



**United Nations Development Programme
Badan Rehabilitasi dan Rekonstruksi (BRR) NAD-Nias,
Government of Indonesia**

Tsunami Recovery Port Redevelopment Programme (TRPRP) NAD-Nias

Programme Summary

The Tsunami Recovery Port Redevelopment Programme (TRPRP) aims to create immediate employment and longer-term livelihoods by redeveloping the destroyed and damaged ports so that equipment and materials can be supplied efficiently to isolated communities for the rebuilding of communities and livelihoods.

This programme has been designed to be accordance with the overall port redevelopment strategy that has been endorsed by the Badan Rehabilitasi dan Rekonstruksi (BRR) to rebuild the ports of Aceh/Nias. Ports are essential basic infrastructure. They are particularly critical for the areas that have been devastated because there is either no road access or very poor road access which is deteriorating quickly. For the areas where most of the funds are to be spent (Calang, Sinabang and Gunung Sitoli) there is at present no access except by sea or air. The only means of getting the necessary reconstruction equipment and materials to those towns is by sea and at present the port facilities are non existent or inadequate.

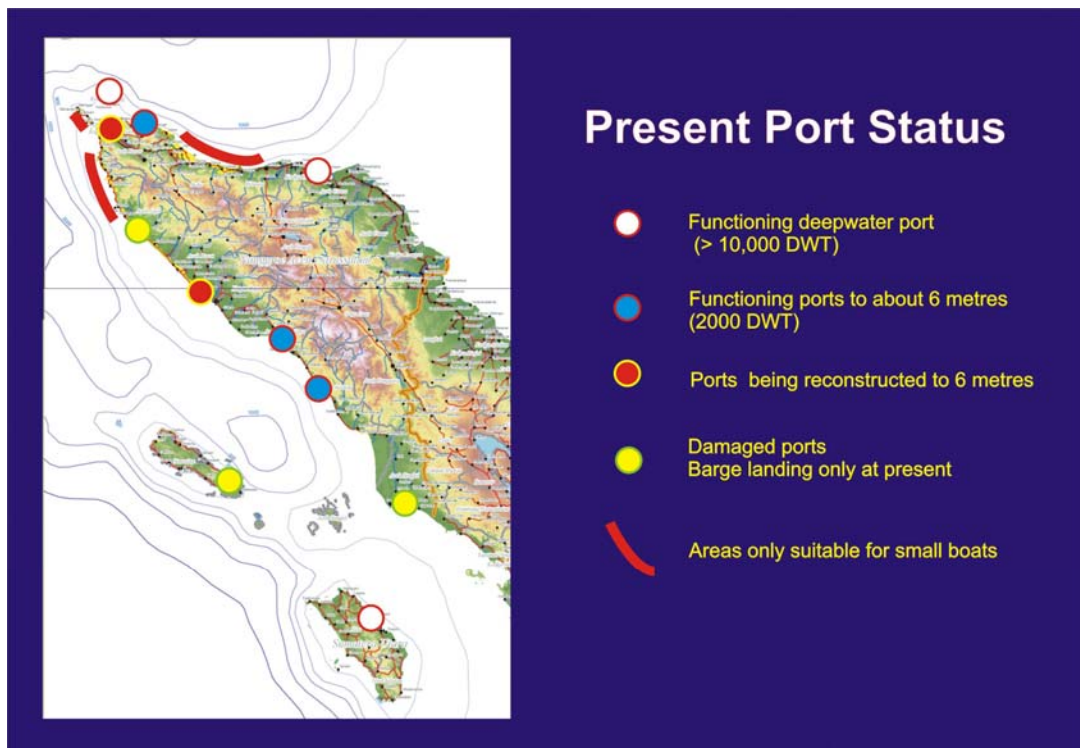
This project is being undertaken within the framework of the Aceh Emergency Response and Transitional Recovery (ERTR) Programme, executed by UNDP in partnership with the BRR, and implemented through partnerships with Provincial Government Transportation Department (Dinas Perhubungan) for Aceh and with the Department of Sea Communications for Nias. The budget total for this project is USD 3.65 million. The project is being funded through the Multi-Donor Trust Fund for Aceh and North Sumatra (MDTFANS).

PORT REDEVELOPMENT PROGRAMME (TRPRP) NAD-NIAS

1. SITUATIONAL ANALYSIS

A necessary requirement for promoting resumption of economic activity in Aceh and Nias, and for expediting the rehabilitation and reconstruction process, is the rehabilitation of essential economic infrastructure that has been destroyed or badly damaged by the earthquake and tsunami disasters. In particular, this includes the rehabilitation of port facilities along the west coast that have been severely damaged and require rehabilitation works. Rebuilding these ports will have a major influence on the long term economic recovery and development of the province, as well as help to speed up the reconstruction and recovery process.

Most of the ports on the north and west coast of Aceh were either badly damaged or were destroyed in the earthquake and tsunami of 26 December 2004 or in the earthquake of 28 March 2005. The present situation with the ports is summarized in the figure below and in the brief description of the situation at each of the ports.



A) Deepwater Ports

There are four deepwater ports in Aceh and Nias with a potential capacity to take vessels of 10,000 DWT or greater. The present status of these ports is summarised below.

Lhokseumawe

Lhokseumawe was not damaged in any of the events of December or March. It has two ports. The first is a dedicated port for the oil and gas industry with LNG and LPG

terminals and a depth at the berths of approximately 15 metres. The second port, to the west of the oil and gas port, has general cargo berths and fertiliser berths with a depth of approximately 10 metres.

Sabang

Sabang on the island of We, approximately 20 km north of the capital of Banda Aceh, has a well sheltered deepwater port which sustained minor damage in the tsunami and which is fully functional. It can accommodate vessels up to 50,000 DWT. At present there is only one deep water berth of 180 m in length and all cargo has to be unloaded using ships' cranes.

