

AGENDA

ECONOMIC DEVELOPMENT NANGGROE ACEH DARUSSALAM PROVINCE

INITIAL EDITION
8 May 2007



ATAP - ACEH TRIPLE-A PROJECT ECONOMIC DEVELOPMENT – NAD PROVINCE

*Cooperation Project between Government of NAD Province -
Federal Republic of Germany (Implemented by GTZ)*



The Government of
Nanggroe Aceh Darussalam Province

INITIAL EDITION
ENGLISH VERSION

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FOREWORD

The Initial “ATLAS” Instrument has provided a total inspiration on the profile of NAD Province, which is a basis for assessing strengths, weaknesses, opportunities and threads in preparing the economic development strategy of NAD Province.

The ‘Initial’ Economic Development Agenda of Nanggroe Aceh Darussalam (NAD) Province has been prepared based on the existing economic potentials presented in the Economic Development Atlas. The Agenda contains the vision of economic development, joint strategy, synchronized action plans, and combined funding source of the stakeholders and their counterparts; besides, it is intended as general reference for planning and investment. For this purpose, the Agenda is made compatible to both the Short-Term Investment Plan and Medium-Term Investment Plan of NAD Province. The ‘Initial’ version of the Agenda will gradually be developed and serve as a basis for the preparation of the economic agendas at Local/Municipal level.

After decades of conflicts and the tsunami, there are three main factors breaking the path to the economic recovery of NAD Province: First, national and international assistance for rescue and recovery of the victims of tsunami taking place in 26 December 2004; Second, MoU of Helsinki signed in 15 August 2005 and the issuance of the Law No.11 /2006 on Aceh Government Authonomy, which gives greater authorities to the Government of Aceh in relation to the development policies, and includes a commitment of 2% additional development fund of the total National *DAU* (General Allocation Fund) till 2020; and third, the peaceful conduct of general election of NAD Governor and 19 regents/mayors.

The Provincial Government of Nanggroe Aceh Darussalam has committed to the social welfare improvement through economic recovery, focusing on the creation of job opportunities and income generation, gender equalization, and reintegration of ex-combatants of *GAM* (Free Aceh Movement) as prerequisites for peaceful sustainability and social welfare. The sustainable economic growth depends on transparency and openness, development of initiative coordination, accountable use of public funds, trust, as well as good cooperation among government, private sector and community as development stakeholders. For that reason, three practical instruments have been prepared. They are called Triple-A instruments:

- **ATLAS**, presenting the condition of economic development potentials in the Province of Nanggroe Aceh Darussalam;
- **AGENDA**, presenting the priorities and common commitments of development stakeholders; and
- **ATURAN-MAIN** (rules of the game), presenting the mechanism of Agenda implementation) as well as the process and procedures of government service delivery.

Aceh Triple-A Project (ATAP) is implemented under the bilateral cooperation between the Government of Nanggroe Aceh Darussalam (NAD) Province and German Federal Republic, implemented by GTZ (German Technical Cooperation). The Triple-A Instruments have been prepared by a multi-stakeholder task force coordinated by *Bappeda NAD Province* (Provincial Development and Planning Board), assisted by the expert team from Swisscontact acting as a “coach”. The Triple-A Instruments are accessible public documents in the forms of hard copies and CD.

Based on the Initial version of Triple-A, the following steps will be implemented, including updating, legal anchoring, dissemination and capacity building, socialization to small and medium scale businesses, and Aceh economic potential marketing to mobilize both domestic and foreign investors.

The Initial Triple-A instruments are dynamic in nature taking into account the latest developments. The data and information will continuously be updated based on the development progress of NAD Province. *Bappeda NAD Province* shall serve as a coordinator of related government institutions and other stakeholders, in relation to the changes of data and information.

Banda Aceh, May 2007

 Governor of NAD


Irwandi Yusuf

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LIST OF PERSONS INVOLVED IN COMPILING THIS ECONOMIC DEVELOPMENT AGENDA FOR NAD PROVINCE

STEERING COMMITTEE

1.	Drh. Irwandi Yusuf, MSc	Governor Nanggroe Aceh Darussalam Province	Advisor
2.	Sayed Fuad Zakaria, SE	Head DPRD NAD Province	Advisor
3.	Husni Bahri TOB, SH, MM, M.Hum	Local Government Secretary NAD Province	Controller
4.	Ir. H. Usman Budiman	Assistant Economic Development Setda NAD Province	Controller
5.	Bupati/Walikota se-NAD Province	Mayors of all regencies/cities in NAD Province	Controller
6.	TIM GTZ dan Swisscontact	GTZ and Swisscontact Team	Advisor

TECHNICAL TEAM

1.	Prof. DR. Abdul Rahman Lubis, M.Sc	Head BAPPEDA NAD Province	Chairman
2.	Ir. Ridwan Husein	Head Dinas Prasarana Wilayah NAD Province	Deputy Chairman
3.	Ir. Zulkiflli, R. M.Si	Kabid Pengendalian Pembangunan Bappeda NAD Province	Secretary
4.	Ir. Faizal Adriansyah	Secretary Bappeda NAD Province	Member
5.	Dr. T. Anjar Asmara	Head Dinas Kesehatan NAD Province	Member
6.	Drs. Anas Nyak Adam, M.Pd	Head Dinas Pendidikan NAD Province	Member
7.	Ir. AK. Jauhari, M.Si	Head Dinas Pertambangan NAD Province	Member
8.	Ir. Chairani, T. A.	Head Dinas Perkotaan & Permukiman NAD Province	Member
9.	Ir. Slamet Eko Purwadi	Head Dinas Sumberdaya Air NAD Province	Member
10.	Ir. Muhyan Yunan, M.SC	Head Dinas Perhubungan NAD Province	Member
11.	Ir. H. Said Mustafa, M.Si	Head Bappedalda NAD Province	Member
12.	Ir. Thurmizi, M.M	Head Dinas Pertanian TPH NAD Province	Member
13.	Ir. Fahrudin	Head Dinas Perkebunan NAD Province	Member
14.	Ir. Nasir Grumud	Head Dinas Peternakan NAD Province	Member
15.	Ir. Razali, M.Si	Head Dinas Kelautan & Perikanan NAD Province	Member
16.	Ir. Abdul Kadir	Head Mobilitas Penduduk NAD Province	Member
17.	Syamsuddin, SH	Head Dinas Ketenagakerjaan NAD Province	Member
18.	Drs. Ridwan Sulaiman	Head Dinas Sosial NAD Province	Member
19.	Ir. Muzakir Ismail	Head Perindang NAD Province	Member
20.	Ir. Zainul Panglima Polem	Head BKPMN NAD Province	Member
21.	Iskandar Arsyad, SE	Head BPS NAD Province	Member
22.	Ir. Abdul Kadir	Head Mobilitas Penduduk NAD Province	Member
23.	Drs. H. Nurdin Ahmad	Head Dinas Pariwisata NAD Province	Member
24.	Ir. Razali Yahya	Kakanwil Badan Pertanahan Nasional NAD Province	Member
25.	Ir. Buchari, M. Eng	Staf Ahli Bappeda NAD Province	Member
26.	Dr. Darni, M. Daud, M. Ed	Unsyiah	Member
27.	Said Faisal, SE, M.Si	Deputy Economy and Usaha BRR NAD-NIAS	Member
28.	Bastian Sihombing	Deputy Infrastructure BRR NAD-NIAS	Member
29.	Ir. Syarifuddin Ibrahim	General Manager PT.PLN (persero) Wilayah NAD	Member
30.	Firmandes, SE	Chamber of Commerce (Kadin) NAD Province	Member

TASK FORCE I: ECONOMY (AGRICULTURE, PLANTATIONS, FISHERY AND ANIMAL HUSBANDARY, INDUSTRY, TRADE AND INVESTMENT)

1.	Dr.Nasir Azis, SE, MBA	KABID PP-I Bappeda NAD Province	Chairman
2.	Ir. Zainal Arifin	Kasubbid Pengembangan Produksi dan Produktivitas Bappeda NAD Province	Secretary
3.	Ir. Zulkiflli, R. M.Si	Kabid Pengendalian Pembangunan Bappeda NAD Province	Member
4.	Ir. Bastian	Kasubbid Pengembangan Investasi dan Pembiayaan Bappeda NAD Province	Member
5.	Rahmadhani, M.Bus	Kasubbid Pengembangan Industri dan Perdagangan Bappeda NAD Province	Member
6.	Salahuddin, SP	Kasubbid Evaluasi Pembangunan Bappeda NAD Province	Member
7.	Ir. Saifullah	Kasubdin Program Dinas Pertanian TPH NAD Province	Member
8.	Ir. Jailani, M. Si	Kasubdin Program Dinas Perkebunan NAD Province	Member
9.	Ir. Khairuddin	Kasubdin Program Dinas Peternakan NAD Province	Member
10.	Ir. Yulham	Kasubdin Program Dinas Kelautan & Perikanan NAD Province	Member
11.	Ir. Asnawi	Kasubdin Program Dinas Perindang NAD Province	Member
12.	Drs. Said Munawar,	Kasubdin Program BKPM NAD Province	Member
13.	Muzakir	Kasie Penelitian dan Pengembangan Dinas Pertanian NAD Province	Member

TASK FORCE II: INFRASTRUCTURE SECTOR INCLUDING: LIVING ENVIRONMENT HIDUP AND NATURAL RESOURCES, TOURISM, PUBLIC INFRASTRUCTURE AND FACILITIES (ROADS AND BRIDGES, WATER RESOURCES, TRANSPORTATION, ENERGY RESOURCES, SPATIAL AND LAND)

1.	Ir. Dirwan, SU	Kabid PP-2 Bappeda NAD Province	Chairman
2.	Ir. Hamdani M.Si	Kasubbid Penataan Ruang Wilayah dan Keparawisataan Bappeda NAD Province	Secretary
3.	Ir. Said Ikhsan	Kasubdin Program Dinas Pertambangan NAD Province	Member
4.	Bahagia	Kasubdin Program Dinas Perkotaan & Permukiman NAD Province	Member
5.	Ir. Mohd. Sanusi, M.Si	Kasubdin Prasarana Jalan dan Jembatan Dinas Prasarana Wilayah NAD Province	Member
6.	Ir. Bambang Riswandi, Dipl.HE	Kasubdin Program Dinas Sumberdaya Air NAD Province	Member
7.	Ir.A.Hadi Sulaiman, M.Si	Kasubdin Program Dinas Perhubungan NAD Province	Member
8.	Ir. Mukhlis Suddin	Kasubdin Program Bappedalda NAD Province	Member
9.	Ir.Syarifuddin Ibrahim	General Manager PT.PLN (persero) Wilayah NAD	Member
10.	Ir. Abulia	Kasubdin Program Dinas Mobilitas Penduduk	Member
11.	Taufiqurrahman, SP, MM	Kasubbid Pengembangan IPTEK dan Energi Alternatif Bappeda NAD Province	Member
12.	Dedy Fahrian, ST, MT	Kasubbid Pengembangan Sarana dan Prasarana Wilayah Bappeda NAD Province	Member
13.	Drs. Yusriadi, M.Si	Kasubbag Dinas Pariwisata NAD Province	Member

TASK FORCE III SOCIAL CULTURAL AND HRD (POPULATION AND EMPLOYMENT, EDUCATION HEALTH AND RELIGION)

1.	Ahmad Ridwan, SE, M.Si	ND. KABID PP-III Bappeda NAD Province	Head
2.	Ir. T Syarbaini, M.Si	Kasubbid Peningkatan Kualitas SDM dan Agama	Secretary
3.	Drs. Irhamuddin	Kasubdin Program Dinas Pendidikan NAD Province	Member
4.	Dr. Azwar	Kasubdin Program Dinas Kesehatan NAD Province	Member
5.	Ir. Sofyan	Kasubdin Program Dinas Mobilitas Penduduk Bappeda NAD Province	Member
6.	Haswar, SE	Kasubdin Program Dinas Ketenagakerjaan NAD Province	Member
7.	Faridah	Kasubdin Program Dinas Sosial NAD Province	Member
8.	Marwan	Kasubdin Program BPS NAD Province	Member
9.	Syamsuar, SE	Kasie Evaluasi dan Pelaporan Dinas Ketenagakerjaan NAD Province	Member
10.	Azwari, SE, M.Si	Kasubbid Kerjasama Pembangunan Bappeda NAD Province	Member

SECRETARIAT

1.	Rahmadhani, M. Bus	Kasubbid Pengembangan Perindustrian dan Perdagangan Bappeda NAD Province	Coordinator
2.	Ir. Saflina, MT	Staf Bidang PP-I Bappeda NAD Province	Deputy Coordinator
3.	Indra Heriansyah, ST	Staf Bidang PP-I Bappeda NAD Province	Member
4.	M. Tajuddin, ST. M.Si	Staf Bidang PP-I Bappeda NAD Province	Member
5.	Aswar, S.Hut	Staf Bidang PP-I Bappeda NAD Province	Member
6.	Rusli Walad	Staf Bidang PP-I Bappeda NAD Province	Member
7.	Chandra Irani, SP	Staf Bappeda NAD Province	Member

GTZ

1. Svenja Paulino Rodriguez
2. Wolfram Fischer

Consultant

1.	Rik L Frenkel	Triple-A Consultant
2.	Frank Van Paassen	Triple-A Consultant
3.	Ramon H Hagad	Triple-A Consultant
4.	Koes Sarwono	Triple-A Consultant
5.	Tri Danandjojo	Triple-A Consultant
6.	Dambung Lamuara Djaja	Triple-A Consultant
7.	Slamet Mulyadi	Triple-A Consultant
8.	Shinta Dewi	Triple-A Consultant
9.	Supartinah	Triple-A Consultant
10.	Andi Ikhwan	Swisscontact
11.	Kai Hauerstein	Swisscontact

INTRODUCTION

BACKGROUND

The Economic Development Agenda of NAD Province spells out the formal planning documents: Poldas, Propeda and Renstrada into several concrete priorities of the development stakeholders based on a common vision strategy, equal investment, and joint funding.

The Agenda is the main one of the three practical instruments to mobilize and coordinate the stakeholders' participation in the preparation and realization of the government's long-term, realization and short-term development programs. The functions of the three instruments complement one another:

Atlas, provides relevant information on the existing conditions and trends, and on the present development potentials of NAD Province;

Agenda, is based on the information laid out in the Atlas, breaks down the strategic development plans into concrete investment priorities for stakeholders; and

Aturan Main (Rules of the Game), serves as a guideline for the effective use of the Atlas and Agenda in mobilizing and coordinating the stakeholders' investments.

The three documents **Atlas**, **Agenda** and **Aturan Main** for NAD Province (also known as Triple-A of ATAP Economic Development) were prepared in close coordination with the multi-stakeholder task forces and were financially supported by the Federal Republic of Germany (BMZ).

CONCEPT

The Economic Development Agenda of NAD Province combines the priority investments of government, community and private sector for the period between 2008 and 2012 into one document. The Agenda is aimed at checking each of the stakeholder investment programs, coordinating the space they need, synchronizing their phased implementation, and combining each funding source. The official planning documents such as RPJP, RPJM and Renstra SKPD, on one hand, have been used as a basis for the Agenda's preparation; on the other hand, the Atlas of Economic Development of NAD Province is used as a reference to assess the existing development potentials and constrains. The strategy and planned activities within the Agenda are classified logically into four categories as follows:

- ❖ **Major functions of the development** that are linked to the objectives of economic, social, cultural and environmental development;
- ❖ **Spatial development** to accommodate the major functions, including the area-based development activities;
- ❖ **Public infrastructure** to provide facilities and service delivery for optimization of efficient use of space to serve the major functions;
- ❖ **Managerial capacity** to coordinate the implementation of the multi-stakeholders' investment programs and to update the rolling Agenda.

APPLICATION

The Agenda of Economic Development of NAD Province is a public document available in hard copy and as a CD-ROM. In practice, it can be used as follows:

- ❖ A reference for the preparation and update of more comprehensive development planning documents: RPJPD (Rencana Pembangunan Jangka Panjang Daerah – Local Long Term Development Plan), RPJMD (Rencana Pembangunan Jangka Menengah – Local Medium Term Development Plan) Daerah dan RKPD (Rencana Kerja Pembangunan Daerah – Local Development Work Plan), Renstra SKPD

(Rencana Strategis Satuan Kerja Perangkat Daerah – Local Institution’s Strategic Plan) and Renja SKPD (Rencana Kerja Satuan Kerja Perangkat Daerah – Local Institution’s Work Plan);

- ❖ The government commitment to the stakeholders in general and to the local assembly in particular, for the implementation of the existing government investment programs stated in the Agenda, and the use of public funds allocated for this purpose;
- ❖ For the coordination of development planning, investment program preparation, physical implementation, operation and maintenance, and service delivery by the related government institutions;
- ❖ For investment control by respective stakeholders, whose endeavors and resources are important for harmonious and sustainable development;
- ❖ For marketing the investment opportunities of NAD Province to the central government, domestic and foreign investors, and to any international donor countries;
- ❖ For mobilizing stakeholders’ funds to increase the government’s financial capacity for public infrastructure development through joint cooperation between government and private sector, and through privatization.

I. CONCEPTUAL FRAMEWORK ATLAS OF NAD PROVINCE

Aceh Triple-A Project (ATAP)



II. CONCEPTUAL FRAMEWORK AGENDA NAD PROVINCE

Aceh Triple-A Project (ATAP)

			4.3 Improved Guidelines from Central Government <ul style="list-style-type: none"> - Strengthen the relation with the key ministries. - Develop the relation with Central organization (Kadin) 	1.3 Poverty reduction and life-quality Improvement <ul style="list-style-type: none"> - Development of vocational training and business - Public health improvement - Job opportunity creation 			
		4.6 Attract International investors <ul style="list-style-type: none"> - Attract multinational companies (FDI) - Promote the international bank investment - Provide facilities for international branch offices - Promote the international franchise 	4.2 Improve the local government service <ul style="list-style-type: none"> - Redefine the institutional roles and functions - Streamline the OSS service organization and train its staff - Review the RP/JP, RP/JM and Renstra of the local government. - Streamline the legal framework - Improve Institutional Capacity 	1.2 Demographic change and equilibrium <ul style="list-style-type: none"> - Encourage small, prosperous family - Anticipate special needs of the old people - Anticipate remote-urban job seeker migration 	1.6 Encourage the sustainable economic growth <ul style="list-style-type: none"> - Open the basis of agricultural economy - Value-added commerce and manufacturing - Eliminate handicaps for business owners and investors. 		
	4.8 Mobilize the International NGOs <ul style="list-style-type: none"> - CHF, Cordaid, SC, Save Children, OXFAM, IFRC, etc. - Initiative coordination. 	4.5 Attract domestic/national investors <ul style="list-style-type: none"> - Create relations between national investors and local business owners - Bank loan/credit guarantee - Provide facilities for offices and franchise 	4.1 Improve the Provincial Government coordination <ul style="list-style-type: none"> - Identify the important institutions and their functions and roles. - Improve the relation between executives and legislatures - Identify the Opportunity in the framework of Law - Improve Institutional Capacity 	1.1 Insight and benefits of historical root <ul style="list-style-type: none"> - Development of natural and historical museum - Analysis of the history of NAD economy for the sustainable economic development 	1.5 Natural conservation <ul style="list-style-type: none"> - Provide facilities for the access to natural assets. - Manage the utilization of renewable resources - Protect natural ecosystem & biodiversity against pollution and physical damage 	1.8 Application and appropriate technology <ul style="list-style-type: none"> - High productivity, good quality and cheap commodities - Information access via media and internet. - Energy savings, recycling, and aware of pollution. - Support the research and innovation inovasi. - Preserved the Local Custom 	
4.9 Mobilization of International Donors <ul style="list-style-type: none"> - Synchronization between project and donors such as: USAID, German Development Cooperation, CIDA, USAID, Turkey Red-Cross, JICA, etc. - Mobilization of UNDP, Worldbank, ADB, etc. 	4.7 Mobilize local NGOs <ul style="list-style-type: none"> - Walhi, PKPU, Yadesa, Yayasan Panglima Laot, Leuser International Foundation, Yayasan Dian Desa, etc. - NGO Forum 	4.4 Support local investor <ul style="list-style-type: none"> - Kadin participation - Partnership with big companies - support the small and medium-scale businesses - Provide facilities for informal businesses 	4. AGENDA OF INSTITUTIONAL DEVELOPMENT	1. AGENDA OF SUSTAINABLE ECONOMIC DEVELOPMENT	1.4 Preservation of cultural identity <ul style="list-style-type: none"> - Promotion of local tradition, arts and skills. - Support the cultural institutions. - Preservation of monuments, archeological sites and architecture. - Support the sport competitions, educative hobbies. 	1.7 Provide facilities for access to market <ul style="list-style-type: none"> - Substitution of imported goods at local market - Competitive quality (eco-label) - Creation of product brand - Provide facilities of credit access for business owners 	1.9 Create quality human resources adaptive to job market <ul style="list-style-type: none"> - Increase the managerial capacity - Increase the professional skills - Incentives for productive workers - Create competitive climate for youth
3.9 Improve Solid Waste Management <ul style="list-style-type: none"> - Domestic solid waste collection - Solid waste disposal to the sanitary landfill - Recycle and composting - Incineration of hospital solid waste and B3 (Hazardous waste) treatment 	3.7 Improve drainage and irrigation <ul style="list-style-type: none"> - Extend and manage the drainage network - Build water ponds - Optimize the irrigation service coverage 	3.4 Improve telecommunication services <ul style="list-style-type: none"> - Increase number of telephone users (customers) - Expand the cellular services coverage - Provide facilities for internet development in all areas 	3. AGENDA OF INFRASTRUCTURE DEVELOPMENT	2. AGENDA OF SPATIAL DEVELOPMENT	2.4 Preparation of zoning plan for green open space. <ul style="list-style-type: none"> - Specify function according to land allocation - Take measures of erosion and landslide prevention. - Plant trees for green buffer. - Preservation and Promotion of Lanscape 	2.7 Benefits of climate <ul style="list-style-type: none"> - Use dry season for tourism and solar energy. - use wet season for productive farming development. 	2.9 Coordination in spatial development plan. <ul style="list-style-type: none"> - Synchronize the inter-regional spatial development plan - Cooperation in inter-regional infrastructure development. - Use Regency/city as center of production.
	3.8 Improve the sewerage and sanitation system <ul style="list-style-type: none"> - Develop the urban sewerage network - Build communal IPAL (Waste Water Treatment Plant) - On-site IPAL for hotels and factories - Promote the benefit of septic tank 	3.5 Expand the electricity service coverage <ul style="list-style-type: none"> - Increase The Power (Kwh) Capacity - Expand The Service Coverage - Develop Solar And Geo-Thermal Energy - Develop Bio-Diesel 	3.1 Optimize land transportation <ul style="list-style-type: none"> - Improve and develop the road and bridge network - Manage the circulation of motor vehicle traffic - Promote the comfortable and safe public transportation - Provide Facilities for traditional and Non Motorized Transportation 	2.1 Open the regional development <ul style="list-style-type: none"> - Develop Banda Aceh as a regional transport hub - Develop Banda Aceh as a regional distribution center. - Actualize Banda Aceh as a regional service center. 	2.5 Optimization of natural resources. <ul style="list-style-type: none"> - Manage the water catchments area and prevent pollution. - Prevent groundwater from contamination (waste). - Reserve rainwater in dams. - Develop the packed drinking water. 	2.8 Prepare zoning plan for built space. <ul style="list-style-type: none"> - Commerce area development planning - Industry zone preparation - Prevent the development of urban ribbon and slum area. - Control the conversion of fertile lands. 	
		4.6 Attract international investors <ul style="list-style-type: none"> - Attract multinational companies (FDI) - Promote international bank investment - provide facilities for international office representatives - Promote international franchise 	4.2 Improve the local government service <ul style="list-style-type: none"> - Redefinition of institutional roles and functions - Streamline the organization, train the staff, and OSS service - Review District RP/JP, RP/JM and Strategic Plans. 	1.2 Demographic change and equilibrium <ul style="list-style-type: none"> - Encourage prosperous small family - Anticipate specific needs for old people - Anticipate migration of village worker to city 	1.6 Encourage the sustainable economic growth <ul style="list-style-type: none"> - Open the basis of farming economy - Value-added commerce and manufacturing. - Eliminate handicaps for business owners and investors. 		
			3.3 Optimize air transportation <ul style="list-style-type: none"> - Banda Aceh as a center of regional air transportation - Extend the runway - Equip the runway with apparatus for night landing - Improve the terminal facilities 	2.3 Develop and manage mining deposits. <ul style="list-style-type: none"> - Use local building materials (sand, stone) - Feasibility study for cement production. 			

A ECONOMIC DEVELOPMENT ORIENTATION

1 Summary of Development Profile (based on the Atlas)

1.1 Economic Profile in Comprehensive Context

The economic development in the NAD Province is not much different from other areas of Indonesia. The economic turmoil that hit the country during the second half of the 1990s resulted in the economy not developing as it should have done in recent years. This economic crisis further worsened in the face of the ongoing armed conflict that blighted the region. Although Aceh, at that point, had large-scale industries, their existence could not promote the welfare of the Aceh community. The security situation made businesses stagnant. There was neither any trickle down effect from industrial and other large-scale business activity, nor was there support for small and medium-scale businesses since both banking and transportation conditions were performing far below the expected level. In such a situation, community purchasing power decreased which in turn lowered the community demand. Before the tsunami occurred, the economic growth rate of the Province between 2000 and 2005 on average amounted to 2.2 percent (based on non-gas and oil GRDP growth). The annual inflation rate was not higher than 5% during the same period.

The situation changed after the tsunami at the end of 2004. This disaster has caused large amounts of cash to flow in through physical rehabilitation and construction programs. Already at the initial stage of recovery, early in 2005, Aceh absorbed a lot of funds that were financing the infrastructure development, shelter for refugees and other recovery programs. The limited resources in the Province on one hand, and the large funds available on the other, have encouraged permanent price escalation. Despite the many business and job opportunities, the social welfare cannot improve since the increase in wages is not equal to the increasing prices. The annual inflation rate, in excess of 20% after the tsunami disaster, has lowered the competitiveness of the Province compared to other parts of Indonesia. Such circumstances are still in effect right up to the present time. If compared to the pre- and post-tsunami situation, the community purchasing power has not improved.

The slow economic growth rate during this period was also due to sluggish business activity. Less than 50% of all the PMAs/PMDNs (foreign and domestic businesses) were active during the conflict period, which then led to low performance of manufacturing industry, trade and mining.

The better security situation in the wake of the Helsinki MoU of mid-2005, has not had a positive impact on the overall economic condition of the Province. This was due to the nodes of economic growth being paralyzed by the tsunami disaster and the weak performance of production tools after the economic and security crisis.

Tangible outcomes of economic development have not been felt by many people. This is indicated by a significant increase in the number of people living in poverty: from 886,800 or 21.7% of the population in 1999, to 1,898,070 or 47.8% in 2005. As a result of these figures, NAD was categorized as the 5th poorest Province in Indonesia in 2005. If closely scrutinized, the pockets of poverty are found in the south and southeast areas of NAD: Aceh Singkil, Aceh Tenggara, Gayo Lues, Nagan Raya and Simelue.

The economy of the Province before the earthquake and tsunami was very dependent on oil and natural gas production. The contribution of agriculture sector was, however, not significant. After the conflict and disaster, the contribution of oil and natural gas

decreased; by contrast, rehabilitation and construction-related sectors tended to show significant increases. If viewed from the point of view of sector contribution, there has been no shift from the primary sector (agriculture and mining) to the secondary sector (industry and manufacturing) and tertiary sector (trade and services). In general, the configuration of sectors within the Province's economy is, from year to year, still the same.

Oil and Gas

The economic performance of NAD Province has, up to now, been dependent on the contribution of the oil and gas sector, although, the productivity of this sector has tended to decrease, and analysts say that the oil deposits in Aceh have run low. Almost one third of the GRDP of NAD derives from the oil and gas sector; it is, however, quite possible that new oil and gas deposits/fields will be found. Law No. 18/2001 on Special Autonomy for the Special Province of Aceh as NAD Province enacts a share of the net-revenue from oil and gas that is more favorable to the Government of NAD.

Agriculture (horticulture, plantation, animal husbandry, fishery and forestry)

The potentials of NAD Province's land resources are adequate for various agricultural cultivations. As mentioned elsewhere, Aceh was once the biggest producer of pepper. Some commodities such as coffee, cocoa, oil palm, caught-fish and pond-fish from coastal fish farms give Aceh both regional and international advantage.

The agricultural sector's contribution to the Province's GRDP is 20%, lower than that of the oil and gas sector (25%), and manufacturing industry (24%).

Manufacturing Industry

Although medium and large-scale industries endured recession as a result of the conflict and disaster, their roles are still significant in the economy of the Province.

Trade

In terms of trade, NAD Province is subordinate to Medan, especially for exports and imports that depend on the Medan/North Sumatera market. This is because the central distribution node for commodities and services for Sumatera is Medan. Ports and airports in the Medan/North Sumatera region serve as the regional hub for both inter-regional and international air transportation.

During the post-tsunami period, both during the emergency response period and the rehabilitation-reconstruction time, the supply of materials flowed from Medan. This was one of the causes of the high inflation rate in NAD Province.

Tourism

NAD Province's tourism sector has not performed strongly, a fact reflected in the small number of foreign and domestic tourists and their length of stay. However, there are indications that the number of tourists is increasing, reflected in the increasing number of hotels and other types of accommodation, restaurants, cafes, and other supporting sectors, particularly in Banda Aceh and surrounding areas.

The existing assets of eco-tourism, cultural tourism and religious tourism of Leuser National Park, Weh Island (Sabang), Takengon and Banda Aceh, are all prime movers in NAD Province's tourism sector.

1.2 Spatial Development Context

NAD Province, which stretches for more than 700 km and has a total of 23 regencies, is a large area considering that it only has a total population of 4.2 million people. Due to its large area, a large number of facilities are needed to manage the Province. On the other hand, the earthquake and tsunami of 2004 have made people aware that, in geographical terms, the Province lies in a tectonic and volcanic earthquake-affected zone. The same applies to other parts of the Nusantara archipelago, the southern parts of which lie along the border where the tectonic plates of Indo-Australia and Eurasia meet.

The instruments for spatial management are already available since the RTRW of NAD Province was established at the beginning of 2007. This could be the basis for spatial development and control of spatial use. With regard to guidelines or scenarios of spatial development in NAD, and the impact of the earthquake and tsunami, the spatial development will serve as a guideline for any infrastructure development.

1.3 Facilities and Infrastructure Service

Land, air and sea transportation is very strategic for the economic development of NAD Province. Most of the transportation networks made in the 1970s were damaged by the tsunami. The main road link along the west coastal corridor endured the most serious damage. The road link along the east corridor was damaged by floods that took place at the end of 2006 and also by the high burden of freight and service movement that had to be supported by Banda-Aceh's primary highway.

The seaport cannot yet serve as a regional hub, although it has been rehabilitated. The sea transportation activity from the seaport is not yet optimum. The airport, on the other hand, saw high increases in the quantities of passengers and freight being moved around due to the post-tsunami rehabilitation and reconstruction efforts. Among the existing airports, Iskandar Muda is much busier since air transportation activities are focused on this airport; besides, there has been a pioneering local flight from Banda Aceh to Meulaboh, Lhokseumawe and Sinabang. This does not, however, indicate that Banda Aceh can be a regional hub for NAD and the surrounding areas. Many airline companies are interested in opening routes to and from Banda Aceh see that the high demand is due to the rehabilitation and reconstruction activities rather than the improved economic condition of the Province.

Other types of infrastructure, such as electricity, water supply, drainage and solid waste management do not show optimum performance. The state-owned electricity company (PLN) still suffers from deficit due to the high production costs for electricity that are higher than the selling price. There is also a limited amount of power available. The performance of the water supply, drainage, sewerage, and solid waste management, although not optimum yet, is improving.

1.4 Institutional and Legal Framework

After the Helsinki MoU signed on 15 August 2005, NAD Province has moved into an era of peace, in accordance with the agreement to terminate the conflict between the Government of Indonesia and GAM (Free Aceh Movement). Beforehand, there were already some initiatives seeking to terminate the conflict, including Law 18/2001 on Special Autonomy for NAD, and Law No. 11/2006 on Aceh Administration that became milestones in the establishment of a peaceful NAD Province.

The organizational structure of NAD Provincial administration, its relation to the local and municipal governments within the Province, and also its institutional relationship with the central government, are all described in the profile of the institutional and legal framework. The institutional profile also describes the peaceful and democratic general election, to elect the Governor, Vice-Governor and Regent/Mayor, which was conducted on 11

December 2006, and which saw 2.6 million voters participate. A non-partisan candidate, Drh. Irwandi Yusuf, Msc, was elected Governor and Muhammad Nazar, S.Ag Vice Governor for the period 2007 to 2012.

The institutional profile also describes the framework of capital investment management in NAD Province, local, national, and international, including the distribution of PMDN (domestic investments) and PMA (foreign investments) in the Province.

Earthquake and tsunami that occurred at the end of 2004 has fostered international solidarity with many donors, and local and international government organizations (NGOs) seeking to help the disaster victims during the rehabilitation and reconstruction period. The BRR (Board for Aceh and Nias Rehabilitation and Reconstruction) is expected to conduct its program of Aceh & Nias post-tsunami rehabilitation and reconstruction up to 2009.

2 Vision for Comprehensive Development

2.1 Potentials

NAD Province lies in a strategic position at the northwest end of Sumatra with a total area of 57,365.57 km² (that is 12.26% of the total area of Sumatra island). At the same time it serves as the gateway for trade and cultural traffic that connects the Western and Eastern hemispheres.

Geographically, NAD Province has extensive forests with a total area of 3,292.53 hectares (9.99%) and dry and wet farming lands of 431,571.80 hectares (7.2%). The rest is mining and industrial lands, inland water villages, open lands and other natural conservation lands that are, in their entirety, about 7% of the total area of NAD. However, if combined with its territorial waters, the Province has an Exclusive Economic Zone amounting to 534,530 km².

From the perspective of natural resources, the Province has very good prospects for future investment. Such opportunities will be more open now that the peace agreement between the Government of Indonesia and GAM (Free Aceh Movement) has been signed (in Helsinki on 15 August 2005), and legalized by Law No. 11/2006 on Aceh Administration, and after the successful election of the Governor and Vice-Governor. The potentials that create strategic economic prospects include agriculture, marine and fishery, manufacturing industry, mining, energy, and the tourism sector.

In addition, the rehabilitation and reconstruction process that has been taking place in NAD Province since 26th December 2004, involving various national and international institutions, has made this Province more open to national and international cooperation.

Law No. 34/2000 on Local Taxes and Tariffs has granted the provincial government the authority to collect several kinds of taxes and tariffs such as Motor Vehicle Tax, Vehicle Ownership Fee, PBBKB, Tax on Ground and Surface Water Utilization, Sea Motor Vehicle Tax and Tax on Sea Motor Vehicle Ownership.

Law No. 33/2004 on Financial Equilibration between Central Government and Local Government, consisting of Profit Share Funds, General Allocation Fund and Specific Allocation Fund, will specify the certainty of local funding. Besides, Law No. 18/2001 on Special Autonomy for NAD Province has added the revenue potentials from oil and natural gas mining.

The most recent legislation was enacted by Law No. 11/2006 on Aceh Administration, where the government of NAD Province, based on Article 183 Paragraph 2, has a 20-year autonomous fund that is broken down as follows: for year 1 (2008) up to year 15 equaling to 2% of the General Allocation Fund, and for year 16 up to year 20 amounting to 1%.

Law No. 18/2006 on Aceh Administration has also raised big expectations for comprehensive educational reform in Aceh. In principle, education is a strategic issue that is still under the Central Government's authority, but because of its special autonomy status, the Government of NAD also has the authority to implement education programs suited to the local community's characteristics, potentials, and needs.

2.2 Handicaps

Many factors have affected the economic growth rate of NAD Province. It was affected by the armed conflict and unstable political conditions. The unfavorable security situation also resulted in negative impacts on the mobility of goods and services. This is indicated by low realization of foreign and domestic capital investment. Furthermore, the economic turmoil which struck the country between 1998 and 2000 has caused economic growth of the Province to decrease significantly.

In addition, the inflation rate has climbed higher and higher meaning that prices have increased rapidly. The inflation rate in NAD Province during the last six years has surpassed the national inflation figure, except in 2003, which was caused by the government policies to apply the economic recovery program throughout Aceh.

Major funds entering the Province of Aceh at the beginning of 2005, a situation which is expected to last up to 2009, has caused there to be a dependency on many sectors, particularly infrastructure and housing development. Such a consequence will continue for the long term considering that development activities will create job and business opportunities for many people. So, it must be anticipated that when the flow of funds decreases as a result of the termination of the reconstruction process, there will be a question of how to provide job opportunities and businesses.

The high rate of unemployment and absolute poverty without a high level of education (human resource quality) have caused the community's socio-economic life to be at its lowest level. Many people are still below the poverty line which is the result of several factors: structural poverty, lingering aftereffects of the conflict, economic crisis, natural disasters, and the increase in the domestic price of oil which has reduced people's purchasing power. The endeavor to improve people's purchasing power is still handicapped by capacity-related matters, and business opportunity and its supporting system.

Health service coverage is still handicapped by the inaccessibility of western part of the Province (particularly, the Regency of Aceh Jaya) and outer islands. Health service operations for this area are still limited. In addition to minimum hospital and public health center services, the community's lifestyle is also at a low in health terms.

As for the existing public facilities and infrastructure, their quality and quantity are not adequate. Besides, the operation and maintenance of the public facilities and infrastructure are not undertaken properly.

As for the public administration, in general, the government personnel (civil servants) in the regencies/cities are not adequate in terms of their number and human resource quality, particularly those in the newly-established regencies. Such circumstances will have an impact on the process of development acceleration and on the improvement of public services delivered at a Sub-district and Village level.

3 Development Vision

Based on the challenges to be faced in the coming 20 years, taking into account the basic capital owned by the Indonesian people and other emerging strategic factors, the development amendment as cited in the Preamble of Law 1945, the National Development Vision for Years 1005-2025 is as follows:

*“Indonesia that is Advanced and Autonomous, Just and Democratic, as well as Secure and United within the Unitary Republic of Indonesia.” *)*

3.1 Orientation of the Long-Term Development Plan (RPJP)

In line with the initial National RPJP, economic development was aimed at strengthening the national economic system to foster the nation’s development with the following characteristics:

- ❖ Economy is designed as a joint business on the familial basis.
- ❖ Production branches vital for the state and beneficial for the nation’s needs are governed by the state.
- ❖ Land and water, and all natural riches contained in them are under the state control and utilized as much as possible for the nation’s welfare.
- ❖ The national economy is managed on the basis of it being a democratic economy with the principles of togetherness, just efficiency, sustainability, environment-based, autonomy, balanced advancement and national unity.
- ❖ APBN (National Budget), as the realization of the state financial management, is carried out transparently and responsibly with as much regard as possible for the nation’s welfare.

Meanwhile, Presidential Regulation No. 7/2005 on RPJMN for 2004-2009, commends the 2004-2009 National Development Vision, which is spelled out as follows:

1. The realization of a united, peaceful, and harmonious Indonesian nation.
2. The realization of a state and nation that adheres strictly to the law, to the principles of equality and human rights, as well as;
3. The realization of an economy that can create job opportunities and livelihoods that provide the strong fundamentals needed for sustainable development.

Referring to the national development visions above, the three missions of National Development for 2004-2009 as follows:

1. To create a peaceful and harmonious Indonesia;
2. To create a just and democratic Indonesia;
3. To create the prosperous Indonesia.

3.2 Long-Term Development Vision of the NAD Province

Long-Term Development Vision of the NAD Province is as follows:

*) based on First Draft of National Long Term Development Plan 2005 – 2025

*“The realization of a fundamental change in all sectors of Aceh community and administration that adhere to the principles of transparency and accountability to create clean governance free from corruption and the abuse of power so that Aceh, in 2012, will grow to be a prosperous and just Province.” *)*

3.3 Objectives of Long-Term Economic Development

Referring to the Initial Draft of the Long-Term National Development Plan 2005-2025, it is suggested that the economic development within the next 20 years for the NAD Province be aimed at achieving the following major targets :

- a. Establishment of a sturdy economic structure, in which agriculture (in a broad sense) and mining become the basis for economic activities producing, in an efficient and modern way, products for manufacturing industries that can be an economic locomotive for global competitive power, and services that become a catalyst for economic self-reliance.
- b. An economy that is developed based on the principles of democratic economy and fair competition in terms of the values of justice and national interest in order to guarantee job and business opportunities for the whole community.
- c. An economy that is developed and oriented towards global competition through gradual transformation from a comparative advantage-based economy (with abundant natural resources) to a competitive advantage-based economy, based on the following principles: (i) to manage the natural resources in a sustainable manner and to improve productivity through knowledge and technology mastery, distribution, application, and innovation; (ii) to manage economic institutions in a sustainable manner through good corporate governance; and (iii) manage natural resources in a sustainable manner according to the local competencies and advantages.
- d. An economic structure that is strengthened by positioning the industrial sector as a locomotive supported by agricultural activities in a broad sense, and mining to produce in an efficient, modern and sustainable manner, products and effective services with good corporate governance to create strong economic self-reliance.

3.4 Objectives of Medium-Term Economic Development

In line with the formulated economic development mission, the following objectives are contained in the Initial Draft of the RPJM for the NAD Province:

- (1) Rebuild the economic infrastructure throughout Aceh so that all the territory of this Province can be a united political and economic entity.
- (2) The Government of Aceh will treat all the economic actors as development partners.
- (3) The Government of Aceh will pay especially close attention to the development of a democratic (community-based) economy.
- (4) The Government of Aceh will proactively identify all the high-cost economic resources that need to be overcome and for which solutions need to be found.
- (5) The Government of Aceh will foster the people’s entrepreneurial spirit so that it can manifest itself again as it did between the 1940s and the 1980s.
- (6) The Acehnese entrepreneurs should be able to grow and become a stable economic community.
- (7) Overseas (international) trade, particularly with Malaysia, Singapore, Thailand, India, and other countries, is to be encouraged.

*) *Kerangka Awal Rencana Pembangunan Jangka Menengah (RPJM) untuk Provinsi NAD*

- (8) Traditional community agribusiness products must have feasible marketing opportunities by opening up overseas markets.
- (9) In all the Regencies, pilot projects for plantations (demonstration plots) are to be developed, so that people can have accesses to agricultural information and prime seeds suited to the natural conditions they work in.
- (10) Close attention should be paid to all ex-GAM combatants and conflict victims so that they can live in a better economy through capital provision and adequate job opportunities.
- (11) Economic growth that is sustainable, environmentally-based, and aware of disaster-risk.
- (12) Transitional achievement of the Rehabilitation and Reconstruction of tsunami impacts.

3.5 Strategies of Economic Development of the NAD Province

To achieve all the above targets, the following Strategies of Economic Development Acceleration of the NAD Province for 2008-2012 are needed:

- ❖ Improve education and training, and job and business opportunities as an effort to reduce poverty.
- ❖ Improve the quality of government apparatus, resources, public facilities and infrastructure to support the improvement of government performance.
- ❖ Revitalize agriculture focusing on the development of prime commodities, rehabilitate centers for coastal fishpond development and sea-fish, construct clusters of industries processing agricultural produce, and develop other supporting facilities and infrastructure.
- ❖ Provide support for micro- and small-scale businesses through an appropriate financing system, and facilities and consultancy for business management and marketing network development.
- ❖ Encourage and facilitate the establishment of community-based business groups consisting of marginalized people including ex-GAM guerillas and conflict victims.
- ❖ Improve the competitiveness of local goods through the upgrading of production, post-production (packing) and the application of marketing strategy.
- ❖ Encourage the promotion of tourism potential, prioritized at the leading tourism areas.
- ❖ Promote the improvement of the Local Investment Realization.
- ❖ Improve the non-oil and natural gas exports through expansion of regional, national and international market networks.
- ❖ Improve the local government roles in inter-local, inter-regional, bilateral IMT-GT cooperation, and other international economic cooperation.
- ❖ Simplify the licensing service and develop reliable and efficient system of economic infrastructure.
- ❖ Equalize the disparity between economic facilities and infrastructure in the western and eastern parts of the Province.

B ECONOMIC DEVELOPMENT AGENDA

1 Economic Development in a Comprehensive Context

1.1 The Historical Roots of Development

a) Potentials and Constraints

- ❖ Aceh with its strategic position at the northwest edge of Nusantara became a cross-cultural point of contact from the beginning of the Hindu, Buddhist, and Islamic eras right up until the era of Western imperialism.
- ❖ Among these numerous points of cross-cultural contact, Islam, which was first introduced by Gujarat traders, has become the most influential in the history of Aceh. It is well known as the place where the first Islamic kingdoms grew in the Nusantara archipelago.
- ❖ The first Acehnese Islamic kingdom, the Aceh Darussalam Kingdom, enjoyed its halcyon days when it was ruled by Sultan Iskandar Muda following the fall of Malacca to the Portuguese in 1511. Then Aceh became a link connecting the western world (India, the Arab world, Europe) and the eastern world (Indochina, China, Japan, Nusantara).
- ❖ Aceh was the last area that the Dutch colonialists wanted to conquer, resulting in 70 years of war (1873-1942) which claimed so many lives on both sides.
- ❖ During the post-independence era, the relationship with the central government was volatile, giving rise to Tgk. Daud Berueh's rebellion in the 1950s and the GAM (Free Aceh Movement) from 1976 up to the Helsinki Memorandum Of Understanding of 2005.
- ❖ Aceh, in the context of world economic history, was once known as a major pepper producer. At the beginning of the 19th century almost 50% of the world's pepper came from Aceh passing through its famous seaports, Ulhee Lheue and Susoh.

From the SWOT analysis below, several potentials for development based on the history of Aceh could be summarized as follows:

- ❖ The strong historical background of Acehnese people can be a basis for the development, particularly in managing the natural resources for the benefit of the Acehnese people's welfare.
- ❖ Aceh was the first Islamic kingdom in Nusantara, therefore its influence on public and institutional norms as well as the economic activities has been very strong.
- ❖ In the past, pepper production and Aceh's strategic position were an attraction to trade between West and East.
- ❖ Historically, Aceh was open for trade cooperation between western and eastern peoples.

Historically-based constraints on development are:

- ❖ Islamic values that are increasingly weakening within social life due to the penetration of various cultures.
- ❖ Knowledge about the development of Acehnese history is more and more difficult to find.
- ❖ Aceh's once strong strategic, commercial position (including its pepper production) has not been developed and optimized.

- ❖ Aceh's former status in terms of cooperative relations has not been exploited fully for the development of economic and commercial activities in the Province.

Table 1.1 SWOT Analysis for History-Based Development

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ The heroism of the Acehnese in their fight against colonialism and injustice. ❖ Strong historical and cultural roots in which Islamic values dominate individual and institutional behavior. ❖ Cross-cultural point of contact to encourage social, cultural and economic cooperation is strong. ❖ Economic history indicates that Aceh's land once had great potential for the production of agricultural commodities. 	<ul style="list-style-type: none"> ❖ Teaching of local history in the context of strengthening the work ethic is still weak. ❖ Limited availability of books on Acehnese history. ❖ Cross-cultural point of contact as an opportunity of inter-local and inter-regional cooperation is underdeveloped. ❖ Its mariner culture has waned.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Historical background could foster cooperation with countries that are culturally close to Aceh such as Arab countries, China, European countries, India, Malaysia, and Turkey and also attract tourists from those areas. ❖ Conduct more research on the history of Aceh. ❖ Cultivation of commercial crops with high value adjusted to suit the market trends, as was once successfully the case in Aceh. 	<ul style="list-style-type: none"> ❖ Islamic values in social life are weakening, due to the penetration of various cultures. ❖ The history of Aceh is understood textually rather than contextually.

b) Medium-Term Objectives and Strategies

The main objectives of developing activities rooted in the historical context are to make a good use of the historical values of the Acehnese people's struggle to enhance the work ethic in managing their natural resources for the people's welfare, and to optimize the commercial activity as it was during NAD Province's glorious years. The **Strategies** to be applied in order to achieve these objectives are:

- ❖ Enhance the Acehnese people's work ethic based on the historical values seen in their struggle against colonialism and injustice: the Acehnese indefatigable struggles in the past is expected to be an inspiration to today's Acehnese people to enhance their work ethic, particularly in managing their natural resources.
- ❖ Make good use of historical 'capital' to recapture the glory of NAD in the fields of commerce and high-value crops cultivation: according to the history of Aceh, the strategic position of Aceh attracted Arab and Indian traders to come and engage in commerce. Their arrival brought prosperity to the Acehnese. In addition to its strategic position, Aceh in the past was also noted for pepper production. Such a

historical experience may be used as a basis for restoring the glory of NAD in trade and high-value crop cultivation.

- ❖ A reinvestigation of Aceh's history is needed to create a reference for the next generation: up till now, very books or references on Aceh's history are found. That is why not many young people fully understand the history of the Acehnese people's struggle from the past right up to present time. More books or references should therefore be prepared.

c) Action Plans

The following five programs based on its historical roots are planned for the development of Aceh for the period of 2008-2011:

1. To promote the history of Aceh through a variety of media. This activity is to promote the history of Aceh. The media to be used for this purpose could include print and electronic media, exhibitions, and national or international events. By promoting the history of Aceh, the values resilience and struggle of the Acehnese are expected to be understood by the next generation. These values are also expected to inspire the next generation to work harder at developing their Province. This promotion will be conducted on a routine basis from 2008-2011.
2. To produce historical books on Aceh. Up to the present time, books on the history of Aceh are still difficult to find. In this program, too, the production of books on the history of Aceh should be planned. This activity will be conducted in 2008.
3. To improve the quality teaching about Acehnese values to enhance the Acehnese people's work ethic. The aim of this activity is to improve the quality teaching about Acehnese values that have begun to fade due to the penetration of other cultures. By improving the understanding of high values in daily life, the people's work ethic is expected to be enhanced. This activity will be executed by introducing the material about these values into the school curriculum. This action plan starts with module preparation and module socialization.
4. To encourage the development of the existing seaports for trade, so as to recapture the role the region had in the past. At present, development of strategic seaports to improve economic activities in Aceh needs to be undertaken. To realize this action plan, transformation of values based on assessment or documentation needs to be made.

d) Indicative Schedule

Table 1.2 Implementation Schedule of Historical-Based Development

No	Activity	2008	2009	2010	2011	2012
1	To promote the history of Aceh through various media (printed, electronic, and national/international events).					
2	To produce books on the history of Aceh					
3	To improve the quality teaching about Acehnese values in order to enhance the Acehnese people's work ethic.					
4	To encourage the development of the existing seaports for commerce, as was the case in the past.					

1.2 Equalization of Urban and Rural Demographic Change

a) Potentials and Constraints

Number of Population. The total population in the NAD Province, according to the SPAN 2005 (National Census) is 4,031,589 people. Of this number, the majority of the people is concentrated on the coastal areas of North Aceh, Pidie Bireun, East Aceh, Aceh Besar, and Banda Aceh. The population distribution in the Province has, however, not been equal up to now. The population distribution is still focused on the old settlement areas, and the expansion of new human settlement is very slow.

Population Growth Rate. The annual population growth rate in the NAD Province between 2000 and 2005 was 0.47%, much lower compared to the average population growth rate within the period of 1980-1990 (2.73%) and 1990-2000 (0.47%). The decrease in population growth was due to the decreasing birth rate. The absolute population growth rate of Aceh is, however, necessary to be increased. Such a condition was a result from the government failure to improve the educational system for Aceh people during the past security condition and disaster striking the Province.

Population density. The population density in the NAD Province is 68.5 people/km². The highest density is in the City of Banda Aceh amounting to 2,916 people per km². Lhokseumawe and Langsa have population density much higher than that of other cities. The lowest population density is in the Regency of Gayo, having a total area of around 10% of the entire Province and population density of 13 people per km².

Dependency ratio. Dependency ratio of the population is 57% (51.1% of children and 5.8% of elderly). The areas with high dependency ratio (above 60%) are Aceh Singkil, Southeast Aceh, Gayo Lues, East Aceh, North Aceh and South Aceh.

Population quality. Up to the present time, the human quality of Aceh is still low. The main factors affecting the population quality are community's low access to meet their basic needs for education, and the high birth rate.

Demographic policies. No policies and strategies have been made for population quality control, population quality improvement, and population mobilization in accordance with the economic growth of the Province.

Population administration. Improvement of the population administration has been implemented since 1960s; however, realization of this program has not successfully been made up to now. On the other hand, there is neither law nor regulation on population administration that will be used to complement the Presidential Decree No. 88/2004 on the Management of the Information of Population Administration. Not all of Aceh people are already aware of the importance of demographic documents, and of complying with administrative matters, and even no population database is available.

Potentials of the NAD Province from the demographic point of view:

- ❖ The NAD Province with its total area of 57,365.6 km² and Exclusive Economic Zone of 534,520 km², which has a total population of 4.2 million people, is categorized as having a "lack of population".
- ❖ Although it lacks people, the number of family members is seen as being small, due to the poor economic conditions (education costs).
- ❖ Since the population is small, while large areas of land are available, the transmigration program integrated with local migration is, therefore, a strategy to be adopted.

Table 1.3 SWOT Analysis of Demographic Equalization

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ From the demographic point of view, NAD Province has a small population. 	<ul style="list-style-type: none"> ❖ Young population is dominant, so the dependency ratio is fairly high. ❖ Population quality is low. ❖ The demographic policies have not been aimed at economic growth. ❖ Demographic administration is not well prepared.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ To continue the small-prosperous-and healthy-family model, related to the endeavor of increasing the human development index. ❖ To aim demographic policies at improving the population quality and quantity, population growth control, population mobilization direction, and population distribution in accordance with the natural and environmental capacity, both at local and national level. ❖ To increase the number of Regencies/cities to be covered by the Demographic Administration Information System. ❖ To improve the welfare of local 'transmigrants' (people who have been resettled from another area) through the cultivation of productive crops and other economic empowerment. 	<ul style="list-style-type: none"> ❖ Population pressure on disaster-prone areas or those serving as conservation for the lower areas

Constraints:

- ❖ Earthquake and tsunami in 2004 has a significant impact on the geographic conditions of NAD Province, particularly the sandy areas struck by the tsunami, where a lot of victims died.
- ❖ Demographic structure of NAD Province's population is composed of youth, that is, young people that are not yet productive (less than 14 years); the dependency ratio of family's economy is, therefore, fairly high.
- ❖ Low population quality due to low accessibility to education.
- ❖ Uneven population distribution in NAD Province due to the population centering on old settlements.
- ❖ Demographic policies have not been focused on the sustainable development.
- ❖ Population administration has not yet been well prepared.

b) Strategies

- ❖ To improve the policies of population distribution and mobilization in a more balanced way in accordance with the environment's capacity to support settlement, through the improvement of economic growth of the area.

- ❖ To improve the population administration policies (population database) to encourage accommodation of people's rights and to improve the quality of documentation, population data, and population information to support the sustainable development plan and its implementation as well as public services through, among others, population registration.
- ❖ To strengthen the prosperous-and-healthy-small-family program both in rural and urban areas, and in areas that were struck by the earthquake and tsunami.
- ❖ To develop the transmigration program for the potential farming, plantation, and coastal fishpond areas.

c) Action Plans

1. Birth Rate Control. This program is aimed at controlling the population growth, which is conducted through:
 - Improvement of the Family Planning (KB) service and access to it, particularly for poor families and families in disaster-prone rural areas.
 - Improvement of communication, information, and reproductive health education services for couples of child-bearing age.
 - Improvement of precautions against negative impacts of contraceptives.
 - Improvement of supply of medicines and contraceptives.
 - Promote more effective and efficient use of contraception in the long term.
2. Family empowerment and resilience. This program is aimed at improving the ability to take care of young children, and improving the family income particularly for *prap-sejahtera* and *sejahtera I* (poor) families, and family environment quality.
3. Institutional strengthening and Family Planning service network improvement. These programs are aimed at controlling the population growth rate and creating quality small families.
4. Demographic database improvement and development. These programs are aimed at improving the post-tsunami demographic inventory system within the NAD Province, which will be conducted through a workshop for national/local trainers, interview personnel, reproductive-health questionnaire personnel, population data collectors, and at developing the inter-Regency/city information system as well as data processing.
5. Local and inter-island transmigration integration. This program is aimed at encouraging the agricultural sector development in strategic areas

d) Indicative Implementation Schedule

Table 1.4 Geographic Equalization Implementation Schedule

No	Activity	2008	2009	2010	2011	2012
1	Birth rate control	■	■	■	■	■
2	Family empowerment and resilience	■	■	■		
3	Institutional strengthening and Family Planning service network improvement	■				
4	Demographic database improvement and development	■				
5	Local and inter-island transmigration integration	■	■	■	■	■

1.3 Social Welfare Improvement

1.3.1 Education Enhancement

a) Potentials and Constraints

The National Law No. 11/2006 on the Aceh Administration, enacted on 1 August 2006, has created high expectations for Aceh's comprehensive educational reform. Although education, in principle, is a strategic issue under the state's authority, the Government of Aceh, due to autonomous status, has the authority to implement education in accordance with local people's characteristics, potentials, and needs.

Educational reform was actually already initiated when the Government of Indonesia reformed the public administration from a centralized to a decentralized system. The existing education system, which used to be under the central government's full authority, has now become a matter for the respective local governments. Such a shift is meant to improve the efficiency and effectiveness of educational management to achieve better educational performance as a whole. The positive impact of educational reform is indicated by the increase in community's participation and access to schooling and education.

Educational institution. As of December 2005, there are 915 pre-schools, 3,791 elementary schools, 895 junior high schools, 519 high schools/vocational schools (including small vocational schools and long-distance classes), 1,500 "Dayah" and "Balee" (417 of which have been accredited as *Pondok Pesantren*), as well as 70 tertiary educational institutions (7 state-owned institutions and 63 privately run institutions), which are spread throughout Aceh. Every year, the number of such institutions increases, but they are not equally distributed across the rural areas. People's weak economic capacity, especially those living in rural areas and in unfavorable geographic conditions without adequate transportation, are all constraints to fully access the educational services.

School Participation Number (SPN) by age group: 7 to 12 years is 94.72%, 13 to 15 years (86.46%), 16 to 18 years (62.48%), and 19 to 24 years (18.33%). Specifically for the pre-school kids (kindergarten children), the Gross Enrolment Ratio for the 4 to 6 age group is 15.05%. The participation numbers for pre-school, secondary school, and higher education are the lowest. Such a situation can be understood since the government, at present, can only exempt schooling expense for elementary school and secondary school through the provision of a subsidy called *Biaya Operasi Sekolah* (School Operation Funds), while the schooling cost for other levels of education are shouldered by the community. According to data for the period 2001-2006, the School Participation Number in Aceh continues to increase. This indicates that the community's participation in and access to education is improving.

Impacts of conflict, earthquake and tsunami. As reported, there are 1,157 school buildings that were burnt by unidentified people during the period of conflict. The physical damage included teaching-learning equipment that was destroyed. Rehabilitation and reconstruction of infrastructure damaged as a result of conflict as of the mid of December 2004 has accounted for 96%.

When the physical rehabilitation and reconstruction had nearly finished, Aceh was struck by a massive earthquake and ensuing tsunami on 26 December 2004, which resulted in a great deal of damage to various facilities, including school buildings and teaching-learning equipment. The disaster damaged at least 1,755 educational facilities, constituting 23.5% of the all existing educational institutions. Besides this, there were also 2,206 non-formal educational institutions that were damaged, and 2,500 educational personnel and 40,900 students who died or were missing. The estimated cost of the damage to educational facilities, as a result of the earthquake and tsunami, was Rp.1,34 quintillion. Up until the end of 2006, 45% of educational facilities and infrastructure that were damaged have

been rehabilitated and reconstructed. Thus, many school children were studying in tents and temporary living quarters in unfavorable conditions. The educational burden became increasingly hard whenever more disasters, landslides and floods, struck the Regencies of Aceh Tamiang, East Aceh, North Aceh, Bener Meriah and Gayo Lues at the beginning of 2007, damaging hundreds of school buildings and other supporting facilities. All this made educational conditions in Aceh even worse.

Education and gender. From the viewpoint of gender-based equalization, although no significant difference was found, women's participation on school-age groups is higher than that of men's. In school-age groups aged 7 to 12, women's participation is 94.77% and men's is 94.67%, while the women's school participation number in the 13 to 15 age group is 86.78% and men's is 86.14%. Women's school participation number in the 16-18 age group is 63.20% and men's is 61.76%. Women's school participation number in the 19-24 age group is 18.08% and men's is 17.53%.

Weak vocational education. At middle (secondary) education level, the composition of general education and vocational education, in terms of the number of students, is not proportional. According to data from 2005, the composition of High School and Vocational School students is at a ration of 85:15, while the national average ratio is 68:32; and the national target number of students by 2009 will be 60:40. The limited number of vocational schools relevant to local government needs has caused the development of plantation, marine, fishery, and other sectors potentially owned by a number of local governments, to face difficulties, since they are not backed up by the availability of a work force with mid-level skills.

The average score of 2005/2006 National Examination is 7.06 for Junior High School students and 6.75 for Senior High School/Vocational School students, which is still below that of 2005/2006 (7.56 for Junior Secondary School and 7.33 for Senior High School/Vocational School).

Qualifications of educational personnel. Teachers with D4/S1/S2 qualifications, working under the *Dinas Pendidikan* (Department of Education at provincial/local government level) only made up 34.47% of all teachers, while the others amounted to 65.53% (with D3/D2 qualifications). Meanwhile, teachers with S1/D4 qualifications, working under the Department of Religious Affairs accounted for 23% while the rest (with D3/D2 or lower qualification) was 77%. In view of this reality, an effort to improve teacher qualification to S1/D4 level and trainings to improve teacher's competencies needs to be put into action sooner. Moreover, equal distribution of teachers to rural areas should also be undertaken so that the existing teachers are not concentrated in urban areas.

Teaching-learning facilities. Inadequate facilities for teaching and learning activities such as libraries, laboratories, teaching/learning aids, and low participation of business/industry owners in educational development, have all been among the factors causing low-quality education in Aceh. Other indicators that school leavers are low-quality, include: low national examination scores and a high rate of unemployment as a result of unabsorbed school-leavers in the world of work.

Non-formal education. Educational problems are not only related to the provision of formal education for children, but also the provision of knowledge and life skills for every community member through the Non-Formal Education Program. Serious illiteracy alleviation needs to be undertaken in an attempt to develop the nation's academic competencies and support long-life learning. As of December 2006, there were a total of 161,209 people (6.02%) of the total population (aged 15 and above). The target age-group of 15 to 44 is the high priority of the illiteracy alleviation program, while those of 45 and above are an additional target necessary to be handled through the *program keaksaraan fungsional* ("functional literacy program"). In terms of illiteracy alleviation, the Provincial Government of NAD has attempted to not only conduct Roman alphabet illiteracy alleviation, but also Arabic illiteracy alleviation indicated by ability to read the

Quran well and correctly. The community also needs to be provided with adequate life skills to help improve their living conditions.

Table 1.5 SWOT Analysis for Educational Sub-Sector

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Elementary educational institutions are almost equally distributed in the rural areas and accessible to community. ❖ Literacy level is high. ❖ School participation number is fairly high (more than 40% of the population is secondary and tertiary school-leavers. ❖ School participation is not subject to gender-based discrimination. ❖ Quality tertiary educational institutions are available. ❖ Legal provisions establishing an amount of 30% of the oil-and-gas profit share is used for education. 	<ul style="list-style-type: none"> ❖ Access to educational services is not equal. ❖ Attempts to apply Islamic-nuanced education cannot yet be implemented optimally. ❖ Programs for life skill enhancement are not yet conducted optimally. ❖ Educational supporting facilities are not adequate. ❖ Qualified teachers are not evenly distributed. ❖ At secondary education level, number of general (high) schools is bigger than that of vocational schools. ❖ Many formal and non-formal educational facilities were damaged by natural disasters, and around 2,500 teachers died. ❖ In terms of qualification, 61.58% of the teachers under the <i>Dinas Pendidikan</i> (Department of Education) hold S1/D4 degree. ❖ School-leaver's competitiveness is still low.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Improve and expand the educational service distribution and access. ❖ Enhance the quality, link-and-match prospect, competitiveness of school-leavers. ❖ Improve public administration, accountability and imaging. ❖ Enhance the application of Islamic-nuanced educational system. 	<ul style="list-style-type: none"> ❖ Development of vocational education without being supported by facilities/ infrastructure and qualified educators as well as business/industry owners. ❖ Development of higher/tertiary educational institutions without being supported by qualified educators, each Regency/city establishes their own higher educational institution ignoring quality and relevance (link-and-match prospect). ❖ Indication of profit-oriented objectives and rapid process of gaining diploma/certificate. ❖ High rate of poverty potential to increase the school-drop-out rate and child labor.

