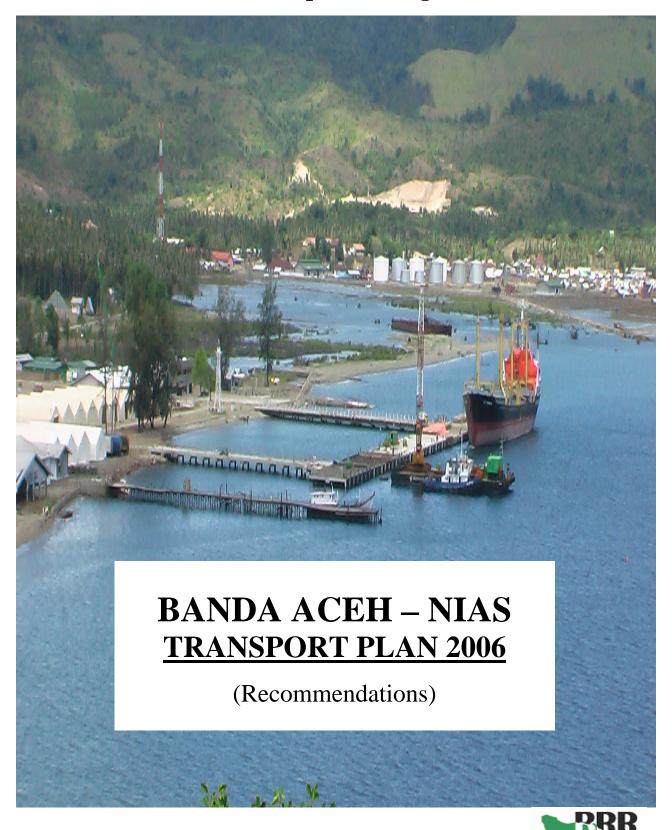
United Nations Development Program – Indonesia



Badan Rehabilitasi dan Rekonstruksi (BRR) Nanggroe-Aceh-Darussalam-Nias

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RECOMMENDATIONS

In support of and as a function of investigations associated with the Banda Aceh Nias Transport Pan 2006, the following general and specific recommendations are made to the relevant decision-making authorities.

10.1 GENERAL RECOMMENDATIONS

- 10.1.1 Insurance the BRR as part of the governance program for institutional development should take action to foster and develop a culture of insurance against future risk by Aceh commerce and industry, and that position is reflected by individuals and in institutional response to major catastrophic events, and the subsequent ability for local communities to recover and re-establish after such events.
- 10.1.2 Maritime Navigation the BRR as part of the infrastructure program should commission a review of bathometric & hydrographic information relating to all Aceh & Nias seaports and navigation lanes through island straits for risk management.
- 10.1.2 Aviation Facilities the BRR as part of the infrastructure program should commission a review of the air-side information relating to all Aceh & Nias aerodromes and landing strips (including water strips) for accuracy and risk management (including specifically the Pavement Concession Number (PCN) ratings for runways, taxiways and aprons).
- 10.1.3 Aviation Management the BRR as part of the infrastructure program should commission an Airport Master Plan for each of the Aceh Province & Nias aerodromes in accordance with world standards for civil aviation, and where necessary or desirable, military aviation standards as determined by the Indonesian Defense Forces.
- 10.1.4 **Aviation Development** the BRR as part of the infrastructure program should take discussions and initiate a project briefing with representatives of the International and Domestic Regular Passenger Transit carriers operating in the region, including:

** Mumbai, Chennai, Kuala Lumpur, Singapore, Jakarta, Bangkok Air India * All Nippon Airlines Tokyo, Jakarta, Singapore, Kuala Lumpur, Bangkok * **British Airways** London, Jakarta, Singapore, Kuala Lumpur, Bangkok * **Emirates Airways** Dubai, Kuala Lumpur, Singapore, Jakarta, Bangkok, Manchester Garuda Indonesia Airlines Jakarta, Medan, Banda Aceh, Singapore, Kuala Lumpur Japan Air Lines Tokyo, Jakarta, Singapore, Kuala Lumpur, Bangkok Malaysia Airlines Kuala Lumpur, Singapore, Jakarta, Medan, Banda Aceh Qantas Airways Sydney, Perth, Jakarta, Singapore, Kuala Lumpur * Silk Air Singapore, Jakarta, Medan, Kuala Lumpur Singapore Airlines Singapore, Jakarta, Kuala Lumpur, Medan, Banda Aceh Thai Airways Bangkok, Kuala Lumpur, Singapore, Jakarta