Sinabang

Sinabang, which is the main city on the island of Simeuleu, has a superb deepwater harbour with many sheltered areas with depths in excess of 45 metres. Unfortunately the island rose and tilted during the March 28 earthquake by between one and (reportedly) four metres. Sinabang harbour appeared to have uplifted by somewhere between 1 and 1.5 metres. All of the port facilities were very badly damaged by the earthquake and none are now functional.

Gunung Sitoli

Gunung Sitoli is the main port for the island of Nias. The island was very badly damaged in the earthquake of 28 March. The port facilities were not damaged by the tsunami and only marginally by the earthquake of 28 March. The main wharf has a depth in excess of 12 metres and in theory could take large ships. However it is in poor condition and appears to have been badly constructed as it is only about 20 years old. The deck has collapsed in three places. It is expected that with the heavy traffic that is now using the wharf it will continue to deteriorate quickly and will have to be replaced or duplicated within the timeframe of the reconstruction program. All of the storage buildings and the offices are in good condition as is the ferry terminal.

B) Shallow Water Ports

Aceh has a number of shallow water ports (with depths of up to 6 metres) that are in varying stages of repair.

Balohan Port

This is the ferry terminal on the island of We (on the opposite side of the island to Sabang). It has a floating terminal for passenger ferries and two ramps suitable for larger car carrying ferries. The port sustained some damage in the tsunami but this was minor and the port is functional

Malahayati Port

Malahayati is the main cargo terminal for Banda Aceh. The wharf was not damaged in the earthquakes or tsunami but all the land based facilities were destroyed. The wharf is beginning to deteriorate. New temporary storage sheds have been constructed and the Dutch government has committed to duplicating the wharf facilities and to providing additional buildings. With the present wharf and the proposed duplication, Malahayati will remain a shallow water port.

Ulee Lheue Port

Before December 26th 2004, Ulee Lheue was the main ferry port for Banda Aceh. It had been a very old historical port, but the new harbour and port facilities had virtually just been completed. The tsunami washed away all of buildings near Ulee

Lheue, except for the mosque and turned the harbour and its immediate surroundings into an island. The port authority building was destroyed but surprisingly the main wharf and the terminal where a floating power station had been moored were in good condition. The port and an access road are being reconstructed at present and should be partly operational by the end of the year.

Lamno Port

Lamno port was completely destroyed by the tsunami. A new small port is being designed in the river about 1 kilometre upstream of the old highway bridge and the old port. This port will only be suitable for small cargo boats of up to about 20 tonne and for fishing boats

Calang Port

Calang commercial and fishing facilities were completely destroyed by the December tsunami. Calang has a good, relatively deep harbour and it is possible to provide port facilities that are protected and suitable for a large variety of marine craft. However at present there is only a very small timber jetty which has been constructed since the tsunami. Cargo can only be brought in by sea in landing craft that moor at the beach.

Meulaboh Port

Meulaboh has a small general cargo wharf that was only slightly damaged by the tsunami. However it has limited capacity because the depth of water is only between 1.5 and 2 metres.

The ferry terminal was damaged, particularly with the destruction of the access way and the removal of the fenders at the berth. The terminal building was also destroyed. However the berthing area is relatively undamaged and mainly needs new fenders.

A new T shaped wharf is being constructed at present at Meulaboh just to the south of ferry terminal by the Singapore Red Cross. This wharf will have a water depth at its face at low tide of about 6 metres.

Susoh Port

This port suffered little damage in the earthquakes and tsunami. Susoh Port serves a local hinterland that was not badly affected. The jetty can accommodate ships of up to about 4000 DWT. It has no dedicated facilities for ferries.

Tapaktuan Port

This port suffered little damage in the earthquakes and tsunami. The wharf appears to have sunk by up to ½ metre but is still functional. It badly needs an additional dolphin off the northern end of the wharf to stop ships ranging in the swell. The existing warehouse has rotten beams and posts and should be demolished. A large lay-down area at the back of the wharf is being extended at present and would make an appropriate location for new storage sheds. Tapaktuan port serves the long narrow district of Aceh Selatan. Most of the district was not badly affected by the tsunami and earthquakes and so has a relatively low priority as part of the reconstruction.

Singkil Port

Singkil was not affected by the December events but sunk in excess of a metre in the March earthquake. As a result the main cargo wharf, the ferry terminal the

warehouse and the offices are below water at high tide. The facilities all need to be rebuilt. At this stage it is not clear whether the facilities should be relocated or whether the existing sites should be built up with reclamation.

Other ports

There are other smaller ports on the islands of Simeuleu, Banyak and Nias which are important for local access to islands or to areas of the large islands remote from good roads. These have not been inspected technically at this time.

2. RATIONAL FOR THE TRPRP PROGRAMME

2.1. Needs to be addressed

Ports are an essential facility that must be restored so that material can be imported for the reconstruction of the province of Aceh and of Nias. It is estimated that over 30 million tonne of material is needed over the next three to four years for the reconstruction; some of the material can be sourced locally and some can be brought in by road, but the vast majority has to be brought into the province and then distributed to the various townships along the coast by sea.

Some of the ports are already being rehabilitated as part of the overall port development strategy. The port of Sabang is being improved with funding from the Government of Indonesia. The port of Malayahati is being expanded with funding from the Dutch Government. The port of Ulee Lheue is being restored by UNDP with funding from the Australian Government and a new wharf is being built at Meulaboh with funding from the Singapore Red Cross. These will all be functional within the next few months.

However there is an urgent need to rehabilitate other ports. The three townships of Calang, Sinabang on Simeuleu and Gunung Sitoli on Nias have no road access and so the import of materials by sea is critical for the redevelopment. At Calang and Sinabang, temporary facilities will be built using old containers so that some materials can be imported while permanent new ports are being designed and constructed. As the complete redevelopment project at each location will take about 18 months, it is urgent that the designs be completed as quickly as possible. A temporary wharf made from containers is not being considered for Gunung Sitoli as the wharf at Gunung Sitoli is still functional. Additionally, since the shore near the port drops off steeply and so it is not a suitable location for a gravity structure such as a wharf made from old containers. WFP intends to put a floating barge platform there, which will suffice until the new wharf is built. If the existing wharf deteriorates too much it would be possible to strengthen it temporarily by putting some flat steel sheeting over the existing concrete.

