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INDONESIA:
Notes on Reconstruction
The December 26, 2004 Natural Disaster




BAPPENAS

A Technical Report Prepared by BAPPENAS
and The International Donor Community

FOREWORD

The December 26 earthquake and tsunami devastated the lives of millions of people, leaving a wake of destruction from Asia to Africa. This was the worst natural disaster in Indonesia's history, and Aceh and North Sumatra suffered the most. Over 110,000 people lost their lives, an estimated 700,000 people were displaced, and many orphaned. The scale of the damages to the local economy, infrastructure, and administration were unprecedented. In an instant, the livelihoods and security of hundreds of thousands of the survivors were ruined.

But this tragedy has galvanized the humanitarian spirit in Indonesia and throughout the world. While it is impossible to replace the loses from this truly horrific event – the Government of Indonesia, along with the support of the international community, is prepared to take on the challenges of reconstruction. Ultimately this task is less about replacing physical assets than it is about rebuilding livelihoods and communities. This can only happen by developing a credible and inclusive recovery plan, relying on a bottom-up participatory approach that truly captures the aspirations and vision of the people of Aceh and North Sumatra.

The Government of Indonesia's response to the immediate needs of the relief efforts has been swift and effective. As this critical work makes the transition to reconstruction, and the communities begin to recover from the initial shock and face the future, a comprehensive strategy is needed to help guide the reconstruction process. This report, *Indonesia: Preliminary Notes on Reconstruction* sets the groundwork by highlighting a range of possible responses based on existing domestic programs and borrowing from global best practices. In the next few months the government will develop the reconstruction strategy for Aceh and North Sumatra – one that is crafted in close consultation with the affected communities.

Indonesia's leaders have already expressed their guiding principles for reconstruction, and they can count on the full support of the international community. If adhered to, they will ensure reconstruction will be as equitable and efficient as possible – while also offering new hope and stability for Aceh, a province that has experienced its share of hardships.

The reports were prepared under the guidance of Bappenas, and in close consultation with the Government of Indonesia's line agencies and its international partners. This was an intense collaborative effort, one that strengthened the working relationships and camaraderie between all participants. We hope the findings from these reports will serve as a sound basis to make informed decisions and, more critically, help empower the people of Aceh and North Sumatra to rebuild their lives and determine their own future.

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This report was a collaborative effort between the Government of Indonesia and the international donor community. The magnitude of the tragedy was an added motivation for all of those involved.

This effort was guided by Bappenas, with invaluable contributions from many government line agencies. The Government's quick mobilization in the field, its organization in Jakarta, and its rapid dissemination and analysis of data were key foundations for the preliminary assessment of damages.

The donor community, together with its partners in government, rallied its collective resources to respond to the urgent reconstruction efforts. Many bilateral and multilateral agencies participated in a two-week effort, working together with Bappenas to complete these reports. The following organizations were key contributors: ADB, AusAID, Danida, DFID, ECLAC, EU, FAO, GTZ, IFAD, IFC, ILO, IMF, JBIC, KfW Development Bank, Perpamsi, The Asia Foundation, UN Habitat, UNHCR, UNDP, UNEP, UNESCO, UNFPA, UNICEF, UNISDR, USAID, WHO, WSP and the World Bank.

We also acknowledge the dedication of all of the local and international NGOs, relief organizations, volunteers, universities, trade unions, and the residents of Aceh – who provided invaluable information for the content of this report. We would also like to thank Jez O'hare for donating his photographs of Aceh, and to Perry Mandeville, for working around the clock to provide satellite imagery for our analysis.

Any follow-up questions, or request for additional information should be directed to Sujana Royat of Bappenas (sudjana@bappenas.go.id), or to Ani Dasgupta (adasgupta@worldbank.org) of the World Bank.

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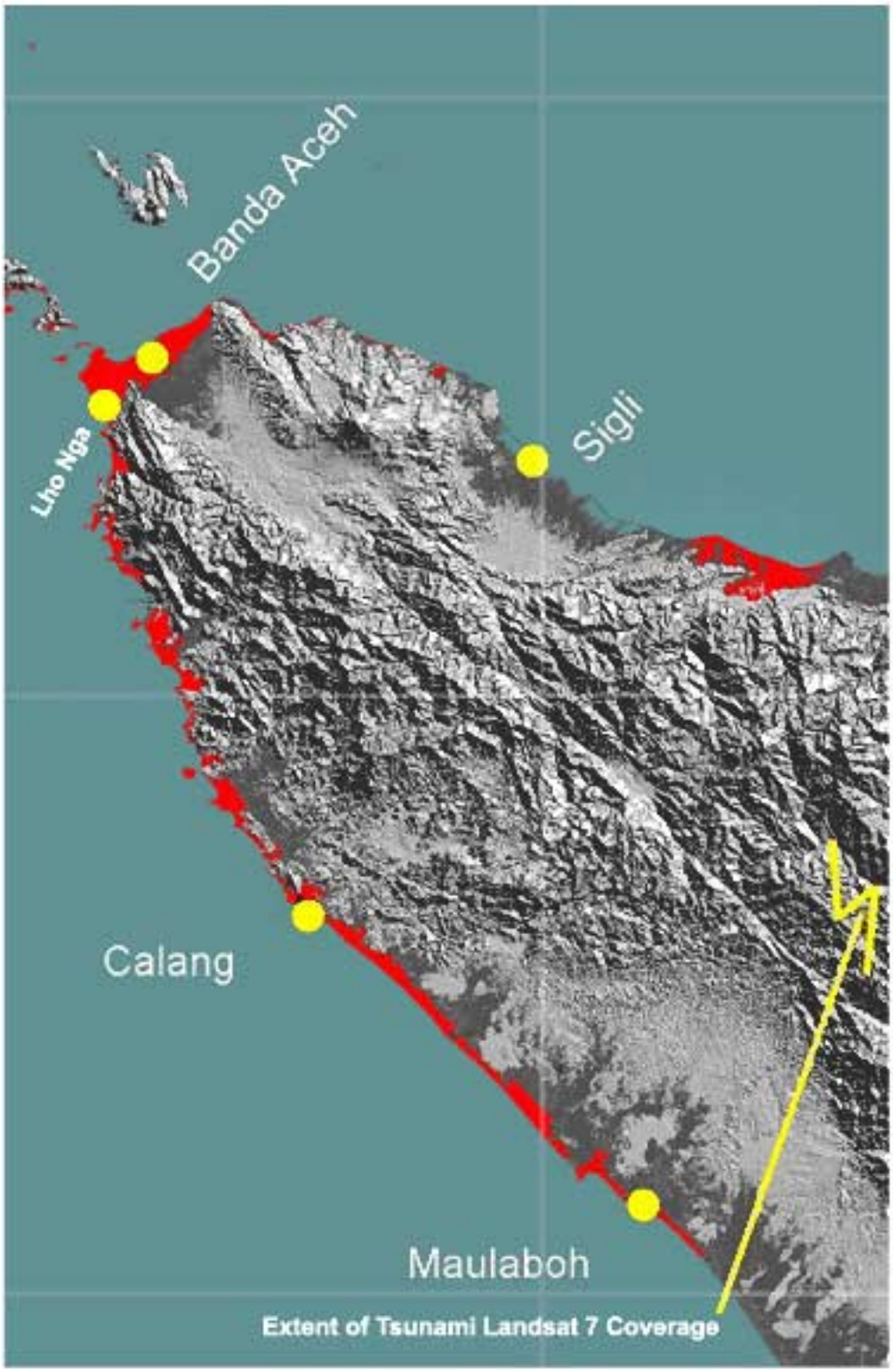
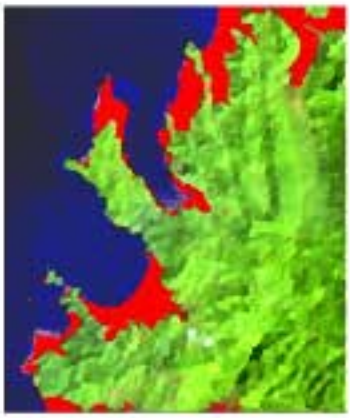
Aceh Tsunami Impact Zone





This map estimates the impacted areas on the coast of Aceh. The areas marked in red illustrate the water line and extent of penetration from the tsunami on December 26th, 2004.

The areas were defined using multispectral analysis (bands 5,4,2) of Landsat Imagery to capture the extent of water damage/loss of vegetation.

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Region Map

GLOSSARY

ADB	Asian Development Bank
ATM	Automated Teller Machine
BAPPENAS	National Development Planning Agency
BI	Bank Indonesia
BMG	Badan Meteorologi dan Geofisika
BPD	Regional Development Bank
BPDs	Village Councils
BPS	Central Statistics Bureau
BRI	Bank Rakyat Indonesia
CAMP	Coordination of Aid and Monitoring of Projects System
CBO	Community Based Organization
CCLC	Creating Learning Communities for Children Program
CDD	Community Driven Development
CHARM	Community Hazard and Risk Management Program
COFISH	Coastal Community and Fisheries Resource Management Project
CZMP	Coastal Zone Management Plan
DAK	Special Local Government Grant
DAU	Consolidated Block Grant
DGLC	Directorate-General of Land Communications
DGSC	Directorate-General of Sea Communications
DGWR	Directorate-General of Water Resources
DIP	Budget Warrents
DMI	Disaster Mitigation Institute
DPRD	Local Council
DPUP	Provincial Office of Ministry of Public Works
DRM	Disaster Risk Management
ECLAC	United Nations Economic Commission for Latin America and the Caribbean
EIA	Environment Impact Assessment
EIII	Employment-intensive Infrastructure Investment
FAO	Food and Agriculture Organization
FIRP	Financial Intermediation Revival Program
GAM	Free Aceh Movement, Gerakan Aceh Merdeka
GoI	Government of Indonesia
HCC	Housing Coordinating Committee
IDP	Internally Displaced Person
IFMS	Integrated Financial Management Systems
IPLT	Septage Treatment Plants
Kabupaten	District Government
KDP	Kecematan Development Program
Kelurahan	Administrative Sub-district (lower level of government administrative unit in a Kota)
Kota	City District
KPKN	Central Treasury Office
MCK	Communal Sanitation Facilities

MCRMP	Marine and Coastal Resources Management Project
MMAF	Ministry of Marine Affairs and Fisheries
MOC	Ministry of Communication
MOC	Ministry of Communication
MoHa	Ministry of Home Affairs
MORA	Ministry of Religious Affairs
MP-SEI	Management Plans for Strategic Environmental Impacts
MPW	Ministry of Public Works
MUI	Indonesia Ulamas Council
NAD	Nanggroe Aceh Darussalam
NGO	Non-governmental Organization
NSC	National Steering Committee
PDAM	Government-owned water enterprises
PERPAMSI	Association of Indonesian Water Supply Enterprises
pesantren	religious boarding schools
PLN	State-owned electricity company
PME	Participatory Monitoring and Evaluation
PODES	Village survey
PSRP	Payment System Restoration Program
PT PLN	the National Electricity Company
PUP	PU Pengaiaran, or Water Resources Service Office
RRSP	Rural Roads Sumatra Project
Satkorlak	Provincial level co-ordinating unit of Bakornas
Satlak	District or municipal level co-ordinating unit of Bakornas
SGP	National Scholarships and Grants Program
SIGP	School Improvement Grants Program
SPBU	Road Side Fuel Stations
SRRP	Sumatra Region Roads Project
SSWP	Small-scale Water Providers
SUMUT	North Sumatra
Susenas	National Household Expenditure Survey
SUSI	Survei Terintegrasi
TA	Technical Assistance
TNI	Indonesian Army
UN	United Nations
UNHCR	United Nations High Commission for Refugees
UPP	Community-driven development project
USB	Unit Sekolah Baru
USO	Universal Service Obligation
USO	Universal Service Obligation
warungs	roadside stalls
WFP	World Food Program
WHO	World Health Organization

Framework for Recovery Strategy

Aceh Photos donated by: Jez O'hare

I. BUILDING THE NEW ACEH AND NORTH SUMATRA: A FRAMEWORK FOR RECOVERY AND RECONSTRUCTION

SUMMARY OF LOSSES AND DAMAGES

The 26 December 2004 disaster has focused national and international attention on the lack of early warning and appropriate immediate response mechanisms in the face of the tsunami. While in the case of Indonesia, a minimal amount of time was available to warn communities (less than 15 minutes) between the occurrence of the earthquake and the arrival of the tidal surges, lack of established international and national communication channels to alert populations and locations in harms way has gathered much attention.

FRAMEWORK FOR RECOVERY AND RECONSTRUCTION

On December 26, 2004, an earthquake and tsunami -- the world's worst natural disaster in living memory – struck the Indian Ocean region killing more than 150,000 people, making almost a million homeless, and sending a wave of shock, an outpouring of sympathy and offers of assistance from across the globe. Indonesia bore the worst brunt of the disaster, concentrated in the provinces of Aceh and North Sumatra. With more than 115,000 people dead and 20 percent of the Acehnese population homeless, no family in the region is untouched by the disaster. Hundreds of communities have been washed away. Local governments have collapsed. In many cities and villages, the tsunami painted a line of destruction across the landscape. On one side of the line, nearly all the infrastructure must be rebuilt or rehabilitated. But the wounds on the other side are devastating as well, as the people of Aceh and North Sumatra have been severely traumatized by the scale of the tragedy. Rebuilding the region will require far more than rebuilding roads and bridges; it will entail reviving lives and livelihoods and resurrecting entire communities.

The first priority has been to provide immediate humanitarian relief to ease the suffering of those who survived and restore their basic needs. But as needs shift from immediate relief to longer term recovery, a coherent, credible and comprehensive strategy is needed that addresses the considerable challenges raised by the scale and scope of the disaster. This paper provides recommendations based on international experience for the development of a reconstruction strategy for Aceh and North Sumatra. It offers a set of broad lessons and principles for designing and managing

the reconstruction efforts. It also brings together a series of sectoral notes that make recommendations on core principles, areas of short- and medium term interventions, and examples on how to carry them out. But this is only a first step in building a credible and effective strategy which will require the full participation of the people from the affected communities. Only these people, who have suffered so much, can define their needs and determine the priorities for rebuilding their communities.

TOWARDS A COMPREHENSIVE AND CREDIBLE RECOVERY STRATEGY

Indonesia's leaders have already expressed a broad vision for a National Recovery and Reconstruction Strategy. The six key principles outlined by the Government include:

- A people-centered and participative process, where the administration listens to and understands the feelings and aspirations of the people;
- A holistic approach – rebuilding based on a comprehensive strategy;
- Effective coordination for consistency and effectiveness among sectoral and regional programs at national and local levels;
- Drawing a distinction between rehabilitation – achieving minimum standards – and reconstruction, with a clear strategy for each;
- Focusing on services and institutions rather than projects;
- Incorporating fiscal transparency and effective monitoring into the rehabilitation and reconstruction programs.

The recovery plan needs to be effective in coordinating the stakeholders of the recovery process. Given the scale and scope of the disaster, recovery and reconstruction efforts will involve nearly all of the key ministries and state agencies, working across all levels of government – central, provincial, kabupaten, kecamatan and desa. Moreover, the unprecedented outpouring of domestic and international support for the reconstruction phase has brought literally hundreds of local and international NGOs, private sector actors, official donor agencies, and multilateral institutions to the affected regions and Jakarta to provide generous assistance, often on the basis of their own internal standards and guidelines. The challenge will be to translate these resources into results on the ground and to coordinate this multitude of actors around a common vision for the recovery of the people in Aceh and North Sumatra.

A CHALLENGING ENVIRONMENT

The reconstruction of the Tsunami-affected areas will take place in a challenging environment. First, the disaster struck an area of Indonesia already affected by on-going conflict. To help foster a sustainable peace, the recovery program can contribute through explicit efforts to improve governance and avoid replanting the seeds which helped to generate conflict. A conflict-sensitive approach will need to pay particular attention to equitable targeting of geographical areas and beneficiaries, the composition of reconstituted administrative and coordinating structures, and transparency in decision-making and financial flows.

Second, the scale of human losses and population displacement has radically affected the composition of communities in many locations. Rebuilding local infrastructure in the most severely-affected areas will need to await a process of consultation with remaining community members on the timing and choice of destination for their return and reintegration. Land disputes may be a risk in some areas. Many communities have been widely dispersed in the aftermath of the disaster, and local leadership may have been lost – complicating the consultation process. Even in the areas which were not directly affected, the composition of some communities has been radically altered by the influx of IDPs, not all of whom will necessarily choose to return to their communities of origin. These changes to community composition, identities and structures have the potential to cause social tensions unless they are sensitively managed, and sufficient time is allowed for careful consultation with communities.

Third, the provincial recovery process will take place in the context of a relatively new decentralization process. Due to the virtual collapse of the provincial administration and several district and local administration structures, it will be difficult in the short-term for provincial institutions to fully contribute to the recovery effort. This will require over time a strong and rapid program of capacity-building to the provincial administration and district and local governments in the affected areas. NGOs and donor agencies need to avoid undermining local institution-building by paying high salaries to local staff or bypassing government coordination and decision-making mechanisms.

Fourth, the unprecedented outpouring of generosity from private citizens around the world is already drawing a large number of NGOs, agencies and institutions into the tsunami-affected areas. Coordination is always a challenge in complex emergencies: in this case the task will be complicated by the large number of actors involved and the volume of funds transferred, not only off-budget but outside official development assistance flows. Government efforts to establish a unified planning and budgetary framework and effective information and coordination structures will need to be respected by all the international actors engaged.