* Adam Air Jakarta, Medan, Banda Aceh * Batavia Air Jakarta, Medan, Banda Aceh * Jatayu Air Jakarta, Medan, Banda Aceh * Kartika Airlines Jakarta, Medan, Banda Aceh Lion Air Jakarta, Medan, Banda Aceh Pelita Air Jakarta, Medan, Banda Aceh

Merpati Nusantara Airlines
Sabang Merauke Air Charter
Suzi Air Charter
Medan, Banda Aceh, Nias, Meulaboh, Simeulue
Medan, Nias, Sabang, Meulaboh, Simeulue
Medan, Banda Aceh & all provincial destinations.

- 10.1.5 Railways Development the BRR as part of the infrastructure program should direct that the Multi-Modal Transport Strategy (USAID) address demand for both a Banda Aceh Medan heavy railway and a Banda Aceh urban light railway as a prelude to a more detailed future feasibility study on both these transport opportunities.
- 10.1.6 National & Provincial Roads the BRR as part of the infrastructure program should encourage all National and Provincial Roads to be controlled access to permit fast, efficient and safe transit of traffic. This implies that a program to install fencing along all adjoining private property and government lands outside of built up areas is instituted throughout Aceh Province (review applicability to Nias).
- 10.1.7 **LEDPs** the BRR as part of the infrastructure program should initiate for each city and town a detailed Local Economic Development Plan prepared in association with or part of a Local Area Traffic Management Plan (LATM).
- 10.1.8 LATMs the BRR as part of the infrastructure program should initiate for each city and town a detailed Local Area Traffic Management Plan prepared in association with or part of a Local Environmental Development Plan (Planning Scheme), and addressing amongst other things pedestrian facilities and the provision of dual use pedestrian cycle paths in urban areas.
- 10.1.9 **Bus Station Banda Aceh** the BRR as part of the infrastructure program should take discussions with the private bus companies servicing Banda Aceh with the view to their relocating asset and operations to a central bus station located on Jalan TKG ABD Rahman Meunasah Meucab (a National / Provincial / Regional peripheral ring road).
- 10.1.10 Fire & Rescue Services the BRR as part of the institutional development program should encourage the Regional & District Fire & Rescue Services authorities to audit their fleet for adequacy to respond to emergency task and make recommendations as to the availability of water supply infrastructure and road network accessibility for their vehicles.
- 10.1.11 Fuel Storage & Retail Distribution the BRR as part of the infrastructure, economic and institutional development programs should discourage (outlaw) the practice of itinerant street vendors supplying motor vehicles as refueling stations along major roads, as it is an unacceptable risk.
- 10.1.12 Fuel Storage & Retail Distribution the BRR as part of the infrastructure, economic and institutional development programs should encourage the expansion of the retail market for fuel products and safe storage in licensing in appropriately located premises.
- 10.1.13 Agricultural Practices the BRR as part of the infrastructure and institutional development programs must move to assert legal control and authority over public roads and road reserves in order to protect road users, the community and the construction integrity of the road infrastructure asset by requiring fencing in urban areas as a function of property development by adjoining private land owners.
- 10.1.14 Agricultural Practices the BRR as part of the infrastructure and institutional development programs must move to assert legal control and authority over public roads and road reserves in order to protect road users, the community and the construction integrity of the road infrastructure asset by enforcing the operating integrity of the paved section of the road (ie. People should not be permitted to reduce the available road width by storing agricultural or building construction products on the road).
- 10.1.15 **Regional Economic Development (Aceh & Nias)** the BRR as part of all programs should develop a Provincial Economic Development Plan that addresses the occupational sectors associated with:
 - Executive, Managerial & Supervisors
 - ❖ Administrative & Clerical Persons
 - Retail, Wholesale & Commission Distributors
 - Miners & Quarry Persons
 - Crafts, Production-Process & Labourers
 - Armed & Security Services.