In addition to the three ports above, minor works are required at several other ports to improve their efficiency for the reconstruction phase. These works include:

- Removal of old sheds at Sabang and the construction of a security fence;

- Cleaning up the port of Balohan including repairing the ferry pontoon;
- Design of a new river port at Lamno.

The minor works at Sabang and Balohan are being prioritised for the following reason. Sabang and Balohan are key for the shipment of reconstruction materials. Sabang will be the major receiver point for materials from overseas. Joint review by UN Joint logistics team and UNDP shows they need extra capacity to receive that volume. Part of the long term strategy is to make Sabang the hub port. To do this there needs to be some work at Sabang to make room for the containers and to be able to provide security. At present there are old storage sheds that are on the point of falling down. Most of the work at Sabang is being funded directly by the Indonesian Government. At Balohan there needs to be some repair work to clean up the tsunami damage so that containers for Banda Aceh can be transported by land from the main entry point at Sabang to Balohan and then materials can be loaded onto the ferry that plies between Balohan and Ulee Lheue

2.2. UNDP Comparative Advantage

UNDP has a long-standing partnership with government agencies in Indonesia in the area of disaster recovery and reconstruction, through its specialised Crises Prevention and Recovery Unit (CPRU). It has worked in partnership with the Department of Settlements and Regional Infrastructure (KIMPRASWIL) in recovery and reconstruction programmes in Maluku and North Maluku, and in the resettlement of refugees in West Timor. UNDP has worked on post-conflict social-economic recovery in Central Sulawesi with the Coordinating Ministry for Social Welfare (Menko Kesra).

UNDP's recent experience in Aceh covers humanitarian, recovery and longer-term development activities. UNDP has worked closely with and supported the Community Recovery Programme, which has since 1999 provided grants to local civil society organizations in Aceh province. Furthermore, UNDP has also before the Tsunami crisis initiated programming in Aceh in the areas of governance and poverty reduction, including notably a programme through the Coordinating Ministry of People's Welfare (Menko Kesra) to support the development and application of local poverty reduction strategies.

Following the tsunami and earthquake disasters, UNDP has launched a programme of support entitled the Aceh Emergency Response and Transitional Recovery (ERTR) Programme. The ERTR programme builds on the proposal submitted by UNDP in the United Nations Indian Ocean Earthquake/Tsunami Flash Appeal. The programme is designed to serve as a crucial link between immediate short-term and longer-term recovery and development activities. The programme includes four key outputs: (1) Immediate employment and rehabilitation through cash for work; (2) Recovery of livelihoods; (3) Recovery of housing, settlements and associated infrastructure; and (4) Strengthening governance capacity for sustainable recovery and risk-reduction. The TRPRP addresses two of the ERTR outputs, namely recovery of livelihoods and recovery of infrastructure by providing the means whereby isolated townships can have access to the equipment and materials needed for the reconstruction.

2.3. Current Port-Related Activities

The UNDP has been supporting the BRR since March by carrying out assessments of the condition of all the damaged ports, preparing options for the rehabilitation of these and preparing a white paper on the immediate and long term strategy for port development. This white paper has been adopted by the BRR as its policy document for the port redevelopment.

In addition, within the ETRR programme, in partnership with the local Transportation Department, and with support from the Government of Australia, UNDP has begun rehabilitation of Ulee Lheu harbour in Banda Aceh. UNDP has committed (and is on track) to having Ulee Lheu harbour operational by December.

To date UNDP has completed a hydrographic and sidescan survey, pinpointing the location and quantity of debris in the harbour that was washed in as a result of the tsunami, and UNDP has contracted a barge and excavator to remove the debris from the harbour, in order to restore it to a safe sailing depth for vessels. In order to gain land access to the site (since the old road is now under water), UNDP has reconstructed the road through filling and armouring the underwater area with rubble sourced through the UNDP tsunami waste recovery project (including for instance demolished buildings). UNDP is also supporting rehabilitation of the ferry berth and passenger berth, reconstruct the breakwater / revetment, construct a new terminal building, and undertaking other general cleanup of the site.

At the request of the Government, and in preparation for the launch of the TRPRP, UNDP has already undertaken international tenders for consulting firms with extensive port experience to bid for the investigations, design and documentation of new port facilities at Calang, Sinabang and Gunung Sitoli. Suitable tenders have been received and it is expected that consulting firms will be appointed shortly. The scope of services to be carried out by the consulting firms includes for each site.

Arrangements are also already underway for minor rehabilitation works at the other smaller ports. UNDP has already let a design contract with a local Acehnese consulting engineering company for the design of Lamno Port. The UNDP is negotiating with the Dinas Perhubungan for that department to undertake the necessary repairs at Sabang and Balohan ports. The UNDP is about to call tenders for the construction of temporary wharves made from old containers that will complement the temporary landing ramps being provided by the World Food Programme (WFP). These will be installed at Calang and Sinabang.

3. STRATEGY

3.1 BRR Immediate Action Programme

A BRR-requested World Bank assessment team undertook a rapid assessment of the current situation in infrastructure sectors, and recommended options for addressing immediate transportation and other infrastructure requirements. Additionally, the World Food Programme (WFP) from Rome undertook a mission relation to logistics needs for reconstruction.

Based on these and its own assessment processes and consultations, BRR has recently established an "Immediate Action Programme" to address key infrastructure performance targets over the next six months, while planning for medium and longer-term requirements. This immediate action programme has recommended a series of targets and partners to achieve these results, with BRR's selection of partners identified as those who were already mobilized.