Islamic-nuanced education. In an attempt to provide Islamic-nuanced education, the government is still facing constraints such as: unfinished Curriculum Plus (combination of both national and local curriculums with Islamic content), many schools having no worship place (*mushalla*), lack of Islamic books, lab-work tools/teaching aids, and absence of standard operating procedures (SOP) for application of Islamic-nuanced education. Besides this, educational institution accreditation for *dayah* and *pesantren* as alternative formal educational institutions needs to be conducted. At present, there are around 1,500 *dayahs*, but only 417 have been accredited as *pesantrens* and the rest are categorized as *Balee Semeubeut* (ordinary worship houses).

Access to education. The educational problems in Aceh are increasingly complicated due to an increase in the number of poor people (low-income groups) and orphaned children who are victims of conflict and natural disaster. Whatever their problems are, they

have the right to access to education and better living conditions. The Government of Aceh is required to fulfill children's fundamental right to receive education. The UUPA has already demanded that Acehnese children aged 7 to 15 must be enrolled at elementary schools for free. Although children are exempt from school fees, every school must meet the Minimum Standard of Educational Service as established in the Decree of the Minister of National Education No, 053/U/2001. The quality of free elementary education is a realization of the provincial government's commitment to an education-for-all program, which is one of the Millennium Development Goals.

Based on the SWOT analysis above, the **potentials** of the educational sub-sector could be summarized as follows:

- ❖ Existence of a fairly big *APBD* (Local Government Budget) to finance educational development in NAD Province (30% of the oil-and-gas profit share to be used for education), other than the de-concentrated APBN (Central Government Budget) and Specific Allocation Fund.
- ❖ Strong international support for assisting the educational program in NAD Province, through multilateral and bilateral boards, and the NGOs/Private Sector.
- ❖ Development of vocational education which is based on local resource potentials.

Constraints of the educational sub-sector are:

- ❖ Many damaged educational facilities, as a result of conflict and natural disasters, which up to the present time have not been rehabilitated or reconstructed.
- ❖ High rate of poverty that weakens the community's access to education.
- ❖ Limited supporting facilities/infrastructure and qualified personnel for the development of vocational training and higher education.
- ❖ Uneven distribution of access to education.

b). Medium-term Objectives and Strategies

Major objectives and strategies for the development of educational sub-sector are as follows:

- ❖ To guarantee the distribution and expansion of access to education
 - Reducing financial constraints on pre-school, special-school, elementary, and secondary education providers.
 - Improving internal efficiency and school-survival at every education level.
 - Encouraging greater community and business owner participation in education.
 - Developing the educational facilities focused on the effort to reduce constraints on learning opportunities and expansion of access to elementary and secondary education in rural areas.
 - Encouraging the development of Higher Educational Institutions in NAD Province.
- ❖ To improve the quality and relevance of education and the competitiveness of school-leavers
 - Improving the efficiency and performance of educational services
 - Decentralizing school/Institutional management
 - Continuously reforming the curriculum and providing guideline materials
 - Decentralizing the teacher management and development plan
 - Improving the school/institution performance and monitoring of pupils' achievement.
 - Improving the government civil servant capacity.
 - Improving the quality and quantity of schools, *dayah*, *madrasah*, libraries and public libraries.
 - Optimizing the institutional, curriculum, managerial development and accreditation of *dayah*.

- ❖ To improve public administration, accountability and image
 - Strengthening the planning, monitoring, and evaluation system
 - Improving the institutional and school management
 - Improving the accountability and transparency of management
- ❖ To accelerate the application of Islamic-nuanced education
 - Building cooperation between the *Dinas Pendidikan* (Department of Education) and other related parties such as Higher/University Educational Institution, MPU, MPD, *Depag* (Department of Religious Affairs), *Dinas Syariat Islam* (specific office taking care of the implementation of Islamic Law), *Biro Keistimewaan Setda Prov.* (Provincial Bureau for Special Authority), and other Islamic community-based organizations.
 - Providing school *mushalla* (worship place), school books, Islamic-nuanced books, and their manual for teachers and parents as well.
 - Improving teachers' skills in practicing the method of Islamic value internalization.

c). Action Plans

There are four programs that are planned to develop the educational sub-sector between 2008 and 2012. The programs are as follows:

1. Equalization and expansion of access to education for all social strata. The program is aimed at improving the community's access to quality education through:
 - Improving the community's participation and access for pre-school children (0 to 6 years old) both formal and non-formal;
 - Increase the 12-year elementary and secondary educational service coverage by implementing single (integrated) management;
 - Developing vocational schools through demand-based approach;
 - Expanding learning opportunities and life skill training through school-based community life-long learning programs;
 - Integrating both formal and non-formal educational concepts for *dayah salafiyah* and encourage the *dayah* religious leaders/teachers to ensure that school-age children follow formal or non-formal education programs;
 - Rationalizing and consolidating the partnership between State Higher Educational Institutions and Private Higher Educational Institutions in terms of financial and managerial matters.
 - Establish a *Kopertis* (Coordinating Office for Private Colleges and Universities), Board of Accreditation, and set the priorities and objectives of higher/university educational institutions in accordance with the local potentials.
2. Quality, relevance, and school-leaver competitiveness improvement. This program is aimed at improving the quality of school graduates in NAD Province so that they can compete in the global market.
 - Utilize educational facilities in a more efficient and effective manner and distribute educational personnel more equally;
 - Improve the quality of educational personnel through capacity building program in the form of trainings and courses.
 - Improve the access to instructional materials and other inputs for graduate quality improvement.
 - Improve the community (particularly business owners) participation to produce autonomous, competitive, and competent graduates.
 - Accelerate the utilization of information and communication technology (ICT) to expand the TV-based learning scope.

- Apply the national curriculum (in accordance with the standard of National Education) to keep with the rapid development of national, regional, and even global (international) education.
 - Improve learning opportunities for government apparatus to enhance their capacity through training courses or higher institutional education.
 - Develop government school, *dayah*, *madrasah*, and public libraries and complete book collections.
 - Develop the educational institution, curriculum, and management, and *dayah* accreditation through workshop, seminar, and training.
3. Improvement of public governance, accountability and image. This program is aimed at improving the educational management system in the NAD Province through:
- Improving the community participation in planning, management, and monitoring of the performance of the educational institutions through School Committee empowerment;
 - Strengthening the school-based management including the accountability of financial management;
 - Improving and revising the system and mechanism for monitoring and evaluation of the performance of educational institutions;
 - Enhancing the effort to alleviate collusion, corruption and nepotism in educational institutions through internal control, public control, and other functional supervision from related institutions;
 - Setting up transparency of educational funding management by requiring the educational institutions to provide the public with information and reports on their achievement.
4. Acceleration of Islamic-nuanced teaching application at all education levels.
- Formulate and distribute the standard operating procedure for the implementation of Islamic-based education values;
 - Accelerate the preparation of Islamic-nuanced curriculum and instructional materials for every education level;
 - Enhance the quantity and quality of religion teachers and distribute them equally across rural areas;
 - Prioritize and/or rehabilitate worship facilities in every school;
 - Apply a monitoring and evaluation system that effectively assesses the educational institutions' implementation of the Islamic-nuanced teaching.
 - Enhance teachers' capacity for integrating their religious insight into the teaching and learning processes.

d). Indicative Implementation Schedule

The proposed implementation schedule is presented in the following table:

Table 1.6 Implementation Schedule for Sub-Educational Sector Development

No	Activity	2008	2009	2010	2011	2012
1	Distribution and expansion of access to education for all social strata.					
2	Improvement of quality, relevance, and school-leaver competitiveness.					
3	Improvement of public governance, accountability and image.					
4	Acceleration of Islamic-based teaching application at all education levels.					

1.3.2 Community Health Improvement

a) Potentials and Constraints

The natural disaster in December 2004 had a massive impact on community health conditions in NAD Province. This can be said despite the lack of an authentic report on this impact. In order to find a comprehensive picture of the community health status in NAD Province, it is, however, necessary to find out about the condition of community health before the natural disaster.

Pre-tsunami-disaster health Status. This picture of the pre-tsunami-disaster health status is based on these indicators: infant mortality rate (IMR), maternity mortality rate (MMR), marrying-age, nutrition of children under-5 and pregnant women, life-expectancy rate, and distribution of contagious diseases. According to the Susenas Report, the 2004 infant mortality rate of 10/1000 is better than that of 2001. This figure is, however, higher than the national figure 35/1000. On the other hand, the maternity mortality rate (373/100,000) is lower than that of 2001. All these figures have, however, not indicated a significant change in maternity mortality rate reduction. The 2004 Susenas figures even indicate an increase in the proportion of married women aged 15 to 24 was 55%; however, there were still women under 16 who were married (4%) who were at pregnancy-and-maternity mortality risk. Of this number, the biggest proportion was in Southwest Aceh (11%). Besides, contraception use is not yet maximized; of married women (aged 15 to 49) only 53% have used contraception. Of this figure, the Regency of Pidie has the highest percentage (85%) and the Regency of Nagan Raya has the lowest (39%). The nutrition status of children under 5 and pregnant women in NAD Province is not yet favorable. According to the 2004 Health Profile, around 9,448 children under 5 out of 233,280 who were weighed, 4.05% were identified as suffering a lack of nutritious food, and this figure does not indicate a significant change compared to that of 2001 (5.06%). Provision of mother's milk for infants below 24 months accounted for 23%, while that of 18 to 23 months is 34%. These percentages have not yet represented the ideal figures for the benefits of mother's milk in terms of nutrition provision and infection prevention. According to UNDP's 2002 Report, the life-expectancy rate of the Acehnese people is 76.7 years, higher than the national rate. According to survey results, contagious diseases found in NAD Province are: diarrhea, malaria, TBC (tuberculosis), respiratory deceases (Pneumonia), dengue fever, leprosy, and skin infections. The handling of these diseases has not produced any optimum outcome. Number of cases reported in 2004 is not different from that of 2001. Likewise, figures for contagious diseases are still lower than that of the national average (exclusive of Java and Bali). The highest number of malaria cases is in the Regencies of Simeulue, Southeast Aceh and Sabang City; while the highest number of tuberculosis cases is in the Regencies of Pidie, Bireuen and Aceh Besar. The highest number of dengue fever cases is in Banda Aceh City, and the Regencies of West Aceh and Aceh Besar (2004 Health Profile).

Health service. It covers utilization of health service, mother and child health services, and immunization for infants and children under 5.

- Utilization of health service. According to the 2004 Health Profile, there has been an almost twofold increase in the utilization of health services both in the public health center at sub-district level and hospital. However, the level of satisfactory hospital service is still low (54.2%).
- Mother-and-child health services. The 2004 Health Profile shows the Ante Natal Care coverage of 69.2% is bigger than that of 2001 (60.7%). Despite this increase in coverage, it is not satisfactory yet. In addition, the coverage of paramedic-assisted birth also increased from 50.7% in 2001 to 62.7% in 2004.
- Immunization for infants and children under-5. Coverage of BCG, DPT (1) and measles immunization in Aceh according to the 2004 Susnas is as follows: 76.2%,

76.6%, and 76.5% respectively, lower than the national average of 90.2%. The coverage is also different in one Regency/city: BCG coverage in the Regency of Gayo Lues was only 22.3%, while in the Regency of Bireuen it was a mere 9.1% during the same year. The low coverage is due to public implementation of national immunization and inconsistent immunization personnel. All these data show that immunization services needs to be improved.

Environmental health (sanitation) condition. The 2004 Sesenas shows that 79% of households in NAD Province have their own drinking water facilities. The biggest number is in Nagan Raya (91%) and the smallest is in Southeast Aceh (55%). In total, 7% of households in Simelue are without their own drinking water facilities. In terms of sanitation facilities, 63% of the population has lavatories; only around 21% does not, particularly on NAD Province's southwest coast (West Aceh, Nagan Raya and South Aceh) and Pidie as well. On average, more than 40% of the population in these areas does not have sanitation facilities. In terms of latrine use, most of the households have their own goose-neck latrines (57%); only around 11% and 23% use '*plengsengan*' latrines and leaching pits respectively. The high level of septic-tank use is in Banda Aceh City (90%). The highest number of households without latrine is found in Gayo Lues (39%). Community behavior and habits may be a factor in decisions whether to use or not use a latrine. For instance, people in Simelue generally tend to dispose of their human waste (feces) at the beach. On the other hand, the communities of Aceh Singkil, East Aceh, North Aceh and Aceh Tamiang use leaching pits. Use of a river for human waste is particularly prevalent on the west coast (South Aceh and ABDYA) and Aceh Tengah (Gayo Lues and Southeast Aceh). With regard to the management of water supplies and networks, the government unit responsible for this is the PDAM (Local Government-Owned Water Supply Enterprise). It manages water distribution, and the Department of Public Works is responsible for technical design and infrastructure and facilities development. Meanwhile the Department of Health is responsible for assessing the health parameters of the distributed water supply.

Post-tsunami health status. The earthquake and tsunami of 26 December 2004 caused more than 150,000 deaths and more than 500,000 people to lose their belongings and dwellings. Among Regencies/cities hit by deaths and loss of property, Banda Aceh City and Aceh Besar were worst affected (122,736 or 22% of the previous total population), Aceh Jaya (16,874 or 17%), and West Aceh (13,785 or 7%). Women and children made up the largest number of victims. As shown in the 2005 Population Census, the men outnumber the women. This figure is above the average for the whole of NAD Province. Due to the loss of dwellings, many people in the Province lived in temporary accommodation centers. According to the 2005 Report of the Central Bureau of Statistics the biggest distribution of refugees was seen in 5 out of 13 regencies: Banda Aceh City, Aceh Besar, West Aceh and Singkil. In these five Regencies there were between 9,525 and 54,393 refugees. Refugee distribution ranging from 5,008 to 9,524 people were found in Pidie, Bireun, Simelue and South Aceh. Refugee distribution ranging from 1,070 to 5,007 people was seen in Sabang, Pidie, Southwest Aceh and Nagan Raya. According to discussions and experts' opinions, the natural disaster had many impacts on people's health in NAD Province. Although there is no comprehensive report on it, the anticipated impacts included:

- Increase in identified contagious diseases such as pneumonia, measles, malaria, dengue fever and diarrhea, as a result of the poor environmental conditions;
- Lowering of nutrition intake of people susceptible to illness, including pregnant mothers, infants and children under 5;
- Increase in mental disorder as a result of post-traumatic stress

The most frightening impact of a big natural disaster on this scale is the emergence of contagious diseases. However, no contagious diseases have been reported up to now.

The predicted decrease in nutrition intake, according to the Nutrition and Health survey conducted by UNICEF in March 2005 was as follows: (a) 11.4% of children under 5 (wasting); (b) 43.1% (underweight) and (c) 38.1% (stunting).

There are significant differences between some areas and others. In Pidie and Southeast Aceh, more than 50% of children under 5 were categorized as underweight. Furthermore, the highest rate of malnutrition cases (above 15%) was found in Simeuleu, and the lowest (less than 5%) was in Bener Meriah.

Environmental health conditions. The tsunami disaster caused damage to water sources and the community consumed drinking water that was below the average health standard. A majority of the wells in the coastal areas are expected to have been penetrated and contaminated by seawater. According to an assessment conducted by CDC Atlanta and CARE in Banda Aceh in June 2005, 100% of the wells were contaminated with E.Coli bacteria. The survey results also show that 60% of the people living in the temporary living centers consumed water in containers, 12% consumed ground well water, 9% consumed water from boreholes, and the rest consumed filtered water, spring water or bottled water. The level of container water use for drinking was 99%, and for washing/bathing was 60%. Use of clean water obtained by the community was very small (1 liter/day/person).

Health financing. In general, Aceh sources of finance for health are grouped into three types: (1) government, (2) donor institutions, and (3) households and the private sector. The community's contribution to health financing is small. The Susenas survey results show that contribution of Aceh community to health financing is Rp.44,847 per-capita per year or US\$5 per-capita per year. Likewise, the annual budget allocated for Health Development from APBN (National/Central Budget), APBD I (Provincial Budget), APBD II (Local/Municipal Budget) for the NAD Province is not optimal – ranging from Rp.84 billion to Rp.429.4 billion. After the tsunami, a Board of Rehabilitation and Reconstruction (BRR) for Aceh and Nias was established in order to conduct coordination. The funding sources of BRR are foreign aid and APBN. The APBN allocated for the health sector has seemed to increase from year to year. The annual allocations for 2005, 2006 and 2007 were Rp.323 billion, Rp.326 billion, and Rp.356 billion respectively. Out of 520 planned development projects, 296 have been realized. For the short-term, the government is expected to prioritize investment in the health sector to prevent economic loss as a result of diseases and death. For the long-term investment plans to achieve the Millennium Development Goals. By doing so, allocation for the health sector will increase as mandated in the Law of Aceh Government so that all Acehnese people can afford to benefit from the available health service.

Medical facilities and medicines. The tsunami has also resulted in damage to basic medical facilities; 12 of the 43 damaged *Puskesmas* (Community Health Centers) in NAD Province were to be relocated. Of 31 government and private hospitals existing in the Province, at least two of them (government hospitals) were damaged seriously: Meuraxa Hospital and Zainoel Abidin Hospital which are under reconstruction. Other damaged medical facilities were the Province's medicine warehouse and Aceh Jaya's medicine warehouse, the Medical Education and Training House in Jantho, the Provincial Department of Health Building, and Buildings of the Department of Health in Aceh Jaya and Simelue. In terms of post-tsunami medicine provision in the Province, there has been an increase in number and types of medicines stored in the medicine warehouses. Besides, there are a lot of medicines from other parties which are now in bad condition and which need special handling, especially to prevent them from having an environmental impact.

Medical personnel. The limited number of personnel and their lack of qualifications are among the medical problems faced by NAD Province. According to the 2004 Health

Profile, the ratio of medical personnel to 100,000 people is still below the ideal level, except for the number of midwives, which has surpassed the target figure. Furthermore, the ratio of general practitioners, dentists, nurses, nutritionists, and sanitationists is still far below the target figures. The distribution of medical personnel is a complicated problem in Aceh since most of these personnel are concentrated in the urban area. The problem has become increasingly difficult since the tsunami struck the Province. The disaster claimed the lives of 17 doctors, 3 dentists, 49 midwives, 30 nurses, 2 pharmacists, and another 104 personnel. To provide optimum medical service in the Province, recruitment of qualified and competent medical personnel needs to be conducted as necessitated by the numbers required.

Table 1.7 SWOT Analysis of Health Sector

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Public awareness of health ❖ Available trained paramedics, doctors and medical personnel ❖ Available medical facilities (Public Health Centers and Hospitals) in every Regency ❖ Increase in budget for health financing 	<ul style="list-style-type: none"> ❖ Restricted distribution of medical facilities in rural areas (small islands) ❖ Limited services ❖ Unhealthy living habits and conditions ❖ Minimum Public Health Center and Hospital medical service ❖ No evidence-based Information system
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Development of medical facilities in rural areas ❖ Development of referred-to hospitals for the east, central and west parts of the Province ❖ <i>Askeskin</i> medical insurance for the poor ❖ Central government and other non-government parties are focused on the Province's health conditions ❖ Existence of Law No. 40/2004 on medical/financial support from government 	<ul style="list-style-type: none"> ❖ Lowering public confidence in medical service provided by government ❖ Individual medical financing shift to other areas (abroad) ❖ Contagious diseases resulting from natural disaster impact such as diarrhea, measles and pneumonia ❖ Possibility of HIV/AIDS endemic ❖ Possibility of Bird Flu spread ❖ Disease resulting from behavioral change ❖ Globalization impact tending to increase

Based on the SWOT analysis above, **potentials** and **constraints** can be summarized as follows:

- Ideal number, types, and distribution of medical specialists are not yet met.
- Access to medical services is low.
- Public confidence in the medical referral services is low.
- Awareness of global endemic of infectious diseases

b) Strategy

The objective of health development is to improve the quality of, and access to, public medical services. The strategic interventions aimed at achieving this are as follows:

- ❖ Improve the basic, referral, and special medical services.
- ❖ Apply a policy regarding a health funding mechanism suitable for the community's needs and health service delivery for the whole community
- ❖ Improve the quantity and quality of medical personnel through appropriate planning, placement of medical personnel and appropriate capacity building to support the development of the local health system.
- ❖ Improve the coverage, distribution, efficiency and quality of medical service provision.
- ❖ Set priorities for disease prevention and control.

- ❖ Strengthen the referral mechanism by using the hospitals with most advanced services.
- ❖ Develop the technology-based medical information system.
- ❖ Conduct studies on medical policies and problems
- ❖ Develop the *Badan Layanan Umum (BLU)* (Board of Public Service) of the provincial and district hospitals.
- ❖ Improve the cross-sector coordination and cooperation with the community, including local national and international NGOs for each effort towards health development through advocacy
- ❖ Develop the facilities for medical education.

c) Action Plans

The actions plans for the development of medical facilities for 2008-2012 are as follows:

- i. Public campaign on medicine use (Program Obat dan Pembekalan Kesehatan). This program is aimed at utilizing medicines, both modern and traditional, and preventing the public from side effects. Activities in the program include:
 - Building a warehouse for permanent storage of the distributed medicines in every district/Regency that has no such facility and fund its maintenance costs.
 - Procure infrastructure and medicine distribution tools in the Province, Regency/city and sub-district public health centers.
 - Conduct training on medicine distribution management and planning in Community Health Centers.
 - Increase the number and types of the available medicines, referring to the Essential Medicine List.To provide the appropriate medical tools in order to serve the community's needs for medical service, a number of activities will be undertaken:
 - To list a manual for medical tool maintenance.
 - To repair and calibrate medical tools on a routine basis
2. Individual healthcare This program is aimed at providing optimum referenced-medical service with an area-based approach through the following:
 - Identification and evaluation of medical personnel and other supporting facilities owned by every hospital in Aceh.
 - Develop excellent medical services/specializations in the referenced RSUD (local government hospitals) of Lhokseumawe, Meulaboh and Langsa.
 - Training for the medical personnel of the Province, and Regency/city to improve their medical services.
 - Develop excellent medical services/specializations in Zainoel Abudin Hospital (RSZA) and the mental hospital (RSJ).
3. Health promotion and community empowerment. This program is aimed at empowering individuals and families to maintain, improve and protect their own health and environment to achieve a healthy, autonomous, and productive community. Activities in this program are:
 - Improvement of public health education based on clean and healthy living habits and behavior
 - Development of Medical Promotion (*Promkes*) media and Communication, Information and Education (*KIE*) technologies, suited to the local specialty, including traditional media
 - Development of school health units to create sanitary environments and healthy living habits and behavior,

- Enhancement of medical personnel's skills and knowledge through technical *Promkes* training.
- Improvement of infrastructure and facilities for *Posyandu* (integrated service post).

4. Healthy environment

This program is aimed at creating a healthy and conducive environment to prevent the public from facing environmental hazards. Activities in this program are:

- Promotion of health and communication, information and educational technology on healthy homes, wash-hands-before-having-meal habits, sanitary latrines, and environmental hygiene.
- Environmental health control in workplaces, offices, clinics and hospitals, schools, and industrial facilities.
- Improvement of cooperation between Department of Health and Department of Public Cleanliness in monitoring and evaluation of the cleanliness of public facilities and places.
- Preparation of *Tim Dakwah Kesehatan Lingkungan* (environmental health teams) in cooperation with Religious Educational Institutions to promote the use of sanitary latrines during Friday preaching in mosques every month.

5. Community health endeavor

This program is aimed at providing the affordable basic medical service. Activities in this program are:

- Basic Medical Service
 - Build/rehabilitate/reconstruct *Puskesmas* (*Pusat Kesehatan Masyarakat* - Community Health Centers), *Pustu* (*Puskesmas Pembantu* – Branch Community Health Center), *Polindes* (*Pondok Persalinan Desa* – Village Child Delivery House), *Posyandu* (Integrated Services Post) in accordance with the required facilities.
 - Procure sterilization tools and train staff in their use at all basic medical service units.
 - Conduct training for all medical personnel on application of the standard of infection prevention.
- Maternity health
 - Training for maternity *Puskesmas* managers;
 - Provision of competence-based training (APN, LSS, KIPK) for all midwives in medical service units.
 - Provision of training/standardization for medical personnel of *PONED* (*Pelayanan - Obstetric Neonatal Emergensi Dasar* - Basic Obstetric Neonatal Emergency Services) and *PONEK* (*Pelayanan Obstetric Neonatal Emergensi Komprehensif* – Comprehensive Obstetric Neonatal Emergency Services).
 - Establish “Prepared Village” (*desa siaga*) and “Mother Friendly Movement” (GSI - *gerakan sayang ibu*)
- Children's Health
 - Training on *ADITUKA* (infant growth) nutrition provision.
 - Guidance for *posyandu* cadres and training in MTBS (*Manajemen Terpadu Balita Sakit - Integrated Management of Small Children's Illnesses*) to Village Midwives;
 - Public campaign on drug abuse for teenagers at school and *pesantren*.
- Mental health
 - Provide special space, in *Puskesmas*, for guidance and counseling.
 - Training for nurses and doctors on provision of guidance and counseling service.
 - Procurement of facilities and infrastructure needed for guidance and counseling service in the referred-to hospital in the Regency/city.

- Disabled and old people's health
- Provision of equipment supporting the disabled and training on how to use it,
- Assessment and preparation of medical service in accordance with World Health Organization's standard; and
- Human rights protection for the disabled.

6. Disease prevention and elimination

- Surveillance and epidemiology
 - Training for the personnel of the Department of Health, Hospitals, and Puskesmas on surveillance and epidemiology.
 - Provision of epidemiologists and entomologists in the Department of Health of the Regency/City.
 - Provide technical assistance for medical personnel handling STP, SKD KLB, risk factors and specific epidemiologic surveillance.
- Tuberculosis prevention
 - To decrease the incidence of tuberculosis and death rate resulting from tuberculosis so that this disease is no longer a health problem in Indonesia.
 - Enhance the public campaign for early contact tracking
- Leprosy prevention
 - To reduce the spread at a certain level so that leprosy will not become a public health problem.
 - To prevent newly-identified patients from becoming disabled through public campaign for early contact whenever suspect leprosy is found.
- Prevention and elimination of dengue fever

Reduce the dengue fever rate and death rate resulted from this disease through:

 - Expansion of laboratory-service coverage for blood testing and dengue fever diagnosis.
 - Improvement of community participation in mosquito nest elimination.
 - Improvement of fumigation staff's capacity
- Prevention and elimination of malaria disease
 - Procurement of materials and equipment especially the RDT diagnosis kit and ACT medicine
 - Conduct personnel training.
 - Expansion of coverage of blood survey.
 - Expansion of coverage of vector survey and kelambunisasi (mosquito net provision).
- Prevention and elimination of rabies

Develop the selected Puskesmas/Hospital as Rabies Center through training and vaccine procurement and a public campaign on treating animal bites that could spread rabies.
- Prevention and elimination of diarrhea

Procurement of medical needs (infusion, wing-needles, infuse pipettes, and cannula) and early handling of diarrhea.

- Immunization
 - o Training in use of the uniject device for Hepatitis B immunization and auto-disposable syringe
 - o Enhance the personnel's capacity in KIPI (Kejadian Ikutan Pasca Imunisasi - Post Immunization Impact) case tracking, recording, and responding.
 - o Provide the medical personnel with technical guidelines on Vaccine Vial Monitor use.
 - o Conduct training on planning of vaccine needs, storing, distribution, recording and monitoring.

7. Public nutrition improvement

This program is aimed at reducing the prevalence of lack of nutrition for the low-income groups through the following activities:

- Training of therapeutic feeding for medical personnel in hospitals.
- Socialization of exclusive ASI (mother's milk) and ASI food supplements for pregnant women and breastfeeding mothers.
- In cooperation with local religious institutions, prepare preaching material on balanced nutrition.
- In cooperation with local religious educational institutions, prepare preaching material on balanced nutrition.

8. Health resources

This program is aimed at increasing the number, quality and distribution of medical personnel, conducted through:

- Design and application of a management information system and a medical personnel information system.
- Improvement of medical personnel recruitment system in accordance with the required competencies.
- Preparation and application of the standard design of competence-based work performance, in terms of clinical and managerial standard.
- Conduct a competence examination by the provincial examination team, for every graduate of medical educational institution.
- Implementation of accreditation to the educational institution for medical personnel training.

9. Policies and management of health development

To establish the optimal, coordinated, and comprehensive health system in the NAD Province, to meet the need for quality medical services that can improve the public health. This program will be conducted through:

- Strengthening of NAD Province health system
 - Preparation of a participative document on the Local Health System,
 - Conduct coordination meetings and facilitate donor institution/NGO participation in the strategic plan-based development of the health sector
 - Preparation of a variety of policies for local health that can support comprehensive planning, implementation, monitoring, and evaluation of NAD Province's health system.
- Coordination and partnership with the stakeholders
 - Create a Local Health Committee that is backed up by the Provincial and Local/District *Qanun* consisting of professionals, personnel from the Department of Health, hospitals, Department of Public Works, local government water enterprise, Department of Public Hygiene, community-based organizations/NGOs, lawyers,

etc. serving as (1) a center of information, (2) protection of medical personnel, and (3) accommodating public complaints related to health problems.

- Policies for poor and disease-susceptible communities
Assess any problems and constraints faced by poor people and provide medical services to them using the existing financing procedures.
 - Dissemination, socialization and support (training, development and finance) needed to apply the policies.
 - Prepare the policies for handling health problems faced by tsunami victims.
- Accreditation/standard of medical service and medical personnel
 - Conduct an accreditation of the standard of medical services in some hospitals/*puskesmas*
 - Establish and/or improve the policies that are related to the medical services of hospital and *puskesmas* referring to the minimum standards of service, involving medical personnel and professionals.
 - Conduct training and provide other support needed for the accreditation application.
- Disaster prevention and emergency/early warning system
 - Empowerment of the Health Problem Prevention Team of the Department of Health at provincial level.
 - Creation and empowerment of on call squads at the Hospitals (RSZA, RS Cut Nyak Dhien, & RS Tjut Mutiah),
 - Coordination among on call squads, PPMK (Program Penanggulangan Masalah Kesehatan – Health Problem Tackling Program) and community in medical tackling during natural disasters and other disasters resulting from human error, in each Regency/city.
- Health development planning and financing
 - Restructuring of the Provincial/Local/Municipal Department of Health in accordance with its major functions and tasks that support the cross-area coordination and decentralization and good governance.
 - Create an efficient financial administration system and medical equipment management in all government health offices.
 - Provincial and District Health Accounts (PHA, DHA) analysis to decide upon the need for minimum budget allocation to be provided by the Provincial/District/Municipal Government to guarantee medical services for the community, particularly the low-income groups,
 - Training on health budget preparation and planning,
 - Adjustment of SIMPUS (Sistem Informasi Manajemen Puskesmas – Community Health Center Information System) to be used as the software for data collection and health information from Puskesmas to the Department of Health and hospitals in Aceh
 - Training for medical personnel on information technology to support the computerized SIK (Sistem Informasi Kesehatan – Health Information System), Hospitals, and Department of Health,
 - Training on health-related issue assessment for medical personnel of the Provincial/District Department of Health,
 - Training on data management which includes data identification, methods of collection, data analysis, data interpretation, and data documentation, as well as data reporting for medical personnel of the Provincial/District/Municipal Department of Health

d) Indicative Implementation Schedule

There are nine activities for the implementation of the development of medical facilities for 2008-2012, as summarized in the following table:

Table 1.8 Implementation Schedule of Health Development

No	Activity	2008	2009	2010	2011	2012
1	Public campaign on medicine use.					
2	Individual healthcare					
3	Health promotion and community empowerment					
4	Healthy environment					
5	Community health attempt					
6	Disease prevention and elimination					
7	Public nutrition improvement					
8	Health resources					
9	Policies and management of health development					

1.3.3 Poverty Reduction

a) Potentials and Constraints

Poverty is a complex problem that is affected by a variety of inter-related factors: level of individual financial income, health, education, access to goods and services, geographic location, gender and environmental conditions. Poverty is also defined as a condition in which an individual or a group of people, men and women, cannot afford to meet their basic needs to survive in good human dignity. Such a definition is derived from a human rights-based approach that poor people have the same basic needs as other community members.

Poverty is no longer perceived only as a limitation – in an economic context, but also a failure to fulfill fundamental rights by offering different treatment to an individual or a group of people who live a better and more dignified life. The fundamental rights that are generally accepted are the rights to food, health, education, job, housing, clean water, land and living environment, security from threats and violence, and rights to participate in social-political affairs without any sexual discrimination.

The economic crisis and armed conflict have caused a drastic increase in the number of people living in poverty. People living in poverty in 1999 numbered 886,809 (21.72%) out of a total population of 4,083,300. In 2005, it increased to 2,009,639 (49.85%) out of a total of 4,031,589. In terms of population distribution, the largest number of poor people are found in Pidie (288,992 people in 2006) and in North Aceh (217,382 people in 2006). The majority of the poor, both women and men, are farmers and fishermen. So, developing agriculture (oil palm, rubber, coffee, cocoa and corn), fishery, and manufacturing industry and their marketing is the high priority for poverty reduction in NAD Province.

Between 1999 and 2006, poverty in NAD Province increased, which was caused by a number of factors, including:

- **External factors** meaning that a high portion of funds and financial aid was directed at the infrastructure development program and government apparatus, which exceeded the portion allocated to productive sectors such as agriculture and fishery – the basic livelihood for the majority of population (80%); incorrect targets of the program; weak support from social, economic and political institutions to reduce poverty; underfunded micro projects managed by the community (financial aid provision without any support or supervision); low value-added products due to the absence of manufacturing industry; no trickle-down effect from major manufacturing industry for the surrounding area; and limited capacity of the area.
- **Cultural factors** causing poverty in NAD Province include: low levels of education and health; the community's high dependency on financial aid; small fund allocations for women oriented activity; and the non market-focused cycle of the village economy.
- **Natural disasters:** earthquake and tsunami, and other traumatic impacts are factors triggering the increase in poverty in the Province, in addition to the lingering aftereffects of the armed conflict.

A number of problems faced by the poor people of the Province are as follows:

- **Failure to honor fundamental rights.** Limited food quality and quantity, and low purchasing power are a problem for poor people.
- **Limited access medical services and low-quality medical services.** The main problem causing the poor people's health level is their difficulties in accessing basic medical services, low-quality medical services, lack of understanding of healthy living habits and behavior, and lack of reproductive health services. The low quality medical service is a result of limited medical personnel, medical equipment, and other medical facilities. The poor people's health condition is generally low. The infant mortality rate of low-income groups is higher than that of high-income groups.
- **Limited access to educational services and low-quality educational service.** Educational development is one of the significant efforts to reduce poverty. A variety of efforts made have significantly improved the education level; however, it has not been accessed equally by all social strata. Still, in urban and rural areas, there has been a gap between people especially between low-income groups and high-income groups.
- **Limited job and business opportunities.** This is a problem mostly faced by poor people. Because they have no strong protection for their business assets, no protection in terms of wages and job security, particularly for child labor and women who work as housemaids. Poor people also have limited capital and lack skills and knowledge. Based on the existing data, the number of job seekers (unemployed) before the tsunami was 136,981 people (8.5%). In 2006, It increased to 177,560 people (11.1%). However, there has been an increase in the workforce participation number to 56.02%. The significant increase in the workforce participation number is seen in rural areas, where it is 58.03% and the highest number is male participation (80.64%). This shows that the solution for unemployment should refer to the provision of jobs for rural people and men.
- **Environmental deterioration due to natural disasters and tsunami.** The increase in poor people in NAD Province has also been caused by the earthquake and tsunami on 26 December 2004. The rural and urban people as well as those living in coastal areas have been much affected by the social, cultural and economic impacts of these massive disasters. Many of their houses were damaged; they lost their jobs.

Table 1.9 SWOT Analysis of Unemployment Among Poor People

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Poor people mostly earn a living from the agriculture sector (oil palm, rubber, cocoa, coffee and corn). ❖ Very conducive security after GAM-GOI conflict has been settled ❖ A great deal of assistance from local, national and international donors for the welfare improvement of the tsunami victims. ❖ Available facilities at Puskesmas for public medical service 	<ul style="list-style-type: none"> ❖ Disproportional funds for development of sectors other than the ones, such as agriculture and fishery, in which most poor people earn their livings. ❖ Mistargeting of groups for poverty reduction program. ❖ Poverty reduction program just provides assistance rather than community empowerment. ❖ Large-scale industries involve few poor people. ❖ Low health and education level. ❖ Poor people's dependent-on-assistance mentality.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Conflict settlement – continuous, concrete and thorough ❖ Optimization of social, cultural and custom values. ❖ Careful Implementation of <i>Syariaat Islam</i> (Islamic Law) ❖ Development of local community-based economy and industry ❖ Provision of rural health and economic services. ❖ Development of educational facilities and quality. ❖ Provision of infrastructure affordable to all social strata. 	<ul style="list-style-type: none"> ❖ Conflict will emerge whenever poverty increases, and the community is not involved in the process of asset development. ❖ Slow process of rehabilitation and reconstruction of production facilities. ❖ Much of the donor assistance is unsustainable.

Based on the SWOT analysis above, the existing potentials and constraints can be summarized as follows:

Potentials

- ❖ Optimum utilization of local, national, and international assistance for economic empowerment, given that the assistance provision is expected to last up to 2009.
- ❖ Development of potentials in the rural economy (agriculture and fishery and agro-industry, as well as urban informal economy).
- ❖ Settled GOI-GAM conflict.
- ❖ Empowerment of poor people in various development sectors.

Constraints

- ❖ Minimum development of agriculture and fishery sector, from which most poor people earn their living.
- ❖ Many programs of poverty reduction have targeted the wrong groups.
- ❖ Limited institutional support in terms of social, economic, and political context, for poverty reduction.
- ❖ Much of the assistance is not kept with empowerment and supervision of poor people. Still, when the assistance runs out, poverty still exists.
- ❖ Large-scale industries involve less poor people.
- ❖ Low education level has become a constraint for the people lacking in education to gain access to better job/income.

- ❖ Minimum education and health facilities/infrastructure to serve poor people.
- ❖ Women and family empowerment to improve home economy is not optimal. Men are still dominant and make the decisions, including how to meet family needs.
- ❖ The economic cycle existing in rural areas does not access the market needs.
- ❖ The GAM-GOI conflict, 1997-1998 economic turmoil, and natural disasters have all worsened the economic conditions of the Province, resulting in the increase in the total number of poor people.
- ❖ Poor people's dependence on local, national and international assistance is very high. On the other hand, the assistance provided for them will cease in time.

b) Strategies

Taking into account the various potentials and possible constraints, the strategies to be used to reduce the number of poor people, both men and women, and to gradually meet basic needs for the coming five-year period are as follows:

- ❖ Lower the percentage of the population categorized as under the poverty line.
- ❖ Fulfill quality and affordable food.
- ❖ Fulfill the quantity and quality of health services.
- ❖ Provide the evenly-distributed basic educational services.
- ❖ Promote a variety of businesses for creating job opportunities.
- ❖ Improve the community's purchasing power through establishment of a minimum regional wage based on the existing economic conditions.

c) Action Plans

Poverty reduction may not be handled solely by a certain sector, but instead by multi-sectors, which involve the related stakeholders in making the program effective. Based on the above strategies, the programs of poverty reduction for the coming five-year period are as follows:

1. Medical service improvement. This program is aimed at improving the level of poor people's health, giving them access to medical services, improving the quality of basic medical services for poor people, improving the reproductive health services for poor people, and improving the community's awareness of healthy living habits and behavior, which are all conducted through:
 - Provision of medical services for poor people through the local Puskesmas and its network.
 - Procurement, improvement and renovation of Puskesmas facilities and infrastructure.
 - Procurement of medical tools, generic medicines, etc.
 - Improvement of basic medical services for children and women (maternity), family planning, contagious disease elimination, and concerning nutrition.
 - Mass-medication assistance.
 - Public campaign on healthy living habits and behavior.
2. Educational service improvement. This program is aimed at improving the community's access to educational services for all social strata, particularly the people lacking in education, through:
 - Improvement of pre-school education, elementary education, secondary education, university education, and out-of-school (non-formal) education to produce reliable human resources.
 - Development of vocational education (formal and non-formal) to support the need for workforce.
 - Development of 9-year compulsory learning program.
 - Improvement of educational services for poor people.

- Provision of school fees for poor people to reduce the number of youth who drop-out of school .
 - Development and utilization of knowledge and technological research outcomes to improve poor people's welfare.
3. Food-resilience improvement. This program is aimed at fulfilling the need for food that meets nutrition standards, through:
- Improvement of food distribution through institutional strengthening and rural infrastructure improvement to support the food distribution system.
 - Prevention and reduction of the problem of providing food through food-for-the poor programs.
 - Revitalization of the community food resilience institutional system.
 - Subsidy and facility provision for farmers to obtain production facilities, seeds, fertilizer, and insecticides.
 - Research for improvement of prime food crop varieties.
 - Training on appropriate technology application for agricultural productivity and product enhancement.
 - Development of food manufacturing industry.
 - Monitoring of food supply and prices at traditional markets.
4. Job and business opportunity creation. This program is aimed at improving the quality of human resources and at creating job opportunities, through:
- Workforce need mapping related to skilled workforce use in the post-tsunami rehabilitation-reconstruction activities, in terms of both skilled and unskilled labor, by the government-funded projects including BRR and donor institution/NGO-funded projects.
 - Capacity building of job seekers to work in the country or overseas through training.
 - Improvement of skills based on local potentials such as skills needed in agriculture, plantation, and fishery sectors.
5. Productive economy development. This program is aimed at improving the community's income, through:
- Development of *Kelompok Usaha Bersama* (Joined Business Unit)
 - Development of *Usaha Ekonomi Produktif* (Productive Economic Business)
 - Development of small and medium business, cooperative, and micro finance
 - Revolving fund strengthening for sector-based credit union
 - Development of Syariah (Islamic-based) and conventional credit unions
 - Improvement of cooperation with NGO, funding and donor institution related to economic empowerment programs

d) Indicative Implementation Schedule

The indicative implementation schedule is presented in **Table 1.10** below.

Table 1.10 Implementation Schedule of Poverty Reduction

No	Activity	2008	2009	2010	2011	2012
1	Medical service improvement program.					
2	Educational service improvement program.					
3	Food-resilience improvement program.					
4	Job opportunity improvement program.					
5	Productive economic development program.					

1.3.4 Gender-Based Equalization

a) Potentials and Constraints

In general, women's low participation in development and the discrimination against women are actually the fundamental problems of women's empowerment. The other problem is the imbalance of women's political participation as a result of the imbalance of the socio-cultural structure. In the social context, this imbalance is reflected most of all in women's limited accesses to better medical services, to higher levels of education, and involvement in broader public affairs.

Women's access to education. The National Social Economic Census data of 2003 indicate that the number of women of 10 years or above who have not attended school is twice that of men (11.56% against 5.43%). Illiterate women amounted to around 12.28% and illiterate men are approximately 5.84%

Women's access to health. In 2000, the maternity mortality rate was the highest in ASEAN, that was, 307 per 100,000 live births. Anemia prevalence of Fe nutrition in pregnancy was still high, accounting for approximately 50.9% (according to 2001 Household Health Survey).

Women's participation in the world of work. According to the National Social Economic Census data of 2003, the level of women's participation in work is still low (44.81%) compared to men's (76.12%).

Women's participation in political affairs. Law No. 12/2003 on General Election mandates 30% of women's representation in the legislative institution. The 2004 general election, however, created a legislative assembly with only 11.6% of women, and 19.8% in the DPD - Independent Representatives of every Province (data from General Election Committee). The women's lowest participation in public positions, in 2003, was also reflected in the percentage of women having public positions Echelon I, II, and III (accounted for 12%). Besides, women's positions in judicial institutions were also low, accounting respectively for 16.2% as judges in Public Justice, 3.4% in State Administrative Justice, and 17% as Justice of the Supreme Court in 2000 (data from National Board of Manpower, 2003).

Domestic violence against women. Domestic violence still persists up to this time. A number of attempts have been made by the government to reduce the amount of domestic violence through several initiatives including: Aksi Nasional-Penghapusan Kekerasan Terhadap Perempuan (National Action for the Reduction of Domestic Violence against Women), the creation of integrated crisis centers at hospitals, construction of room for special services in Polda (Provincial Police Station) and Polres (District Police Station), and a center for integrated services for women's empowerment in every Regency/city, as well as dissemination of information and public campaigns against violence against women.

Level of imbalance between men and women. The 2004 Indonesia's Human Development Report shows the HDI (Human Development Index) of 65.8 and GDI (Gender-related Development Index) 59.2. The high HDI compared to GDI indicates that the entire achievement in human resource development has not been fully matched by the gender-related development. In other words, there is still gender-related imbalance. Meanwhile, the 2002 Indonesia's GEM (Gender Empowerment Measurement) data emphasized gender-related imbalance in economic development (women in the workforce and average wages in non-agriculture sectors), political affairs (women's participation in

parliament) and decision making (women professionals, high-ranking officials and managers) is 54.6, that is, rank 33 of 71 surveyed/measured countries.

Laws and regulations. Many of the existing laws and regulations still discriminate against women. The existing instruments of criminal law are not complete in their protection of every individual, particularly, from domestic violence.

Women empowerment. This is a cross-sector program that involves various elements, at a national and local level. Up to now, no complete data on women's empowerment are available, that makes it difficult to formulate the program. In addition, inter-institutional coordination and community participation in women's empowerment are also limited. As a consequence, the program of women's empowerment seeking to improve the quality and women's welfare does not work optimally.

Many of the women, victims of tsunami in NAD Province, are susceptible to human trafficking. Loss of property/belongings has resulted in economic problems, which also cause women in NAD Province to be susceptible to human trafficking.

Table 1.11 SWOT Analysis of Gender-based Equalization

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Number of women of NAD is higher than that of men. ❖ Women's fighting spirit has existed in Aceh for long time, meaning that gender-based equalization has also existed in Aceh 	<ul style="list-style-type: none"> ❖ Low quality of life and women's role in sectors: education, health, economy, and politics. ❖ High frequency of domestic violence against women. ❖ Imbalance between men's and women's participation in development. ❖ Many laws and regulations discriminate against women. ❖ Weak gender equality institutions and networks. ❖ Many women, who are tsunami victims, are susceptible to sexual humiliation and human trafficking.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Government attempts to reduce the amount of domestic violence against women. ❖ Law No. 12/ 2003 on 30% of women representation in legislative institution. ❖ Mass-media are more transparent to gender-related issues. ❖ Law No. 23/ 2004 on alleviation of domestic violence ❖ More local, national, and international organizations have programs of women's empowerment. 	<ul style="list-style-type: none"> ❖ Economic conditions as a result of tsunami – susceptible to human trafficking. ❖ <i>Patriakal</i> culture, the perception that men are superior to women.

Based on the SWOT analysis above, the following potentials and constraints could be summarized:

Potentials

- ❖ The number of Acehnese women is higher than that of Acehnese men; so, women have the potential to be the development workforce.

- ❖ Women take significant roles in the creation of a new generation of quality.
- ❖ Government attempts to reduce domestic violence against women through, among others, *Aksi Nasional-Penghapusan Kekerasan Terhadap Perempuan* (National Actions for Reduction of Domestic Violence against Women), creation of integrated crisis centers at hospitals, construction of room for special service in Polda (Provincial Police Station) and Polres (District Police Station), and center for integrated service of women's empowerment in every Regency/city, as well as information dissemination and public campaigns against violence against women.
- ❖ Women's fighting spirit has existed in Aceh for long time, meaning that gender-based equalization has also existed in Aceh.
- ❖ More local, national, and international organizations have programs of women's empowerment.
- ❖ Women representation in DPR and DPD (Local Assembly).

Constraints

- ❖ Low women's life quality and women's lesser role in development.
- ❖ High frequency of cases of domestic violence against women.
- ❖ Low level of women's welfare.
- ❖ Discriminatory practices against women.
- ❖ Many laws and regulations which discriminate against women.
- ❖ Imbalance of women's participation in political affairs resulting from the imbalance of the social-structure.
- ❖ Weak gender equalization institutions and networks.
- ❖ Women's limited access to health, education and public affairs.
- ❖ Many women who are tsunami victims are susceptible to sexual humiliation and human trafficking.

b) Strategies

Based on the potentials and constraints stated above, the strategies to be used for women's empowerment in NAD Province are as follows:

- ❖ Improve the public access to educational and medical services as well as other development sectors to enhance the women's life quality and resources.
- ❖ Increase the public campaigns seeking a reduction of domestic violence against women.
- ❖ Enhance women's participation in political affairs and public positions.
- ❖ Improve women's welfare and child protection.
- ❖ Strengthen the related institutions, coordination, and gender equality network in planning, implementation, and evaluation of various policies, programs and activities in sector development, including fulfillment of international commitments, supply of gender-related data and statistics, and community participation improvement.
- ❖ Improve the attempt of more resolute law enforcement to protect every individual from violence, exploitation, and discrimination, including domestic violence.

c) Action Plans

Based on the strategies above, the action plans for the next five years are as follows:

1. *Synchronization of women's quality of life policies*. This program is aimed at creating synchronized policies related to women quality of life improvement, through:
 - Establish policies aimed at improving women's quality of life;
 - Implement the communication, information and educational policies and laws and regulations pertaining women;
 - Coordinate planning, implementation, monitoring and evaluation of women's empowerment and women's welfare programs.

2. Women's quality of life improvement and women's protection. These programs are aimed at improving women's quality of life, roles and positions in various development sectors, and women protection from various types of violence, exploitation and discrimination. These programs will be conducted through:
- Affirmative action particularly in education, health, law, manpower, social affairs, environment and economy;
 - Improvement of women's protection from various types of violence, exploitation (abuse) and discrimination including the effort to prevent and cope with the cases,
 - Development and betterment of legal apparatus and of quality of life policies and women's protection in various development sectors,
 - Implementation of the communication, information and educational policies and law and regulation on women at a district level;
 - Preparation of a registry and reporting system, violence case handling and settlement, exploitation and discrimination against women,
 - Creation of community-based and hospital-based integrated services at a provincial/district level as a means of protecting women who are victims of violence, including domestic violence,
 - Enhancement of community's role and mass-media in coping with pornography.
3. Gender-related institutional strengthening. This program is aimed at strengthening the institutions and network handling gender-related issues/cases in various development sectors at a provincial/district level, through:
- Provision of materials for communication, information, and education on gender-based equalization and justice;
 - Capacity building and institutional network development for women's empowerment at a provincial/district/municipal level, including the Center for Women/Gender Study, as well as research institutions, interest groups and gender empowerment;
 - Preparation of various policies for gender-related institutional strengthening at a provincial/district level;
 - Preparation of a mechanism for planning, monitoring and evaluation of gender-related institution at provincial/district level.
4. Synchronization of policies for children and women quality of life improvement. This program is aimed at synchronizing the policies for improving children and women quality, through:
- Establishment of policies aimed at improving women's life quality and women protection;
 - Implementation of the policies related to communication information, education and law on women;
 - Coordination of planning, implementation, monitoring and evaluation of women empowerment program at district/municipal level.

d) Indicative Implementation Schedule

Table 1.12 Implementation Schedule of Gender-based Equalization

No	Activity	2008	2009	2010	2011	2012
1	Synchronization of women life quality policies					
2	Women's life quality improvement and women protection					
3	Gender-related institutional strengthening					
4	Synchronization of policies for children and women quality					

1.3.5 Economic Empowerment for GAM Members

a) Potentials and Constraints

Armed Conflict NAD Province This conflict can, in simple terms, be divided into three periods during the history of modern Aceh. The first period of armed conflict occurred during the Cumbok War in the late 1940s. It involved an armed standoff between Islamic scholars and Acehese nobles. The period of armed conflict was initiated by the *Darul Islam* movement, inspired by Daud Bereuh's group of radical Islamic scholars who won the Cumbok War. The second conflict lasted almost a decade (1956-1963) and was settled after an offer was made to grant Aceh limited autonomy in the sectors of education, custom and culture, and in the implementation of *syariat Islam* (Islamic Law) as well. The cause of the second conflict was the ideological differences between the Central Government in Jakarta and Aceh. The third period of armed conflict was initiated by GAM (Free Aceh Movement) an armed separatist movement in 1974, and lasted till 2005. It was divided into the three 'generation eras'. The first generation, led by Hasan Tiro, was motivated by their dissatisfaction with the unfair management of oil resources. The second period of conflict with GAM occurred during the 1990s. In 1989, the Soeharto regime stated the *Jaring Merah* military operation in what was then popularly known as the *Daerah Operasi Militer – DOM* (Military Operation Zone) up to 1998. The implementation of DOM led to countless human rights violations in Aceh, resulting in a great deal of suffering for the Acehese people. The third GAM 'generation' emerged after the annulment of DOM under the new regime led by President Habibie. At that time many of the GAM activists who had fled to Malaysia came back to Aceh and exploited the nascent reform movement. The human rights violations during the time of the DOM operation resulted in deep hatred towards the central government in Jakarta, which was provoked and used by GAM to increase the Acehese ethno-nationalistic identity. These conditions were successfully articulated by GAM and reflecting a growing discontent among the Acehese people about such issues such as ideology, poverty, social imbalance and injustice and the idea of cession from the Unitary Republic of Indonesia could be accepted by the Acehese people at large. Thus it can be seen that the Acehese people, all through their history, have lived in a seemingly constant state of conflict.

Efforts To Secure A Peace. The armed conflict between GAM and the Government of Indonesia spanned 27 years. Various endeavors to bring about peace in Aceh have been made by the Government and many other parties. However, a lasting peace in NAD Province was very difficult to secure.

The starting point for achieving peace was the government's decision to annul the Military Operation Zone (DOM) status, which was then followed by the appointment of Henri Dunant Center (HDC) as a third party striving to bring the conflict to an end in an appropriate, peaceful and democratic manner. On 12 May 2000 the "*Kesepakatan Bersama tentang Jeda Kemanusiaan di Aceh*" (Joint Agreement on Aceh Humanitarian Pause) was started, which was effective from June to September 2000 and then extended to January 2001.

At the beginning of the Humanitarian Pause implementation, a significant decrease in the intensity of violence was already evident. However, it did not last long because both sides accused each other of having violated the Humanitarian Pause they had already agreed upon. The failure of the Humanitarian Pause led to an increasing intensity of violence at the end of 2000, and civil society suffered as a consequence.

At the end of January 2001, the HDC brought the two parties back to Geneva for another temporary joint agreement taking into account the better political future: free and just

elections for Aceh, an independent election committee acceptable to the two parties, monitoring of election process by an independent/non-partisan body, regulations ensuring non-political party participation in the election and the establishment of a local political party, and criteria allowing GAM its supporters to participate in the political process. However, this temporary joint agreement could not be fully implemented. Then, on 18 March 2001, the two parties were back in Geneva and agreed to establish two Security Zones covering two districts, North Aceh and Bireun. But, during the implementation of the joint agreement, GAM launched an attack, killing, burning, and committing other crimes in the two Zones.

Hence, the peace making process in Aceh continued. The Cessation of Hostilities Agreement (CoHA), which was still mediated by HDC, was signed on 9 December 2002 in Geneva. This agreement was designed to terminate violence and create a basis for a lasting peace by emphasizing 4 main agendas: (a) Military Agenda, (2) Human Aid Agenda, (3) Reconstruction, and (4) Civil Reform. The agreement was initiated by two month trust building activity from 9 December 2002 up to 9 February 2003, during which the two parties could communicate with regard to all the provisions of the agreement during which time they agreed not to use their military power.

The party mandated to monitor security and any violence was the Joint Security Committee (JSC). In addition to monitoring the security situation, the JSC was assigned to determine the "peace zone", where GAM and GOI could maintain their defensive position, and avoid confrontation, or they could make preparations for reconstruction and development. The first 'peace zone' was established in Indrapura (District of Aceh Besar). Then, the establishment of six new 'peace zones' was announced on 9 February 2003 approaching the end of CoHA implementation. The six new 'peace zones' were in (i) Sub-District of Kawai XVI of West Aceh; (ii) Sub-District of Peusangan, Bireun; (iii) Sub-District of Sawang, North Aceh; (iv) Sub-District of Tiro, Pidie; (v) Sub-District of Simpang Keramat, North Aceh, and (vi) Sub-District of Idi Tunong, East Aceh. The two parties agreed not to carry weapons and mobilize new military forces within the zones. In terms of security and order, implementation of CoHA was deemed successful, indicated by the drastic decrease in violence and armed engagements.

The important lesson learned from the peace making efforts already made during the Humanitarian Pause, supervised by HDC, was that mutual distrust would only hamper the expected peace, and finally, the Cessation of Hostilities Agreement was in vain as indicated by the rejection of the agreement offered by the government – the integrity of the Unitary Republic of Indonesia. Through the issuance of Presidential Decree No. 28/2003 date 19 May 2003, the Government of Indonesia started the Integrated Operation to uphold the sovereignty of the Republic of Indonesia. Moreover, humanitarian operations, law enforcement, and local government empowerment were also intensified to accelerate the social and economic recovery by prioritizing a dialog and general community participation. Due to the persistent armed conflict, the Integrated Operation was then extended through the Presidential Decree No. 97/2003 for the period of 18 November 2003 – 19 May 2004.

The form of Military Emergency in Aceh was the implementation of the Integrated Operation which include (i) Humanitarian Operation – aimed at protecting the security of civilians, and providing assistance for education, medication, food, worship facilities, and concrete job opportunities, (ii) Operation of Law Enforcement – aimed at intensifying the upholding of the law in NAD Province, (iii) Operation of Local Government Empowerment – aimed at revitalizing the ineffective local administration, and (iv) Operation of Security Recovery – aimed at reconditioning the security and reducing the power of GAM and running military operations.

The comprehensive operations of Military Emergency I and II seemed successful, despite constraints and problems occurring in the first year. Firstly, there was the limited professional capacity of the government apparatus in coordinating and implementing the four integrated operations in a comprehensive manner. Secondly, the law enforcement operation was not implemented fairly or without discrimination. Thirdly, security recovery operation sometimes conflicted with aspects of the humanitarian operation and with human rights.

The Military Emergency in NAD Province was terminated and changed into the Civil Emergency through the Presidential Decree No. 43/2004. The change in status was based on a consideration that security in Aceh was gradually improving. In most cases, it could also be used to make the situation more conducive for development in Aceh. The Humanitarian Aid and Public Rehabilitation already ran in line with the primary objective of recovering the public's trust in the Government, improving the social welfare and enhancing the economic conditions.

About 50% of the school buildings that were burned down by GAM was already of rehabilitated or reconstructed. The school system kept running, although some schooling took place in temporary buildings. Procurement and distribution of basic needs ran well via land and sea transportation. Market activity kept increasing and the economy improved. Then the integrated operation was thrown into doubt when the earthquake and tsunami struck Aceh.

On 15 August 2005, a MoU Agreement between GOI and GAM was signed in Helsinki, Finland. The two parties clarified their commitment to conflict settlement in Aceh in a peaceful, comprehensive, sustainable, and respectable manner. The two parties believed that the peaceful settlement of the conflict would possibly promote the post-tsunami redevelopment of Aceh. There are 19 GOI obligations in the MoU to be followed up. They were with regard to political, legal, human rights, security, and socio-economic matters. All these matters should be implemented by GOI, the Provincial Government of Aceh and GAM. Following the MoU, the Provincial Government of NAD has already established the *Badan Reintegrasi Damai Aceh - BRA* (Board of Aceh Peaceful Reintegration) through the Decree of Governor of NAD No. 330/032/2006 and its revised version dated 13 April 2006, No. 330/106/2006. Other than the MoU, the legal decisions taken into consideration when establishing the BRA included (1) Presidential Decree No. 15/2005 stating that the Governor of NAD plans and implements reintegration and empowerment of every individual involved in GAM into the community starting from acceptance, supplies provision, homecoming, and job provision, and (2) Guidelines of Coordinating Minister for Political, Legal and Security Affairs No. DIR-67/MENKO/POLHUKAM/12/2005 on Optimization of the Implementation of GOI-GAM MoU.

BRA consists of *Forum Bersama Pendukung Perdamaian Aceh* (Joint Forum for Aceh Peace Supporters), *Badan Reintegrasi Damai Aceh - BRA* (Board of Aceh Peaceful Reintegration), and *Badan Pengawas Reintegrasi Damai Aceh* (Supervising Board of Aceh Peaceful Reintegration). The major tasks of BRA include giving inputs to the *Badan Pelaksana* (Implementing Board) of BRA, to monitor and evaluate BRA's performance, to support *Badan Pelaksana*, to coordinate and synergize all donors' assistance with *Badan Pelaksana*. The target people of BRA are 1,000 ex-GAM militia, 1,200 ex-GAM non-militia, political prisoners accepting amnesty, and 2,500 civilians (conflict victims). Up to this time, the assistance provided for the target groups are as follows: farming land for job creation (empowerment) and Social Insurance in the form of *Diyat* and housing.

Table 1.13 SWOT Analysis of Economic Empowerment for Ex-GAM Members

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Conducive security ❖ Normal economic conditions, although economic growth is slow ❖ BRA support, including economic empowerment for ex-GAM members 	<ul style="list-style-type: none"> ❖ Majority of ex-GAM members have medium-to-low education; they are possibly less skilled ❖ Reintegration program of ex-GAM members in economy sector is not yet strong
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Crash program for empowerment in fishery sector (coastal fishpond) and sea fish for ex-TNA or GAM non-TNA to replace the loss of thousands of coastal fishponds due to tsunami. ❖ Agriculture development (plantation, fishery & civil forestry) of high-value commodities ❖ Post school-age vocational education (building construction, electricity, electronics, craft and traditional food) 	<ul style="list-style-type: none"> ❖ Slow job creation especially for ex-GAM members ❖ High inflation ❖ If BRA's performance is not good, it will worsen the process of reintegration

Based on the SWOT analysis above, the potentials and constraints can be summarized into the following:

Potentials

- ❖ In most cases, the post-Helsinki MoU condition is secure, where the economy of NAD Province has started to be active, indicated by rehabilitation and reconstruction activities of tsunami victims.
- ❖ BRA as a rehabilitation institution after the Helsinki MoU will have an important role in reintegration and empowerment for ex-GAM members and victims of conflict.
- ❖ Major opportunities for new job creation – loss of thousands of coastal fishponds and fishermen due to tsunami. This needs strategic crash programs to overcome this problem due to the major market segment of fish products.

Constraints

- ❖ Majority of ex-GAM members have medium-to-low education; they are also possibly less skilled.
- ❖ Reintegration program of ex-GAM members in economy sector is not yet strong.
- ❖ Slow job creation especially for ex-GAM members.

b) Strategies

Considering the existing potentials and constraints, the following strategies are formulated:

- ❖ Implement the program and activity related to Aceh reintegration aimed at a sustainable peace.
- ❖ Coordinate planning and implementation among government and non-government institutions, either domestic or foreign, to implement the economic empowerment under Aceh reintegration in accordance with Helsinki MoU.

- ❖ Coordinate and monitor the implementation of community empowerment at Regency/city so that the program realization is in line with the MoU provisions.
- ❖ Monitor and evaluate the program and activities already agreed upon.
- ❖ Compile activities that have been conducted by the implementing units and distribute them to the relevant institutions,.
- ❖ Strengthen the performance of BRA – as the institution facilitating the integration of ex-GAM members, particularly in the economic empowerment.
- ❖ Develop the employment opportunities in various sectors particularly in small and medium-scale businesses, including fishery sector: sea fish and coastal fish ponds.

c) Action Plans

1. Improvement of BRA's performance in facilitating the reintegration of ex-GAM members in the economy of NAD. This program is not merely to reintegrate the ex-GAM members as Indonesian citizens; but it is actually related to their livelihoods so they can support themselves and their families in a normal manner. This program is implemented with a measured target.
2. Crash program for job opportunity. The biggest job opportunity potential is in the fishery sector, particularly sea fish and coastal fish ponds, considering that there were a lot of coastal fish ponds and fishermen who were victims of the tsunami.

d) Indicative Implementation Schedule

The indicative implementation schedule of the programs above is presented in **Table 1.14** below:

Table 1.14 Implementation Schedule of Economic Empowerment for ex-GAM Members

No	Activity	2008	2009	2010	2011	2012
1	Improvement of BRA's performance in facilitating the reintegration of ex-GAM members in the economy of NAD					
2	Cash program for job opportunity					

1.3.6 Islamic Syariah and Cultural Strengthening

a) Potentials and Constraints

The strict '*kaffah*' implementation of Syariah Islam in Aceh refers to the Koran and *sunnah Rasulullah (Al-Hadist)*, of which further descriptions are based on Law No. 44/1999 on the *Penyelenggaraan Keistimewaan Provinsi Daerah Istimewa Aceh* (Implementation of Special Province of Aceh Administration) and Law No. 11/2006 on Aceh Administration that are technically governed by *Qanun Aceh*. Since the beginning of Indonesian independence, the Acehnese people have strived for the formal implementation of the *syariah Islam*, which serves as a source of religious values reflected in an individual's life, at a social level, or in government and state-related activities. According to the Acehnese saying *hukum ngoen adat lage zat ngoen sifeut*, the relationship between *syariat* and local custom is like the relationship between an object and its own nature. It means that the *syariah* rules and Acehnese customs are already united, no longer separated, in such a way that they have been manifested in all aspects of life.