RAPID RESPONSE AND BROAD PARTICIPATION – A PHASING STRATEGY

The recovery strategy needs to find a balance between responding rapidly and broad participation. People need to get back to work, get money in their pockets and put their children back in school. Some of these programs, supported by the government and the UN, have already started. At the same time, the people will need time to determine where and how to rebuild their homes and businesses. And whole communities will need time to rethink the design of their towns and villages and rebuild their healthcare and school systems. Programs to address immediate reconstruction needs, while planning for longer term reconstruction need to be carried out in tandem. Finding the right balance, building on a needs assessments and specific sector strategies, will be crucial for the success and sustainability of the recovery process.

Some programs can and should be implemented immediately. These include support for those with trauma, labor intensive work programs, and getting children back to school. Large infrastructure rehabilitation could also start immediately, particularly with respect to telecommunications, electricity, ports, and airports. These sectors are dominated by state-owned enterprises, and consultation with the affected population and the private sector should support the most cost-effective rehabilitation.

For longer term participation in the planning process, it is necessary to reconstitute communities through restoring community organizations. This will require extending those networks of community-based organizations that are still functioning in the affected areas. It will also require working within the temporary shelters of displaced persons to try to preserve and restore community ties.

Re-establishing local governments to provide core local services should be among the highest priorities. The Aceh and North Sumatra public administration, justice and security systems have been paralyzed. In Aceh, two thirds of the local governments are not yet operational and it will take time for effective participation through local elections and fully functioning institutions to be re-established. In the interim, significant assistance from national ministries and agencies from Jakarta will be crucial to quickly restore services, but such arrangements should have clear "sunset" provisions and transition strategies to move back to local control over provision of public services as soon as possible.

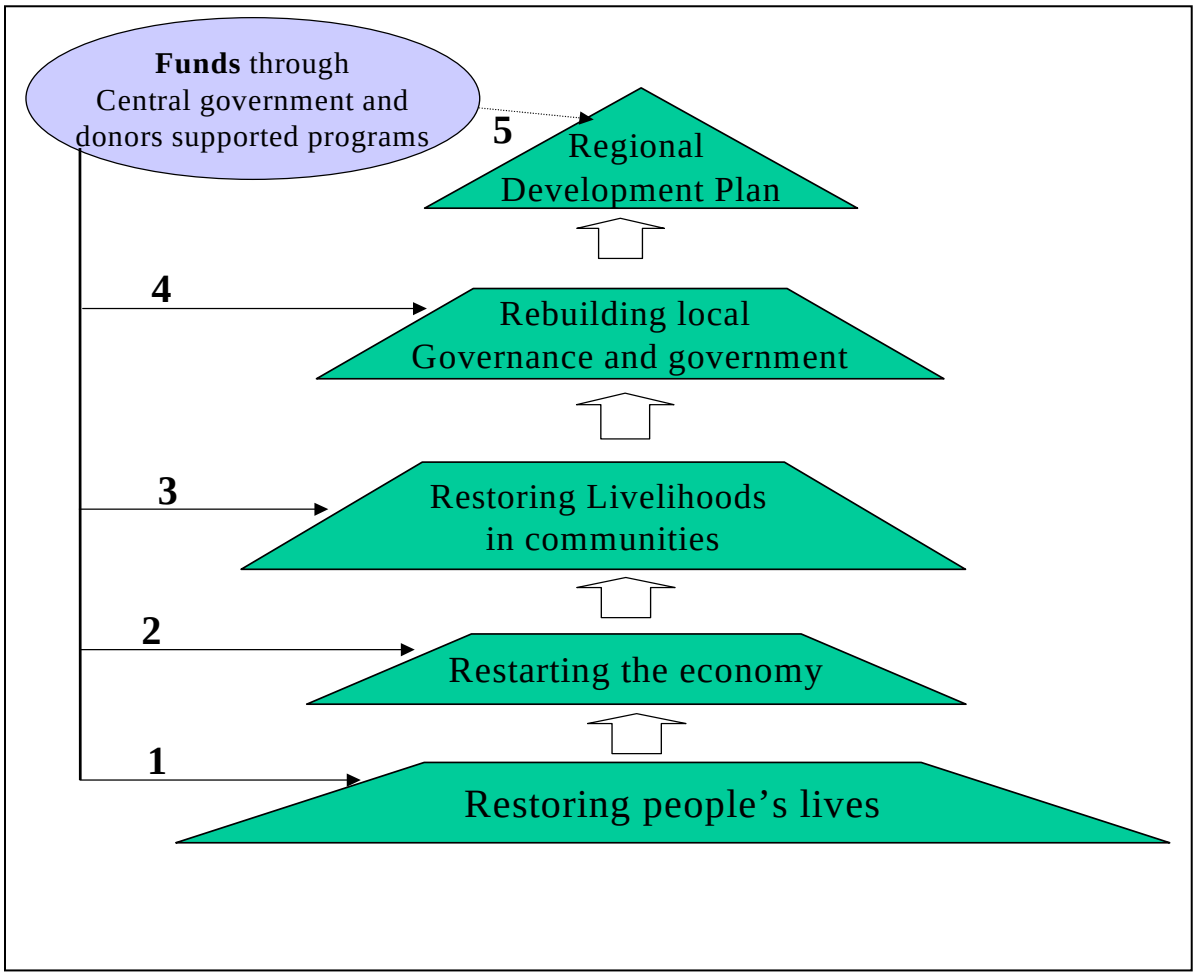
FIVE OBJECTIVES

A successful recovery strategy should have five basic goals:

- To restore people's lives – clean water to drink, roads to take their children to clinics, roofs over their head, a source of income to support their families.
- To restore the economy – jobs, markets for people to sell and buy daily necessities, banks that lend to small-scale enterprises.

- To rebuild communities to give them social stability, a sense of orientation and local solidarity.
- To restore the system of local governance – local governments that represent people's aspirations and guide development towards that goal.
- To re-establish the province as politically stable and economically vibrant, a growth pole of Indonesia that attracts investment from the whole region and is resilient and protected against new disasters (see also chart 1).

CHART 1 - FIVE OBJECTIVES AND A BOTTOM-UP PROCESS



A. RESTORING PEOPLE'S LIVES

Labor intensive public works. Cleanup and preliminary reconstruction should begin with a simple system of paid, labor-intensive public works. Wages need to be set at an appropriate level to avoid drawing people out of other jobs. All villagers would be eligible, not only those directly affected by the disaster. Such a program will provide early cash in the hands of the poor and will also help distract them from the traumatic experience. This system should be used only for simple clean-up and very minor repairs since it will usually not have sufficient technical oversight or tools to take on more difficult public works, which can be tackled during the reconstruction phase.

Recapitalizing household micro-enterprises with grants. Reconstruction will bring with it many opportunities to re-start small businesses that were ruined by the crisis. To re-start these household businesses, the choice is between providing communities with micro-credit versus providing them with grants. However, experience in rural areas elsewhere suggests that start-up grants, even for private goods such as small businesses, are a better instrument than micro-credit would be. The reason is that initial repayment rates are likely to be low. Provided that community planning processes are functioning, simple criteria for assigning the start-up grants can be presented to communities.

Community aid education. Experience from reconstruction efforts elsewhere shows that communities often do not know what aid may already be available. Encouraging communities to approach service providers requires sufficient information and, often, facilitation and training in local advocacy. A particularly effective mechanism for disseminating information about what aid programs are available is radio programming. Developing a network of local-language radio programming should be a priority. Community-level training programs in "aid advocacy" are particularly important for highly vulnerable groups since they are less likely to participate in normal group meetings, particularly with outside donors. Indonesian NGOs such as PPSW, and YAPPIKA have already piloted such programs in Aceh and Nias. Radio Suara Muhammadiyah has also established a radio network in some IDP camps across Aceh.

B. RESTARTING THE ECONOMY

Credit and microfinance. As commercial banks reestablish operations the demand from SMEs and large firms for new credit to rebuild and purchase working capital will be high. A credit facility through commercial banks to business should be established to promote investment and accelerate rebuilding. A large number of small businesses which may not have access to the formal banking sector will try to access credit through non-commercial bank sources such as

cooperatives, credit unions, development banks and microfinance institutions. Smaller business credit programs should be channeled through these organizations.

Rehabilitate transport infrastructure. The reconstruction program needs to restore the structural integrity of heavily-damaged or destroyed roads, ports or airports. This could include new construction where this would improve the resilience of the transport network against disasters and improve capacity for future growth. The reconstruction work should include upgrading of construction standards where necessary to ensure capacity, loadings and resilience of the structure.

Employment-intensive investment in infrastructure. In the rehabilitation phase, the main priority is to focus on infrastructure that is fundamental to improving access to markets, which provide productive inputs and basic living necessities. Labor-based methods should be used to the extent that is economically and technically feasible. The infrastructure should therefore be both asset-creating and employment-creating.

Encourage entrepreneurship. In parallel, a local economic revival strategy should focus on local entrepreneurship and the promotion of micro/small enterprises, enhancing their capacity to respond to emerging market opportunities and encouraging new initiatives. During the rehabilitation phase many people will turn to micro-enterprise activities to generate an income. These re-emerging entrepreneurs will need access to micro-finance and know-how. Special attention must be given to women entrepreneurs as they commonly constitute the largest number of micro-entrepreneurs, yet are the most disadvantaged in terms of access to productive resources.

C. RESTORING LIVELIHOODS IN COMMUNITIES

Manage temporary shelters carefully. Repairing or reconstructing houses is among the victims' highest concerns. Land needs to be cleared, spatial plans developed, titles re-assigned, and compensation provided. Temporary shelter is thus unavoidable. However, based upon lessons learned from other disasters, temporary shelters have a tendency to become permanent if they are not properly managed. To the degree possible, efforts should be made to encourage affected residents to remain on-site or as close to their original property as possible so that they are in familiar surroundings, their unease at being away from their remaining assets is reduced, they are better able to work at rehabilitating and reconstructing their homes and they create less demand for new service facilities and large-scale temporary investments. Large settlements

carry some benefits in terms of economies of scale, but for health and social reasons, small temporary settlements are preferable.

Managing housing reconstruction. Community-built housing nearly always works better than contractor or government-built housing does. It costs less, achieves higher rates of satisfaction, and it provides a cornerstone for successful community reconstruction. It is also among the best ways to inject cash into local economies. Given the nature of the disaster and anticipated reconstruction, local housing programs need to be backed by certain types of public planning actions. First, in the more urban areas, basic design standards are needed for construction quality and sanitation. This needs to start soon. Second, if large numbers of households start rebuilding all at once, there will be significant shortages of materials and house-building specialists, so advance procurement planning will be needed. Third, highly vulnerable households will not be able to reconstruct their houses without additional help.

Re-establish coastal communities. The tsunami has uprooted many poor fishing and coastal communities. To assist poor communities and individuals whose livelihoods were dependent on natural resources that are now damaged or destroyed, start-up grants, micro-credit and technical assistance can be made available to develop sustainable livelihood options. With respect to the fisheries, the activities should focus on the rehabilitation of infrastructure, provision of fishing gear, and reviving fisheries-related craftsmanship. The immediate activities in agriculture should focus on rehabilitation of farms, and provision of relevant tools, equipment and inputs. Timing is critical because delays may lead to farmers' missing the planting for the next season.

Support host communities that have taken in displaced people. It is already clear that across Aceh and Nias, neighboring communities have taken in large numbers of displaced people. They will require support. This should be provided through open community discussions so that villagers are all aware that their contribution to the reconstruction effort is acknowledged. It should also distinguish between short-term shelter, and permanent relocation since the latter will require entering new numbers into district service provision plans.

D. REBUILDING LOCAL GOVERNANCE AND GOVERNMENT

Restoring the decentralized representative institutions of governance. As key representative institutions, bodies such as the DPRDs and BPDs could coordinate and lead the next stage of local needs assessments and local reconstruction plans. They could also establish local rehabilitation and reconstruction centers to coordinate

with the provincial and national recovery effort to help coordinate incoming aid. In areas where local administrations do not function at all, it is essential to re-build representative institutions of governance from below. As people start coming back to their villages, elections to Village Councils (BPDs) would represent an important first step in the rebuilding of local governance.

Re-establishing basic public administration and security functions. The system of law and order needs to be able to provide stability and security during the recovery and rehabilitation process. The structure of the police force and its command hierarchy are fragmented. Investigatory, prosecutorial and adjudicatory services have collapsed and many judges seem to have fled to other parts of the country. Many detention facilities seem to be dysfunctional, as well. It is critical that standing procedures are established to assist the police and other justice institutions to maintain law and order.

Public awareness of financial information. Aid agencies should develop a standard operating procedure for sharing financial information with communities, local governments, the province and central government institutions. Three minimum steps are: (a) public signboards that provide basic information on total budgets, wage rates, and allowable overheads; (b) village-level public readings of all bids from suppliers and findings by audit agencies (BPKP has developed a good methodology for this); and (c) recording all entering funds and programs into village financial records.

E. DEVELOPING A REGIONAL DEVELOPMENT PROGRAM

Reorienting Aceh. With the disaster, Aceh's demography, economy, ecology and even geography has significantly changed. Some of the impacts, such as an outflow of people to other parts of Indonesia or the impact on the conflict in Aceh cannot be foreseen yet. A lot will also depend on the success of the recovery which in turn will depend on the inclusiveness of the process.

A development strategy for the province. Once the recovery effort is under way and the social and economic conditions have stabilized, a province-wide regional development plan could focus on institutional challenges for long term growth and post-conflict recovery. This would include scenarios and a diversification strategy after the gas field in Arun has been depleted by 2015 and with it the revenue windfall from natural resource sharing.

IMPLEMENTATION

Indonesia's reputation for good governance, both domestically and abroad, will rise or fall on the basis of how the tremendous outpouring of public and private sector support for the recovery and reconstruction of Aceh and North Sumatra is managed and governed. The challenge is to develop an efficient, transparent and equitable mechanism for transforming the billions of dollars pledged around the world into the hundreds of dollars needed by each individual in the affected areas to rebuild lives, livelihoods and communities. As these funds have been pledged "in trust" for the people in the affected communities, it is essential that the Government of Indonesia embed the funds in a framework that meets and even exceeds the international standards of other high profile trust funds (such as oil revenue funds in Alaska, Alberta and Norway). To do this will require clear and well-designed mechanisms for channeling multiple financing sources, for managing the vast array of reconstruction activities, and for governing the use of funds. The main principles for each of these areas are outlined in the sections below.

A. FINANCING

It is too early to make any aggregate assessment of the financing picture for the Aceh reconstruction. The international response has been unprecedented, and official and private donors have already pledged several billion USD for Aceh and North Sumatra. The detailed amount and composition of external flows, however, is difficult to project because several donors will wait for the results of the needs assessment, before finalizing their pledges. In addition, the very large private contributions still need to be clarified.

There are three broad options for channeling official donor funds

(i) through direct bilateral programs. This is likely to be most suitable for the largest bilateral donors, which already have substantial programs in Indonesia;

(ii) through co-financing with multilateral institutions (ADB, UN agencies, World Bank). This could include co-financing loans, providing grants attached to existing and new projects, or creating trust funds executed by multilateral institutions. This option can be attractive to the donors because: they can leverage their funds against a larger pool of resources from the multilaterals; they make use of existing aid delivery mechanisms, and they can take advantage of the fiduciary framework of the multilaterals to ensure adequate safeguards on the use of their own funds;

(iii) through a multi-Donor Trust Fund or multi-donor programmatic grant. For MDTFs, international experience suggests many different management and governance arrangements in terms of how they are administered on a day-to-day basis, the allocation of responsibility for project approval and program coordination, and the extent of earmarking of donor funds. Multi-donor programmatic grants are a new instrument through which donors can directly support the Government's own reconstruction program through a quick-disbursing, multi-tranche grant program linked to a clear framework of results, indicating achievement of the Government's own goals. Both MDTFs and multi-donor programmatic grants have the advantage of

strong country ownership, simple arrangements for flow of funds and greater coordination among donors in line with a unified recovery plan and budget.

Recognizing the considerable diversity among donors in Indonesia, some combination of the above financing channels is the most realistic option for reconstruction aid to Indonesia that maximizes assistance and responds to donor concerns. However, to ensure effective coordination and clear country ownership, it is essential to develop an overarching Government-led management and governance structure that can cut across the different financing channels. Bilateral programs, co-financed multilateral programs and MDTFs can all be filtered through a Government management structure that reviews each program for consistency with Indonesia's own recovery plan and evolving priorities.

Regardless of the specific means by which donor resources are channeled, it is important that significant funds are provided through the government budget. Bringing donor funds on budget can help coordination and effective implementation of the recovery strategy. Lessons from other countries that experienced significant aid inflows highlight the importance of ensuring coordination, country ownership and measures that reinforce the government's budget and accounting system. Experiences with off-budget support have been problematic because each project had its own accounting, financial management, and procurement arrangements, resulting in fragmented recovery efforts.

B. MANAGEMENT STRUCTURE

Managing recovery and reconstruction from Aceh. If the people in the affected communities are to take the lead both in planning and participating in the reconstruction of their livelihoods and communities, it is essential that the main management functions of these efforts be based in Aceh. Although the capacity of sub-national institutions in the affected areas, especially at the province level, has been severely damaged in the aftermath of the disaster, the management structure should be designed to revitalize that capacity and, ultimately, to transfer these management functions back to the appropriate sub-national institutions. Over time, the regional office of BAPPENAS – the BAPPEDA of Aceh – could spearhead the reconstruction effort with some additional support from the center and from donor technical assistance programs. BAPPEDA/Aceh is well connected with local institutions in Aceh and could serve as the bridge to BAPPENAS, which has been charged by the President to coordinate the overall reconstruction effort.

Until the BAPPEDA is ready to assume this role, an institution to coordinate the reconstruction efforts will be needed. This institution could take the form of a coordinating body with a clear terms of reference and limited lifespan. Alternatively,

the management functions could be provided by some combination of the existing state institutions (Coordinating Ministry of the Economy, BAPPENAS, and Ministry of Finance) with additional staff capacity and training as needed. It is important not to underestimate the considerable time and transaction costs needed to manage such a large and diverse range of additional assistance funds. Adding these burdens to the existing workloads of already overstretched ministries and agencies is likely to result in serious managerial lapses, with considerable fiduciary and reputational risks.