Target	Proposed Partner
Ensure overland access on all tsunami affected recovery and reconstruction routes on west coast of Aceh	CRS / USAID / JICA
Ensure security and reliability on existing transport routes needed for recovery and reconstruction	ADB / BRR/Provincial Authorities
Provide Temporary 2000 DWT berth facilities in Calang and Sinabang	UNDP
Provide additional port capacity in Banda Aceh	UNDP / AusAid
Designs for Repair / Reconstruction of three seriously damaged seaport facilities (Calang, Sinabang, Gunung Sitoli)	UNDP
Secure existing port access roads in Banda Aceh	ADB
Provide 18 months temporary light aircraft facilities in remote or poorly accessible affected areas	BRR
Provide transitional housing for 60,000 persons by end 2005	BRR / UN / International Red Cross
Ensure shipping and logistics system for reconstruction	WFP
Improve drainage in Banda Aceh and new settlement	BRR / JICA / Muslim Aid
Ensure sufficient services for displaced persons and affected communities	UN / UNICEF
Empower BRR to take lead on coordination and monitoring and support local Government and community planning and delivery of reconstruction needs	BRR / UN

The Tsunami Recovery Port Redevelopment Programme (TRPRP) is undertaken within the framework of this Immediate Action Programme to meet the needs identified above. UNDP's specific contribution to this strategy is to provide immediate rehabilitation to priority port facilities, providing support to temporary wharves to

support the reconstruction process, while undertaking planing and detailed engineering designs for reconstruction of target major ports.

This initial ports project does not include the reconstruction works at the three major ports (Calang, Sinabang, Gunung Sitoli), but only the design and investigations. While the designs are being prepared, UNDP will undertake further consultations with Government and donors on arrangements for the actual reconstruction of these three ports. As part of the design process, detailed discussions will be held for purposes of approvals with BAPPENAS, the Department of Sea Communications and the Dinas Perhubungan and other relevant authorities to ensure that all relevant government agencies are informed and their needs are incorporated into the final designs and implementation of the reconstruction process. The estimated cost of the development of these three ports is USD 44.2 million.

3.2 Approach

3.2.1 Planning

The general location of the various facilities has been identified with the local Bupatis and their advisors. However these need to be confirmed and issues associated with land ownership etc confirmed. A master plan for each site will be prepared showing the appropriate size and layout of all facilities. This master plan will be agreed and approved by UNDP and relevant government agencies (coordinated by UNDP) before further work is undertaken.

This master plan process will factor in and address economic impacts and linkages of the planned port facilities, in order to ensure that ports are planned on the right scale. This will include linking the planning process into economic development planning processes being undertaken by BRR, local government (including BAPPEDA) and other stakeholders.

3.2.2 Site Investigations

Investigations will cover all studies necessary to be able to develop safe designs for the port facilities. These will include:

- Detailed bathymetric mapping of sections of the harbours sufficient to allow for the berthing areas and any turning circles;
- Geotechnical investigations of foundation conditions at the location of the berths;
- Geotechnical investigations of soil conditions at the location of the land based port facilities;
- Identification of suitable material for reclamation or coast protection as required.

3.2.3 Development of Design Criteria

The consultants will develop design criteria for the detailed design of the commercial port for the three locations, the ferry ports at Calang and Sinabang and the fisheries

facilities at Sinabang. These criteria will be presented in draft form to the UNDP and to the Dinas Perhubungan or to the Department of Sea Communications (in the case of Gunung Sitoli) for approval before the detailed design is undertaken.

For the ferry terminal the design vessel will be determined after consultations with the Aceh Reconstruction Authority and other relevant government agencies as to the likely long-term sizes of ferries for this province.

For the fishing fleet, most boats are small but some are larger in the range of 10 to 20 tonne. Discussions will be held with the Panglima Laut and others to determine whether there is a realistic likelihood of larger fishing boats using the facilities and whether this would warrant berthing or lifting facilities for larger boats.

The design criteria shall include:

- The results of the geotechnical investigations and the associated soil properties that are to be used for the detailed design;
- The seismic design parameters for the wharves and buildings. These should take into account the magnitudes of the earthquakes that have recently affected the area and the local effects these have had.
- The tidal ranges;
- The magnitude of any storm surges;
- The steps that would be taken to minimize the effects of a tsunami of the same magnitude as that which affected the region in December 2004;
- The horizontal loading of the design ship (and boat for the ferry terminal) against the wharves;
- The fender spacing and capacity for the commercial and ferry facilities;
- The bollard spacing and capacity for the commercial and ferry facilities;
- The vertical loading on the commercial wharves assuming the stacking of containers, two high at any location;
- The loading on the commercial wharves from a forklift capable of lifting one full 40 tonne container;
- Other loading criteria as appear appropriate to the design engineers;
- The levels of the wharves taking into account possible water level return periods and practical loading and unloading requirements on and off vessels;
- The depth at the wharves and in any approach channels taking into account under keel clearance requirements;
- The recommended sizes and layouts of all buildings with reasons for the recommendations. These will be developed in conjunction with the UNDP and the relevant local authorities;
- Other criteria as required to satisfy the Client of the adequacy of the facilities proposed.

3.2.4 Detailed Design

The detailed designs will include sufficient information in the form of technical specifications and drawings to enable a competent international marine contractor to complete the works to the required standard.

Where equipment or materials are specified in the design, they will be of a generic nature so as to be able to meet UN procurement guidelines and not force the ultimate construction contractor(s) to have to source materials from any specific country or supplier.

3.2.5 Proof Checking

UNDP will engage an independent engineer to conduct an independent proof check of the designs. If the proof checking reveals errors that would make the structures unsafe or not functional or if it reveals an over conservative design that, in the opinion of the proof engineer, is not cost effective, the consultant(s) will rework his calculations to provide mutually satisfactory outcomes. It is intended that the independent engineer will be one of the engineers employed by UNDP unless there is some very specialist technical issue that has to be considered by some other expert.

3.2.6 Documentation

The contract conditions for the construction of the port facilities will include the UNDP General Conditions of Contract for Civil Works. The Consultant will prepare full contract documentation for the commercial and the ferry terminals on the assumption that construction might be tendered as either one or several contracts. The documentation will include Bills of Quantities, the General and any Special Conditions of Contract, the Technical Specifications and the Drawings. The consultants will also include suitable tender documentation to enable construction offerors to bid the work.