As stipulated by Law No. 44/1999, the Aceh Administration is granted with special autonomy in certain sectors such as education, customs and religion, and the Islamic scholars' role in deciding the local policies. Besides, Law No. 11/2006 (instead of Law No. 18/01 which was already canceled) allows the Aceh Administration to implement the *syariah Islam* (Islamic Rules) in a comprehensive way in all aspects of life and public administration. With regard to this, the Aceh Administration is also allowed to prepare and apply the civil law governing familial cases, and wealth-related cases, and penal code based on *Syariat Islam* by containing them in the *Qanun Aceh*. The sanction/penalty of penal cases in the *qanun Aceh* is allowed to follow/refer fully to the stipulations of the *Syariah Islam*, not restricted by the existing law and regulations.

The latter also states that in Aceh the *Syariah* Court of Law that is authorized to handle both civil and penal cases on the basis of Islamic rules as contained in the *qanun Aceh* has been established. While the prosecution is conducted by the office of the counsel and investigation is made by *Wilayatul Hisbah* – part of civil service and PPNS (Civil Servant Investigating Officer) under police coordination.

Most of the existing regulations are based on Syariah Islam (Islamic Rules) which have, to some extent, been the sub-system of the national law and regulations. The institution personnel and implementing apparatus are not, however, from the special autonomy apparatus. Therefore, there is a problem to be addressed, namely a special training on *qanun Aceh*, which only applies in Aceh for legal enforcement personnel who are central government apparatus. Likewise, an adequate amount of financing for the central institution and apparatus carrying out the provincial works (special autonomy) should be provided by the central government.

With regard to this problem, provision of a special training for the central government apparatus, and legal enforcement personnel assignment as the provincial *Wilayatul Hisbah* (civil service and civil servant investigating officers) are not adequately integrated into the existing system, and neither has any legal basis, nor compliance with the operational regulations. All of this should be settled, even if necessary, by creating an apparatus model suitable for Aceh situation to enforce the strict *Syariah Islam* under the framework of NKRI (Unitary State of Republic of Indonesia) based on the 1945 Constitution.

The other problem: The community desires the government, at least, at *gampong* level to be closely related to the existing stipulations in the traditional law and to be involved fully in the implementation of *syariat Islam* as found in, and taught by the Aceh tradition. As a matter of fact, the provincial government is now attempting to organize *gampong* administration through, among others, repositioning of *gampong* head to *geucik* and

teungku imeum as well as *tuha peut gampong*, and reestablishment of possible united community and the government solely as the coordinator of *gampong*. However, it has not been finalized since *teungku imeum* has not been positioned and rewarded to the same degree as the *geucik*. The existence of *geucik* is governed by the *Qanun Aceh* while the existence of *teungku imeum meunasah* is governed by *Qanun* of the Regency/municipal government. In practice, due to the public requirement (according to the prevailing traditions), *teungku imeum* should conduct the tasks that are sometimes harder than that of *geucik*'s. Since *teungku imeum* and part of *gampong* traditions has long not been functioning, or even neglected (not governed by Law No. 5/1979), the present Aceh Administration has to train its personnel to reintroducing these traditional rules in order to reinforce the *gampong* administration system.

It is expected that, with the training, *teungku imeum* can recognize all his tasks, which have so far been neglected, such as becoming the guardian of orphan children, protecting orphan children's property, and administering and utilizing appropriately the *zakat* and religious property in his *gampong*. *Teungku imeum* should, therefore, improve the quality of religious and social services, which have, up to now, seemed to have been run improperly, because his religious and social services were no longer considered as a *gampong*'s responsibility (for instance, doing *meunasah* by *shalat berjamaah* and *pengajian*, guiding and supervising the youth so that they don't behave wildly and destructively, and settling a familial or social dispute based on the *syariat*, have already merged with local customs). Besides, the community religious understanding, experience, and implementation are inadequate. Awareness of implementing the religious values has, so far, tended to be every individual's responsibility without any government supervision that leads to ignorance. Religious implementation for some people is realized only through the form of religious symbols, and does not fully comply with the strict application of *Isyariat Islam*. This condition is reflected in negative indications such as immoral behavior, collusion, corruption & nepotistic practices, drug abuse, pornography, gambling and liquor consumption. The high number of divorces and inharmonious marriages show the weak condition of family life as a basis of community's moral building. Various behaviors that are contrary to religious morality and ethics are indicators of inappropriate religious understanding and experiencing that needs to be improved.

Religious understanding, experience and implementation among school children seem unsatisfactory, reflected in their low ability in reading Koran and the increasing rate of juvenile delinquency. This is a challenge for the government and those who are involved in religious education. Besides, the lack of learning facilities, qualified educators, and coordination and communication between schools and parents are all the constraints in religious education. On the other hand, rapid flow of globalization, mostly incompatible with religious values and Islamic morality – particularly spread through printed and electronic media has encouraged school children to exhibit negative behavior. Such a condition should have been avoided or reduced through appropriate religious understanding and implementation. Religious teaching at school and in community is inadequate for protecting children from negative influences and pop culture spread by the mass media.

Religious services are also deemed inadequate. This is seen from the lack of worship facilities, minimum use of worship places, and bad management of religious donation and property. '*Zakat*' (tithe) collection to most people is still a charitable and incidental activity. Religious property in the form of '*wakaf*' (possessions donated for community or religious use) has not been optimally used, or even well organized, or its ownership correctly transferred, so that it can be protected from misuse. *Baitul Mal* as the board of religious property management is still being revived and needs to be developed and socialized. *Zakat* has been a *PAD* (*Pendapatan Asli Daerah* – Locally-Generated Revenue) potential; therefore, an appropriate system or mechanism needs to be established so that it may be administered properly to comply with the *syariat* stipulations.

Potentials

- ❖ Commitment to improve the performance of *Syariat Islam* Department and develop the leadership characteristics oriented to achieve the Islamic vision and mission, and to strengthen the *syariat Islam* implementation.
- ❖ Excellent human resources to encourage community in the *syariat Islam* implementation.
- ❖ Dominant Islamic culture in Aceh custom.
- ❖ Law No. 11/2006 on Aceh Administration forms a strong base for religious strengthening of Islam.

Constraints

- ❖ Limited funds for the development of religious activities in NAD Province.
- ❖ Irresistible non-Islamic culture entering through electronic media.
- ❖ Influences of non-Islamic/outside culture particularly after tsunami entering the social life of NAD Province will affect Islamic values that have long existed and developed in NAD Province.
- ❖ Indication of religious apostatization of children of tsunami victims through the provision of school needs and other facilities.

Table 1.15 SWOT Analysis of *Syariah Islam* Strengthening

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ○ Implementation of <i>syariat Islam</i>-related information spread ○ Personnel's high commitment ○ Islam as Aceh people's religion ○ Law No. 44/1999 on Implementation of Special Province of Aceh ○ Provincial Regulation of Aceh No.5/2000 on <i>Syariat Islam</i> Implementation ○ Harmony among religion followers 	<ul style="list-style-type: none"> ❖ No coordination line to Regency/city as limited by Law UU No. 32/2004 ❖ Shift of cultural values (Islamic) in the present generation ❖ Abundant influence of outside culture after tsunami entering NAD, especially affected by foreign NGOs ❖ Lack of religious understanding, experience and implementation ❖ Religious understanding, experience and implementation among school children are also unsatisfactory ❖ Inadequate religious service
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Aceh people's custom and religious experience encourages the success of <i>syariat Islam</i> implementation in NAD. ❖ <i>Syariat Islam</i> implementation is a prioritized program of the Provincial Government of NAD, as contained in the Provincial Government Strategic Plan ❖ Availability of funds from local government ❖ Existence of ulama leaders and availability of Islamic literature ❖ Coordination among ulamas under the "HUDA" organization ❖ Attention from external parties paid to the NAD Province that other Provinces are also interested in applying the <i>syariat Islam</i> ❖ Islamic Aceh culture becomes attraction for regional cooperation, particularly in Malacca Strait zone 	<ul style="list-style-type: none"> ❖ Irresistible globalization influence via electronic media ❖ No perception in common on the importance of <i>Syariat Islam</i> as the institution serving to coordinate <i>Syariat Islam</i> implementation in NAD ❖ Deteriorating Islamic values in social life ❖ Less charismatic religious leaders/ulamas ❖ Moral decadency particularly in young people

b) Strategies

Considering the existing potentials and constraints, the following strategies are formulated:

- ❖ Religious service for Acehnese people need to be optimally made.
- ❖ Mobilized social-religious force (network of *ulama/mubaligh/juru dakwah/religious announcer*).
- ❖ Development and strengthening of cooperation with national and international NGOs
- ❖ Cooperation and coordination with institutions in the implementation of religion-related programs.

c) Action Plans

Policies for the quality of religious implementation are broken down in the development programs as follows:

1. Religious service improvement. This program is aimed at reconstruction of 1,069 worship places to ensure that every citizen can carry out their religious obligations, of 58 KUA (Office for Islamic Religious Affairs) buildings, and provision of 30,000 exemplars of marriage books, through:
 - Reconstruction of worship houses, KUA buildings and 'haji' boarding house.
 - Provision of marriage books.
 - Provision of manual books of *syariat* implementation for *Gampong* apparatus.
 - Provision of *Iqra* books and a building for *Hilal* (moon) observation.
2. Religious understanding, experience and improvement and religious value development. These programs are aimed at recovering inner peace as a result of losing family or relatives and other opportunities; recovering mental-spiritual condition through *sakinah* family creation, providing assistance of *shalat* (praying) articles; providing assistance for *sakinah* family groups, providing religious books for, and religious information campaign to, *da'i, guru mengaji, ulama, dan majelis taklim*. These programs are conducted through:
 - Mental-spiritual rehabilitation for tsunami victims in NAD Province.
 - Programmed recitation of the Koran and speech delivery on religious matters.
 - Education and internalization of *akhlakul karimah* to the youth.
3. Religious teaching and religion-related educational improvement. This program is aimed at recovering inner peace as a result of losing family or relatives and other opportunities, and recovering mental-spiritual condition through:
 - Coordination for *imam mesjid, khatib, Da'i, guru pengajian, zakat* personnel and *Baitul Maal, and pentajhid mayit*.
 - Improvement of religious education quality and addition of religious-teaching periods at schools and higher educational institutions.
4. Improvement of state apparatus facilities and infrastructure. This program is aimed at constructing and rehabilitating the facilities and infrastructure (office buildings), through:
 1. Reconstruction of Provincial Office of Department of Religious Affairs of Nanggroe Aceh Darussalam
 2. Reconstruction and rehabilitation of Municipal/District Office of Department of Religious Affairs of Banda Aceh, Pidie, Aceh Jaya and West Aceh.
 3. Construction of Provincial MPU building and other 3 Municipal/District MPU buildings.

d) Indicative Implementation Schedule

The indicative implementation schedule for the above activities is presented in **Table 1.16** below.

Table 1.16 Implementation Schedule of *Syariah Islam* Strengthening

No	Activity	2008	2009	2010	2011	2012
1	Religious service improvement					
2	Religious understanding, experience, and improvement and religious value development					
3	Religious teaching and religion-related educational improvement					
4	Improvement of state apparatus facilities and infrastructure.					

1.4 Preservation of Indigenous Cultural Identity

a) Potentials and Constraints

In general, from the cultural viewpoint, all types of Acehese life are closely related to Islamic values. Certain community circles are, however, still affected by pre-Islamic traditions, which are reflected in Acehese people's customs such as *hari-hari kenduri tolak bala*, *kenduri laot*, *kenduri blang*, *kenduri glee*, etc.

The Provincial Government of Nanggroe Aceh Darussalam, in 2004, through the issuance of *Qanun* No. 3/2004 on Establishment of Organization Structure of Aceh Tradition Council of the NAD Province, with objectives to rebuild, maintain, preserve and develop the Acehese culture in accordance with the government policies for *Syariat Islam* implementation. The steps or ways to be taken to develop the Acehese traditions and culture include through rebuilding of Acehese culture and philosophy respected by the Acehese people.

Besides, the Provincial Government of Nanggroe Aceh Darussalam has also published a book on Acehese Culture, consisting of four Chapters – I (Introduction), II (Origin of Acehese Culture dealing with the history of human and cultural origin, cultural adaptation and culturalization and pluralism of Aceh culture), III (Identity of Ethnic Groups of Aceh: Aceh Pesisir, Gayo, Alas, Tamiang, Singkil, Kluet, Simeulu, and Aneuk Jame, in which local languages and adaptation are contained), and IV (dealing with Aceh cultural system covering the Acehese people's faith, occupation, science, familial system, arts, language and literature as well as Aceh Administration and political system).

The existing problems faced by the NAD Province in the cultural development are as follows:

- **Government's weak ability to manage the diversity.** This is indicated by groups of people with strong ambition having the potential to trigger a social conflict. Such a phenomenon seems worrying since the Indonesian people are made up of 520 ethnic groups. This problem is increasingly serious as a result of the limited public space accessible and manageable, together with multi-cultural community as their channel of aspiration. Nowadays, transfer of public space to private space tends to emerge due to economic problems.
- **Identity crisis of local people.** Values of social solidarity, family atmosphere, and hospitality that used to be seen as having the power to unite communities has increasingly faded at the same time as the strong growth of materialistic values and

individualism. Intensity of friendship among community members or groups is lessening. The same is true for national identity as manifested in the correct usage of the Indonesian Language and Local Language as part of the national culture, due to the growth of outside values that are deemed superior. Both national and local identity tends to weaken due to the rapid absorption of negative global culture and the community's inability to adopt parts of global culture relevant to the national character building. The economic growth that is not equalized by the national character building has resulted in a cultural crisis that will, in turn, weaken the culture's resilience.

- **Less national capability to manage the tangible cultural assets.** In the era of local government autonomy, local cultural asset management is the responsibility of the local/provincial government. Low quality cultural asset management is not only caused by the local government financial capacity, but also its understanding, appreciation, awareness and commitment to apply the good governance principles. Meanwhile, public appreciation of local culture and products is less due to limited information.

Table 1.17 SWOT Analysis Indigenous Cultural Identity Preservation

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Law No. 44/1999 on Implementation of Special Province of Aceh ❖ Law No. 18/ 2001 on Special Autonomy for the Special Province of Aceh as the Province of Nanggroe Aceh Darussalam. ❖ <i>Qanun</i> No. 1/ 2002 on Basic Spatial Development Plan Nanggroe Aceh Darussalam Province 2001 ❖ Decree of the Cultural Department Head Prov. NAD No. 065/511/2002 on Task and Functions of the Structural and Non Structural Cultural Department Officers. ❖ Cross-cultural condition makes the Acehnese culture tend to be cosmopolite. ❖ Islamic dominantly characterizes the culture of NAD. 	<ul style="list-style-type: none"> ❖ Weak management of diversified culture existing in Aceh. ❖ Shift of cultural values in present generation. ❖ Less ability to manage the tangible culture and intangible culture. ❖ Less existence of community (traditional) leaders. ❖ Limited knowledge on local culture. ❖ Weak preservation of cultural building, culture-related literature and traditional arts. ❖ Lost local wisdom. ❖ Expensive operation and maintenance cost for cultural assets.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Supporting funds from the Provincial Government. ❖ Available cultural leaders/literature/maps of NAD. ❖ Available experts and cultural figures ❖ Coordination among Budayawan and the relevant institutions. ❖ Much attention from external parties paid to the Province of Nanggroe Aceh Darussalam. 	<ul style="list-style-type: none"> ❖ Weakening identity of Islamic local cultural values ❖ External cultural influence (global era) through electronic media. ❖ Less charismatic cultural leaders. ❖ Moral decadency

Based on the SWOT analysis (see above), potentials and constraints are summarized as follows:

Potentials

- ❖ Develop and preserve the local culture that is derived from Aceh People's Indatu Culture – originating from Islamic culture to support the people's harmonious life.
- ❖ Islamic values are dominant in Acehnese culture.
- ❖ Strong Acehnese culture as people's identity that becomes a strong shield in interaction with other/outside culture.

- ❖ Acehnese culture could attract the working out of regional cooperation, particularly in Malacca Strait.

Constraints

- ❖ External cultural influence (global era) through electronic media.
- ❖ Expensive operation and maintenance cost for cultural assets
- ❖ Less charismatic cultural leaders.
- ❖ Moral decadency.
- ❖ Shift of cultural values in present generation.
- ❖ Limited knowledge on local culture.
- ❖ Lost local wisdom

b) Strategies

Considering the existing potentials and constraints, the following strategies are formulated:

- ❖ Develop the culture that is in accordance with the principles of *syariat* Islam.
- ❖ Develop the social potentials to create an open, democratic organization for cultural dialog.
- ❖ Encourage the acceleration of modernization characterized by the unity of the Indonesian citizenry and strong civil society.
- ❖ Enable local wisdom to be a basis for social ethics to strengthen the local identity.
- ❖ Increase people's appreciation of local culture and products.
- ❖ Preserve the arts and cultural heritages.
- ❖ Revitalize the local customs, traditions, and art and culture.
- ❖ Develop the supporting facilities and infrastructure for post-tsunami cultural preservation.
- ❖ Enhance the knowledge of local culture, including the improvement of existence of local cultural leaders, through the optimization of government funds and external donations.

c) Action Plans

Based on the strategies above, the actions plans for the next five years are formulated as follows:

1. Diversification of culture management. This program is aimed at creating a harmonious relation among social units and cultures to calm the tension and local conflict by:
 - Setting out an open and democratic inter-cultural dialog;
 - Creating various types of national bonds through, among others, infrastructure development to improve the inter-region transportation access and cross-cultural communication;
 - Preserving and develop a public space for tightening the social 'capital';
 - Increasing the law enforcement to create justice among social and cultural units;
 - Rehabilitating cultural infrastructure and facilities or cultural sites;
 - Providing assistance for local cultural performance in national and international cultural events.
2. Development of cultural values. This program is aimed strengthening the existing cultural resilience to resist the penetration of negative foreign culture and facilitate the process of positive and productive foreign culture adoption and adaptation. For that reason, the *syariah Islam* as a moral foundation emphasizing values of honesty,

modeling, sportiveness, work ethics, dependency, tolerance, responsibility needs to be developed through:

- Revitalization and re-realization of local culture that has Islamic values;
- Cultural transformation through adoption and adaptation of new, positive values suited to the principles of *Syariah Islam* to enrich and strengthen the national culture orientated to the improvement of work performance, critical attitude, accountability and *Iptek* (science and technology) application,
- Reviving indigenous identity and culture of Acehese people,
- Increasing youth's awareness of ethics and customs,
- Practicing of traditional ceremonies (*bouh gaca dan intat linto*),
- Publishing of a book on *Gayo* custom,
- Creation of Aceh's cultural map,
- Implementation of cultural campaign using billboard, booklet, and leaflet,
- Public information campaign and development of indigenous cultural values of the NAD Province through mass media.

3. ***Cultural asset management***. This program is aimed at increasing the community's appreciation of the tangible and intangible cultural assets through:

- Preservation of historical and archeological assets;
- Development of cultural information and database system by cultural mapping and government archive documentation;
- Capacity building for the personnel managing cultural assets
- Institutional development by improving the managerial system of the existing units responsible for cultural asset management to create good governance;
- Increase the roles of private sector in cultural asset management through:
 - Local/indigenous film development.
 - Provision of incentive-model for cultural asset preservation: historical and archeological heritages owned by individuals.
 - Transcription and transliteration of ancient documents;
 - Observation and writing of traditional wedding ceremonies of the ethnic groups in NAD Province.
- Revitalization of all potentials of cultural industries.

d) Indicative Implementation Schedule

The indicative implementation schedule of the above activities is presented in **Table 1.18** below.

Table 1.18 Indicative Implementation Schedule of Preservation of Indigenous Cultural Identity

No	Activity	2008	2009	2010	2011	2012
1	Diversified culture management					
2	Development of cultural values					
3	Cultural asset management					

1.5 Preservation of Ecosystem and Natural Resource

1. Potentials and Constraints

NAD Province is dominated by hilly and mountainous areas; the north coast area is a flood plain that tends to slope slightly, while the south east coast area is relatively steep. The middle part of the Province forms a mountainous area, which is the western end of the Bukit Barisan mountain range of Sumatra Island.

Forests are found on the mountainous zones of Seulawah and Leuser. Presently, much attention is being focused on the forest ecology due to illegal logging that has resulted in tremendous flooding in the north part of NAD Province, from North Aceh to Aceh Tamiang. The illegal logging has also threatened the existence of *nutfah* plants in Gunung Leuser National Park.

The marine ecology of the Province consists of Malacca Strait into which many rivers of Aceh flow while carrying sediment. On the other hand, there is the ridge of rock found in the south sea area and the area around the islands of Simelue and Weh.

At present, Aceh has various environmental problems that result in natural and environmental damage:

- ❖ *Deteriorating forest condition.* Forest is an important resource, not only for supporting the national economy but also to maintain the environmental supporting capacity for the balance of world ecosystem. NAD Province is one of the areas having extensive forest. Most of Gunung Leuser National Park is located in this Province – 625,000 hectares of the total area.
- ❖ *Damaged DAS (Daerah Aliran Sungai – Water Catchments Area).* Illegal logging and land conservation have resulted in big impacts – ecosystem damage in the water catchment areas. The damage is also caused by weak coordination between water catchment area management downstream and upstream, which will, in turn, threaten the balance of the ecosystem in general, particularly water reserves and supply mostly needed for irrigation, industry and household consumption.
- ❖ *Damaged ecosystem of the coastal and marine habitats.* The damaged ecosystem of coastal and marine habitats has increased particularly in dense-activity areas on the north and east coasts of the Province. It is indicated by the disappearing mangrove that has resulted in coastal erosion and declining biodiversity. Such conditions are also worsened by inappropriate spatial development planning. A number of activities seen as being causes of coast erosion include coastal sand-mining for reclamation, hotel construction, and other purposes. Meanwhile, the sedimentation destroying the coastal water has tended to increase. Rapid silting-up of some estuaries has also resulted from high sedimentation caused by the inappropriate land activities upstream, which even ignore the principles of land conversion. Besides, the level of pollution is too high in the coastal zone and in the water. The industrial, household, and agricultural activities are the main source of the pollution. Other activities such as sea transportation, oil tankers and mining are other sources of pollution too. Meanwhile, illegal fishing and mining of the ridge of rock taking place up to this time have all worsened the ecosystem of the coastal and sea habitats.
- ❖ *Increasing mining activities that destroy the environment.* The nature of mining business, particularly the open pit mining, always affects the ecosystem and its natural habitats. Large-scale mining activities will disturb the balance of the environmental functions and have bad impacts on human life. The public will tend to resist the existence of this mining activity. Such a bad image has been worsened by unlicensed (illegal) mining that causes bad environmental damage.

- ❖ *Less optimization of sustainable forest management.* Since the 1970s forests have been used as an economic machine for export of logs and timber based industries. Forest management system is still dominated by *Hak Pengelolaan Hutan* (Concession for Forest Management) that is granted in an opaque manner to certain private enterprises without involving the local people and local government. Social control cannot be implemented; *KKN* (collusion, corruption & nepotism) are practiced; and *KKN* actors tend to strive for a short-term benefit as much as possible. For the future, there should be a sustainable forest management that promotes the economic, social and environmental aspects.
- ❖ *Unclear authority and responsibility for forest management.* Local government autonomy has changed the model of the Central-Local Government relationship. Since this change is not governed by a certain law, a variety of different interpretations exist. Consequently, the forest condition tends to be pressured since there is no reciprocal understanding between the Central Government and Local Government in natural resource management. For instance, Law No. 41/1999 on Forestry Affairs tends to emphasize on ideal aspects of forest management rather than to accommodate clearly the authorized entity of forest management. Although Law No. 32/2004 on Local Government, which is a revision of Law No. 22/1999, has stated clearly the relationship between Central Government and Local Government in terms of authority, responsibility, use, maintenance, control, profit-share, and environmental and spatial synchronization, for its implementation it still needs further regulations.
- ❖ *Weak law enforcement for illegal logging and timber smuggling.* High costs for forest management and weak control and law enforcement have all resulted in less effective forestry planning. Cases of over cutting, illegal logging, timber smuggling to other countries, and other illegal activities have already occurred. All are expected to result in the losses of forest amounting to 1.2 hectares per year, surpassing the total area of cut forests licensed by the Department of Forestry. In addition to weak law enforcement, failure of forest management is also caused by land-tenure problems, unsustainable forest management, and the community's hindered access to forest resources.
- ❖ *Low capacity of forest management personnel.* Number of human resources, funding, infrastructure-facilities, and incentives for forest management disproportionately low compared to the amount of forest to be managed. Such a condition makes it difficult to cope with forest-related problems such as timber stealing, forest fires, illegal forest use, etc. Furthermore, the community's participation in securing the forest is also low.
- ❖ *Non-wood forest product and environmental services not developed optimally.* Non-wood forest products and environmental services of the forest ecosystem such as forest values as a water source, bio-diversity, clean air, climatic equilibrium, beauty of nature, and environmental assimilating capacity that all have economic potentials have not been developed as expected. According to survey results, the service values of forest ecosystem are much bigger than its product values. It is expected that the values of wood forest products are around 7% of the total economic values; the rest of it is of non-wood products and environmental service. Nowadays, demand for environmental services is increasing, particularly for bottled drinking-water, research objects, eco-tourism, etc. the environmental service has not been optimally utilized.
- ❖ *Marine potentials not optimally exploited.* NAD Province owns extensive marine resources with a total coastline of $\pm 1,660$ km and a total water area of $\pm 295,370$ km², consisting of territorial waters and waters around islands of 56,563 km² and Exclusive Economic Zone of 238,807 km². The fishery resource is $\pm 423,410$ tonnes

consisting of territorial waters and island territory of 220,090 tons and Exclusive Economic Zone of 203,320 tonnes with a sustainable potentials of 272,707 tonnes and amount of consumption (2004) of 102,555 tonnes or 37.60%. This indicates that there is a potential to be developed amounting to 170,152 tonnes (62.40%).

- ❖ *Increase of illegal fishing and destructive fish catching practices.* Illegal, unregulated, and unreported fishing by domestic and foreign ships in Aceh waters and the Exclusive Economic Zone around the Aceh waters still continues. This is due to the weak control and law enforcement with respect to fishery crime.
- ❖ *Less optimal management of small islands.* The NAD Province includes 119 small islands. Based on the data from Department of Marine Affairs and Fishery, the Province, however, has 180 small islands. So, there is a significant discrepancy of 61 small islands. Identification and inventory (including naming) of all of the small islands, either inhabited or uninhabited, which exist in NAD waters, need to be made in order that they can be optimally used in a sustainable manner for the benefit of the community's welfare. These small islands are susceptible to the change of natural condition due to its limited environmental supporting capacity; community-based exploitation and management of the islands are, therefore, to be conducted.
- ❖ *Undeveloped disaster mitigation system.* From the viewpoint of geography, the NAD Province lies on three active lithospheres: Indo-Australian, Eurasian, and Pacific lithospheres. Such conditions indicate why the Province is susceptible to natural disasters such as earthquakes and tsunami. Natural disasters (which occurred in the NAD Province, on 26 December 2006) threaten the flora, fauna and human life as well as the entire public infrastructure already built, if the developed early warning system is not applied. Within the medium term, development of the mitigation system, among others, through the scientific and technological advancement, will become very important for the mitigation of the negative impacts of the disaster. Besides, geological hazards mapping and spatial development conducted by considering the geological hazards zones and locations of economic activities need to be made appropriately. Moreover, the urban development model should be adjusted to the existing environmental supporting capacity. The other efforts to be made are to develop the natural green belt (mangrove forest) and ridge of rock on coastal areas.
- ❖ *No legal assurance to mining-related activities.* This condition is due to the incomplete discussion about the Draft Mining Law replacing Law No. 11/1967 on Mining-Related Subject Matters. Also, the local government autonomy has caused more uncertainty in business enterprise due to many local regulations that hinder business investment such as local government fees, profit sharing, and other licensing regulations for mining enterprises.
- ❖ *High level of pollution and no integrated and systematic waste treatment.* The increase in per-capita income and the change in lifestyle of urban people have caused a significant impact in terms of pollution of solid and liquid waste or gas. Solid waste has loaded the solid waste management, particularly the final disposal site. Still, solid waste has not been treated systematically, only being dumped tending to pollute soil and water and causing leaches that threaten human health. Water quality deterioration results from domestic, agricultural, and industrial wastewater. An integrated wastewater treatment among the interrelated sectors is therefore needed. The higher intensity of industrial activity and population mobility has become the cause of air quality deterioration, particularly in urban areas. Regulations on emission control for industry and transportation are needed to improve the air quality. Besides, hazardous materials deriving from hospital, industry, mining and human settlement have not been handled seriously.

- ❖ *Undeveloped alternative funding for environmental management.* The government fund allocation for environmental management is less than adequate. Of the total development fund, approximately 1% is allocated annually for this sector. Due to the limited local government financing capacity, funding alternatives need to be continually made in accordance with Law No. 23/1997 on Living Environment, through, including: Debt-for-Nature-Swap (DNS) Scheme, Clean Development Mechanism (CDM), Trust Fund Mechanism, and green tax. The endeavors oriented to these funding alternatives are still unclear since the local government financing mechanism and regulations are not flexible enough to anticipate a variety of innovative financing schemes. Besides, another funding alternative needs to be developed from local government sources through financing institutions and other independent institutions.
- ❖ *Unsynchronized regulations on environmental affairs.* Regulations on environmental affairs are not synergized with the regulations of other sectors. There are overlapped and inconsistent and even controversial regulations both at local and national level. To strengthen the principles of sustainable development, regulations on environmental affairs need to be continually developed.
- ❖ *Community's low awareness of environmental management.* In most cases, people consider that natural resources will be available forever, in unlimited amounts and for free. Water, air, climate and other natural wealth are deemed to be God's gifts that will never run out. And so is the notion that living environment will always be able to restore its supporting capacity and functional sustainability. This becomes more complicated with the existence of various basic problems such as poverty, stupidity and greed.

Based on the SWOT analysis (see below), the potentials and constraints are summarized as follows:

Potentials:

- ❖ Population pressure on natural resources is low.
- ❖ Preservation of the existing natural resources through environment-friendly manner such as cultivation of organic agriculture and plantation.
- ❖ Logging moratorium in Aceh and a shift to agro-forestry, silvo-forestry and eco-tourism activities.

Constraints:

- ❖ Low awareness about environmental management.
- ❖ Undesirable urban environmental conditions, particularly for the solid waste and drainage management, oil waste disposal, domestic and non-domestic waste disposal, and the medium-term efforts for air and water pollution prevention.
- ❖ NAD Province's disaster prone location, especially the volcanic and tectonic hazards
- ❖ Northern waters susceptible to pollution due to high frequency of international sea transportation crossing the Malacca Strait.

Table 1.19 SWOT Analysis of Ecosystem and Natural Resources Preservation

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ NAD Province is rich in various natural resources: land and marine ecology. ❖ Population pressure to natural resources is low. ❖ NAD Province owns a lot of islands. 	<ul style="list-style-type: none"> ❖ Large environmental damage as a result of the tsunami. ❖ Continuous deterioration of forest condition. ❖ Damage to Water Catchment Areas. ❖ Increasingly damaged ecosystem of coastal habitats. ❖ Mining activities destroying environment. ❖ Less optimum sustainable forest management system. ❖ Unclear distribution of authority and responsibility for forest management. ❖ Weak law enforcement for illegal logging and log smuggling. ❖ Low capacity of forest management. ❖ Less optimally used non-timber forest products and environmental services. ❖ Less optimally used marine potentials. ❖ Intense mode of illegal fishing and destructive fish catching. ❖ Less optimal use and management of small islands. ❖ Less developed disaster mitigation system. ❖ No legal guarantees for mining business. ❖ High level of pollution and no integrated and systematic waste treatment implemented. ❖ Less developed funding alternative for environmental management. ❖ Unsynchronized environmental law and regulations. ❖ Community's low awareness of environmental management.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Improvement of the natural resource management. ❖ Optimization of economic benefits of the natural resources. ❖ Development of environmental regulations. ❖ Law enforcement ❖ Rehabilitation and restoring of natural resources reserves ❖ Environmental pollution control. ❖ Natural resource development for supporting the local economy and increasing the environmental welfare without neglecting the environmental functions. 	<ul style="list-style-type: none"> ❖ Continuous logging that polutes the rainwater catchments areas and Leuser National Park. ❖ Plantation investment on the ecology susceptible to land-use conversion. ❖ NAD Province's susceptible-to-natural-disaster location. ❖ Northern waters susceptible to pollution due to high frequency of international sea transportation crossing the Malacca Strait.

2. Strategies

Taking into account the potentials and constraints, the following strategies and action plans need to be formulated:

- ❖ improving the forest management system by increasing the community involvement directly in the forest management, increasing the coordination and strengthening of the institutions in the water catchment areas, and enhancing the supervision and law enforcement.
- ❖ entering into agreements with governments at district/municipal level upon the sharing of authority and responsibility for forest management.

- ❖ increasing the effectiveness of the available forest management resources.
- ❖ declaring a moratorium in certain zones.
- ❖ optimizing the use of non-timber forest products and environmental services.
- ❖ managing and making efficient use of the potential of marine, coastal and small islands resources in a sustainable and community-based manner.
- ❖ building a control and supervision system for fishery resource management through law enforcement.
- ❖ repairing the damaged ecosystem conservation and rehabilitation.
- ❖ controlling pollution and environmental damage in the coastal zones, sea and non-marine waters.
- ❖ strengthening the capacity of the supporting instruments for marine development in terms of science and technology, human resources, institutional aspects, and regulations as well.
- ❖ increasing marine research and technology development.
- ❖ developing mitigation efforts in marine and coastal environments, increasing work safety, and minimizing the risks from sea disaster (tsunami) for people living on the coastal areas and small islands.
- ❖ activating partnerships for increasing the community's and private sector's active participation in management of marine, coastal and small island resources.
- ❖ increasing exploration for new oil and gas reserves and other minerals.
- ❖ increasing exploitation by taking the sustainable development into account, particularly for aspects related to forest damage, bio-diversity, and environmental pollution.
- ❖ increasing small-scale mining business in rural areas by taking account of the social and environmental factors.
- ❖ increasing the benefits of mining and adding value.
- ❖ fostering good mining practice on the existing mining locations.
- ❖ rehabilitating disused mine locations.
- ❖ creating legal assurances through regulatory adjustment and consistent law enforcement.
- ❖ increasing the control and supervision of mining management.
- ❖ improving mining-related services and information, including information on geological hazard zones.
- ❖ evaluating unsuitable policies/regulations.
- ❖ emphasizing the principles of sustainable development.
- ❖ improving coordination in environmental management at provincial/district/ municipal levels.
- ❖ harmonizing the development of environmental laws and consistency of enforcement with regard to environmental pollution.
- ❖ To increase the control of environmental impacts.
- ❖ building the institutional capacity for sound environmental management at provincial/district/municipal level, particularly in handling the cases that are accumulative and seasonal by nature, and disasters.
- ❖ raising the community's awareness of environmental issues and active participation as a social control in monitoring the environmental quality.
- ❖ improving the environment-related data/information, including information about areas susceptible to natural disasters and about the early warning system.

c). Action Plans

Based on the above strategies, the programs conducted for the next five years are as follows:

1. Forestry product increase. This program is aimed at making more efficient, optimum, just and sustainable use of forest potentials by creating forest management units in

accordance with the principles of sustainable forest management, supported by competitive forestry industries through:

- Establishment of forest zones.
- Establishment of unity in forest management.
- Establishment of forest use and control of forest function and status transfer.
- Development of community-based forest and forestry business.
- Institutional supervision of production forest.
- Development of certification for sustainable forest management.
- Development of non-timber products and environmental services.
- Conservation of forest resources.

2. Critical land rehabilitation. This program is aimed at attempting to protect forest resources and restoring forest functions and functionally degraded land. The policies to be followed are restoring the critical lands, enhancing the community's skills for reforestation, and increasing community participation in forest management, through:

- Development of *Hutan Raya Pocut Meurah Intan* Park.
- Support for the development of *Hutan Raya Pocut Meurah Intan* Park.
- Development of non-timber forest products/goods and forest research.
- Management of conservation zones.
- Support for the management of conservation zones and bio-diversity.
- Management and supervision of reforestation.
- Support for the Management and supervision of reforestation.

3. Development and management of marine resources. This program is aimed at managing and making efficient use of marine, coastal, small-island resources in an optimum, just and sustainable manner through integration of various uses to give beneficial contribution to the local development and social welfare improvement, through:

- Policy formulation and regulation establishment for integrated management of marine, coastal, and small-island resources;
- Efficient and community-based sustainable management of marine, coastal, and small-island resources;
- Development of monitoring, controlling, and surveillance and community empowerment;
- Organization of marine, coastal and small-island zones in accordance with their environmental supporting capacity;
- Conduct of marine research and technology development and other non-biological resources;
- Development and management of marine conservation zones, and rehabilitation of damage ecosystem of the marine habitats such as ridge of rock, mangrove forest, *padang lamun* and estuaries;
- Increase of community's and private sector's active participation in the management of marine, coastal, and small-islands resources;
- Organization and institutional development including community-based institution at local level:
- Laws enforced for violators and fishery crimes;
- Improvement of safety, marine disaster mitigation, and marine climatic forecast;
- Development of the knowledge of the present generation with regard to marine-related matters.

4. Oil and gas enterprise development. This program is aimed at managing the oil and gas enterprises in order to serve as an important source of local revenue, increase up-stream and down-stream investments, optimally develop the oil-and-gas potentials, and improve the quality of oil-and-gas human resources, through:

- Development of oil-and-gas supporting businesses;

- Development of local content;
 - Development of health and safety in the workplace in oil-and-gas extraction;
 - Community development on the surrounding of oil-and-gas extraction
 - Management of oil wells;
 - Technical development of plant and equipment in oil-and-gas extraction;
 - Preparation and evaluation of exploration;
 - Monitoring of field POD (Plan of Development);
 - Education and training in oil-and-gas sector;
 - Exploration of new oil-and- gas deposits;
 - Increase in natural gas benefits;
 - Optimization of oil-and-gas fields;
 - Increase in profits of oil and gas mining;
 - Management of oil-and-gas database;
 - Oil-and-gas research and development;
 - Oil-and-gas exploration and exploitation taking account the environmental functions and supporting capacity.
5. Development of resource of energy, mineral and groundwater. This program is aimed at optimizing the use of mineral, coal, geothermal and ground water resources through the principles of good mining practice.
- Preparation of regulations, technical guidelines, and the standard for mineral and coal, and geothermal and ground water extraction.
 - Monitoring and supervision of mining activities;
 - Supervision of production, marketing, and management of mineral and coal, geothermal and ground water management;
 - Assessment and planning of mineral and coal, and geothermal and groundwater production and marketing;
 - Evaluation of the implementation of the community development policies within the mining areas;
 - Evaluation, supervision, and control of community-managed mining activities potential to pollute the environment, particularly the use of mercury and cyanide in gold mining as well as unlicensed mining and certain chemicals on small-scale industries;
 - Technical guidance on mining;
 - Management of mineral and coal, geothermal and groundwater database, and geological information distribution related to the disaster mitigation efforts;
 - Promulgation of mining-related policies and regulations;
 - Increase of benefits and profits of mining products;
 - Geological, mineral and coal, geothermal and groundwater research and development;
 - Geological, mineral and coal, geothermal and groundwater education and training; and
 - Post-mining environmental restoring and implementation of post-mining policies as well as environment-based oil and gas mining.
6. Natural resources protection and conservation. This program is aimed at protecting the natural resources from damage and managing the existing conserved areas to assure the ecosystem quality as a buffer zone, through the following activities:
- Review of the policies of natural resources protection and conservation;
 - Protection of natural resources from uncontrolled exploitation particularly on the conserved areas, including the conserved marine area and wet land, as well as other areas susceptible to environmental damage;
 - Protection of forest from fire;
 - Development of the institutional coordination in the integrated water catchments area management;

- Management and protection of land, coastal, and marine biodiversity from extinction;
 - Development of incentive and disincentive system for natural resources protection and conservation;
 - Formulation of funding mechanism for natural resources protection and conservation;
7. *Institutional development, law enforcement of natural resources management, and environmental conservation.* These programs are aimed at developing the capacity of natural resources management personnel and environmental functions through good environmental governance based on transparent, participative and accountable principles:
- Review and analysis of the instruments used for sustainable natural resources use.
 - Capacity development of the natural resources and environmental management personnel, including the community-based traditional institution.
 - Increase of community's participation in natural resource and environmental management through partnership model.
 - Development of control and supervision of natural resource including the disaster prevention.
 - Development of alternative funding for environmental prevention.
 - Improvement of inter-institutional coordination.
 - Development of environmental regulations for environmental control, pollution and destruction.
 - Integrated law enforcement and legal settlement on cases of natural resources and environmental destruction.
 - Development policies review and implementation through internalization of sustainable development principles.
 - Development formal and non formal education on environmental matters.
 - Development of good environmental governance program integrated with other good governance programs.
8. *Development of access to information on natural resources and environmental matters.* This program is aimed at improving the quality of information on natural resources and environmental matters to support the planning of natural resources uses and protection of environmental functions through:
- Preparation of database on natural resources: potentials and supporting capacity of the ecosystem, including the small islands;
 - Development of natural resources values: forest, water, coasts, and mineral reserves;
 - Preparation of natural resources and living environment balance report;
 - Preparation and application of Green GDP;
 - Preparation of database on forest resource and forest resource balance;
 - Inventory and finalization of forest border organization and bordering area;
 - Preparation of achievement indicators for natural resources and environmental management;
 - Distribution and improvement of Information access to public, including information on disaster mitigation and natural resources and environmental potentials;
 - Development of early warning system related to global dynamics and change in natural conditions such as earthquake, tsunami, floods and droughts.

9. Prevention and control of environmental damage and pollution. This program is aimed at improving the environmental quality and protecting from damage and/or pollution in land areas, in freshwater and sea waters as well as air so that community can obtain better-quality living environment, through:
- Air and groundwater quality monitoring particularly in urban and industrial areas; surface water quality especially on development-dense river bank areas; as well as sea water quality on coastal areas, in a sustainable and coordinated manner among local governments and sectors;
 - Supervision of the threshold of wastewater, gas emission, and hazardous materials from point sources and non point sources;
 - Development of environmental laboratory facilities as well as ambient air monitoring;
 - Preparation of regulations for pollution and environmental control, technical guidelines, environmental threshold and legal settlement of environmental pollution cases;
 - Use of environment-friendly oil (especially unleaded gasoline and the like) for transportation and energy sector to reduce the urban air pollution referring to Euro-II gas emission standard;
 - Socialization of use of clean technology and eco-efficiency in various manufacturing industries and means of transportation;
 - Supervision of BPO reduction at district/municipal level;
 - In-depth assessment of impacts of global climatic changes, and measures of anticipation on the prioritized sectors;
 - Adaptation to the impacts of climatic changes on the sector strategic plans and local government development plan;
 - Increase in products and use of compost fertilizer of urban domestic waste;
 - Increase of community and informal sector participation particularly scavengers and scrap dealers in the endeavors of solid waste sorting and 3R (Reduce, Reuse, Recycle);
 - Assessment on a regional final disposal site;
 - Development of system and mechanism for hazardous material treatment and, at any rate, establishment of treatment plant facilities;
 - Implementation of incentive and disincentive system to industrial and mining activities potential to environmental pollution;
 - Development and application of various instruments for environmental management, including spatial development, assessment of environmental impacts, and licensing mechanism;
 - Integration of environmental costs into the production cost, including progressive taxes of natural resources and environmental management;
 - Development of environment-based technology, including traditional technology for natural resources management, waste treatment, and environment-friendly technology, and
 - Formulation of regulations and mechanism for alternative funding such as DNS (debt for nature swap), CDM (Clean Development Mechanism), environmental fee, etc.
10. Rehabilitation and restoring of natural resources reserves. This program is aimed at rehabilitating the damaged environment and accelerating the natural resources reserves serving as both a buffer zone and potentials for sustainable use, through:
- Establishment of areas prioritized for rehabilitation of mining, forest, land , and coastal areas as well as small islands;
 - Development of institutional capacity, facilities and infrastructure for rehabilitation of mining, forest, land , and coastal areas as well as small islands;
 - Increase of reforestation effectiveness, conducted in an integrated manner;

- Rehabilitation and the damaged ecosystem and habitats in forests, coastal areas (coral reef, mangrove, sea grass, and estuaries), waters, ex-mining location, equipped with development of management system;
- Restocking of agricultural and fishery resources;
- Up-stream rehabilitation to assure the supply of irrigation water for agriculture and prevent from erosion and sedimentation on river and coastal areas; and
- Revitalization of lakes, ponds, and other water sources.

d) Indicative Implementation Schedule

The implementation schedule is presented in **Table 1.20** below.

Table 1.20 Implementation Schedule of Ecosystem and Natural Resources Preservation

No	activities	2008	2009	2010	2011	2012
1	Forestry product increase					
2	Critical land rehabilitation					
3	Development and management of marine resources					
4	Oil and gas enterprise development					
5	Development of resource of energy, mineral and groundwater					
6	Natural resources protection and conservation					
7	Institutional development, law enforcement of natural resources management, and environmental conservation					
8	Development of access to information on natural resources and environmental matters					
9	Prevention and control of environmental damage and pollution					
10	Rehabilitation and restoring of natural resources reserves					

1.6 Supports for Sustainable Economic Production Growth

1.6.1 Agriculture

1.6.1.1 Food Crops and Horticulture

a) Potentials and Constraints

The contribution of the agricultural sector to the provincial GDP between 2001 and 2005 was relatively stable (20.46 to 21.04%) and between 2003 and 2004 its growth was 3.43% and 5.66%. This sector has also contributed to the strengthening of the interrelation among sectors of industry, consumption and investment.

The agricultural sector has absorbed around 35% of the total workforce amounting to 2,487,426 people. Around 70% of the households in rural areas depend on the agricultural sector for their livelihoods, particularly from the food-crop sub sector.

In terms of the total area of agricultural land, the agricultural sector is dominated by the plantation sub-sector rather than the agriculture sub-sector. The total area of plantation is around 1,103,803 hectares, which is larger than the total area of farming land which is 390,366 hectares (Bureau of Central Statistics 2005).

Presently, manufacturing of agricultural products is growing rapidly. The Regency of Pidie now possesses a modern rice manufacturing with a maximum capacity of 3 tons per hour (24 tons of rice/day).

Availability of dry land and neglected farming land amounts to 1,564,438 hectares; the total area of non-irrigated dry land is 983,389 hectares; the total area of land used as domestic premises is 240,594 hectares; the total area of unproductive land is 340,455 hectares; and the total area of wet farming land is 53,603 hectares.

With regard to agriculture, the Acehnese people have from generation to generation owned a *kejrué blang* tradition – farmer groups at the village level – to be representatives to the Department of Agriculture in developing the agricultural programs in NAD Province.

The 26 December 2004 tsunami has caused damage to farming land of 20,000 hectares. In total, there were more than 88,000 hectares of farming land, premises and dry land damaged by tsunami. This has, at any rate, affected the existing agricultural and horticultural products.

Based on the SWOT analysis (see below), the potentials and constraints of the development of food crop and horticulture are summarized as follows:

Potentials:

- ❖ Major potentials of agricultural products and large farming land.
- ❖ Financing institutions at a village level for food crop and horticulture available in sub-districts of NAD Province.
- ❖ Significant absorption of work force in the agriculture sector.
- ❖ High contribution of the agricultural sector.
- ❖ Development of food crop and horticulture by qualified PPL (agriculture information campaign personnel), available quality seeds and post-harvest supports.

Constraints:

- ❖ The ongoing aftermath of the conflict, tsunami and floods have all destroyed the farming facilities and infrastructure in the Province.

- ❖ Limited quantity and quality of functional personnel to strengthen the farming institution at a village level.
- ❖ Significant poverty rate in farming households.
- ❖ Damage to farming land as a result of floods in 2006.
- ❖ Significant damage to farming land as a result of tsunami affecting the agricultural sector performance.

Table 1.21 SWOT Analysis of Food Crop and Horticulture

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Available adequate lands for food crop and horticulture cultivation in the NAD Province. ❖ Available Local, National APBD (Budget) and BRR ❖ Adequate <i>Unit Pelaksana Teknis Dinas</i> (Technical Implementation Units), BPP, BBI. ❖ Available farming institution. ❖ Available partnership with business owners (ALSINTAN). ❖ Adequate number of human resources at provincial and district level. 	<ul style="list-style-type: none"> ❖ Low competitiveness of food crop and horticulture due to transportation problem. ❖ Less farming facilities and infrastructure. ❖ Limited personnel for agricultural information campaigns. ❖ Narrow farming land. ❖ Limited capital of farmers and farm business owners. ❖ Weak roles of farming institution. ❖ Less open information on farming technology and market. ❖ Unavailable farming insurance. ❖ Less available quality seeds. ❖ Relatively expensive production facilities. ❖ Farming policies are not benefitting the farmers. ❖ Percentage of poor farmers relatively high.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Existence of grant from donor countries. ❖ High demand of agricultural goods, both domestic and foreign. ❖ Law No.11/2006 on Aceh Government. ❖ High interest of capital investor in agriculture and horticulture sector. ❖ Available farmers and agriculture labor. ❖ Local government supports for the growth of agricultural industry. ❖ Existence of higher educational and research institutions. ❖ Banking ❖ Business owners of farming facilities. ❖ Transportation and distribution. ❖ Existence of traditional institutions. 	<ul style="list-style-type: none"> ❖ Organism destroying plants (pests and diseases). ❖ Outside-Aceh competitiveness of food crop and horticulture. ❖ Natural disasters (tsunami, floods and droughts). ❖ Overseas dumping politics. ❖ Shift of function from productive land to industrial purpose/building due to government policies. ❖ Dispute on farmer-cultivated land between business owner and government. ❖ Rare fertilizer and seeds. ❖ Weak marketing system for agricultural products.

b) Strategies

To increase the competitiveness of food crop and horticulture, the strategic and action plans are formulated based on the existing potentials and possible constraints as follows:

- ❖ Post-conflict and tsunami development and/or rehabilitation of farming facilities and infrastructure.
- ❖ Human resources development in the food crop and horticulture sub-sectors.
- ❖ Optimization of food crop and horticulture land.
- ❖ Development of prime commodities.

c) Action Plans

1. Develop the farming facilities and infrastructure of food crop and horticulture.

- ❖ Development of integrated agro-tourism and agribusiness facilities (commodity manufacturing and marketing)

In order to obtain value-added food crops and horticultural commodities, agricultural products, as produced by farmer at present, should gradually be manufactured or shifted to semi-processed or fully-processed commodities. Agricultural cultivation also has a chance for agro-tourism development. So, integrated agribusiness and agro-tourism facilities need to be developed as a pilot project for potential and value-added commodities for the period of 2008-2012.

- ❖ Development of ALSINTAN (pre-and post-harvest)

To support the development of food crop and horticultural productivity and to take the potentials of uncultivated land into account, pre-and post-ALSINTAN (Agricultural devices and machines) existence is significant. There are two activities in the development of ALSINTAN: (i) developing ALSINTAN through the existing UPT (Technical Service Unit) and/or (ii) invite the private sector to work out a partnership in the development of ALSINTAN. The partnership scheme may be in the form of co-financing between government and private sector. This activity will be conducted for the period between 2008 and 2012.

- ❖ Development and application of pre-and post-harvest technology

Food crops and horticultural productivity improvement will be realized if the pre-and post-harvest technology is continuously developed and applied by farmers. The technological development could be conducted by the existing UPT in cooperation with a higher educational institution. So, the department of agriculture may concentrate on the developmental activities and ascertain that the developed technology can be applied by farmers. This activity will be conducted during the period of 2008 – 2012.

2. Increase the commodities and productivity of food crops and horticulture

- ❖ Provision of high-quality seeds for farmers through BBI/BBU (development of seeding facilities)

One factor determining the farming productivity is the availability of high-quality seeds. BBI/BBU seeding facilities, therefore, need to be made. This activity will be conducted between 2008 and 2012.

- ❖ Control of organisms that destroy plants

One of the constraints for a farmer to increase the productivity of food crop and horticulture is organisms that destroy plants. This activity is, therefore, aimed at assisting farmers in reducing this kind of organism by providing pesticide for them and conducting public campaigns on the best ways to reduce this constraint. This activity will be conducted within the period of 2008-2012.

- ❖ Land optimization and expansion, including utilization of abandoned land

As a result of the past conflict, extensive farming land has not been utilized optimally. To meet the demand of domestic, regional or international markets if possible, optimization of abandoned land will be a solution. So, this activity is focused on the provision of supporting facilities and infrastructure for optimum use of the abandoned land, and will be conducted during the period of 2008-2012.

❖ Development of environmental-friendly farming systems (organic farming)

Organic agriculture, as already practiced in other areas, can improve the productivity of food crop and horticulture. This activity will be focused on the pilot project of organic farming as learning and proofing medium for farmers to practice. It will be conducted during the period of 2008-2012.

❖ Improvement of farmers' welfare through integrated farming

One endeavor to improve farmer's welfare is not to rely on food crops and horticulture as the sole source of livelihood. Ideally, these could be combined with other sub-sectors such as husbandry, fishery, etc. This activity is aimed at developing the models of integrated farming that farmers can create according to the existing potentials. The models will then be applied in the form of a pilot project. This activity will be conducted during the period of 2008-2012.

❖ Develop the excellent commodities of food crop and horticulture by Regency/city

Aceh is very rich in food crops and horticulture. To increase their competitiveness, development of excellent commodities in every Regency/city will be a significant measure. In this activity, identification of excellent commodity needs to be conducted and supported by adequate facilities and infrastructure, including partnership with private sector. This activity will be conducted during the period of 2008-2012.

3. Develop food crop and horticulture human resources (farmers)

❖ Development of farming institution and network

In principle, there have been some farming organizations and networks up to village level. It is, however, important to strengthen them (not to establish new organizations) in order to encourage the productivity improvement. So, this activity will be focused on institutional strengthening and capacity building for farmers through the provision of training, comparative study, etc. It will be conducted during the period of 2008-2012.

❖ Revitalization of agricultural extension personnel

For publicizing farming innovation and technology and, at the same, encouraging farmers to apply them, the existence of agricultural extension personnel is very important. However, since the decentralization began and the situation was conducive, the performance of agricultural extension personnel has not been as what is expected. In order to accelerate the agricultural extension (campaign) to farmers, which will, in turn, help improving their productivity, revitalization of agricultural extension personnel need to be conducted through the provision of advanced study, long and short-term training or comparative study. This activity will be conducted during the period of 2008-2012.

❖ Development of appropriate technology-based field school

The existence of appropriate technology-based field school is one provider of reliable agricultural extension personnel. In addition to provide reliable personnel to support the government program, this activity can also support the development of private sector activity making investments in food crop and horticulture. It will be conducted during the period of 2008-2012.

❖ Strengthening the coordination of related institutions to prevent the water catchment areas from damage of uncontrolled logging

Floods caused by uncontrolled logging will have a major impact on commodities of food crop and horticulture. So, this activity is aimed at coordinating the related

government units through workshop, seminar, etc. which will be conducted during the period of 2008-2012.

4. *Increase the access to farming information*

- ❖ Open the information network of domestic and foreign markets

To provide incentives for food crop and horticulture farmers and to reduce the uncertainty of the produced commodities, it is very important to provide information network of market, either domestic or foreign oriented/export. The information network can be provided directly (by the government) or the government facilitates the existing information to be forwarded to farmers. This activity will be conducted for the period of 2008-2012.

- ❖ Encourage the technology transfer through technical assistance provision, field training and education, database preparation

Improving the productivity of food crop and horticulture, availability of technology that can be accessed and used by farmers is very important. In order to achieve this purpose, technical assistance provision and field training and education need to be conducted so that technology transfer can take place. Besides, existence of database on food crop and horticulture will support the process of technology transfer to farmers. This activity will be conducted for the period of 2008-2012.

5. *Increase the food crop and horticulture farmers' accesses to capitalization*

- ❖ Provide revolving funds through government-owned finance at provincial/district level for food crop and horticulture sector

Having access to capital is a problem for food crop and horticulture farmers. However, there is proof that direct provision of capital by government unit for farmers will finally cause them to be less productive, or they can settle their credit. So, this activity is planned to allocate financial assistance through the existing local government-owned finances (at district/sub-district level) in the form of revolving funds. It will be conducted for the period of 2008-2012.

d) Indicative Implementation Schedule

The implementation schedule of development of food crop and horticulture is presented in **Table 1.22** below.

Table 1.22 Implementation Schedule of Development of Food Crop and Horticulture

No	Activity	2008	2009	2010	2011	2012
1	<u>Develop the farming facilities and infrastructure of food crop and horticulture</u> ❖ Development of integrated agro-tourism and agribusiness facilities (commodity manufacturing and marketing) ❖ Development of ALSINTAN (pre-and post-harvest) ❖ Development and application of pre-and post-harvest technology					
2	<u>Increase production and pest control</u> ❖ Provision of quality seeds for farmers through BBI/BBU (development of seeding facilities) ❖ Control of organism destroying plants ❖ Land optimization and expansion, including utilization of abandoned land ❖ Development of environment-friendly farming system (organic farming) ❖ Improvement of farmers' welfare through integrated farming ❖ Develop the excellent commodities of food crop and horticulture by Regency/city					
3	<u>Develop food crop and horticulture human resources (farmers)</u> ❖ Farming institutional and network development ❖ Revitalization of agricultural extension personnel ❖ Development of appropriate technology-based field school ❖ Strengthening the coordination of related institutions to prevent the water catchments area from damage of uncontrolled logging					
4	<u>Increase the access to farming information</u> ❖ Open the information network of domestic and foreign market ❖ Encourage the technology transfer through technical assistance provision, field training and education, database preparation					
5	<u>Increase the food crop and horticulture farmers' accesses to capitalization</u> ❖ Provide revolving funds through government-owned finance at provincial/district level for food crop and horticulture sector					

1.6.1.2 Plantation

a) Potentials and Constraints

The hilly topographic conditions of NAD Province are suited to the cultivation of oil palm, rubber, coffee and cacao which are the major plantation commodities of the Province. The development of plantations is not only beneficial for the economy but also for ecological equilibrium – to preserve land fertility and water resources.

In the NAD Province, there is a fairly extensive land available for cultivation of plantation crops. There is a total of 250,000 hectares of abandoned land (ex-HGU) that can be switched into plantation area. Around 761,572 hectares are potential to be individually-owned and large scale plantations with a total production of 1,023,303 tons.

In 2005, there was a decrease in the number of plantation products: Rubber (36.58%), Coconut (12.47%), and Coffee (6.23%). On the other hand, the increasing products were areca nut (12.13%), Oil Palm (30.57%), and Kemiri (13.70%).

In general, plantations within NAD Province are cultivated in a mono-cultural manner, whereas landownership is often less than 1 hectare and only primary products are produced. The farmer's income is low because the value-adding product processing is done outside the Province.

The armed conflict caused the abandonment of and damage to plantation crops amounting to 254,666 hectares, with 270,840 farmer households. Moreover, the earthquake and tsunami has caused damage to 22,305 hectares of plantation, which affect 23,766 farmer households. These are all causes of low productivity.

There are 21 palm oil factories, 111 coffee manufacturers, 129 *pala* refineries, 29 *nilam* refineries, coconut oil manufacturers, 2 cacao manufacturers, and 4 rubber manufacturers. At present, the subsequent manufacturing process (for frying oil and soap of CPO) is carried out outside of the Province.

Table 1.23 SWOT Analysis of Plantation Crops

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Natural conditions (climate and land) of the Province much supportive for development of plantation commodities. ❖ Fairly large built plantation area and potential land to be developed. ❖ Availability of plantation labor and personnel. ❖ Clear regulatory framework for plantation enterprise development. 	<ul style="list-style-type: none"> ❖ Low plantation productivity. ❖ Small area of owned farming land (less than 1 hectare) and commodities produced are still primary by nature; and low commodity quality causing low income. ❖ Low mastery of information and low-quality human resources (plantation workers) and farmers. ❖ Limited access to plantation enterprises.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Increase in market demand of plantation commodities. ❖ Increase in interest and number of investors of plantation development. ❖ Bettering business climate of plantation, indicated by Helsinki MoU. ❖ Existence of Law No. 11/2006 on Aceh Government. 	<ul style="list-style-type: none"> ❖ Growth of outside-NAD plantation commodities development. ❖ Anomaly (extreme climatic changes).

Based on the SWOT analysis above, the existing potentials and constraints are summarized as follows:

Potentials

- ❖ Quantitatively, the number of plantation human resources is adequate.
- ❖ The natural condition of the Province is supportive for plantation commodity development.
- ❖ The built plantation area is extensive.

Constraints

- ❖ Productivity of commodities is only 50% of the potentials. This is caused, among others, by damaged/old plantation crops, less investment capital, and the used seeds do not qualify for the technical criteria.
- ❖ Qualitatively, the plantation human resources are low.
- ❖ Minimum facilities and infrastructure (roads)
- ❖ Plantation commodities are marketed via middleman, due to weak relation between farmers (producers) and consumers.

b) Strategies

Considering the existing potentials and possible constraints, the following strategies and action plans are formulated:

- ❖ Plantation rehabilitation, intensification, extension, and diversification.
- ❖ Capacity building for farmers and plantation workers.
- ❖ Improvement of plantation facilities and infrastructure and institutional strengthening.

c) Action Plans

1. Develop the plantation commodity and facilities/infrastructure

- ❖ Rehabilitation of plantation crops (cacao, oil palm, rubber, coconut).

In most cases, plantation in Aceh is an individual enterprise. As long as the conflict took place, farmers could not cultivate plantation commodities maximally. Due to the existence of peace agreement, a number of rehabilitations are, therefore, to be conducted either in terms of technical aspect or business management. This activity will be conducted within the period of 2008-2012.

- ❖ Development of plantation crops (cacao and oil palm).

As long as the conflict continued, the existing land and plantation commodities could not be managed optimally. Due to the existence of the peace agreement, the abandoned lands could be utilized to increase the plantation commodities. So, to optimize the use of additional lands, a number of activities are made in the form of land preparation and supports for production process and post-production marketing. This activity will be conducted within the period of 2008-2012.

- ❖ Development and provision of Product Processing Unit

The value-addition of plantation commodities depends on their finished state, not the total production (harvest). The development of processing units for plantation commodities should, actually, be the link of plantation development in NAD Province in order to obtain value-addition and product brand. This activity will be initiated by a feasibility study, appointment of business partner and construction of *UPH (Unit Pengolahan Hasil – Product Processing Unit)* as well as cooperation in product marketing. The prime products for this activity are coffee, oil palm, and

cacao. It will be conducted, possibly as a pilot project or realized in limited number, within the period of 2008-2012.

❖ Development and improvement of access (roads)

To expand the coverage of plantation commodities, mostly located far from roads, access to the locations of plantation (production) need to be constructed. This activity is aimed at supporting access provision so that farmers so they can easily carry their commodities to the marketing network. It will be conducted within the period of 2008-2012.

❖ Provision of quality seeds through the development of seeding facilities

One key factor in developing the productivity of plantation commodities is to provide quality seeds for farmers. To ensure the availability of quality seeds, seeding facilities need to be constructed. This activity will be conducted within the period of 2008 - 2012.

❖ Development of agribusiness areas

To obtain value-addition of plantation commodities, in-production and post-production activities are to be made in an integrated manner. One of the planned activities is to develop the agribusiness area so that the plantation commodities can be further processed (not directly sold in the form of raw material). It will be conducted within the period of 2008 - 2012.

2. Information development and cooperation in plantation development

❖ Work out a partnership with private sector

At present, the plantation model is an individual business and its activity only serves as an additional source of livelihood. To increase the productivity of the plantation sector, private sector involvement should be increased. So, this activity is aimed at developing various partnership schemes between private sector and individual plantation, either in the form of study or pilot project. This activity will be conducted within the period of 2008 - 2012.