Given the scale and scope of the recovery and reconstruction efforts, it is not realistic that one agency executes the totality of the recovery program. Rather, the agency charged with the recovery effort should be a clearinghouse or "one-stop shop" of information on projects and programs derived from the reconstruction strategy as well as on the available financing sources and their terms and conditions. The register of financing sources should include on-budget financing options (such as dedicated APBN/APBD reconstruction funds, bilateral and multi-donor trust funds, concessional financing from bilateral and multilateral sources, overseas development financing, and commercial loans) and off-budget financing options (including bilateral off-budget trust funds, NGOs, charitable contributions and private sector donations). All donor and charitable agencies and organizations should be required to report their assistance offers. The clearinghouse would then be able to match needs identified in the Recovery and Reconstruction Strategy with the appropriate financing source in a tiered approach that would give preference to the "least cost" and "most flexible" financing option within the terms if reference set out by the relevant donors.

The clearinghouse should be based on an ICT-enabled aid management, coordination and tracking system. Such a system will promote information sharing on aid activities from conceptualization to implementation, and facilitate collaboration between government and donors. In addition, the system should track and report on the delivery of aid for better planning and service delivery.

In addition to these clearinghouse and matching functions, **the management structure designed to coordinate reconstruction efforts should, in conjunction with the relevant line ministries and agencies, set out the overall fiduciary guidelines for reconstruction projects.** This would include developing special guidelines to promote the timely implementation of projects in such areas as (i) Procurement; (ii) Supervision of projects; (iii) Funds flows and payment validation procedures, (iv) Accounting and reporting standards; and (v) Audit guidelines.

C. GOVERNANCE STRUCTURE

Regardless of the number of roads repaved and bridges rebuilt, the success of the reconstruction efforts will largely depend on the strength of the governance arrangements over the substantial funds pledged. The governance arrangements refer not only to the fiduciary safeguards preventing corruption, fraud, and misuse of

reconstruction funds, but also the mechanisms by which the interests and concerns of the people in affected communities are represented in the planning and implementation of reconstruction activities. Indonesia's own experience with community-driven development programs has clearly demonstrated that broad community participation in decision-making and oversight can be one of the most effective methods to prevent corruption and detect problems if they do occur. But in the context of a post-disaster reconstruction where people have been traumatized by the extent of the destruction, such participation can also be one of the best forms of healing and personal recovery.

At the very center of any effective governance framework should be an independent board of overseers with a membership drawn largely from the affected communities to ensure transparency and accountability over the use of reconstruction funds. The board should be clearly distinguished from the management structure of the recovery and reconstruction operations and would have four basic responsibilities:

- to **represent the concerns of the affected communities** in the use of reconstruction funds;
- to provide **public oversight** regarding the fiduciary implementation of the fund;
- to give **guidance to the management on overall strategy and priorities** as the recovery evolves;
- to perform regular and comprehensive **monitoring and evaluation** functions over the recovery and reconstruction effort.

To carry out these responsibilities, the board could take on the following specific functions.

- **Hold regular public consultations with representatives of the affected communities.** These meetings would be conducted to solicit citizen feedback on the ongoing recovery and reconstruction efforts and to gather recommendations for changes to the recovery and reconstruction program. These meetings should be based on a regular schedule published in advance, be open to the general public, and be held in easily accessible venues.
- **Approve and publish independent audit reports on all financial transactions.** Joint audits should be performed by the Supreme Audit Agency and an internationally recognized private audit firm appointed by and reporting directly to the board. The terms of reference for the audit should include certification of quarterly financial statements, verification of physical implementation of work documented and value-for-money analysis of work completed.
- **Approve and oversee the procurement guidelines for recovery and reconstruction operations.** Given the need for fast-disbursing assistance for key elements of the recovery operation, special procurement procedures will be necessary for efficient processing of projects and programs. Management should submit to the board for approval a semi-annual procurement plan that sets out the conditions on implementing agencies for direct contracting of goods and services and sole-source appointment of individual consultants where required. The

procurement plan would also specify the types of transactions that would require an independent Procurement Agent that would be given complete authority to execute procurement transactions based on specifications agreed to ex-ante.

- **Manage a Public Complaints Bureau for receiving allegations of corruption, fraud or misuse of recovery and reconstruction funds.** The Public Complaints Bureau should report directly to the board. Its functions are to provide an easy-to-use format for soliciting complaints from the public, such as easily identifiable, self-addressed postcards, telephone/sms hotlines, and a complaints website.

- **Appoint, in consultation with the Corruption Eradication Commission and the Attorney General's Office, a Special Prosecutor for the investigation of corruption allegations involving recovery and reconstruction funds.** The Special Prosecutor should be granted the authority by special decree for expedited investigation and prosecution of such corruption allegations to be adjudicated by the Anti-Corruption Court.

- **Oversee the performance of the recovery and reconstruction operations.** The board would be responsible for Monitoring & Evaluation functions in order to report to the President, to the donors, and to the public on the quality and timeliness of the implemented operations and their consistency with the National Recovery and Reconstruction Strategy. M&E activities should employ participatory methods to involve, as much as possible, individuals and groups directly from the affected communities.

The credibility of the board will depend critically on the credibility of its members and the quality of the selection process. Board members should be nominated by independent constituencies and appointed by the President for a single, fixed term, following an independently implemented fit-and-proper test. At least two-thirds of the board members should be from the affected communities. The potential nominating organizations in the affected communities could include: (i) Recognized civil society organizations; (ii) Religious organizations; (iii) The private sector or relevant trade associations; (iv) Professional associations of accountants, auditors or lawyers; (v) Transparency International or other recognized anti-corruption organizations; (vi) Media organizations; and (vii) Donor contributors to the recovery and reconstruction efforts. The board could also have *ex officio* members, including the Governors of NAD and North Sumatra, chairmen of the provincial legislatures, and nominated members of the DPD representing the affected communities.

To function effectively and to prevent conflicts of interest, the board would need to be financed separately from the budget. Funding could be provided by pooled donor funds. The budget should be sufficient to provide adequate compensation for board members, program support to carry out the functions listed above, a full-time secretariat to assist in those functions, and adequately provisioned headquarters in Banda Aceh with smaller representative offices as required in the affected communities.

Even if implemented well, this governance structure will not completely eliminate corruption and misuse of reconstruction funds. In fact, such a structure, by uncovering corruption when it occurs, is likely to raise the profile of corruption, especially in the media. Nevertheless, a strong governance structure with independent representation from the affected communities should build confidence, both domestically and internationally, in the reconstruction efforts and, by so doing, promote further investment to ensure that the recovery program is sustainable over the long term.

Geeting People Back to Work

Aceh Photos donated by: Jez O'hare

2. GETTING PEOPLE BACK TO WORK

SUMMARY OF LOSSES AND DAMAGES

It is feared that more than 600,000 people in Aceh and Nias – about one quarter of the total working population - have lost their jobs as a result of the tsunami disaster. Assuming that the incidence of death was the same for those who had an occupation and those who were inactive or unemployed, it is estimated that about 60,000 of these jobs were 'lost' because employees died. In actual fact the figure is likely to be much higher, as the busy urban district of Banda Aceh was at the center of the destruction.

The fishery sector, which accounts for over 130,000 jobs and ensures the livelihood of almost 70 per cent of the coastal population, was dramatically affected as very few fishermen were able to get back to their work. Large job losses occurred in agriculture, where about one fourth of cash crop areas and rice fields appear to have been damaged. A similar percentage of all farmers and their employees are likely to be unemployed: an estimated total of around 300,000 people. The impact on modern manufacturing activities was relatively minor in employment terms (perhaps a few thousands jobs) because of the limited size of this sector. At the same time, it is estimated that more than 100,000 unregistered small businesses employing over 170,000 people in all sectors may have been destroyed.

This comes on top of a labor market that was difficult prior to the disaster. Almost 70 per cent of the working population was self-employed or engaged in the informal economy. The open unemployment rate in NAD was higher than the national rate: 11.2 per cent versus 9.5. Unemployment was a special concern for youth – almost one third of the unemployed were in the 15-24 age bracket – and for women.

As a result of the disaster the open unemployment rate in affected districts may reach up to 30 per cent. Job recovery can be rapid in some sectors, particularly as infrastructure rehabilitation reestablishes regular conditions for ordinary life and, if labor-based processes are sought, will generate new employment opportunities. Nevertheless, the mismatch between the demand for labor and the large number of unemployed people may pose a major problem to the recovery process. In other sectors, the mismatch between the skills that will be required during the recovery and those available locally may represent a distinctive bottleneck, as the capacity of local training institutions, which was already thin as a consequence of the conflict situation, was further undermined by the damage caused by the disaster.

GUIDING PRINCIPLES

This paper focuses on some specific policies and programs that could help maximize the employment and human resource potential of the recovery process. It is important to emphasize that rebuilding jobs and livelihoods is a central element of a people-centered recovery strategy. Employment targets and benchmarks should be considered in all rehabilitation and reconstruction efforts.

In addition to the overall guidelines underlined by BAPPENAS, the following principles should be taken into consideration:

- A concerted attempt should be made to maximise the benefits at the local level and utilise, to the greatest extent possible, local human and physical resources;
- Jobs, in particular those generated in the post-rehabilitation phase, should be sustainable and lead to greater local economic and social development.
- Rehabilitation and reconstruction programs should comply with international core labor standards, national labor regulations and occupational health and safety standards.
- There should be mechanisms for social equity and gender mainstreaming.
- Special attention should be paid to the needs of those who are in the most vulnerable position in the labour market and who are likely to face greater exploitation in the post-disaster situation (women, youth, children, elderly, displaced, homeless, disabled, very poor households, women-headed households).
- Mechanisms should be developed for the participation of local stakeholders in program formulation and implementation, ensuring equal representation by population groups that are traditionally under-represented.
- Specific efforts should be made to enhance the capabilities of local planners, business associations, trade unions, civil society organizations, youth networks, gender groups and community organizations to participate in decisions about their livelihood and the future of their community.
- Finally, polices and programs should have a positive impact on armed conflict in Aceh.

REHABILITATION STRATEGY

In the rehabilitation phase, employment and human resources policies should aim to re-establish conditions for people to earn a minimum wages and rebuild livelihoods. There are five critical areas where programs could be developed right away.

A. **Promotion of Emergency Employment Services and rapid labor market assessment**

During the rehabilitation phase, an increasing emphasis will be placed on providing wage employment to local women and men for planned and employment-intensive public works. This will require people to fill jobs that were not part of the traditional labor market in Aceh. In addition some people will not want to, or be able to, return to the type of work they did prior to the disaster.

Under normal circumstance, this would be the main task of the District's Dinas Tenaga Kerja Offices (DISNAKER's). However, the disaster has damaged 90% of the premises of DISNAKER and many of their management and staff are missing or dead.

The challenge will be how to effectively match the needs of job seekers with the new opportunities created in the labor market. International experience shows that early in the rehabilitation phase, the establishment of Emergency Employment Centers (in tents or temporary structures), can build essential bridges between job seekers and employment opportunities, and are essential to all players in the recovery effort. The core tasks that will be delivered through the network will be registering job-seekers and job vacancies, matching the two, recruiting workers for special employment program and ensuring non-discrimination in access to job opportunities.

B. Employment-intensive investment in infrastructure

The objective of the rehabilitation phase would be to bring basic infrastructure back into an adequate level of service. This will particularly involve the rehabilitation of infrastructure that is fundamental to the process of improving access and local markets which provide the potential for cash crop production and access to basic living necessities.

In this phase, the key concept of people-centered infrastructure development needs to be prioritized. This implies that solutions are not imposed but developed on an understanding of the actual needs of the people. Labor-based methods should be used to the extent that is economically and technically feasible. The infrastructure should therefore be both asset-creating and employment-creating. Fortunately, the basic guidelines and training materials already exist in Bahasa for this purpose.

C. Community based training and short cycle training programs

Another immediate critical task will be to develop the skills and create employment opportunities for the most socially and economically disadvantaged groups, in particular, rural women, disadvantaged young adults and people with disabilities. Programs centered on community-based training can be particularly helpful. The Training for Rural Economic Empowerment (TREE) project, which is being implemented in conflict areas in Pakistan and the Philippines, is one main example. The project has had a wider impact on peace and order. It rests on a comprehensive training package that identifies and assesses local economic opportunities, designs and delivers community-based skills training, and provides post-training services, including a range of support measures to assist trainees to organize themselves into credit and savings groups. The project builds the capacity of government and private sector partners to implement the methodology.

D. Encouraging entrepreneurship

In parallel, a local economic revival strategy should focuson local entrepreneurship and the promotion of micro/small enterprises, enhancing their capacity to respond to emerging market opportunities and encouraging new initiatives.

During the rehabilitation phase many people will turn to micro-enterprise activities to generate an income. These re-emerging entrepreneurs will need to access to ideas, micro-finance, and know-how. Strategies that reach large numbers of people using mass-media and community-based approaches are often effective in disseminating this type of information. Special attention must be given to women entrepreneurs as they commonly constitute the largest number of micro-entrepreneurs yet are the most disadvantaged in terms of access to productive resources. Youth-for-youth networks connecting young people in Aceh with other young people with similar interests and expertise could be easily set up through the existing Indonesian Youth Employment Network.

E. Addressing the special needs of children

A special concern is for the many orphaned children and those of families who have lost their livelihoods as they face the risk of becoming victims of trafficking and the worst forms of child labor. This is relevant to the immediate impact and long term consequences of a disaster. Quick impact projects should be implemented to provide hands-on direct assistance to children through rehabilitative, educational, health, nutrition and psycho-social and disaster counseling. Also initiatives to keep children into some form of schooling and out of exploitative and hazardous work situations will be very important. They may well be linked with youth employment initiatives once they get off the ground at a later stage.

RECONSTRUCTION STRATEGY

The reconstruction phase is intended to provide the basis for the further development of the Province in economic, social and administrative terms. It is essential to ensure that employment and human resources form a key component of the reconstruction process. Unless the local economy is set on a sustainable development path that leads to decent employment and livelihood opportunities for all its members, the social conditions for a peaceful resolution of the armed conflict will not be realized.

The programs launched in the rehabilitation stage would continue and should be strengthened in the reconstruction. Their role will be even more critical, as the prospects for employment generation may change and become more uncertain in the transition from rehabilitation to reconstruction. The demand for jobs and the nature of jobs will change considerably. We can expect, for instance, a sizable decline in the number of simple, unskilled jobs in infrastructure and a growing request for workers with more complex skill profiles.

Employment and human resources policies and programs should be anchored in well-functioning local public and private institutions, capable of interacting and collectively contributing to the design and running of employment-friendly regional development plans. Capacity building in local economic development (LED) approaches and methodologies can be very useful.

A. Building institutional capacity for the delivery of employment services

The emergency centers established in the rehabilitation phase should become the nucleus of a wider range of employment services that evolve and are gradually re-integrate into the functions of local government agencies.

B. Employment and local resources-based infrastructure work

In the reconstruction phase, infrastructure can only be developed if institutional arrangements and capacity are in place. This will depend on there being sufficient government capacity to plan and develop the infrastructure sector in harmony and collaboration with other sectors, in particular the agriculture sector.

The planning of infrastructure reconstruction needs to reflect not only the level of access required in the affected areas, but also the comparable levels in the unaffected areas of the Province. A prerequisite therefore will be to have reliable data on both the pre-existing infrastructure facilities and the composition and needs of the households remaining to be served.

The concepts of participation, employment creation, development of local skills and local entrepreneurs, developed in the rehabilitation phase, would be strengthened in the reconstruction phase.

C. Setting up a demand-driven skills training system

One of the major constraints in the transition from rehabilitation to reconstruction and economic development will be the lack of trained labour at different levels. Training should become one of the most important elements of the recovery strategy. It should be result-oriented and geared towards private sector needs, with particular emphasis on developing local training capacity.

It will be essential to promote/strengthen local training providers, provide new training tools, and ensure the quality of training. Facilities should be renewed and expanded to cater for demand. However, addressing the full training needs of the reconstructed economy will be beyond the resources of traditional providers. A flexible approach to address training delivery should take full advantage of international and local organisations currently providing training as well as of potential agreements for on-the-job training and internships in ongoing business.

A comprehensive program for skills development and employment generation should be launched that would include the following integrated components:

- Capacity building of DISNAKER

- Establishment of a network of training providers capable of delivering a flexible system of formal and non-formal skills and enterprise training.

- Establishment of a Vocational and Enterprise Development Fund. The fund would receive proposals from communities and/or training providers and an independent committee would review them. If the proposals are assessed as being feasible and in accordance to the fund's guidelines, the applicants would receive funding, training and logistical support, and monitoring.

- Community empowerment through the delivery of an integrated system of skills and enterprise training.

D. Creating a supportive environment for entrepreneurship

Another critical task is the re-establishment of a supportive business environment which allows entrepreneurs of all sized business to make investment decisions with a reasonable degree of confidence and without excessive financial, administrative and regulatory burdens.

It is essential that enterprises have easy access to a range of practical and efficient business development services (BDS) such as training, consultancy and advisory services, marketing assistance, information, technology development and transfer, business linkage promotion, and linkages to finance and financial services. Many of private BDS providers have been lost. Rebuilding these capacities will be a crucial element but will take considerable time. Thus providing short-term alternative sources of BDS will be essential, e.g. business centers, etc.

As the situation moves from relief to rehabilitation, there will be an emerging micro-enterprise sector – informal survival economy. Strategies to encourage, regulate and support these enterprises without adversely affecting their viability will be critical for their long term development and the quality of employment they provide. In part this is linked to the issue of spatial planning.