- Professional & Technical Persons
- Salespersons & Commercial Travellers
- Farmers, Foresters & Fishermen
- Transport & Communication Workers
- Community Service, Sport & Recreation

- 10.1.16 Regional Economic Development (Aceh & Nias) the BRR as part of all programs should develop a Provincial Economic Development Plan 2007-12 that addresses the workforce sectors associated with:
 - Communication & Information Technology
 - Construction & Mechanical Services
 - Electricity, Gas & Water Distribution
 - Environmental Management
 - Manufacturing
 - Public Administration
 - Security & Defense
 - Transport, Storage & Distribution

- Community & Health Services
- ❖ Education, Interpretative & Personal Dev't
- Entertainment, Recreation & Personal Serv
- Finance, Property & Business Services
- Primary Production, Forestry & Mining
- * Research & Product Development
- Tourism & Hospitality
- ❖ Wholesale, Retail & Commission Trade.
- 10.1.17 **Agriculture** the BRR as part of the economic program should undertake a study into the 'Value of Agricultural Production' for Aceh Province & Nias.
- 10.1.18 **Social Accord** the BRR as part of the infrastructure and community development program initiate a study or research into the special needs of housing, health (mens, womens, children, seniors), community awareness, community development, community consultation, business development, job creation, disability services, mental illness, medical clinics, family planning all with attendant needs for specialist transport planning consideration and accessibility.
- 10.1.19 **Tourism Asset** the BRR as part of the economic program undertake research to quantify the current level of tourism / hospitality investment in terms of employment and capital asset value.
- 10.1.20 **Internet** the BRR as part of the economic and community development programs should initiate an internet research project to investigate methods for improving internet access and communication for all industry sectors.
- 10.1.21 **Population** the BRR as part of the community development program initiate further demographic research to quantify and qualify population statistical data (historic, event and projected) as relates to the statistical divisions of the Aceh Province and Nias.
- 10.1.22 **Environment** the BRR as part of the corporate governance program should initiate a 'State of the Environment Report' addressing species diversity, habitat sustainability, environmental management, and the presence of rare or endangered flora and fauna.
- 10.1.23 **Waste Management** the BRR as part of the infrastructure program should undertake a comprehensive waste (solid, liquid and gas) management strategy, and contaminated site assessment study of major urban areas with a terms of reference that will help define a 'State of the Environment Report' for Aceh Province and Nias.
- 10.1.24 Heritage the BRR as part of the community development and infrastructure programs should take discussions with relevant stakeholder groups to establish a cultural heritage register (built and natural environment) canvassing national, provincial, regional, district and local heritage places for the future.
- 10.1.25 **Banda Aceh Stock Exchange** the BRR as part of the institutional development program should undertake discussions with stakeholder groups to canvas support for the establishment of the Banda Aceh Stock Exchange a vehicle to facilitate international investment in the region, including most particularly the Banda Aceh Port Corporation.
- 10.1.26 West Coast Islands Port Corporation the BRR as part of the institutional development program should facilitate discussions with stakeholder groups to canvas support for the establishment of the West Coast Islands Port Corporation a vehicle to facilitate domestic and international investment around Simeulue, Banyak, Nias, Tanah, Mentawai, Siberut, Sipora, Pagai and Enggano.