❖ Provision of marketing network for plantation commodities

To provide incentive for plantation farmers and reduce the uncertainty of their produced commodities, it is very important to provide in information network of market, either domestic or foreign oriented/export. The provision of information network can be made directly (by government) or the government facilitates the existing information to be forwarded to farmers. This activity will be conducted for the period of 2008 - 2012.

3. Institutional development in plantation sector

❖ Training for farmers and plantation workers

To support the change in orientation in the plantation sub-sector activity (from additional source of livelihood to major source of livelihood) on a commercial basis, capacity building for farmers and plantation workers is a primary condition. So, a number of trainings, related to in-production and post-production processes, need to be conducted. This activity will be conducted within the period of 2008-2012.

❖ Government policies in land-use for plantation (land optimization or new land opening)

To accelerate the use of abandoned land for plantation enterprise, government policies are needed, which can be incentive in the form of legal assurance. A review of the existing regulations, including Law on Aceh Administration enacted in 2006, is needed to prepare the comprehensive policies. This activity will be conducted within the period of 2008-2009.

- ❖ Institutional development and strengthening for plantation cooperative and commodity association

In principle, several farmer organizations and networks and commodity-based associations are already established. However, to support the production improvement of agricultural commodities, it is important to strengthen these existing organizations and networks, and not establish yet a new institution. For this activity, which is directly related with organizational strengthening and capacity building of farmer organizations and networks. This activity is planned to be implemented during the period 2008 - 2012.

d) Indicative Implementation Schedule

The implementation schedule of these activities is presented in **Table 1.24** below:

Table 1.24 Implementation Schedule of Plantation Sub-sector Development

No	Activity	2008	2009	2010	2011	2012
1	Develop the plantation commodity and facilities/infrastructure <ul style="list-style-type: none"> ❖ Rehabilitation of plantation crops (cacao, oil palm, rubber, coconut). ❖ Development of plantation crops (cacao and oil palm). ❖ Development and provision of UPH plantation ❖ Development and improvement of access (roads) ❖ Provision of quality seeds through the development of seeding facilities ❖ Development of agribusiness area 					
2	Information development and cooperation in plantation development <ul style="list-style-type: none"> ❖ Work out a partnership with private sector ❖ Provision of marketing network for plantation commodities 					
3	Institutional development in plantation sector <ul style="list-style-type: none"> ❖ Training for farmers and plantation workers ❖ Government policies in land-use for plantation (land optimization or new land opening) ❖ Institutional development and strengthening for plantation cooperative and commodity association 					

1.6.1.3 Animal Husbandry

a) Potentials and Constraints

Development of animal husbandry in NAD Province has, from year to year, indicated a decrease in the number of products and livestock. The decrease is caused by the managerial changes. Prior to 1999 animal husbandry was a side business by nature, but from 2000 up to present time, this business activity has been managed intensively, particularly beef fattening and chicken raising. The supporting factors supporting the growth of animal husbandry are the relatively small amounts of land required, relatively small amounts of capital, and rapid capital circulation supported by adequate marketing. The other supporting factors include government loans for capitalization, and layer-hen and chicken raising businesses. To increase the scale of livestock business, government credit is provided for small-scale business investment and economic empowerment.

To increase the number and quality of livestock, artificial insemination is used in line with vaccination provision that is supposed to prevent contagious diseases. The positive impact of the activities conducted by government to promote livestock business has caused increases in productivity of the animal husbandry sector. Animal husbandry has good prospects to be developed as one of the competitive sectors supporting the community's economy. For this reason, the government needs to provide access to capitalization and encourage its marketing.

The cumulative annual increases in cattle-raising between 2001 and 2003 were 2.32%, 4.44%, and 2.33% respectively. Besides, chicken-raising business increased by an annual growth rate of 6.21 %, On the other hand, the annual growth of the sheep-raising business was 0.59 %. Still, the number of slaughtered cattle amounted to 61,810 in 2005; while the number of buffalo, goat and sheep slaughtering business fluctuated.

Based on the SWOT analysis (see below), the development potentials and possible constraints can be summarized as follows:

Potentials

- ❖ Local and regional markets are still fairly open to husbandry commodities.
- ❖ There is a possibility for domestic and international market expansion due to the opening of Sabang free port and free trade.
- ❖ Farmers' awareness of running husbandry agribusiness is high.
- ❖ The community is aware of the importance of consuming animal protein: meat, egg, and milk.
- ❖ There are government policies to recover the rural economy.
- ❖ There are financing sources (local and international) for husbandry development.

Constraints

- ❖ The capacity of livestock farmers and husbandry personnel to manage husbandry agribusiness is limited.
- ❖ Farmers' capital for livestock raising and their access to financing sources are limited.
- ❖ Majority of poultry seeds (chicken or layer hen) and livestock food are still imported from outside Aceh (from North Sumatra Province).
- ❖ Artificial insemination institution (BIB) as provider of frozen sperm is not yet established in NAD Province; it is still imported from West Java/East Java.
- ❖ Market demand for husbandry commodities, both local and regional, is still high; however, husbandry farmers do not have access to market expansion.
- ❖ Use of abandoned lands for growing cattle food is still limited.
- ❖ Few private entities run husbandry product manufacturing business.
- ❖ Economically, husbandry farmers' entrepreneurial motivation is low.

- ❖ Facilities and infrastructure for livestock raising are limited.
- ❖ Supervision of livestock/health healthcare is not adequate.
- ❖ Funds (Central APBN, Provincial APBD & District/Municipal APBD) allocated for the development of livestock raising are not adequate.
- ❖ Husbandry farmer organizations in rural areas are not fully developed.
- ❖ Appropriate technology for improving husbandry products has not yet been fully applied.
- ❖ Less coordination with related units responsible for husbandry development.

Table 1.25 SWOT Analysis of Animal Husbandry Sub-sektor

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Around 75% of the total population depends on agricultural sector, including animal husbandry sub-sector. ❖ Available lands used for husbandry such as savanna and estates. ❖ Available professionals/experts of livestock raising sector (ranging from S0 degree to S3 degree), either civil servants or non-civil servants, supported by professional institutions, government and private sector. ❖ Available livestock population with a variety of genetics beneficial to create excellent offspring. ❖ Available natural potentials useful for sources of livestock food: agro-industrial waste. ❖ Available livestock food (green leaves) at adequate amount. ❖ Available appropriate technology to help increasing livestock products. ❖ Accessible guidance and information for livestock-raising business. ❖ Community awareness of maintaining livestock health. 	<ul style="list-style-type: none"> ❖ Livestock raising run by community is still considered as a side job; and big livestock are used for source of power (plowing) and reserved as savings or social status. ❖ Facilities and infrastructure for livestock raising are limited. ❖ Application of livestock-raising technology is limited. ❖ Farmers' capital for livestock-raising and their access to financing sources are deemed limited. ❖ Livestock farmers' bargaining power in the market place is weak. ❖ Sources of livestock-seeding in each area are limited. ❖ Supervision of livestock/health healthcare is not adequate. ❖ Funds (Central APBN, Provincial APBD & District/Municipal APBD) allocated for the development of livestock raising are not adequate.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Market demand for husbandry commodities, both local and regional, is still high. ❖ Free port and free trade at Sabang are already open, which make it possible for market expansion. ❖ Farmers' awareness of running husbandry agribusiness is high. ❖ Government policies for rural economic recovery have been established. ❖ There are financing sources (local and international) for husbandry development. ❖ Majority of poultry seeds (chicken or layer hen) and livestock food are still imported from outside Aceh. 	<ul style="list-style-type: none"> ❖ Number of slaughtering houses existing in Regencies/city is not adequate. ❖ Capacity of livestock farmers and husbandry personnel to manage husbandry agribusiness is limited. ❖ Appropriate technology for improving husbandry products has not yet been fully applied. ❖ Less coordination with related units responsible for husbandry development. ❖ Artificial insemination institution (BIB) as provider of frozen sperm is not yet established in the NAD Province. ❖ Factory-made livestock food is still imported from other Province.

b) Strategies

To increase the competitiveness of husbandry commodities by considering diverse potential and constraints, the following strategies and action plans are formulated:

- ❖ Enhance the husbandry sub-sector performance, from traditional farm model to semi-intensive farm model.

- ❖ Improve the livestock health maintenance due to the existence of various poultry diseases.
- ❖ Increase the husbandry sub-sector's capitalization access.
- ❖ Development of local prime commodities.

c) Action Plans

1. Implement the semi-intensive husbandry model, particularly in areas with high potentials and strategic markets

In order to improve the competitiveness of husbandry products and, at the same time, increase the farmer's income, a high priority for livestock raising development needs to be set in areas with potential and strategic market. So, this activity is aimed at providing technical supports, facilities and infrastructure, and adequate institutional capacity to undertake the semi-intensive husbandry model, which will be conducted within the period of 2008-2012.

2. Develop traditional husbandry on farming areas as part of farmer households saving or rural livelihoods

This activity is aimed at improving the traditional farmers' income and welfare by increasing their productivity. To realize this, a pilot project integrating farming and husbandry in a sustainable commercial business will be implemented within the period of 2008-2012.

3. Develop the farmers' capacity and strengthen the husbandry institutions

In principle, a number of organizations and farmer networks have been created. To support the husbandry sector productivity it is, however, important to strengthen the existing organizations and networks (not to establish a new organization). Still, capacity development in terms of farmers or husbandry personnel is a major condition to be met. Therefore, any activities related to direct institutional strengthening and/or development of the organization members and farmer network, such as training, comparative study, etc. need to be made. All of these activities will be conducted within the period of 2008-2012.

4. Develop the silvo-agri-pastoral husbandry – consolidated household husbandry near the protected forest – to reduce tree cutting

Poverty has become a factor for farmers raising livestock near the protected forest to rely on it as a source of their cattle food. This activity is therefore aimed at designing an appropriate model for providing incentives for farmers living near the protected forest to reduce tree cutting and, at the same time, increase their livestock-raising productivity. It will be conducted within the period of 2008-2012.

5. Strengthen the health inspection of livestock, especially after the rapid spread of bird flu

Bird flu pandemic has resulted in a strong blow particularly to the continuity of poultry-raising groups. This activity is therefore aimed at improving attention to farmers, in terms of information campaigns or other publicity, to prevent bird flu and how to eliminate its impact. It will be conducted within the period of 2008-2012.

6. Provide revolving funds for the husbandry sector, through government-owned financing units at provincial/district level

Having access to capitalization has always been a problem for farmers. A lot of evidences, however, show that direct provision of capital by government unit will not, in turn, cause farmers to be productive; instead, they cannot settle their credit. This activity is therefore aimed at planning the allocation of revolving funds for farmers

through the existing finance institutions, at district and Sub-District level. It will be conducted within the period of 2008-2012.

7. Develop integrated prime commodities at Regency/Municipality respectively

Aceh is rich in types of animal husbandry, both for consumption and for commercial purposes. To increase the competitiveness of husbandry products, integrated prime commodities need to be developed in every Regency/Municipality. This activity is therefore aimed at identifying husbandry products in every Regency/Municipality and supporting facilities, to be provided by developers, and the partnership with the private sector. It will be conducted within the period of 2008-2012.

8. Facilitate the establishment of modern livestock-food factory

Up to this time, livestock food is still imported from other Provinces. On the other hand, local resources for raw materials of livestock food are available in the Province. This activity is, therefore, aimed at facilitating the capital investment for establishing a modern livestock-food factory, in terms of licensing, local resource identification (potentials and location), supporting infrastructure, and the human resources needed. This activity will be conducted within the period of 2008-2010.

d) Indicative Implementation Schedule

The implementation schedule of the above activity is presented in **Table 1.26** below.

Table 1.26 Implementation Schedule of Development of Animal Husbandry Sub-sector

No	Activity	2008	2009	2010	2011	2012
1	Implement the semi-intensive husbandry model, particularly on areas with high potentials and strategic market					
2	Develop traditional husbandry on farming areas as part of farmer households saving or rural livelihoods					
3	Develop the farmers' capacity and strengthen the husbandry institutions					
4	Develop the silvo-agri-pastoral husbandry – consolidated household husbandry nearby the conserved forest – to reduce tree cutting					
5	Strengthen the health inspection on livestock, especially after the rapid spread of bird flu					
6	Provide revolving funds for husbandry sector, through government-owned financing units at provincial/district level					
7	Develop integrated prime commodities at Regency/Municipality respectively					
8	Facilitate the establishment of modern livestock-food factory					

1.6.1.4 Fishery

a) Potentials and Constraints

NAD Province has a coastline with a total length of 1,660 km with a total marine area of 295,370 km², which consists of territorial waters and islands waters amounting to 56,563 km² and the Exclusive Economic Zone of 238,807 km². Of the total 160 km coastal line, 800 km has been damaged by the 26 December 2004 tsunami.

The yields of territorial waters and islands waters and Exclusive Economic Zone amount to 220,090 tons and 203,320 tons respectively, or equal to ± 423,410 altogether. The maximum sustainable yield (MSY) of sea area amounts to 110,045 tons and the EEZ total allowable catch (TAC) of 80% or equals to + 162,656 tons. It means that the total of the sustainable yield is 272,701 tons. While the total use of marine potential was 37.60% or 102,555 (in 2004). So, there is still an opportunity for yield increase of 62.40%. However, the total use of sustainable yield in 2005 decreased to 80,230.2 tons (29.4%) as a result of tsunami.

The total water area of fish cultivation is estimated at 67,055 hectares consisting of 10,158 hectares of fresh water, 44,883 hectares of salty water and 12,014 hectares of sea water. Majority of the area of coastal pond (20,000 hectares) and supporting facilities (coastal pond channels) was damaged due to the tsunami.

The existing fishery facilities include 3 units of PPI (coast fishery ports), 17 units of PPP, and 13 units of TPI, 41 units of ice factories (suppliers), 6 units of cool storage with a capacity of 30 tons, 14 fish/shrimp seeds unit, and 1 coast fish seeds unit. Marine sector has indicated a high number of employments with a total of 106,585 people employed in it.

Table 1.27 SWOT Analysis of Fishery Sub-sector

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Available funds (APBN and APBD) ❖ Long coastal line and exclusive economic zone of NAD. ❖ Available Local Technical Implementation Unit (UPTD) ❖ A large number of small islands ❖ Available apparatus of Department of Marine and Fishery Affairs ❖ Legal support, law No. 31/2004 on fishery ❖ Potentials of wide area of mangrove and coral reef ❖ Fishery and marine businesses. 	<ul style="list-style-type: none"> ❖ Apparatus performance is weak ❖ Less supporting facilities and infrastructure ❖ Marine facilities and infrastructure are still in post-tsunami rehabilitation process ❖ Limited personnel of marine and fishery inventory ❖ Unavailable facilities for marine and fishery development ❖ Low absorption of marine and fishery technology (fishery catch, cultivation, and manufacturing)
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Law on Aceh Administration (UUPA) ❖ Donor countries and NGOs assisting in Aceh ❖ High regional and international market demand ❖ Developed marine and fishery technology ❖ Bettering transportation and distribution access ❖ Available facilities and infrastructure ❖ High complexity of marine and fishery potentials ❖ High economic value of fishery commodities 	<ul style="list-style-type: none"> ❖ Post-tsunami damage of marine and fishery infrastructure that is not immediately rehabilitated ❖ High level of illegal fishing ❖ Damage to mangrove and coral reef ❖ Loss of small islands ❖ Natural disaster ❖ Use of antibiotics ❖ Spread of shrimp and fish disease ❖ Tied demands of international market

Based on the SWOT analysis above, the potentials and constraints could be summarized as follows:

Potentials

- ❖ Institutional implementation of marine and fishery sector.
- ❖ Potentials of marine and fishery resources of the Province include: catch fishery – *demersal* and *pelagis* fish, and cultivation fishery – coastal pond and fresh-water fish, which have not yet been optimally used.
- ❖ Majority of the marine and fishery commodities (alive, fresh or manufactured) are aimed at meeting the regional and international market demand.
- ❖ Facilities of Sabang free port and free trade open for both national and international market expansion.

Constraints

- ❖ The 26 December 2004 tsunami caused a drastic decrease in fishery products (coastal pond fish and sea (catch) fish) and damage to marine and fishery facilities including the loss of fishermen.
- ❖ Quantity and quality of the apparatus are limited.
- ❖ Few investors in marine and fishery sector.
- ❖ No bank (finance sector) providing credit for fishermen.

b) Strategies

With the objective to increase the competitiveness and value addition of fishery commodities by taking account the potentials and possible constraints, the following strategies and action plans are formulated:

- ❖ Development and rehabilitation of the facilities, infrastructure and institutions of marine and fishery sector lost as a result of tsunami.
- ❖ Development of the prime fishery commodities.
- ❖ Development of the human resources of marine and fishery sector.
- ❖ Sustainable use of marine and fishery resources.

c) Action Plans

1. Develop and rehabilitate the fishery facilities and infrastructure

- ❖ Improve the facilities of UPTD (Local Technical Implementation Unit) by procuring office supplies

To increase the competitiveness of fishery commodities, development of supporting facilities for the technical implementation unit is a must. This activity is aimed at improving the UPTD service by providing the office supplies. It will be conducted within the period of 2008-2012.

- ❖ Accelerate the rehabilitation and construction of PPI, TPI, boats, hatchery and coastal ponds that was destroyed by the tsunami

A lot of marine and fishery facilities were damaged by the tsunami. This activity is aimed at accelerating the provision of fish catching facilities and post-catching facilities in the form of rehabilitation and construction of PPI, TPI, boats, hatchery and coastal ponds. It will be conducted within the period of 2008-2010.

- ❖ Develop the facilities and infrastructure for fishery product to domestic market and overseas market (export)

To enhance the fishery product competitiveness, both for domestic and overseas markets, provision of supporting facilities and infrastructure is a must. This activity is aimed at providing the facilities and infrastructure needed for expanding the fishery

product marketing. In addition, provision of information on fishery commodity market by the government unit or other source of information should be available. It will be conducted within the period of 2008-2012.

2. *Develop the fishery potentials and supporting environs*

❖ Increase the value addition of fishery commodities

In addition to providing supporting facilities and infrastructure for fishery product manufacturing, this activity is aimed at developing a pilot project for increasing the fishery commodity value addition, and also encouraging a cooperation-with-private sector scheme. It will be conducted within the period of 2008-2012.

❖ Determination of the development area for excellent fishery commodities

To increase the fishery product competitiveness, it is important to determine the area for developing the prime fishery commodities. This activity is therefore aimed at identifying the potential fishery products that will be used as a basis for determining the development area. In addition, the supporting facilities and infrastructure for the development area need to be identified, including the partnership with the private sector. It will be conducted within the period of 2008-2012.

❖ Improve the quality of fishery product through the provision of quality agro input

One of the factors determining the fishery product competitiveness is its quality. This activity is aimed at providing quality fish food to ensure the quality fishery product. It will be conducted within the period of 2008-2012.

❖ Improve the ecology of mangrove and coral reef

Mangrove gives protection. Besides, the existence of mangrove and coral reef is the ecosystem that can support the fishery production. This activity is therefore aimed at improving the ecology of mangrove and coral reef, either in the form replanting or protecting from inappropriate (forbidden) fish catching such as the use of explosive chemicals that can destroy coral reef. It will be conducted within the period of 2008-2010.

❖ Control and supervise the integrated use of fishery resources

The persistence of future fishery resource will much depend on the control and supervision of its use. This activity is therefore aimed at providing facilities and infrastructure as well as the legal basis for the persistence of future use of fishery resource. It will be conducted within the period of 2008-2012.

❖ Use the marine and fishery potentials on outer and inner small islands for fishery business

To prevent isolation of outer/inner small islands of the Unitary State of the Republic of Indonesia marine and fishery potentials existing there should be developed. This activity is therefore aimed at providing supporting facilities and infrastructure so that the fishery business can be run there and at the same time prevent from exploitation of marine potentials by other countries. It will be conducted within the period of 2008-2012.

3. *Develop the capacity of the human resource in fishery sector*

❖ Open possibilities to join formal and informal education

Capacity building for human resource skills and knowledge is needed. This activity is therefore aimed at providing both formal and informal education/training on marine affairs which will be conducted within the period of 2008-2012.

❖ Develop the institutional capacity of the personnel of the Department of Marine and Fishery Affairs

In terms of institutional capacity, availability of qualified personnel at the Department of Marine and Fishery Affairs will determine the supports for improving the fishery product competitiveness. This activity is therefore aimed at providing opportunities for the personnel to join the formal and informal education, training, workshops, or comparative study, which will be conducted within the period of 2008-2012.

- ❖ Establish a center for skill enhancement for the marine and fishery sectors

Availability of skilled labor is important to increase the fishery product competitiveness. This activity is therefore aimed at establishing a center for skill enhancement of marine and fishery sector to fulfill the need for workforce, which will be conducted within the period of 2008-2012.

d) Indicative Implementation Schedule

The implementation schedule is presented in **Table 1.28** below.

Table 1.28 Implementation Schedule of Fishery Sub-sector

No	Activity	2008	2009	2010	2011	2012
1	Develop and rehabilitate the fishery facilities and infrastructure <ul style="list-style-type: none"> ❖ Improve the facilities of UPTD (Local Technical Implementation Unit) by procuring office supplies ❖ Accelerate the rehabilitation and construction of PPI, TPI, boats, hatchery and coastal ponds that was destroyed by the tsunami ❖ Develop the facilities and infrastructure for fishery product to domestic market and overseas market (export) 					
2	Develop the fishery potentials and supporting environs <ul style="list-style-type: none"> ❖ Increase the value addition of fishery commodities ❖ Determination of the development area for prime fishery commodities ❖ Improve the quality of fishery product through the provision of quality agro input ❖ Improve the ecology of mangrove and coral reef ❖ Control and supervise the integrated use of fishery resources ❖ Use the marine and fishery potentials on outer and inner small islands for fishery business 					
3	Develop the capacity of the human resources in fishery sector Open possibilities to join formal and informal education <ul style="list-style-type: none"> ❖ Develop the institutional capacity of the personnel of the department of marine and fishery affairs ❖ Establish a center for skill enhancement of marine and fishery sector 					

1.6.1.5 Forestry

a) Potentials and Constraints

The area of forest of NAD Province, based on the Assigned Forest and Water Area according to the Decree of Minister of Forestry Affairs No.170/Kpts-II/2000, dated 29 June 2000, is \pm 3,335.713 hectares (land) or 3,549,813 hectares (with its total water area). The forest area is about 66.22% of the total area of the Province, which includes Conserved Forests, Protected Forest and Production Forest.

The condition of the forest is not stable. Of 5,056 kilometers of outer forest border to be built, only 3,523.60 kilometers (69%) is already realized. While the construction of the border of forest function is not realized yet. Such a condition has resulted in weak legal assurance in managing the forest resource and controlling the occupied forest area.

The existing data of Baplan (2002) shows that the indicated forest area to be rehabilitated amounts to 2,125,300 hectares (or 37% of the total land area of the Province), either inside or outside the forest area. Such a condition requires a joint commitment to support the recovery of forest area through national forest rehabilitation. This is in line with the priority of the national development policies – to protect and rehabilitate the natural resources so that their sustainability and quality are maintained and at the same time ensure the available space for people's life.

Since Law No. 11/2006 on Aceh Administration is already effective and implemented, the provincial government has the authority to make policies, regulate, and carry out any activity that affects the Regencies/cities. Considering the existing geographical conditions in the Province, the management of the forest in NAD is categorized (divided) into 5 Water Catchment Areas, of which implementation will be the responsibility of the established UPTDs as the provincial government representatives.

The existing condition of forests and their development model in NAD Province:

1. *Hutan Tanaman Industri – HTI* (Forest of Plants for Industrial Purposes)
 - Total area is 247.265 hectares with 8 enterprises
 - Locations in the Districts of East Aceh, Bener Meriah, Central Aceh, Aceh Besar, Pidie, and North Aceh.
 - Varieties cultivated: *Acacia Mangium*, *Eucalyptus*, and *Pinus Merkusii*.
2. *Hutan Rakyat* (Individually-owned Forests)
 - These types of forests are developed or cultivated in the Districts of Aceh Besar, Gayo Lues, Pidie, North Aceh, and Central Aceh.
 - Varieties cultivated are those of local excellent plants: *Sentang*, *Pinus* and *Kapur*.
 - Development model applied in Aceh Besar is the Agro-forestry system with interval-plants such as ginger, chilli, string beans and other plants.
3. *Hutan Kemasyarakatan* (Community-managed forest)
 - These types of forest are developed through Community Forestry (HKM – Hutan Kemasyarakatan) Agro-forestry in Districts of Aceh Besar, Sabang Simeulue and Pidie.
 - The forest development model applied in Sabang consists of white teak trees as basic plants with interval-plants of yellow nut and chilly.
 - Development of Community Forestry (HKM – Hutan Kemasyarakatan) Forestry in Aceh Besar and Pidie with basic plants: *sentang* and interval-plants: sweet corn and other horticulture.

Prioritized Policies

The prioritized forest policies within the period of 2005-2009 are as follows:

1. Elimination of illegal logging in state-owned forests and illegal timber trading.
2. Revitalization of forestry sectors especially the forestry industry.
3. Forest rehabilitation and conservation.
4. Economic empowerment of the community living in and around forest area.
5. Stabilization of the forest areas.

Table 1.29 SWOT Analysis of Forestry Sub-Sector

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Available regulations ❖ Available budget and human resources. ❖ Central and provincial governments commitment to rehabilitate and reconstruct NAD Province after the earthquake and tsunami. ❖ Some groups of people are more aware of the importance and preserved bio-resources and their ecosystems. ❖ Previous forestry development as a 'capital'. ❖ Available big potential of forest resources. 	<ul style="list-style-type: none"> ❖ Redesign of <i>Hak Penguasaan Hutan</i> (Rights of Forest Authorization) is not yet finalized. ❖ Low accessibility and wide forest area to be managed. ❖ Droughts and <i>El Niño</i> phenomenon that cause forest fires. ❖ Limited budget, technology mastery, and quality human resource to support the achievement of forest development. ❖ Limited access to quality seeds at adequate quantity for forest and land rehabilitation as well as Industrial Plantation Forest (<i>HTI - hutan tanaman industri</i>). ❖ Practice of forest management unsuitable to forest conservation principles. ❖ Weak law enforcement. ❖ Funding system not in line with activity that depends on climate and weather. ❖ Banking system and regulations that do not fully encourage investment in forestry sector. ❖ Community dependency on forest land and products that is relatively high.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Increase in domestic and international market demand for forest products. ❖ Existence of potential NGOs supporting the forest development through their participation in forest development planning, implementation and supervision. ❖ Requirements of eco-labeling of forest products at international market. ❖ Ambition of the Provincial Government to make NAD a "Green Province". ❖ World community's big attention to the conservation of forest in the Province of Nanggroe Aceh Darussalam. 	<ul style="list-style-type: none"> ❖ Imbalance between demand and supply of wood raw materials. ❖ Continuous illegal logging and smuggling. ❖ Forest fires that have not been well overcome. ❖ Less successful development of new Industrial Plantation Forest (<i>HTI - hutan tanaman industri</i>). ❖ Low level of science and technology use. ❖ Less investor's interest to use non-timber forest products and environmental service. ❖ Large area of mangrove and protected coastal area damaged by tsunami.

Based on the SWOT analysis above, the potentials and possible constraints in this sub-sector could be summarized as follows:

Potentials

- ❖ Forest resources available in large quantities.
- ❖ Increase in domestic and international market demand for forest products.
- ❖ Existence of potential NGOs supporting the forest development through their participation in forest development planning, implementation and supervision.
- ❖ World community's close attention to the conservation of forest in NAD Province.
- ❖ Some groups of people are more aware of the importance and preserved bio-resources and their ecosystems.

Constraints

- ❖ Redesign of Hak Penguasaan Hutan (Rights of Forest Authorization) is not yet finalized.
- ❖ Low accessibility and wide forest area to be managed.
- ❖ Unfavorable security of the area.
- ❖ Community dependency on forest land and products that is relatively high.
- ❖ Forest fires that have not been well overcome.
- ❖ Weak law enforcement.

b) Strategies

- ❖ Maximize the forest resources for people's benefit through the conservation of forest functions and environmental equilibrium, sustainable development, economic purpose and local culture, and spatial use.
- ❖ Maximize people's benefit by maintaining conservation of forest functions and environmental equilibrium, sustainable forest development, in accordance with economic purposes, local culture and planning of spatial use.
- ❖ Optimize the use of a forest area by involving the local community and NGOs in its implementation.
- ❖ Institutional strengthening and development of facilities and infrastructure.
- ❖ Commencement of NAD Province as a 'Green Province'

c) Action Plans

1. Carry out and strengthen the forest management and authorization within the area of NAD referring to Law No. 11/2006 on Aceh Administration.

As already mentioned in Article 165 of the Law, the provincial and District/municipal governments, as their respective authority, and based on the existing norm, standard and procedures that are valid nationally, have a right to grant a license related to forest management and authorization. This activity is therefore aimed at ensuring that the license granted refers to the public service principles: fast, accurate, cheap and simple. It will be conducted within the period of 2008-2012.

2. Implement the policies that allow conservation of forest resources to prevent permanent damage.

Factually, the NAD Province was struck by various natural disasters, which was actually caused by inappropriate and unsustainable forest management. Although an issue of moratorium has been launched, forest management policies that are sustainable by nature need to be made. This activity is therefore aimed at preparing the policies that encourage principles of forest resources management with consistent law enforcement. It will be conducted within the period of 2008-2012.

3. Conduct institutional restructuring and forest management with emphasis on water catchments area.

4. Encourage wood industry restructuring to increase the competitiveness and equalize between demand and raw material supply.

Majority of the Province's prime commodities (including wood) are, inevitably, manufactured in other Provinces. The value addition of the forest commodities is owned by wood industries outside NAD. This activity is therefore aimed at encouraging a restructuring of the wood industry so that the NAD Province can have the value-added forest commodities, through mapping of raw material demand and supply. It will be conducted within the period of 2008-2012.

5. Increase the development and management of forest resource dual functions.

In principle, in addition to serving as the supplier of raw materials for industries, forests also serve as a source of livelihood for people in the surrounding area. Because of these two functions, sustainable forest management is very important. This activity is therefore aimed at encouraging the Provincial/District/Municipal Government to prepare the master plan for sustainable management of forest resources, which equalize the forest function to produce raw material and forest function as a source of livelihoods. It will be conducted within the period of 2008-2012.

6. Increase the rehabilitation of forest and unproductive land within the forest area and protected area to conserve and protect the hydrological system.

The successive natural disasters in NAD Province have indicated that the forest and the land are in a critical condition. This activity is therefore aimed at reconditioning the forest and land through rehabilitation, one-million-tree-planting program, etc., which will be conducted within the period of 2008-2012.

7. Increase community awareness and empowerment through public information campaign, training and technical assistance provision in forest development actions.

Achieving sustainable management of forest resources needs community participation, particularly from those who live in the forest surroundings and rely for their livelihood on forest resources. This activity is therefore aimed at increasing the community awareness and empowering them to manage forests in a sustainable manner through public information campaign, training, technical assistance provision, etc., which will be conducted within the period of 2008-2012.

8. Increase the non-government institution's roles in living environment and forest resources management.

Non-government organizations (NGOs) are one of the important stakeholders in forest resources management. The facts show that not all non-government organizations have successfully initiated sustainable forest resource management. This activity is therefore aimed at encouraging the roles of these organizations in forest resources management either in the form of joint participation of government and non-government institutions, facilitation in increasing community participation and care, etc. it will be conducted within the period of 2008-2012.

9. Including community in enhancing adherence to the rule of law.

As already delineated earlier, the Provincial Government of NAD should have a master plan for sustainable forest resource management. The reality, however, is inconsistency in law enforcement. Besides, people who live around and rely for their livelihood on the forest actually have the potential to help implement the law, if they are informed and trained with regard to compliance with the law. This activity is therefore aimed at preparing the policies and strategies for sustainable forest resource management in which community participation and concrete measures are indicated to help enforce the law. It will be conducted within the period of 2008-2012.

10. Create a Unit Pelaksana Teknis Daerah (Technical Implementation Unit) as a unit of water catchments area ecosystem-based forest management.

1.6.2 Mining

a) Potentials and Constraints

The economic structure of NAD Province, up to 2005, was still dominated by the primary sectors (agriculture and mining). These sectors' contribution to the Province's GDP accounted for 40% to 56% respectively. The contribution of oil and gas sector was 23% in 2005. Its production has, however, tended to decrease, and new explorations have not indicated maximum outcomes. So, the contribution of this sector has also decreased drastically and affected the provincial government revenue significantly.

On the other hand, other mining sectors such as coal, gold, iron ore and lead still have the potential to be developed to balance the drastic decrease of oil and gas. All these minerals are found in fairly large quantities in the Province; and at present, the existence of these mining potentials is still controversial due to the indefinite authorization body (either Department of Forestry, Department of Mining, or Department of Environmental Affairs) to manage them.

As of December 2006, after the Helsinki MoU, many investors have been interested in investing in mining's exploration sub-sector; but they were still restricted by the existing regulations and authorization.

Class-C mining of industrial/building materials (sand and stone, coral, land-fill soil, hill stone, limestone, quartz sand, and marble) is also a significant economic potential to support the physical development in the NAD Province. All these should be managed in a sustainable manner by taking account of the environmental aspects.

Other potential mining materials in the Province include: tin, iron, ferruginous sand, *manganese*, molybdenum, chromium, copper, zinc, platinum, silver, mercury, sulphur, river sand, trass, mica, gypsum, granite, *andesitic*, serpentine, magnesia, phosphate, dolomite, and ocher.

Strategic sources of energy:

- Oil: 17.5 billion barrels distributed along north and west coast/off shore
- Natural gas: around 64 billion ft³
- Coal; 1.7 million tons in west and south areas
- Geothermal energy: 590 mwe in Seulawah Agam, Ie Se'Um, Jaboi Sabang and Lokop
- Water energy: 842 mwe

Based on the SWOT analysis (see below), existing potentials and possible constraints in the mining sector could be summarized as follows:

Potentials:

- ❖ General mining sectors shall be taken into account in anticipating the decrease in oil and gas sector's contribution.
- ❖ To anticipate the deficit of electrical energy and high dependency on North Sumatra's power plants, alternatives to building a big power plant need to be made since many investors are interested in this project since the Helsinki MoU was signed.

Constraints:

- ❖ Personnel of the Department of Mining lacking in professionalism need to be provided with education, and functional and technical training.
- ❖ Limited technology and working equipment result in ineffective functions of the personnel of the Department of Mining to provide an accurate database on mining reserves and potentials.

- ❖ Restricted development of mining sector as a result of overlapping functions of management and authorization among the sectors of forestry, mining, and environmental affairs.
- ❖ Intense protests from environmental organizations (domestic and foreign) are one of the factors hindering the mining development.

Table 1.31 SWOT Analysis of Mining Sector

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Oil and gas are still the biggest contributors to the provincial revenue ❖ Big potentials of iron and non-iron mining ❖ Fairly major potentials of geothermal energy, water and coal ❖ Available human resources with Geological, Mining and Oil qualifications ❖ Law No. 11/2006 on Aceh Administration that grants bigger authority to the Province 	<ul style="list-style-type: none"> ❖ Unprofessional government apparatus ❖ Unavailability of equipment and sophisticated technology ❖ Overlapping functions and authority among sectors: forestry, mining and environmental affairs ❖ Less accurate data
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Foreign investors attracted to invest their capitals on oil mining and other mining sector ❖ Coal, geothermal energy and water are future alternatives that are environment-friendly 	<ul style="list-style-type: none"> ❖ Unfavorable security ❖ Intense protests from environmental concerns-related organizations

b) Strategies

Taking into account the existing potentials and constraints, the following strategies and action plans are formulated:

- ❖ Develop the potentials of general mining.
- ❖ Develop alternative energy.
- ❖ Improve the professionalism of personnel.
- ❖ Modernize the technology of the working equipment of the Mining Department.
- ❖ Work out development cooperation among sectors: forestry, mining, and environmental affairs.

c) Action Plans

1. Work out development cooperation among sectors: forestry, mining, and environmental affairs.

Natural disasters such as floods indicate the over exploitation of the natural resources, including mining activities. Besides, existence of natural resources (mining and energy) is one of the major potentials for economic growth in the Province. This activity is therefore aimed at synchronizing and coordinating the sustainable and appropriate management of mining activities through workshop, regulation creation, and law enforcement. It will be conducted within the period of 2008-2012.

2. Increase the coordination and information campaign to the public and environmental groups.

In addition to making coordination among government units, community and other stakeholder support and participation are needed to achieve sustainable mining management. This activity is therefore aimed at increasing the community and other

stakeholder participation in the form of a public campaign and other campaigns. It will be conducted within the period of 2008-2012.

3. Improve the coordination in oil and gas exploration, that is, to find new exploration fields including offshore exploration and reuse of old wells.

Oil and gas are major potentials for the Province's economic growth and searching for new oil and gas sources or reusing old wells should be undertaken in a sustainable manner. This activity is therefore aimed at encouraging the private sector (gas and oil companies) operation, in the form of creating the conducive mining regulations and/or providing the required supporting facilities and infrastructure, if necessary. It will be conducted within the period of 2008-2012.

4. Improve the supervision of mining exploration, either classes A, B and C, to protect against negative environmental and social impacts through the application of qualified feasibility studies and environmental impact analyses.

As explained earlier, the occurrence of natural disasters, such as floods, resulting from mining practices that ignored the sustainable principles. Whereas the government through the existing regulations has required the application of environmental impact analyses to prevent the negative impacts of mining operations. This activity is therefore aimed at ascertaining the law enforcement in the conducted feasibility studies and environmental impact analysis. It will be conducted within the period of 2008-2012.

5. Modernize the working equipment of the Mining Department.

One of the factors that can support the service of the Mining Department to encourage the private sector participation in oil and gas exploration is the availability of modern working equipment. This activity is therefore aimed at providing it, in the form of hardware or software, which will be conducted within the period of 2008-2012.

6. Develop the exploration of general mining.

General mining is also one major potential to encourage the Province's economic growth, and should, therefore, be undertaken in a sustainable manner. This activity is therefore aimed at encouraging private sector operations in general mining, in the form of creating the conducive mining regulations and/or providing the required supporting facilities and infrastructure, if necessary. It will be conducted within the period of 2008-2012.

Table 1.33 SWOT Analysis of Industrial Sector

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Available adequate natural resources, either the renewable or non-renewable, as raw materials for the industrial sector. ❖ Existence of a number of industries: PT. PIM, PT. AAF, PT. SAI and PT. KKA has provided experience and insight of managing big industries in Aceh. ❖ High number of workforce empowered optimally. ❖ Increase in roles of prime commodities of agro-based industries to meet the domestic and foreign market demands. ❖ Increase in use of local raw materials to substitute for the imported raw materials. ❖ Stronger industrial structure. ❖ Developing downstream industries that manufacture the natural resources with high competitiveness. ❖ Available international seaport to support the export and import activities. ❖ Entire community's and government personnel's commitment and enthusiasm to develop better Aceh in industrial sector after the conflict and tsunami through Aceh Reconstruction. 	<ul style="list-style-type: none"> ❖ Limited supporting infrastructure for industrial sector. ❖ Weak existence of IRT and IK as a result of limited working capitalization/equipment, supervision, sustainable market, and business management. ❖ Limited human resources to support the industrial sector, particularly in information technology and marketing. ❖ Strategic and fast-growing industrial zones not yet built. ❖ Weak interrelatedness and partnership between primary sector and manufacturing industries that raw material supply is not continual. ❖ Less supports for research and technological development in industries, research institutions and local higher educational institutions. ❖ Dependency on licensed products and technology from outsourcing. ❖ Development policies for local industrial sector by government not yet optimum. ❖ No company supporting the local industries. ❖ A number of vital companies undergo managerial, financial problems and destruction as a result of tsunami (PT.PIM, PT.KKA,PT. SAI).
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Big potentials for agro-based industrial products. ❖ Industry as an excellent sector to accelerate the economic growth through job opportunity creation and per capita income improvement. ❖ Development of economically fast-growing industrial zones according to the existing natural and human resources, initiated by government through BUMD/BUMN (local government-owned/state-owned enterprises). ❖ Increasing demand for agro-based industrial products in line with the dynamics of population and economic growth – domestic/foreign. ❖ Based on the value of export to 15 exporting countries, Indonesia has a strong competitiveness for its local resource-based manufacturing products, particularly agro-based industrial products and food, if compared to Thailand, Malaysia, and the Philippines – which are positive to local economic growth. ❖ Open opportunity for investment in industrial sector as a consequence of big local potentials (market and resources). ❖ AFTA, APEC and WTO cooperation encouraging international market to be open for local commodities. 	<ul style="list-style-type: none"> ❖ Activating industrial sector from the beginning needs seriousness and big energy. ❖ Acehnese people's culture needs to be synchronized with the industrial needs. ❖ Increasing competition as a result of AFTA and WTO cooperation, and competition among producing countries having similar economic characteristics such as: China, Thailand, the Philippines, Malaysia, India, Vietnam and Laos. ❖ Protective attitude (tariff and non-tariff barriers), from certain countries/trade alliance to hinder Indonesian agro-based industrial products to enter those countries. ❖ Certain countries practicing dumping policies for Indonesian agro-based industrial products. ❖ Increasing high-quality imported products from China such as plastics, garment, machines, foods, etc.

Based on the SWOT analysis above, the existing potentials and possible constraints of the development of industrial sector could be summarized as follows:

Potentials:

- ❖ Develop the management of agro-based industries such as: agriculture, fishery, and plantation.
- ❖ Develop the economically fast-growing industrial zones according to the existing natural and human resources, initiated by government through BUMD/BUMN (local government-owned/state-owned enterprises).
- ❖ Develop the market of agro-based industrial products in line with the dynamics of population and economic growth – domestic/foreign.

- ❖ Increase the competitiveness of local resource-based manufacturing products, particularly agro-based industrial products and food to compete with other manufacturing products from Thailand, Malaysia, and the Philippines.
- ❖ Open opportunity for investment in industrial sector as a consequence of big local potentials (market and resources).
- ❖ Enhance the cooperation with AFTA, APEC and WTO to open wider market to empower the local/domestic commodities

Constraints:

- ❖ Limited supporting facilities and infrastructure for the development of industrial sector.
- ❖ Limited access to finance for IRT and IK – which are weak in working capitalization/equipment, supervision, continuous marketing, and management for business owners.
- ❖ Limited human resources to support the industrial sector, particularly in information technology and marketing.
- ❖ Strategic and fast-growing industrial zones not yet built.
- ❖ Weak interrelatedness and partnership between primary sector and manufacturing industries that raw material supply is not continual.
- ❖ Less support for research and technological development in industries, research institutions and local higher educational institutions.
- ❖ Dependency on licensed products and technology from outsourcing.
- ❖ No company supporting the local industries, and sub optimal government policies for local industrial sector development.
- ❖ Managerial and financial problems, and destruction as a result of tsunami in several vital companies (PT.PIM, PT.KKA, PT. SAI).
- ❖ Increasing competition as a result of AFTA and WTO cooperation, and competition among producing countries having similar economic characteristics such as: China, Thailand, the Philippines, Malaysia, India, Vietnam and Laos.
- ❖ Protectionist attitude (tariff and non-tariff barriers), from certain countries/trade alliance to hinder Indonesian agro-based industrial products to enter those countries.
- ❖ Increasing high-quality imported products from China such as plastics, garment, machines, foods, etc.

b) Strategies

With the objective to increase the competitiveness of the agro-based industrial products and encourage the manufacturing industries producing the value-added commodities and taking account the existing potentials and re-operated PT. PIM, PT. AAF, PT. SAI and PT. KKA to encourage the acceleration of production and productivity of IRT and IK sector, a number of strategies and action plans need to be formulated:

- ❖ Increase the number of manufacturing industries of fishery and agricultural commodities.
- ❖ Increase the competitiveness of the Province's industrial products, particularly which are produced by small, medium, and large-scale businesses.
- ❖ Develop the prime industrial commodities of the Regencies/cities.
- ❖ Improve the supporting infrastructure for the industrial sector, particularly in strategic and fast-growing zones by including the investors' direct participation.
- ❖ Continue to develop the human resources in the industrial sector, particularly in IT mastery, marketing and local raw material management as substitution of imported materials.
- ❖ Improve the roles of micro-finance to support IRTs and IKs.

c) Action Plans

1. Provide facility and assurance for business registration and licensing for industrial operation

One of the main requirements to attract private sector participation in industrial sector investment is to provide facilities and assurances about the necessary business licences. This activity is therefore aimed at reviewing the existing policies and regulations that may hinder the process of registration and licensing in the industrial sector, including the recommendation for change in industrial operation. It will be conducted within the period of 2008-2009.

2. Develop the agro-based industries

To obtain the value-added agricultural and fishery commodities, the existence of manufacturing industries is very important. This activity is therefore aimed at developing a scheme of cooperation with private sector to set out the product manufacturing within the Province, through the provision of incentives: investment facility or the required supporting facilities and infrastructure. It will be conducted within the period of 2008-2012. A number of manufacturing industries to be built are:

- Rice and corn mill
- Potato, cassava, banana and jack fruit chip factory
- Chilly and tomato sauce factory
- CPO mill
- Fruits canning
- Fried shallot and food seasoning factory
- Soybean manufacturing
- Coffee and cacao mill
- *Kemiri* manufacturing
- Sugar and brown sugar mill
- Fishery product and animal skin manufacturing

3. Build the industrial infrastructure through labor-intensive programs:

- Construct roads in industrial zones and centers
- Prepare the industrial zones and centers
- Select raw materials manually

4. Build the industrial centers on several areas where prime commodities exist:

- Wood and other forest products
- Refineries of *nilam*, clove and pepper
- Copra factories

5. Develop the industrial zones of fertilizer, chemicals and rubber raw materials on strategic growth areas within the Province: Sabang, north coastal area of Aceh, East Aceh and West Aceh. The industrial zones need to be distributed to keep the balance of areas of economic growth, such as:

- Blang Ulam Industrial Zone (Malahayati Seaport, Banda Aceh)
- Sabang Industrial Zone (Sabang Seaport)
- Lhokseumawe Industrial Zone (Lhokseumawe Seaport, North Aceh)
- Langsa Industrial Zone (Langsa Seaport, East Aceh)
- Kutacane Industrial Zone (Langsa/ Singkil Seaport, Southeast Aceh)
- Singkil Industrial Zone (Singkil Seaport, Aceh Singkil)
- Lhok'Nga Industrial Zone (Malahayati Seaport, Aceh Besar).

6. Provide information and technology as well as facilities related to in-production and post-production processes

In addition to the industrial actors, the factor that will determine the competitiveness of industrial products is the technology that is used to improve the product quality. This activity is, therefore, aimed providing information on in-production technology and post-production technology as well as the required facilities, which will be able to increase the industrial actors' capacity at micro, small, and medium-scale. It will be conducted within the period of 2008-2012.

7. Develop the institutional capacity and human resources of the Department of Industrial and Trade Affairs

To provide better service, the capacity of the Department of Industrial and Trade Affairs personnel needs to be built by providing them opportunities to attend the formal training and education related to managerial matters or production capacity for micro, small and medium-scale enterprises; besides, supporting facilities and infrastructure including modern ICT need to be provided. This activity will be conducted within the period of 2008-1020.

8. Use facilities and infrastructure owned by the Provincial Government of NAD to promote the excellent industrial commodities produced by micro, small and medium-scale enterprises

The existing facilities owned by the provincial govern have not optimally been used to promote the prime commodities such as the Taman Ratu Safiatuddin. This activity is therefore aimed at conducting the public campaign and promotion by using the existing facilities. It will be conducted within the period of 2008-2012.

9. Develop the industrial actors' capacity particularly at micro, small and medium enterprises

One factor determining the competitiveness of industrial commodities is their quality. This activity is therefore aimed at developing the industrial actors' capacity through several trainings on product quality improvement, which will be conducted within the period of 2008-2010.

d) Indicative Schedule

The implementation schedule of the above activities is presented in **Table 1.34** below:

Table 1.34 Implementation Schedule of Industrial Sub-sector Development

No	Activity	2008	2009	2010	2011	2012
1	Provide facility and assurance for business registration and licensing for industrial operation	—————				
2	Develop the agro-based industries		—————			
3	Build the industrial infrastructure	—————				
4	Build the industrial centers					
5	Develop the industrial zones	—————				
6	Provide information and technology as well as facilities related to in-production and post-production process	—————				

No	Activity	2008	2009	2010	2011	2012
7	Develop the institutional capacity and human resources of the Department of Industrial and Trade Affairs					
8	Use facilities and infrastructure owned by the Provincial Government of NAD to promote the excellent industrial commodities produced by micro, small and medium-scale enterprises					
9	Develop the industrial actors' capacity particularly at micro, small and medium enterprises					

1.6.4 Electricity, Gas and Water Supply

a) Potentials and Constraints

Most of the electricity need is supplied by the PLN (State-Owned Electricity Enterprise) and a small portion is supplied by community self-help; while, water supply is entirely supplied by the PDAM (Local Government Water Enterprise). Electricity, gas and water supply sector contribution to the Provincial GRDP is relatively small (accounted for 0.10% up to 0.17% between 2000 and 2005). Instead, if combined with the non oil and gas GRDP, their contribution was around 0.20% up to 0.27%.

Table 1.35 SWOT Analysis of Electricity, Gas, and Water Supply Contribution to the Provincial GRDP

	Strength	Weakness
Internal	<u>Electricity</u> ❖ Available trained human resource with adequate service facilities and increasing number of customers. <u>Water Supply</u> ❖ High demand for water connections	<u>Electricity</u> ❖ Electricity tariff is still below the HPP price since all the existing power plants use oil; so the production cost is high and PLN still experiences financial deficit ❖ The power plant productivity is low and relatively old (its economic life time is no longer long) <u>Water Supply</u> ❖ Limited service coverage ❖ Very low tariff
	Opportunity	Threat
External	<u>Electricity</u> ❖ High demand for connections ❖ Low electrification ratio <u>Water Supply</u> ❖ Growing urban area ❖ More reasonable water supply tariff	<u>Electricity</u> ❖ Damaged electricity infrastructure as a result of natural disasters: floods, landslides, etc. <u>Water Supply</u> ❖ High rate of lost water due to leaks or illegal uses

During 2005, the sector's contribution to the GRDP was still weak although its impact was strong. According to the method of computing GRDP, the electricity, gas and water supply sector was also computed based on its production. There was still a deficit in this sector; its contribution to the GRDP was nearly 0%.

The impact of electricity, gas and water supply sector was exactly opposite to its contribution to the GRDP. Many economic activities depend on the services of this sector.

b) Strategies

Based on the existing potentials and possible constraints, the strategies and action plans are formulated as follows:

- ❖ Increase the endeavors to increase efficiency in production and management in order not to suffer from losses.
- ❖ Set the tariffs according to its customer classes and functions (private use or non-private use).
- ❖ Increase the supervision related to the high rate of unaccounted electricity and water.

c) Action Plans

1. Increase the product supervision in accordance with SOP. It aims to facilitate the monitoring and evaluation.
2. Improve the services, either for new connections or damage of connections/repair. It is believed that better services will cause positive impact on electricity bill payment.
3. Make transparent tariff review (tariff setting) to public. This is aimed at providing clear information on electricity tariff and tariff setting (classifications). Tariff review is needed to eliminate customers' misunderstanding on tariff increase.
4. Improve the auditing of Provincial PLN cash-flow. Auditing needs to be improved in order to find out the enterprise financial condition that will be the basis for its capacity to provide public service.

d) Implementation Schedule

The implementation of the above activities is presented in **Table 1.36** below.

Table 1.36 Implementation Schedule of Improvement of Electricity, Gas and Water Supply Sector Performance with Regard to Its Contribution to the GRDP of NAD

No	Activity	2008	2009	2010	2011	2012
1	Increase the product supervision in accordance with SOP					
2	Improve the services					
3	Make transparent tariff review (tariff setting) to public					
4	Improve the auditing of Provincial PLN cash-flow					

1.6.5 Building and Construction

a) Potentials and Constraints

The contribution of the building and construction sector to the GRDP is relatively stable, that is, between 3.3% and 4.4%.

The growth of this sector tended to increase, and in 2005 its performance was unfavorable with its growth tending to decrease to -23.96% from the previous year.

However, it has tended to improve since the period of rehabilitation and reconstruction initiated by BRR and a number of domestic and foreign donor institutions in 2006.

Table 1.37 SWOT Analysis of Building and Construction Sector

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ It is expected that up to the next two years, rehabilitation and reconstruction in the NAD Province will last at large quantity; so, contribution of building and construction sector to the GRDP of the Province will stay significant. 	<ul style="list-style-type: none"> ❖ Expensive prices of building materials, since they are supplied from Medan. ❖ Normal demand for building and construction in the Province is relatively small, due to its small number of population.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Support from Andalus cement factory that is about to operate immediately. Housing sector of post-tsunami non-rehabilitation/reconstruction will resume growing. 	<ul style="list-style-type: none"> ❖ Being "somnolent" about foreign aid ❖ High inflation rate

- ❖ Post-tsunami rehabilitation and construction will improve the sector's contribution to the Province GDP, at least up to 2009 when the BRR tasks will be terminated.
- ❖ Industrial development or reactivation of industries that collapsed during the continuous conflict and tsunami is an opportunity for building and construction sector to grow.
- ❖ Normally, the performance of building and construction sector is not so high; it tended to be at the stable proportion before the tsunami.

b) Strategies and Action Plans

1. Enhance the local workforce capacity for the post-tsunami rehabilitation and reconstruction.
2. Develop the local resources for post-tsunami rehabilitation and reconstruction.

c) Indicative Implementation Schedule

The implementation schedule of the activities above is presented in **Table 1.38** below.

Table 1.38 Implementation Schedule of the Development of Building and Construction Sector

No	activity	2008	2009	2010	2011	2012
1	Enhance the local workforce capacity for the post-tsunami rehabilitation and reconstruction.					
2	Develop the local resources for post-tsunami rehabilitation and reconstruction					

1.6.6 Trade

a) Potentials and Constraints

The prime commodities of NAD Province entering the global market are indicated by the development of export value. The volume and export value of local commodities are still dominated by crude oil, liquid natural gas, fertilizer and manufactured wood. However, the economic crisis, the conflict and natural disaster all resulted in negative impacts on the trade sector that its entire export value decreased. The Province's export value in 1997 amounted to US\$2,654,301,240 and decreased to US\$ 2,059,087,160 (or 0.22%) in 1998, and it tended to decrease in successive years. However, entering 2004 the Province's export value increased to US\$1,440,808,126 (or 26%) if compared to the previous year's.

Still, the Province's exports have been dependent on oil and natural gas. As an illustration, the oil and natural gas contribution to the provincial GDP accounted for 96.0% or US\$165,051,534 of the Province entire export amounting to US\$172,238,567 in August 2005.

The Province's non-oil and natural gas exports have not made any significant contribution. Since export of prime commodities is still made via Tanjung Priok Port in Jakarta and other ports in North Sumatra, the value-addition of the Province's prime commodities benefits other Provinces rather than NAD. Furthermore, almost all commodities particularly the local consumer goods for daily needs such as sugar, frying oil, rice, garments, eggs, etc. come from the Province of North Sumatra.

Sea transportation has a significant role in the Province's economy. In 2003 the export-import value of NAD amounted to US\$2,090,865,249 that was made via the seaports of Blang Lancang and Lhokseumawe.

Table 1.39 SWOT Analysis of Trade Sector

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ A great deal of natural resources (oil & natural gas and non oil & natural gas) as raw materials for high value-added export. ❖ Existence of big industries such as PT. Exxon Mobil, PT. PIM, PT. AAF, PT. SAI and PT. KKA producing gas, fertilizer, paper, and cement as excellent export commodities. ❖ Sabang as Free Port and Trade Zone as enacted in Law No. 37/2000 to increase exports and imports. ❖ Entire community's and government personnel's commitment and enthusiasm to develop better Aceh in industrial and trade sectors after the conflict and tsunami through Aceh Reconstruction. ❖ Available prime agro-based industrial commodities for domestic and foreign markets. 	<ul style="list-style-type: none"> ❖ A great deal of natural resources that have high export value have not been used productively. ❖ Sabang as Free Port and Trade Zone has not served optimally for exports and imports. ❖ Limited supporting infrastructure for industrial and trade sectors that causes impact on commodities production and distribution. ❖ Minimum increase in quantity and quality of exported commodities of agricultural sector and industrial products. ❖ Limited insight, skills and business management of the local traders. ❖ Fragmented strategic business locations. ❖ Minimum capitalization and supervision of traders that affect job opportunity creation and income improvement. ❖ Unavailable accurate and rapid market information system. ❖ No strategic and fast-growing industrial clusters are built. ❖ High dependency on licensed product and foreign technology that affects domestic consumer product. ❖ Weak competitiveness of the local commodities against foreign products, affecting the purchasing power of the community. ❖ Gap of inter-regional development (east, west and central) that affects price disparities and basic commodity distribution. ❖ Limited socialization of domestic and foreign trade policies. ❖ Low awareness of <i>Haki</i> business operation protection

	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Big potential for the agro-based industry such as agricultural, fishery, plantation commodities. ❖ High increase in export of local resource-based primary commodities due to price factor or volume increases such as rubber, CPO, etc. ❖ Betterment of investment policies, investment climate and reduction of high cost economy, physical infrastructure improvement and software preparation: government personnel and business actors. ❖ Trade facilitation for export/import and exporter empowerment. ❖ Opportunity for local prime commodities in major markets and international markets through promotion, exhibition, trade mission and business forum. ❖ Use of existing opportunities: restricted trade undergone by China has resulted opportunities in major markets; however, the similar restriction shall be avoided. ❖ Development of fast-growing industrial zones through certain industrial centers in accordance with the existing human resources and natural resources, initiated by government's BUMDs/BUMNs (State-Owned Enterprises/Provincial Government-Owned Enterprises) by creating major markets. ❖ Open investment opportunities on industrial and trade sectors due to big opportunity (market and resources) resulted from betterment of investment climate. ❖ Cooperation among AFTA, APEC and WTO causing open wider market to strengthen the domestic commodities. 	<ul style="list-style-type: none"> ❖ North Sumatra Province still becomes the main producer of basic needs such as rice, eggs, frying oil, etc. ❖ Protectionism (tariff and non-tariff barrier) from certain countries or trade alliance to restrict the agro-based industrial commodities into those countries. ❖ Activating industrial and trade sectors needs seriousness, and large energy and fund. ❖ A number of countries implementing dumping practice for agro-based industrial commodities. ❖ Unfair practices in overseas trade negotiation and diplomacy, and protection of domestic market. ❖ Increasingly higher competition as a result of AFTA & WTO cooperation and competition with producing countries that have economic characteristics in common such as China, Thailand, the Philippines, Malaysia, India, Vietnam, and Laos. ❖ Increase in China's high quality products such as plastics, garment, machines, foods, etc.

Based on the SWOT analysis above, the existing potentials and possible constraints are summarized as follows:

Potentials:

- ❖ Development of big potential for the agro-based industry such as agricultural, fishery, plantation commodities.
- ❖ Betterment of investment policies, investment climate and reduction of high cost economy, physical infrastructure improvement and software preparation: government personnel and business actors.
- ❖ Trade facilitation for export/import and exporter empowerment.
- ❖ Opportunity for local prime commodities in major markets and international markets through promotion, exhibition, trade mission and business forum.
- ❖ Use of existing opportunities: restricted trade undergone by China has resulted opportunities in major markets; however, similar restrictions shall be avoided.
- ❖ Open investment opportunities on industrial and trade sectors due to big opportunity (market and resources) resulted from betterment of investment climate.

Constraints:

- ❖ Limited supporting infrastructure for industrial and trade sectors that causes impact on commodities production and distribution.
- ❖ Fragmented strategic business locations.
- ❖ Minimum increase in quantity and quality of exported commodities of agricultural sector and industrial products.
- ❖ Limited insight, skills and business management of the local traders.

- ❖ Minimum capitalization and supervision of traders that affects job opportunity creation and income improvement.
- ❖ Unavailable accurate and rapid market information system.
- ❖ Undeveloped the fast-growing and strategic industrial zones.
- ❖ High dependency on licensed product and foreign technology that affects domestic consumer product.
- ❖ Weak competitiveness of the local commodities against foreign products.
- ❖ Gap of inter-regional development (east, west and central) that affects price disparities and basic commodity distribution.
- ❖ Limited fund for activating the industrial and trade sectors.
- ❖ North Sumatra Province still becomes the main producer of basic needs such as rice, eggs, frying oil, etc.

b) Strategies

Referring to the existing potentials and possible constraints, the following strategies and action plans are formulated:

- ❖ Expand the marketing scope of the Province's prime commodities to other Provinces including the overseas market.
- ❖ Strengthen the institutional capacity and human resources to support the expansion of market scope of the Province's prime commodities.
- ❖ Increase the stabilization of price and distribution of basic commodities for local people.

c) Action Plans

1. Increase the domestic market networking

So far, prime commodities are traded to other Provinces; so, no value-added commodities are made in the NAD Province. This activity is therefore aimed at facilitating the development of market networking for the Province's prime commodities at domestic market. It will be conducted within the period of 2008-2012.

2. Provide facilities and information on basic commodity market

One factor that will determine the inflation rate is the assurance of availability of basic commodities for the public. Available information on basic commodities is very strategic, particularly, to anticipate price escalation, which will possibly affect the inflation rate. This activity is therefore aimed at facilitating the provision of information on basic commodity availability and demand to support monitoring and policies required. It will be conducted within the period of 2008-2012.

3. Identify export commodities

Factually, there are prime commodities from the Province that are marketed overseas; and the producers are not aware that their products are traded there. This activity is therefore aimed at identifying the Province's prime commodities which have so far been exported to other countries, or which have potentials to enter export market. It will be conducted within the period of 2008-2009.

4. Increase the non-oil and gas export

As explained earlier, the Province's prime commodities have indirect export markets. This activity is therefore aimed at facilitating the value-addition improvement of the products so that they enter directly the export market. It will be conducted within the period of 2008-2012.

5. Establish the distribution and marketing center on strategic areas

As what has been already experienced by other countries, one of the strategies to encourage product marketing is to provide sales centers in the locations of prime commodities within the whole Province. This activity is therefore aimed at providing the sales centers of the Province's prime commodities, which will be conducted within the period of 2008-2012.

6. Prepare for the establishment of BUMD and/or private sector-and-cooperative joint venture to market the Province's prime commodities

Establishment of local BUMD and/or private sector-and-cooperative joint ventures is a strategic measure to penetrate the oversease market for the Province's prime commodities. A variety of studies indicate that this strategy cannot fully be relied for market penetration rather than to create conducive business atmosphere for private sector to run production and trade. This activity is therefore aimed at preparing for the establishment of BUMD and/or private sector-and-cooperative joint ventures to speed up penetration of prime commodities either to domestic or international markets. It will be conducted within the period of 2008-2012.

7. Develop and organize locations for strategic business for traders

Availability of strategic locations that are comfortable and accessible to buyers is one factor of interest to traders. Existence of a number of remote traditional markets will, on the other hand, cause any flare-up when the District/municipal government gives modern traders a permit to run their businesses in their areas. This activity is, therefore, aimed at encouraging the District/municipal government to provide strategic business locations or reorganize the existing ones. It will be conducted within the period of 2008-2012.

8. Provide facilities for fast and accurate market information system

Available market information is badly needed by domestic/international market-oriented business owners/actors. This activity is therefore aimed at providing fast and accurate market information and other market information, owned by other stakeholder, concerning commodities, specifications, prices, market segment (location), etc. It will be conducted within the period of 2008-2012.

9. Provide revolving funds through provincial/district government financing units for micro, small and medium enterprises

Access to capitalization is always a problem for small, micro and medium scale enterprises. A lot of evidences, however, show that direct provision of capital by government unit will not, in turn, cause farmers to be productive; instead, they cannot settle their credit. This activity is therefore aimed at planning the allocation of revolving funds for them through the existing finances, at district and Sub-District level. This activity will be conducted within the period of 2008-2012.

10. Develop the efficient and effective distribution of basic commodities

A good distribution system is one factor to ensure the availability of basic commodities for public; and government institutions (at central or district level) shall not, on the other hand, be a dominant actor in commodity distribution. In other word, effective and efficient distribution system will much depend on distributor's behavior and other trade practice. This activity is therefore aimed at developing a distribution system which is effective and efficient in terms of monitoring and law enforcement. It will be conducted within the period of 2008-2012.

d) Indicative Implementation Schedule

The implementation schedule of the above activities is presented in **Table 1.40** below.