Supporting the upgrading of these micro-enterprises through improved access to finance, business development services and integrated small business development programs will maximize their contribution to the economy and employment. Examples of support strategies include:

- Employment and Enterprise Funds - funds for use by organizations to deliver vocational and enterprise skills development programs.

- Micro-finance initiatives

- Building the capacity of community organizations and government agencies involved in micro and small enterprise development programs. This will be important as these organizations and their staff move from relief to rehabilitation roles.

- Small enterprise start-up and expansion programs, including:

    - Entrepreneurship training

    - Skills training

- Micro-finance, credit guarantee scheme
- Counselling and mentoring

E. Social safety nets and social protection mechanisms

Safety nets and social protection mechanisms catering to people in both the formal and informal economy are vital for a balanced and successful reconstruction process and for ensuring social stability and better prospects for peace. Based on a review of pre-existing mechanisms, effective access to appropriate basic protection is required, principally for those not included in the formal social security systems e.g. micro-insurance schemes run by community groups and women's organizations.

EXAMPLES OF PROGRAMS

1. Setting up Emergency Employment Services

Objective: To contribute to the rebuilding of livelihoods of women and men in Aceh, by providing access to improved job-brokering, placement and information services.

Experience: Emergency employment assistance services that build bridges between job seekers and employment opportunities can be very helpful in post-crisis recovery. People have to fill new jobs, such as those emerging from rehabilitation. In addition, some people would not want to or be able to return to the type of work they did prior to the disaster. Mechanisms to rapidly assess labor market needs and match demand and supply can be useful to all players in the recovery effort.

Examples: The ILO has run Emergency Employment Services projects in Afghanistan, Argentina, Kosovo and Sri Lanka. A practical field publication entitled "Guidelines for Establishing Emergency Public Employment Services" is available in Bahasa Indonesia.

Suggested interventions: Establish one central EES in Aceh and 4 satellite centers in the province with the following tasks:

- Registering job seekers
- Advocacy with employers (local, national, international agencies) and obtaining vacancies
- Matching jobs and job seekers
- Collecting and disseminating labor market information
- Meeting the needs of special categories of job seekers

- Planning and managing special employment and training measures

Costs: around US$ 1 million for year one to set-up and operate the centers.

2. Employment intensive approach to infrastructure

Objective: In the implementation of the rehabilitation and reconstruction works labor-based methods should be used to the extent that is economically and technically feasible.

Experience: Initially, labor-based infrastructure rehabilitation works will provide immediate but temporary employment to a large number of unskilled people and improve access to village markets etc. They will also provide families with essential income. In general labor-based technology works better when it is part of a comprehensive approach to meeting community needs. The experience gained in rehabilitation can be used to integrate labor-based methods in the broader infrastructure reconstruction efforts.

Examples: The ILO has a wealth of materials learnt from the responses to crisis situations in Sri Lanka (prior to the Tsunami), East Timor, Cambodia and the Solomon Islands. It is also active in Indonesia. A partnership should be formed with local NGOs, the University Networks and agencies such as UNDP, ILO, USAID, DFID and WFP. Basic guidelines and training materials already exist in Bahasa.

Suggested interventions: The initial emergency phase will be concerned with clearing the debris, cleaning out the markets, schools, health clinics and other waste disposal operations. In general many of these activities can be carried out manually and wages can be paid for the work. Whilst this work is not technically demanding there will still be a need for proper administration, recruitment and payment procedures and supervision. Subsequently, it will be important to train local government staff and local contractors in the planning, design and implementation of employment intensive investment programs.

Costs: Depending on the type of infrastructure and mix of technologies used, an average of US$ 7.5 million for 12 months

3. Supporting young entrepreneurs, women and men

Objectives: To encourage young women and men to start their own micro-enterprises and enhance their chances to develop viable businesses.

Experience: For many young women and men, self-employment is often the only option to earn their livelihood in a crisis situation. These fledgling entrepreneurs would benefit from simple, short entrepreneurship training programs. Once trained, they can better link with customers, suppliers, microfinance institutions etc.

Examples: A variety of entrepreneurship training modules are available such as the ILO's Know About Business (KAB), Start Your Business (SYB) and GET (Gender and Enterprise Together) Ahead for Women in Enterprise. They have been tested

extensively in many poor countries in Asia. Specific modules exist for the rural and fishery sectors. Some of these modules are in Bahasa and are extensively utilized by the on-going project on *Youth Employment in Indonesia: Policy & Action* and its wide network of partner organizations (HIPMI, IWAPI, APINDO, KADIN, IBL).

Suggested interventions: Extend the scope and coverage of the Youth Employment project to Aceh and Nias. Carry out a rapid assessment of needs of potential young entrepreneurs in Aceh. Translate and disseminate relevant training modules. Mobilize young entrepreneurs all over Indonesia to mentor and assist young people in Aceh.

Costs: To be determined

4. Setting up a demand-driven management and skills training system

Objective: To stimulate local economic revival and employment by means of building up local capacity for skills development

Experience: In many poor countries vocational and technical schools are inadequate to meet the needs of markets in both the formal and informal sectors. The delivery of management and skills training can be strengthened through flexible decentralized approaches that combine public and private providers and are open to the participation of local economic and social actors.

Examples: ILO/UNDP implemented and EU funded STAGE Project in Timor Leste

Suggested interventions:

- Capacity building of DISNAKER (District's Dinas Tenaga Kerja Offices)
- Establishment of a network of training providers capable of delivering a flexible system of formal and non-formal skills and management training.
- Establishment of a "Vocational and Enterprise Development Fund", which would receive proposals from communities and/or training providers. Proposals would be reviewed and analyzed by an independent committee. If the proposals are assessed as being feasible and in accordance to the fund's guidelines, the applicants would receive funding, training, logistic support and monitoring.
- Community empowerment through the delivery of an integrated system of skills and enterprise training (SIYB and TREE).

Costs: Approximately US$ 5 million for a 3 year program.

5. Extension of Social Protection to Workers in the Informal Economy

Objective: To provide access to social protection to those excluded from formal social protection mechanisms.

Experience: Micro-insurance schemes have proven to be an effective tool to overcome the huge deficit of social protection affecting the poor all over the world. They cover

a broad spectrum of risks, although life and health insurance remain by far the two main products covered by most of the schemes. They can be initiated by a wide diversity of actors: community-based organizations, NGOs, micro-finance institutions, health providers, trade unions, etc.

Examples: (i) Health Micro-insurance Schemes for Women in the Informal Economy, Philippines and Nepal – Government of Norway; (ii) Access of poor women in Bangladesh to health micro-insurance – US Department of Labor; (iii) Extension of Social Protection in Health – ILO & PAHO, (iv) Federation of Micro-Insurance Schemes in Africa – Belgian Government; (v) Micro-insurance schemes for women in informal economy, India through SEWA; (vi) NOVADECI Cooperative in the Philippines – no donor; (vii) SEWA in India – technical assistance from several donors.

Suggested interventions: Identify community groups (similar to those formed during the rehabilitation stage) to handle and manage community-based insurance schemes. Identify technical experts in setting-up and management of the schemes as well as guide the community-based groups in establishing linkages with existing private and public providers. Develop information campaigns on the need for and benefits of social protection; and carry out assessment or feasibility studies on the social protection needs and design of benefit packages, training of managers of micro-insurance schemes, setting up organizational systems and developing linkages with other groups and facilities.

COSTS

to be determined

Getting Children Back to School

3. GETTING CHILDREN BACK TO SCHOOL

SUMMARY OF LOSSES AND DAMAGES

Current estimates of the impact of the earthquake and tsunami are that as many as 45,000 students and 1,870 teachers were lost. Approximately 1,962 schools[i] were destroyed or damaged in Aceh and 104 in Nias. This represents 28 percent of the stock in Aceh province and 20 percent of the stock in the district of Nias. In economic terms, the Bank currently estimates the value of damage across the sector at US$112m. Costs associated with providing temporary services are estimated at US$17.8m. As the vast majority of schooling is financed by the state, only a small portion of the damages and losses are borne by the private sector: $7.8m in damages and $1.2m in losses.

There are an estimated 700,000 internally displaced persons in 95 locations, at least 100,000 of which are thought to be children. UNICEF are in the process of providing emergency schooling for this number via 2,000 one-classroom tents and 2,000 sets of school-in-a-box. Various agencies, including government, have begun the task of preparing temporary teachers for those temporary classrooms that can not be staffed by displaced teachers (about 4,800 teachers are among the IDPs).

Trauma to varying degrees is evident among all survivors, particular among children.

Critical Needs Two interrelated needs are of paramount concern: (i) providing responsive and adequate schooling[ii] and related services for the displaced; (ii) establishing a sustainable forward-looking sector infrastructure[iii]. The challenge presented by the latter should not be at all underestimated, as education in Aceh had been very seriously compromised by over twenty years of conflict prior to the tsunami[iv].

GUIDING PRINCIPLES

The scale of the disaster has dictated that a phased approach be taken to recovery efforts. The initial response has been the provision of shelter, basic needs and emergency schooling. Next, as the extent and impact of the disaster is better understood, service provision in the sector will be strengthened through comprehensive service upgrading and facility rehabilitation. Finally, a period of

reconstruction will result in a stable set of services and a return to the broader sector development efforts targeting better services and outcomes.

Particularly in light of the impact of the armed conflict in Aceh on the young and on education services in general, the success of the recovery effort during each of these phases will depend on the degree to which individuals and communities participate in the recovery process and, importantly, on the degree to which their expectations and aspirations are met as the recovery proceeds. A comprehensive strategy will be required if the concerns of all stakeholders (central and regional government, communities and community based organizations and religious groups) are to be meaningfully addressed. The strategy for the revitalization of the education system should include a road map for service provision over the coming years and should address all aspects of schooling – pre-school programs, formal and non-formal schooling, training and vocational and higher education. Fundamental to the effectiveness and eventual success of the strategy will be a clear articulation of, and response to, national and regionally-set system performance standards, *both* for the short term and for the longer term. In other words, performance objectives must be clear from the outset.

It is also necessary to apply the lessons of recent years. Many programs and projects have targeted rehabilitation and reconstruction of facilities and many have also targeted quality: all have worked to improve outcomes. There is a wealth of experience among managers and practitioners throughout Indonesia. For example, effective service improvement strategies (well tested in Sumatera) include education mapping, community-managed and executed school rehabilitation and construction, school- based teacher training and incentive-based contracting of teachers. There are also relevant lessons from reconstruction efforts in adjacent countries.

From Timor, we have learnt the need for: (i) clear and unambiguous rehabilitation and reconstruction objectives (ii) appropriate and understandable benefit targeting strategies (iii) services and needs mappings (iv) rapid investments in capacity development (v) realistic phasing and scheduling of recovery activities (vi) coordination of reconstruction efforts and (vii) coordination of donor contributions and donor involvement. We have also learnt the need to apply operating standards and for comprehensive monitoring from the outset. Perhaps the most critical of lessons is that of prioritizing the development of a comprehensive recovery strategy appropriate to the emergency setting and to the social and cultural context that existed prior to the emergency.

While there is broad agreement that communities are key to the recovery effort, experience dictates that comprehensive socialization and a clear and shared appreciation of roles are essential if the type of environment necessary to ensure that outcomes meet expectations is to be created. There is a significant opportunity for *local* NGOs and CBOs to play a critical role in this process. Should they take up this challenge the need for a systematic effort to overcome the inherent mistrust of government and of outsiders and their organizations, including national NGOs, could be avoided. Efforts to prepare local stakeholders for such a contribution should begin immediately.

The need for displaced students to get back into a learning environment, and to gain a focal point other than that provided by the disaster and its aftermath, is well documented. This need should be addressed through interventions that also revitalize

the sector by providing immediate schooling opportunities and by beginning a program that, over the medium term, offers higher quality services and education outcomes than previously existed. Schools will have to both offer an immediate point of focus plus a promise for the future. This may necessitate that where local government and/or school management capacity no longer exists, the vacuum in management and system administration be filled with contracted experienced individuals or organizations.

In summary, the post disaster agenda should focus on service provision in the short term, rebuilding and stabilizing sector institutions and systems over the medium term and service improvement and outcomes over the longer term. Effective monitoring that is both internationally respected and responsive to local needs and expectations will be essential to ensure these goals are maintained and met. Simply put, the guiding principles for a recovery strategy should be that it is:

1. **People-centered**. Efforts to reestablish services at the various levels of schooling should be responsive to assessed community and individual needs. The recovery strategy must clearly articulate concern for peoples' welfare and should not omit support for those that have special needs that result from their recent experiences.

2. **Part of a medium term comprehensive sector program.** The recovery strategy, while responding to emergency conditions, should reflect national policy objectives as well as provincial and community goals. If the strategic perspective of national policy and the province's medium term development plan are absent, it may be difficult to finance and sustain any gains made during the recovery process.

3. **Reflective of lessons learnt and of good practice**. Both the post-emergency schooling and system recovery experience in the region, and experience in upgrading services and facilities across Indonesia over the past two decades, have taught service providers a great deal. These lessons must be consolidated, socialized in the effected areas and applied.

4. **Focused on efficiency and accountability**. Accountability, open professional management and transparency will be key. Independent monitoring could verify the extent to which recovery goals are met, and the degree to which they have been met at reasonable cost and without unnecessary transaction costs.

REHABILITATION PHASE

Within the recovery strategy referred to above, investments in the rehabilitation phase will gradually move service provision, and access to services, away from emergency response conditions and facilities to the more permanent structures of school buildings, adequately trained teachers, more comprehensive sets of teaching/learning materials and mechanisms to support higher education, non-formal education and training and early childhood facilities and their students. This phase of activity will

also include the consolidation of the systems (assessments, monitoring, management and oversight) necessary to make the recovery program effective.

Activities should include:

1. **Establishing a small but influential program oversight capacity**. Substantial levels of coordination among stakeholders that do not normally interact will be critical to successful implementation of the recovery program. A *small* powerful, highly respected program oversight group that includes substantial local representation should be established to facilitate the program and to ensure that bottlenecks are effectively dealt with.

2. **Needs assessments and information systems**. To include (i) assessment of the education needs of impacted communities, and (ii) creation of local sector specific information and planning capacities. As part of this exercise the needs and capacities of all current and potential service providers will need to be assessed and if necessary strengthened (see maximizing local resources, below). This assessment should be on ongoing exercise coordinated with the monitoring effort.

3. **Monitoring**. Independent monitoring of the recovery program is a priority and should be in place as soon as possible. Ideally, it should consist of an internationally recognized, Indonesian education sector experienced lead monitor charged with (i) designing and implementing a comprehensive monitoring system for the recovery program, and (ii) training local NGO and government appointed monitors to take over the monitoring after an agreed period. For the monitoring to be effective an agreed code of conduct including sanctions for non-compliance should be established. Commitment to this process is an essential requirement for external support.

4. **Empowering communities, NGOs and CBOs**. Grants and technical assistance can support community-based rehabilitation of damaged facilities or the rental of suitable facilities for schooling or child care. Grants can also finance the purchasing of learning materials and services such as teacher training. Should grants be directed to NGOs and CBOs, then community and local government oversight would be essential.

5. **Maximizing local resources**. Grants to competent local service providers to provide (i) accelerated and regular in-service training to teachers, and (ii) vocational training specific to the recovery effort and immediate employment opportunities.

6. **Short-term contracting of teachers**. Contracts can be issued to teachers on a performance-incentive basis according to regionally and nationally approved guidelines. Over a period of time emergency volunteers and seconded staff from other localities can be replaced by contract teachers. In this way suitably qualified individuals can be brought into the professional teaching force without creating an administrative burden on a severely stretched local government.

7. **School based in-service teacher training and post-trauma counseling**. Grants can be issued to clusters of schools to finance demand-based training

and the general upgrading of pedagogical skills. A specific category of grants could target the training of post-trauma counselors and post- trauma counseling in schools,

8. **Scholarships** for (i) current and future tertiary students to attend other institutions while institutions in Aceh are rehabilitated – reconstructed - restaffed, and (ii) pre-tertiary students to cover the costs of schooling and/or the opportunity cost of attendance.

RECONSTRUCTION PHASE

Again, within the recovery strategy referred to above, this final phase will institutionalize service provision in the impacted areas and to impacted students by establishing or reestablishing permanent institutions and services. New schools and facilities will be constructed, useable older facilities will be rehabilitated based on assessed need and population placement, the civil service requirement will be fully complemented, appropriately qualified and trained teachers will be contracted and higher education services reestablished. National and provincial service standards will be established for this phase and adhered to.

While many of the activities above will continue well into this phase, emphasis will be service consolidation and the provision of appropriate permanent facilities and the quality of services provided in those institutions.

Activities should include:

1. **Strengthening the information system** and integrating it into regional and national education planning and management processes.

2. **Continuing the needs assessments** to ensure relevance of planned activities.

3. **Maintaining program oversight capacity and monitoring.** These services should be continually strengthened to ensure that facilities and services are fully integrated into national and regional education systems and that service standards are maintained. Ensuring transparency and good management of resources will remain key to this exercise.

4. **Continuing to empowering service providers communities, NGOs and CBOs**. Better-focused and larger grants to finance communities and approved organizations to construct facilities and to purchase materials and services. Enforcement of the USB model of school provision[v].

5. **Continuing to maximize local resources for training**. Increased grants to those local providers that continually provide quality vocational, technical and enterprise/entrepreneurship training for young people in the transition to work.

6. **Contracting teachers**. Systems should be put in place to institutionalize the contracting of teachers. It is most probable that additional incentives will be needed to attract and retain good performers.

7. **School based in-service teacher training and post-trauma counseling**. The emphasis in this grants program will be on supporting those support systems that are working well.

8. **Scholarships.** While over the longer term the intention may be to phase out scholarship support, it is recognized that this may not be possible during the life of the recovery program.