The consultants will also produce confidential, priced Bills of Quantities for the use of UNDP.

3.3. Complementarity and Coordination

The development of the ports of Calang, Sinabang and Gunung Sitoli complements the works being done on the other ports in Aceh, namely Sabang, Malahayati, Ulee Lheue and Meulaboh. All of the developments are necessary if equipment and materials are to be brought to the areas most in need of housing and infrastructure rehabilitation. All of the proposed developments are in accordance with the approved master plan for port development.

The initial concepts for the development of the three ports have been discussed and agreed with BRR, the Dinas Perhubungan for Aceh province, with the local Bupatis and in the case of Gunung Sitoli with the local port authority. A significant component of the designs of the new port facilities will be consultation and the consultants for the projects will be expected to liaise with the following in developing the detailed master plans for each facility: BRR, UNDP, the Dinas Perhubungan, the local Bupatis, the Panglima Laut for each location, the Department of Sea Communications and the local communities.

These activities have also been planned in relation to other activities being supported by other donors and agencies. This includes activities supported by WFP, ADB, and others indicated in Section 3.1. as part of BRR's Immediate Action Programme.

3.4. Project Outputs

The Tsunami Recovery Port Redevelopment Programme (TRPRP) aims to create immediate employment and longer-term livelihoods by redeveloping the destroyed and damaged ports so that equipment and materials can be supplied efficiently to isolated communities for the rebuilding of communities and livelihoods.

The project has four specific outputs, as follows:

1. Design and investigations for ports at Calang, Sinabang, Gunung Sitoli, and Lamno
2. Functionality of other ports improved through minor rehabilitation works (Sabang and Balohan)
3. Construction of temporary wharves (Calang and Sinabang)
4. Effective and efficient management, monitoring and oversight

Output 1: Design and investigations for ports at Calang, Sinabang, Gunung Sitoli, and Lamno

The results for each of the three major port development projects and for the minor port of Lamno will be:

- Hydrographic survey reports of the seabed bathymetry at each location of the ports;
- Geotechnical survey reports on the subsea and land geology and on the material properties of the materials encountered so that engineering properties for foundations can be assigned to them;
- Master plans of the proposed berthing and on land facilities at each site so that final approval can be obtained from the UNDP, the Dinas Perhubungan and the BRR;
- Engineering design calculations and drawings suitable for construction;
- Bills of quantities for the construction works;
- Tender and contract documentation suitable for calling construction contracts;
- Tender estimates for the proposed works at each site.

The tender documents for the new port facilities will be made available to BRR and MDTFANS donors.

Output 2: Functionality of other ports improved through minor rehabilitation works (Sabang and Balohan)

Under this output, UNDP will engage local engineering consultants firms to undertake designs, and will contract minor rehabilitation works for other ports on the west coast, including demolishing damaged buildings, cleaning sites, and fix minor damages caused by the tsunami/earthquakes. Initial target sites include Sabang and Balohan.

- For the port of Sabang the outputs will be the demolition of three old sheds and the construction of a security fence around the port laydown area.
- For the port of Balohan the outputs will be the full restoration of the port facilities as they existed before the tsunami and December 2004 earthquake.

Output 3: Construction of temporary wharves

Under this output, UNDP will call tenders for the installation of two temporary wharves for small ships at Calang and Sinabang, to facilitate the immediate and medium term transportation requirements of the reconstruction phase, while the designs and reconstruction works are being undertaken. The results will be two temporary wharves made from second hand containers that will be operational for small ships at both Calang and Sinabang. The temporary wharves will be constructed as soon as possible close to the ramps being provided by WFP. All works will be complementary to those of WFP.

Output 4: Effective and efficient management, monitoring and oversight

This output refers to the role and responsibilities of UNDP itself as the Partner Agency for the MDTFANS grant for this project. In order to provide technical and management support to the project, UNDP will employ national and international port engineers, and will additionally contract a firm to provide three international port engineers to provide overall technical assistance to the project. The main functions of these engineers will be:

- To help implement the port development strategy of the BRR as agreed in the approved white paper;
- To ensure that designs are done properly and that the requirements of the BRR and UNDP are met;
- To ensure that construction contractors are selected properly and that the construction will be managed well;
- To oversee local engineering consultants on smaller port designs (i.e. Calang);
- To be responsible for the training of local engineering staff;
- To prepare concept plans for other cargo, ferry and fishing ports as required;

Additionally, UNDP has five main responsibilities in support of this project (supported through the 3% General Management Services charge). These are: (1) the recruitment of individual consultants; (2) the procurement, contracting, and payment of contractors; (3) the monitoring and supervision of individuals and firms recruited

by UNDP to provide technical and operational support, in order to ensure appropriate and effective use of project resources; (4) overall financial management; and (5) supporting the preparation of periodic reports for BRR and the donor members of the MDTFANS.

4. MANAGEMENT ARRANGEMENTS

4.1 Execution Arrangements:

The Tsunami Recovery Port Redevelopment Programme (TRPRP) is being undertaken within the framework of the Aceh Emergency Response and Transitional Recovery (ERTR) Programme. The ERTR Programme is directly executed by UNDP, with the Badan Rehabilitasi dan Rekonstruksi (BRR) NAD-Nias as UNDP's Government counterpart for the programme. Planning for the programme has been undertaken in collaboration with the Sector Deputy For Housing and Infrastructure of BRR

The TRPRP will be supported within the overall management structure of the ERTR Programme, and will draw on the technical, operational and logistical infrastructure of the programme, including several experienced port engineers engaged by UNDP. Hence, through the ERTR programme UNDP is providing in-kind contributions for the supervision, monitoring and operational support of the project.

Day to day project management of the TRPRP will be overseen by experienced UNDP port engineers. Project work plans for the programme will be jointly developed by UNDP and its implementing government partner (the Dinas Perhubungan).

4.2 UNDP Support Services:

UNDP will provide Support Services to the Dinas Perhubungan in the implementation of this programme. These services include, inter alia, recruitment and contracting of project management and technical staff, procurement of services, support for budget and financial management, etc., and overall monitoring of the implementation of activities and services for this project on behalf of the donor partners of the MDTFANS in order to ensure effective and efficient use of resources.