Table 1.40 Implementation Schedule of Trade Sector Development

No	Activity	2008	2009	2010	2011	2012
1	Increase the domestic market networking	■	■	■	■	■
2	Provide facilities and information on basic commodity market	■	■	■	■	■
3	Identify export commodities	■	■			
4	Increase the non-oil and gas export	■	■	■	■	■
5	Establish the distribution and marketing center on strategic areas	■	■	■	■	■
6	Prepare for the establishment of BUMD and/or private sector-and-cooperative joint venture to market the Province's prime commodities	■	■			
7	Develop and organize locations for strategic business for traders	■	■			
8	Provide facilities for fast and accurate market information system	■	■	■	■	■
9	Provide revolving funds through provincial/district government financing units for micro, small and medium enterprises	■	■	■	■	■
10	Develop the efficient and effective distribution of basic commodities	■	■	■	■	■

1.6.7 Transportation and Communication

a) Potentials and Constraints

The transportation and communication sector contribution to the GRDP between 2000 and 2004 did not show any significant change, accounting for approximately 4%. However, it increased to 7% in 2005 as a result of high contribution of land transportation sub-sector within the NAD Province.

Transportation

- Of its total contribution to the GRDP, around 3% is derived from the transportation sub-sector.

Communication

- The communication sub-sector contribution to the GRDP is between 0.6% and 0.9%.
- The communication sub-sector has grown rapidly as can be seen in the use of wireless communication systems, either GSM or CDMA-based, and internet connections.

Table 1.41 SWOT Analysis of Transportation and Communication Sector

	Strength	Weakness
Internal	<u>Transportation</u> <ul style="list-style-type: none"> ○ Both land and air transportation from Aceh to North Sumatra continues to develop <u>Communication</u> <ul style="list-style-type: none"> ○ Wireless/cellular connection system has grown rapidly 	<u>Transportation</u> <ul style="list-style-type: none"> ○ Transportation infrastructure is not yet strong, especially passenger sea transportation <u>Communication</u> <ul style="list-style-type: none"> ○ Communication sub-sector more serves consumptive needs
	Opportunity	Threat
External	<u>Transportation</u> <ul style="list-style-type: none"> ○ Development of inter-city transportation within the Province <u>Communication</u> <ul style="list-style-type: none"> ○ Continuously growing market segment 	<u>Transportation</u> <ul style="list-style-type: none"> ○ Demand of air transportation by donor institutions assisting in post-tsunami rehabilitation and reconstruction <u>Communication</u>

Transportation

- Since the post-tsunami period air transportation use has increased nearly 100%; however, almost all arrivals and departures have been made through Iskandar Muda Airport, and only a few via Malikul Saleh Airport in Lhokseumawe.

Communication

- The communication sub-sector has developed rapidly as can be seen in the use of wireless/cellular technology. Shops and street vendors providing cellular services have proliferated rapidly; however, this sub-sector's contribution to the GRDP is small as it is only for consumptive use rather than productive use.

b) Strategies**Transportation**

- Develop the air transportation service particularly the feasibility of the Iskandar Muda Airport.
- Develop the inter-Province and inter-city land transportation that involves local business owners.

Communication

- Develop low-cost wireless-based communication.

c) Action Plans**1. Transportation**

- Develop the air transportation service in Iskandar Muda Airport, and the airport business center, if possible.
- Encourage the involvement of local business owners in developing the land transportation.

2. Communication

- Develop low-cost wireless-based communication by giving investment facilitation based on sound competition.

d) Indicative Implementation Schedule

The indicative implementation schedule of the above activities is presented in **Table 1.42** below.

Table 1.42 Implementation Schedule of Transportation and Communication Development

No	Activity	2008	2009	2010	2011	2012
1	<u>Transportation</u>					
	○ Develop the air transportation service in Iskandar Muda Airport, and the airport business center, if possible.					
	○ Encourage the involvement of local business owners in developing the land transportation.					
2	<u>Communication</u>					
	○ Develop low-cost wireless-based communication by giving investment facilitation based on sound competition.					

1.6.8 Banking and Other Finances

a) Potentials and Constraints

Based on a year 2000 benchmark, the banking sector contribution to the GRDP was Rp.519.2 billion showing an increase of 6.3% in 2005. It was, however, relatively small only 1,5% (including *migas*) and 2,3% (non *migas*).

In fact, the Banking LDR of the Province has tended to decrease. This sector is therefore less effective as an agent of development with only minimum involvement in the real economic sector growth. Most loans are used for consumptive purposes, not productive.

Based on the latest data, in 2003 this sector employed 12,756 people (or approximately 0.6%) of the total workforce in the Province. Since it is capital by nature rather than labor intensive, its asset development and profit have not been able to accommodate manpower.

The existing banks are categorized into two: *bank umum* (savings bank) and *bank perkreditan rakyat* (private bank specializing in low-interest loans to petty traders). There are 16 *bank umum*, 11 banks (operated conventionally), and 5 other Syariah banks in the Province. Of all the all existing banks, approximately 50% are government-owned banks, and the rest belong to the domestic private sector. Of 20 *bank perkreditan rakyat*, 15 are operated conventionally and the remaining five are Syariah banks. By August 2006, there were a total of 218 branches of government-owned banks within the Province, and 23 branches of *bank perkreditan rakyat*.

Table 1.43 SWOT Analysis of Bank and Finance

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Banking sector continues to develop ❖ Public is already familiar with banking services ❖ Syariah banking grows more rapidly than the conventional banking does 	<ul style="list-style-type: none"> ❖ Based on its LDR value, banks are deemed less supportive of loans for productive purposes
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Development of Syariah banking ❖ Development of new banks, either local or national private branches 	<ul style="list-style-type: none"> ❖ Distribution of bank loans for consumptive purposes and growing capital (savings) in SBI

- ❖ In general, the banking sector contribution to the GRDP continues to increase, although its total proportion is relatively small.
- ❖ Based on its LDR, the banking sector is less supportive of access to productive funding, including its support for UKM (micro, small and medium) businesses. Most of the funds are used for consumptive loans and the rest are saved as SBI (Bank Indonesia Certificate)
- ❖ As a special note: Syariah banks continue to obtain significant shares in the Province's banking system. By the end of 3rd quarter of 2006, the total assets of Syariah banks increased to 24.8% (Rp1.2 quintillion) with deposit amounting to Rp.971.5 billion for each quarterly growth of 26.4%. Their profit has increased to nearly 59% of the previous quarter of Rp.21.7 billion with Non-Performing Finance (NPF) of 2.9%. The banks also indicate adequate potential to expand their operations with their Financing to Deposit Ratio (FDR) of only 11.8%.

b) Strategies

- ❖ Increase the banking sector support for economic businesses, including the micro, small and medium-scale enterprises.
- ❖ Continue to develop the Syariah banking.
- ❖ Develop banking and other finance facilities to sub-districts particularly outside Banda Aceh.

c) Action Plans

1. Encourage the bank umum intermediation to support access to funding for productive economic development.

The low LDR (loan to deposit ratio) of the *bank umum* in the Province indicates that banking functions to finance the productive economic development have not been optimum. This activity therefore seeks to encourage the District/municipal government to facilitate private sector particularly the micro, small and medium enterprises to have accesses to the *bank umum*, in the form of provision of information on sector and potential debtors in each district/city, licensing procedure streamlining (business permit) – to be one of the requirements for credit grant, and distribution of

Provincial/District/Municipal Government revolving fund through *bank umum* (cash collateral). It will be conducted within the period of 2008-2012.

2. Encourage the Syariah banking intermediation in productive economic development

Although NAD Province has applied the principles of Syariat Islam, the *bank umum* that operate with *shariah* permits have not optimally provided funds for the productive sector. This activity is, therefore, to encourage the District/municipal government to facilitate private sector particularly the micro, small and medium enterprises to have access to the Syariah banks, in the form of provision of information on sector and potential debtors in each district/city. It will be conducted within the period of 2008-2012.

3. Develop the government micro finance units at Sub-District level

The long-lasting conflict in the past caused the finance units at Sub-District level within the Province to decrease. On the other hand, *bank umum* also limited their operation in District or city capital. Since the Law on Aceh Administration has been effective, there are opportunities to develop the Provincial/District/Municipal Government micro finance units in accordance with commercial principles. This activity is therefore aimed at mobilizing the Provincial/District/Municipal Government funds to develop the micro finance units at District level, (either the funds distributed by the government units/bodies without definite output or additional equalization funds to be obtained by the Provincial Government after the implementation of Law on Aceh Administration). It will be conducted within the period of 2008-2012.

d) Indicative Implementation Schedule

The implementation schedule of the above activities is presented in **Table 1.44** below.

Table 1.44 Implementation Schedule of Bank and Finance Development

No	Activity	2008	2009	2010	2011	2012
1	Encourage the bank umum intermediation to support the access to funding for productive economic development.	—————				
2	Encourage the Syariah banking intermediation in productive economic development.	—————				
3	Develop the government micro finance units at Sub-District level.	—————				

1.6.9 Services

a) Potentials and Constraints

The service sector has two sub-sectors: Public Administration and Defense, and Private Sector. The sector contribution to the Province's GRDP has tended to increase from year to year. In 2000, its contribution was approximately 7.48%; then in 2005, it increased to 11.95%. If the GRDP from Non-Oil and Gas sector is combined, the service sector contribution to the GRDP is becoming increasingly higher.

The biggest contribution of this sector is derived from the Public Administration and Defense sub-sector amounting to 6% to 9% of the total GRDP, generated from government public services and routine expenditures.

The development of the service sector during the last two years indicated that the contribution of private sub-sector, which includes social activities, entertainment & recreation, and household, increased to 20% of the total, whereas between 2000 and 2002 it was only 10%.

The sector performance (or Gross Value Addition) of the sector is computed based on:

- ❖ Government services based on the realized government expenditures.
- ❖ Social services (private, entertainment and individual) based on the estimated production.
- ❖ Government/non-government service provision has generally provoked a positive response from the public in NAD Province, particularly from middle-low income groups.
- ❖ Administrative services continue to increase especially due to the immediate implementation of new format of public service (One-Stop Service) at District/municipal level.
- ❖ The middle-high income groups tend to go to other Provinces or other countries for exclusive services deemed higher quality.

Table 1.45 SWOT Analysis of Services

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Government services such as licensing, health, education and administrative, tending to improve ❖ Non-government services: education, research institution, audio-visual communication, household, workshop, etc. tending to increase due to the post-tsunami rehabilitation and reconstruction activities ❖ One-stop service for licensing and public services 	<ul style="list-style-type: none"> ❖ High inflation rate that will possibly reduce the value-addition ❖ Lower quality services causing public to find better service in other neighboring Provinces
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Improvement of government and non-government services ❖ Diversified services to meet various public needs 	<ul style="list-style-type: none"> ❖ High inflation rate will reduce the competitiveness of services in the Province ❖ Certain segment tending to choose overseas services, since the domestic service (medical) is less optimum

b) Strategies

- ❖ Apply standard public services.
- ❖ Develop the institutional capacity (including the public service personnel).
- ❖ Improve the educational and medical services for middle-low income groups as well as rural and remote areas.
- ❖ Develop the high quality public services.

c) Action Plans

1. Encourage the District/municipal governments to develop the One-Stop Service model.

Legal assurance and transparency in securing business permits is one factor to attract investors to invest their capital in NAD Province. Besides, simplification of licensing procedures is a strategy to ensure and speed up delivery of government services. This activity is therefore aimed at developing the One-Stop Service at District/municipal level. It will be conducted within the period of 2008-2009.

2. Develop institutional capacity by applying the standard operating procedure for service provision.

During the decentralization era the provincial government is required to create minimum standard of service provision using the Central Government equilibration fund. Besides, there has been an idea of sanctioning local governments that cannot realize the minimum standard of service provision, namely in the form of reduction in the Central Government equilibration fund. This activity is therefore aimed at improving the institutional capacity of provincial government service in the form of training, standard operating procedures, etc. It will be conducted within the period of 2008-2012.

3. Develop the institutional capacity such as health and education, particularly in rural areas and small islands.

During the conflict, the government basic services such as education and health could not be provided optimally. The Helsinki Agreement has become a starting point for improving the government basic services. This activity is therefore aimed at improving the educational and medical facilities particularly for rural areas and small islands. It will be conducted within the period of 2008-2010.

4. Encourage the development of public service for middle-high income groups in NAD, so that they do not go to other Province or country for the services they need.

NAD Province is located in the regional zone of Penang and Singapore, which might cause the middle-high income groups to seek medical treatment in Penang or Singapore. This cannot be avoided due to the limited medical facilities existing in the Province, and causes NAD Province's foreign currency to be carried out and spent elsewhere. This activity is therefore aimed at providing quality medical services by making feasibility studies, which will be conducted within the period of 2008-2009.

d) Indicative Implementation Schedule

The implementation schedule of the above activities is presented in **Table 1.46** below.

Table 1.46 Implementation Schedule of Service Development

No	Activity	2008	2009	2010	2011	2012
1	Encourage the District/municipal government to develop the One-Stop Service model.	██████████	██████████			
2	Develop the institutional capacity	██████████	██████████	██████████		
3	Develop the institutional capacity	██████████	██████████	██████████		
4	Encourage the development of public service	██████████	██████████			

1.6.10 Tourism

a) Potentials and Constraints

In general, tourism potentials in NAD Province are very attractive. The Province has a great deal of sea tourism since it is encircled by a large ocean and small islands. There are a total of 10 natural tourist attractions. As of 2004, the Province had 537 listed tourist attractions (already developed or undeveloped). These are categorized into 288 natural tourist attractions, 165 cultural tourist attractions, and 74 special-interest tourist attractions.

In 2003, tourist arrivals in Aceh were estimated at 250,570 people (3,603 of them were foreign tourists). Since 2005 Aceh's tourism has gradually begun to improve with a total of 4,287 foreign tourists and 320,900 domestic tourists. As of October 2006, there were a total of 4,852 foreign tourists and of 586,521 domestic tourists.

By way of support for tourism, there are a number of facilities:

- 20 star hotels, 25 hotels and home-stays with a total of 1,910 rooms for 3,820 persons.
- 414 restaurants with a total of 2,861 tables for around 14,227 persons.

After the 2004 tsunami, Aceh began to be known to tourists visiting Indonesia. The occupancy rate has increased significantly due to volunteers and social workers (domestic or international) involved in the post-tsunami rehabilitation and reconstruction activities.

Table 1.47 SWOT Analysis of Tourism Development

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Aceh has a variety of tourist attractions ❖ Better access to the neighboring countries: Malaysia, Singapore, Thailand, India, China, etc. ❖ Adequate tourist accommodation such as: hotels, restaurants, tourist transportation, souvenir shops, money changers, travel agents, and guides ❖ Community hospitality ❖ Ability to serve foods and beverages (culinary) ❖ Various dances and other traditional arts ❖ Craft, carving, and motif ❖ Customary and religious law 	<ul style="list-style-type: none"> ❖ Limited tours and travel business ❖ Condition and management of tourist destination are not optimum ❖ No means of international transportation ❖ Less quality hotels and restaurants ❖ Limited tourist promotion ❖ Less adequate facilities and infrastructure for the tourist destination ❖ Planning for tourism system and tourist destination ❖ Community preparedness ❖ Investment interest ❖ Damage to tourist destination area as a result of tsunami
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Strategic access to the neighboring countries: Malaysia, Singapore, Thailand, India, China, etc ❖ Variety and specificity of culture and tourist destination ❖ Many foreigners visiting Aceh after tsunami ❖ Known to international community 	<ul style="list-style-type: none"> ❖ Damaged tourist destinations ❖ Rapid growth of tourism development in other Provinces such as Bali, North Sumatra and other countries such as Singapore, Malaysia, Thailand, etc. ❖ Security and political stability ❖ Central government policies

Based on the SWOT analysis above, the existing potentials and possible constraints are summarized as follows:

Potentials

- ❖ Tourism development has a significant multiplier effect on the economic sector of the Province, which has complete tourism potentials: nature, sea, culture, historical heritages, and tsunami tourism.
- ❖ Various tourist attractions.
- ❖ Easy access from Malaysia, Singapore, Thailand, India, etc.
- ❖ Available sea ports and airports.
- ❖ Known to the international community.

Constraints

- ❖ The 2004 tsunami has caused damage to the facilities and infrastructure particularly in the west coastal area of NAD Province.
- ❖ Community's low awareness of tourism sector, perceived as negative activity and destroying younger generation's morality.
- ❖ Low quality of the human resources in tourism businesses (hotels, travel agents and guides).
- ❖ Security concerns and perceived political instability.
- ❖ Extensive and longterm investments needed to make tourism a reliable sector.

b) Strategies

Referring to the existing potentials and possible constraints, the following strategies and action plans are formulated:

- ❖ Improve the rehabilitation and reconstruction of the damaged tourism facilities and infrastructure.
- ❖ Enhance the roles of all social strata in tourism development.
- ❖ Designate and develop the areas of excellent tourism as a prime-mover for other tourist destinations.
- ❖ Improve the promotion of tourism, both at a domestic or international level.
- ❖ Develop the knowledge of those responsible for tourism businesses (tourist destinations, hotels, travel agents and restaurants) about standards of service provision.

c) Action Plans

1. Speed up the effort to improve the tourism facilities and infrastructure.

The 2004 tsunami has caused damage to tourism facilities and infrastructure, particularly those which are located near the beach. This activity is therefore aimed at encouraging the provincial government to provide the basic facilities and infrastructure needed by tourism stakeholders and facilitate the private sector (domestic or foreign) to speed up the tourism recovery. In addition to build basic infrastructure in the tourism locations (particularly the facilities damaged by the tsunami), the provincial government is expected to provide incentives and simplify the licensing procedures, so that private sector can invest their capital in tourism development of the Province. It will be conducted within the period of 2008-2012.

2. Information campaign and establishment of tourism interest groups at tourist attraction localities.

Community involvement is one factor to support the tourism development. The positive involvement will assist in creating good perceptions in every visitor to the tourist attractions. This activity is therefore aimed at improving the community awareness and establishing tourism interest groups in each tourist location in NAD Province, which will in turn create positive perceptions in every visitor. It will be conducted within the period of 2008-2012.

3. Enhance the tourist promotion either domestic or international through exhibitions or article writing on Aceh's tourism.

NAD Province actually has a strong basis for promoting its tourism. The favorable security situation within the Province is an assurance that can attract tourists. However, due to the lingering aftereffects of the conflict, NAD Province's tourism potential are not well known to domestic and foreign tourists. This activity is therefore aimed at promoting various tourism potentials existing in NAD, by using various promotional media including the production of articles on Aceh's tourist attractions. It will be conducted within the period of 2008-2012.

4. Improve the tourist sector's human resources particularly for those who are responsible for tourism management such as hotels, travel agents and training of guides.

The other factor determining the development of the tourism sector is the availability of capable human resources. Capacity building should not only be focused on the government sector, but also on private sector players directly involved in the development of tourism. This activity is therefore aimed at developing the capacity of both the government sector and private sector involved in the tourism development through training, comparative studies, etc. It will be conducted within the period of 2008-2012.

5. Designate and develop the areas of excellent tourism as prime-mover of other tourist destination.

d) Indicative Implementation Schedule

The implementation schedule of the above activities is presented in **Table 1.48** below.

Table 1.48 Implementation Schedule of Tourism Development

No	Activity	2008	2009	2010	2011	2012
1	Speed up the endeavors of improving the tourism facilities and infrastructure	■	■	■	■	■
2	Information campaign and establishment of tourism interest group at the surrounding of tourist attractions	■	■	■	■	■
3	Enhance the tourist promotion	■	■	■	■	■
4	Improve the tourism human resources	■	■	■	■	■
5	Designate and develop the areas of excellent tourism	■	■	■	■	■

1.7 GRDP by Expenditure

a) Potentials and Constraints

This section presents a general analysis of the entire provincial economy, covering primarily an assessment of its potentials and constraints. It then proceeds with a statement of the long-term goal that may be pursued by the entire development process as well as the overall objectives for the next five years or so. The aim is to mold a possible unifying direction for economic development.

As such, this section does not proceed to the formulation of specific actions for implementing the strategies. Action formulation is left to the other sections that follow, as the discussion delves into specific aspects of the provincial economy.

Table 1.49 SWOT Analysis of GRDP by Expenditures

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Before the tsunami in 2004, the economy had been expanding, although at a relatively modest pace, despite socio-political constraints. ❖ The foregoing indicates that there is potential for further expansion. ❖ The multiplier effect of the ongoing humanitarian aid, rehabilitation, and reconstruction should ultimately be reflected in an expanding economy. ❖ There is ample idle capacity for production; unexploited land, natural resources, and labor are abundant. 	<ul style="list-style-type: none"> ❖ The provincial economy is basically consumption-driven. ❖ Past public investments had been focused mostly on government apparatus and not on catalyzing economic growth. ❖ Production technology has been stunted by the past political disturbances. ❖ Low rate of investment may have rendered existing production facilities obsolete. ❖ Human capital has not been sufficiently developed.
	Opportunity	Threat
Eksternal	<ul style="list-style-type: none"> ❖ There has been a sustained trend of investment capital movement to emerging economies. ❖ The mobilization of humanitarian aid had likewise brought the attention of the Province to potential investors. ❖ Neighboring countries are net foreign investing countries. 	<ul style="list-style-type: none"> ❖ The provincial economy is subject to the negative impression foreign investors harbor on the entire country. ❖ There is intense competition for foreign direct investment among Indonesian Provinces and among developing countries. ❖ The provincial economy is very much vulnerable to the volatility of commodity prices, particularly those for oil and gas.

Based on the SWOT analysis above, the existing potentials and constraints could be summarized as follows:

While expansions were recorded in 2002 and 2003 of 20.1% and 5.5% respectively, these were followed by contractions of 9.6% in 2004 and an even higher 13.5% in 2005 due to the devastations brought by the earthquake and tsunami in 2004.

Household consumption increased by an average of 8.5%. Expenditures on food, however, declined by an average of 2.6% in real terms even as spending on these items increased by an average of 9.3% in nominal terms. Spending on non-food items surged in 2004 by 51.3% and again by 79.3% in 2005 to more than offset the declines in the previous years and achieve a relatively high real average increase of 30.4%.

Government spending grew by an average of 29.2% in real terms. The increase in 2005 was however out of line with previous years' increases that averaged over 35%.

Gross domestic fixed capital formation likewise posted a respectable average improvement of 29.5% per year, despite the reduction of 36.0% in 2003. Positive movements in inventory averaged 165.8%.

Exports went up by a yearly average of 50.3%, while imports went down by an average of 22.5% per year. While the Province's terms of trade with other Indonesian Provinces achieved a five-year average surplus of almost Rp 1.7 trillion, such surplus declined by a yearly average of 175.8%. In relation to other Provinces, NAD Province was a net importer to the tune of Rp 3.6 trillion in 2002 and Rp 12.1 trillion in 2005. Since the Province's major export product is natural gas, the foregoing trade-balance picture becomes even bleaker if oil and gas mining are to be taken out of the equation.

The provincial economy, and whatever growth it achieved during the five-year period under review, was basically consumption-driven. Including oil and gas mining, which as noted earlier is the dominant provincial economic sector, consumption contributed an average of 36.0% to GRDP. The decline in oil and gas output in 2005 further boosted consumption's share to over half of GRDP. Without oil and gas mining, the provincial economy becomes even more skewed toward consumption, which averaged 62.8% of GRDP during the five-year period under discussion. (In fact, this proportion went up to 80.5% in 2005). On average, investment was a mere 16.8% of GRDP (and even lower if short-term investment in inventory is deducted), with net export contributing the remaining 20.4%.

b) Long-term Goal

The vision, as it were, is generally what all economies strive for:

The provincial economy represents a healthy and sustainable balance of household consumption, government expenditures, investment, and net export, each of which is strong enough for self-perpetuation of growth as well as to provide support to the other components.

c) Medium-Term Objectives

The objectives/targets for the next five years are as follows:

- The yearly growth of the provincial economy is at least equal to the national average (assuming consistent expansion of the national economy).
- Food consumption of households, in real terms, regains and exceeds its 2001 level .
- Household income steadily increases to support steadily rising overall expenditures as an indication of improving living standards, but with adequate proportion allocated to savings.
- Government expenditure as a proportion of total GRDP will be maintained at its 2005 level and any increase beyond this level should clearly be meant for stimulating the growth of real economic sectors.
- Investment, as measured in terms of gross domestic fixed capital formation (net of inventories), at least maintains its 2005 proportion to GRDP.
- Exports, excluding oil and gas, will achieve parity with imports within five years and, thereafter, post yearly surpluses.
- The negative terms of trade with other Indonesian Provinces, excluding oil and gas, will be reversed within the next five years.

1.7.1 Household Consumption

a) Potentials and Constraints

Household consumption expanded in real terms by an average of 8.5% 2001 and 2005. Whatever increase was recorded in overall household spending, it was allocated to non-food items. On average, spending on food items declined by 2.6% in real terms, in spite an average increase of 9.3% in nominal terms. Thus, on average, households consumed less food while spending more for it.

The high overall inflation rate in the Province mainly affected food items. In contrast, there was negative inflation in non-food items. In view of the relative increases discussed earlier, there occurred a significant shift in the distribution of household expenses. While previously expenses on food items hovered in real terms between 60.6% and 73.5% for a five-year average of 64.1%, this was reversed in 2005 with food items accounting for only 46.4% of total real expenditures.

Decreases in household expenditures may be traced ultimately to the real per capita GRDP and thus per capita regional income, which, as a whole (including oil and gas mining), both contracted by 9.2% in 2005. The real increase in spending in 2005 thus implied that households may have dipped into their savings or resorted to borrowing to finance current consumption.

Table 1.50 SWOT Analysis of Household Consumption

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Household income is forecast to increase along with the anticipated provincial economic growth. ❖ Alternative household income sources have been provided by the ongoing rehabilitation and reconstruction efforts. ❖ The socio-political climate has become quite conducive to micro-entrepreneurship. 	<ul style="list-style-type: none"> ❖ Supply of basic necessities will remain constrained as the real economic sectors try to regain their productive capacities. ❖ High inflation will continue to erode whatever nominal increases are achieved in household income. ❖ Low skills have led to the exclusion of locals from higher-paying jobs, even those related to the ongoing rehabilitation and reconstruction efforts.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ An outlook for sustained regional economic growth should ultimately manifest itself in higher household income. ❖ The restoration of the productive capacities of the real sectors should be able to achieve significant import substitution and tame local inflation. 	<ul style="list-style-type: none"> ❖ The imminent completion of the rehabilitation and reconstruction program, including the gradual pull-out of donor agencies, could potentially cause widespread socio-economic dislocation of the local population. ❖ The post-tsunami influx of migrants could continue to pose competition to locals for job and income opportunities long after the rehabilitation and reconstruction program has been completed.

b) Medium-Term Objectives and Strategies

As enumerated in the preceding section, the medium-term objectives for household consumption are as follows:

- Food consumption of households, in real terms, regains and exceeds its 2001 level .

- Household income steadily increases to support steadily rising overall expenditures as an indication of improving living standards, but with adequate proportion allocated to savings.

It is realized that multi-pronged strategies will be necessary to accomplish the foregoing objectives. On the other hand, household consumption itself needs to be viewed in the context of the entire provincial economy, and that strategies implemented in other aspects/areas will have effects on household consumption. It is thus presumed that the strategies proposed here will be considered in relation to other economic development strategies articulated in other parts of this document.

Thus specifically for household consumption, the following strategies will be pursued during the next five years:

- **Develop multiple sources of income for local households.** This will entail, at the very least, the provision of income sources to those households which presently have none. In addition, households with access to more or less steady sources of income will be encouraged to develop other income sources, primarily through cottage/household industries. As a component of gender empowerment, the target for the development alternative/additional income sources will primarily be non-working housewives. The strategy will be pursued in close coordination with the developmental activities in the various economic sectors. To ensure the sustainability, the gathering, dissemination/promotion, and provision of support to implementation of livelihood technologies will be institutionalized.
- **Shield household income from sudden drastic deterioration.** As the provincial economy becomes more and more integrated with the national and global economies, it will also become more and more vulnerable to external influences. For instance, a sudden drop in the prices of major commodity exports, coffee for example, could wipe out the incomes of dependent families. While the alternative income sources to be developed in the preceding strategy could somehow cushion the impact, still the loss of a primary income source could mean economic dislocation. The interventions will include the implementation of such social safety nets as unemployment insurance, crop insurance, and government-sponsored/subsidized commodity stockpiles.
- **Ensure universal accessibility by temporarily adopting targeted lifeline pricing for specific goods and services.** The goods and services that easily come to mind are water and sanitation, health, and education. For the poorest of the poor, lifeline pricing, even outright subsidies will be adopted for them to be able to afford reasonable levels of access to these goods and services. One could view this simply as a way of 'preserving the present stock', but in this context should be pursued more as part of a sustained, long-term investment in the improvement of the Province's human capital.

c) Medium-Term Investment Program

Each of the foregoing strategies is treated as a distinct component of a proposed medium-term investment program and is therefore further broken down into several investment packages, as follows:

1. Development of Multiple Sources of Household Income

- **Establish a Livelihood Technology Resource Center (LTRC).** The center will be responsible for collecting, packaging, and disseminating household livelihood technologies and for supporting the incubation of household livelihood projects.

- **Set Up a Micro-Financing Institution for Household Livelihood Credit.** It is realized that numerous micro-financing schemes are now being implemented mostly under the auspices of donor agencies. Specifically for households, the credit scheme is proposed to be formalized under a micro-financing institution whose mandate will be limited to financing household livelihood projects. Its setup and operations will thus be largely patterned after the Grameen Bank of Bangladesh.
- **Support the Establishment of Household Cooperatives.** In the same manner, there are so many cooperatives that exist at present. The type being contemplated here, however, are those that will cater especially to the needs of non-working housewives who are undertaking livelihood projects to augment their families' income. The aims, functions, and structure of each cooperative will be decided by its members. Successful models will however be disseminated.

2. Preservation of Household Income

- **Establish Unemployment Insurance.** It is realized that this is now being discussed at the national level. The provincial government, however, may opt to proceed with the process on its own, based on inputs from local employers and labor organizations. Although expected to be self-sustaining, the insurance scheme could however be initially underwritten by the windfall incomes expected from the Province's special autonomy status.
- **Establish Crop Insurance.** Likewise, this is already being discussed at the national level. The Province, however, may opt to initiate its own efforts toward giving protection to its own citizens. Also, this is envisioned to become a commercially sustainable endeavor, but the provincial government may initially underwrite the risks involved until the facility becomes acceptable to a wider customer base.
- **Sponsor/Subsidize Commodity Stockpiles.** Stockpiles are meant to protect farmers/growers from sudden drop in prices. Each stockpile will be meant for a specific commodity that the government will identify and designate. The mechanism is basically that the government will buy agricultural commodities at pre-established floor prices once the market prices of these commodities fall below such floor prices. The establishment of stockpiles may be done by the government in collaboration with certain farmer groups/cooperatives.

3. Universal Accessibility of Essential Goods and Services

- **Support the Implementation of the Concept of Public Service Obligation (PSO).** This is basically the responsibility of local governments, but the provincial government may provide support to the coverage expansion especially of piped water supply and sanitation services.
- **Implement Conditional Cash Transfer (CCT) Schemes.** CCT schemes are particularly for basic education and health care are now being implemented in selected locations. One of the major funding sponsors is the World Bank. The schemes may be adopted Province-wide, and their applications extended. For example, CCT for education may cover beyond the government-mandated nine years of free education.

d) Indicative Implementation Schedule

The investment program will be implemented for a period of five years. An indicative implementation schedule for each investment package and activity is presented in **Table 1.51**.

Table 1.51 Implementation Schedule of Development of Various Sources of Household Income

NO	Activity	2008	2009	2010	2011	2012
1	DEVELOPMENT OF MULTIPLE SOURCES OF HOUSEHOLD INCOME					
1.1	Establish a Livelihood Technology Resource Center					
1.1.1	Conduct a feasibility study	—				
1.1.2	Develop the funding and working mechanisms and organizational setup	—				
1.1.3	Formulate and enact the necessary legal framework		—			
1.1.4	Acquire the land for the center's premises		—			
1.1.5	Construct the physical facilities		—	—		
1.1.6	Procure and install the necessary tools and equipment			—		
1.1.7	Recruit the required personnel			—		
1.1.8	Support the initial operation of the center			—	—	—
1.2	Set Up a Micro-Financing Institution for Household Livelihood Credit					
1.2.1	Conduct a feasibility study	—				
1.2.2	Develop the funding and working mechanisms and organizational setup	—				
1.2.3	Formulate and enact the institution's charter		—			
1.2.4	Acquire the land for the institution's premises		—			
1.2.5	Construct the physical facilities			—		
1.2.6	Procure and install the necessary tools and equipment			—		
1.2.7	Recruit the required personnel			—		
1.2.8	Support the initial operation of the institution			—	—	—
1.2.9	Study the feasibility of privatizing the institution					—
1.3	Support the Establishment of Household Cooperatives		—	—	—	—
1.3.1	Identify alternative models for cooperative purpose, functions, and structure		—			
1.3.2	Hire, train, and mobilize cooperative-movement advocates		—			
1.3.3	Mobilize technical and, if necessary, financial support to established cooperatives			—		
1.3.4	Document, disseminate, and replicate 'success stories'			—		
2	PRESERVATION OF HOUSEHOLD INCOME					
2.1	Establish Unemployment Insurance		—	—	—	—
2.1.1	Conduct a feasibility study		—			
2.1.2	Develop the funding and working mechanisms and organizational setup			—		
2.1.3	Formulate and enact an appropriate charter			—		
2.1.4	Provide physical facilities, tools, and equipment			—		
2.1.5	Recruit the required personnel			—		
2.1.6	Support the initial operation of the insurance scheme				—	—
2.1.7	Study the feasibility of privatizing the scheme					—
2.2	Establish Crop Insurance		—	—	—	—
2.2.1	Conduct a feasibility study		—			

NO	Activity	2008	2009	2010	2011	2012
2.2.2	Develop the funding and working mechanisms and organizational setup			—		
2.2.3	Formulate and enact an appropriate charter			—		
2.2.4	Provide physical facilities, tools, and equipment			—		
2.2.5	Recruit the required personnel			—		
2.2.6	Support the initial operation of the insurance scheme				—	—
2.2.7	Study the feasibility of privatizing the scheme					—
2.3	Sponsor/Subsidize Commodity Stockpiles		—	—	—	—
2.3.1	Identify and select eligible commodities		—			
2.3.2	Conduct a feasibility studies		—	—		
2.3.3	Develop the funding and working mechanisms and organizational setup			—		
2.3.4	Formulate and enact an appropriate legal framework			—		
2.3.5	Provide physical facilities, tools, and equipment			—		
2.3.6	Recruit the required personnel			—		
2.3.7	Support the operation of the stockpiles			—	—	—
2.3.8	Periodically monitor and evaluate the performance of stockpiles and decide on the continuation of each of them				.....	.....
3	UNIVERSAL ACCESSIBILITY OF ESSENTIAL GOODS AND SERVICES					
3.1	Support the Implementation of the Concept of Public Service Obligation	—	—	—	—	—
3.1.1	Conduct real demand studies of water supply and sanitation services	—				
3.1.2	Identify target population segments for expansion of service coverage areas under PSO	—				
3.1.3	Identify and select from workable technical solutions	—				
3.1.4	Prepare systems expansion plans and service delivery mechanisms		—			
3.1.5	Establish financing schemes		—			
3.1.6	Promote participation of target population segments		—	—	—	—
3.1.7	Implement systems expansion		—	—	—	—
3.1.8	Monitor, evaluate, and improve service-delivery mechanisms				.....	.....
3.2	Implement Conditional Cash Transfer (CCT) Schemes	—	—	—	—	—
3.2.1	Conduct baseline studies and identify potential beneficiaries	—				
3.2.2	Determine the CCT modes to be adopted and define the scope of each mode	—				
3.2.3	Establish policies and operating guidelines	—				
3.2.4	Set up the institutional arrangement for implementation		—			
3.2.5	Conduct and evaluate trial runs		—			
3.2.6	Implement the schemes			—	—	—
3.2.7	Periodically monitor, evaluate and improve the schemes				.....	.....

1.7.2 Government Expenditure

a) Potentials and Constraints

The enactment of the local government autonomy law and its subsequent implementation in January 2001 brought significant increases in the revenues of the provincial and local governments of NAD Province. Additional increases came when Aceh. Additional increases in regional revenue came when Aceh was granted Special Autonomy status 2001. Following the December 2004 tsunami, NAD Province received a large amount of reconstruction and rehabilitation funds from communities and donors both inside and outside the country. In terms of regional budget (APBD), NAD Province is among the richest Provinces in Indonesia, and even more so in per capita terms.

NAD Province's most important sources of revenue are the DAU and revenue-sharing. NAD Province received the third largest allocation of natural resources revenue-sharing along with Kalimantan Timur and Riau. The provincial PAD increased after decentralization but experienced a sharp decrease in 2005 as a consequence of the tsunami, which affected many potential tax bases and hampered tax collection. The increase in PAD after decentralization was driven mainly by the expansion of the motor vehicle tax and the addition of the surface and ground water user tax.

According to the Law on Governance in Aceh approved in August 2006, beginning in 2008 NAD Province will begin receiving 2% of national DAU allocation for 15 years followed by 1% for the following 5 years (until 2028). The additional funds are intended to finance the development and maintenance of infrastructure, economic empowerment, as well as the education, social, and health sectors. The new law also revises oil and gas revenue-sharing between central and regional government. NAD Province will continue to receive 70% of oil and gas revenue. Natural resources revenue is however likely to fall due to the decline in oil and gas production.

Both provincial and local government spending increased substantially after the 1999 decentralization and the 2001 special autonomy. Despite a considerably reduced role in regional spending after decentralization, however, the central government continues to spend substantial resources in the region on five sectors that, by and large, are also prioritized by the provincial and local governments: infrastructure, education, regional development, health, and agriculture.

Since 2003, development spending on government apparatus has become the highest spending priority for provincial and local governments. The share of this item to total development expenditure has increased continuously. One major underlying reason was the creation of new local governments whose number grew from 14 in 2002 to 21 by 2006. Furthermore, the creation of an additional two is now being mooted as almost certain in 2007.

Table 1.52 SWOT Analysis of Government Expenditure

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Local government autonomy in general and the Law on Governance in Aceh (Law 11/2006) provides ample sources of income for the provincial and local governments of NAD, primarily DAU shares on income from natural resources. ❖ In terms of regional budget, NAD is among the richest Provinces in Indonesia, and even more so in per capita terms. ❖ At least until 2009, the reconstruction and rehabilitation program will continue to significantly augment NAD's total expenditure levels. 	<ul style="list-style-type: none"> ❖ Public expenditures have so far been focused on the development of government apparatus; relatively smaller portions have gone to stimulating the growth of real economic sectors. ❖ There is significant overlaps in the focus of expenditures among local, provincial, and national government levels. ❖ There is significant disparity in the distribution of government revenue per capita among local governments, with the richest local government having revenue six times that of the poorest local government's. ❖ Serious financing gaps exist across different sectors and across geographical areas. ❖ Against various indicators, NAD's public sector, especially at the local government level, has been found to possess less than 50% of the capacity to manage the increasing flow of funds. ❖ Inadequacies in data collection and processing have hampered programming and budgeting. ❖ Locally generated revenues (PAD) continued to contribute a very small portion of revenues of both the provincial and local governments.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ The country's good economic prospects imply an expanding financial pool for DAU, which in turn means an increasing share, in absolute terms, for NAD. 	<ul style="list-style-type: none"> ❖ Declining oil and gas production means that the revenue from this source will likely decrease. ❖ The Province has the fourth highest poverty incidence in Indonesia, with poverty alleviation eating resources that could be allocated for regional development. ❖ Striking structural deficiencies plague public services.

b) Medium-Term Objectives and Strategies

As presented in an earlier section, the medium term objectives are as follows:

- Maintain government expenditure at a level that will render it an effective agent of economic development.
- Improve efficiencies in the use of public funds and, as a consequence, increase yearly allocations for spending in development.

The objectives imply that the NAD's provincial and local governments will adopt an interventionist stance toward the regional and local economies. The justification is that government spending is foreseen as the only definite source of expansionary impetus for the economy as household consumption, investment, and export tries to regain their respective footings. Government expenditure is thus expected to stimulate growths in the other components of the provincial and local economies. Within the time horizon of the Agenda, it is expected that, even if government expenditure is maintained or even increased, its contribution to the regional and local economies will gradually decrease as households and the private sector take over.

The objectives will be pursued through the implementation of the following medium-term strategies:

- **Increase locally generated revenues (*Pendapatan Asli Daerah* or *PAD*).** During the medium-term, it is proposed that a target of increasing PAD's contribution to total provincial and local government revenues be increased by one percentage point every year. The focus will be on maximizing collection from existing revenue sources as well as identifying and exploiting potential revenue sources. Utmost care should be however be exercised to ensure that PAD maximization does not become a disincentive to household and private-sector activities, which implies that the local taxes and fees is truly progressive and if there are prima facie indications that certain revenue sources will deter household and private-sector expansion, then their exploitation should not be pursued. Even amid increasing receipts from central-government transfers and thus the relatively low regard that may be attributed to PAD, the enhancement of this group of revenue sources is still deemed important as a general indicator of economic well-being in the Province and in its constituent cities and municipalities.
- **Provide a strategic orientation to government expenditure.** The strategic orientation will be required so that government expenditure truly become an economic development stimulus. The interventions proposed for Household Consumption, such as the CCT, are by nature already a stimulus for economic growth. In addition, however, the strategy would mean, at the first instance, controlling routine expenses and increasing allocations to development spending. It also means prioritizing allocations for certain expenditure items that will have the most positive impact on economic development, especially for sectors and geographical areas where funding gaps have been identified. Trade-offs may however be expected as the government exercises its choice between short-term expansion and long-term sustainability.
- **Improve budget realization.** This, in essence, is intended to improve the efficiency and effectiveness of revenue and expenditure administration. One area that needs looking into is the basis by which programs and budgets are prepared, ensuring that correct and up-to-date and properly processed data and information form such basis. Another area is the possibility of streamlining the mechanisms involved in the processes. Finally, there is also the issue of accommodating the needs and aspirations of the broadest spectrum of development stakeholders at various levels, local, provincial, and national.

c) Medium-Term Investment Programs

The foregoing strategies are at the same time designated as the components of the proposed medium-term investment program, as follows:

1. *Expansion of Locally Generated Revenues (*Pendapatan Asli Daerah* or *PAD*)*
 - **Formulate and Implement Revenue Improvement Action Plan (RIAP) for the Provincial Government.** RIAP is far from a novel concept; along with the Local Institutional Development Action Plan (LIDAP) it first came up as an integral component of the prescribed medium-term investment program to be prepared under the IUIDP (integrated urban infrastructure development) program that the Indonesian government adopted in the mid-1980s. Even so, RIAP formulation and implementation is still deemed applicable, especially for NAD and its local governments where PAD constitutes a very small portion of total government revenues. At its most basic, RIAP covers the maximization of revenues from existing sources as well identification and exploitation of new sources that are allowed under existing laws and regulations. Maximization includes, among others,

tariff adjustments, improvement of collection coverage and efficiency, improvement in other aspects of revenue administration.

- **Formulate and Implement RIAP for Each Local Government.** RIAP formulation and implementation will be replicated in each of the local government, making use of the lessons learned in undertaking the exercise at the provincial level. Basically, the same methodologies will be used, with some modifications to account for differences in revenue sources based on the regional autonomy law and the Law on Governance of Aceh.

2. Strategic Orientation of Government Expenditure

- **Provide Benchmarks for Various Expenditure Items.** Limits may have to be established, especially for routine expenditure items so that these do not consume un-proportionately large portions of the budget relative to allocations for development. Limits will likewise be needed for allocations for government apparatus as these are basically internally oriented and therefore have virtually no effect on the economy (except boosting consumption) even if under the present budgeting format they are classified as spending for development. Incentives for local governments to observe the benchmarks are proposed to be established, perhaps in the form of counterpart funding for specific projects and/or block grants from the provincial government to concerned local governments.
- **Establish Priority Sectors and Geographic Areas.** This will require a series of coordination meetings and public hearings to determine the needs and aspirations of the local population and, thereafter, harmonize conflicts and discrepancies among them. Once priorities are established, commitment of support to the priorities will then have to be sought from among the stakeholders, especially those that have access or are in control of resources needed to realize those priorities. The ideal would be to formulate a regional development plan that reflect those priorities, as well as the roles and responsibilities of each concerned party, and is accepted by the various stakeholders. A strategic reallocation of funds already earmarked for specific activities/projects may be triggered by the said regional development plan as, at present, it has been determined that in some critical areas and geographic locations funds already programmed by the central government and the various donors will not meet even the minimum needs. There are indications, for instance, that allocations for transport development are grossly inadequate, and so are those for the municipalities of Aceh Barat Daya, Aceh Selatan, Aceh Timur, Aceh Tamiang, and Nias.
- **Formulate and Implement Improved Coordination Mechanism among Major Regional Players.** Among the more significant players in regional development are the provincial and local governments of NAD Province, the Rehabilitation and Reconstruction Agency (Badan Rehabilitasi dan Rekonstruksi or BRR), and the Aceh Reintegration Agency (Badan Reintegrasi Aceh or BRA). In addition, central government ministries through their respective DIPAs (Daftar Isian Penggunaan Anggaran or development budget allocation) continue to play a significant role in specific sectors, such as health and education. Likewise, donors often pursue their own programs based on priorities set by their sponsors. An instrument that is hoped to prove useful in this regard is a regional development plan that serves as a common 'menu' for all development players. In addition, procedures need to be developed, and thereafter agreed and adhered to by all players, for medium-term programming, annual budgeting, implementation, and monitoring and evaluation.

3. Improvement of Budget Realization

- **Improve Public-Sector Programming and Budgeting Processes.** The non-realization of provincial and local government budgets is in most cases traceable to delayed approvals, which then leave inadequate time for budget

implementation. Another cause is the delay in the receipt of central-government transfers, but this is an area that is largely beyond the control of the provincial and local governments. The processes and schedules for budget preparation and approval, as well as the roles and responsibilities of the executive and legislative branches of government, are already clearly spelled out in laws and regulations. What could be needed is simply a commitment from all concerned to abide by such processes and schedules. At the same time, it would be necessary to actually observe and evaluate how the provincial and local governments actually prepares and approves their respective budgets and streamline the processes that are applied.

- **Strengthen the Capacity of Programming and Budgeting Personnel.** Especially at the local government level, delays in budget approval and implementation is said to be caused also by the inadequate capacities of budget-formulation and budget-implementation personnel. In tandem with the streamlining of budget preparation processes, an evaluation of the capacities of the aforementioned personnel will be evaluated and on the basis of the results of the evaluation results, a capacity building program will be prepared and implemented.
- **Establish and Develop a Programming and Budgeting Database.** A multitude of studies have been conducted on the entire Province and constituent cities and municipalities. The aim here is not so much to establish a central repository of all data and information for NAD, but to integrate those that are essential for more efficient programming and budgeting. Links may however be established with other databases to complement and enrich the contents of the programming and budgeting database. This will entail an identification of data and information requirements, an inventory of what is available and what needs to be made available, design of the database and database-administration protocols, formulation of specifications and procurement of hardware and software, and data entry.

d) Indicative Implementation Schedule

An indicative implementation schedule for each investment package and activity is presented in **Table 1.53**.

Table 1.53 Indicative Implementation Schedule of Locally Generated Revenue Improvement

NO	ACTIVITY	2008	2009	2010	2011	2012
1	EXPANSION OF LOCALLY GENERATED REVENUES (PENDAPATAN ASLI DAERAH OR PAD)					
1.1	Formulate and Implement Revenue Improvement Action Plan (RIAP) for the Provincial Government					
1.1.1	Conduct an inventory of existing revenue sources.	—				
1.1.2	Evaluate the potential of each source and compare potential with actual collection.	—				
1.1.3	Review relevant laws and regulations and identify and assess untapped revenue sources.	—				
1.1.4	Formulate action plans for maximizing existing revenue sources and exploiting untapped sources.	.....	.....	.....	.....	.....
1.1.5	Prepare draft legal bases for implementing the action plans.	.....	.....	.....	.....	.....
1.1.6	Analyze the impact of the action plans on, among others, poverty, investment, and the like.	.....	.....	.....	.....	.....

NO	ACTIVITY	2008	2009	2010	2011	2012
1.1.7	Prepare annual RIAP work, income, and expenditure budgets.	—	—	—	—	
1.1.8	Implement the action plans.		—	—	—	—
1.1.9	Monitor and evaluate the implementation.		.....	.....	.....	.....
1.2	Formulate and Implement RIAP for Each Local Government	—	—	—	—	—
1.2.1	Conduct an inventory of existing revenue sources.	—				
1.2.2	Evaluate the potential of each source and compare potential with actual collection.	—				
1.2.3	Review relevant laws and regulations and identify and assess untapped revenue sources.	—				
1.2.4	Formulate action plans for maximizing existing revenue sources and exploiting untapped source.	.....	.....	.....	.....	.....
1.2.5	Prepare draft legal bases for implementing the action plans.	.....	.....	.....	.....	.....
1.2.6	Analyze the impact of the action plans on, among others, poverty, investment, and the like.	.....	.....	.....	.....	.....
1.2.7	Prepare annual RIAP work, income, and expenditure budgets.	—	—	—	—	
1.2.8	Implement the action plans.		—	—	—	—
1.2.9	Monitor and evaluate the implementation.		.....	.....	.....	.....
2	STRATEGIC ORIENTATION OF GOVERNMENT EXPENDITURE					
2.1	Provide Benchmarks for Various Expenditure Items	—	.....	.....	.....	.....
2.1.1	Develop the draft benchmarks and identify measures by which they may be met.	—				
2.1.2	Gather feedback from concerned parties and finalize the benchmarks.	—				
2.1.3	Establish the incentive framework for implementing the benchmarks.	—				
2.1.4	Orient concerned parties.	—				
2.1.5	Implement and monitor compliance.		.....	.....	.....	.....
2.1.6	Administer the incentive framework.		.....	.....	.....	.....
2.2	Establish Priority Sectors and Geographic Areas	—	—	—	—	—
2.2.1	Prepare draft sectoral and geographic priorities as well as financing plans for specific projects/activities.	—				
2.2.2	Conduct public hearings.	—				
2.2.3	Finalize the priorities.	—	—	—	—	—
2.2.4	Secure commitments from funding sources.	—	—	—	—	—
2.2.5	Synchronize project/activity start-ups.	—	—	—	—	—
2.3	Formulate and Implement Improved Coordination Mechanism among Major Regional Players	—	.....	.....	.....	.....
2.3.1	Develop improved procedures for coordinating planning, programming, budgeting, implementation, and progress monitoring, reporting, and evaluation.	—				
2.3.2	Establish the institutional arrangement for improved coordination.	—				
2.3.3	Implement and monitor the application of the improved coordination mechanism.	.....	.....	.....	.....	.....
2.3.4	Introduce refinements to the mechanism.	.....	.....	.....	.....	.....
3	IMPROVEMENT OF BUDGET REALIZATION					
3.1	Improve Public-Sector Programming and Budgeting Processes	—	—	—	—	—
3.1.1	Observe actual programming and budgeting processes at provincial and local government levels.	.....	.....	.....	.....	.....

NO	ACTIVITY	2008	2009	2010	2011	2012
3.1.2	Identify problems and bottlenecks in the actual processes.	.....			
3.1.3	Develop streamlined processes.	—				
3.1.4	Orient concerned personnel from both the legislative and executive branches on the application of the streamlined processes.		—			
3.1.5	Provide technical assistance in the actual application of the streamlined processes.		—			
3.2	Strengthen the Capacity of Programming and Budgeting Personnel	—	—	—		
3.2.1	Identify the knowledge and skills requirements of efficient and effective programming and budgeting.	—				
3.2.2	Evaluate the competencies of existing programming and budgeting personnel.	—				
3.2.3	Identify knowledge and skills gaps.	—				
3.2.4	Prepare a human resource capacity building program (personnel transactions, training and development, rewards and sanctions).		—			
3.2.5	Implement the capacity building program.		—	—		
3.3	Establish and Develop a Programming and Budgeting Database	—	—	.....	.....	.....
3.3.1	Determine data and information requirements.	—				
3.3.2	Conduct an inventory of available and missing data and information.	—				
3.3.3	Prepare a plan for acquiring missing data and information.	—				
3.3.5	Design the database and the database management system and administration protocols.	—				
3.3.6	Design the institutional arrangement for database management.	—				
3.3.7	Establish the software and hardware configurations.	—				
3.3.8	Procure and install the necessary software and hardware.		—			
3.3.9	Enter the data.		—	—		
3.3.10	Monitor and improve the database performance.			.....	.....	.....

1.7.3 Export and Import

a) Potentials and Constraints

Exports steadily grew, except for a slight dip of 8.3% in 2003. Imports, on the other hand, were erratic, fluctuating at wide amplitudes of negative 80.2% and 65.3% respectively in 2002 and 2005 and positive 116.1% and 2.8% respectively in 2003 and 2004. Exports thus expanded at a yearly average of 41.9% while imports contracted by a yearly average of 6.6%. Trade balance increased by an average of 54.1%.

By proportion, 99.8% of the exports in 2005 were oil-and-gas related. The benefits of these exports did not really accrue to the local population (except for a few that are employed in oil-and-gas extraction and related industries) as most of these were actually brought in from out of the Province. Discounting earnings from these products, the Province would have experienced a trade deficit of US\$ 14.3 million in 2005 even as imports went down by 65.3% from the level reached in 2004.

Excluding earnings from mineral fuel and mineral oil products, from January to August 2006, the region's export had registered a substantial decrease of 76.5% to US\$ 9.8 million as opposed to the US\$ 41.8 million registered during the same period in 2005.

Imports, on the hand, surged by 120.7% to US\$ 18.5 million from US\$ 8.4 million during the same period in 2005. Thus, for the first eight months of 2006, the region experienced a foreign trade deficit of US\$ 8.6 million.

For the first nine months of 2006, the biggest export earning was derived from chemicals, with a share of 40.1%. This was followed by food and live animals with a share of 36.6%. Likewise, a significant contribution of 22.7% came from machinery and transport equipment. On the other hand, manufactured goods accounted for the bulk of imports with a share of 47.4%, followed by food and live animals with a share of 23.8%, and machinery and transport equipment with a share of 21.4%.

By destination, 93.0% of the region's 2005 exports went to just two countries: South Korea and Japan which respectively account for 69.4% and 23.6% of total export value. During the same year, only six countries had export to the region that exceeded US\$ 1 million: Thailand, Switzerland, Malaysia, USA, France, and Singapore. Combined, the exports of these countries accounted for 92.3% of the region's total imports.

Table 1.54 SWOT Analysis of Exports and Imports

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Trading with foreign countries is well ingrained in local tradition as substantiated by the Province's history. ❖ The Province is rich in natural resources on which to build a strong exports base. ❖ There has always been a demand for commodities produced in the Province such as coffee and rubber. 	<ul style="list-style-type: none"> ❖ Regional exports had been almost totally dependent on oil and gas. ❖ There was practically no effort in the past to diversify the regional exports base. ❖ Oil and gas reserves are dwindling with total exhaustion imminent unless new proven reserves are discovered. ❖ There has also been no effort to diversify export markets with strong potential for buyers to exert pressure on sellers. ❖ There is inadequate infrastructure to support the development of a strong exports base. ❖ The Province lags behind in export competitiveness compared to other Indonesian Provinces and relative to neighboring countries. ❖ Like the entire regional economy, the Province's imports are heavily skewed in favor of consumption rather than investment.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Geographically, the Province has relatively easier access to China and India, two of the world's fastest growing economies. ❖ World prices of commodities have in recent years been on the rise. ❖ World sympathy may be reoriented from humanitarian assistance to trade relationship. 	<ul style="list-style-type: none"> ❖ Competition, especially during the next few years, is foreseen to become fiercer as world economic growth slows down. ❖ Export-driven Indonesian Provinces and neighboring countries will react to any sign of competition posed by NAD's products.

b) Medium-Term Objectives and Strategies

As enumerated in an earlier section, the medium-term objectives for regional external trade are as follows:

- Exports, excluding oil and gas, will achieve parity with imports within five years and, thereafter, post yearly surpluses.
- The negative terms of trade with other Indonesian Provinces, excluding oil and gas, will be reversed within the next five years.

In essence, what objectives imply is not so much that imports continue to shrink. They rather mean that exports, excluding oil and gas and their derivatives, continue to increase at a much faster pace. They also imply a change in the structure of imports from being destined for consumption toward the purchase of capital goods and technology intended to boost the region's production capacity and productivity. The latter restructuring is expected to occur as a natural consequence of the rising capacity of local products to compete with imported ones and thus satisfy local demand and penetrate external markets both within and outside the country.

The strategies for accomplishing the foregoing objectives are as follows:

- **Promote import substitution.** The strategy is deemed necessary in view of the chronic trade deficits in non-oil-and-gas terms of overseas as well as inter-provincial trade. The money spent to finance these deficits could very well have been retained within the region to fuel economic expansion had there been enough production capacity to satisfy local demand for goods and services. Furthermore, a cursory analysis reveals that the imported goods and services accounting for much of the deficits do not really require very sophisticated production and distribution technologies and could have therefore been quite easily produced within the Province. Import substitution will not be accomplished through import restrictions, but rather through the promotion of locally made products to local consumers, perhaps with some appeal on regional pride, and the continuous improvement of the quality of locally made products and services.
- **Support the development of a strong export base independent of oil and gas.** The actual development of export products and services is assumed to be undertaken by the concerned economic sectors supported by relevant sectoral/line government agencies, for example agriculture for agricultural exports. The interventions proposed here is basically to support such development in various economic sectors.

Pursue export-market diversification. As mentioned, the Province's export products go to a very limited number of destinations. Especially for non-oil and gas, the reason is basically that the Province has very limited export products to start with. Exportable products are hoped to developed as part of the preceding strategy to be completed by export-market diversification to find viable outlets for the Province's expanding range of exportable products and services.

c) Medium-Term Investment Program

The foregoing strategies constitute the components of the proposed medium-term investment program:

1. Promotion of Import Substitution

- **Verify Local Production and Distribution Capacities.** The verification process is necessary to ensure that there is indeed enough local supply to satisfy local demand and thus lend the much needed credibility to the promotion of local products. The verification process may prove to be a protracted exercise as the local production capacities are rehabilitated or improved. This will consist of desk analysis of data from agencies responsible for the different economic sectors as well as field visits for physical confirmation. In the process, production and distribution bottlenecks may be identified and brought to the attention of relevant parties, including concerned government agencies and community and private-sector groups.
- **Launch Public Information Campaign.** As mentioned, this campaign will focus on promoting locally made/raised products. Care should however be exercised so as not to offend the sensibilities of importers as well as producers in other Provinces. The campaign should also be launched after a thorough verification of the availability of adequate supply from local producers. The component will entail the conceptualization of a campaign theme, production of appropriate communication materials, monitoring of results.
- **Facilitate Regular Consultations among Local Producers and Traders.** The consultations are intended to create enduring relationships among local producers and sellers. During the consultations, it is hoped that supply-purchase contracts will be negotiated and perhaps finalized. It is likewise hoped that problems encountered by these groups are identified and referred to appropriate bodies for eventual solution.

2. Development of a Strong Export Base Independent of Oil and Gas

- **Organize an Export Promotion Council.** The council is a marketing grouping of individuals of various backgrounds who care for the development of the Province's exports. It will thus be composed of representatives of the provincial and local governments, private-sector groups, the academe, and the community at large.
- **Identify Products with Export Potentials.** One of the first tasks of the Export Promotion Council is to identify local products that have strong export potential. This will be done primarily through research and consultations with knowledgeable parties.
- **Disseminate Export Quality Standards.** This will have the nature of public information campaign, but will have as targets producers whose products have been identified as having strong export potential. Part of this activity will also be enforcement of those standards, basically through moral suasion, among exporters.

3. Diversification of Export Markets

- **Conduct Market Research Studies.** The scope of the research may be defined by the products that have been identified as having export potential and subsequently articulated by the Export Promotion Council. Alternatively, the research may also be focused on existing needs/demands in overseas markets that are geographically accessible to NAD, which can potentially be met by local producers. One of the essential outputs of the studies would be clear mechanisms for penetrating certain overseas markets, including list of potential buyers, order receipt and shipment procedures, quality and safety standards, and the like. It is likely that market research will be a recurring activity, depending on the number of export markets the Province intends to penetrate.
- **Launch Export Promotion.** This will entail the formulation of a coherent marketing strategy, including perhaps and NAD brand image, and subsequently

the implementation of various marketing activities, such as participation in national and international product exhibitions/expositions. Possible agents for export promotion are the various donor agencies as well as foreign governments that are now actively involved in rehabilitation and reconstruction. For this reason, some seats in the Export Promotion Council may be reserved for their representatives.

d) Indicative Implementation Schedule

Table 1.55 Indicative Implementation Schedule of Export and Import Development

NO	ACTIVITY	2008	2009	2010	2011	2012
1	PROMOTION OF IMPORT SUBSTITUTION					
1.1	Verify Local Production and Distribution Capacities	.....	.....	.....	.....	.....
1.1.1	Gather data from concerned government agencies and private-sector groups	.....	.....	.....	.....	.....
1.1.2	Conduct field verification of production and distribution data and information	.....	.....	.....	.....	.....
1.1.3	Analyze and publicize production and distribution capacities as well as bottlenecks	.....	.....	.....	.....	.....
1.1.4	Recommend appropriate actions for solving bottlenecks	.....	.....	.....	.....	.....
1.1.5	Refer problems to appropriate government agencies and/or private-sector groups	.....	.....	.....	.....	.....
1.2	Launch Public Information Campaign		=====	.....	.....	.....
1.2.1	Conceptualize the campaign		=====			
1.2.2	Produce communication materials		=====			
1.2.3	Launch the campaign			.....	.....	.....
1.2.4	Monitor the campaigns results and impact			.....	.....	.....
1.2.5	Make necessary modifications			.....	.....	.....
1.3	Facilitate Consultations among Local Producers and Traders		=====	.....	.....	.....
1.3.1	Establish a forum		=====			
1.3.2	Convene consultation meetings			.....	.....	.....
1.3.3	Identify problems/bottlenecks			.....	.....	.....
1.3.4	Assist in solving problems/bottlenecks			.....	.....	.....
2	DEVELOPMENT OF A STRONG EXPORT BASE INDEPENDENT OF OIL AND GAS					
2.1	Organize an Export Promotion Council		=====	=====	=====	=====
2.1.1	Define the mission and vision of, as well as key results expected from, the council		=====			
2.1.2	Design the council's organization structure and working mechanisms		=====			
2.1.3	Invite and mobilize the council members			=====		
2.1.4	Provide financial and administrative support to the council			=====	=====	=====
2.2	Identify Products with Export Potentials			=====	=====	=====
2.2.1	Conduct consultation meetings with concerned parties at national, provincial, and local levels			=====		
2.2.2	Identify potential export products			=====		
2.2.3	Verify local production capacities			.....	.....	.....
2.2.4	Identify the support required by local producers/exporters			.....	.....	.....
2.2.5	Provide technical assistance for product development support			.....	.....	.....
2.3	Disseminate Export Quality Standards			=====	=====	=====
2.3.1	Constitute a panel of quality-control/assurance experts			=====		
2.3.2	Prescribe quality standards for each export product				.....	.....
2.3.3	Monitor and ensure compliance with prescribed quality standards				.....	.....

Table 1.56 SWOT Analysis of Inflation

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Activities related to rehabilitation and reconstruction will continue to prop up the local population's income and purchasing power in spite of a very high rate of inflation. ❖ The prevailing high rate of inflation is primarily caused by temporary disruptions in local production and distribution capacities and should therefore ease up once these capacities are restored and upgraded. 	<ul style="list-style-type: none"> ❖ Prices of factors of production may remain at their high levels even after the completion of the rehabilitation and reconstruction activities. ❖ The local economy is now seemingly caught in a vicious cycle, wherein high inflation discourages productive activities that could potentially bring it down by easing up constraints on the supply side.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ National inflation is on a declining trend, and should moderate local inflation as the local economy becomes more and more integrated with the national economy. ❖ Cheaper alternative sources of products and services, including those from overseas, will be available as the local economy becomes more and more global in outlook and reach. 	<ul style="list-style-type: none"> ❖ The same national and global linkages that bring opportunities will render the local economy vulnerable to external inflationary influences.

b) Medium-Term Objective and Strategies

The medium-term objective is to achieve price stability, and thus contain inflation at a level that will remain viable for sustained growth of the various components of the local economy. In terms of the strategies that will be used, however, the preceding statement may appear misleading as none of the strategies that follow is meant directly to control price increases. The main instrument for managing inflation is of course monetary policy: the setting of money supply as well as interest rate. While under the Helsinki Agreement NAD Province is supposed to enjoy a certain level of autonomy in formulating monetary policies, the details of how this will be implemented still remain to be clearly defined. Monetary policy as an inflation-management instrument has therefore not been included in the proposed strategies. Furthermore, the elimination of supply constraints, especially of basic commodities such as food, that actually push prices upward are assumed to be addressed by the respective economic sectors.