EXAMPLES OF REHABILITATION AND RECONSTRUCTION

It is probable that the types of interventions best suited to facilitate and promote the recovery of education services will not vary much between the rehabilitation phase and the reconstruction phase. This is because the rehabilitation phase is concerned with the stabilization of a set of key services, while during the reconstruction phase emphasis will be placed on the institutionalization and improvement of those same services.

National and regional governments, the donors and a large number of schools already have substantial experience in many of the interventions below: all are well tested. Lessons have been learnt over the years and applied to improve service quality and outcomes. For all the programs listed below, implementation guidelines exist that can be adopted by, or adapted for, the special circumstances of Aceh and Northern Sumatra.

1. Community Empowerment through Grants

Objectives: To encourage community participation in the schooling process, to encourage and support school-based management, to encourage communities to hold service providers accountable for inputs and outcomes.

Experience: Many government programs now provide grants to communities to support school-based management, construct or rehabilitate schools, to purchase materials to support quality improvement and to contract for services such as teacher training and teaching. The Ministry of National Education, many districts and thousands of communities throughout Indonesia have experience in this and use well-established guidelines and manuals for their programs. By mandate, every school in the country must have a school committee drawn from its community. Grants are usually directed at these committees or in the case of large construction grants to a more representative and larger community-based body. All grant programs provide roughly 5% of the overall program cost for socialization, community preparation and facilitators. A further 15 % of the program costs finances the provision of technical support to communities.

Examples: (i) School Improvement Grants Programs (SIGP) – RNG, WB, AusAID (ii) Junior Secondary Education Projects – WB (iii) Basic Education Projects – WB (iv) Decentralized Basic Education Project – ADB.

Suggested Intervention: Establish a grant and technical assistance facility that would fund communities and approved organizations (including religious and private sector providers) in the first instance to rehabilitate damaged facilities or to rent suitable facilities for schooling or child care and to purchase of materials and support services. Later, and/or during the reconstruction phase the grant facility would finance community-based school construction, quality support interventions including materials purchasing and teacher contracting.

2. **School Mapping and Service Needs Assessment**

Objectives: To compare additional service requirements, by mapping existing institutions, their facilities and staff and the services they can provide in respect to location and surrounding populations, against the assessed needs of the impacted populations.

Experience: School mapping at the district and sub-district level across many provinces in numerous projects and schooling needs assessments prior to undertaking construction

Examples: (i) Junior Secondary Education Projects – WB (ii) Basic Education Projects – WB (iii) Decentralized Basic Education Project – ADB; Youth Employment in Indonesia – Policy and Action Project – ILO.

Suggested Intervention: A school mapping exercise and a schooling needs assessment across the effected region and across impacted populations. This should be completed within the next two months.

3. **Child-Centered Joyful Learning and School-based Support to Teachers**

Objective: To create a sustainable community and school-based learning environment that stimulates a children-centered learning environment and a community/family-centered approach to schooling and education responsibilities.

Experience: The Creating Learning Communities for Children (CCLC) program successfully blends community participation and ownership of schooling within school development and student-centered active learning. Communities and local governments across Indonesia have embraced the program.

Examples: (i) CLCC - Unicef,, UNESCO, NZ, AusAID (ii) Management of Basic Education – USAID.

Suggested Intervention: Hire contractors to facilitate the introduction of CLCC type programs to each of the effected communities. The programs would be adapted to place a greater emphasis than usual on child care, counseling and community well-being. An addition to the standard program should be considered to cater for early childhood and family support needs.

4. **Contract Teachers**

Objective: To provide a facility for service providers to hire teachers to overcome shortages in key subject areas and to staff schools in remote, rural or poor areas.

Experience: Most frequently, projects that support contract teachers finance teacher recruitment and teacher incentives packages adequate to encourage suitably qualified teachers to move to and settle in poor rural and remote areas for periods of up to three years. Projects also finance teacher preparation and in-service training. Support and monitoring costs are estimated at 6% of the program costs.

Examples: (i) Junior Secondary Education Projects (WB) (ii) Basic Education Projects (WB)

Suggested Intervention: Hire contractors to provide train and monitor contract teachers for those schools that are experiencing teacher shortages.

5. **Scholarships**

Objective: To ensure access to schooling is not denied for economic reasons.

Experience: Indonesian scholarship programs have operated at both the tertiary and pre-tertiary level in recent years. Governments at all levels, donors and virtually every school and educational institution in the country is familiar with these programs and experienced in their execution.

Examples: National Scholarships and Grants Program (SGP) – GoI, WB, ADB, RNG, Unicef, JICA, AusAID.

Suggested Intervention: Establish a Northern Sumatera Scholarship Fund/Program that will provide needs-based scholarships to students from all levels of education. SGP can serve as a model, but targeting models and distribution mechanism would need to be revisited.

6. **Independent Monitoring**

Objective: To ensure good management, compliance with implementation arrangements and overall accountability.

Experience: SGP and SIGP benefited from independent monitoring. A central independent monitoring unit (CIMU) managed over 60 regionally located fulltime professional monitors for the national programs. CIMU also worked with many national NGOs to oversee and report on program activities. Non-compliance with agreed practices and leakage were to the best of our knowledge substantially lessened due to presence of the program monitors. Lessons learnt from the CIMU experience have been applied broadly across the basic education sector.

Examples: CIMU – RNG, AusAID, WB, ADB

Suggested Intervention: Establish an independent monitoring unit consisting of an internationally recognized, Indonesian education sector experienced lead monitor charged with (i) designing and implementing a comprehensive monitoring system for the sector recovery program, and (ii) training local NGO and Government-appointed monitors to take over the monitoring after an agreed period.

COSTS

To be estimated when an agreed sector development plan is available.

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[i] In respect to damages, the term 'schools' includes only formal institutions, public and private, state and religious. Some local government documents may confuse the reader in this regard as they refer only to lost madrasah. In Aceh all schools are formally called madrasah, regardless of their management.

[ii] The term schooling is used in this note in an inclusive sense. We refer to formal and non-formal services provided at all levels of education by all providers, public, private, state or religious.

[iii] The term infrastructure refers to the wide range of services and systems that facilitate and support education services at the point of delivery.

[iv] An illustration of the impact of the civil conflict on the schooling community is that in the two days that followed the imposition of martial law on May 19, 2003, some 248 schools were burned, most totally destroyed, seriously disrupting the schooling of over 60,000 students. Prior to that episode of destruction, some 544 schools were torched in 2002. More than 150 teachers have been killed and many have fled the province. Reconstruction has been was sluggish and even by the time of the December 26 earthquake and subsequent tsunami many of the damaged schools had not been completely reconstructed and full sets of learning materials supplied.

Although government statistics indicate that net enrollment rates (NER) for all levels of schooling, primary, junior secondary and secondary, are higher for the affected areas of Aceh are more-or-less reflective of the national average at the primary and junior secondary education and are about five percentage points higher for senior secondary., it is widely held believe that these rates do not accurately reflect participation rates (i.e. the number of kids in actually in each classroom). Furthermore, informal surveys conducted in 2003 revealed continual low teacher attendance in the troubled areas.

[v] *Unit Sekolah Baru* or USB refers to the process of constructing a school and ensuring that all necessary services, trained teachers, learning materials and an operating budget are synchronized so that a school becomes fully-operational immediately the construction is completed and the final site inspection confirms that it is ready for use.

Supporting Community Driven Reconstruction

4. SUPPORTING COMMUNITY DRIVEN RECONSTRUCTION

SUMMARY OF LOSSES AND DAMAGES

Current estimates of the impact of the tsunami are that as many as 1,000 villages and urban communities have been destroyed or badly damaged. Many of the normal assumptions about how communities function no longer apply. Large numbers of families have lost members; many others are dispersed in refugee camps, among other villagers in Aceh/North Sumatra, or have even left for other provinces.

Other contributions to this assessment provide quantified estimates of physical damage and the costs of reconstruction. The purpose of this summary report is to provide some guidance towards how those communities can be rebuilt. Aceh has suffered a terrible tragedy. But Acehnese communities have a long history of resilience and recovery. Reconstruction must build on the strengths of the Acehnese. Well-managed community development programs can and should be the foundation of a reconstruction strategy, not just because they will provide an efficient means to rebuild lost infrastructure, but because the direct participation of the Acehnese population in the rebuilding effort is necessary to rebuild the social organization and livelihoods of communities in the affected areas.

Critical Needs

Aceh's communities have gone through a major shock. It cannot be emphasized too strongly how important it is that they be given a determining voice in the pace and the content of reconstruction. Even before the disaster, communities in most parts of Aceh already suffered because of the conflict. Results of the conflict included high levels of suspicion, a depressed local economy, and an unwillingness to approach formal authorities. A top-down reconstruction program will only exacerbate these patterns, as well as allow for potential corruption and misuse of funds. Providing a major role for communities in the development, implementation and monitoring of the reconstruction process will help to minimize corruption, and it will let the reconstruction process build on a foundation of renewed trust and confidence.

Community reconstruction priorities for Aceh fall into three main categories depending on the degree/ways in which communities were affected by the disaster:

- First, communities that are completely destroyed but where survivors wish to return and rebuild will need official authorization and substantial resources to get started. This group is likely to be quite small.

- A much larger group consists of communities that were partially affected and now need resources and some technical advice so they can start reconstruction.

- A third category consists of communities that were undamaged or only slightly damaged but have now taken in displaced people. They will need assistance so that the newcomers do not become a burden.

The primary aim for all three types of communities should be the same: the most important priority is to get them past a short-term dependency on relief and into the reconstruction program. Communities that are rebuilding normally have their own, well defined set of priorities. First, they will need cash, initially to meet basic necessities, and, later, to improve their houses and local infrastructure. A second priority is to ensure that there are representative institutions in place that can present requests to the government and other donors and can provide communities with necessary information. And third, they will need to reconstitute an inclusive community-level planning process that can represent the full village population, including newly vulnerable groups created by the disaster, and which can arbitrate local disputes and confusion.

GUIDING PRINCIPLES

For the reconstruction effort, Acehnese ownership of the reconstruction process must be the overarching principle that guides the design of programs. Some simple organizing procedures that will help to achieve that objective include:

- Information, particularly financial information, needs to be accessible, clear, and in Indonesian;

- Consultations with villagers should be part of a structured planning process, not one-off dissemination events. Consultations should include host communities and those who may face livelihood losses as a result of any relocation as well as those actually displaced;

- Local initiatives should be encouraged and funding should support them;

- Local labor and expertise should be used wherever possible, and remunerated at reasonable rates;

- Most communities benefit from trained facilitation to sort through priorities and resolve differences;

- Technical support and oversight will improve most village projects, but it should report to villagers;

- Accessible grievance mechanisms should be in place – including for complaints about unethical practices of staff involved in relief programs.
- External monitoring is effective if it is field-based and if findings are shared across communities;
- Sanctions need to be clear and they need to be applied consistently.

Community reconstruction program must also build on a few additional actions that reflect the special conditions of the province and the nature of the disaster:

- All of Aceh province should be covered by community reconstruction programs – this is important because (a) virtually all communities have been affected by the disaster and the preceding conflict, whether directly or through the absorption of new members; and (b) selective treatment will create jealousy, which is likely to take the form of renewed or new conflict. (Full coverage does not, of course, preclude calibrating levels of support to the degree of damage);
- Local institutions such as the mukim should play key roles. However, their strength varies across Aceh. Decisions need to be made about when they can be the main organizational unit for community programs and what strengthening may be needed. Village life and village administration must be restored by helping the community to find socially acceptable structures and people;
- Communities must be actively engaged in resolving problems. Community-based land-mapping and alternative dispute resolution procedures need to be instituted quickly in areas that have lost significant populations or where the boundaries are no longer clear. Mechanisms are also needed to secure space. Land will have to be acquired for shelter, work, and farming. Land rights must be secured in a manner cognizant of traditional land rights and which preserves the rights of inheritors where the owners may have died or left;
- Further disruptions should be minimized and should involve principles of informed choice. Major relocation decisions such as whether to return to home communities or whether to move to new areas within or outside of Aceh should be choices guided by local decision-making.
- National and Acehnese stakeholders will need to make decisions about what kind of amnesty and/or community reconciliation program is required.

LESSONS LEARNED

Indonesia has been a world leader in community development programs since the 1970s, so there is a rich body of national experience to draw on for Aceh. But there are also a number of lessons from other countries that can inform the reconstruction effort. These are especially relevant because Indonesia has never had a large-scale relief effort that involved so many international actors helping the country with a crisis. Useful lessons from reconstruction experiences in Afghanistan, Bangladesh, East Timor, Palestine, Rwanda and elsewhere include the following:

- **Coordination is key** – It is not possible to regulate the tremendous inflow of aid agencies. However, having a strong, accessible, and friendly national or provincial government coordination group will provide an overview of where agencies are functioning Even more important, though, is to develop a simple, standard procedure so that any agency (national or international) provides basic information to local government and communities and is encouraged to observe a framework of minimum standards. A community consultation procedure should be a requirement on all agencies and contractors. An effective coordination mechanism can also identify emerging problems (such as communal tensions) and major gaps (especially relating to special needs of vulnerable groups, and can reinforce the agencies' grievance mechanisms.

- **Develop a basic "common approach" for working in villages –** Having a simple set of shared common principles such as those developed by the Red Cross for how to work in villages that has been developed through a participatory process among donors can avoid the worst impacts and improve the benefits. These should include economic principles that will avoid distortions (i.e. wage rates, subsidies), and social principles, such as how to consult with communities and how to ensure that benefits reach the most marginal and poor. It should also distinguish the types of mechanisms and instruments necessary for the different types of affected communities.

- **Strengthen local capacities** – The presence of well-funded international agencies often sucks out human resources from local institutions just when they are most needed. Consideration should be given to a strong program of local capacity development in ways that will allow them to retain their autonomy. These organizations are key for successful continuity from reconstruction into normal operation.

- **End relief early --** Clear criteria are needed for ending relief programs**,** which, if extended, will create dependency and also introduce a number of distortions into the local economy. What those criteria are should be agreed between the government and the main aid agencies early into reconstruction.

- **Host communities must benefit** – Communities that accept displaced people either temporarily or permanently incur significant costs because of the pressures that the newcomers place on their resources and services. This needs to be acknowledged in program design and specific measures provided to compensate them and to let them benefit from their hospitality. Without such measures, over time resentment will build, and local conflicts may ignite;

- **Promote sustainable governance structures early and then invest in developing their capacity –** Rwanda provides a particularly good example of using recovery from a tragedy to set up greatly improved local governance structures. Defining a popular, representative system of village and local government early in the reconstruction and moving the program onto the routine budget made it possible to make effective follow-on investments in medium and long term capacity development programs. Also, from the outset, programs should develop ways in which to connect such local institutions into decision-making at higher levels of government (at the district and provincial levels).

- **Collaborate with NGOs –** Countries such as Afghanistan, Bangladesh, and Bosnia have found that NGOs can provide some types of specialized services efficiently and at low cost. Indonesia welcomes help from NGOs, but cumbersome financial procedures make it difficult for national NGOs to help government programs succeed. Other countries engaged with NGOs effectively by reducing requirements, promoting dialogue, and taking advantage of their skills found them to be helpful development partners.

- **Standardize technical designs –** Preparing and publicizing appropriate technical manuals will prevent a proliferation of one-off projects that cannot be maintained or replicated. Using a provincial level coordination group to work with government line agencies on agreed standards is usually the best way to achieve this. This will also encourage international agencies to use local designs and materials, rather than importing, which will enhance both the sustainability of their programs and their contribution to economic recovery.

REHABILITATION PHASE

The overall purpose of the rehabilitation phase is to facilitate a return to villages and a phase-out of relief support. This will allow a transition to a more sustainable community-based planning process that encourages villagers to identify and manage local development projects, and to convey their requirements to higher orders of government, to NGOs, and to other providers of development services.

Community participation should be promoted from the outset of rehabilitation, and community development programs should avoid "expert" assessments that instruct villagers rather than respond to their needs. Thus, even the initial rehabilitation phase should begin with facilitated community meetings to introduce the new programs and to answer questions about how they work. These initial meetings would also launch a locally managed registration process, so that village memberships could be identified and validated by other villagers, new documentation provided for them (i.e. interim KTPs, bank accounts, etc), and any necessary starter packages provided. Villagers should also be encouraged to carry out and discuss their own rapid needs and redevelopment survey.

Activities supported under this phase should include:

1. **Labor intensive public works –** Cleanup and preliminary reconstruction should begin with a simple system of paid, labor-intensive public works. Wages need to be set at or below local agricultural minimums to avoid drawing people out of other jobs. All villagers would be eligible. This system should be used only for simple clean-up and very minor repairs since it will usually not have sufficient technical oversight or tools to take on more difficult public works, which can be tackled during the reconstruction phase.

2. **Rebuilding houses –** Repairing or reconstructing their houses always ranks at the top of villager concerns. Community-built housing nearly always works better – it costs less, it achieves higher rates of satisfaction, and it provides a cornerstone for successful community reconstruction – than contractor or government-built housing does. It is also among the best ways to inject cash into local economies. Given the nature of the disaster and anticipated reconstruction, local housing programs need to be backed by certain types of public planning actions. First, in the more urban areas, basic design standards are needed for construction quality, sanitation, and soon. Second, if large numbers of households start rebuilding all at once, there will be significant shortages of materials and house-building specialists, so advance procurement planning will be needed. Third, highly vulnerable households will not be able to reconstruct their houses without additional help.

3. **Recapitalizing household micro enterprises with grants –** Reconstruction will bring with it many opportunities to re-start small businesses that were ruined by the crisis. To re-start these household businesses, the choice is between providing communities with micro-credit versus providing them with grants. However, experience in rural areas elsewhere suggests that start-up grants, even for private goods such as small businesses, are a better instrument than micro-credit would be. The reason is that initial repayment rates are likely to be low (too many competing uses, local risk, no institutional backup, etc). Provided that community planning processes are functioning, simple criteria for assigning the start-up grants can be presented to communities.