4.3 Implementation Arrangements:

The Government implementing partner will be the Dinas Perhubungan. UNDP will contract and manage the design consultants on behalf of the Dinas Perhubungan. Engineering staff from the office of the Dinas Perhubungan will be part of the design teams of the selected consultants for the three major ports. The rest of the programme will be implemented in conjunction with the Dinas Perhubungan. Relationships with the Dinas Perhubungan will be governed by Letters of Agreement (LOAs). Delivery agents include private sector firms which will be contracted through competitive procurement processes. In making decisions about what delivery arrangements to use, priority will be given to prospects for efficiency and effectiveness in delivery.

4.4. Procurement of Goods and Services:

Procurement for goods and services for this project will be undertaken through competitive and transparent tender processes, in line with UN and UNDP rules and procedures. Requests for Proposals (RFPs) and Invitations to Bid (ITBs) will be advertised publicly via the web, newspaper advertisements, through searches of vendor databases maintained by UNDP Indonesia and the Inter-Agency Procurement Services Office (IAPSO) databases, and through direct email distribution (i.e. through the IAPSO procurement notices distribution list). Procurement Notices for will be posted on:

- UNDP Indonesia Website <<http://www.undp.or.id/procurement>>
- UNDP Global Website <<http://www.undp.org/procurement> >
- IAPSO <<http://www.iapso.org/supplying/procurement-notices.asp> >
- BAPPENAS / BRR e-Aceh Web Site <<http://www.e-aceh.org/>>

Procedures and criteria for evaluation of bids will be detailed in tender documents. Generally, proposals/bids will be assessed according to principles of technical quality (including proposed approach and work plan, responsiveness to the specifications of the scope of services, and capacity and experience of the proposing organization / firm, including experience on previous similar projects) and value for money.

Results of procurement processes for the project will be reviewed by UNDP's Contracts, Assets and Procurement Committee (CAPC) and UNDP's Advisory Committee on Procurement (ACP) in New York, as relevant, in order to ensure that competitive and transparent processes are undertaken.

In order to ensure efficient and prompt procurement processes that meet UNDP corporate standards, the UNDP country office in Indonesia has received support to strengthen its procurement capacity in response to the tsunami. In terms of procedures, UNDP has special guidelines for procurement of goods and services in emergency contexts that are being applied for the tsunami response. This includes an increased delegation of authority for the country office, as well as expedited review and approval processes for contracts.

Additionally, the procurement section in Jakarta has been strengthened and processing times streamlined through provision of additional staffing support (including additional international Procurement Officers on loan from other country offices), specialized procurement technical assistance from UNDP's New York Bureau of Management and from the UNDP Inter-Agency Procurement Services Office (IAPSO) in Copenhagen.

In order to minimize risks associated with procurement and contracting of services, UNDP's Office of Procurement and Legal Services (OLPS) in New York, as well as by UNDP's global Office of Audit and Performance Review, have fielded missions to assess procurement risks and provide recommendations on procurement risk mitigation measures. Additionally, trainings on risk assessment and management have been provided to UNDP programme and operational staff.

The tenders for the three designs and investigations have already been undertaken in line with UNDP rules and procedures. UNDP is currently finalizing the process

towards announcing the awards. In order to ensure validity of process (competitiveness and transparency) and value for money in procurement processes, results of tenders have been reviewed by UNDP by the CAPC and ACP. These panels have cleared the results of the three tenders for design and investigations (Calang, Sinanbang and Gunung Sitoli).

4.5. Financial Management and Flow of Funds:

Financial management will be undertaken through UNDP's internal control framework and in line with UNDP's financial rules and procedures. The objectives of the internal control framework are to ensure efficacy and efficiency in the receipt, custody and use of all financial resources administered by UNDP. Project financial transactions will be undertaken through UNDP's new enterprise resource planning (ERP) system (ATLAS), which was introduced in 2004 and is based on best-practice enterprise resource management systems used in the public and private sectors.

For payment of services contracted by UNDP, through UNDP procurement processes, payments will be made directly by UNDP to consultants/contractors based on benchmarks and deliverables specified in agreements / contracts. Prior to issuance of progress payments, UNDP will assess deliverables and achievement of milestones, including through on-site monitoring and review/evaluation of narrative and financial reporting (including detailed supporting documentation as required). For project components implemented directly by Dinas Perhubungan, funds will be transferred on a quarterly advance basis, and will be reported upon and reviewed prior to transfer of further advances.

Financial reporting will be undertaken as per UNDP and MDTFANS procedures, and as part of overall project reporting. Information on contracts and expenditures will be publicly posted to ensure transparency on UNDP websites.

5. MONITORING, REPORTING, EVALUATION AND AUDIT

5.1. Project Monitoring Framework:

An overall monitoring framework for the ERTR Programme has been developed by UNDP to ensure accountability and transparency in the use of programme resources, and to ensure that lessons learned in the implementation of this project are distilled and shared with stakeholders, including the Government of Indonesia and the MDTFANS donor partners. The monitoring framework for this project will be fully compliant with the monitoring and evaluation framework to be established for the MDTFANS as a whole.

Delivery of services by the implementing partner and consultants/contractors will be monitored against deliverables and benchmarks included in contracts, through a review and evaluation of narrative and financial reporting, combined with on site monitoring by UNDP of service delivery. Feedback will be provided to the implementing partner and consultants/contractors in order to identify issues that

need corrective action, ensure that such actions are taken early, and to improve overall quality in the implementation of activities and provision of services.

The programme's financial resources will be monitored through a series of controls at various levels (as described above in section Financial Management and Flow of Funds). All financial transactions are undertaken, recorded, monitored, analysed and reported through UNDP's newly introduced ATLAS Enterprise Resource Planning (ERP) system. Approved project budgets and expenditures will be publicly posted in project areas, as well as on the UNDP website.