As a consequence, the proposed strategies are not so much meant to manage inflation but rather to cushion its adverse impact, especially on the most vulnerable segments of the local population. As such, they are of very limited scope and reactive in nature. They are very much related to, and should therefore be considered and implemented in conjunction with, the strategies pertaining to Household Consumption.

The strategies are as follows:

- **Monitor prices and consumption patterns.** The purpose is basically to understand their impact on living standards and provide the basis for undertaking measures that will somehow lessen the adverse impact on the most vulnerable groups.
- **Implement indexation of the proposed Conditional Cash Transfer (CCT) mechanism.** This will mean the adjustment in the nominal amount of the CCT based on inflation, so that the beneficiaries' consumption of basic goods (food primarily) and services (health and education) is maintained at a pre-determined desired minimum level both in quantitative and qualitative terms. The indexation will thus rely on the information made available by the preceding strategy. A complication that needs to be anticipated in implementing this strategy is the spike in prices after the budget, and

thus the allocation for the CCT has been set as what happened when the national government drastically reduced subsidies for petroleum-based fuel in October 2005.

c) Medium-Term Investment Program

The medium-term investment program consists of only two packages corresponding to the proposed strategies, as follows:

1. *Monitoring of Prices and Consumption Patterns*

Prices and consumption patterns are being monitored by Bank Indonesia and the Central Statistics Agency. A more in-depth and focused monitoring will however be required to achieve the objective of the strategy of providing the basis for implementing measures that will cushion the effects of inflation on the poor. In any case, the implementation of the strategy may be undertaken as a collaborative effort, with the data coming from the aforementioned agencies forming as the initial basis for defining the scope of the monitoring effort proposed here.

2. *Indexation of the Conditional Cash Transfer (CCT)*

As mentioned, indexation will entail the adjustment of the nominal amounts of the CCT based on the monitored increase in prices of goods and services that constitute the bulk of the poor families' expenses. The adjustment will be based on anticipated deterioration in consumption, and thus living standards, as a result of the rise in prices. Guidelines will have to be established and publicized to make the indexation as transparent as possible, especially for the target beneficiaries.

d) Indicative Implementation Schedule of Inflation Impact Control

Table 1.57 Indicative Implementation Schedule of Inflation Impact Control

NO	ACTIVITY	2008	2009	2010	2011	2012
1	MONITORING OF PRICES AND CONSUMPTION PATTERNS	————	.....	.....	.....	.....
1.1	Hold discussions with Bank Indonesia and the Central Statistics Agency	—				
1.2	Design the monitoring scope and methodology	——				
1.3	Establish the institutional arrangement	——				
1.4	Conduct the monitoring		.....	.....	.....	.....
1.5	Publicize the monitoring results		.....	.....	.....	.....
2	INDEXATION OF THE CONDITIONAL CASH TRANSFER (CCT)			————	.....	.....
2.1	Analyze the initial outputs of the monitoring of prices and consumption patterns			—		
2.2	Develop guidelines and procedures for indexation			—		
2.3	Conduct public hearings on the guidelines and procedures			——		
2.4	Finalize the guidelines and procedures			——		
2.5	Implement the indexation along with the distribution of the CCT				.....	.....
2.6	Monitor and improve the implementation				.....	.....

1.8 Technology

a) Potentials and Constraints

A piece of technology is a helping aid that is created and applied in such a way to assist in various human activities to achieve the results that are good, clean, and economical in terms of cost and time. Technology has been part of daily activities in NAD Province, such as use of home technology, electrical energy, transportation, cultivation, information-telecommunication, medication, etc.

The technology that is presently used in NAD Province is not different from that which is used in other Province, like Jakarta especially in the use of information and telecommunication technology. Likewise, the technology that is used for oil and natural gas exploration is not different from that which is used in Kuwait or the United States. However, the appropriate technology that is used for agricultural commodity cultivation is less adequate.

Processing of various agricultural commodities (food crop) and plantation such as rice, soybean, corn, cacao, coffee, rubber, copra, except palm oil, still uses the simple post-harvest technology such as peeling, ripening and drying. The simple post-harvest technology used for treating these commodities causes low value-addition, while other Province that is ready with a more advanced technology can obtain bigger value-addition from the commodities produced by NAD.

Development of information technology is aimed at various technology-based activities, which used to be made conventionally. The existing information technology all activities are possible to be made virtually. The other technology that is presently being applied in NAD Province is the one that is related to the early warning system of natural disaster.

Table 1.58 SWOT Analysis of Technology

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ The technology used in oil and natural gas exploration is equivalent to that which is used in the oil-producing countries. ❖ Experienced in using the high technology in industries of pulp, fertilizer and cement. ❖ Communication and office technology. ❖ Medium technology in coffee packing. ❖ Tsunami-early-warning technology. 	<ul style="list-style-type: none"> ❖ Post-harvest technology including fishery technology is less adequate. ❖ Technology operators are still taken from other Province. ❖ Less strong engineering education both at higher education and poly-technique.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Medium technology for agricultural and fishery commodity manufacturing. ❖ Development of engineering education related to the supports of post-harvest and manufacturing technology. 	<ul style="list-style-type: none"> ❖ High technology is used only for consumptive needs rather than productive needs. ❖ Dependency on licensed technology.

Based on the SWOT analysis above, the existing potentials and possible constraints could be summarized as follows:

- ❖ The technology used varies from the most simple to the sophisticated one.

- ❖ Low and medium technologies are still used in agricultural sector, while the sophisticated ones are used in oil and gas exploration, offices and information-telecommunication, including the tsunami early warning system.
- ❖ Engineering education is weak (either in institutes or higher education).

b) Strategies

Referring to the existing potentials and possible constraints, the following strategies and action plans are formulated:

- ❖ To develop the appropriate agricultural technology.
- ❖ To develop the low-cost-but-environment-friendly technology and alternative technology especially for manufacturing the agricultural commodities.
- ❖ Development or quality improvement of schools and technology institutes in NAD.

c) Action Plans

1. Develop the use of appropriate technology for manufacturing the agricultural, plantation, livestock and fishery commodities.
2. Develop the the low-cost-but-environment-friendly technology either for post-harvest manufacturing or alternative/applied technology.
3. Develop and strengthen engineering school and engineering higher education in the centers of growth in NAD.

d) Implementation Schedule

The implementation schedule of above activities is presented in **Table 1.59** below:

Table 1.59 Implementation Schedule of Technological Development

No	Activity	2008	2009	2010	2011	2012
1	Develop the use of appropriate technology for manufacturing the agricultural, plantation, livestock and fishery commodities					
2	Develop the the low-cost-but-environment-friendly technology either for post-harvest manufacturing or alternative/applied technology					
3	Develop and strengthen engineering school and engineering higher education in the centers of growth in NAD					

1.9 Human Resources development

a) Potentials and Constraints

In terms of school graduates, the number of people graduating from SD (elementary school) is accounted for 29.5%; SLTP (junior secondary school) 19.1%, SLTA (high school) 17.3% and higher education 3.6%. These percentages indicate that the quality of human resources of NAD needs to be improved, at least to high school level.

Based on its administrative area, the districts/cities that have become economic locomotive in NAD indicating graduated higher level of education are Banda Aceh, Bireuen, Pidie, Aceh Besar and Lhokseumawe.

According to 2005 SPAN census, people of 15+ based on their one-week activities are reported as the following categories: workers (53%), job-seekers (7%), jobless or available to be employed (5%), and school-attendants or housekeepers (34%).

More than 70% of the population of the Districts of Bener Meriah Gayo Lues, Bireuen and Central Aceh are employed (worker-status); the highest number (more than 74%) of people of 15+ who have worker-status are in the District of Bener Meriah, while the lowest percentage (27%) are in the District of Pidie.

Table 1.60 SWOT Analysis of Human Resources Development

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Higher education level in cities that become economic locomotive. ❖ More than 20% of the population has high and higher education. ❖ Human resource use in agricultural areas is high. 	<ul style="list-style-type: none"> ❖ Agricultural sector has a high level of human resource use but its quality is low. ❖ The percentage of high school and junior secondary school graduate is relatively higher (32.23%) causing community's low skill. ❖ A few credit schemes that give accesses to informal sector and post-skill training participants to have access to capitalization.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Improvement of school graduates of NAD people (men and women). ❖ Development of vocational education for agricultural cultivation, industry and services. ❖ Potentials of appropriate technology that have not been fully developed for creating job opportunities. 	<ul style="list-style-type: none"> ❖ There are too many types of general education; vocational education is less developed. ❖ Many businesses stop their operation as a result of tsunami. ❖ Limited instructors in BLK and LLK-UKM.

Referring to the SWOT analysis above, the existing potentials and constraints could be summarized as follows:

Potentials

- ❖ Most of the Province's human resources, as the general condition in Indonesia, are employed in agricultural, livestock, plantation, forestry, and fishery-marine sectors.
- ❖ The agricultural sector is the most accommodative in terms of manpower potentials, although its productivity is still low.

Constraints

- ❖ In terms of education level of the human resources, 20% of the population is high school and higher education graduates.
- ❖ Many people lost their livelihoods in various sectors as a result of earthquake and tsunami – tending to increase the number of unemployment.

b) Strategies

Referring to the existing potentials and constraints, the following strategies and action plans are formulated:

- ❖ Development of agricultural human resources.
- ❖ Development of vocational education.
- ❖ Development of *pesantren* of applied technology.
- ❖ Expansion and development of free-guarantee credit scheme for job seekers particularly those who have already joined the skill trainings.
- ❖ Job opportunity expansion through Appropriate Technology Application and *Wira Usaha Baru* (Newly Established Business).

c) Action Plans

1. Improve the Agricultural Human Resource Capacity, considering that the agricultural potential is big:
 - Food agricultural human resources
 - Plantation human resources which are quality-organic oriented.
 - Livestock human resources
 - Fishery-marine human resources, particularly for management of coastal-pond fish and live catch-fish.
2. Develop the vocational education to improve the human resources quality in manufacturing the existing commodities and also to prepare for supporting the industrial development.
3. Develop the pesantren applied technology, which is related to agricultural and non-agricultural cultivation using applied information technology.

d) Indicative Implementation Schedule

The implementation of the above activities is presented in **Table 1.61** below.

Table 1.61 Implementation Schedule of Human Resources Development

No	Activity	2008	2009	2010	2011	2012
1	Improve the Agricultural Human Resource Capacity					
2	Develop the vocational education to improve the human resources quality					
3	<i>Develop the pesantren applied technology</i>					

2 Spatial Development

2.1 Geography: Regional-Context Area Development

a) Potential and Constraints

NAD Province lies between Malacca Strait and Indian Ocean which is very strategic from an economic, political and geographical viewpoint. The Malacca Strait is a shipping lane connecting the western world (India, Africa & Europe) and the eastern world (south east Asian countries, China, Japan) and Australia. So, it is the busiest international trading sea route in south east Asia.

Geographically, the Province lies on 2°-6° North Latitude and 95°-98° East Longitude. Its neighbors are India, Myanmar, Thailand and Malaysia. In the east part, it borders, by both sea and land the Province of North Sumatra. NAD Province has a total area of 57,365.57 Km², consisting of protected forest area of 26,440.81 Km², cultivation forest of 30,924.76 Km² and Leuser Mountain ecosystem of 17,900 Km² with its highest top of 4,446 m above sea level, and an Exclusive Economic Zone of 534,520 km². NAD Province owns a total of 119 islands, 73 big rivers and 2 lakes.

The division of administrative area of the Province has undergone a lot of changes. Presently, it consists of 4 municipal governments and 17 district governments, 228 Sub-District governments, 629 *mukim*, and 5947 village governments. The Central DPR (House of Representatives) on 8 December 2006 already agreed to the Draft Law on establishment of 2 additional districts in NAD, that is, the District of Pidie Jaya and the District of Subussalam.

Table 2.1 SWOT Analysis of Geography: Regional-Context Area Development

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ A number of economic development centers are already established, which all have sea accesses. ❖ Fairly large and fertile agricultural land (2.5 people/hectare). ❖ Fairly large forest and maintained ecosystem. ❖ Established new districts that will bring the government service delivery closer to the community. ❖ Close position with the neighboring countries (Malaysia, Singapore, Thailand, India) 	<ul style="list-style-type: none"> ❖ Majority of the Province area are formed of hills where transportation is difficult to cover the remote parts. ❖ Many exports and imports are executed via Medan
External	Opportunity	Threat
	<ul style="list-style-type: none"> ❖ NAD Province lies on the west edge of Indonesia; so, it is potential to be the gate to the country. ❖ Large Exclusive Economic Zone has not been optimally used. 	<ul style="list-style-type: none"> ❖ Located near Java Trench, potential to have earthquake and tsunami. ❖ Investments potential to change the landscape or to cause pollution such as big mining, cement factory, chemical industries, etc. ❖ Illegal fishing by other countries.

Based on the SWOT analysis above, the existing potentials of equalizing the regional development are as follows:

- ❖ IMT-GT (Indonesian-Malaysia-Thailand Growth Triangle) is a form of regional cooperation affecting the western parts of Indonesia. The IMT-GT cooperation involves four countries of North Malaysian Peninsula, five Provinces of South Thailand and two Provinces of West Indonesia, which have become five Provinces since 2001. The benefit that Indonesia wants to obtain from this cooperation is to speed up the economic growth through a various of reductions in, and elimination of, trade and non-trade barriers, to open an opportunity for natural and human resources to benefit from Malaysia's and Thailand's economic advantages, and to improve the reciprocal understanding and harmonious relationship among peoples in the borders of the three countries that will ensure the continuity of sub-regional stability and security.
- ❖ Besides, Law No. 11/2006 on Aceh Administration mentions that Sabang is the Primary Gate to the western part of Indonesia. This is also supported by the establishment of Sabang as a free-trade zone. With regard to the changes that will have an effect upon the regional economic development, endeavors to improve the supporting facilities and infrastructure should, therefore, be made.

b) Strategies

- ❖ To develop the Acehnese people's geographical insight especially the sea dimension.
- ❖ To prepare inventories of the Province's geographic assets.
- ❖ To improve monitoring of land use (including small islands) and utilization of the sea.
- ❖ To improve services of the Sabang International Hub.

With the existence of IMT-GT regional cooperation, the Province is expected to be one of IMT-GT gates. A number of strategies are, therefore, to be made as follows:

- ❖ To establish Lhokseumawe as the gateway of industrial development.
- ❖ To establish West Aceh as the gateway of agricultural development.
- ❖ To establish Banda Aceh as a base for industry and trade.
- ❖ To establish Sabang as the center of tourism.

c) Action Plans

There are four activities to be planned for equalization of regional-context area development within the period of 2008-2012. These four activities are as follows:

1. To develop Acehnese people's geographical insight on NAD Province through the mass media, public discussion, and learning in schools.
2. To prepare inventories of the Province's geographic (sea and land) assets
3. To conduct routine monitoring of the utilization of the Province's geographical assets, in view of the developing investments that are potential to cause geographical changes.
4. To improve the facilities and infrastructure for supporting the distribution of commodities and services in anticipation of NAD Province (Sabang City) to be an International Hub.

d) Indicative Implementation Schedule

The proposed implementation schedule for the above activities is presented in the following table:

Table 2.2 Implementation Schedule of Geography: Regional-Context Area Development

No	Activity	2008	2009	2010	2011	2012
1	To develop Acehese people's geographical insight on NAD Province through in-mass media study, public discussion, and learning in schools.	■	■	■		
2	To prepare inventories of the Province's geographic (sea and land) assets.	■	■	■	■	
3	To conduct routine monitoring of the utilization of the Province's geographical assets, in view of the developing investments that are potential to cause geographical changes.	■	■	■	■	
4	To improve the facilities and infrastructure for supporting the distribution of commodities and services in anticipation of NAD Province (Sabang City) to be an International Hub.	■	■	■	■	■

2.2 Improvement of Geophysical Awareness of Natural Disaster

a) Potential and Constraints

World Crustal Plate Subduction

NAD Province is located above three active crustal plates of Indo-Australia, Eurasia, and Pacific as other islands on the southern ring of Indonesian islands are. With such a location, the Province is susceptible to tectonic earthquake due to both direct subductions and geological fault on Semangko (Bukit Barisan) formation.

Volcanoes

There are a number of volcanoes in the Province such as Mount Pasee with its Geireudong summit (2,595 m), Mount Peut Sagoe (2,708 m), Gayo Mountains with its Bur Ni Telong summit (2,566 m), and Mount Ucap Malu (3,187 m). The others are: Mount Alas with its Abong-abong summit (3,015 m), Mount Leuser (3,466 m), Aceh Raya Mountain with its Seulawah Agam summit (1,762 m), and Seulawah Inong Mountain (868 m). Among these mountains, the active ones are Seulawah Agam, Peut Sagoe and Bur Ni Telong.

Earthquake & Tsunami

The 9-Richter Scale earthquake, with its epicenter 149 km to the south of Meulaboh or 3.3 North Latitude – 95.95 East Longitude at 30km under the sea (News on Earthquake No. 66/NSC/XII/2004, BMG – Center of National Earthquake), caused a tsunami at 07:58:53,4 West Indonesian Time Zone, on 26 December 2004. The tsunami brought disorder to parts of Aceh's coastal area, North Sumatra, West Coast of Malaysian Peninsula, Thailand, East Coast of India, Sri Lanka, and even to the east coast of Africa. Thousands of lives were lost in the Province and buildings damaged as a result of the earthquake and tsunami. Indonesia (Aceh and Sumatra) had the most victims.

Table 2.3 SWOT Analysis of Improvement of Geographic Awareness of Natural Disaster

Internal	Strength	Weakness
	<ul style="list-style-type: none"> ❖ Community's high aware of the danger of earthquake and tsunami ❖ Existence of volcanoes that will provide materials and fertility for the surrounding areas 	<ul style="list-style-type: none"> ❖ Location of Aceh between world's active crustal plates ❖ Most of the buildings not constructed with earthquake-proof standard ❖ Lost mangroves serving as shields of tsunami ❖ No earthquake and tsunami early warning system
External	Opportunity	Threat
	<ul style="list-style-type: none"> ❖ Mangroves replanting and maintenance to protect coasts ❖ Development of natural disaster early warning system ❖ Many donor countries available to assist in improving security from natural disaster 	<ul style="list-style-type: none"> ❖ Earthquake and tsunami may occur again someday ❖ Broken sustainability of community's awareness of natural disaster (tsunami, volcanoes)

Based on the SWOT analysis above, potentials of improving awareness of natural disaster risks could be concluded as follows:

Seismic activity in NAD Province is not an extraordinary occurrence, since this Province is actually located on a seismic boundary. Based on the seismic history compiled by geophysics experts, within the last 30 years there have been 100 earthquakes measuring 5 or more on the Richter Scale. Most epicenters are along the east coast of Aceh. There have been 15 earthquakes under the sea measuring 7 or more on the Richter Scale and 6 with epicenters under the land. All these earthquakes had shallow depth. There have been 27 medium-size earthquakes under the sea to the east of Aceh, and 25 under the land. The majority of the earthquakes had epicenters under the sea around Seumelue Island and Bukit Barisan with a southwest–northeast axis to the Andaman Sea and Myanmar.

The 2004 earthquake was the biggest earthquake that ever occurred in this Province (9.0 scale) with its epicenter located 225 km to the south of Banda Aceh City at 9-10 km depth. The earthquake was then followed by a huge tsunami striking almost all the coastal areas of NAD Province, with the most severe damage from Banda Aceh to the west coast of Sumatra.

Based on the seismic history, it very possible that tsunami will occur in NAD Province. The earthquake occurring along Bukit Barisan will possibly result in landslide and strong tremors. Therefore, earthquake and tsunami should be considered as a significant factor in spatial development planning of NAD Province.

b) Strategies

The medium-term objectives and strategies to improve the awareness of natural disaster risks are as follows:

- ❖ Develop the city and zones that are earthquake-proof
- ❖ Use river channels as city frames
- ❖ Convert and protect the protected forests, urban forest and mangrove forests as a shelter (shield) and a defense against tsunami.
- ❖ Develop and add green belt zones as a defense against natural disaster and as natural conservation
- ❖ Disaster mitigation on the managed cultivation areas

c) Action Plans

There are four activities to be planned for the improvement of natural disaster-risk awareness within the period 2008-2012. They are as follows:

1. Relocate the settlements that are closer (3.5km) to the coastal areas, or that are river borders, to construct the protected zones.
2. Build protection belts for settlements that consist of mangrove forests and urban plantation forests.
3. Tighten the requirements for quality building construction by inserting stipulations of earthquake-proof and tsunami building construction in the IMB (Building Construction Permit) and improve the field monitoring.
4. Procure the equipment for an earthquake-and-tsunami early warning system

d) Indicative Implementation Schedule

The proposed implementation schedule of the above activities is presented in the following table:

Tabel 2.4 Implementation Schedule of Improvement of Geophysical Awareness of Natural Disaster

No	Activity	2008	2009	2010	2011	2012
1	Relocate the settlements that are closer (3.5km) to the coastal areas, or that are river borders, to construct the protected zones	████████████████████				
2	Build protection belts for settlements that consist of mangrove forests and urban plantation forests	████████████████████				
3	Tighten the requirements for quality building construction by inserting stipulations of earthquake-proof and tsunami building construction in the IMB (Building Construction Permit) and improve the field monitoring	████████████████████				
4	Procure the equipment of earthquake-and-tsunami early warning system	████████████████████				

2.3 Development and Management of Geological Resources

a) Potential and Constraints

Rock

Rocks in NAD Province can be categorized as igneous rock and metaphoric rock, sedimentary rock and old volcanic rock, limestone, young volcanic rock and alluvial sediment. They are grouped as follows:

1. Igneous and metaphoric rock group
2. Sedimentary and old volcanic rock group
3. Limestone group
4. Young volcanic rock group
5. Alluvial sediment rock group

Mineral Deposits

NAD Province is rich in varied mining resources such as industrial mining and building construction materials, ores, and energy resources that all have the potential to be developed and used. The classifications of these are as follows:

- Strategic mining materials (Class A)
- Vital mining materials (Class B)
- Others which are not included as Class A and Class B (Class-C mining materials)

The Class-C mining materials that are found in NAD Province are: phosphate rocks, talk, mica, magnesium, ocher, quart sand, gypsum, trass, limestone, dolomite, granite, granodiorite, diorite, andesitic, basalt, quarsit, *serpih*, clay, *felspar* and bentonite. The other types of sand and stones are found in all districts.

Table 2.5 SWOT Analysis of Development and Management of Geological Resources

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ NAD Province is rich in natural resources: minerals, oil, rocks, coal and limestone ❖ Law No. 11/2006 allows the Province to have a big share of mining revenue 	<ul style="list-style-type: none"> ❖ Transportation of mining materials is still a problem; no reliable human resources of mining ❖ Minimum exploration facilities and infrastructure ❖ Limited local regulations governing mining operations
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Detail exploration of mining materials ❖ Less optimum use of mining potentials 	<ul style="list-style-type: none"> ❖ Environmental damage as a result of exploitation ❖ Less strict application of mining regulations (law enforcement)

Based on the SWOT analysis above, the potentials of the mining deposit management and development could be concluded as follows:

Based on the results of geological analysis, NAD Province has a *Semangko* fault stretching from Banda Aceh (in the north) to Lampung (in the south). This fault is estimated to shift around 11 cm per year and is susceptible to earthquake and landslide. On the other hand, such a condition endows the Province with mining deposits (resources) on the surrounding fault.

The possible constraints are the existence of the mining deposits is on the protected zones where it is not possible to explore. Besides, the available technology is not adequate for mining explorations and exploitations.

b) Strategies

The medium-term objectives and strategies of mining deposit management and development are as follows:

- ❖ The development that will convert the function of some parts of cultivation zone should be made using the agreed technical and administrative process and procedures;

- ❖ As long as there is mining, the environmental impact that may occur should be managed properly so as to avoid environmental damage or any threats to life and the community's source of livelihoods;
- ❖ Upon the completion of mining activities, rehabilitation of former mining locations should be carried out in order to restore it to cultivation or its previous use;
- ❖ For Class-C mining on rivers and other cultivation zones, attention should be paid to the river water quality protection, and physical stretch and base of river (for river exploitation), or the environmental quality of the agricultural cultivation zones (for agricultural activities).

c) Action Plans

There are four activities to be planned for the development and management of mining deposits (resources) within the period 2008-2012. They are as follows:

1. Supervision of the mining exploitation. This activity is meant to supervise every mining operation (oil and gas or non-oil and gas) so that it can meet the proper mining process and minimize the possible environmental impacts.
2. Exploration of new oil and natural gas reserves. This activity is meant to search locations possible to have oil and natural gas reserves, either on land or on the Province's Exclusive Economic Zone.
3. Drawing up of Local Government regulations for mining zones. This regulation will govern the areas (locations) permitted for mining operation and requirements of environmental impact mitigation.
4. Law enforcement of mining operation. This activity is meant to create good mining practice.

d) Indicative Implementation Schedule

The proposed implementation schedule of the above activities is presented in the following table:

Table 2.6 Implementation Schedule of Development and Management of Geological Resources

No	Activity	2008	2009	2010	2011	2012
1	Supervision of the mining exploitations	■	■	■	■	■
2	Exploration of new oil and natural gas reserves	■	■	■	■	■
3	Exploration of new oil and natural gas reserves	■	■	■		
4	Law enforcement of mining operation	■	■	■	■	■

2.4 Geomorphologic Zoning for Reduction of Environmental Degradation Risk

a) Potential and Constraints

Topography

NAD Province has an average elevation of 125 meters above sea level. The percentages of the area according to its elevation are as follows:

- a. Area at an elevation of between 0-25 m above sea level is 1,297,895 hectare (22.62%).
- b. Area at an elevation of between 25-1000 m above sea level is 3,110,498 hectare (54.22%)
- c. Area at elevation of over 1,000 m above sea level is 1,297,895 hectare (23.16%)

Land Declivity

Topographically, approximately 68% of the total land area of the Province is hilly and mountainous and the remaining 32% is flat and or gently inclined. The areas with mountainous topography are in the middle part of Aceh that forms the Bukit Barisan Mountains, while the areas with hills and gentle slopes are in the north and east parts of Aceh.

Types of Soils

NAD Province's soils consist of organosol, red and yellow podsol, latosol, regosol, alluvial, andosol and hydromorph. Among these types, red and yellow podsol are the most dominant with a total area of 2,788,854 hectare (48.62%).

Table 2.7 SWOT Analysis of Geomorphologic Zoning for Reduction of Environmental Degradation Risk

	Strength	Weakness
Internal	❖ Ecosystem is well maintained due to the large protected forests	❖ Fairly extensive mountainous areas that are difficult for agricultural and transportation sectors
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Development of prime commodities based on the existing topography, types of soils and zonal climates ❖ The protected areas can be used for eco-tourism 	❖ Erosion easily occurs if protected areas on the mountains are not well maintained

Based on the SWOT analysis above, the potentials for preparation of Geomorphologic Zoning for Reduction of Environmental Degradation Risk could be concluded as follows:

Land use for the protected zones will bring environmental benefits to support the existence and continuity of cultivation activities in these zones. In other words, the protected zone is used for sustainable development.

Land use for cultivation zones will bring direct value-addition or economic value, which possibly will cause land use shifts due to higher value-addition. With regard to the land

use shift in the cultivation zone, there are two dimensions that need to be scrutinized simultaneously, namely:

- economic dimension, which will bring concrete increases in value-addition or economic value;
- spatial and environmental dimension, which do not cause spatial or environmental quality deterioration resulting in negative impacts in the form of short and long-term losses.

b) Strategies

The medium-term objectives and strategies for Geomorphologic Zoning for Reduction of Environmental Degradation Risk areas as follows:

- ❖ Execute the *sustainable logging* on the protected zones (to protect the existing forests, to conserve the water sources, and to reduce erosion).
- ❖ Sustainable development also needs to be taken into account. The existing activities should be evaluated with respect to their environmental impacts; provision of licensing of new activities should be assessed in terms of their impacts and benefits.

c) Action Plans

There are four activities to be planned for Geomorphologic Zoning for Reduction of Environmental Degradation Risk within the period 2008-2012. They are as follows:

1. Improve the law enforcement of illegal logging on the protected zones
2. Reevaluate and warn poorly performing companies authorized for forest management
3. Implement reforestation and terrace construction on areas susceptible to landslide and erosion
4. Law enforcement for land use that is not in accordance with its licensing status, land certification and Spatial Development Plan

d) Indicative Implementation Schedule

The proposed implementation schedule of the above activities is presented in the following table:

Table 2.8 Implementation Schedule of Geomorphologic Zoning for Reduction of Environmental Degradation Risk

No	Activity	2008	2009	2010	2011	2012
1	Improve the law enforcement of illegal logging on the protected zones	■	■	■		
2	Reevaluate and warn to companies (having poor performance) authorized for forest management	■	■	■	■	
3	Implement reforestation and terrace construction on areas susceptible to landslide and erosion	■	■	■	■	
4	Law enforcement for land use that is not in accordance with its licensing status, land certificate and Spatial Development Plan	■	■	■	■	■

2.5 Human-Made Hydrological Pollution Prevention and Control

a) Potential and Constraints

From the physiographical viewpoint, NAD Province has short river systems, flowing to west and narrow east lowlands, which makes it seem as if their problem pile up. For the open waters, there are a total area of 20,000 hectares of turf swamp, 450,000 hectares of water swamp and 70,000 hectares of mangrove forest. Turf land has a significant role in coastal hydrology since 90% of the turf consists of water; so, it can serve as water reservoir in coastal areas. The turf land also supports the flow of surface water and ground water at the coasts so that it naturally serves to protect against sea water penetration inland. Since most of the turf land in the west coast of NAD Province was not damaged by the tsunami, it can still function properly as a water reservoir and water supply for the surrounding settlement.

Ground Water

The coastal area of the Province is categorized as area with adequate water resources, either shallow ground water or deep ground water. Banda Aceh is categorized as an area that has high-to-medium level of ground water, while the others like Lhokseumawe, Sigli, Lhoknga, Teumon, Meulaboh and Tapaktuan are categorized as having medium-level of ground water.

Surface Water

According to the Decree of Ministry of Forestry No. 170/Kpts-II/2000 in IBSAP (2004), there are 50 Water Catchment Areas in NAD Province. In the central parts of the Province, which are mostly mountainous, there are extensive Water Catchment Areas dominated by forests, plantations and bushes. Among them, the biggest one is Kr. Jambo Aye Water Catchments Area. The water Catchment Areas on coastal areas are narrow and dominated by human settlement, agricultural activities, plantation areas and stony hills.

Rainfall

NAD Province has tropical climate with two seasons: dry season and rainy season. The rainy season lasts between October and April with average monthly rainfall of 350 mm/month. The dry season lasts between May and September with average monthly rainfall of 185 mm/month. The areas with relatively high precipitation are Pidie, West Aceh, Nagan Raya, Southwest Aceh, and Simeulue Island.

Based on the SWOT analysis (see table below), the potentials of Human-Made Hydrological Pollution Prevention and Control could be concluded as follows:

The water body that forms surface water within the area of the Province particularly consists of rivers, lakes, swamps and water sources.

The surface water used in NAD Province includes:

- Sources of clean water to support the rural and urban people life (taken directly or piped) and industrial needs;
- Sources of water for irrigation;
- Major area drainage channels (for rivers), where all drainage flows go to the rivers which will finally end up in the sea;
- Fish catching on public waters can be replaced by 'keramba' (a kind of basket) fish raising;
- In certain locations, the surface water can possibly used for water transportation (with boats, rafts, etc.), of which service is limited for local activities such as tourism, crossing.

Table 2.9 SWOT Analysis of Human-Made Hydrological Pollution Prevention and Control

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Quantitatively, NAD Province has a great deal of water potentials ❖ The ground water potential on coastal areas is still good 	<ul style="list-style-type: none"> ❖ Minimum operation and maintenance of the water resources infrastructure ❖ Weak coordination and participation in management of water resources ❖ No structure of management of database on water resource ❖ There are a number of rivers in a critical condition ❖ Some surface and ground water is already polluted by untreated waste disposal ❖ Low potential of ground water on mountainous areas
External	Opportunity	Threat
	<ul style="list-style-type: none"> ❖ Construction of water percolation wells to increase the ground water potentials. 	<ul style="list-style-type: none"> ❖ Continuous logging results in erosion and reduces the capacity of ground water filing. ❖ Mismanagement of turf land can reduce the water potential on coastal areas.

Ground Water

Groundwater use by the community, particularly shallow ground water, takes the form of ordinary wells or pump wells for household purposes. Such water use in principle can be continued.

There is a possibility that the user of deep groundwater is large scale industries. However, it is suggested that these industries use surface water. In reality, if there is no surface water at the location of the industry, the use of deep groundwater is allowed under tight controls, but not at locations near the coast, to protect sea water intrusion as those in Lhokseumawe or North Aceh.

b) Strategies

The medium-term objectives and strategies of Human-Made Hydrological Pollution Prevention and Control are as follows:

- ❖ With regulation, control and protection from damage of forest's ecological functions as water catchments, water resources can potentially be used optimally, continuously and in a sustainable manner.
- ❖ The quality of surface water needs to be maintained particularly in the critical water catchment areas. Waste water disposal without treatment should be avoided. Areas along rivers should be maintained as green belts.
- ❖ In principle, ground water use is limited for ordinary wells and pump/drill wells; deep ground water use for big industries should be controlled tightly, only for areas far from coasts.

c) Action Plans

There are four activities to be planned for Human-Made Hydrological Pollution Prevention and Control within the period 2008-2012. They are as follows:

1. Program of water sources development and management. This activity is aimed to develop and manage, and regulate the environment-based use of water sources.
2. Law enforcement for protected zone conservation.
3. Industrial waste treatment control. This activity is meant to control the ground water pollution and surface water pollution caused by industrial activities.
4. Enhancement of the performance of Department of Mining and Energy for industrial monitoring and PDAM (government-owned water enterprise) particularly in deep ground water use.

d) Indicative Implementation Schedule

The proposed implementation schedule of the above activities is presented in the following table:

Table 2.10 Implementation Schedule of Human-Made Hydrological Pollution Prevention and Control

No	Activity	2008	2009	2010	2011	2012
1	Program of water sources development and management					
2	Law enforcement for protected zone conservation					
3	Industrial waste treatment control					
4	Enhancement of the performance of Department of Mining and Energy					

2.6 Preparation of Guidelines for Economic Activity in Coastal Areas

a) Potential and Constraints

The total area of the Exclusive Economic Zone of the Province is 543,520 km². From the geographical viewpoint, the sea area of NAD Province is included in the *Paparan Sunda* (Malacca Strait, South China Sea and Java Sea waters) with average depth of 120m forming widely distributed thick sediments. The potentials existing in Malacca Strait and Indian Ocean waters can be developed for economic multi-sector purposes: fishery, tourism, sea mining, maritime industries, sea transportation, building construction and other marine services.

Pre-disaster Conditions

- ❖ **Fishery** – before the 26 December 2004 tsunami, fishery was one of the economic pillars of NAD Province. In 2004, its contribution to the NAD GRDP was Rp1.59 quintillion or 6.5% (Department of Fishery and Marine Affairs NAD, 2005). The product from fishery amounted to 120,209 tonnes per year, while the cultivated fishery product

amounted to 15,454 tonnes per year in 2003. These products were equally distributed in the Indian Ocean and Malacca Strait.

- ❖ **Infrastructure** – for supporting industries include 1 fishery port in Banda Aceh, 10 major fish auction ports in 7 Districts/cities, and other small fish auction ports in 18 districts/cities. Besides, there are a total of 36,600 hectare coastal fishponds, most of which are semi-intensive ones owned by small-capital farmers. These coastal fishponds were spread across North Aceh, Pidie and East Aceh.

Post-disaster Conditions

- ❖ There was a lot of damage to coastal fishponds, and even in the area (South Aceh) where impacts of tsunami were not so serious. The coastal fishponds which were struck by the tsunami waves were not easy to repair and reuse. All the damage was approximately 50% of the fishery sector losses. The biggest economic loss was the lost revenue from fishery sector (caught fish and farmed fish). Deceased fishermen, damaged fishery facilities and infrastructure including fishing equipment and boats and damaged coastal fishponds made the big number of losses.

Table 2.11 SWOT Analysis of Preparation of Guidelines for Economic Activity on Coastal Area

Internal	Strength	Weakness
	<ul style="list-style-type: none"> ❖ There are mangrove areas left 	<ul style="list-style-type: none"> ❖ Many mangrove areas are already open for coastal fish and shrimp ponds and salt production. This condition made tsunami wave easily strike far into the land. ❖ A lot of ridges of rock were lost.
External	Opportunity	Threat
	<ul style="list-style-type: none"> ❖ Development of mangrove belts for coastal protection, particularly in settlement areas. ❖ Conservation and rehabilitation of the left coral area ❖ Development of coastal tourism 	<ul style="list-style-type: none"> ❖ Due to the lost mangrove and coral reef, natural fish-breeding is not optimal. ❖ Marine bio-diversity is endangered.

Based on the SWOT analysis above, the potentials of Preparation of Guidelines for Economic Activity on Coastal Area could be concluded as follows:

Based on the Marine Spatial Development Plan of Indonesia, the cooperation in Marine Spatial Use consists of:

- a. 13 (thirteen) areas of marine spatial use potential for joint cooperation.
- b. Areas of marine spatial use of West Sumatra consisting of NAD Province, Sumut (North Sumatra), Sumbar (West Sumatra), Bengkulu, and Lampung.
- c. Areas of marine spatial use (in international context) of NAD Province are IMT – GT (Indonesian Malaysia Thailand – GT).
- d. Center of marine space and national primary marine areas (marine spatial development plan) of NAD Province is in Lhokseumawe – Medan.
- e. Areas of spatial marine use by area of fishery management of NAD Province are in Malacca Strait.

b) Strategies

The medium-term objectives and strategies for Preparation of Guidelines for Economic Activity on Coastal Area are as follows:

- ❖ Organization of marine resources will include activities already exist now and that which will be potential for the future.
- ❖ Fish catching on the sea up to 4 miles for District/municipal authority, and 12 miles for provincial authority – which is a Line 1; however, it is possible for fishermen to do fish catching at a further distance (Line 2 and 3).
- ❖ Coastal shipping.
- ❖ Marine tourism.
- ❖ Possible sea-bottom mining exploitation.
- ❖ Salt making.
- ❖ Use of marine energy such as: tides, waves, sea current

c) Action Plans

There are two activities to be planned for Preparation of Guidelines for Economic Activity on Coastal Area within the period 2008-2012. They are as follows:

1. Conservation and rehabilitation of mangrove belts for protection of urban area and human settlement from tsunami
2. Conservation of the coral reef

d) indicative Implementation Schedule

The proposed implementation schedule of the above activities is presented in the following table:

Table 2.12 Implementation Schedule of Preparation of Guidelines for Economic Activity on Coastal Area

No	Activity	2008	2009	2010	2011	2012
1	Conservation and rehabilitation of mangrove belts for protection of urban area and human settlement from tsunami	████████████████████				
2	Conservation of coral reef	████████████████████				

2.7 Utilization of Climatic Conditions

a) Potential and Constraints

The climatic conditions of NAD are categorized as tropical (Schmidt-Fergusson classification) with average temperatures ranging from 25.5 °C in December up to 28 °C in May (according to 2003 measurement results by BMG – Board of Meteorological and Geophysical Affairs in BPS 2005). The average air pressure is around 2.6 mb and the relative humidity ranges from 77% – 89%.

Climatologically, NAD Province is divided into 5 climatic zones: West Coast, and North Middle to Weh Island, South Middle, Middle Mountains and East North coasts.

The annual average rainfall is 2,269.4 mm, with the highest average rainfall in December and the lowest in April. The total number of rainy days a year is 179, with the most frequent rainy days in December and the least frequent in May.

Most of the average rainfall in NAD Province is above 13.6 mm/day/year, and even in some districts: Pidie, West Aceh, Nagan Raya, Southwest Aceh, and Simeulue Island, the average rainfall is 34.8 mm/day/year (Bappenas 2005). For parts of districts: West Aceh, North Aceh, East Aceh and Southeast Aceh, the average rainfall is under 13.6 mm/day/year (Bappenas 2005).

Table 2.13 SWOT Analysis of Utilization of Climatic Conditions

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ The climate of NAD is humid, so water resources are fairly abundant. ❖ The climate in NAD is suitable for all-year farming with simple farming technique. ❖ Temperature is high so that housing construction is simple; no need for heating equipment 	<ul style="list-style-type: none"> ❖ Air quality has become a problem in cities of NAD.
External	Opportunity	Threat
	<ul style="list-style-type: none"> ❖ Many countries provide opportunities for cross-subsidies for reducing activity of Glass House emission 	<ul style="list-style-type: none"> ❖ Global heating has caused unstable climate indicated by frequent storms and long droughts

Based on the SWOT analysis above, the potentials of Utilization of Climatic Conditions could be concluded as follows:

With regard to clean air supply for supporting life, the endeavors to maintain air quality, including micro climate, need to be made. Therefore, existence of protected forests, parks and vegetations in settlement areas are very important to improve the air quality.

Any disturbance to air quality can be resulted from gas emission by industries and motor vehicles. To reduce the disturbance to air quality, an endeavor to control the gas emission should be applied.

b) Strategies

The medium-term objectives and strategies of Utilization of Climatic Conditions are as follows:

- ❖ Increase the community awareness of air quality.
- ❖ Increase the 'greening' within cities
- ❖ Control the industry and motor vehicle gas emission.

c) Action Plans

There are seven activities planned for Utilization of Climatic Conditions within the period of 2008-2012. They are as follows:

1. Conduct public campaigns on the causes and consequences of air quality deterioration and the ways to reduce it.
2. Implementation of road-side tree planting.
3. Conservation and addition of urban green open space.
4. Preparation of standard regulation on motor vehicle and industry gas emission.
5. Enhancement of industry gas emission monitoring.
6. Implementation of motor vehicle gas emission testing as a requirement for STNK (motor vehicle license) renewal.
7. Implementation of on-road motor vehicle gas emission testing.

d) Indicative Implementation Schedule

The proposed implementation schedule of the above activities is presented in the following table:

Table 2.14 Implementation Schedule of Utilization of Climatic Conditions

No	Activity	2008	2009	2010	2011	2012
1	Conduct of public campaign on causes and results of air quality deterioration and the ways to reduce it	■	■	■	■	■
2	Implementation of road-side tree planting	■	■	■	■	■
3	Consrvation and addition of urban green open space	■	■	■	■	■
4	Preparation of standard regulation on motor vehicle and industry gas emission		■	■		
5	Enhancement of industry gas emission monitoring	■	■	■	■	■
6	Implementation of motor vehicle gas emission testing as a requirement for STNK (motor vehicle license) renewal	■	■	■	■	■
7	Implementation of on-road motor vehicle gas emission testing	■	■	■	■	■

2.8 Development of Land Resources

a) Potential and Constraints

Most of the land in NAD Province is forest. The total forest area is 4,477.9 km² or approximately 78.06%, agricultural land is 683.6 km² or 11.92%, and plantations account for 197.6 km² or 3.44%. There are 10 locations of eco tourist attractions. Among them is the National Park of Gunung Lauser with its total land area of 7,926.75 km² stretching in three districts: South Aceh, Aceh Singkil and Southeast Aceh.

Formally, conversion of land function is a change in land use from the functions as defined in the RTRW (Local Spatial Development Plan). In practice, the land conversion is a change in land functions, for example: a change in forest land to estate, and wet or dry farming land. For urban area, farming land is converted to settlement land. In practice, open land undergoes function conversion as a result of land clearing or natural damage, of which rate is 0.33% (according to the revised Provincial RTRW).

Table 2.15 SWOT Analysis of Development of Land Resources

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Many tropical/protected forests within NAD Province 	<ul style="list-style-type: none"> ❖ Many developments are not in accordance with the Spatial Development Plan ❖ Management of protected area is much less optimum; many practices of illegal logging ❖ Post-tsunami high demand for wood as building construction material; so wood price increases ❖ Most districts/cities of NAD have no Detailed Spatial Development Plan
External	Opportunity	Threat
	<ul style="list-style-type: none"> ❖ Housing construction for victims of tsunami or other housing construction is easier to control/ensured to comply with the Spatial Development Plan rather than housing construction for individual, particularly poor people. 	<ul style="list-style-type: none"> ❖ Often, illegal logging in protected/conserved forest with the aim to create estate, but left empty

Based on the SWOT analysis above, the potentials for Development of Land Resources could be concluded as follows:

Land use for protected areas is dominated by forests with a variety of vegetations, except for the protected area with conserved archeological sites or buildings. In some protected areas with additional functions, basic infrastructure (particularly roads and electricity transmission network) can be built as long as it does not conflict with the protected functions. These protected areas (zones) are: Nature Preserves and Culture Preserves with their additional uses as tourist attractions and recreational sites. The land use in local protected areas (rivers and beach borders) in principle can give protection to rivers and beaches, although any direct uses of the protected area (such as garden, fruit plants, etc.) can be made.

Land use for cultivation areas consists of forest (on limited product), plantation, dry farming land, wet farming land, and settlement (urban/semi-urban and rural), and other possible cultivations. In line with planned management of cultivation area mentioned earlier, the limited product forest and plantation located on downstream area should make

a contribution to protection/conservation: that is, to maintain the quality of land cover by forest trees or plantation trees, so the area gives protection to its lower protected area.

b) Strategies

The medium-term objectives and strategies of Development of Land Resources are as follows:

- ❖ Available RDTRW (Local Detailed Spatial Development Plan) and enhance the community's knowledge of it
- ❖ Law enforcement to RDTRW violation.

c) Action Plans

There are four activities planned for the Development of Land Resources within the period of 2008-2012. They are as follows:

1. Preparation or review of the RDTRW (Local Detailed Spatial Development Plan) for all districts/cities that have not owned it.
2. Promulgation of RTRW and RDTRW to all stakeholders (government, private sector and community).
3. Integration of demand for land status conversion suitable to the RDTRW.
4. Reprimand the unsustainable land use (causing environmental damage)

d) Indicative Implementation Schedule

The proposed implementation schedule of the above activities is presented in the following table:

Table 2.16 Implementation Schedule of Development of Land Resources

No	Activity	2008	2009	2010	2011	2012
1	Preparation or review of the RDTRW (Local Detailed Spatial Development Plan					
2	Promulgation of RTRW and RDTRW to all stakeholders					
3	Integration of demand for land status conversion suitable to the RDTRW					
4	Reprimand the unsustainable land use					

2.9 Coordination in Inter-District/Municipal (Regional) and Inside-District/Municipal Spatial Use

a) Potential and Constraints

NAD Province is divided into 17 districts and 4 cities (municipalities) consisting of 257 sub-districts, 693 *mukim* and 6,107 villages as well as 112 township. To the north and east the Province borders on Malacca Strait; to the south it borders on the Province of North Sumatra and to west on Indian Ocean. Its only land connection is with the Province of North Sumatra. So, NAD Province is very dependant on North Sumatra. The total land area of NAD Province is 57,365.57 km² with the largest forest area of 39,294.20 km², small plantations of 3,675.01 km², and mining area of 4,43 km².

Table 2.17 SWOT Analysis of Coordination in Inter-District/Municipal (Regional) and Inside- District/Municipal Spatial Use

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ NAD Province has a higher autonomy than other Province of Indonesia. ❖ Land price is affordable to local people 	<ul style="list-style-type: none"> ❖ Many documents of land ownerships lost due to tsunami
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Donors is available to assist in mass land certification ❖ Available donor to assist in reconstructing and reorganizing the urban and settlement area 	<ul style="list-style-type: none"> ❖ Due to the lost land ownership documents (or unclear administrative documents), there is a possibility of conflict of land ownership

Based on the SWOT analysis above, the potentials of Coordination in inter-District/Municipal (Regional) and intra-District/Municipal Spatial Use could be concluded as follows:

Land ownership for protected areas is in principle the state authority or provincial/local governments. Land authority by other entities, besides state/local/provincial governments, that is already defined in the plan as a protected area, can be extended as long as it serves as a protected/conserved area. Land authority is particularly related to culture preserve, river and coast borders and other protected areas. The locations specified as protected areas as defined in the Provincial RTRW do not find their legal status affected. What is important in this case is the utilization of the land.

Any individual, group of individuals or corporate body is allowed to secure land authority, either as permanent ownership or temporary ownership (such as A Right for Business Use, A Right for Building Use, A Right of Management, etc.) as long as the existing regulations are complied with.

b) Strategies

The realization objectives and strategies of Coordination in Inter-District/Municipal (Regional) and Intra- District/Municipal Spatial Use are as follows:

- ❖ A need to specify clear/definite bordering for protected/conserved areas where no private ownership exists, with limited allowable activities.
- ❖ Specifically for the areas struck by tsunami, there is a need to reevaluate the division of protected/conserved areas and culture preserve in order to have land use redistribution.

c) Action Plans

There are three activities planned for Coordination in Inter-District/Municipal (Regional) and Inside- District/Municipal Spatial Use within the period of 2008-2012. They are as follows:

1. Preparation of inter-RDTRW link and land use administration
2. Implementation of land redistribution and mass land certification program for the area stricken by tsunami
3. Improvement of land certification service

d) Indicative Implementation Schedule

The proposed implementation schedule of the activities above is presented in the following table:

Table 2.18 Implementation Schedule of Coordination in Inter-District/Municipal (Regional) and Inside- District/Municipal Spatial Use

No	Activity	2008	2009	2010	2011	2012
1	Preparation of inter-RDTRW link and land use administration					
2	Implementation of land redistribution and mass land certification program for the area stricken by tsunami					
3	Improvement of land certification service					

3 Infrastructure Development

3.1 Optimization of Over Land Transportation

a) Potentials and Constraints

The road network available in NAD Province extends to 18,943,08 km. This amount is divided into 1,782.78 km of national roads, 1,701,82 km of provincial roads and 15,458,48 km of local roads. At the moment the condition of the national road is as follows: 720,34 km in good condition, 511,31 km is moderate/slightly damaged and 551.13 km is heavily damaged. The condition of the provincial roads is 385.21 km in good condition, 612.38 km is moderate and 704.23 km is heavily damaged. While the condition of the local roads is 3.053,65 km in good condition, 9,410.31 km moderate and 2.994,53 km heavily damaged.

As for road surface type, 90,09% of the national roads is asphalted, 4,24% is gravel and 5,67% is dirt road. The provincial roads are 44,27% asphalted, 37,68% gravel and 18,06% is dirt road. The coverage of the road network in NAD Province consists of main arteries along the east coast, through the centre and along the west coast, feeder roads, urban roads and island roads. Until 2006 the ability of the government to upgrade roads was very limited, and involved less than 10% of the total roads. Road management mainly concentrated on repair and consolidation of the road condition.

There are 794 bridges on the national arteries with a total length of 20,393 m. Of these, 660 bridges, with a total length of 16,497 m (80,90%), have already been replaced, while 134 bridges with a total length of 3,895,90 m or 19,10% are still original, old bridges. There are 638 bridges on the provincial roads with a total length of 14,137,00 m. Of these 399 bridges have been replaced, with a total length of 5,971,70 m or 42,24%. While the rest, 239 bridges or 8.165,30 m or 57,76% are still waiting to be replaced. Replacement is mainly necessitated by the width of the bridges now being and their deteriorating condition.

About 25% of the road network in NAD Province is damaged. There is disparity between its development in the east and west. More attention is given to the east because of the availability of gas and oil. To stimulate local economic growth and provide access to remote areas, the government continuously tries to improve the infrastructure of the main roads, both in quality and in length. A phased improvement of roads and development of new roads has already been achieved, together with replacement of transportation facilities.

Public and freight transport in the cities, between the cities and in the rural areas has been guided and developed, so it is able to contribute in the improvement of smooth transportation.

Based on the SWOT analyses the following Potentials and Constraints can be concluded:

Potential

- ❖ The road network is a basic need for distribution services, trade commodities and industry.
- ❖ Highway development along east – west coasts.
- ❖ Improvement of national, provincial and regional road network systems to support the distribution and flow of passengers and freight.
- ❖ Transportation development fulfills a very important role in local economy development.

Table 3.1 SWOT Analyses Optimization of Over Land Transportation

	Strengths	Weaknesses
Internal	<ul style="list-style-type: none"> ❖ Road infrastructure is still a basic need for distribution services of trade and industry commodities ❖ The availability of road infrastructure and bridges along East, North, West and South coast, and through the center of NAD Province. ❖ Availability of road and bridges infrastructure network along the East North, West and South coast, and in the Central Area of NAD Province ❖ The Public Transport network already serves the whole area of NAD Province, and is already integrated between modes. ❖ Availability of AKDP and AKAP (inter provincial and intra provincial public transport) services ❖ Availability of safety facilities for overland transportation ❖ Availability of facilities to monitor the load of freight transport ❖ High accessibility to achieve the origin and targets of service users ❖ Has amore dominant role in serving the community 	<ul style="list-style-type: none"> ❖ Only 25% of the roads in NAD are in good condition ❖ Activities related to Public Service Obligation/PSO are weak. ❖ Institutions and regulations, human resources, technology, investment funding, capacity, and operation and maintenance ❖ Inefficiency of infrastructure management causes a low efficiency of the coordination and task and function distribution among the institutions, especially because of unclear relations between regulators, owners and operators ❖ Transportation needs high investments and has a long period on return of funds, while the tariffs do not reach the level of full financial cost recovery. Implementation of transportation infrastructure is often done in monopolized way, making the government's role as regulator still very necessary ❖ Supervision at weighting bridges is not optimal ❖ Many facilities are damaged because of natural disasters, and are not immediately reconstructed because of bureaucracy and funding problems
	Opportunities	Threats
External	<ul style="list-style-type: none"> ❖ Construction of motorized vehicle test building, because there is a plan to test all motorized vehicles under supervision of the Transportation Department ❖ Availability of a plan to provide special driving licenses to public transport drivers ❖ Transportation performs an important role in the opening of isolated areas ❖ Construction of railway line from Banda Aceh to Medan ❖ Pembangunan Highway Development along East and West Coast 	<ul style="list-style-type: none"> ❖ Lack of road capacity, especially if road infrastructure development is compared with the growth of vehicle numbers ❖ The use of roads for business activities which don't have a direct relation to the function of the roads. ❖ High accident and traffic violation levels ❖ High service level of unofficial public transport

Constraints

- ❖ The road network performance was, as of the end of 2005, generally poor, considering that about 25% of the road length was in damaged condition.
- ❖ The high level of road damage leads to overload and insufficient handling system.
- ❖ Not all rural and remote areas can be reached by overland transportation
- ❖ Government development funds for expanding these facilities are very limited
- ❖ The economic growth of the community is hampered because of insufficient transportation

b) Strategy

The Goal of Optimization of Overland Transportation is the improvement of the accessibility to the economic areas to support the economic development. Strategic interventions to achieve this include:

- ❖ Maintenance and construction of roads and bridges which fulfill the needs of freight transportation and services in the whole area: The Department of Transportation is the implementing agency and must always understand the needs of the community in NAD Province. Therefore improvement and capacity building of transportation infrastructure is needed in line with its development. Recommendations from different parties will help The Department of Transportation to propose and prepare development programs for the transportation sector in NAD Province.
- ❖ Urge the government to accelerate the transportation links to the remote areas: this strategy will open the isolation of all areas in NAD as much as possible, so the economy in the remote areas can develop, the same counts for social and cultural activities like health, education and government activities.
- ❖ Improvement of coordination with involved institutions: Internally, at the moment the Transportation Department of NAD contains 6 (six) Sub Departments, i.e.: Penelitian Pengembangan and Program (Research Development and Programming), Pengarah Perhubungan Darat (Overland Transport Direction), Keselamatan PHB Darat (Overland Transportation Safety), PHB Laut (Sea Transportation), PHB Udara (Air Transportation) and Pos and Telekomunikasi (Post and Telecommunication). Although all sub-departments have their own responsibilities in transportation system development, they have to cooperate to manage the integrated system. Therefore the coordination and communication system in the environment of the Transportation Department of NAD Province should function well. Externally coordination is also needed and should be improved by engaging other parties, both horizontally (with other provincial departments in NAD Province) as vertically (with the central government, community and private sector).
- ❖ Motivation of private sector to participate more actively in the transportation sector: Besides the authority and funds available at the provincial government of NAD, actually the private sector and community also have the right to be involved and invest in infrastructure in the transportation sector. This is in accordance with national policy stated in regulation Perpres 67/2005 on private partnership in infrastructure development. This scheme is more popular called PPP (*Public Private Partnership*) or KPS (Kemitraan Pemerintah-Swasta). With this scheme the provincial government is not only blessed with a lower financial burden, but it is also hoped that it will have a positive impact on transparency, efficiency and service quality to the community.
- ❖ Prioritize development of transportation facilities which are more focused on community economic growth, especially to provide opportunities for trade activities in the Regencies and to promote the equal distribution of development, which will decrease the price levels from certain remote areas caused by transportation costs.
- ❖ Achievement of integrated and intermodal road transportation in the infrastructure service network: Integrated development of transportation between the provincial areas and then related intra and intermodal transportation and increase the accessibility to interconnect the synergy of modes of the areas transportation network

- ❖ Achievement of traffic discipline in accordance with regulations and community norms. Improve the process learning and socialization on regulations and traffic rules, in order to achieve comfort and safety in implementation of the transportation system
- ❖ Achievement of time and traffic discipline and reliability of services: Improve the service in the public transportation system, especially on time schedule and starting points of each transportation mode.
- ❖ Short trips with high safety level. Decrease of travel time with the same travel distance, but with better safety, can be achieved through maintenance of transportation assets in accordance with its lifetime.
- ❖ Development of overland transportation infrastructure and facilities to give better transportation access to the community ... Achievement of service delivery in accordance with affordability of users with reasonable tariffs. One of the problems often surfacing in the area is public transport tariffs, which are often different in the field, although already defined by the central government. To keep the tariffs affordable for the local community, support from the government in the form of subsidies is needed. Therefore adjustment of the tariffs in accordance with the affordability for the local community is needed in NAD Province
- ❖ Increase of services and control of traffic accident number for vehicle users on the public road. Improvement transportation quality is measured with the decrease in traffic accidents, which among other can be achieved a higher quality of vehicle testing of the public as well as private vehicles..
- ❖ Rehabilitation and reconstruction of road infrastructure and facilities and ferries damaged by the tectonic earthquake and tsunami wave to restore the service to the community
- ❖ Development of road infrastructure and facilities to provide better transportation access too the community
- ❖ Increase of ferry fleet and provision of new crossings as effort to provide transportation to island people.
- ❖ Consolidation of subsidies on public crossing transport remote islands as effort to open isolated areas and trigger economic development of these areas.
- ❖ Development of railway mass transport as fast, cheap, energy efficient and environmentally friendly public means for transportation of passengers and goods

c) Action Plan

1. Rehabilitation of land transportation facilities, damaged by natural disasters.

The earthquake and tsunami disaster disabled all existing facilities, including transportation facilities which support social-economic activities of the community which experience serious disturbance. Until now there are still several facilities in need for immediate improvement or reconstruction. Therefore special attention to recover and reconstruct these facilities is needed.

2. Improvement of land transportation safety facilities along the national, provincial and Regency roads.

Calibration of transportation facilities to improve the safety quality and service to the community, to reduce the accident level. This activity includes:

- Socialization of traffic and public transport safety, including socialization of safety belt use inside cars
- Structuring and management engineering of public transport
- Increase of facilities at national, provincial and local roads
- Motorized vehicle testing and improvement of accident prone areas

3. Construction of land transportation infrastructure and facilities in remote areas.

Development of transportation facilities and infrastructure for remote areas in NAD Province in accordance with the local development vision and mission of the new governor, which gives priority to economic development of communities in remote areas, by the construction of transportation facilities and infrastructure which connects the remote areas with the regional cities and economic centers of NAD Province.

4. Improvement of human resource quality through education and technical training on land transportation.

This education and technical training program includes: traffic and public transport orientation, basic traffic techniques, terminal management, traffic supervision and control, public transport management, traffic management, traffic impact analyses, public transport survey and supervision, and motorized vehicle testing. This education program is targeted for civil servants in the overland transportation sector.

5. Rehabilitation and maintenance of passenger and goods transport infrastructure and facilities

The rehabilitation and maintenance action plan includes the acquisition of motorized vehicle testing equipment, vehicle testing stations, weighting bridges and terminals. The target of this activity is to make the public transport facilities to function again.

6. Improvement and development of passenger and goods transport infrastructure and facilities.

This activity includes the construction of: vehicle testing station, traffic signs, traffic lights, street marking, road safety fence, deliniator, marking pins, bend and U-turn mirrors, weighting bridges, street lightning, traffic management and engineering, *warning light*, tax vehicles and mechanical equipment, motorized vehicle testing equipment and improvement of traffic accident areas. Targets for this activity include reduction of overloaded trucks, increase in the weighting bridges to monitor and evaluate freight traffic control and reduce the amount of accidents.

7. Purchase of safe, comfortable, on-time and cheap transportation modes

The availability of adequate transportation modes has become an urgent need for the development of NAD Province, considering the high potential of NAD Province in mining (oil, gas, and coal), forestry (timber and non-timber forest products), plantation, fishery (sea and land) and eco-cultural tourism. One of the efforts to connect the main potentials of NAD Province is the rehabilitation of railway infrastructure and facilities, because some advantages compared to other transportation modes like its ability for long distance transport, mass transport, its environmental friendliness and from economic point of view.

d) Indicative Implementation Schedule

The Implementation Schedule for mentioned Activities can be seen in **Table 3.2** below.

Table 3.2 Implementation Schedule Optimization of Over Land Transportation

No	Activity	2008	2009	2010	2011	2012
1	Rehabilitation of land transportation facilities, damaged by natural disasters.					
2	Improvement of land transportation safety facilities along the national, provincial and Regency roads.					
3	Construction of land transportation infrastructure and facilities in remote areas.					
4	Improvement of human resource quality through education and technical training on land transportation.					
5	Rehabilitation and maintenance of passenger and goods transport infrastructure and facilities					
6	Improvement and development of passenger and goods transport infrastructure and facilities.					
7	Purchase of safe, comfortable, on-time and cheap transportation modes					

3.2 Optimization of Sea Transportation

a) Potentials and Constraints

NAD Province has a relatively long coastline. Therefore, there are a lot of sea-ports where the transportation, industrial and trading activities take place. There are 10 sea-ports with the privatized and non-privatized status.

Five sea ports have been privatized (managed by PT. Pelindo-I). They are the sea-port of Sabang – in Sabang, Malahayati sea port – in Aceh Besar, Krueng Geukueh sea port – in Lhokseumawe, and Kuala Langsa sea port – in Langsa. In the west shore, there is only one sea port managed by PT. Pelindo-I namely Meulaboh sea port – in Aceh Barat. Meanwhile, on the west coast there is only one sea port, which is managed by PT. Pelindo-I yaitu Pelabuhan Umum Meulaboh – Aceh Barat. Sea ports that have not been privatized (managed by Department of Transportation) are Calang sea port, Susoh sea port, Tapaktuan sea port, Sinabang sea port and Singkil sea port.

Some of the sea ports were heavily damaged by the earthquake and tsunami, including Malahayati sea port, Calang sea port, Sinabang sea port, and Singkil sea port. Sea transportation plays an import role in supporting the economy. In 2004 the traffic flow and ferry crossings registered at Balohan seaport was 654 crossings with 125.862 passengers and 37.827 ton cargo. This total is an increase compared to the previous year.

Table 3.3 SWOT Analyses Optimization of Sea Transportation

	Strengths	Weaknesses
Internal	<ul style="list-style-type: none"> ❖ Is a form of transport with a high capacity ❖ Energy effective compared to other modes of transport ❖ Able to serve transportation for remote islands ❖ Sea transportation of NAD has strategic locations for international transfer harbor. ❖ Pollution level and environmental damage is very small. 	<ul style="list-style-type: none"> ❖ The level of services is influenced by the weather. ❖ Amount of transportation facilities is still very limited. ❖ Supporting sea port facilities and ferries are still insufficient. ❖ Lack of supporting facilities for maintenance and repair of ships. ❖ Supervision on sea transportation still low. ❖ Lack of professional Human Resources for operators.
	Opportunities	Threats
External	<ul style="list-style-type: none"> ❖ Many external parties/donors/NGOs in infrastructure development ❖ Can open economic access to coastal areas and inland waters ❖ Can push and attract tourism growth ❖ Provides access to overland/continuing transportation ❖ The demand on ferry services is growing 	<ul style="list-style-type: none"> ❖ Uncertain whether conditions ❖ Restricted government funds for operational costs of remote transport. ❖ Plantation products transported overland in the Western and Eastern direction decrease the function of the harbors and sea transportation. ❖ Sea transportation is often used for smuggling practices ❖ Lack of private sector participation in the implementation of sea transport, especially via ferries monopolized by government enterprises (BUMN).