4. **Supporting host communities that have taken in displaced people** – It is already clear that across Aceh and Nias, neighboring communities have taken in large numbers of displaced people. They will require support. This should be provided through open community discussions so that villagers are all aware that their contribution to the reconstruction effort is acknowledged. It should also distinguish between short-term shelter, and permanent relocation since the latter will require entering new numbers into district service provision plans.

5. **Rebuilding local administrations** – In many areas, local administrations no longer function. They should be re-launched as quickly as possible, through standard procedures for village elections. Village councils (BPDs), should be elected early, in order to aid in local reconstruction and to help prevent local capture of development aid. Getting them started in the rehabilitation phase will in many areas involve a trade-off between the need for action and the need for broad-based representation from populations that may still be dispersed elsewhere. In such cases, where populations fall below a defined threshold, it should be possible to elect a one-year interim administration. Local administrations will need their own start-up grants and training programs.

6. **Poverty mapping –** A recurrent problem in local development projects is that the very poor and vulnerable are hidden from view. In a crisis such as this, where their normal protection systems may have vanished entirely, not bringing these people into view can quickly turn into tragedy. Female-headed

households will face a particularly severe challenge in this context because many have lost their support networks and inherited assets. A large repertoire of participatory mapping tools already exists and has previously been used with success in Aceh and northern Sumatra. Local level poverty mapping will not only provide external service providers with information about how to help the most vulnerable, but it nearly always triggers charitable responses by communities.

7. **Public awareness of financial information –** Aid agencies operating in communities should develop a standard operating procedure for sharing financial information with communities. Three minimum steps are: (a) public signboards that provide basic information on total budgets, wage rates, and allowable overheads; (b) village-level public readings of all bids from suppliers and findings by audit agencies (BPKP has developed a good methodology for this); and (c) recording all entering funds and programs into village financial records.

8. **Community aid education –** Experience from reconstruction efforts elsewhere shows that communities often do not know what aid may already be available if only they were to request it. Encouraging communities to approach service providers requires sufficient information and, often, facilitation and training in local advocacy. A particularly effective mechanism for disseminating information about what aid programs are available is radio programming, and developing a network of local-language radio programming should be a priority. Community-level training programs in "aid advocacy" are particularly important for highly vulnerable groups since these may not participate in normal group meetings, particularly with outside donors. Indonesian NGOs such as PPSW, and YAPPIKA have already piloted such programs in Aceh and Nias.

9. **Monitoring systems –** Systematically monitoring progress in thousands of villages is beyond the capacity of any agency during rehabilitation and reconstruction. Successful monitoring will depend more on the effectiveness of social controls. Nevertheless, some guidelines on how best to monitor community programs during rehabilitation are possible. First, ensuring broad-based participation cannot be emphasized too strongly. Limiting information to a small circle of village elites is the death of community programs everywhere. Second, Acehnese NGOs such as PUGAR have done pioneering work promoting village cross-audits. This should be expanded; it will also allow villagers to compare notes on reconstruction's progress. Third, auditors such as BPKP, project managers, and so on need to provide on-site feedback to communities on their findings; results should also be read on local radio.

RECONSTRUCTION PHASE

The purpose of reconstruction is not just to rebuild village infrastructure, but to pave the way towards an effective, sustainable system of bottom-up planning that can respond to local needs for years to come. Many of the basic procedures will be the

same as for the rehabilitation phase, but with more emphasis on sustainability and longer-term planning.

Examples of recovery program support interventions

Indonesia has some of the world's best known community development programs, so it should not be too difficult to apply best practice lessons to Aceh. Recommended community programs are of three types:

> Sub district and village level block grant programs—These programs usually consist of the following elements: (i) a facilitated community planning and accountability process; (ii) direct disbursement of an unearmarked block grant to a collectively held account; (iii) villager-contracted technical assistance during implementation; and (iv) training for community institutions. Most build simple infrastructure and support village level revolving funds or micro-credit.
>
> Advantages of this type of program include the fact that several were already operating successfully in Aceh and they retain a functioning field infrastructure. Because of their modular design, they can be scaled-up very quickly. Drawbacks include their lack of integration with higher order planning, though in some sectors, such as education, this is being overcome.

Examples: (i) Gemma Salam Aceh Provincial Government); (ii) KDP, UPP (WB); CLG, Coastal Communities, and CERD (ADB)

> Targeted grants for the poor – Community-wide planning processes are not always appropriate for the very poor or otherwise marginalized populations, who may have special needs or are unable to participate actively in group meetings. Post-disaster Aceh will see a surge in such groups: female and child-headed families, deeply traumatized people, people recovering from injuries and, to some extent, households from communities that have disappeared and must now integrate elsewhere.
>
> Aceh has limited experience with programs designed for this type of group but there are some notable examples from Aceh and other parts of Indonesia. NGOs have been particularly active in this field, and small-grant programs such as the UNDP-supported CRP, if effectively monitored, can potentially play an important role here.

Examples: Program untuk Ibu Kepala Keluarga (JSDF); community healing programs (Flower Aceh, RPUK); CRP (UNDP)

Community-local government joint programs – Communities will have needs that require either technical skills or which involve recurrent costs. The majority of these will be handled by sectoral programs described elsewhere in this assessment. Nevertheless, it is worth highlighting that Indonesia has a number of ongoing and planned multi-sectoral joint planning programs that can be launched as part of the recovery effort.

Examples: KPEL (Bappenas), SPADA (Kawasan Tertinggal, WB)

Supporting Religion and Culture

5. SUPPORTING RELIGION AND CULTURE

SUMMARY OF LOSSES AND DAMAGES

The central role that religion plays in the lives of the Acehnese renders it impossible to begin calculating the losses and damage to the cultural systems and values of Aceh without looking into how religion and religious practices are affected by the tsunami. Even more complex, however, is to calculate the psychological loss and damage amongst the survivors who have to live their lives now without the basic prerequisites to observe their cultural practices: those who have to reconcile their guilt in having buried the dead in what they considered to be a "inappropriate" way according to their religion; those who had to pray without having their basic worship needs; and those who have lost their natural cultural leaders as well as the facilities at which they can congregate and begin to create a new sense of community.

On a less complicated level, a preliminary needs assessment for Aceh province estimates total losses and damage due to the death of religious leaders and the destruction of mosques and *meunasah* (community-based religious centers) and other places of worship of $51 million. .Cultural activities to support the re-establishment and involvement of religious groups in different elements of reconstruction implementation and oversight (including women's groups and NGOs) has been costed at $1.75 million.

GUIDING PRINCIPLES

All assistance towards rebuilding the lives, confidence, and dignity of the Acehnese must take into consideration the fact that **Islam is the primary cultural force in the province**. Communities in Aceh are centered around *meunasah,* a community mosque; approximately 200,000 of 950,000 students in Aceh attend Islamic schools, one of two major universities in Banda Aceh was an Islamic university. As such **engaging mass-based Islamic organizations** with networks and branches down to the village-level (Muhammadiyah has the strongest local base in Aceh) is essential to ensure that programs for rehabilitation and reconstruction are designed in a participatory and people-centered manner.

Any form of assistance should also take into account the fact that the special autonomy status of Nanggroe Aceh Darusallam includes a provision on syariah Islam

(Islamic law). That said, it is also important to understand that the concept of "syariah Islam" itself remains, up to now, vaguely defined. Implementation of syariah Islam requires a set of local regulations to be passed by local legislatures known as *Qanun*. In pre-tsunami Aceh there have been vibrant conversations on what would be included in the local regulations; particularities of syariah were being constructed and contested. A number of civil society organizations and individuals have been consistent in pushing their agenda to include key issues such as principles of good governance in the discussion of *Qanun*. At this time these productive conversations, using religious language and forms, has ground to a complete halt. Therefore, while on the one hand it is important to consider the fact that syariah is the law of the land, it is also equally important to understand that the Acehnese themselves were still in engaged in a lively debate over what constitutes syariah. It is important that any party delivering assistance for the Acehnese remain neutral in this debate.

Neutrality is also key in light of the TNI and GAM conflict. While recognizing fully that any forms of assistance and operations in Aceh are under the coordination of the GoI, it is also important, for the assistance to be effective, that it be organized in coordination with parties considered to be neutral by the conflicting sides. Again, for this purpose, religious organizations and leaders with credibility and neutrality are important parties. Most prominent are Muhammadiyah and MPU, the local branch of the Indonesian Ulamas Council (MUI). Nahdlatul Ulama is also present, but to a lesser extent.

As in many other places, women are central in Acehnese culture and history. The importance of including women in any consensus building at every stage of rehabilitation and reconstruction of Aceh cannot be overstated. Including Acehnese women in consensus building is not only important for the physical aspects of rehabilitation and reconstruction, but also for the continuing debates on more complex arenas such as the debate over *qanun* as mentioned above. Specific efforts need to be made to support local women's NGOs and ensure women have a role in decision-making, implementation and oversight of programs at community level.

Early support in the rehabilitation process would have to ensure that Acehnese are comfortable to practice their cultural values which are centered on Islam. This includes ensuring the availability of both the physical dimensions, i.e. *meunasah*, as well as *ulama* in IDP camps. Islamic organizations and leaders have to be engaged in dealing with common problems found in IDP camps such as human right abuses (mainly in the form of domestic violence), as well as women and child trafficking and criminality. Intervention on these forms of abuses is best mediated through trusted Moslem organizations to avoid resistance from the society.

In the medium to longer term in the reconstruction phase, the focus should shift from meeting physical and psychological needs in temporary areas such as IDP camps, to assisting the Acehnese to rebuild their communities. Again, it is crucial here to take into account the role of Islamic organizations and leaders to facilitate the process. Though in many cases consensus building which includes all stake holders in the community *will* prolong the process of reconstruction, it is too important to be avoided.

REHABILITATION PHASE STRATEGY

During the rehabilitation phase, assistance strategies to rehabilitate the cultural system and values in Aceh should focus on rebuilding the dignity and confidence of Acehnese, among others through reviving the cultural entities and religious values.

A strategy for rehabilitation phase should consider the following:

- Facilitating the functions of mosques and *meunasah*. Reviving these functions will help build Acehnese sense of selves and community.
- Availability of religious teachers to enable both mosques and *meunasah* to function will be critical. This can be part of rehabilitation process of education for children either in surviving mosques and *meunasah* or in temporary mosques and *meunasah* in IDP camps.
- Reconstruction of permanent mosques and *meunasah* buildings. Include all groups in discussion with religious leaders, community leader and local authorities on the plan to establish temporary mosques and *meunasah* in IDP camps and new mosques in areas completely destroyed by tsunami. A full needs assessment should be conducted during this period. Reconstruction should as far as possible be placed in the hands of local communities to create employment, a sense of community ownership of the process and reduce prospects of corruption of reconstruction funds.
- Mosques and *meunasah* should also function as information exchange place posting for family tracing efforts and other public information needs.
- Religious organizations should be engaged in dealing with violence and criminality commonly found in IDP living arrangements.
- Women should be included in camp management and establishment of temporary *meunasah* in IDP camps areas. Women can participate in soup kitchens, providing care for separated children, and teaching Qur'an reading for which they could be paid in order to provide them with an essential source of income.

RECONSTRUCTION PHASE STRATEGY

During the reconstruction phase, assistance to Acehnese cultural and value system should focus on rebuilding communities. Some communities will need to be relocated and some will just go back to their former areas. A combination of physical reconstruction of mosques, schools and *meunasah* will be needed. Assistance to rebuilding participatory and all-inclusive community will be essential in helping the community to function.

A strategy for rebuilding cultural system and values during reconstruction phase should consider the following:

- Religious and *adat* leaders remain important agents in the reconstruction and rebuilding of Acehnese communities. Their existence and replacement will be essential in performing various social and religious functions.

- A rapid assessment can be commissioned to document current status of the existence of Acehnese religious and *adat* leaders.

- Young and inexperienced religious teachers might be forced by this situation to perform functions previously performed by their seniors. Support from religious experts for mentoring, and partners in discussion from outside Aceh may be appropriate at this stage to boost morale.

- Reconstruction process should be responsive to the needs and interest of women, children and marginalized groups, such as widows and the disabled. New design of or support facilities for mosques and *meunasah* maybe required to accommodate these groups.

- Women's participation in the recovery program will be essential, in all development planning, implementation and monitoring stages. Their role will be crucial in the re-building of community facilities such as *meunasah* and mosques, that are the center of community activities.

- Assistance in rebuilding community process should be based on a solid understanding of Acehnese social structure. While rebuilding old structures, it is also important to introduce a new concept of women's participation.

- Include religious-and-locally-based organizations to monitor the social development in Aceh, which will be prone to violence and human right violations. Local Muslim organizations such as Muhamadiyah or PERTI, should be assisted in their understanding of post-disaster social problems and challenges for better conflict prevention.

- If ensuring that the basic functions of schools can be achieved during the rehabilitation phase, improving the quality of education should be the attention of the reconstruction phase. Inclusion of civic education, conflict resolution and culture in school curricula will be necessary.

EXAMPLES OF PROGRAMS – REHABILITATION PHASE

1. Provision of Places of Worship

Objective: Provide Acehnese survivors with appropriate worship facilities in the camps and temporary communities they live in.

Program: Camp and community developers would sit with local representatives of MPU (the local branch of the Indonesian Ulamas Council, MUI) or Muhammadiyah to determine placement and design of small mosques or *meunasah* in each of the large IDP camps or temporary communities being built. Community builders would coordinate with Islamic donors, the Ministry of Religious Affairs (MORA) or mass-

based organizations in both Medan and Jakarta for the provision of needed materials, items of worship (copies of the Qur'an, etc.) and other things to complete the mosques. Donors would also coordinate with MORA for the provision of ulama/khatib to provide Friday prayers services as well as counseling and other religious services in the camps.

Program Partners: MORA, MUI, Muhammadiyah.

Expected Impact: Provision of basic pre-requisites for Acehnese to perform their religious worship, providing solace and fulfilling a basic cultural requirement for this highly spiritualized society.

Appropriate Timing: Immediate

2. Mosques as Centers for Family Tracking and Public Information

Objective: to equip large mosques that function as community centers with the means to serve as a center for family tracing and other public information on disaster relief as required.

Program: International Donors or NGOs with experience in family tracing will set up bulletin boards, computers, or other equipment needed for family tracing at a centrally accessible room in large mosques. Mosque management will be given basic training or briefings in how to collect and present the data needed for a family tracing program. The mosque community itself or Islamic organizations such as Muhammadiyah will provide the personnel to maintain the program at the mosque. Radio Suara Muhammadiyah has provided receivers and loudspeakers to 50 IDP camps. Together with local mosques, this can represent a powerful medium for the provision of public information on the availability of aid, news on home communities for displaced persons, access to legal education and the like.

Program Partners: International NGOs, Muhammadiyah, MPU, Radio Suara Muhammadiyah

Expected Impact: Heightening the effectiveness of family tracing programs by housing them in mosques where Acehnese people naturally congregate, and providing capacity building to mosque leaders to serve their communities in practical and badly needed ways. Informing communities on assistance available; facilitating public oversight of aid delivery.

Appropriate Timing: Immediate

3. Pemuda Muhammadiyah as Human Rights Monitors in IDP Camps

Objective: to provide monitoring of human rights violations within IDP camps by a Muslim organization deemed credible and neutral.

Program: Building on training already provided to Pemuda Muhammadiyah cadre in Aceh by local human rights NGOs, Pemuda Muhammadiyah will deploy human rights

monitors to each IDP camp or temporary community, to monitor human rights violations. The nature of the violations being monitored will include those related to the GOI-GAM conflict – i.e. physical attacks, or diversion of aid from intended populations, etc. As Muhammadiyah is a neutral organization with regard to that conflict, it will be received on both sides. Other human rights abuses to be monitored will include sexual attacks, any kind of violence, and corruption or siphoning off of aid. Monitors will be trained to be particularly attuned towards rights violations towards women and children in IDP camps. Abuses will be reported to the relevant authorities, as well as to the local religious leaders who wield great authority in Aceh.

Program Partners: International and local human rights NGOs, Pemuda Muhammadiyah

Expected Impact: Provision of security and an environment free of abuse within IDP camps; an extra layer of monitoring of aid distribution, ensuring that aid gets to those in need; aid programs and rehabilitation of survivors in IDP camps undisturbed by GOI-GAM conflict.

Timing: Immediate, for the next year

4. Anti-violence campaign through religious leaders

Objective: Reduce the potential of and the effects of violence by wide-spread distribution of Islamic teachings on peace and anti-violence.

Program: During the rehabilitation and reconstruction Aceh will be especially vulnerable and prone to violence – due to the years of political conflict prior to the tsunami which may well be on-going during reconstruction, as well as the tsunami-related conflict itself, including disputes over land, children, income, aid, etc. It will be important to reinforce a culture of peace and snuff out the embers of violence during this reconstruction phase. Building on the success of similar programs throughout Indonesia, the Aceh chapters of Muhammadiyah and NU, and local Acehnese religious organizations, will promote a widespread understanding of Islamic teachings enjoining peace and decrying violence. This can be done in a variety of ways that have been proven to be effective elsewhere in Indonesia – distribution of leaflets outside mosques after Friday prayers, trainings for local religious leaders on anti-violence from an Islamic perspective, radio and TV programs or PSAs, etc.

Program Partners: Muhammadiyah, NU, ulama associations, international and local NGOs

Expected Impact: The reinforcing of peace as a cultural value in Aceh, and the gradual erosion of violence as a way of life.

Appropriate Timing: Immediate

EXAMPLES OF PROGRAMS – RECONSTRUCTION PHASE

1. Rebuilding Communities through Pesantren

Objective: Revival of the social fabric, and healing from the years of conflict and the trauma of the disaster in Aceh by empowering *pesantren* (Islamic boarding school) leaders to take an active part in rebuilding communities.