10.2 SPECIFIC RECOMENDATIONS

- 10.2.1 **Infrastructure Project Management** the BRR financial evaluation reinforces the need to commit to the WB Project Management Procurement process identified by the BRR Infrastructure Directorate.
- 10.2.2 Raw Material Resources the BRR as part of the economic development program should commission a Nanggroe Aceh Darussalam & Nias (Northern Sumatra) Raw Material Resources Study to document the potential export requirements for bulk commodities associated with mining, agriculture, forestry and fisheries.
- 10.2.3 **Banda Aceh Port Corporation** the Government of Indonesia should take such action as necessary to establish a BAPC to assume planning, design, construction and management responsibility for (all or part of) the transport assets comprising:
 - ❖ Banda Aceh International Seaport (site selection pending further research) ~ US\$3.5 Billion
 - ❖ Banda Aceh International Airport (Sultan Iskandar Muda) ~ US\$1.2 Billion
 - ❖ Banda Aceh Ring Road (Toll Route) ~ US\$500 Million
 - ❖ Banda Aceh Medan Motorway (Toll Route) ~ US\$1.8 Billion
 - ❖ Provisional subject to feasibility Banda Aceh Medan Railway ~ US\$2.0 Billion.
- 10.2.4 **Indonesian Aerodrome Directory** (Domestic and Light Aircraft Northern Sumatra) the Indonesian Directorate General for Aviation should review and amend this publication to indicate the correct runway length and strip dimensions for Sabang Airport (Maimun Saleh) with an appropriate notice to airmen to follow advising of relevant changes.
- 10.2.5 **Provincial Roads** (Aceh) the BRR as part of the infrastructure program adopt the following schedule of roads for provincial funding and management responsibility:

**	Banda Aceh to Malahayati	(~ 30km)	
*	Lamno to Jantho	(~ 30km)	
*	Sigli to Calang	(~ 80km)	
*	Sigli to Takengon	(~ 140km)	
*	Sigli to Meulaboh via Jeuram	(~ 50km)	
*	Lhokseumawe to Takengon	(~ 40km)	
*	Langsa to Blangkeujeuren	(~ 160km)	
*	Sinabang to Sibigo	(~ 120km)	including Lasikin Airport Road

10.2.6 **Provincial Roads** (Nias) – the BRR as part of the infrastructure program adopt the following schedule of roads for provincial funding and management responsibility:

*	Gunungsitoli to Lahewa	(~ 90km)	
*	Gunungsitoli to Sirombu	(~ 70km)	
*	Gunungsitoli to Telukdalam	(~ 140km)	including Banaka Airport Road
**	Lahewa to Telukdalam	(~ 160km)	

10.2.7 Regional Roads (Aceh Besar) – the BRR as part of the infrastructure program adopt the following schedule of regional roads (not being or to include National or Provincial Roads) for regional funding and management responsibility:

*	Jalan TKG ABD Rahman Meunasah Meucab	Gampong Blang to Batoh and Cot Malem
*	Jalan Tengku Imum Lueng Bata	Batoh to Kampung Baru
*	Jalan Tengku Iskandar	Bandar Baru to Pango Deah
*	Jalan Saltan Alaidin Johasyah	Punge Ujong to Lamcot
*	Jalan Saltan Malikulsaleh	Punge Ujong to Lamcot
*	Jalan Lamteh	Lam Manyang to Lampaseh Kota.

10.2.8 **Regional Roads** (Elsewhere) – the BRR as part of the infrastructure program undertake further research and discussions with stakeholders to determine regional roads (not being or to include National or Provincial Roads) for regional funding and management responsibility:

❖ Aceh BaratMeulaboh, Calang & Lamno❖ Aceh BesarLeupeng, Lhokgna & Malahayati❖ Aceh SelatanTapaktuan, Susoh & Bakongan

❖ AcehSingkel Singkel

❖ Aceh Tenggara Kutacane, Terangon & Blangkeieren

Aceh Tengah
Aceh Timur
Aceh Utara
Bireuen
Pidie
Takengon
Langsa
Lhokseumawe
Bireuen
Sigli