Based on the SWOT Analyses the following Potential and Constraints can be defined:

Potential

- ❖ Has the characteristic of big capacity means of transport, which can be used as means of transport between the Regencies/cities to decrease the load on the roads.
- ❖ Able to provide services for remote islands, although this still needs government subsidies.

Constraints

- ❖ Availability of supporting facilities in the harbors is still not sufficient for an freight transfer process.
- ❖ Development of sea transport depends very much on the economic activities of the hinterland. At the moment the sea transportation development in NAD Province is still limited because the growth of trade and industries in the hinterland don't show positive signs yet.
- ❖ In order to improve the safety of sea transport, the sea transport facilities need yearly maintenance and repair. Facilities and infrastructure for this maintenance and repair are not yet available in NAD Province, and has therefore be done somewhere else, causing high operational costs.
- ❖ At the moment Dinas Perhubungan (the Transportation Department) still lacks human resources in the sea transportation sector, so its task execution is not optimal.

b) Strategy

The goal of Optimization of Sea Transportation is to provide an economic transportation mode, improve the accessibility of all areas in NAD Province, and establish cooperation in

sea transportation with other Provinces and even other countries (Malaysia, Singapore, and Thailand). Strategic interventions to achieve this include:

- ❖ Establish a sea transportation network integrated with networks of other modes: Like for overland transportation, for sea transportation also improvements are needed for integrated inter-modal transportation in NAD Province. The geographical condition is NAD Province needs a sea transportation system which can improve the connections between the modes and the production areas and markets. To increase the economic efficiency, especially for transportation costs for goods distribution and services, an intermodal integrated system is needed with optimal connections between the different modes. The creation of an intermodal transportation system, which can increase the transportation efficiency between the areas, both for industrial activities, tourism, as other economic activities.
- ❖ Provision of supporting sea port facilities: Support to the development of sea port facilities to achieve an organized, integrated, safe and comfortable sea port, in order to increase movement efficiency of people and goods, decrease inconsistent services between areas and promote the local economy.
- ❖ Increase private sector participation in ferry activities, especially those serving the commercial lines: Create private sector involvement in development and management of ferries and improve the performance of shipping.
- ❖ Support to sea port import and export activities: Trade performs an important role in promotion of a continuous flow of goods and services via efficiency improvement of the regional distribution system via the sea ports
- ❖ Guidance of human resources in sea transportation: The provision of training and courses for sea transportation personnel, to ensure consistent conditions and skills of the work force and maintain a certain sea transportation safety level, especially for sea transport operators and management.
- ❖ Improvement of sailing safety: Facts show a recent increase in accidents in the transportation sector, including sea transport. Many causes can lead to accidents, but the main factor is always appearing is the factor human error. Especially for sea transport sector, a sector full of regulations. The provincial government of NAD has to ratify several conventions which are established by The United Nations Convention on the Law of the Sea (UNCLOS) including the obligation to fulfill several regulations. At the United Nations a special division is available which handles maritime sector, i.e. International Maritime Organization (IMO), which generally arranges sea transport safety, pollution prevention, regulations, training and education for ship crew. With the availability of this board in each member country (flag state) has the responsibility to apply international conventions to ships that carries the flag of its nation.
- ❖ Improvement of ferry service quality: NAD Province consist of a wide area surrounded a coastal line and with a rather low population density. Outside the urban areas, this population is not evenly distributed, but divided over small groups of people living in often isolated remote areas, especially between the north and the south and on the islands, causing unequal growth of welfare and economic activities and basic need services for the community, especially for sea crossings.
- ❖ Consolidation and improvement of services to remote areas: Improved and prioritized on port condition, in accordance with its layout and pioneer sailing service improvement, to enable and ensure reasonable pioneer transportation services to support the trade development and decrease the dependence on sea transportation

from outside the Province. Community participation in traditional sailing services will be increased to open access to remote and isolated areas.

c) Action Plan

1. Reconstruction of access from integrated harbors to existing transportation facilities.

Many of the sea transportation facilities and infrastructure in NAD have been damaged, starting from slightly damaged until heavily damaged or destroyed. This has had its impact on the local economy of NAD Province. Damage also occurred to other transportation infrastructure like road network to the harbor. The sea transportation program for the coming five years is to repair and improve the sea transportation infrastructure performance, and implement program coordination-synchronization between the ports and harbors with the involved transportation sectors.

2. Acquisition of supporting sea harbor and ferry harbor facilities. A rehabilitation and maintenance program for sea transportation infrastructure, with the following physical target activities: rehabilitation of navigation equipment, rehabilitation of ship navigation, harbor jetty, dredging of the entry/exit route and the rehabilitation of the administrative office of the harbor.

3. Construction of ship repair and maintenance facilities and infrastructure (dry-dock) in NAD Province. To support sea transport, docking facilities for certain types and sizes of ships should of course be available. Therefore ship docking facilities to support ship maintenance should be developed. Implementation of this activity by involved institutions or private sector should be implemented during the coming 3-5 years.

4. Construct sea transportation facilities and infrastructure on remote/isolated areas. Economically the implementation of facilities and infrastructure to remote areas is normally not feasible, but from territorial point of view and to evenly distribute welfare to remote population, it can be very strategic. Coordination of transportation institutes with sea transport and the private sector is very much needed to implement this action plan. Also supporting activities are needed like provision of facilities for the management, like tax incentives, navigation information support and sailing safety.

5. Socialization, coordination and inspection on the availability of sea safety and rescue facilities on ferries. Sailing safety is compulsory, even with a status of pioneer harbor to be the seaworthy from technical point of view, weather information and complete safety equipment should always be available.

6. Educational and training support in the field of sea transportation.

Support includes activities on institutional guidance, conducive investment climate, a supporting political economical, social and cultural climate, conducive rules and regulations, human resource guidance and good leadership.

7. Socialization, coordination and cooperation between private sector, investors shipping companies and involved institutions

d) Indicative Implementation Schedule

The Implementation Schedule for mentioned Activities can be seen in **Table 3.4** below.

Table 3.4 Implementation Schedule Optimization of Sea Transportation

No	Activity	2008	2009	2010	2011	2012
1	Reconstruction of access from integrated harbor to existing transportation facilities.					
2	Acquisition of supporting sea harbor and ferry harbor facilities.					
3	Construction of ship repair and maintenance facilities and infrastructure (dry-dock) in NAD Province					
4	Construct sea transportation facilities and infrastructure on remote/isolated areas.					
5	Socialization, coordination and inspection on the availability of sea safety and rescue facilities on ferries.					
6	Educational and training support in the field of sea transportation					
7	Socialization, coordination and cooperation between private sector, investors shipping companies and involved institutions					

3.3 Optimization of Air Transportation

a) Potentials and Constraints

Air transport also plays an important role in economic development. It is an alternative transport in which most people are interested as it is very effective. At present, NAD Province has 11 airports, both commercial airports, special airports and pioneer airports (operated by the Department of Transportation).

- ❖ There is one commercial airport operated by PT. Angkasa Pura – II, which is:
 - Sultan Iskandar Muda Airport – in Banda Aceh. This airport is also used as an airforce base (TNI-AU Sultan Iskandar Muda).
- ❖ There are also two special airports operated by the private sector:
 - Malikussaleh Airport in Lhokseumawe (operated by PT. Arun LNG) also used for commercial purposes with limited flights (Lhokseumawe – Medan)
 - Point-A Airport in Lhoksukon (operated by Exxon Mobil Inc).
- ❖ The other eight airports are operated by the Department of Transportation:
 - Maimun Saleh Airport in Sabang which is also used as an air force base of TNI-AU Maimun Saleh;
 - Cut Nyak Dhien Airport in Meulaboh which is also used as an air force base (TNI-AU Meulaboh);
 - Kuala Batu Airport in Blang Pidie;
 - T. Cut Ali Airport in Tapaktuan;
 - Lasikin Airport in Sinabang;
 - Rembele Airport in Takengon;
 - Alur Buluh Airport (Leuser Forest) in Kutacane;
 - Syekh Hamzah Fansyuri Airport in Singkil.

Air transport also accelerates economic activities. In 2006, there were five commercial airlines operating out of Sultan Iskandar Muda Airport, namely Garuda, Adam Air, Lion Air, Sriwijaya and SMAC. With a total of 236 flights, the total number of passengers transported via this airport in 2005 was 233,886 passengers, or 85,76% of the total transportation capacity, which means a growth of 7,8 % compared to the year 2004 when passengers numbered 131.960 people from a transportation capacity of 169.352 people.

Table 3.5 SWOT Analyses Optimization of Air Transportation

	Strengths	Weaknesses
Internal	<ul style="list-style-type: none"> ❖ Time efficient ❖ Environmental friendly ❖ On-time departures ❖ More established management ❖ Better trained human resources 	<ul style="list-style-type: none"> ❖ Relative high tariffs ❖ Lower accessibility than overland transportation ❖ High cost facilities and infrastructure ❖ Recruitment of human resources is more expensive ❖ Airports need a big space free of high buildings in its surroundings
	Opportunities	Threats
External	<ul style="list-style-type: none"> ❖ Infrastructure available in almost all Regencies ❖ Government subsidies available for operational cost in pioneer areas ❖ Availability of aid funds from donor countries ❖ User need (economic actors) to be at several placed in a short time 	<ul style="list-style-type: none"> ❖ Limited government funds to support air transportation operational cost ❖ The demand for air transportation services to pioneer areas is relatively low, because of low socialization on flight schedule and prices ❖ Part of the existing demand is related to rehabilitation and reconstruction activities in NAD Province

A relatively drastic increase in the amount of flights and the amount of air to Aceh has been caused by the ongoing rehabilitation and construction activities.

Based on the SWOT Analyses the following Potentials and Constraints can be defined:

Potentials

- ❖ A growing demand from the community for air transportation services caused by the rehabilitation and reconstruction activity in NAD Province.
- ❖ Development of facilities, infrastructure and operation of air transport.
- ❖ Improvement of skilled human resources with technical abilities in air transportation.

Constraints

- ❖ No investors investors have yet been attracted to invest in air transport between the Regencies, so government subsidies are needed
- ❖ Limited government funds for the operational costs of air transportation.
- ❖ High cost facilities and infrastructure.
- ❖ Airports need a large space with surroundings that are free of high buildings

b) Strategy

The goal of the Optimization of Air Transportation is the “Improvement of Bandara Aceh as an International Airport and the opening of flight services within the Province”. Strategic interventions to achieve this include:

- ❖ Improvement airport system in NAD: The topographical condition in NAD Province, with its wide hilly area, makes flying in the Province an attractive alternative transportation mode. To facilitate this, the rehabilitation is needed of several airports which have been damaged by the earthquake and tsunami, upgrade of several airports to the status of main airport and the addition of local airports at locations which are difficult to reach with other transportation modes.

- ❖ Improvement airport SIM to international status: To support the globalization of NAD Province and improve the export, one of the airports in the Province should be upgraded to the status of international airport.
- ❖ Improvement airport services: Improvement of the quantity and quality of human resources in air transportation. Distribution of information to a wide community about flight / air transportation services between Regencies (costs, flight schedule and regulations). Improvement of the service and management professionalism in air traffic transportation to create a trust of the community on the comfort and safety of flying. An investor should be found to invest in air transportation.

c) Action Plan

1. Rehabilitation and reconstruction of airport facilities and infrastructure

Airports damaged by the earthquake and tsunami will be reconstructed, to restore the air transportation services for the community. This activity will be implemented by the Air Transportation Department (Central Government) during the period 2008-2009.

2. Improvement Sultan Iskandar Muda Airport as International Airport Hub and Haji Embarkation

The improvement of Sultan Iskandar Muda Airport (Banda Aceh) in order to receive airplanes from sizes like B747, including the development of supporting facilities. This activity will be implemented by the Air Transportation Department (Central Government) during the period 2009-2010.

3. Development of four airports as main airports

Expansion of the airports: Maimun Saleh Sabang, Cut Nyak Dhen Meulaboh, Lasikin Sinabang and Rembele Takengon as main airports in NAD Province, which can be served by airplanes like F-28. This activity will be implemented by the Air Transportation Department (Central Government) during the period 2009-2010.

4. Construction new airport

The construction of this new airport, which will be build to provide an alternative quick transportation mode, to open an isolated area and to anticipate the possibility of broken overland and sea connections because of natural disasters like earthquakes and tsunamis This activity will be implemented by the Air Transportation Department (Central Government) during the period 2011-2012.

5. Improvement of airport services

Recruitment of human resources which have skills and technical know-how in the field of air transportation to fulfill the need for air transportation personnel. Therefore recruitment of human resources which have the necessary experience is needed, and the exiting personnel should be given additional education and technical in the field of air transport. This activity will be implemented by the Air Transportation Department (Central Government) during the period 2008-2012.

6. Socialization and coordination with private sector, investors, airlines and involved institutions

To realize the performance improvement of air transport in NAD and air transport from and to NAD a healthy competitive climate is needed. Socialization and coordination with air transport stakeholders is needed, together with the preparation of involved institutions to respond and improve the air traffic management. The coordination will be followed by a flight test with private sector or investors to attract them to local air business in NAD Province. This activity will be implemented between 2008-2009, the

period where donor activities, NGOs and rehabilitation and reconstruction of tsunami are still going on, but regional business activities and tourism are already starting to grow in NAD Province.

7. Socialization to community on flight services

Information on air transportation services should be disseminated to the community, especially related to route, service provider, service safety level and other important information. The socialization is meant to promote the air transportation, especially the internal NAD flights. This activity will be implemented during a period of 5 years by Air Transportation Department (Central Government) in cooperation with private sector.

8. Develop alternative transportation modes to the airport.

Airports cannot stand on its own, but should be integrated with other modes of transportation. Therefore an inter-modal system is needed to achieve an efficient and effective public transport. This activity will be implemented during a period of 5 years by Air Transportation Department (Provincial Government) in cooperation with private sector.

9. Support to operational expansion of pioneer flights.

In a Province as wide as NAD Province, extensive transportation facilities need to be established. To achieve this a synchronization program which supports the operation of transport to remote and isolated areas will be implemented. This program can consist of support like tax incentives and flight facilities for business people on pioneer flights. This activity can be implemented in the coming five years, taking into account that pioneer flights will still need a lot of support from the local government. This activity will be implemented by Air Transportation Sub-department (Dinas Perhubungan of the Province) during the period 2011-2012.

d) Indicative Implementation Schedule

The Implementation Schedule for mentioned Activities can be seen in **Table 3.6** below.

Table 3.6 Implementation Schedule Optimization of Air Transportation

No	Activity	2008	2009	2010	2011	2012
1	Rehabilitation and reconstruction of airport facilities and infrastructure	■	■			
2	Improvement Sultan Iskandar Muda Airport as International Airport Hub and Haji Embarkation		■	■		
3	Development of four airports as main airports		■	■		
4	Construction new airport				■	■
5	Improvement of airport services	■	■	■	■	■
6	Socialization and coordination with private sector, investors, airlines and involved institutions	■	■			
7	Socialization to community on flight services	■	■	■	■	■
8	Develop alternative transportation modes to the airport.	■	■	■	■	■
9	Support to operational expansion of pioneer flights.				■	■

3.4 Improvement Telecommunication Services

a) Potentials and Constraints

A telecommunication network is needed for developed and modern communities. In accordance with the needs of the community, telecommunication networks rapidly grow and develop to facilitate their needs and based on the rapid development and progress of Aceh, especially the urban areas. The telecommunication networks such as telephone, telegram, facsimile, and other telecommunication products have been extended to Sub-Districts, both through telecommunication service offices and Wartel (telecommunication stalls) installed in every Sub-District and public space. In addition, the global telecommunication networks have been extended to the cities where the cellular telephones can be operated using the GSM and CDMA systems.

Telecommunication services, both cable and cellular telephone already cover all the Regencies/Municipalities in NAD Province. The usage capacity for cable telephones has reached 88,766 connections, with a successful call ratio of 75,64% and supported by 881 Wartels (telecommunication stalls). For cellular telephones, healthy competition is going on between cellular telephone network providers in extending the coverage area. This fact is illustrated by the rapid construction of Base Transceiver Stations (BTS) towers in NAD Province.

Programs and activities already implemented by Badan Pengelola Data Elektronik (BPDE – Electronic Data management Board) include the construction and development of Local management Information System (SIMDA), the provision of infrastructure, provision and management of data and the guidance of civil servants in the field of communication and information technology. Besides these programs Badan Pengelola Data Elektronik also maintains a communication network among the Regencies/Municipalities with a bandwidth capacity of 5 Mbps using Vsat, donated by BRR NAD-Nias, to interconnect the Regencies/Municipalities and the Province, at each Regencies/Municipalities one Vsat unit has been installed, to form the Metropolitan Area Network (MAN).

The e-Government implementation planned for the future, includes the availability of databases at each local Department, Board and institution, the availability civil servants skilled in the field of communication and information technology and the availability of local telecommunication infrastructure.

Table 3.7 SWOT Analyses Improvement Telecommunication Services

	Strengths	Weaknesses
Internal	<ul style="list-style-type: none"> ❖ Able to reduce distances and time, so provides quicker information exchange ❖ Able to cover remote areas, so can open the area isolation ❖ Availability of wide network and diverse communication equipment ❖ Easier data communication in the virtual world 	<ul style="list-style-type: none"> ❖ Some areas are still not covered by the telecommunication network ❖ Supervision of the communication equipment is weak ❖ Coordination with network providers is still too low ❖ Human resources to supervise telecommunication is too low
	Opportunities	Threats
External	<ul style="list-style-type: none"> ❖ Availability of investors ❖ Easy and can be used by all levels of the community. ❖ The demand for the community for telecommunication and data exchange increases. ❖ Government institutes and private sector depend very much on telecommunication and data exchange. ❖ Available portable/handheld communication equipment is affordable for the community. 	<ul style="list-style-type: none"> ❖ Potential of increasing criminality (fraud, theft, pick pocketing, robbery, terror, etc.). ❖ Can cause school children to neglect their duties (studying). ❖ Misuse of data exchange (pornography, etc.) ❖ No regulation available to clarify authority on telecommunication. ❖ Imbalance between existing infrastructure with newest technology development, causing equipment to be out of date before its lifetime is reached

Based on the SWOT Analyses the following Potential and Constraints can be defined:

Potential

- ❖ Telecommunication network facilitates mean easier information and data exchange.
- ❖ Availability of wide telecommunication network
- ❖ Availability of investors willing to invest in network services.

Constraints

- ❖ Low supervision on the use of communication equipment can cause criminality.
- ❖ Imbalance between existing infrastructure with newest technology development, causing equipment to be out of date before its lifetime is reached
- ❖ No regulation available to clarify authority on telecommunication.
- ❖ Human resources related to the telecommunication field are still inadequate

b) Strategy

The goal of Improving Telecommunication Services is increasing the availability of telecommunication facilities sufficient for up-to-date information exchange and affordable for all development stakeholders. Strategic interventions to achieve this include:

- ❖ Construction and development of Aceh e-Government: Improvement of quantity and quality of local telecommunication infrastructure to integrate data and service information for the public. Improvement of the administration quality of the provincial government, which is based on communication and information technology to provide information services for the public in a transparent and accountable way.
- ❖ Expansion of Internet use through education and private sector: use of the internet is still low in NAD Province, especially because the telephone tariffs are relatively high

and knowledge about using Internet is limited. Promotion is needed to improve the knowledge of the use and technical background of internet access, especially in the schools. Besides that motivation of the private sector to invest in internet provision (provider as well as Warnet).

- ❖ Expansion of network coverage to remote areas not covered by telecommunication yet: The current telephone cable network does not serve all the Regencies in NAD Province yet, but all the Regencies are already served by cellular phone (GSM Telkomsel or Indosat). Telkomsel is even trying to provide services to all Sub-Districts. The development costs of a telephone cable network are higher than those of wireless networks. Telecommunication prices via GSM are still quite high, because they are based on inter-local connections. Therefore the development of the telephone cable network is restricted to the urban areas only (until Sub-District capital level). To cover the whole area of each Regency, a CDMA (Flexi) network should be installed, which is affordable based on local connections.
- ❖ Support to telecommunication investment: Investment difficulties in Aceh which have already been discussed in the sub-chapter on economy also apply to investment in telecommunication (high inflation, unclear long term prospect). Special support to investors is therefore compulsory to ensure local investment.
- ❖ Improvement of supervision and control on the use of communication equipment: With the availability of wireless telephone facilities, several new forms of fraud/confidence tricks appeared. This criminality is difficult to trace back, especially since mobile phone cards can be purchased without identification, safeguarding the anonymity of the deceiver. To improve the safety, the provision of identity information should be made compulsory for the purchase of a mobile phone card, and in the information network some modifications should be made to trace communications back which are related to criminality.

c) Action Plan

1. Construct and develop Aceh e-Government

Development of infrastructure, an Aceh Government databank and database management at local Departments, Boards and Institutes. Infrastructure construction and information system development to support the establishment of an "Electronic Government" (e-Gov) for Aceh. Guidance of civil servants who have knowledge and experience in communication technology management and information systems. This activity will be implemented by the Electronic Data Management Board (Badan Pengolahan Data Elektronik) during the period 2008-2011.

2. Socialization to governmental/non-governmental institutions and to the community

To improve the working efficiency and effectiveness, a campaign on the use of telecommunication equipment will be socialized through mass media, and the distribution of posters and leaflets. This activity will be executed by Department of Transportation and Telecommunication, in cooperation with mass media providers like TVRI, RRI and the local newspapers. This activity is planned for the period 2008 - 2009.

3. Expansion of cable telephone network in urban areas.

The cable telecommunication network will be expanded in the urban areas (Regency capitals) with the installation of cables ready for multimedia to anticipate service improvement to internet and multimedia in the future. This activity will be executed by

3.5 Improvement of Electricity Services

a) Potentials and Constraints

PT.PLN (Persero) NAD has served the whole areas in NAD Province. To serve the community better, PLN NAD has provided branch offices at Regency and Sub-District levels.

In general, the post-earthquake/tsunami electricity situation is getting better, but the supply is still inadequate. Around 70% of the demand for electricity in NAD Province is supplied from North Sumatra System, which is still in deficit up to now, while 30% is supplied from isolated systems, with a degree of reliability that does not reach the N-1 standard, meaning the electric supply will be cut when one of the power generators is broken or under maintenance.

The condition in 2006 of electricity supply for the NAD Province is:

1. The peak load of the system is 204.5 MW, with a total production of 909.6 GWh is supplied by P3B Sumatera & Kit Sumbagut 144,3 MW (70,56%), through the 150 kV transmission network, 5 MW (2,44%) through the 20 kV distribution network of the North Sumatera area, and the rest 55,2 MW (26,99%) is supplied through isolated systems. The 7 (seven) main transmission station currently in use are 150 kV transmission stations along the east coast, which are supplied by the 150 kV Sumut-Aceh transmission system. The total peak load supplied through this system is 139,6 MW.
2. In 2006, the sale of electricity was estimated at 763,5 GWh with a composition per sector for households at 546,07 GWh (71,5%), commercial: 89,33 GWh (11,7%), industry at 41,72 GWh (5,5%), and social services at 86,74 GWh (11,4%). In terms of household connections, the electricity ratio in NAD Province in 2005 was still 78,3%.
3. Development of village electricity until the end of 2006 was able serve 5.438 villages of the 5.595 villages, so the village coverage ratio has already reached 98,33%, with a total amount of customers of 719.321. However, several main bottlenecks are faced by NAD Province Government in supporting the acceleration of the electricity sector are a limited financial capacity of the government and the remote location of high load centers from electricity generators, and the load level which is technically and economically no feasible to be serve at a large scale.
4. The electric development in NAD after the signing of the Helsinki is getting better. It is projected to increase averagely 8.5% per year during the period between 2007 and 2016. Therefore, to meet the increasing demand, it is necessary to develop new electric generators of 20 MW per year.
5. The financial performance of PLN NAD continues to make deficits since the selling price of electricity is lower than the main production cost. In 2006, PLN NAD got a deficit of Rp. 840 billion or Rp. 2.3 billion per day. The main reason of this deficit is the increase of fuel price, while the selling price of electricity remains the same at Rp. 524 / kWh.
6. NAD Province has great potentials in terms of primary energies, such as:
 - Coals: 1.7 billion tons
 - Water equals to 1,480 MW
 - Native Heat equals to 590 MW
7. Electricity service to remote areas is not yet covered by PT PLN. Several action shave been taken for the short term, among others the installation of solar panels and micro-hydro installations. The amount of solar panels which has already been distributed over 11 Regencies/cities already reached the amount of 880 units (50-120 WP) by the end of 2004. Monitored from their condition, more than 80% among them

are already out of order. The micro hydro installations, which have been constructed in several Regencies like Aceh Tengah, Aceh Tenggara, Aceh Barat, Aceh Utara and Aceh Timur almost all are suffering damage and don't function any more. This is caused by the conflict situation, causing the monitoring of the remote locations impossible.

With such potentials, it is necessary to prepare for primary energy diversification to replace fuel for electricity production. In addition, Jatropha oil (Jarak) or CPO (Crude palm oil) can also be used for electricity generation.

Based on the SWOT Analyses the following Potential and Constraints can be defined:

Potentials

- ❖ The primary energy potential has not been developed yet.
- ❖ The number of customers is increasing.
- ❖ The electricity network is spreading but there are still villages which are not covered yet
- ❖ There are still energy reserves that can be developed.
- ❖ Electricity infrastructure already covers villages far from urban areas.
- ❖ Availability of alternative energy to replace fuel at generators.

Constraints

- ❖ The electricity system of NAD Province still has a lack of power.
- ❖ The available budget for PLN to invest in additional power supply is very limited.
- ❖ The amount of fuel being used as power source needs to be reduced.
- ❖ Financial performance is still suffering deficit.
- ❖ Electricity tariffs are still below Base Production Costs (HPP).
- ❖ Base Production Costs are still high, because the whole generation system is based on fuel.

Table 3.9 SWOT Analyses Improvement Electricity Services

	Strengths	Weaknesses
Internal	<ul style="list-style-type: none"> ❖ Electricity infrastructure already covers villages far from urban areas ❖ Availability of interconnected network TL/ 150 kV Sumut – Aceh, by the end of 2007 interconnection to whole Sumatera. ❖ Availability of trained Human with adequate service facilities. ❖ The amount of costumers increases. ❖ Related to the modernization of the nation is one of the most important aspects to increase the productivity of the production sector. 	<ul style="list-style-type: none"> ❖ Topographical conditions and natural boundaries of mountains, especially in the center, cause a remote settlements distribution. ❖ Generation power is still to low, with a relative old age, causing power cuts often needed. ❖ Electricity tariffs are still under Base Production Cost ❖ Base Production Cost are still high because generation is based on fuel. ❖ Unable to serve requests for energy supply with capacities >200 kVA ❖ Financial performance are still suffering deficit.
	Opportunities	Threats
External	<ul style="list-style-type: none"> ❖ A General Plan for Power Supply for the NAD area is already available. ❖ Availability of alternative primary energy reserves is quite high. ❖ The use of fuel can be replaced with Jatropha oil and CPO. ❖ The increase in Electricity sale is still high (request for connections and industry is still high) ❖ Excess electricity can be supplied to other Provinces via the interconnected system T/L 150 kV if the power generation increase is realized according to the schedule. ❖ Construction of coal based power generators is cheap and can be done quickly. ❖ Opening of opportunities of stakeholders (cooperation private sector and industries) to supply electricity for them selves as well as for public purposes. (Kepres No. 37 Year 1992 about initiatives on electricity supply by private sector). 	<ul style="list-style-type: none"> ❖ Limitations to government budget to construct large scale generators based on alternative energy. ❖ Prices of Jatropha oil and CPO are still fluctuating and tend to increase. ❖ Motivation of IPP to invest in energy generation is still low because the electricity price is still low. ❖ Possibility of natural disaster ❖ Coal energy is not environmentally friendly. ❖ The need for electricity will increase together with economic development of the area and the population growth. ❖ There is no private sector available yet who dares to invest in electricity generation. ❖ Installations often get broken caused by natural disasters.

b) Strategy

The goal of the Electricity Services Improvement program is to supply sustainable energy in sufficient quantities to support the economic development and serve the the community's basic needs at affordable prices. Strategic interventions to achieve this include:

- ❖ Urge the Private Sector to invest in energy generation using alternative energy sources: The use of diesel as an energy source for electricity generation as currently used throughout the whole NAD Province, cannot 'revoover costs' with the electricity tariffs asked from the customers and the diesel prices applied since 2005. Moreover with the use of diesel generators which still supply 30% of the customers. Therefore an alternative sources of funding and energy needs to be found with high and sustainable capacities to serve an integrated system for Sumatra Island. Potential primary energy (coal, geothermal and hydropower) will get priority for power generation needs in NAD. Besides plantations need to be urged to produce and sell Jatropha oil (Jarak) and CPO for power generation need. A lobby is needed to NAD

Province Government to convince them to participate in investment in the power generation sector.

- ❖ Development of distribution network: Construction of distribution network to supply villages which are not covered yet to support the “75/100 program” (75 years independent, 100% electricity coverage!). Village electricity and remote areas in need for electricity will get priority for electricity generation from alternative energy sources in isolated systems.
- ❖ Increase awareness of energy saving: To decrease energy wasting, increase in awareness and knowledge on energy saving (especially electricity and fuel) and alternative energy sources is needed for all stakeholders, including government private sector as well as community.

c) Action Plan

1. Socialization to attract investors to construct large scale non-fuel power stations.

A first step to overcoming the electricity supply crisis and to start energy diversification, a feasibility study on alternative (non-fuel) energy generation in NAD will be implemented. The result of the feasibility study will be disseminated to several possible national (Indonesia Power and private sector) as well as international investors, to attract investment in Aceh. This activity will be implemented by PLN supported by “Dinas Pertambangan dan Energi” (Department of Mining and Energy) in 2008.

2. Construction of small scale steam, geothermal and micro hydro power installations at pure isolated areas and islands

Several isolated systems will be provided with small scale power generators based on alternative energy, like steam (PLTU), earth heat (PLTP) and micro hydro power (PLTMH), to reduce the role of fuel driven generators (PLTD) and at the same time accommodate the increase in customers. PLN plans to construct 3 steam generators (PLTU Meulaboh, Tapak Tuan and Blang Pidie), 1 geothermal generator (PLTP in Sabang) and 1 micro-hydro generator (PLTMH in Blang Kejeran) in the period 2007 - 2009, with a total capacity of 54 MW.

3. The use of Jatropha oil (Jarak) and CPO as alternative fuels

Jatropha oil (Jarak) and CPO as bio-diesel can with little modification be used by diesel generators as alternative fuel. PLN hopes to use Jatropha oil and CPO as replacement of diesel, but the availability of Jatropha oil and CPO is still limited, and its price is unstable. Therefore the support of local government is needed to stimulate the producers to sell Jatropha oil and CPO to PLN. This activity is planned for the year 2008.

4. Construction of new Transmission Line (T/L) and main transmission stations fro the west coast of Aceh

The construction of an 850 km Transmission Line has been planned, as part of a De-dieselization program, together with the construction of 13 additional Main Transformers between the existing transformers, as steps to improve the reliability for the community. This program will be implemented by PLN during the period 2009 - 2012.

5. Construction of Distribution Network

PLN has planned the construction of a Medium Voltage Network (MVN) with a length of 550 km, a Low Voltage Network (LVN) of 675 km and additional distribution

Transformers of 18 MVA to add about 180.000 new connections during the period 2008 - 2012. This program is part of the 100% village for electricity and improvement of the reliability to the community.

6. Implement Energy Saving Campaign

This campaign will be held through the mass media (TVRI, RRI and local newspapers), pamphlets and leaflets at public places and special meetings for all stakeholders. The Campaign will discuss several examples of energy savings and use of alternative energy. This activity will be implemented by "Dinas Pertambangan dan Energi" (Department of Mining and Energy), supported by PLN and Pertamina during the period 2008 - 2012.

d) Indicative Implementation Schedule

The Implementation Schedule for mentioned Activities can be seen in **Table 3.10** below.

Table 3.10 Implementation Schedule Improvement Electricity Services

Nr	Activity	2008	2009	2010	2011	2012
1	Socialization to attract investors to construct large scale non-fuel power stations.	■				
2	Construction of small scale steam, geothermal and micro hydro power installations at pure isolated areas and islands	■	■			
3	The use of Jatropha oil (Jarak) and CPO as alternative fuels	■				
4	Construction of new Transmission Line (T/L) and main transmission stations fro the west coast of Aceh					
5	Construction of Distribution Network	■	■	■	■	■
6	Implement Energy Saving Campaign	■	■	■	■	■

3.6 Improvement of Access to Water Supply

a) Potentials and Constraints

In 2003, NAD Province has a total of 14 PDAMs distributed in Regencies/Municipalities. Before the tsunami disaster, the general drinking water production by the local water supply companies (PDAM) in NAD Province was between 20 l/s and 425 l/s. The highest production was from PDAM Banda Aceh, PDAM Sabang, and PDAM Lhokseumawe, while those of other PDAMs were relatively small, between 20 – 60 l/s.

Until 2006 the drinking water production capacity already reached 2.706 l/s, in practice only 2.559,5 l/s, already serving 937 towns and villages or 11% of the total population of NAD Province, with 75.995 house connections. In theory with this capacity it should be possible to serve more than 45% of the population, but this is not reached because of a high leakage, which is between 37% and 60%.

Until 2006, a water supply installation was finalized with a capacity of 2.600 l/s, which served 937 towns and villages. With this production capacity, together with the existing network, the water supply network can serve 444.346 people, or 11% of the total population of NAD Province

Table 3.11 SWOT Analyses Improvement of Access to Water Supply

	Strengths	Weaknesses
Internal	<ul style="list-style-type: none"> ❖ Availability of large infiltration/catchment areas. ❖ Relative low concentration of urban population compared to the area of the Province. ❖ The availability of water supply companies (PDAM) and water supply networks at the majority of Regencies/Municipalities in NAD Province. ❖ Sufficient ground water available at the flat areas for the use of shallow wells. 	<ul style="list-style-type: none"> ❖ Wide and distributed rural areas make high investments needed to develop water supply networks. ❖ Several Regencies don't have a water supply company (PDAM) yet and at other Regencies the institution is still a board (BPAM). ❖ The Water supply network is damaged by the earthquake and tsunami. ❖ The operational budget is higher than the income from retributions. ❖ Shallow wells are getting polluted and brackish. ❖ The available water is not always in accordance to the need, both in quantity and quality.
	Opportunities	Threats
External	<ul style="list-style-type: none"> ❖ Mobilization of the many donors currently active in NAD, which are eager to support in programs to improve water supply and sanitation (USAID ESP, etc.) ❖ The increase for request for water supply ❖ Privatization of water supply management ❖ Community participation to construct and operate water supply systems. ❖ Assure a major portion of the water need for public purposes. ❖ Preparation of a local decree (Qanun) on water resources. ❖ Use of sea water as water source by applying osmosis techniques. 	<ul style="list-style-type: none"> ❖ Coordination between so many donors is difficult ❖ The occurrence of several diseases related to the shortage of water. ❖ The threat of a water crisis, which is a hot topic remembered each year with the World Water Day on 21 March.

Based on the SWOT Analyses the following Potential and Constraints can be defined:

Potential

- ❖ Maximum utilization of available water treatment capacity.
- ❖ Extension of water supply coverage area.
- ❖ Extension of house connections to water supply network.

Constraints

- ❖ Low quality of Human Resources is water supply sector.
- ❖ Low maintenance of water supply infrastructure and facilities.
- ❖ Low availability of water supply infrastructure and facilities in drinking water shortage areas.

b) Strategy

The Goal of Access to Water Supply Improvement is to provide water in sufficient quantity and quality for economic activities and to provide drinking water of a reasonable quality and at an affordable price for the whole community. With the support of the local governments, by the year 2012 this program will serve 60% of the population in the urban areas, and 45% in the rural areas, with a water quality which is ready for consumption. Strategic interventions to achieve this include:

- ❖ Protection of water infiltration areas (protected forest): The availability of naturally conserved water is decreasing because of the shrinking protected forest. Therefore to ensure the availability of water in the future, the infiltration areas need to be protected (Activities for this strategy are already discussed in detail in sub-chapter 2.5).
- ❖ Improvement of water supply companies in all Regencies/cities: The majority of water supply companies (PDAM) in NAD Province are still small, in some cases are still a board (BPAM) or even don't exist at all. This strategy targets the establishment of water supply institutions in all the Regencies/Municipalities to the status of company (PDAM), with an efficient performance according to the standards.
- ❖ Improvement of PDAM service delivery in urban, vital economic and drinking water shortage areas: To support the economic development, the availability of water supply in economic vital areas, like urban centers, industrial areas, harbors, airports and tourism areas need to be ensured. Furthermore, priority will also be given to tsunami affected networks which are not rehabilitated yet, and drinking water shortage areas.
- ❖ Improvement of the quality of water sources in rural areas: There is a need to support the rural communities which are not served by the water supply companies. This support can be in the form of dissemination, the construction of public taps, or support in the construction of water supply networks which will be operated by the community itself.

c) Action Plan

1. Monitoring and guidance of water supply companies (PDAM):

This activity supports the upgrading water supply boards (BPAM) into water supply companies (PDAM) in 3 Regencies and the establishment of new water supply companies (PDAMs) in Regencies/Municipalities which don't have them yet (in 2 Regencies). Furthermore existing water supply companies (PDAMs) will receive support to increase their performance, through reorganization support and training activities (in all 21 Regencies / cities). Implementation of this program will be done by Dinas Perkotaan dan Permukiman (Department of Urbanization and Settlements) during the period 2008 - 2012.

2. Rehabilitation/Reconstruction of installations, pipe network and customer connections

The majority of the water supply networks that have been damaged by the tsunami have been rehabilitated, or are under reconstruction at the moment. Networks which can still be rehabilitated and for which there is no program yet, will be reconstructed with aid from the provincial government. It is estimated that during the period 2008 - 2009 Dinas Perkotaan and Permukiman (Department of Urbanization and Settlements) in cooperation with the local water supply companies (PDAM) will need to install new pipelines of about 100 km long.

3. Construction of water supply infrastructure and facilities at economically vital and drinking water shortage areas

To support the economic development, the water supply network will be developed in the economic vital areas and water shortage areas. It is estimated that during the period 2009 - 2012 Dinas Perkotaan dan Permukiman (Department of Urbanization and Settlements) in cooperation with the local water supply companies (PDAM) will need to install new pipelines of about 250 km long.

4. *Increase the availability of good quality drinking water in rural areas*

The program to increase the good quality drinking water in the rural areas will be implemented through community participation. Depending on the preparedness of the community, and the water resources available, this program can be in the form of (1) improvement of well qualities or water tanks (PAH) of the community, (2) the provision of public taps (together with sanitation facilities: "PUBLIC TOILET/BATHHOUSE (MCK)") and (3) the provision of community based water supply networks. This program will be implemented by Dinas kesehatan (the Health Department), in cooperation with Dinas Perkotaan dan Permukiman (Department of Urbanization and Settlements) during the period 2008 - 2012.

d) Indicative Implementation Schedule

The Implementation Schedule for mentioned activities can be seen in **Table 3.12** below.

Table 3.12 Implementation Schedule Improvement of Access to Water Supply

No	Activity	2008	2009	2010	2011	2012
1	Monitoring and guidance of water supply companies (PDAM)					
2	Rehabilitation/Reconstruction of installations, pipe network and customer connections					
3	Construction of water supply infrastructure and facilities at economic vital and drinking water shortage areas					
4	Increase the availability of good quality drinking water in rural areas					

3.7 Development of Irrigation and Drainage System

3.7.1 Irrigation

a) Potentials and Constraints

There are 15 river catchment areas in NAD Province. The biggest one is the area of Sungai Lawe Alas with a total area of 7,557 km² of the total area of 55,852 km² in Sabang, Simeulue, and Banyak Island in the west. The most populated areas are found in the Aceh Besar Regency and in Banda Aceh City. In general, the rivers are short and steep, especially the rivers downstream along the west coast. The west coastal area is the wettest area where the highest rainfall is 3,500 mm/year, while the mountain area has higher rainfall of about 5,000 mm/year. In the north coastal area, the rainfall is lower with an average rainfall of only 1,200 mm/year. There 15 DAS (catchment area) in NAD Province, namely: DAS Pase, DAS Jambu Aye, DAS Kluet, DAS Krueng Aceh, DAS Krueng Baro, DAS Merbau, DAS Meureude, DAS P.Weih, DAS Peureulak, DAS Peusangan, DAS Sabe Geupe, DAS Simeulue, DAS Singkil, DAS Teunomwoyla, and DAS Tripee Batee

NAD Province is rich in water resources and most of the rice fields are served by irrigation infrastructure. The Province has 465 irrigation areas with a total area of 318,681 ha and with a total asset value of Rp. 5.1 trillion. Around 45% of the rice fields have technical irrigations, 12% - semi technical irrigation, and 43% - simple irrigation. Small irrigation areas are usually located along the west coast and in the highlands, while the extensive irrigated areas are located in the north and east coast. Of the total irrigated areas, only 70% functions properly, while the remaining 30% doesn't function because the networks have not been completed or because of degradation caused by poor maintenance.

With the launching of regulation Nr. 07 of 2004 on water resources, authority and responsibility of the central government and local government in irrigation management is divided based on the size of the irrigation areas. The authority and responsibility of the central government lies on irrigation areas larger than 3000 Ha, the provincial government between 1.000 until 3.000 Ha and the regional government for areas smaller than 1.000 Ha.

With the topographical conditions which are mountainous and hilly, NAD Province has several areas with good potential for constructing reservoirs. Until now 5 dams have already been constructed and 1 lake. One of the locations which has good prospects for the construction of a dam is the downstream catchment area of DAS Jambo Aye in Aceh Utara Regency. Based on a feasibility study, which is prepared by Rendel Williamson Hydro consultant, Randel Parkman and Kennedy & Donkin, the specific location has a potential storage capacity of 4.170.000.000 m³ which can be used for irrigation, urban water supply and electricity generation with a capacity of 160 Mega Watt. Other important reservoir potentials include Rukoh in Pidie Regency with a potential storage capacity of 142.473.000 m³ which could solve water shortage problems in the Baro Raya irrigation area (19.280 Ha), and Keumuning lake in Langsa to solve flooding and water supply problems.

Table 3.13 SWOT Analyses Development of Irrigation System

	Strengths	Weaknesses
Internal	<ul style="list-style-type: none"> ❖ Available irrigated area is already large ❖ The major part of the irrigated area is already technical or semi-technical ❖ Peasant organizations are already available and trained ❖ Experts in irrigation sufficiently available ❖ New technologies are available for irrigation which consume less water but produce more 	<ul style="list-style-type: none"> ❖ Still low motivation to plant more than once a year in several areas with good irrigation systems ❖ Limited availability of basic data (hydrological data) ❖ Peasant organizations are not yet available over the whole Province ❖ Pasca tsunami, many irrigation areas and infrastructure are damaged and filled with mud, part of it can economically not be put back in function
	Opportunities	Threats
External	<ul style="list-style-type: none"> ❖ National Government policy supports the development of irrigation to fulfill the national demand on rice ❖ Agricultural potential area is still large ❖ Intensity of agricultural productive areas can still be increased ❖ Still a big market available for rice commodities 	<ul style="list-style-type: none"> ❖ Flood and draught disasters ❖ The amount of peasants in potential irrigation areas is still low ❖ Conversion of rice field area in other land use purposes ❖ Transformation from agricultural community into industrial community

Based on the SWOT Analyses the following Potential and Constraints can be defined:

Potential

- ❖ Development and construction of check dams / lakes to control the river discharge.
- ❖ Normalization of rivers and construction of river embankments
- ❖ Development of irrigation areas
- ❖ Improvement of irrigation areas
- ❖ Construction of irrigation infrastructure

Constraints

- ❖ Not all potential rice field areas have been surveyed yet

b) Strategy

The Goal of Development of Irrigation System is to increase the quality of irrigation water distribution management to support the agriculture sector's economic development. Strategic interventions to achieve this include:

- ❖ Protection of the availability and quality of water resources (protected forest): Conservation, control of damaging factors and guarantee of water reserves during the dry season. The availability of naturally conserved water is decreasing because of the shrinking protected forest. Therefore to ensure the availability of water in the future, the infiltration areas need to be protected (Activities for this strategy are already discussed in detail in sub-chapter 2.5).
- ❖ Preparation of irrigation system inventory and development plan: Accurate data collection of potential areas and areas which have already been developed for irrigation, including existing problems in the field. Phased planning of undeveloped potential areas according to priority scaling.
- ❖ Rehabilitation and development of existing irrigation systems: Repair of irrigation infrastructure damaged by tsunami and other causes. Routine maintenance of existing irrigation infrastructure, to safeguard effectively and efficiency. Increase of technical irrigated area.
- ❖ Development of potential irrigation area: After the existing irrigation area has been improved, there is still the possibility to convert dry agricultural land in wet agricultural land, or open new irrigation areas. This conversion needs to be done with close concern on possible impacts to the ecosystem and with clear regulations.
- ❖ Improvement of organization and cooperation of irrigation water distribution management: Increase of amount and quality of peasant organizations, equally distributed. Increase of technical knowledge of peasants and irrigation field personnel.

c) Action Plan

1. Preparation of irrigation system inventory

Draw up an accurate inventory of potential areas and areas which have already been developed for irrigation, including existing problems in the field, followed by routine data updating. This inventory will be implemented by the Department of Water Resources (Dinas Sumber Daya Air) in 2008, and the routine update will be carried out each following year.

2. Preparation irrigation system development plan

Implement a study and phased detailed plan for undeveloped potential areas according to priority scaling. This activity will be implemented by the Department of Water Resources (Dinas Sumber Daya Air) in 2008.

3. Rehabilitation and development of existing irrigation system

Because the major part of the irrigated area is located on the coastal planes, the damage to the systems by the tsunami is relatively serious. Part of the rehabilitation of the systems has already been implemented. This activity will focus on the rehabilitation as well as development of the irrigation system which still can be repaired. This activity will be implemented by the Department of Water Resources (Dinas Sumber Daya Air) during the period 2008 - 2012.

4. Preparation and implementation of regulations on land use function change

Prepare a local regulation (Qanun) on land use conversion including law enforcement. This activity will be implemented by the Department of Water Resources (Dinas Sumber Daya Air) during the period 2009 - 2010.

5. Improvement and construction of technical irrigation network

The potential to develop existing irrigation areas in NAD Province, should be used to increase the agricultural production. This program will start with the monitoring of potential irrigation areas, followed by the development of at least 5 new irrigation systems (including dams, channels and division gates). This activity will be implemented by the Department of Water Resources (Dinas Sumber Daya Air) during the period 2011 - 2012.

6. Monitoring and repair of existing irrigation systems and its management

To optimize the water use in the existing irrigation areas, an assessment should be made of the condition and the water management system of the existing irrigation areas. The main focus for this assessment is to improve the operation and maintenance of the irrigation system. Also special attention will be given to prepare for diversification of the use of irrigation water to other forms of agriculture, besides rice fields. Based on this assessment, a recruitment and training of irrigation field personnel will be implemented (management and gate operators) in all Regencies of NAD Province. This activity will be implemented by Dinas Sumber Daya Air (Department of water Resources) together with Dinas Pengairan (Irrigation Department) of each Regency during the period 2008 - 2009.

7. Quality improvement and extension of Water User Groups (P3A)

Provide guidance and increase the amount and the quality of peasant organizations evenly distributed over the Province, including training to improve the technical knowledge of the peasants. This activity will be implemented by Dinas Pengairan (Irrigation Department) of each Regency during the period 2010 - 2012.

d) Indicative Implementation Schedule

The Implementation Schedule for mentioned Activities can be seen in **Table 3.14** below.

Table 3.15 SWOT Analyses Development of Drainage System

	Strengths	Weaknesses
Internal	<ul style="list-style-type: none"> ❖ Existing drainage network in ± 50 % of the total need in each city ❖ Availability of work unit to handle urban and settlement drainage construction ❖ Availability of urban drainage outline plan ❖ Sufficient availability of experts in water resources 	<ul style="list-style-type: none"> ❖ Existing drainage network still discontinuous ❖ Limited available budget to develop drainage sector ❖ Many Regencies/Municipalities don't have a drainage master plan yet ❖ Lack of maintenance/cleaning by involved institutions result in shallow rivers/channels (sedimentation) ❖ Community knowledge on sustainable water resource management is still low. ❖ The downstream slopes of rivers are quite small. ❖ Limited availability of basic data (hydrological data). ❖ Insufficient capacity of urban drainage network.
	Opportunities	Threats
External	<ul style="list-style-type: none"> ❖ Availability of technical assistance ❖ Availability of support from local governments in drainage construction ❖ Increase of inundation area caused by elevated road and drainage in settlement areas. ❖ Some urban areas still don't have drainage networks ❖ Rivers can be used as outlet for the drainage network. ❖ Construction of flood protection infrastructure in the urban areas. ❖ Construction of ponds to control river discharge. ❖ Construction of dams and ponds to control sediment. 	<ul style="list-style-type: none"> ❖ Difficult control of deforestation in catchment areas (DAS) ❖ High discharges of rivers in rainy season and very low discharges in dry season ❖ Global climate change which causes global warming and also has its impact on the rainfall. ❖ Lack of community awareness of function of drainage and the need for environmental protection ❖ Lack of pumping stations to discharge drainage water during high tides and rain caused floods. ❖ No good coordination yet to handle drainage by involved departments ❖ Disposal of solid waste to water bodies and flood channels. ❖ Illegal construction of houses/buildings in river beds. ❖ Sedimentation of channels, Palung and Muara Rivers influence the water flow during floods very much.

Based on the SWOT Analyses the following Potential and Constraints can be defined:

Potential

- ❖ The drainage network of the urban area needs integrated extension.
- ❖ Rivers can be used as outlet for the drainage network.
- ❖ Development and construction of dam / ponds to control river discharge.
- ❖ Capacity building of institutions involved in drainage.
- ❖ Construction of flood protection infrastructure in the urban areas.

Constraints

- ❖ An integrated urban drainage master plan is not available yet.
- ❖ Low community awareness of about the need to not dispose of waste in drainage channels.

- ❖ Lack of maintenance of drainage network.
- ❖ Illegal constructions in river beds.

b) Strategy

The Goal of Drainage System Development is to decrease the occurrence and impacts of floods. Strategic interventions to achieve this include:

- ❖ Protection and improvement of river catchment areas (DAS) and protected forest: Floods and sedimentation of rivers occur mainly because of forest cutting in the upstream area. Therefore catchment area protection is needed for long term flood control, together with steps to reduce erosion (Activities for this strategy are already discussed in detail in sub-chapter 2.5).
- ❖ Improvement of community awareness and knowledge on the need for living environment protection, sustainable water resource management and the connection and use of water bodies and infrastructure (construction of rainwater infiltration wells and sanitation facilities, connection to drainage, irrigation or water supply networks).
- ❖ Improvement of river capacity to store and discharge excess amounts of water: River capacity increase can be done by dredging of sediment which hampers the flow and by the provision of retention ponds or areas as discharge regulators. Also attention is needed to construct flood protection facilities for economic vital areas and settlements.
- ❖ Improvement of drainage network: Available drainage network in the majority of Regencies/Municipalities is net well planned and maintained. The function of a drainage network is to discharge rainwater to the nearest water body, in order to avoid inundation of economic vital and settlement areas. Therefore a program is needed to prepare integrated drainage master plans together with a program on rehabilitation and improvement of the drainage network.
- ❖ Improvement of operation and maintenance of drainage network: Improvement of the performance of operation and maintenance of drainage infrastructure, especially in urban areas, together with program synchronization with the solid waste sector, where the infrastructure of both sectors is often near to each other and is potential to reduce the drainage performance.

c) Action Plan

1. Implementation of socialization campaign make the community aware of the functions and the use of water infrastructure

Implement guidance and socialization to the community to construct infiltration wells for rainwater from roofs, construct septic tanks for waste water and to dispose of waste in its right place. This campaign will be implemented in each Regency/Municipality by the Provincial Department of Urbanization and Settlements (Dinas Perkotaan and Permukiman), in cooperation with the local Settlement Section of Public Works (PU Cipta Karya) during the period 2008 - 2012.

2. Dredging and cleaning of rivers and drainage channels.

The discharge capacity of rivers and most of the drainage channels is hampered by sediment, resulting from tsunami and lack of maintenance. In the current tsunami rehabilitation activities this problem has not yet received much attention, and therefore will need special activities to dredge the main rivers and to clean and rehabilitate the drainage channels. This activity will be implemented in the rivers and

main drainage channels by Dinas Sumber Daya Air (Department of Water Resources) during the period 2008 - 2012, and the drainage channels in the settlements by the Provincial Dinas Perkotaan and Permukiman (Department of Urbanization and Settlements), in cooperation with the local Settlement Section of Public Works (PU Cipta Karya) during the period 2008 - 2010.

3. Construction of flood control infrastructure.

Based on case reporting and topographical information of the area, an identification of flood prone areas shall be made. For each case, the cause needs to be identified, together with the method to solve the problem. There will be cases inundation occurs because of bad functioning drainage system, but also cases where special actions are needed. This activity will be implemented on regular basis by the Provincial Department of Urbanization and Settlements (Dinas Perkotaan and Permukiman), in cooperation with the Provincial Department of Water Resources (Dinas Sumber Daya Air) and the local Settlement Section of Public Works (PU Cipta Karya) during the period 2008 - 2012.

4. Preparation of integrated drainage system master plan

Drainage channels are normally built as accessories to roads (by Bina Marga), accessories to irrigation (by pengairan) or accessories to settlement areas (by Cipta Karya). They each build their drainage channels with their own design standards and dimensions, and in most cases do not take the size of the catchment areas into account. Therefore for each Regency/Municipality a drainage network inventory needs to be made of the existing system, followed by the preparation of a drainage master plan. This activity will be implemented by the Provincial Department of Urbanization and Settlements (Dinas Perkotaan and Permukiman), in cooperation with the Provincial Dinas Sumber Daya Air (Department of Water Resources) and the local Settlement Section of Public Works (PU Cipta Karya) during the period 2008 - 2010.

5. Construction of new drainage channels in settlement areas which don't have a network yet.

Based on the drainage master plan, construction of new drainage channels is needed and improvement of other channels. This activity will be implemented by Settlement Section of Public Works (PU Cipta Karya) of each Regency/Municipality, where needed supported by the Provincial Department of Urbanization and Settlements (Dinas Perkotaan and Permukiman). Implementation of this program is planned for the period 2010 - 2012.

6. Improvement of drainage network maintenance activities

The construction of drainage channels is normally done by Dinas PU (Public Works Department), whether this is Seksi Pengairan (Irrigation Section), Seksi Jalan (Roads Section) or Seksi Cipta Karya (Settlement Section). However, operation and maintenance is normally only executed by the Irrigation Section. This Section mainly maintains the irrigation channels and rivers, not the drainage channels. This activity will start a clear decision on which institution is responsible for the maintenance of drainage channels, followed by the preparation of this institution for the execution of this task, complete with routine budget for continues maintenance. This decision needs to be prepared in each Regency/Municipality, and is hoped to be declared in the year 2008, so the institutions can be mobilized and start operation in 2009.

d) Indicative Implementation Schedule

The Implementation Schedule for mentioned Activities can be seen in **Table 3.16** below.

Table 3.16 Implementation Schedule Development of Drainage System

No	Activity	2008	2009	2010	2011	2012
1	Implementation of socialization campaign make the community aware of the functions and the use of water infrastructure	■	■	■	■	■
2	Dredging and cleaning of rivers and drainage channels.	■	■	■	■	■
3	Construction of flood control infrastructure.	■	■	■	■	■
4	Preparation of integrated drainage system master plan	■	■	■		
5	Construction of new drainage channels in settlement areas which don't have a network yet.			■	■	■
6	Improvement of drainage network maintenance activities	■	■	■	■	■

3.8 Development of Sewage and Sanitation Facilities

a) Potentials and Constraints

The existing data about human waste management only show the percentage of latrines and septic tanks. They are still raw data at a provincial level, where 75% of the urban people in NAD Province are identified as having access to latrines and 70% to treatment facilities, such as septic tanks (43%) or leaching pits (27%). Communal facilities like Public Toilet/Bathroom (MCK) or Communal Treatment facilities are rarely used in Aceh. The rest discharges the sewage directly, without treatment to, into the environment (river, channel, rice fields, bare land, etc.).

To anticipate the sewage volume, especially from human waste, which increases together with the increase of population, desludging services of septic tanks with vacuum trucks are needed, together with sewage treatment installations (IPLT). Until 2006 there were only 3 IPLT units that were still working properly (Banda Aceh City, Lhokseumawe and Bireuen), for the other Regencies they are non-existent (16 Regencies/Municipalities) or are non-operational (3 Regencies/Municipalities).

Based on the SWOT Analyses (see table below) the following Potential and Constraints can be defined:

Potential

- ❖ Improvement of 6 existing sewage treatment installations (IPLTs).
- ❖ Improvement of the effectiveness and efficiency of the fleet of operational vacuum trucks
- ❖ Improvement of the role of private sector in wastewater collection and treatment.

Constraints

- ❖ Provision of sanitation facilities often get a low priority
- ❖ No sewerage system is available yet, especially for crowded settlement areas.
- ❖ Limited availability of public toilet/bathroom (MCK) or communal treatment facilities for areas of low income population.

Table 3.17 SWOT Analyses Development of Sewage and Sanitation Facilities

	Strengths	Weaknesses
Internal	<ul style="list-style-type: none"> ❖ Sludge treatment installations (IPLT) are available in 6 Regencies/Municipalities ❖ A vacuum truck armada is available ❖ Availability of professional human resources in wastewater treatment 	<ul style="list-style-type: none"> ❖ No management institutions exist yet which specially handles wastewater problems. ❖ Low availability of vacuum trucks compared to service coverage. ❖ Low volume of existing public toilet/bathhouse (MCK) or communal treatment facilities ❖ Non-existence of Sludge Treatment Installations (IPLT) and sewerage systems in most of the Regencies/Municipalities
	Opportunities	Threats
External	<ul style="list-style-type: none"> ❖ Population growth and appearance of significant new settlement areas add potential new service area. ❖ Mobilization of private sector to provide desludging and sewage treatment services ❖ Construction of proper Sludge Treatment Installations (IPLT) at Regencies/Municipalities which don't have them yet 	<ul style="list-style-type: none"> ❖ The bad habit of the community to discharge wastewater to public places ❖ Low maintenance of existing facilities.

b) Strategy

The Goal of Development of Sewage and Sanitation Facilities is the protection of surface water and ground water quality. Strategic interventions to achieve this include:

- ❖ Improving community awareness of environment cleanliness: The main reason for low quality and maintenance of sanitation facilities is often the low awareness and knowledge on these facilities.
- ❖ Improving wastewater treatment: The majority of the existing sanitation facilities infiltrate (partly treated) wastewater into the ground, with the risk of polluting the groundwater, especially in densely populated areas. Therefore steps are proposed to improve the quality of the wastewater treatment facilities. In the high populated areas where most of the households don't have facilities yet, communal facilities like Public Toilet/Bathhouse (MCK) or communal treatment facilities can be implemented.
- ❖ Provision of vacuum trucks and Sludge Treatment Installations (IPLTs): Because almost all sanitation facilities use on-site treatment facilities, desludging services (with vacuum trucks) and sewage treatment become a main priority.

c) Action Plan

1. Increase community awareness of environment cleanliness through socialization programs

Over the whole period 2008 until 2012 a campaign will be held to improve the awareness of about sanitation facilities. This campaign will be implemented by the

Health Department (Dinas Kesehatan), via a mass media campaign (TVRI, local radio and local newspapers), and via the distribution of leaflets and pamphlets at public places (hospitals, clinics, government offices and village offices). This activity is a routine activity which will be implemented over the whole period of 2008 - 2012.

2. Improvement of household wastewater treatment with on site facilities

Several pilot projects will be implemented to demonstrate on the construction of good quality sanitation facilities. For urban areas with high densities, the community will be given a choice between the construction of public toilet/bathroom (MCK), communal treatment facilities, or on-site septic tanks based on a revolving fund mechanism. In the rural areas with low population densities, this program will be implemented with only choices between constructions of leaching pits or septic tanks with infiltration facilities, both based on a revolving fund mechanism. This activity will be implemented by the Hygiene Department (Dinas Kebersihan) or the Public Works Settlement Section (PU Cipta Karya) in cooperation with local NGOs in the period 2008 - 2012.

3. Increase service to areas which are not covered yet, by extending vacuum truck armada.

For each Regencies/Municipalities where no desludging service with vacuum trucks exists, minimal 2 new vacuum trucks will be purchased, which will be operated by the Hygiene Department (Dinas Kebersihan) or the Public Works Department (Dinas Pekerjaan Umum) with commercial desludging tariffs (2008 and 2009). It is hoped that with these examples, the private sector will start to provide its own desludging services (2010 until 2012).

4. Construction of Sludge Treatment Installations (IPLTs) at Regencies/Municipalities which don't have them

Sludge needs treatment before its effluent can be discharged to the environment. Therefore Sludge Treatment Installations (IPLTs) need to be constructed. A logical location for this would be at a solid waste disposal site (TPA), because they are normally far enough from settlements, so incidental smell does not become a problem. And the effluent of the IPLT can further be treated in leachate treatment facilities of the landfill. The construction and management of the IPLT will be the task of the Hygiene Department (Dinas Kebersihan) or the Public Works Department (Dinas Pekerjaan Umum), and is planned for the period 2008 - 2010.

5. Implementation pilot program on routine desludging of septic tanks

The treatment efficiency of septic tanks depends on the volume of the fluid portion available in the septic tank. People often only start thinking of desludging the septic tank, if the facility starts to become clogged, and in thus in fact already does not function well for a long time. To ensure routine desludging, a pilot project will be implemented, where areas in 2 or 3 cities a database of septic tanks will be build, with the purpose to offer 'desludging services', which are developed through 'membership' contributions. This program will be implemented by the Hygiene Department (Dinas Kebersihan) or the Public Works Department (Dinas Pekerjaan Umum) during the period 2011 - 2012.

6. Integration of quality sanitation facility construction as a prerequisite for a building permit (IMB)

To motivate the construction of good quality sanitation facilities (minimum septic tanks) by the community or private sector, the construction of these facilities should become a prerequisite for a building permit (IMB). To achieve this a regulation will need to be added to the procedure to arrange a building permit (IMB). This program will be implemented by the Public Works Settlement Section (PU Cipta Karya) during the period 2008 - 2010.

d) Indicative Implementation Schedule

The Implementation Schedule for mentioned Activities can be seen in **Table 3.18** below.

Table 3.18 Implementation Schedule Development of Sewage and Sanitation Facilities

No	Activity	2008	2009	2010	2011	2012
1	Increase community awareness of awareness of environment cleanliness through socialization programs					
2	Improvement of household wastewater treatment with on site facilities					
3	Increase service to areas which are not covered yet, by extending vacuum truck armada.					
4	Construction of Sludge Treatment Installations (IPLTs) at Regencies/Municipalities which don't have them					
5	Implementation pilot program on routine desludging of septic tanks					
6	Integration of quality sanitation facility construction as a prerequisite for a building permit (IMB)					

3.9 Development of Solid Waste Management

a) Potentials and Constraints

Solid waste management in urban areas is usually under the responsibility of the Hygiene Department (Dinas Kebersihan) and is partly still managed by the Public Works Department (Dinas Pekerjaan Umum) of the Regencies/Municipalities. This department is responsible for the solid waste collection from housing settlements, commercial areas public facilities, and services areas (currently only $\pm 25\%$). The cities like Banda Aceh and Lhokseumawe already have their own Final Disposal Sites (TPA) using controlled landfill management. Via Dinas Perkotaan and Permukiman of Nanggroe Aceh Darussalam Province, aid in the form of equipment like transfer depots (TPS), containers, arm-roll trucks, waste trucks, handcarts and bulldozer has already been provided.

Based on the SWOT Analyses (see table below), the following Potential and Constraints can be defined:

Potential

- ❖ Extension of coverage to areas which are not served yet by solid waste collection services.
- ❖ Extension of operational management of solid waste collection, because a lot of waste is still not collected from high population density areas.
- ❖ Involvement of private sector in waste recycling and solid waste management.
- ❖ Improvement of consistent implementation of local regulation on solid waste management.