Program: The reconstruction not only of houses and markets but also of social structures and communities affords an opportunity for Acehnese to participate in their own governance and in their own society-building. Religious leaders, especially *pesantren* heads, are natural leaders in this regard, but often have little experience in engaging in policy-making. Building on successful programs in other areas of Indonesia, and the training of a group of *pesantren* leaders on human rights and Islam, Indonesian NGOs will provide training for these leaders, giving them skills such as budget analysis and policy advocacy. In this way, *pesantren* and religious leaders will be able to ensure that the cultural values of the local Acehnese are fairly represented within the new social, governance, and economic systems that will emerge through reconstruction.

Program Partners: National and International NGOs, Acehnese *pesantren*

Expected impact: Bottom-up planning, traditional and long-standing cultural norms and values not erased despite the building of entirely new communities and social systems.

Appropriate timing: as emergency relief phase is ending, so that training and capacity building can take place during rehabilitation phase, for application in the reconstruction planning and implementation phases.

2. Empowering women's voices in the reconstructive process

Objective: Enable local Acehnese women and women's organizations to participate effectively in rebuilding communities.

Program: The history of Aceh has always put women in a special place, especially in times of crisis. Aceh has been governed by four women *sultans* and in Acehnese and Indonesian national lore women are lauded among its bravest warriors. Acehnese women's organizations and activists were also very active in pushing the peace process in Aceh—in fact, it was women's NGOs in Aceh who, for the first time, were successful in bringing together all conflicting parties, both government and rebels to talk about the Aceh peace process, the future of Aceh and demand the safety of women and children in the on-going conflict between Indonesian military and the Aceh Freedom Movement. Most of Aceh's women's NGOs are now paralyzed and a number of important women activists are still missing and presumed dead. In such a situation, advocacy and empowerment efforts for Acehnese women, previously provided by these NGOs, are no longer in place. In this program, Muslim women NGOs and women's branches of NU and Muhammadiyah would provide training and skill-building for women in Aceh, aimed at creating a cadre of local women leaders who can then participate effectively in all manner of reconstruction planning – social, political, religious, and economic. This will be especially important in the ongoing effort to elaborate on syariah law – a process that was interrupted by the disaster and

will undoubtedly recommence as soon as people are able to focus on community building again. Having women's participation in the development of the interpretations and applications of syariah law will be very important. Activities in this program would include needs assessments, support for existing Acehnese women's organizations, trainings in leadership, advocacy, and planning for women, and establishment of advocacy centers on women's issues like domestic violence, family law, etc.

Program Partners: Muslim women NGOs, Muhammadiyah, NU, international and local women's NGOs.

Expected Impact: Inclusion of women's voices in the reconstruction planning and implementation process, which will most effectively ensure that women's needs and interests are met in the newly rebuilt communities.

Appropriate Timing: Identification of surviving women leaders and NGOs that can be empowered can begin after the emergency relief phase. Training for women leaders should begin during the rehabilitation phase so that the women are ready to fully participate in the reconstruction phase.

COSTS

Reconstruction of damaged mosques, meunasahs and musholla (plus other places of workship) has been costed at $51 million. Planned cultural activities to help restore religious practices and an active role for religious organizations in the rehabilitation and reconstruction are estimated to cost $1.75 million.

FIDUCIARY CONTROL AND MONITORING

For physical reconstruction, an independent agency can be hired to ensure compliance with technical requirements for construction and rehabilitation of mosques and meunasah. Community monitoring teams can also be formed to oversee progress and financial compliance for all reconstruction at village level, including mosques and meunasah.

Monitoring of non-physical works such as public information campaigns, training for local women's NGOs and family tracing programs will be undertaken jointly by international and local NGO partners.

Rebuilding Houses

6. REBUILDING HOUSES

SUMMARY OF LOSSES AND DAMAGES

The massive earthquake that reached 9 on the Richter scale and caused the tsunami that occurred on 26 December 2004 resulted in significant loss of human life and habitat in areas of Aceh and North Sumatra. It is estimated that some 1,000 villages and urban communities have been affected and 127,000 houses completely destroyed, leaving around 600,000 people homeless. Furthermore, about 152,000 housing units suffered damages estimated at 50% of their value.

The preliminary estimate of damages and losses in Aceh and North Sumatra is Rp.13.4 trillion [US $1.4 billion]. This estimate, computed through a rapid damage assessment, includes reconstruction and rehabilitation costs, temporary shelter, debris removal, tertiary infrastructure repair and furniture. But the losses are not only physical. While affected by the civil conflict, significant numbers of settlements still functioned as homogeneous communities. Many have now been torn apart.

Losses in relation to housing are also institutional. Although losses appear not to have been as serious as expected, in many locations, land ownership records have been lost. The loss of land title deeds in damaged houses and government buildings is a significant problem for the housing sector, but also has major ramifications for householders, especially the poor and vulnerable.

GUIDING PRINCIPLES FOR REHABILITATION AND RECONSTRUCTION

Apart from housing being among the highest priority of works needed, it is also expected that the process of organizing all levels of the community for this task would create a platform or clearinghouse mechanism for various community rebuilding, economic and social recovery needs, promote and support an integrated rehabilitation/recovery approach and lay the foundation for a wide range of follow-up reconstruction activities (see attachment). The overall guiding principles for

rehabilitation and reconstruction formulated by Bappenas are very relevant for the housing sector and have been incorporated into our analysis and recommendations.

- **The people of Aceh must be contributors rather than bystanders to the rehabilitation or reconstruction of their houses.** A people-centered and participative rehabilitation and reconstruction program which defines central roles for civil society and non-governmental organizations is a central part of the proposed housing strategy. Making decisions about the houses and villages or neighborhoods, and rebuilding their own houses will give the Acehnese something focused and personal to do and will help to rebuild social capital in affected areas. Participation in housing needs, planning, construction, and monitoring is an important recovery vehicle and a top priority for the people of Aceh.

- **Housing rehabilitation and reconstruction strategies need to be integrated with other sector strategies.** Developing holistic, multi-sectoral approaches that draw together, prioritize and sequence, planning and construction of housing and infrastructure services is vital but linking housing and employment/human resource and economy/business development strategies is equally important.

- **Coordination between and within ministries and levels of government is vital**. Effective coordination to ensure consistency and effectiveness among sectoral and regional programs at national and regional levels is critical given that housing touches on many sector responses and ministerial and government interests.

- **'Rehabilitation' of housing deals with damage repairs while 'reconstruction' deals with the of new housing**. The distinction between rehabilitation is particularly relevant to housing and lies at the basis of the strategy and costing.

In addition, a number of principles are specific to housing and the present conditions in Aceh:

- **Security of tenure should be prioritized** and is an important pre-condition for housing reconstruction. To the degree that formal procedures may be long and cumbersome, the authorities would have to rely heavily upon input from the communities to find some type of intermediate solution.

- **Capacity building** should focus on service provision mechanisms and institutions involved, not be limited to the implementation of sub-projects.

- **Fiscal transparency and effective monitoring is vital.** The sheer scale of the housing rehabilitation and reconstruction efforts means that new approaches to procurement and monitoring need to be developed and accountability systems, both to the people and to the donors, established and maintained. Communities should be given a role and capacity building so that they can participate effectively in monitoring and promoting greater accountability. For more information, see the separate *Fiduciary Strategy* note.

Some lessons specific to housing reconstruction

- The proper sequencing of housing reconstruction – land assembly, distribution of materials, construction of infrastructure networks and so on – is important. The

allocation or acquisition of land should be one of the first steps to take, and take quickly, after a natural disaster.

- Relocation is a major issue. Decisions to relocate affected populations should be contingent upon: (i) consent of the target population; (ii) legal tenure of new sites and responsible agency's control over them; (iii) accessibility of new sites for intended population. There is a need to assess whether the reasons for relocation are technically correct before planning to relocate people or entire villages. Particularly when moving people away from coastal zones, the tendency to return is almost irresistible. When relocating people away from one risk, it is important to keep exposure to new risks in mind. While it may be important to settle people away from flood-prone areas, in situ reconstruction should be promoted after earthquakes to take advantage of existing infrastructure and community facilities, while minimizing resettlement and its attendant social dislocation. In situ reconstruction has stimulated considerable self-help efforts in low-cost reconstruction. It also provides a good opportunity to build on the knowledge growing out of the experiences of other developing countries as they face similar emergencies.

- Housing technology should be simple and culturally appropriate. Local construction materials should be used to deal with building bottlenecks.

- Tight quality audit arrangements with quality check by independent teams is essential for large-scale emergency reconstruction of private dwelling units by owners and for reconstruction of public infrastructure.

Temporary Shelter

Details on the number of affected households already living in temporary shelters are not available partly because of the ongoing relief activities and partly because of difficulties being experienced in the record-keeping process. Based upon estimates cited by various officials and the press, it appears that there are about 600,000 people who are currently housed in some form of temporary shelter. For a selected group of people the GoI is setting up special temporary shelter facilities in 24 locations where a total of about 35,000 persons will be accommodated.

Based upon lessons learned from other disasters, temporary shelters have a tendency to become permanent if they are not properly managed. To the degree possible, efforts should be made to encourage affected residents to remain on-site or close to their property so that they are in familiar surroundings, their unease at being away from their remaining assets is reduced, they are better able to work at rehabilitating and reconstructing their homes and they create less demand for new service facilities and large-scale temporary investments.

Experience has also shown that while there may be some economies of scale in establishing and maintaining large temporary shelters, these benefits could easily be outweighed by several negative factors such as the need to provide new schools, as well as building, staffing and operating clinics, health, water and sanitation, feeding, recreation and entertainment facilities. The cost of transportation to jobs and other areas also adds to the problem and it is not uncommon for various petty and serious criminal activities to add to the psychological effects of keeping large numbers of

people in a small space over a long period. Thus, smaller temporary shelter settlements are preferable.

The authorities have an obligation to provide collective temporary shelter for orphans, the old and feeble and similar vulnerable groups. However, large shelters should be avoided and emphasis placed on assisting those affected in the areas where they previously lived. Given the unprecedented nature of this disaster, the rehabilitation and reconstruction process may be longer than normal. Creative ways will have to be found to ensure adequate temporary facilities are provided while minimizing some of the negative effects mentioned above.

REHABILITATION AND RECONSTRUCTION STRATEGY

The fundamental aspect of the housing strategy is first the distinction between rehabilitation and reconstruction.

Rehabilitation concerns the repairs and refurbishment of damaged buildings which can still be made habitable. It comprises activities such as rebuilding structural or non-structural elements of walls, roofs, and replacing windows, doors and fixtures. The process of rehabilitation is expected to last for 3 years with the earliest possible start date. It is assumed that the average cost of rehabilitation would be about the equivalent of 25% of the cost of a new core housing unit. In no case would the cost of rehabilitation of a unit exceed the cost of core unit.

Reconstruction is directed at building new housing for those who lost their houses completely. It involves development of new core units to replace destroyed and uninhabitable houses and includes provision of tertiary infrastructure such as drainage, pathways, toilet facilities and other basic utilities.

The rehabilitation and reconstruction strategy needs to be flexible to accommodate local requirements and new developments in the field. It is expected that the Government will provide rehabilitation and reconstruction grant assistance to affected communities through several schemes. The highest level of this assistance is expected to be the equivalent cost of a basic house (core unit) for those whose homes were completely destroyed. For those suffering partial destruction of their homes such assistance will cover the damage incurred but only to the equivalent value of a core unit.

Key Parameters of the Rehabilitation and Reconstruction Strategy

Solving spatial planning and location issues with the people of Aceh. The government and other stakeholders need to work together to identify habitable and uninhabitable areas at a very early stage. Houses in hazardous areas will need to be relocated/vacated (a system of color demarcation will need to be developed). Because of the magnitude of the destruction, special attention should be given to the disposal of debris, including any toxic waste. Removal of debris will facilitate the reinstatement of basic services in affected areas and allow the authorities to plan

accordingly. Much of the land along the coastline has been lost, and houses may be located in vulnerable/hazardous land. In such cases, villagers will need to find new places to live. Part of the process of spatial planning will therefore involve allocation of land to people made landless by the Tsunami, and reallocation and reconsideration of the layouts of ad hoc settlements which are costly to service. Community participation in the information collection, identification and re-planning of settlements will be vital to building confidence in the reconstruction process. Housing response should be closely linked with other tertiary services (such as local roads, water and sanitation services) and will need integration and coordination.

Resolving the problems of land titles and security of tenure. Land titling and tenure are crucial as a basis for recovery of affected areas, and a requirement before housing reconstruction can start. The absence of legal title documents and the loss of some records constitutes a major hurdle for the rehabilitation and reconstruction process. Flexible and accommodating policies will need to be developed toward land ownership and relocation. The option of community based mapping and tracking should be explored as an important first step in this process and should be followed by a formalized recording system at the district level in a later stage. Innovative solutions will need to be adopted such as collective land titling, land pooling/land readjustment. These include the Council for Legal Rehabilitation proposed in the separate *Regional Government* note.

Establishing participatory and equitable decision-making processes. The principles of community participation that define and includes roles for women and vulnerable groups should become the basis for all activities. This approach will build on the Community Driven Development (CDD) experience throughout Indonesia. A variety of housing rehabilitation programs will be designed in order to suit the various income groups: middle and high income groups, and for urban and rural poor and vulnerable groups. Civil society and community based organizations will be required to play a central role in the implementation of this large-scale rehabilitation program. A particular concern is ensuring equitable access for potential beneficiaries. Mechanisms will be needed to ensure benefits are not captured by outsiders and to ensure that vulnerable groups (e.g. female-headed households and those with old, handicapped or young members) are not marginalized. Efforts are needed at the earliest stage possible to assess and document owners, renters and vulnerable groups in affected areas. This could be achieved through community self-assessment that promotes transparency in the selection process. Despite the unprecedented scale of this activity, this still presents an opportunity for the introduction of large scale community-based operations in the country.

Support homeowners and utilize local materials and expertise for construction. Local expertise, materials, housing and architectural traditions should be the starting point for the design and construction of housing. Large scale top-down housing programs should be avoided at all cost. Any plans to supply all materials and/or do the whole thing for communities will seriously undermine both markets and initiative. The introduction of new technologies has to take into account potential earthquake and tsunami effects. Minimum norms and standards will need to be defined and agreed, and then enforced through formal and community-based channels. Recycling of building materials from debris of damaged housing stock should be encouraged through labor-based and employment creating processes.

Develop livelihood and settlement responses into integrated, multi-sectoral approaches. Aceh has suffered massive economic and social change. The livelihoods of people working in many sectors such as agriculture, fisheries, industry have been strongly affected, and people may not be able or willing to return to previous work locations. Rehabilitation activities in housing will be strongly affected by work opportunities, and jobs can be created and opportunities for income generated by linking housing rehabilitation to employment and human resource and economic and business development strategies. Housing and water and sanitation service delivery approaches are closely linked and will need integration and coordination.

Build capacity, streamline and decentralize program management. To the extent possible, provincial and local authorities, not central government should be the government focal point for rehabilitation and reconstruction efforts. Appropriate monitoring and evaluation capacity will have to be developed for all participating entities. There will also be a need to develop a quick-response procurement process without sacrificing transparency, accountability and related features (see the separate *Fiduciary Strategy* note on this point). Because the capacity of local government organizations has been badly affected through staff deaths and related trauma, secondments, technical assistance and training needs will have to be provided. Similarly, capacity enhancement of the private construction sector will be crucial. Even though they have limited capacity, NGOs will have to play a substantial facilitating role in a community based housing rehabilitation program and may act as contractors and/or sub-contractors.

Monitoring and Evaluation. Monitoring and evaluation mechanisms at all levels will be required. Independent monitoring and evaluation details are not yet available but they would be crucial for successful program execution.

RECONSTRUCTION PROGRAM

A people-centered program for housing reconstruction and rehabilitation includes a number of key steps that must be undertaken in sequence after organizing the affected communities and working with them to ensure that the program reflects their input through the various stages.

A. Removing and disposing of debris. The housing program begins with the removal of the debris created by the tsunami. Local government with the support of all levels of government and other non-state stakeholders should take the lead role the process of clearing and properly disposing of debris and hazardous waste, ensuring that beneficiaries do not re-occupy identified hazardous zones.

B. Planning settlements and allocating land. The government has a key responsibility in the acquisition and allocation of land, and the provision of land titles or security of tenure to households. Developing the processes for this is urgent as

tenure rights and land reallocation will otherwise form a blockage in the reconstruction process. Key activities will include:

To the extent possible, commencing work in areas which have the least problematic land tenure and planning needs. In parallel, with community, local government and other consultations, a decision will have to be made on the approach which is to be used for addressing land title issues in cases of non-existing, missing or destroyed titles.

Although the loss of some land ownership records creates a significant problem in the housing and urban sector, it also provides an opportunity for the GoI to realize its equitable land re-organization and land-readjustment goals in the spatial reorganization of the city.

The planning process will also include decision-making over services e.g. will houses be linked up to networked infrastructure such as local roads, small piped water networks and local sanitation systems; linked into condominial water and sanitation systems, or rely on individual or shared on-site solutions.

C. Providing options for housing and construction processes. This step involves participatory decision-making over the type of permanent housing provided to the people made homeless by the tsunami, and the process by which it will be delivered. Housing rehabilitation and reconstruction is expected to be implemented through a variety of supply mechanisms targeted at different segments of the society. In a very preliminary assessment of potential supply capacity, it is clear that unless all of the following sources are tapped, the demand would be overwhelming and the reconstruction period appropriately affected. Options will be made available, informed choice processes put in place, and decisions on the most appropriate option facilitated with beneficiary householders. Each of these options has important secondary benefits.