❖ Sabang & Balohan

Simeulue Sinabang, Sibigo & Palau Banyak
Nias Gunungsitoli, Lahewa & Telukdalam

- 10.2.9 Freight Truck Axle-Weight Compliance the BRR as part of the institutional development program should encourage the Provincial Transport Authority to develop a road-side program for assessing / enforcement of compliance by operators and owners of freight trucks who overload their vehicles with extreme weight and centre-of-balance loads that exceed vehicle manufacturer specifications.
- 10.2.10 Ferry Freight Weigh Bridge the BRR as part of the infrastructure program should develop a freight vehicle weigh bridge at vehicular ferry terminals (eg. Ulee Lheu and elsewhere), so that those responsible for safety (passengers and freight) are aware of the cumulative traffic weight, and if that complies with the manufacturers weight tolerance standards for the ferry.
- 10.2.11 Spatial Planning the BRR as part of the corporate development program initiate an external review of the management of geographic and other data sources using information technology that will establish domestic benchmarks for the use and development of geo-spatial data.
- 10.2.12 Cadastral Management the BRR as part of the community development, institutional development and infrastructure programs should initiate discussions with all stakeholders as to the adoption of a 'Torrens' title of land administration, formally recognising land tenure (private and public) as the foundation for a future land rating system as a financial mechanism for governance.
- 10.2.13 **Building Code of Indonesia (Aceh & Nias)** the BRR as part of the community development, institutional development and infrastructure housing programs should initiate discussions with all stakeholders in order to establish a minimum design standard in terms of probable capacity to withstand an earthquake and tsunami event (relative scales to be determined).
- 10.2.14 Major Infrastructure Easements the BRR as part of the institutional development and infrastructure programs should initiate discussions with all stakeholders in order to establish the broad regional network of infrastructure services (leading to easements within provincial and regional road reserves for water supply, drainage and waste water disposal pipelines, gas pipelines and electricity transmission lines, and corresponding management arrangements to protect and maintain that asset into the future.
- 10.2.15 Dangerous Goods (Storage & Transport) the BRR as part of the institutional development and infrastructure programs should initiate discussions with all stakeholders in order to establish preferable and acceptable dangerous goods storage locations and transport routes, and corresponding management arrangements to protect and maintain those particular assets into the future.
- 10.2.16 **Banda Aceh International Airport** the BRR as part of the infrastructure program should adopt the policy position that the Sultan Iskandar Muda airport will be a full international operation, and relevant design aspects should be altered to cater for Boeing 777 and Airbus A380 aircraft (both new generation wide body aircraft) the main runway needs to be widened to 60m and the taxiways widened to 45m (design+), with appropriate PCN ratings.

10.2.17 Governance – the BRR (in conjunction with all relevant stakeholders) as part of the institutional development program initiate further research to examine the governance role and split as relates to the following transport issues:

Indonesian Government

**	Commerce	& trade
**	Commerce	α uaue

- Corporate affairs
- Environmental sustainability
- Industrial relations

- Communications
- Defense & essential services
- Immigration & ethnic affairs
- Taxation (company & personal).

Sumatera Development Forum

& Economic cooperation

Social enhancement

Aceh Provinci & Nias (or West Coast Islands)

- Cadastral management (land tenure & access)
- District & local government management
- ❖ Health & welfare
- Planning & environmental management
- ***** Taxation (duties, fees & charges)
- Transport (provincial roads & bridges)
- Disaster coordination
- Education & training
- Land administration
- Port corporations (public private partners)
- Traffic & transport (licensing & insurance)
- Energy development.

Kota / Kabupaten

- Building services (construction administration)
- City & regional planning schemes
- Cultural development
- Energy & power generation / transmission
- Environmental protection & enforcement
- Hazardous materials (dangerous goods)
- Land valuation & rating
- Tourism & hospitality
- Workplace relations.

- Cadastral development (new lands)
- City & regional transport plans
- Disaster management (emergency services)
- Entertainment, sport & recreation service
- * Environmental occupational health & safety
- Heritage & native title
- Primary industry (agriculture & resources)
- ❖ Waste management & recycling

Kecamatan

- ❖ Domestic pets, livestock & vermin
- Local planning strategies (land use transport)
- Water supply, sewerage & drainage.
- Local management plans (infrastructure)
- Unkempt land, fences, litter
- 10.2.18 **BAIA Terminal Completion** the BRR as part of the infrastructure program should reschedule the finance and construction of the new Sultan Iskandar Muda airport terminal so as to be completed and operational no later than 30 June 2007.
- 10.2.19 **Banda Aceh International Seaport** the BRR as part of the infrastructure program should adopt the policy position that there will be a future international seaport, and subject to design, feasibility and site selection processes, the five potential locations to be investigated include:

❖Ulee Lheu 2 – area west of main drainage canalPreference 1❖Ulee Lheu 3 – area east of main drainage canalPreference 2❖Ulee Lheu 1 – area west of Ulee Lheu cargo terminalPreference 3❖MalahayatiPreference 4❖Sabang (We Island)Preference 5.