5.2. Reporting

Reporting for the project as a whole to the MDTFANS will take place in line with MDTFANS requirements detailed in the MDTFANS Financing Agreement and Operations Manual. UNDP will provide support to its Government implementing partner in reporting. Reports will include performance indicators as well as physical and financial progress in achieving results, and will be submitted to the MDTFANS Steering Committee through the Secretariat at least every six months.

For funds transferred to its government partner by UNDP on a quarterly advance basis, the Dinas Perhubungan will provide quarterly reporting on expenditures of these funds, activities undertaken, and results achieved.

Reporting (both narrative and financial) on implementation of activities and services will be undertaken by the Dinas Perhubungan and consultants/contractors on the basis of reporting schedules defined in agreements and contracts.

5.3. Audit and Evaluation Provisions

All UNDP-supported projects are subject to UNDP audit rules and regulations. Projects in response to the tsunami disaster are subject to periodic management reviews, appraisals of internal control mechanisms, and annual independent audits. Additional internal audit procedures are also being established.

Activities by implementing partners are also subject to audit provisions, including UNDP reviews of financial reporting and supporting documentation, and independent audit of implementing agent accounts for certain activities. Agreement / Contracts with implementing partners will be linked to milestones and deliverables. UNDP will verify financial expenditures of implementing partners like Dinas Perhubungan, and UNDP only makes payments upon positive review of project progress towards achievement of deliverables results specified in the LOA/contract, and appropriateness of expenditures, based on review of partner financial reporting (including supporting documentation), validated by field monitoring. Expenditures found to be in appropriate or insufficiently supported will be rejected.

UNDP has a team of qualified financial monitoring personnel whose sole function is to review financial expenditures reports of implementing partners of tsunami related programming. Financial reviews include the following:

- Analytical Review to examine reported expenditures against the activities and results specified in the narrative report, and against the budget agreed with UNDP. This is in order to ensure that expenditures are in conformity with the provisions of the contract / agreement and that funds are being appropriately used to achieve project objectives
- Test of details to review Supporting Documentation for Expenditures, to ensure that the implementing agent has appropriate supporting documents for expenditures.

UNDP's provision of support services are also audited on a regular basis as part of audits of the Country Office as a whole by the Office of Audit and Performance Review, as well as externally by the UN Board of Auditors.

5.4. Risks and Mitigation Measures

Risk assessment of UNDP's tsunami response has been undertaken by the UNDP country office together with UNDP's global Office of Audit and Performance Review, which has provided recommendations on risk mitigation measures. Additionally, UNDP's global Office for Legal and Procurement Services has provided trainings to UNDP programme staff on risk assessment and mitigation measures for procurement and contracting of services. These measures will form part of UNDP's procurement on behalf of BRR for this project.

See the following Risk Matrix for the TRPRP:

RISK	EFFECT	PROBABILITY	IMPACT	MANAGEMENT	WHO
Political					
The peace process collapses and there is significant instability in Aceh	The facilities will not be able to be constructed and used	L	H	Monitor the situation on a continuous basis and hold discussions as necessary with the BRR and Dinas Perhubungan	UNDP
Government of Indonesia and the BRR do not provide sufficient support	The construction will be slow in implementation	L	M	The commitment of the BRR (and through it the GOI) needs to be reinforced at each management review meeting	UNDP/BRR
Institutional					
Land agreements for location of facilities for Phase II construction will not be negotiated within project timeframe.	The construction will not proceed	L	M	Discussions by consultants, UNDP and BRR with the Bupati and other local interests	UNDP/BRR/Consultants
The Dinas Perhubungan does not have adequate skills and authority to manage and maintain the new facilities.	Proper management and maintenance of the facilities will not occur	M	M	Identification of skill and authority levels required for effective management and maintenance. Consultations to ensure that these are achieved through transfer from Dinas staff and institutional strengthening measures as part of Phase II project.	UNDP/ Dinas
The Dinas Perhubungan does not impose a suitable mechanism to raise maintenance revenue for the new facilities	Insufficient maintenance budget will affect sustainability	L	M	Identify maintenance budget and consult with Dinas on appropriate funding mechanisms	UNDP/Consultants
Land use agreements for Phase II construction are disputed or repudiated	The construction will be delayed or stopped	M	H	An acceptable mediation body should be agreed before the project starts.	UNDP/BRR

RISK	EFFECT	PROBABILITY	IMPACT	MANAGEMENT	WHO
				Community negotiations should be a continuing part of the project program	
Commercial					
Sea transportation does not remain an economically viable option	The facilities will not be used to capacity	L	H	Financial encouragement should be considered to new shipping companies to begin operation	Dinas
Assessment of demand is not accurate	The facilities will not be used to capacity	L	L	Other forms of export goods need to be produced	BRR/Dinas
Shipping agents do not increase the volume of shipping to the area in response to increased demand	The facilities will not be used to capacity	L	M	Financial encouragement should be considered to new shipping companies to begin operation	Dinas
Producers have do not have sufficient capacity to utilise increased transportation opportunities	The facilities will not be used to capacity	L	M	Farm management practices must be reviewed and improved	UNDP/BRR
Produce buyers do not use storage facilities or the ports	The facilities will not be used to capacity	L	L	Storage and shipment costs need to be reviewed	Dinas
Availability of storage facilities does not improve the quality of produce shipped from the ports	The economic benefit of the project will be reduced	L	M	A review of the whole logistics operation should be undertaken	Dinas
Infrastructure					
The seabed conditions make it difficult to construct the port facilities	The wharf will be more expensive than anticipated	L	M	Thorough site investigations and design solutions to meet site conditions.	Consultants
Lack of good quality aggregates will result in poor quality concrete.	The wharf structures will require high levels of maintenance	M	M	If problems are identified during site investigations then the feasibility of using precast units will be investigated.	Consultants

5.5. Environmental Impact

These projects will develop facilities adjacent to or near the original port facilities. The design process undertaken as part of this project (Phase 1) will assess the environmental impacts of the eventual construction of the port facilities and develop any mitigation measures that are necessary to protect the environment at the sites.