Constraints

- ❖ Low community awareness and knowledge on environment cleanliness and household level waste management.
- ❖ Solid waste management often gets a low priority during budgeting preparations, although its operation and maintenance costs are quite high.
- ❖ Weak maintenance of solid waste facilities and infrastructure.

Table 3.19 SWOT Analyses Development of Solid Waste Management

	Strengths	Weaknesses
Internal	<ul style="list-style-type: none"> ❖ The availability of suitable final disposal site (TPA) for several cities ❖ The availability of solid waste collection armada and sufficient temporary disposal sites 	<ul style="list-style-type: none"> ❖ Limited availability of solid waste management facilities and infrastructure. ❖ Low availability of experts in solid waste management. ❖ Lack of operational budget ❖ Low level of solid waste management ❖ Low community awareness of environmental cleanliness
	Opportunities	Threats
External	<ul style="list-style-type: none"> ❖ Availability of local regulation on solid waste management. ❖ Availability of technical and implementation guidelines (Juknis and Juklak) on solid waste management. ❖ Availability of institutions responsible for urban solid waste handling ❖ Still a lot of waste to be collected from settlement areas with high population densities. ❖ Population growth and significant new settlement area development result in solid waste volume increase. 	<ul style="list-style-type: none"> ❖ Weak implementation of local regulations on solid waste handling. ❖ Lack of socialization of household level waste management ❖ Human resource management at Dinas Kebersihan (Cleanliness Department) is not optimal yet. ❖ Minimum maintenance of existing facilities and infrastructure.

b) Strategy

The goal of Solid Waste Management Development is the protection of a clean and healthy environment and the reuse of waste which still has value. By 2015, it is hoped that all Regencies/Municipalities will provide Final Disposal Sites (TPA), so that 60% of the urban garbage is collected. Strategic interventions to achieve this include:

- ❖ Improvement community awareness of environmental cleanliness: Consolidation of a clean urban area is very difficult if the community has no awareness of environmental cleanliness, sources of waste and environmental friendly waste management. Socialization is needed, to avoid irresponsible behavior by the community in littering, waste burning, waste disposal into waterways and the like.
- ❖ Improvement solid waste management capacity with the purchase of supporting solid waste operational equipment: Improvement of urban waste management, starting from household level until final disposal. Waste collection services in urban areas need to be increased, especially in economic vital, highly populated and environmental sensitive areas.
- ❖ Improvement of human resources in solid waste management sector: Human resources with experience in management or planning in the solid waste sector is still very limited in the Regencies/Municipalities of NAD Province and the motivation of civil

servants to be active in this field is also low. Therefore special attention is needed to increase the human resources of this sector.

- ❖ Improvement of community awareness and ability in waste management: Community participation is not only needed passively, (not littering, avoidance of use of plastic, etcetera), but also actively, via participation in recycling and waste collection activities.
- ❖ Improvement of recycling activities , especially in rural areas: Rural areas are too extensive to be served by intensive waste collection. In these areas recycling initiatives (at a household level as well as at a business level) need to be promoted, like recycling enterprises and composting from organic waste. The residue of waste which really cannot be recycled will still need to be collected on a monthly basis.

c) Action Plan

Activities planned for Solid Waste Management Development for the period 2008-2012, including their descriptions are:

1. Campaign to increase community awareness

During the whole period of 2008 until 2012 an awareness improvement campaign will be held on solid waste management and the “3Rs” (reduce, reuse, recycle). This campaign will be implemented by the Hygiene Department (Dinas Kebersihan) or the Public Works Department (Dinas Pekerjaan Umum), via a mass media campaign (TVRI, local radio and local newspapers), and via an announcement car.

2. Increase solid waste management capacity with the purchase of supporting waste collection equipment.

To support the Hygiene Department (Dinas Kebersihan) in waste collection service, complete equipment will be purchased, like vehicles (... compacting trucks, ... dump trucks and ... arm-roll trucks), waste containers (... units) and handcarts (...). This activity will be implemented by the Hygiene Department (Dinas Kebersihan) or the Public Works Department (Dinas Pekerjaan Umum) during the whole period of 2008 - 2012.

3. Improvement and extension of Final Disposal Site (TPA)

In the three Regencies/Municipalities which don't have Final Disposal Sites (TPA) yet (Aceh Besar (?), Gayo Lues and Sabang) new Disposal sites will be build. In the other Regencies/Municipalities, the existing disposal sites will be improved, in order to fulfill the standards of sanitary landfill, and will be expanded. Improvement of the Final Disposal Site will include the construction of a drainage system and leachate treatment, venting systems, and cover soil storage. This activity will be implemented by the Hygiene Department (Dinas Kebersihan) or the Public Works Department (Dinas Pekerjaan Umum) during the period 2010 - 2012.

4. Improve human resources in sold waste management.

An assessment of civil servants from local government Regencies/Municipalities will be made to select participants for training on solid waste management and planning by maximizing the coverage area and empowerment of the personnel. This activity will be coordinated by the Provincial Urban and Settlement Department (Dinas Perkotaan and Permukiman), with participants from the Hygiene Department (Dinas Kebersihan) or the Public Works Department (Dinas Pekerjaan Umum) and the Environmental Department (Dinas Lingkungan Hidup) of the Regencies/Municipalities, during the period 2008 - 2010.

5. Improve knowledge and extend awareness of the community about solid waste management.

In several villages distributed over all the Regencies/Municipalities (per Regency 1 village) a pilot project on cleanliness will be implemented, which starts with a socialization program on recycling for the community, followed by the motivation of some community leaders to start communal waste recycling or composting activities. In this village also a temporary waste disposal site will be constructed, which will only be used for remaining waste (dry), which will be collected on a monthly basis. This activity will be implemented by the Hygiene Department (Dinas Kebersihan) during the period 2011 - 2012.

6. Socialization of funding structure in waste handling and drainage;

Development of a waste retribution system to cover operational costs of waste collection. This activity will be implemented by the Hygiene Department (Dinas Kebersihan) or the Public Works Department (Dinas Pekerjaan Umum) in the Regencies/Municipalities which do already collect waste during the period 2011 - 2012.

7. Improvement of the management quality of Final Disposal Site (TPA) with sanitary landfill system standards for urban areas

The majority of Final Disposal Sites is still managed as an open dumping site. To improve the environmental conditions around the disposal sites, the management of the disposal sites will be improved in each Regency/Municipality. This activity will be implemented by the Hygiene Department (Dinas Kebersihan) or the Public Works Department (Dinas Pekerjaan Umum) in the Regencies/Municipalities which do already collect waste during the period 2010 - 2012.

8. Preparation of feasibility study on the use of a WTE-incinerator (waste to energy) in waste management

This study will be implemented by the Hygiene Department (Dinas Kebersihan) or the Public Works Department (Dinas Pekerjaan Umum) during the period 2011 - 2012.

d) Indicative Implementation Schedule

The Implementation Schedule for mentioned Activities can be seen in **Table 3.20** below.

Table 3.20 Implementation Schedule Development of Solid Waste Management

No	Activity	2008	2009	2010	2011	2012
1	Campaign to increase community awareness					
2	Increase solid waste management capacity with the purchase of supporting waste collection equipment.					
3	Improvement and extension of Final Disposal Site (TPA)					
4	Improve human resources in sold waste management.					
5	Improve knowledge and extend awareness of the community about solid waste management.					
6.	Socialization of funding structure in waste handling and drainage;					
7.	Improvement of the management quality of Final Disposal Site (TPA) with sanitary landfill system standars for urban areas					
8.	Preparation of feasibility study on the use of a WTE-incinerator (waste to energy) in waste management					

4 Institutional Development

4.1 Improvement of Provincial Government Coordination

a) Potentials and Constraints

Seen through the lens of history, NAD Province has a strong trading tradition. It served as a world renowned transit point and market for traders who wanted to buy precious Acehese spices. They came from from China, Europe, India, Saudi Arabia and even from USA.

NAD Province consists of 21 Regencies/Municipalities, i.e. the Regencies of Simeulue, Aceh Singkil, Aceh Selatan, Aceh Tenggara, Aceh Timur, Aceh Tengah, Aceh Barat, Aceh Besar, Pidie, Bireuen, Aceh Utara, Aceh Barat Daya, Gayo Lues, Aceh Tamiang, Nagan Raya, Aceh Jaya, Bener Meriah, and Banda Aceh City, Sabang City, Langsa City, Lhokseumawe City.

However, based on UU RI (Law of Indonesian Republic) No. 7 and 8, the Regencies of Aceh Singkil and Pidie have been split. The new Municipality and Regency are the City of Subulussalam and the Regency of Pidie Jaya. Under the government organizational structure, NAD Province has a Governor and Vice-Governor, a Provincial Government Secretary, four Assistant Secretaries, 12 Bureaus, 17 Boards, 23 Departments.

The provincial government of NAD Province has a huge coverage area. However, it has not established a joint secretariat which may serve as a platform for inter-municipal coordination and the coordination between the provincial government and the municipal governments in NAD Province.

In terms of permit issuance, there are certain permits issued by NAD Province through responsible departments. The departments under NAD Province which at present have the authority to issue permits are:

- *Dinas Perhubungan* (Department of Transportation) – responsible for the issuance of Transportation Business Permit, Transportation Operation Permit, Special Freight Transportation Permit, Incidental Transportation Permit.
- *Badan Koordinasi Penanaman Modal Daerah* or *BKPMD* (Investment Coordination Board) of NAD Province – responsible for the issuance of foreign and domestic investment permits in NAD Province.
- *Dinas Perkotaan dan Permukiman* of *Perkim* (Department of Urban Planning and Settlement) – responsible for the issuance of permits for the utilization of settlement and territorial basic infrastructures and facilities.
- *Dinas Pertambangan dan Energi* (Department of Mining and Energy) – responsible for the issuance of:
 - Mining Business Permit, Mining Authority Permit, Working Contract Permit and Coal Mining Business Agreement (*Perjanjian Karya Pengusahaan Pertambangan Batubara* or *PKP2B*);
 - Mining Business Permit in Principal;
 - Mining Area Preservation; and
 - The permit for surface water exploitation and utilization.

In addition, the culture and religion in NAD Province are highly appreciated. Such conditions should be maintained to create a conducive situation for political stability and security which has been achieved through Helsinki Agreement signed in August 2005. These circumstances have also had positive impacts on the Government of NAD Province

leading to better coordination with the Regencies and Municipalities under NAD Province and with the central government as well.

Potentials

- ❖ A strong mercantile history because of its strategic position as a trading and cultural gateway between Eastern and Western countries providing opportunities for marketing the diverse potential of Aceh.
- ❖ Marketing of diverse potential of every Regency/Municipality will subsequently be conducted through the Joint Secretariat to be established soon.
- ❖ Its trading heritage can be developed and packaged to attract potential investors.
- ❖ The pride of cultural conservation and religion will provide a conducive climate for investment development.

Constraints

- ❖ There is not yet a platform under the auspices of which inter-Municipal coordination or for the coordination between the provincial government and local governments in NAD Province can take place.
- ❖ Traumatic conditions resulted from various conflicts that have taken place in the past.
- ❖ Crimes are still taking place.

Table 4.1 SWOT Analysis for Improvement of Provincial Government Coordination

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ NAD Province has a strong historical roots in trading because of its strategic position for trading and cultural traffic connecting the eastern and western countries. ❖ NAD Province has a huge coverage area in which every Regency and city have different value-added potentials. ❖ The culture and religion are well conserved. 	<ul style="list-style-type: none"> ❖ There is no platform for inter-municipal coordination. ❖ Lengthy traumatic conflicts have hampered investments. ❖ The process and procedures of investment permit issuance are still complicated.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ The strategic position of NAD Province and potential natural resources has a strong bargaining position for the development of NAD Province. ❖ The pride of trading history can be manifested to children as early as possible through schools. ❖ The background of trading history can be packaged in such as way as to attract investors. 	<ul style="list-style-type: none"> ❖ Unhealthy competition among local governments and local isolationist tendencies may take place. ❖ The potential investors may be worried about their investments in Aceh. ❖ The investors are lowly interested in making investments in Aceh.

b) Strategy

Considering the potentials and possible constraints, the following strategies should be formulated.

- ❖ Improving the Marketing of Aceh’s diverse potential Since the era of Sultan Iskandar Muda’s reign, NAD Province has had good trading relationships with other countries such as Saudi Arabia and India. These relationships should be maintained and improved. Therefore, it should be guaranteed that the commodities can be supplied

from NAD Province. In addition, because there are still some seaports that serve domestic and foreign shipping, it is necessary for NAD Province to decide on one international seaport which will become the main access to improve the trading relationships.

- ❖ Establishment of Joint Secretariat serving as a platform for inter-Municipal coordination. At present, at the level of NAD Province the Joint Secretariat has not been established. The Joint Secretariat as a non-structural unit may serve as a platform to coordinate and synchronize programs and activities to be implemented together by the Municipalities and Regencies in NAD Province.
- ❖ Historical and cultural development and conservation as an effort to attract investors. The historical values of each Regency/Municipality in NAD Province should be identified, developed and conserved. Then, the Joint Secretariat to be immediately established will prepare the inter-municipal coordination to package and market the existing historical and cultural potentials.
- ❖ Simplification of investment-related permits. The provincial government of NAD still has the authority to issue several permits. The requirements, processes and procedures which are considered complicated and too long should be reviewed and simplified by the responsible departments, boards, and bureaus.

c) Action Plans

1. Improve the marketing of Aceh's existing potential. To be able to improve the marketing, the provincial government of NAD firstly has to improve the value-added commodities which may enter the international markets. Aside from the value-added products, the trading infrastructure and facilities should also be improved. It is also necessary to decide one international seaport completed with its facilities and access roads.
2. Establish a Joint Secretariat serving as a platform for inter-municipal coordination. The Joint Secretariat has not been established yet at the provincial level. As a non-structural unit, the Joint Secretariat will serve as a platform for coordinating and synchronizing the program and activities which will be realized together with the other Regencies/Municipalities. In addition, the Joint Secretariat may also serve as:
 - An inter-municipal Joint Secretariat serving as a platform for joint activities of the local government in NAD Province and as a coordinator pertaining to the provincial and local government coordination.
 - A forum for addressing the cross-boundary issues. The provincial government has to seek possible solutions of the cross-boundary issues.
 - All the decisions taken by the Joint Secretariat are considered as recommendations to the Governor. For further actions, it still needs confirmation/ratification from each Regency/Municipality, including from the local councils.
3. Conduct events for marketing the value-added products from each Regency/Municipality. The value-added products should have been identified by the Joint Secretariat. Then, the Joint Secretariat should prepare a schedule for the next five years to promote the value-added products. The marketing events can be conducted in each Regency/Municipality, in the provincial level or even in the national level.

4. Develop and conserve historical and cultural assets of Aceh to attract investors. Each Regency/Municipality should first identify their own historic and cultural potentials. The historic and cultural potentials are then submitted to the provincial government, through the Joint Secretariat – which is expected to be established already. The Joint Secretariat then prepares a proposal for the development and conservation of historical and cultural assets which involve more than one Regency/Municipality.
5. Review and simplify the investment-related permits. The permit-related regulations issued by the Provincial Government of NAD should be reviewed and simplified especially the requirements, processes and procedures. In addition, it is also necessary to establish *Unit Pelayanan Terpadu Satu Atap* or *UPTSA* (one-stop service unit) where the permit applicant only come to one office to process the application. The permit issuance streamlining should also followed-up at the local government level, with the same service standard and quality.
6. Conduct a comparative study. Before the establishment of *UPTSA*, the provincial and local governments in NAD should conduct a comparative study of the other Provinces or Regencies/cities which have successfully improved their public service delivery through the one-stop service unit.

d) Indicative Implementation Schedule

The implementation schedule for the activities above is presented in **Table 4.2**.

Table 4.2 Implementation Schedule for Improvement of Provincial Government Coordination

No	Activities	2008	2009	2010	2011	2012
1	Improve the marketing of existing potential in Aceh					
2	Establish a Joint Secretariat serving as a platform for inter-municipal coordination.					
3	Conduct events for marketing the value-added products from each Regency/Municipality.					
4	Develop and conserve historical and cultural assets of Aceh to attract investors.					
5	Review and simplify the investment-related permits.					
6	Conduct a comparative study.					

4.2 Improvement of Local Government Services

a) Potentials and Constraints

The administrative boundaries in the Province of Nanggroe Aceh Darussalam have changed. At present, NAD Province has 5 Municipalities and 18 Regencies, 257 Sub-Districts, 693 *mukim*, 6,107 villages and 112 *kelurahan* (urban village).

Based on the Law No. 11 / 2006 on the Authority of Aceh Provincial and Local Governments, the Regencies and Municipal governments have relatively the same authorities as the provincial government does, except for basic services which cannot be provided by the Regencies and Municipal governments, including cross-boundary issues.

In line with the local government autonomy, the investment-administration service and the other basic services have been handed over to the local government.

Aside from oil and gas, most Regencies/Municipalities in NAD Province have value-added products, such as oil palm, coffee, rubber and chocolate. However, the marketing of the value-added products is very limited, and still in the form of raw commodities. They have not yet been processed. This is due to the absence of joint efforts to build manufacturing industries for their value-added commodities. The raw commodities should be processed through the manufacturing industries to be more ready to be marketed to other regions and abroad.

Potentials

- ❖ The value-added commodities from each Regency/Municipality should be handled in an integrated way, especially for the commodity processing. Therefore, it is necessary for the local governments to establish an inter-municipal cooperation, which in terms of economic scale will save the investment cost, and in operation and maintenance costs as well.
- ❖ The legal basis for investment should be made clear. The process and procedures for investment permit issuance should also be simplified to show the concern of the government towards public service delivery.
- ❖ The trading and marketing networks which were previously successful in NAD Province should be re-developed.
- ❖ It is necessary to conduct a cross-marketing of their conducive conditions to give a clear picture of the whole condition and security.

Constraints

- ❖ There is no platform which can serve as an umbrella for inter-municipal coordination and for the coordination between the provincial and local governments.
- ❖ Lingering traumatic aftermath of conflicts in the past.
- ❖ Limited inter-municipal accessibility.

Table 4.3 SWOT Analysis for Improvement of Local Government Services

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Most Regencies/Municipalities in NAD Province have value-added commodities. ❖ Based on the existing laws, each Regency/Municipality has the authority to improve their public services. ❖ In terms of investment climate, there is already a conducive security condition. 	<ul style="list-style-type: none"> ❖ There is no platform for inter-municipal coordination for integrated commodity management. ❖ In general, the security condition is conducive, but there is no security guarantee for investors who want to make investments. ❖ The accessibility among the Regencies/Municipalities is poor due to the factors of distance and geographic physical conditions.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ The establishment of a platform for inter-municipal coordination for integrated value-added commodity management. ❖ Simplification of investment-related permits to attract investors. ❖ Cross-promotion of investment conducive condition to attract investors. 	<ul style="list-style-type: none"> ❖ The local economy is driven by other stronger Regency/Municipality or Province. ❖ The Investors will withdraw their investments. ❖ The economic development and the increase of revenue will be restricted.

b) Strategy

Considering the potentials and possible constraints, the following strategies should be formulated.

- ❖ Conduct of 'inter-municipal leveraging' for value-added commodity marketing. The inter-municipal leveraging here means that one Regency/Municipality promotes not only the products and services of its own but also of other Regencies/Municipalities. What should be taken into account here is the system management which does not restrict the healthy competition among the Regencies/Municipalities concerned.
- ❖ Establishment of a platform for integrated value-added commodity management. If one or more Regencies/Municipalities have the same value-added products, it is necessary to establish a platform for integrated value-added commodity management. This is meant to save the costs of investments as well as of operation and maintenance.
- ❖ Review of regulations and simplification of investment-related permits. There are various permits issued by the Regencies/Municipalities among others Business Permit (HO), Building Permit (IMB), Location Permit, Trading Permit (SIUP), Company Registration (TDP), Warehouse Registration (TDG), etc. To make it easier for communities who want to apply for the permits, it is necessary to establish a one-stop service unit (UPTSA). In addition, the existing regulations should be reviewed and the requirements, processes and procedures should be simplified and standardized to be implemented in each Regency/Municipality.
- ❖ Identification of potential markets both domestic and foreign markets. To encourage the improvement of value-added commodities of each Regency/Municipality, it is firstly necessary to identify potential markets for the value-added commodities.
- ❖ Comprehensive campaign of conducive conditions to attract investors. The security condition in NAD Province should be maintained and socialized in each Regency/Municipality in NAD Province, and also outside the Province. The conducive security situation should be publicized to attract potentials investors to make investments in NAD Province.

c) Action Plans

1. Prepare the mechanism of 'inter-municipal leveraging' for marketing value-added commodities of each Regency/Municipality. The inter-municipal coordination should be well prepared, especially to market their potential commodities. To initiate the inter-municipal coordination, it is firstly necessary to establish a Joint Secretariat at a provincial level. The Joint Secretariat will serve as a platform to facilitate the inter-municipal coordination. In addition, after the establishment of the Joint Secretariat, it should be followed-up with the provision of an office, as well as office equipment and facilities.
2. Establish a platform for inter-municipal coordination for integrated value-added commodity management. Before the establishment of an inter-municipal coordination platform, it is necessary to identify value-added commodities of each Regency/Municipality. It is also necessary to conduct a feasibility study for the construction of a manufacturing industry which can accommodate the same commodities produced from several Regencies/Municipalities. It is also important to identify the representatives of each Regency/Municipality to be involved in the inter-municipal coordination platform.

3. Improve the inter-municipal accessibility. The inter-municipal coordination and cross-boundary marketing cooperation should be facilitated with adequate infrastructure and facilities and communication as well.
4. Review the existing regulation and simplify the investment-related permits. The permit-related regulations should be reviewed, and the processes and procedures should also be simplified. This activity should be conducted by the departments which have the authority to issue the permits. In addition, to make it easier for permit applicants and to reduce the possibility of KKN (corruption, collusion and nepotism), it is necessary to establish an *UPTSA* (one-stop service unit) in each Regency/Municipality.
5. Identify potential markets, both domestic and foreign. The potential markets which can accommodate the value-added products from each Regency/Municipality should be identified. After that, the government cooperates with both the potential markets and with the local community/farmers. This activity is initiated by the departments/government institutions concerned (i.e. the department of agriculture/plantation) involving the existing local entrepreneurs and farmer representatives. The other activities to be conducted by the government include socialization of how to improve the commodity quality, provision of high quality seeds, plant treatment, and the treatment of harvests.
6. Conduct publicity and information campaign about the security situation. The local governments (Regencies/Municipalities) should continuously maintain the conducive security situation. It should be noted and informed to the public that the issue of security is not merely the responsibility of the government, but it is also the responsibility of the whole community. Therefore, it is necessary to establish a security unit in every village, and the government will provide security facilities, such as security posts and equipment in every village. The conducive conditions should also be regularly socialized to attract potential investors.
7. Conduct workshops on value-added commodities, manufacturing and marketing. Seminars on the value-added commodities should be regularly conducted, and potential buyers and investors should be invited to the seminars. The seminar is aimed at attracting more investors and buyers, and to get responds from potential buyers, for example about the quality and quantity of the products. The seminars should also be initiated by the government.

d) Indicative Implementation Schedule

The indicative implementation schedule for the activities above is presented in **Table 4.4**.

Table 4.4 Implementation Schedule for Local Government Services Improvement

No	Activities	2008	2009	2010	2011	2012
1	Prepare the mechanism of 'inter-municipal leveraging' for marketing value-added commodities of each Regency/Municipality					
2	Establish a platform for inter-municipal coordination for integrated value-added commodity management.					
3	Improve the inter-municipal accessibility.					
4	Review the existing regulation and simplify the investment-related permits.					
5	Identify potential markets, both domestic and foreign markets.					
6	Conduct publicity and information campaign of security.					
7	Conduct workshops on value-added commodities, manufacturing and marketing.					

4.3 Improvement of Coordination with Central Government

a) Potentials and Constraints

The central government retains its authority in foreign affairs, national defense and security, national court, monetary and fiscal, religious affairs, and other authorities such as the policies on national planning and national development control at a macro level, effective use of natural resources and strategic high technology, conservation and national standardization.

The Rehabilitation and Reconstruction Board (BRR) for NAD Province and Nias was established in 16 April 2005 through the Government Regulation (Perpu) No. 2 / 2005. To strengthen this government regulation, the Government issued Law No. 10 / 2005, and for the organizational structure the Presidential Decree No. 63 / 2005 was issued. It contains the membership of Steering Board, Monitoring Board and Implementing Board of the Rehabilitation and Reconstruction Program in Nanggroe Aceh Darussalam and Nias.

The law explains that the Rehabilitation and Reconstruction Board consists of three instruments with complementary tasks and responsibilities, namely:

- First instrument: Steering Board, responsible for ensuring that the aspirations from various parties are referred to in the rehabilitation and reconstruction process.
- Second instrument: Monitoring Board, responsible for ensuring that the rehabilitation and reconstruction programs are efficiently and effectively conducted and are in accordance with the local community needs.
- Third instrument: Implementing Board, responsible for the management of post tsunami rehabilitation and reconstruction programs.

In addition, the BRR Aceh-Nias has prepared a new step to improve the investment climate in Aceh, through the preparation of a new office of Investor Outreach Office (IOO) or *Kantor Penunjang Pelaku Investasi (KPPi)*.

Potentials

- ❖ Prepare well planned development with the involvement of the central government through BRR.

- ❖ In the formulation of development priorities for the period of 2005 – 2009, the Implementation Board (*Bapel*) conducts rehabilitation and reconstruction programs in seven main sectors, namely:
 - (1) Identification, mapping and land certification as well as spatial planning;
 - (2) Housing construction;
 - (3) Construction of local, urban and regional-based infrastructures;
 - (4) Local economic recovery;
 - (5) Construction of health and educational infrastructures;
 - (6) Revitalization of religion, social and cultural activities; and
 - (7) Institutional capacity building for the local governments and technical departments.
- ❖ Many international NGOs provide assistance in the process of rehabilitation and reconstruction in Aceh under the coordination of the provincial government and BRR.

Constraints

- ❖ Too many rehabilitation and reconstruction activities conducted both by the central and provincial governments.
- ❖ Low community involvement in the implementation of rehabilitation and reconstruction programs.
- ❖ High dependency of local community on the assistance from the government and NGOs.

Table 4.5 SWOT Analysis for Improvement of Coordination with Central Government

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ The central government pays attention to the NAD Province, especially in rapid rescue emergency programs due to tsunami. ❖ The central government even assigned <i>Bakornas PBP</i> as the implementing board for the rapid rescue and emergency programs. ❖ BRR has established IOO (Investor Outreach Office) or <i>Kantor Penunjang Pelaku Investasi (KPP)</i>. ❖ Many funding donors give their funds through BRR. 	<ul style="list-style-type: none"> ❖ Too many activities conducted by the central government through BRR. ❖ The community involvement in the implementation of rehabilitation and reconstruction programs is not yet optimal. ❖ High dependency of the local community to the government's assistance and NGOs' assistance.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Improvement of community-based planning process in the rehabilitation and reconstruction projects. ❖ Preparation of comprehensive planning using the available funds. ❖ Preparation of effective and efficient controlling and reporting mechanism for project implementations. 	<ul style="list-style-type: none"> ❖ The rehabilitation and reconstruction projects are not what the community want. ❖ The rehabilitation and reconstruction projects will be rejected by the community. ❖ There might be manipulation in the project implementation.

b) Strategy

Considering the potentials and possible constraints, the following strategies should be formulated.

- ❖ Improvement of community-based planning process in the rehabilitation and reconstruction projects. In the implementation of rehabilitation and reconstruction

projects, Bapel proactively consults the planning programs formulated in the Master Plan to the local communities which become the object of rehabilitation and reconstruction projects in NAD and Nias through community-based planning process. The community involvement becomes one of the main criteria for the project design.

Aside from the community involvement, the project implementation is also based by Bapel on a development phasing scenario. The design decided by Bapel is also based on the guidelines from the Master Plan and inputs from the community, for instance the rehabilitation and reconstruction programs are oriented to reach a better condition or *build back better*. Bapel prioritizes more on the fulfillment of critical needs of the community, especially the most vulnerable condition after tsunami.

- ❖ Establishment of a supervisory team to monitor the implementation of rehabilitation and reconstruction programs. In the implementation of rehabilitation and reconstruction programs, Bapel coordinates with various parties, among others with the universities in NAD Province and Nias, local NGOs, funding donors, international cooperation institutions and government institution like *Komite Pemberantasan Korupsi* or *KPK* (Corruption Watch). The response from various institutions have been good. They have the same breath and spirit to liberate NAD Province and Nias from corruption. From a number of cooperations conducted by Bapel, it is necessary to have a supervisory team that will monitor the implementation of rehabilitation and reconstruction programs. This supervisory team should consist of three stakeholders namely government, private sector and community.
- ❖ Establishment of monitoring and evaluation as well as reporting system for the implementation of rehabilitation and reconstruction. In order to ease the monitoring, evaluation and reporting of the rehabilitation and reconstruction projects, it is necessary to have a comprehensive monitoring and evaluation system. The system explains the mechanism of 'who does what' in the whole process of monitoring, evaluation, and reporting.

c) Action Plans

1. Improve the involvement of local people in community-based planning. The local community should be consulted first about the planning and implementation of rehabilitation and reconstruction programs. The community involvement becomes the main requirement of project implementation. The community is not only involved in the planning programs, but also in the project implementation, monitoring and reporting to anticipate possible manipulation in the rehabilitation and reconstruction programs.
2. Establish a field supervisory team responsible for the implementation of rehabilitation and reconstruction programs. The community involvement in the whole process of preparation, implementation, monitoring and evaluation in the rehabilitation and reconstruction programs is representative in nature. The representatives of the supervisory team are not only from the community, but also from the private sector and government. This team should have a strong legal base. Therefore, the team should be established based on the Regent/Mayor's Decree.
3. Formulate a monitoring, evaluation and reporting system for the implementation of rehabilitation and reconstruction programs. To facilitate the supervisory team, it is necessary to first formulate the monitoring, evaluation and reporting mechanism to give a clear picture of the responsibilities of each stakeholder.

d) Indicative Implementation Schedule

The indicative implementation schedule for the activities above is presented in **Table 4.6**.

Table 4.6 Indicative Implementation Schedule for Improvement of Coordination with Central Government

No	Activities	2008	2009	2010	2011	2012
1	Improve the involvement of local people in community-based planning.					
2	Establish a field supervisory team responsible for the implementation of rehabilitation and reconstruction programs.					
3	Formulate a monitoring, evaluation and reporting system for the implementation of rehabilitation and reconstruction programs.					

4.4 Support to Domestic Investments

a) Potentials and Constraints

Economic growth, manpower absorption and locally generated revenues are determined by the involvement of both foreign and domestic investments in the production process from extraction of raw materials to finished goods, as well as export and import activities. In NAD Province, there were 225 companies consisting of 65 foreign investments and 160 domestic investments. They were working in different sectors:

- Plantation - 63 companies,
- Fishery - 21 companies,
- Mining - 12 companies,
- Forestry - 13 companies,
- Husbandry - 8 companies,
- Cash crops - 1 company,
- Hotel - 9 companies,
- Non-metal industry - 2 companies,
- Timber industry - 8 companies,
- Food industry - 12 companies,
- Textile Industry - 1 company,
- Chemical industry - 14 companies,
- Paper industry - 5 companies,
- Other industries - 12 companies,
- Trading - 5 companies,
- Transportation - 7 companies,
- Other services - 32 companies.

Of 225 companies (foreign and domestic investors) in NAD Province with a total foreign investment realization of US\$ 817,995,400 and a total domestic investment realization of Rp. 2,227,968,184,371,-, 52 companies are still operating, 35 companies are under reconstruction and 138 companies are no longer operating due to lengthy conflicts, tsunami and deficit as well as shifting to more profitable businesses.

In terms of domestic investments, in **2004** there were two companies operating in Aceh with a total investment of Rp. 9.7 billion. They were:

- *Koperasi Pemberdayaan Rakyat* (Community Empowerment Cooperative) located in the City of Banda Aceh, with a total investment of Rp. 2.300.000.000,- and operating in transportation/travel services.
- *PT. Abad Jaya Abadi Sentosa* located in North Aceh, with a total investment of Rp. 7.400.000.000,- and operating in AMP (Asphalt Mixing Plant).

In **2005** there was no investment made in Aceh, but in **2006** there were two domestic investments made in Aceh with a total investment of Rp. 218.623.552.000,-. They are:

- *PT. Agra Para Citra* located in Nagan Raya, with a total investment of Rp. 158.623.552.000,- and operating in oil palm industry,
- *PT. Berlian Global Perkasa* located in the City of Banda Aceh, with a total investment of Rp. 60.000.000.000,- and operating in accommodation services (hotel).

Potentials

Increase the number of domestic investments by providing:

- ❖ Raw materials and export commodities .
- ❖ Half-finished and finished goods.
- ❖ Access to capital goods.
- ❖ Clear legal bases.
- ❖ Regulations on investments which attract investors, for example with lower taxes.
- ❖ Provision of infrastructure and supra-structure (transportation, telecommunication, electricity, water, sanitation, public facilities, security).
- ❖ The activity of private sectors in promoting the natural resources and human resources.
- ❖ The capability of local entrepreneurs to open business and create trading networks with other entrepreneurs.
- ❖ Synchronization of related departments in the formulation of projects needed by investors.
- ❖ Availability of manpower and experts in all sectors.
- ❖ Availability of governments and banks in assisting big companies.

Constraints

- ❖ The infrastructure and supra-structure facilities are limited.
- ❖ The inflation and interest rates are relatively high.
- ❖ Banks have limited financial capacity to provide credits for medium and large-scale businesses.

Table 4.7 SWOT Analysis of Domestic Investments

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ The forestry, fishery, mining, plantation, industrial, agricultural and horticultural commodities as well as services are available. ❖ Manpower is also available. ❖ Land is available. ❖ Capital is available. ❖ The Law on Aceh Government supports investments. ❖ Local entrepreneurs have made domestic investments. ❖ Supports are given by the provincial and local governments as well as the private sectors. ❖ Supports are also given by the community. ❖ The experts in electronics and mechanics as well as professional workers of all sectors are available. ❖ There are new government and private banks. 	<ul style="list-style-type: none"> ❖ Cash crops of Aceh are sent outside Aceh. ❖ The infrastructure facilities are not evenly distributed in all Regencies/Municipalities. ❖ The 'qanun' (local regulation) on investment has not yet been formulated. ❖ The government investment-related institution has not been established in all Regencies/Municipalities in NAD Province. ❖ The domestic investments have not been realized. ❖ Regional and international business relationship has not been well managed. ❖ It is difficult to collect taxes from Investors. ❖ The shape, colour, size and quality of local products are not yet satisfying. ❖ There is no complete information/data about export commodities and infrastructure and facilities considered necessary for the investors. ❖ There is no coordination between BKPM (Investment Coordination Board) and related institutions. ❖ Banks have not yet provided credits for medium and large scale businesses. ❖ Most domestic investors do not obey government regulations. ❖ Lack of business partners for big, medium and small scale business entrepreneurs. ❖ The service delivery from government officials to potential investors is not yet satisfying. ❖ Local inflation and bank interest rate is relatively high. ❖ There is a political intervention in investment. ❖ Domestic investors sometimes neglect environmental impacts. ❖ Domestic investors sometimes do not keep their promise relating to the people living nearby (near the factory / industry). ❖ Domestic companies do not fully pay their taxes.

	Opportunity	Threat
Eksternal	<ul style="list-style-type: none"> ❖ Construction of new factories. ❖ Development of domestic companies. ❖ Buying of company shares by the community. ❖ Merging of domestic companies. ❖ Status changing of domestic investments. ❖ Improvement of raw materials and capital goods. ❖ Diversification of business to the economic and service sectors. ❖ Improvement of economic growth and local revenues. ❖ Improvement of local, regional and international business relationship. ❖ Extension of business and employment development. ❖ Natural resource exploration and exploitation. ❖ Improvement of income cash-flow and company assets. ❖ Formulation if investment and economic policies based on the community aspiration. 	<ul style="list-style-type: none"> ❖ Product consumption and construction depends on the other region. ❖ The existing companies will bankrupt because of the government policies that do not stand up for domestic investments. ❖ The existing investments will be shifted to other businesses because of government and political pressures. ❖ The companies will move to other Provinces. ❖ The companies will lay-off their workers. ❖ The companies will withdraw their assets and capitals and make investments outside Aceh. ❖ The companies will neglect their land and equipment because of bankruptcy. ❖ The potential investors are not interested in Aceh because of lack of reliable data. ❖ The investors will cancel their investments because of high investment costs, slow service, <i>KKV</i> (corruption, collusion, nepotism) as well as complicated permit procedures and investment regulation, and impermanent permit. ❖ The companies will move to the other region that offers better policies, prodecures, regulation, services, product prices and marketing condition.

b) Strategy

Considering the potentials and possible constraints, the following strategies should be formulated.

- ❖ Improvement of transparency in investment process and procedures. The transparency can be improved through the preparation of brochures or leaflets that consist of the process and procedures of investment permit application.
- ❖ Improvement of information service and investment permit. The investment permit application should be conducted through a one-stop service unit.
- ❖ Improvement of information about local potentials. The local potentials should be well publicized especially to potential investors. It should also be completed with the information of investment process and procedures.
- ❖ Guidance and control towards the implementation of domestic investments. The skills and knowledge of the personnel under BKPM (local coordination board for investments) will be improved in order that they can provide better services pertaining to the investment permit issuance.
- ❖ Improvement of personnel. The personnel's capacity under BKPM (local coordination board for investments) will be improved step-by-step.

c) Action Plans

1. Improve the local, regional, national and international business coordination. The business coordination between the local government and the provincial and central governments should be improved on a win-win basis. The design of cooperation should be clearly formulated, including the responsibilities of each party. The cooperation can be initiated by the Joint Secretariat.
2. Improve the investment information technology. The improvement of investment information technology should be conducted, through the construction of internet tower and preparation of web-site which should be installed in government institutions concerned. It is expected that the investment-related information can be accessed by public.
3. Encourage the private sectors to participate in investment promotion. The investment promotion should be conducted not only by the government, but also by the private sector. Therefore, it is necessary to formulate the mechanism of private sector involvement in this activity.
4. Prepare and improve the export commodity and manufacturing industry. Treating oil and gas as export commodities has resulted in energy crisis. Therefore, the number of export commodities should be improved, and manufacturing industries be developed to increase the selling prices of the export commodities.
5. Develop new infrastructures and facilities needed by investors (electricity, water, seaport, roads, telephone lines, transport, buildings, etc.). The effort to attract investors is not only focused on the improvement of the quality and quantity of value-added commodities, but also on the improvement of infrastructures and facilities, say for instance the improvement of electricity; water supply; seaport facilities and infrastructures; improvement and/or construction of national, provincial and local roads; improvement and extension of telephone lines; improvement of freight transports; etc.).
6. Formulate investment 'qanun' (regulation) and effective and efficient permit issuance process and procedures. With the enactment of the Law No. 11 / 2006 on Aceh Government, which gives specific authority to NAD Province, should be followed-up with reviewing the regulations, especially pertaining to investment permits, manpower permit, etc. The complicated requirements, processes and procedures should be simplified and streamlined. In addition, the legal basis (regulation) should also be prepared.
7. Prepare investment data, documentation, publication and promotion. The data about investment opportunities in NAD Province should be prepared, i.e. the data of value-added products, number of manufacturing industries, investment permits, as well as the existing condition of infrastructure and facilities. The data should be documented. It will serve as an information source for investment promotion.

d) Indicative Implementation Schedule

The indicative implementation schedule for the activities above is presented in **Table 4.8**.

Table 4.8 Indicative Implementation Schedule of Domestic Investments

No	Activities	2008	2009	2010	2011	2012
1	Improve the local, regional, national and international business coordination.					
2	Improve the investment information technology.					
3	Encourage the private sectors to participate in investment promotion.					
4	Prepare and improve the export commodity and manufacturing industry.					
5	Develop new infrastructures and facilities needed by investors (electricity, water, seaport, roads, telephone lines, transport, buildings, etc.).					
6	Formulate investment 'qanun' (regulation) and effective and efficient permit issuance process and procedures.					
7	Prepare investment data, documentation, publication and promotion.					

4.5 Foreign Investment

a) Potentials and Constraints

Both the foreign and domestic investments play an important role in economic growth, manpower absorption and government revenue generating, especially in the production process from raw materials to finished goods, as well as in export and import activities. In NAD Province, there were a total of 225 companies consisting of 160 domestic investments and 65 foreign investments. There are 63 companies operating plantations, 21 companies in fishery, 12 companies in mining, 13 companies in forestry, 8 companies in husbandry, one company in food crops, 9 companies in hotel business, 2 companies in non metal industries, 8 timber industries, 12 food companies, one textile industry, 14 chemical industries, 5 paper industries, 12 other industries, 5 trading industries, 7 transportation companies and 32 service companies.

Of 225 companies (foreign and domestic investors) in NAD Province with a total foreign investment realization of US\$ 817.995.400 and a total domestic investment realization of Rp. 2,227,968,184,371,-, 52 companies are still operating, 35 companies are under reconstruction and 138 companies are no longer operating due to lengthy conflicts, tsunami and deficit as well as shifting to more profitable businesses.

During the last three years from 2004 to December 2006, there were new foreign investments made in Aceh with a total investment of US\$ 156,279,675. PT. Simeulu Investment Group, as a foreign investor, in Simeulue operates in accommodation and has a total investment of US\$ 9,533,000.

In 2005 there were four foreign investments made in Aceh with a total investment of US\$ 93,645,000. The four foreign companies are:

- PT. Simecons Group located in Simeulue – working in oil consulting services (property sector),
- PT. Sari Melati Kencana located in the City of Banda Aceh and the City of Lhokseumawe – working in the restaurant business with a total investment of US\$ 59,100,000.
- PT. Energi Alam Raya Semesta located in the Regency of Aceh Barat with a total investment of US\$ 34,200,000 – working coal-powered electric generator (power station), and

- PT. Indo Cafco located in the Regency of Bener Meriah with a total investment of US\$ 315,000 – working in coffee and cacao peeling.

In 2006, there were nine new foreign companies with a total investment of US\$ 53,101,675. They are:

- PT. Beuna Trading House located in the City of Banda Aceh, with a total investment of US\$ 250,000 and working in major trading and imports,
- PT. Indonesia Malaysia Thailand Jaya Raya – located in the City of Sabang, with a total investment of US\$ 48,630,000 and working in the fishing industry,
- PT. Glory Pearl Nusantara – located in the City of Sabang, with a total investment of US\$ 3,000,000 and operating in fuel storage,
- PT. Mercy Teams Internasional – located in the City of Banda Aceh, with a total investment of US\$ 220,000 and operating in lobster breeding,
- PT. Nolemon Banda Aceh with a total investment of US\$ 1,000,000 and operating in major trading and after-sale services,
- PT. Seoyong Company - located in the City of Banda Aceh with a total investment of US\$ 1,000,000 and operating in metal industry and housing construction,
- PT. Cadg Indo – located in the City of Banda Aceh with a total investment of US\$ 200,000 working in business management consulting services (property sector) and in the agricultural sector,
- PT. Haritos Shipping Logistics – located in the City of Banda Aceh with a total investment of US\$ 335,000 and operating in business management consulting services,
- PT. Darulaman – located in Aceh Besar with a total investment of US\$140,000 and operating in major trading (main distributor).

Potentials

The number of foreign investments will increase on condition that the following are available:

- ❖ Raw materials and export commodities.
- ❖ Half-finished and finished goods.
- ❖ Capital goods.
- ❖ Clear legal basis.
- ❖ Investment policy/regulation which does not harm the potential investors.
- ❖ Infrastructure and supra-structure (seaport, roads, electricity, water supply, transportation, security).
- ❖ Government institution responsible for investments.
- ❖ Private institutions actively promoting the natural and human resources.
- ❖ The good will of the local entrepreneurs to cooperate with foreign entrepreneurs.
- ❖ Synchronization of projects needed by investors.
- ❖ Low taxes.
- ❖ Cheap workforce and experts in all sectors.
- ❖ Professional workers in electro and mechanics.
- ❖ Land and transportation.
- ❖ Technology information for investment promotion.
- ❖ The good will of the government and banks to provide funding for big companies.
- ❖ The export commodities are open to be exploited and explored by manufacturing industries as long as they do not exceed their capacity. The half-finished and finished goods industries are still needed in the future.

Constraints

- ❖ The political intervention in business hampers the investors to enter Aceh.
- ❖ Complicated bureaucracy, lengthy issuance permit and poor service also discourage the investors.

Table 4.9 SWOT Analysis – Foreign Investment

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ The forestry, fishery, mining, plantation, industrial, agricultural and horticultural commodities as well as services are available. ❖ Manpower is also available. ❖ Land is available. ❖ Capital is available. ❖ Raw materials and finished goods are available. ❖ The Law on Aceh Government supports investments. ❖ Many local entrepreneurs are involved in foreign investments. ❖ Supports are given by the provincial and local governments as well as the private sectors. ❖ Supports are also given by the community. ❖ The labour wage is relatively low. ❖ The experts in electronics and mechanics as well as professional workers of all sectors are available. ❖ There are new government and private banks. 	<ul style="list-style-type: none"> ❖ Cash crops of Aceh are sent outside Aceh. ❖ Consumed products and constructions depend on the other region. ❖ The infrastructure facilities are not evenly distributed in all Regencies/Municipalities. ❖ The 'qanun' (local regulation) on investment has not yet been formulated. ❖ The government investment-related institution has not been established in all Regencies/Municipalities in NAD Province. ❖ Private sectors do not actively support investments. ❖ The foreign investments have not been realized. ❖ Regional, national and international business relationship has not been well managed. ❖ It is difficult to collect taxes from Investors. ❖ The legal aspects do not support investments. ❖ The shape, colour, size and quality of local products are not yet satisfying. ❖ There is no complete information/data about export commodities and infrastructure and facilities considered necessary for the investors. ❖ There is no coordination between BKPM (Investment Coordination Board) and related institutions. ❖ The internet facility has not been provided. ❖ Banks have not yet provided credits for medium and large scale businesses. ❖ Not all foreign investors obey government regulations. ❖ Lack of business partners for big, medium and small scale business entrepreneurs. ❖ The service delivery from government officials to potential investors is not yet satisfying. ❖ Local entrepreneurs are not interested in foreign investments. ❖ Local inflation and bank interest rate is relatively high. ❖ There is a political intervention in investment. ❖ Foreign investors sometimes neglect environmental impacts. ❖ Foreign investors sometimes do not keep their promise with the people living nearby (near the factory / industry). ❖ Foreign companies do not fully pay their taxes.

	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Construction of new factories. ❖ Development of foreign companies. ❖ Buying of company shares by the community. ❖ Merging of foreign companies. ❖ Status changing of foreign investments. ❖ Improvement of raw materials and capital goods. ❖ Diversification of business to the economic and service sectors. ❖ Improvement of economic growth and local revenues. ❖ Improvement of local, regional and international business relationship. ❖ Extension of business and employment development. ❖ Natural resource exploration and exploitation. ❖ Improvement of income cash-flow and company assets. ❖ Formulation if investment and economic policies based on the community aspiration. 	<ul style="list-style-type: none"> ❖ The existing companies will bankrupt because of the government policies that do not stand up for foreign investments. ❖ The existing investments will be shifted to other businesses because of government and political pressures. ❖ The companies will move to other Provinces. ❖ The companies will lay-off their workers. ❖ The companies will withdraw their assets and capitals and make investments in other regions. ❖ The companies will complain because of harmful government policies. ❖ The companies will neglect their land and equipment because of bankruptcy. ❖ The potential investors are not interested in Aceh because of lack of reliable data. ❖ The investors will cancel their investments because of high investment costs, slow service, <i>KKV</i> (corruption, collusion, nepotism) as well as complicated permit procedures and investment regulation, and impermanent permit. ❖ The companies will move to the other region that offers better policies, prodecures, regulation, services, product prices and marketing condition.

b) Strategies

Considering the potentials and possible constraints, the following strategies should be formulated.

- ❖ Improvement of value-added commodities. To attract foreign investors to Aceh and to increase investment values, adequate finished and export commodities are required and so are the infrastructures and facilities needed by investors.
- ❖ Improvement of private sector's involvement in investment promotion. The private sector's and government's involvement in investment promotion is required. They should be actively promote the value-added products, export commodities and manufacturing industries.
- ❖ Regulation streamlining. It is necessary to have a new regulation on investment which can accelerate the administration processes as well as the development of infrastructures and facilities.

c) Action Plans

1. Improve the local, regional, national and international business coordination. The business coordination between the local government and the provincial and central governments should be improved to create a win-win situation. The design of cooperation should be clearly formulated, including the responsibilities of each party. The cooperation can be initiated by the Joint Secretariat.

2. Improve the investment information technology. The improvement of investment information technology should be conducted, through the construction of internet tower and preparation of web-site which should be installed in government institutions concerned. It is expected that the investment-related information can be accessed by public. The permit-related information should also be uploaded to the web-site.
3. Encourage the private sector to participate in investment promotion. The investment promotion should be conducted not only by the government, but also by the private sector. Therefore, it is necessary to formulate the mechanism of private sector involvement in this activity.
4. Prepare and improve the export commodity and manufacturing industry. Treating oil and gas as export commodities has resulted in energy crisis. Therefore, the number of export commodities should be increased. The manufacturing industries should also be developed to increase the selling prices of the export commodities.
5. Develop new infrastructures and facilities needed by investors (electricity, water, seaport, roads, telephone lines, transport, buildings, etc.). The effort to attract investors is not only focused on the improvement of the quality and quantity of value-added commodities, but also on the improvement of infrastructures and facilities, say for instance the improvement of electricity; water supply; seaport facilities and infrastructures; improvement and/or construction of national, provincial and local roads; improvement and extension of telephone lines; improvement of freight transports; etc.).
6. Formulate investment 'qanun' (regulation) and effective and efficient permit issuance process and procedures. With the enactment of the Law No. 11 / 2006 on Aceh Government, which gives specific authority to NAD Province, should be followed-up with reviewing the regulations, especially pertaining to investment permits, manpower permit, etc. The complicated requirements, processes and procedures should be simplified and streamlined. In addition, the legal basis (regulation) should also be prepared.
7. Prepare investment data, documentation, publication and promotion. The data about investment opportunities in NAD Province should be prepared, i.e. the data of value-added products, number of manufacturing industries, investment permits, as well as the existing condition of infrastructure and facilities. The data should be documented. It will serve as an information source for investment promotion.

d) Indicative Implementation Schedule

The indicative implementation schedule for the action plans mentioned above is presented in **Table 4.10**.

Table 4.10 Indicative Implementation Schedule for Foreign Investment

No	Activities	2008	2009	2010	2011	2012
1	Improve the local, regional, national and international business coordination.					
2	Improve the investment information technology.					
3	Encourage the private sectors to participate in investment promotion.					
4	Prepare and improve the export commodity and manufacturing industry.					
5	Develop new infrastructures and facilities needed by investors (electricity, water, seaport, roads, telephone lines, transport, buildings, etc.).					
6	Formulate investment 'qanun' (regulation) and effective and efficient permit issuance process and procedures.					
7	Prepare investment data, documentation, publication and promotion.					

4.6 Mobilization of Local NGOs

a) Potentials and Constraints

Regional Forum of Aceh NGOs

- ❖ The presence of local NGOs in Aceh since the middle of the 1980s was an effort to strengthen the active participation of the community in a democratic life of the country. Several Acehnese activists initiated the establishment of a forum to strengthen the synergy of NGOs in Aceh.
- ❖ The Aceh NGO Forum was established based on the agreement of NGO activists in a meeting conducted in SCF Office in 19 and 24 January 1990. The forum was named *Forum Regional Lembaga Swadaya Masyarakat Aceh* or FR-LSM Aceh (Regional Forum of Aceh Non-Government Organization) in the form of a Working Group. The forum has the following vision and mission:

Vision

The democratic life, peaceful condition, welfare and the quality of being just and fair as well as deep respect for human rights are realized in Aceh.

Missions

- Encourage the transformation of government policies to be oriented to public service improvement.
- Empower civil society organizations.
- Improve communities' capacity in problem-solving.
- Encourage law enforcement in NAD Province.

After the Tsunami took place on 26 December 2004, many national NGOs moved to Aceh to take part in the activities pertaining to the rapid rescue and emergency in Aceh, for the victims of the tsunami.

Potentials

- ❖ Many local NGOs have facilitated the community in NAD Province in various activities pertaining to the rehabilitation and reconstruction programs as well as in other

programs as poverty reduction, development of education and skills, improvement of public health and environmental sanitation, and the promotion of human rights.

- ❖ The local NGOs forum serves as a platform for local NGOs to coordination with the government.

Constraints

- ❖ The local NGOs which have the same activities do not yet coordinate with each other.
- ❖ The activities of local NGOs have not been mapped. The local NGOs' activity mapping can be used by the local NGOs as a reference to avoid overlapping activities.

Table 4.11 SWOT Analysis of Local NGOs Mobilization

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ Many NGOs work for the community in NAD Province. ❖ The government well coordinates with the local NGOs working in NAD Province. ❖ There is a regional forum of local NGOs in Aceh. 	<ul style="list-style-type: none"> ❖ Several NGOs have the same activities but they have not yet coordinate each other. ❖ Low reporting mechanism of local NGOs to the Government. ❖ The map of local NGOs' activities has not been provided.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Improve the coordination between the local NGOs and the Government. ❖ Improve government facilitation towards local NGOs. ❖ Prepare a reporting mechanism of local NGOs' activities to the government. 	<ul style="list-style-type: none"> ❖ The activities are not focused, deviating from the targets. ❖ Manipulation of NGOs' activities might be may occur. ❖ The trust of the community to the local NGOs may decrease.

b) Strategies

Considering the potentials and possible constraints above, the following strategies should be formulated.

- ❖ Improvement of government's facilitation of the local NGOs Forum.
- ❖ Preparation of local NGOs' activity maps.
- ❖ Evaluation of local NGOs performance (especially the NGOs which have worked and are working in NAD Province).
- ❖ Improvement of local NGOs capacity.

c) Action Plans

1. Prepare the map of local NGOs activities to avoid duplications and overlapping of activities. So far, there are a number of local NGOs assisting in rehabilitation and reconstruction programs in NAD Province. However, their activities are not yet mapped in an integrated way. The mapping of local NGOs activities could be conducted by the *Satker* (working unit) of BRR which has been established in NAD Province. *Satker* BRR may proactively identify the local NGOs activities. The NGOs activities are then integratedly mapped. This should be done to avoid overlapping activities and fundings.

2. Evaluate the existing local NGOs working in NAD Province. The evaluation of local NGOs activities might be conducted by Bappeda as the government institution responsible for the coordination of the whole planning and programming in NAD Province. In this case, Bappeda may coordinate with Satker BRR is supposed to have identified and mapped the local NGOs activities.
3. Based on the evaluation, improve the local NGOs capacity. Not all local NGOs are able to conduct programs and/or activities as requested by the communities they facilitate. Therefore, the government should improve the local NGOs capacity. The NGOs capacity building can be done through skill improvement and training based on the programs and activities they are working for, or in the form of provision of infrastructures and facilities needed by the local NGOs.

d) Indicative Implementation Schedule

The indicative implementation schedule for the activities above is presented in **Table 4.12**.

Table 4.12 Indicative Implementation Schedule for Local NGOs Mobilization

No	Activities	2008	2009	2010	2011	2012
1	Prepare the map of local NGOs activities to avoid duplications and overlapping of activities.					
2	Evaluate the existing local NGOs working in NAD Province.					
3	Based on the evaluation, improve the local NGOs capacity.					

4.7 Mobilization of International NGOs

a) Potentials and Constraints

- ❖ After the Tsunami took place on 26 December 2004, many international NGOs came to Aceh to take part in the emergency program. Their mission was to stage a rapid response to the plight of the victims of the tsunami. Besides, the other international NGOs came to Aceh with their own vision and mission.
- ❖ Most international NGOs have the following concerns, namely:
 - Poverty alleviation;
 - Income generating;
 - Health service and care;
 - Educational improvement;
 - Environmental improvement;
 - Development of small scale business;
- ❖ There were approximately 215 NGOs that came to Aceh after the tsunami. Some of them have finished their programs, and some others are still in Aceh with the mission of implementing recovery programs.

Potentials

- ❖ A number of International NGOs have worked for the Indonesian Government. Especially for the Provincial Government of NAD, most of the International NGOs activities are oriented to the post tsunami rapid recovery and some others are oriented to the improvement of health, environmental condition, basic educational development, and economic development.
- ❖ The International NGOs programs are relevant to the programs of NAD Province. However, but the International NGOs cannot stay for a long time. They have limited time because of limited funding provided by the funding donors.
- ❖ For their sustainability, the government should provide counterpart funding.

Constraints

- ❖ The map of "poverty" which can be used as a reference by the International NGOs has not been prepared.
- ❖ The counterpart funding from the government is limited. This may hamper the sustainability of the international NGOs programs.

Table 4.13 SWOT Analysis of International NGOs Mobilization

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ A number of International NGOs still work in NAD Province. ❖ There is a good coordination between NAD Province and International NGOs. ❖ The activities done by International NGOs are still relevant to the government programs. 	<ul style="list-style-type: none"> ❖ There is no map of "poverty" which can be referred to by the International NGOs. ❖ The government's counterpart funding is limited. This hampers the sustainability of the international NGOs programs.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Preparation of 'poverty' maps which can be used as references by the Provincial Government and International NGOs. ❖ Improvement of the coordination between the provincial government and NAD Province. ❖ Preparation of government's counterpart funding for project sustainability. 	<ul style="list-style-type: none"> ❖ The activities of International NGOs might not be focused, deviating from the targets. ❖ Low achievement of the activities. ❖ The programs cannot be sustained after the phasing out of the international NGOs.

b) Strategies

Considering the potentials and possible constraints above, the following strategies should be formulated.

- ❖ Preparation of a comprehensive map of NGOs activities.
- ❖ Improvement of the coordination between the provincial government and International NGOs.
- ❖ Identification of International NGOs programs which should be sustained by the government.
- ❖ Development of training of trainer (TOT) from the International NGOs whose activities/programs should be sustained by the government.

c) Action Plans

1. Prepare a comprehensive map of NGOs activities to be used as a reference for International NGOs. So far, there is a number of International NGOs assisting in the rehabilitation and reconstruction programs in NAD Province. However, their activities are not yet mapped in an integrated way. This mapping activity should be conducted by Bappeda of NAD Province, which is at present developing a geo-data center. This unit may proactively identify the activities done by the International NGOs. The activities should then be integratedly mapped. This is important to avoid overlapping activities.
2. Improve the coordination between the provincial government and International NGOs. In order to control the activities of the International NGOs, it is necessary to have representatives of international NGOs in every government department with whom they work together in NAD Province.
3. Improve and develop the program, of training of trainer (TOT) from the International NGOs whose activities should be sustained. For the International NGOs whose activities are sustainable in nature, it is necessary to have a transfer of knowledge program for the local NGOs (if possible) and/or to the government personnel. The transfer of knowledge can be conducted through training of trainers (TOT). The training participants (trainees) should first be selected based on their professional backgrounds. It is expected that the government personnel taking part in this TOT program can follow-up the activities conducted by the International NGOs.

First, it is necessary to identify the International NGOs programs that should be followed-up, and conduct a training needs analysis taking into account the skills and knowledge of the government personnel.

4. Prepare government counterpart funds for sustainable programs. As mentioned above that the International NGOs have limited funds and time, therefore, the government should provide counterpart funds for the international NGOs programs. In addition, based on the identification, the International NGOs programs should be classified and compared to the tasks and responsibilities of each government departments (SKPD) in NAD Province. The programs that are the same as the tasks and responsibilities of each SKPD can be financed through SKPD budget.

d) Indicative Implementation Schedule

The indicative implementation schedule for the activities above is presented in **Table 4.14**.

Table 4.14 Indicative Implementation Schedule for International NGOs Mobilization

No	Activities	2008	2009	2010	2011	2012
1	Prepare a comprehensive map of NGOs activities to be used as a reference for International NGOs.					
2	Improve the coordination between the provincial government and International NGOs.					
3	Improve and develop the program, of training of trainer (TOT) from the International NGOs whose activities should be sustained.					
4	Prepare government counterpart funds for sustainable programs.					

4.8 International Donor Mobilization

a) Potentials and Constraints

The earthquake and tsunami that occurred in the Province of Nanggroe Aceh Darussalam caused serious damage and had many victims. This has encouraged the international donors to help the victims. The international donors in general have the same mission – humanitarian, but there are also some donors that are concerned with the improvement of facilities and infrastructure, education, and living environment.

The condition in Aceh has encouraged the international donors to implement their humanitarian and development programs. The international donors are as follows:

- UNDP via CRP (*Community Recovery Program*)
- USAID *Office of Transition Initiative*
- WHO.
- FAO (*Food and Agriculture Organization*)
- IOM (*International Organization for Migration*)
- UNICEF (*United Nations Children's Emergency Fund*)
- ILO (*International Labor Organization*)
- GTZ (*The Deutsche Gesellschaft für Technische Zusammenarbeit*)
- AusAID (*Australian Agency for International Development*)
- UN OCHA (*Office for Coordination of Humanitarian Affairs*)

Potentials

- ❖ There are a number of international funding donors like GTZ, AusAID, UNDP, World Bank, ADB, UNICEF, etc. They help the Province of Aceh in post-tsunami recovery programs through direct and technical assistance.
- ❖ The technical assistance provided through the International NGOs are relevant to the programs conducted by the government.

Table 4.15 SWOT Analysis for International Donor Mobilization

	Strength	Weakness
Internal	<ul style="list-style-type: none"> ❖ There are still a number of international funding donors in Aceh. ❖ The funds are oriented to the post-tsunami recovery programs and to the improvement of health and living environment. The programs are in line with the government programs. ❖ The cooperation between the government of NAD Province and funding donors is good. 	<ul style="list-style-type: none"> ❖ There is no comprehensive map which be used as a reference for the international fundings donors. ❖ The government's counterpart funding is one of the requirements to get technical assistance. ❖ The human resources for the cooperation with the international funding donors are very limited.
	Opportunity	Threat
External	<ul style="list-style-type: none"> ❖ Preparation of a comprehensive map to be used as a reference for the international funding donors. ❖ Improvement of local NGOs' capacity in order that they can facilitate the programs funded by international funding donors. ❖ Preparation of counterpart funding for the activities financed by international funding donors. 	<ul style="list-style-type: none"> ❖ Funding not used in right way. ❖ Positive impact not sensible. ❖ Unsustainable action program. ❖ Community appreciation to government reduces.

Constraints

- ❖ The funds provided for the technical assistance are limited, thereby affecting the sustainability of the programs and activities.
- ❖ Limited funds provided by the government.

b) Strategies

Considering the potentials and possible constraints above, the following strategies should be formulated.

- ❖ Preparation of maps of activities financed by international funding donors that can be used as a reference for both the government and international funding donors.
- ❖ Preparation of counterpart funding for the programs proposed to be financed by international funding donors.
- ❖ Improvement of local NGOs to facilitate the activities financed by international funding donors.

c) Action Plans

1. Prepare maps of activities financed by international funding. The international funding donors and the activities conducted in NAD Province should be well mapped. The maps will serve as a source of significant information not only for the government, but also for private sectors and community. Therefore, it is necessary to establish a team which will proactively coordinate with related institutions.
2. Prepare counterpart funding for the programs proposed to be financed by international funding. To show government's commitment to the programs financed by international funding donors, the government should provide counterpart funds, which is usually only 10% of the total fund needed for the programs. Therefore, it is necessary to identify the programs proposed to be financed by international funding donors. It is also necessary to formulate the prioritization criteria for the programs to be financed by the international funding donors.
3. Prepare program proposals to be financed by international funding donors. Bappeda, as the coordinator of development planning and programming, should establish a team that is oriented to the preparation of program proposals. The estimate counterpart funding needed for the programs should also be calculated.
4. Improve the local NGOs to facilitate the programs financed by international funding donors. The programs conducted in NAD Province should not always be facilitated by International NGOs. The capacity of local NGOs can be improved to facilitate such programs. Therefore, Bappeda should initiate to prepare the list of local NGOs and their specifications.

Indicative Implementation Schedule

The indicative implementation schedule for the activities mentioned above is presented in **Table 4.16**.

Table 4.16 Indicative Implementation Schedule for International Donor Mobilization

No	Activities	2008	2009	2010	2011	2012
1	Prepare maps of activities financed by international funding.					
2	Prepare counterpart funding for the programs proposed to be financed by international funding.					
3	Prepare program proposals to be financed by international funding donors.					
4	Improve the local NGOs to facilitate the programs financed by international funding donors.					