- 10.2.20 **Banda Aceh Ring Road (Toll Route)** the BRR as part of the infrastructure program should take steps to identify the alignment, reserve and acquire the land, and commence planning and design for a grade-separated controlled-access peripheral urban ring road that links up Malahayati in the east to Lhokgna in the west, and functions as a toll route for future funding and maintenance.
- 10.2.21 Banda Aceh Medan Motorway (Toll Route) the BRR, in association with the Provincial Government of Sumatra Utara (respective % ownership to be determined), and as part of the infrastructure program should take steps to identify an alignment, reserve and acquire the land, and commence planning and design for a grade-separated controlled-access motorway between Banda Aceh and Medan that functions as a toll route for future funding and maintenance.
- 10.2.22 **Trans-Sumatra Motorway (Toll Route)** the BRR, in association with the Government of Indonesia, the Provincial Governments of Sumatra, and relevant industry stakeholders, initiate discussions for the purpose of establishing the potential for a Trans-Sumatra Motorway (Toll Route grade-separated controlled-access) extending from Banda Aceh in the north to Bandar Lampung in the south.
- 10.2.23 **Investment** the BRR as part of the institutional development and infrastructure program should be looking to establish corporate relationships and information sharing programs with international investment groups such as :
 - Listed International or Domestic Infrastructure Groups (with capital and expertise)
 - Superannuation Investment Houses (banking and finance sectors)
 - Core service provider groups (airlines, sea freight chandlers, petroleum companies, etc).
 - ❖ Global business groups aligned to BAPC / WCIPC operations seeking South-East Asia role
 - ❖ Business groups already aligned to BAPC / WCIPC operations in South-East Asia
 - Business groups based in Aceh Province and Nias with a vested interest in the collective outcome.
- 10.2.24 Free Trade Agreements the BRR in association with the Government of Indonesia should be looking to establish free-trade agreements (sister city friendship) to support trade development potential through key transport infrastructure assets agreements could be considered with:

Australia Darwin, Perth, Sydney & Melbourne

Bangladesh Dhaka

China Hong Kong, Beijing & Shanghai
India Calcutta, Chennai & Mumbai

❖ Malaysia Kuala Lumpur, Kelang, Langkawi & Penang

❖Maldive IslandsMalle❖MyanmarRangoon❖PakistanKarachi❖PhilippinesManila

Singapore

Sri Lanka
Thailand
Colombo & Candy
Phuket & Bangkok

United Arab Emirates Dubai.

- 10.2.25 **Organisational Liaison** the BRR as part of the institutional development program should establish the Banda Aceh Provincial Planning Authority (BAPPA initially a liaison group but potentially evolving into decision-making group), comprising elected and appointed representatives from the :
 - ❖ Banda Aceh Chamber of Commerce & Industry
 - ❖ Banda Aceh Community Development Association
 - ❖ Banda Aceh Local Government Association
 - Sumatra Development Commission
 - Indonesian Dept Transport
 - Indonesian Dept Conservation & Environment
 - ❖ Banda Aceh Rehabilitation & Reconstruction Agency Chairmanship.

- 10.2.26 **Research Development Program** the BRR as part of the institutional development and infrastructure programs initiate further research to produce the following reports:
 - NAD-Nias Project Management Report 2006
 - NAD-Nias Demographic Projections Report 2006-2031
 - ❖ NAD-Nias State of the Environment Report 2007
 - ❖ NAD-Nias Cultural Heritage Report 2007
 - NAD-Nias Multi-Modal Transport Strategy 2006*
 - NAD-Nias Raw Material Resources Strategy 2006.
- 10.2.27 **Business Development Program** the BRR as part of the institutional development and infrastructure programs initiate further business planning and investment reports :
 - ❖ NAD-Nias Regional Economic Development Plan (2007-12)*
 - NAD-Nias Provincial Airports' Master Plan 2006
 - NAD-Nias Provincial Seaports' Master Plan 2006
 - ❖ Banda Aceh Port Corporation Business Plan 2007-08
 - ❖ Banda Aceh International Airport Master Plan & Business Plan (2007-12)
 - Banda Aceh International Seaport Master Plan & Business Plan (2007-12).

ooooooo End of Recommendation ooooooo