Environmental issues that will be considered among others include:

a) For Calang

- The effect the wharf or jetties might have on the beach shape and stability;
- The impact on any residual vegetation of importance in the area that will be developed as port land;
- The nature and importance of any offshore reefs (if any);
- The design details to ensure that the port does not cause any spillage or pollution when in operation;
- The effects on native vegetation and on roads and settlements if any quarry has to be developed;
- The social and economic effect that the port will have on the township.

b) For Sinabang

- The impact on any residual vegetation of importance in the areas that will be developed as port land;
- The nature and importance of any fringing reefs at the designated development sites;
- The design details to ensure that the ports do not cause any spillage or pollution when in operation;
- The possibilities for reestablishing mangrove stands (most of the existing mangroves are now above high water because of the uplift that has occurred);
- The effects on native vegetation and on roads and settlements if any quarry has to be developed;
- The social and economic effect that the port will have on the township.

c) For Gunung Sitoli

- The effect on any native vegetation in the area of the access road;
- The design details to ensure that the port does not cause any spillage or pollution when in operation;
- The nature and importance of any fringing reef at the designated development site;
- The social and economic effect that the port will have on the township.

For the temporary facilities there are no plans to carry out EMPs. The temporary wharves will be placed in port land – more or less where materials have been unloaded ever since the earthquakes and tsunami. These areas were completely devastated by the earthquakes and tsunami. The other minor rehabilitation works are repair works and simply fixing what is already existing and damaged.

6. LEGAL CONTEXT

This project is undertaken as a sub-project of the Aceh Emergency Response and Transitional Recovery (ERTR) Programme, and is undertaken within the legal context of the ERTR project document signed by the Badan Rehabilitasi dan Rekonstruksi (BRR) NAD-Nias and UNDP in May 2005. Relationships with local Government counterparts will be governed by Letters of Agreement (LOAs) between UNDP and each district department.

7. RESULTS AND RESOURCES FRAMEWORK

<p>Intended Outcome as stated in the Country Programme Results and Resource Framework: Crisis prevention approaches integrated into Government recovery, development and planning frameworks.</p>
<p>Applicable MYFF Service Line: Recovery</p>
<p>Partnership Strategy: This programme will be undertaken in collaboration with the Agency for Rehabilitation and Reconstruction of Aceh and Nias (BRR) and the Multi-Donor Trust Fund for Aceh and North Sumatra (MDTFANS) established by the World Bank and several donors. The programme will be implemented with the local Government Dinas Perhubungan (Transport Department), and delivered through arrangements with the private sector.</p>
<p>Project title: Aceh Emergency Response and Transitional Recovery Programme ATLAS Award ID: 00038024</p>

	Intended Outputs	Output Targets (Six Month Programme)	Indicative Activities	Responsible parties	Inputs
1	Design and investigations for ports at Calang, Sinabang, Gunung Sitoli, and Lamno	Approved investigation and design reports and master plans / Contract documents ready for construction tenders for the ports of Calang, Sinabang, Gunung Sitoli and Lamno.	<ol style="list-style-type: none"> 1. Bathymetric and land based surveys 2. Geotechnical surveys and laboratory tests of site materials. 3. Master plans of port facilities 4. Detailed designs and drawings 5. Bills of quantities 6. Contract documents 	<ul style="list-style-type: none"> • UNDP for recruitment, procurement and contracting, and consultant payments • Designated consultants for performance of works • Dinas Perhubungan for monitoring and policy 	Contracted Services for consultant firms for designs
2	Functionality of other ports improved through minor rehabilitation works (Sabang and Balohan)	Improvement of land storage area behind the wharf at Sabang -- Site clean and ready for secure storage of imported materials and equipment Repair to the existing port facilities including the terminal building at Balohan	<p>Sabang</p> <ol style="list-style-type: none"> 1. Removal of three old sheds 2. Construction of a security fence around the site <p>Balohan</p> <ol style="list-style-type: none"> 1. Repair of the ferry landing pontoon 2. Clean up of the access roads and the car park; 3. Removal of one derelict building; 	UNDP for monitoring contractor performance Dinas Perhubungan for recruitment and management of contractors for the works	Sabang minor works, including land storage area ready Balohan minor works

	Intended Outputs	Output Targets (Six Month Programme)	Indicative Activities	Responsible parties	Inputs
			<ol style="list-style-type: none"> 4. Restoration of security fencing;; 5. Restoration of the revetment and eroded land area; 6. Repair to the terminal building and offices 		
3	Construction of temporary wharves (Calang and Sinabang)	Construction of two temporary wharves for small coastal trading ships: <ul style="list-style-type: none"> • Construction of a temporary wharf at Calang • Construction of a temporary wharf at Sinabang 	<ol style="list-style-type: none"> 1. Recruitment of contractor(s) 2. Construction of wharves and approach roads 	UNDP for procurement, management, supervision, monitoring and reporting Dinas Perhubungan for monitoring and policy	Construction of wharves and approaches
4	Effective and efficient management, monitoring and oversight of the overall programme on behalf of the MDTFANS donor partners	<ul style="list-style-type: none"> • Timely recruitment of consultants and procurement of quality goods and services • Enhanced financial reporting and accountability for the use of MDTFANS resources • Effective monitoring and reporting of programme activities 	<u>Direct Technical Assistance and Project Management Costs for Outputs 1, 2 and 3</u> <ol style="list-style-type: none"> 1. Technical assistance and technical monitoring 2. Direct project support <u>Indirect Costs</u> <ol style="list-style-type: none"> 1. Recruitment of consultants 2. Procurement of goods and services 3. Management of human and financial resources 4. Monitoring and reporting of programme implementation by district government and service providers 	UNDP for recruitment, procurement, management, supervision, monitoring and reporting.	<ul style="list-style-type: none"> • Direct project support costs: <ul style="list-style-type: none"> ○ Contracted Services for consulting firm for technical assistance and monitoring ○ International consultant (Individuals) ○ National consultants (Individuals) ○ Travel • UNDP General Management Services (GMS) (3%)