- **Community-Based housing helps rebuild social networks**. Indonesia has had very successful experiences with community based projects as the Kecamatan Development Project (KDP), Urban Poverty Project (UPP), and National Urban Shelter Sector Project (NUSSP). The bottom-up approach these projects employ will give communities the opportunity to assess and prioritize their own needs and fully participate in the process of achieving them. *In line with the need to revive communities and get people back to work, the primary delivery mechanism for the rehabilitation and reconstruction of housing should be a community-based program.* Experience from Maharashtra, East Timor and Afghan reconstruction efforts indicates that having large numbers of families rebuild their own houses simultaneously will also be much faster than tendering contracts. In some cases, NGOs will take on the actual construction of houses.

- **Self help housing helps focus on rebuilding lives.** A large number of the victims of the tsunami will want to rebuild their own houses as soon as possible. Rebuilding their own houses will also give Acehnese villagers something focused and personal to do and the process of contributing to reconstruction is expected to help to alleviate some of the trauma being reported.

- **The private sector can be mobilized to build in whole or part.** Responsible government counterparts and other stakeholders can help build the capacity of the

private sector in Aceh province to assist in the rehabilitation and reconstruction components. Getting cash into the local economy is vital, and some people will choose not to build their own houses. This supply mechanism will make it possible for them to have full or partial outside support. The role of small private construction enterprises and individuals will be crucial for any on-site services that may be required, such as septic tanks and wells. It is anticipated that some middle–income households, for instance, might allocate their time to other activities and opt for a house to be built for them.

- **Public sector institutions have been a provider of low-income housing in the country**. It is envisaged that they will have an important role, especially in the reconstruction process where plans are underway to provide primarily prefabricated units to those beneficiaries who opt for such solutions.

- **NGOs comprise a very important group**; they have been very active in assisting participants mentioned above and their facilitator role in this disaster will continue to be important. While in the past, they have not directly produced a significant share of new units, indications are that will do so now.

D. Establishing delivery mechanisms for construction materials. For community-based and self-help solutions, the program will include multiple mechanisms for householders to obtain housing materials. Experience from other disaster operations show that to the degree possible, the government should not directly buy, store or deliver materials because such practice tends to be subject to numerous non-transparency and leakage factors. It has also been found that a more efficient alternative is for the authorities to have agreements with several large and strategically-located suppliers whereby the government offers to buy (via financing to beneficiaries) specific volumes over time, based upon estimates of supply needs. Combining such commitments with a voucher program for qualified beneficiaries of both the rehabilitation and reconstruction program provides a great deal of flexibility while it addresses a major concern of transparency and accountability.

E. Connecting houses to other services. For community-based housing initiatives and self-help (owner-builder) housing, simple design criteria will need to be defined to ensure alignment within a spatial plan so that services can be coordinated and delivered at an efficient cost at a later date. In greenfield sites, of course, service delivery will not be limited to physical services. Ensuring adequate social, medical and other services is essential and there will be need to identify and coordinate this process to avoid duplication and bottlenecks.

For each of these above housing delivery channels, detailed ground rules governing such areas as location, norms and standards, housing cost, criteria for beneficiary selection, etc, will have to be prepared, disseminated, monitored and enforced by a combination of local and national entities having such responsibilities. Such criteria are needed to avoid problems of construction in hazardous areas, reduce the perception of favoritism and prevent the provision by donors of a few expensive units and thus create exaggerated expectations. A public awareness campaign will help disseminate the rights and obligations of the people in relation to housing reconstruction.

An **institutional support program** for housing reconstruction is also required to cut through bureaucratic blockages and facilitate speedy implementation. Activities under this program would proceed in parallel to the processes involving communities and include:

- **Reconsideration of norms and standards.** Because of the exceptional nature of the proposed rehabilitation and reconstruction program, many of the existing building and construction codes and regulations governing this sector may have to be reviewed and adjusted if they are found to be deficient. It is very likely that many of the shortcomings noted would be in the monitoring and enforcement aspects and so special efforts would have to be made to address these.

ESTABLISHING THE INSTITUTIONAL FRAMEWORK FOR DELIVERY

Because of the complex nature of the overall rehabilitation and reconstruction operation, there is a need for a strong Program Coordinator (PC), aided by a small unit, to oversee and facilitate implementation of the program. The PC will report to a National Steering Committee (NSC) comprising Bappenas, MoF, MoHA, MPW, the State Ministry of Public Housing and civil society representatives.

At the central government level, it is envisaged that the executing agency of the program will be the Ministry of Public Works and the Ministry of Public Housing, in coordination with provincial and local authorities, and beneficiary and NGO communities and the international donor/lender organizations. A Housing Coordinating Committee (HCC) should be established at provincial and local government level, comprising representative of various agencies and civil society to facilitate coordination of housing related programs. The HCC will ensure program compatibility, timeliness of delivery, beneficiary selection and compliance with agreed standard and equity issues. It expected that each program will have its own Project Implementing Units reporting to their respective sectoral agencies.

- **Establishing funding mechanisms.** The rehabilitation of housing will be funded from multiple sources and include numerous public, private and individual sources. Whenever external funding is involved, it will be monitored by GoI in conjunction with the international donor community. Funding mechanisms may differ depending on the source, implementing agency and type of initiative. In view of this, significant efforts will have to be made in order to coordinate the various funding inputs and consideration should be given to the feasibility of pooling of resources or at least, have in place some mechanism for taking account of who is spending what in which sector, for what program, under what criteria, etc. Many donors/lenders, for a variety of reasons, will try to enter and commence various activities on their own. It is very important for the authorities to try at the outset to dissuade such practice since it creates a range of both short and long-term problems, including those affecting sustainability and duplication of resources. Fore more on this issue see the separate notes on *Financing for Reconstruction* and the *Fiduciary Strategy*.

- **Developing information systems and dissemination pathways.** The Executing Agency (Ministry of Public Works / Ministry of Public Housing) will establish an information system that will cover the whole project, at the central, provincial and local levels and will provide information interfaces to civil society through printed media, radio and the internet.

- **Underpinning the program with skilled and committed staff.** National, provincial and local authorities will designate full-time personnel in support of the management of the rehabilitation program. The staff allocated must be skilled and sensitive to the participatory and capacity building processes envisaged. The program can draw upon the human resources of a pool of community organizers/facilitators of various Community Driven Development (CDD) projects which need to be trained for the task of community housing.

- **Monitoring, Evaluation and Accountability.** Monitoring and evaluation mechanisms are required at the central, provincial and field levels. Independent monitoring and evaluation systems will have to be established as part of the program.

COST OF THE HOUSING REHABILITATION AND RECONSTRUCTION PROGRAM

The proposed financing plan envisions a total cost of **Rp. 1.1 trillion (US $ 115 million)** for rehabilitation, and **Rp. 3.3 trillion (US $347 million)** for reconstruction.

Cost assumptions:

- The estimated needs for housing rehabilitation and reconstruction are spread over a 3- and 5-year period respectively.

- It is assumed that the production capacity of the five different production modes – community based housing, private sector, public sector, self-help and NGOs – can be raised substantially from their current levels, and that these increases in production capacity are possible through management support provided under the housing rehabilitation and reconstruction program.

- The cost estimates are based on unit prices of (i) Rp. 0.2 million/m^2 for rehabilitation, and (ii) Rp 0.8 million/m2 respectively for core house to be constructed (reconstruction). These estimates are based on the assumption of a 36 m^2 core house for any type of assistance. Thus, the expenditure for rehabilitation and reconstruction is significantly lower than 100% compensation for losses incurred.

- About 151,000 houses are counted as damaged and some 127,000 units are completely destroyed. The replacement need of houses is 115.000 which accommodates an estimated total loss of 12.000 households.
- It is assumed that the unit costs for housing rehabilitation and reconstruction contain costs for community assistance, approximately 15%.
- Costs for independent audit are not included.

Attachment 1 contains details of damage by house type, numbers of houses to be reconstructed and rehabilitated and the Costs and Financing Plan.

Rebuilding Roads, Bridges, Ports and Airports

Aceh Photos donated by: Jez O'hare

7. REBUILDING ROADS, BRIDGES, PORTS AND AIRPORTS

SUMMARY OF LOSSES AND DAMAGES

Much of the primary transportation infrastructure and transport of Aceh Province is located in the coastal areas, including the eastern and western links to North Sumatra, and is therefore at risk from storm surge and coastal erosion hazards. Tsunami damage was greatest on facilities in the western coast and northern area. Earthquake-related damage is evident on port and airport structures and some roads but relatively minor in severity. However, it is likely that the impact of the tsunami impact may have been amplified on structures weakened by the earthquake, such as bridge supports.

Total damages and losses for transportation are estimated to be Rp. 5 trillion, predominantly in the road subsector which accounts for 96%, with nearly 4% in ports and less than 1% in airports. The impact is dominated by an estimated Rp. 1.8 trillion damages in land transport and Rp. 1.6 trillion in road infrastructure. Economic losses estimated at Rp. 1.3 trillion include the emergency repairs and clean-up, but are dominated by the costs of diversion and added travel costs required for reaching the western coast areas isolated by the destruction of large parts of the western road.

Road infrastructure impacts in the affected area included about 316 km of national and provincial roads, 121 bridges destroyed and 316 damaged, and possibly over 1,000 km of local roads. That has a replacement cost of Rp. 1.6 trillion, which is equivalent to about 20% of the national annual road management budget. The land transport damages included an estimated 29,000 vehicles (mostly motorcycles and comprising about 7 percent of the total vehicle fleet), ferry terminals at Rp. 170 billion and bus and road safety facilities. Damages of Rp. 0.24 trillion were incurred in port infrastructure at 9 of the 14 seaports in Aceh and at 5 ports in North Sumatra. The damages to airport infrastructure were earthquake-related and comparatively minor (Rp. 17 billion) allowing moderate levels of operations to resume, but losses due to increased transport costs may reach about Rp. 29 billion.

A number of issues should be included in shaping the recovery strategy, including:

- **Improvement of access.** Rapid restoration of access – to water supply, markets and social services - is a priority for the initial relief phase. Access considerations should also shape the rehabilitation and reconstruction programs.

- **Strategic Planning.** Strategic redundancy should be built into the transport system so as to provide for alternative means of access when some links or modes are disrupted by either natural or security-related hazards. Specific considerations include: retention of both eastern and western arterial road links and the pace for reconstruction of the west coast road, upgrading of inland alternative road routes, the standard and capacity of the ports and airports, etc.

- **Spatial Planning**. The reconstruction of the west coast road will include relocation that is dependent on the redevelopment of spatial plans and mapping of hazard zones, in order to mitigate risks and support sustainable development. This includes avoidance of conservation areas such as the trans-Aceh Ladia-Galaska highway through the Genung Leuser National Park, which has high environmental risks and has been declared ineligible under World Bank programs.

- **Disaster Risk Mitigation**. Design considerations should include systematic natural hazard risk assessment, and review of structural and non-structural schemes for reducing natural hazard risks for critical transport infrastructure, e.g. structural protection from storm surge, increased hydraulic capacity of drainage, etc.

- **Construction capacity**. The construction industry's capacity in Aceh is limited but could be expanded from nearby North Sumatra, where many of the plant and equipment assets are located for security reasons. The transport of large quantities of construction materials, notably cement, asphalt, reinforcing steel and larger bridge trusses which would need importing to the Province, will require upgrading of port facilities and rehabilitation of the arterial road access. The implementation capacity of the Provincial Public Works Office (DPUP) may also be constrained because of the loss of about one-third of their staff.

- **Security and Cost**. Costs are likely to be higher than the regional norm to cover both added security and also the generally higher costs of materials in Aceh which will be exacerbated by the diminished local construction capacity and the congestion arising from the reconstruction program.

GUIDING PRINCIPLES

Guiding principles to be applied to developing the transport sector recovery plan include:

- **Participation**: The planning and implementation of transport infrastructure programs should include full recognition of human and physical resources available locally and concerted effort to utilize local resources; recognize infrastructure as part of a comprehensive approach to improve livelihoods; and recognize

development of the local road network as a specific facilitating mechanism for socioeconomic development.

- **Comprehensive strategy**: The reconstruction plan should be based on a strategic analysis of the transport network that includes supplementary capacity and redundancy between road, port and air, so as to provide alternative means of access and support of regional and national economic links. The overarching concept of the reconstruction program is to restore the rural arterial network with adequate resilience and redundancy to minimize the impact of future events. For urban and rural areas, the objective following rehabilitation is to restore functionality and support spatial planning that recommends relocation.

- **Coordination of programs**: As the provincial and district level capacity has been severely reduced by the disaster, and due to the scale of some reconstruction projects, it is expected that the Ministry of Public Works (MPW) would take a lead in programming the rehabilitation and reconstruction of national and provincial roads, and augment the capacity of the DPUP for supervision of the road works. Likewise for road transport facilities, ferry ports, seaports and airports rehabilitation and reconstruction – the Ministry of Communications (MOC) would take a lead. The normal budget allocations for transport infrastructure in Aceh and Sumatra should continue to be allocated over and above the reconstruction program in order to address ongoing asset preservation requirements without diversion of funds. The emergency-related rehabilitation and reconstruction program should be focused on areas which have been severely impacted.

- **Rehabilitation Program**: The work necessary to ensure safety for operational capacity of the road, port or airport assets. It includes repairs to culverts, road furnishings, and minor maintenance to road surface, retaining walls, sea walls, protection of bridge piers and abutments, strengthening of wharf and terminal structures, resurfacing of pavements and bridge decks. Rehabilitation works will be carried out during 2005-2006.

- **Reconstruction**: The reconstruction program will restore the structural integrity of heavily-damaged or destroyed road, port or airport assets. This could include new construction to improve the resilience of the transport network against disasters and improve capacity for future growth. The reconstruction work will include upgrading of construction standards where necessary to ensure capacity, loadings and resilience of the structure.

- **Capacity building**: Implementation arrangements should utilize and strengthen DPUP and Kabupaten/city Public Works Office (DPUK) resources to the extent feasible, especially for urban and rural roads programs. Mentoring and support for surviving and new staff should be provided by experienced persons on temporary transfer.

- **Procurement and financial management**: Special procedures will be identified to assist in expediting the procurement of works and services for the first year, in the framework of fiduciary controls established for donor-supported programs.

- **Funding options**: Use of the Special Allocation Funds (DAK) as a mechanism for channeling central government funds, including foreign grant funds, so as to

promote local ownership and commitment. Use as a pilot for enhancing DAK planning, monitoring and audit.

- **Feasibility Studies.** Require state-owned enterprises (Pelindo I, Angkasa Pura II and ASDP) to follow sound commercial principles in planning and implementing their rehabilitation and reconstruction investments and to avoid excessive standards.

REHABILITATION PHASE STRATEGY

To be implemented during 2005 –06, the rehabilitation phase strategy includes:

- An immediate survey within the affected areas to record damages, map hazard zones and identify areas and priorities for the rehabilitation and reconstruction program within the affected areas.
- Corrective rehabilitation works to be implemented where possible using labor-intensive corrective works methods to ensure maximum engagement of local labor.
- Implementing more significant works via small to medium contracts in local areas through DPUP for speed of procurement.
- Monitoring of contracts and supervision to ensure quality of work together with appropriate fiduciary controls.
- Rehabilitation of urban roads and bus terminals should be given priority.
- Rehabilitation of the roads Geumpang-Meulaboh and Sp.Km 87-Lamno as a priority to provide an alternative access to Meulaboh and affected areas on the west coast. However, this section crosses Leuser National Park and therefore needs careful assessment.
- Rehabilitation of the airports at Meulaboh (runway and airside facilities), Sinabang (runway), Banda Aceh (control tower) and Sabang (replacement of navigation equipment);
- Rehabilitation of 4 ports in Aceh and navigational aids in 9 ports in Aceh and North Sumatra.

RECONSTRUCTION PHASE STRATEGY

Reconstruction of the Banda Aceh – Meulaboh route along the west coast to provide access to affected areas, staged over 5-6 years beginning from north;

- Reconstruction and upgrading as necessary of the southern route from Meulaboh to North Sumatra border.
- Upgrade and betterment of unpaved portion of route through Geumpang to Meulaboh (this needs environmental assessment as it traverses Leuser National Park).
- Upgrading of airports at Banda Aceh and Meulaboh, depending on the strategic planning results.
- Redevelopment of Banda Aceh harbor, including provision of major coastal protection.
- Road Transport: Explore opportunities for corporatizing management and development of bus terminals (institutional structure, business opportunities). As a minimum, should consider piloting the institutional principles now being developed for public service agencies (Badan Layan Umum) by the Ministry of Finance.
- Small ports, airports, and ferry terminals - Explore opportunities for corporatizing management of terminals and improving subsidy delivery mechanisms.
- Proposed capacity expansions (e.g. runway extensions or port expansions) should be economically and financially justified.

EXAMPLE PROGRAMS

Existing Programs: The following existing programs could be considered as possible vehicles for the reconstruction program:

- Sumatra Region Roads Project (SRRP) financed by the World Bank: An amount of $31 million has been made available under an MOU, comprising $6 million available immediately and an additional $25 million supplementary loan.
- The current Road Rehabilitation Sector Project (RRSP) and proposed Road Rehabilitation 2 Project (RR2P), (Asian Development Bank): an MOU has been agreed making finance available for reconstruction.
- Government routine budget programs.

Possible programs:

- **Road rehabilitation** - The rehabilitation programs and preparation of the reconstruction program could be financed and implemented under the current loan projects above (e.g. SRRP and RRSP-1) and proposed loan (e.g. RR2P) in order to facilitate a rapid start to the program. The preparation activity would include a

detailed survey of damage and engineering design of the reconstruction candidate subprojects. The rehabilitation on Nias, North Sumatra, could be included either under this program, or under MPW annual road betterment programs.

- **Road reconstruction** - The reconstruction of the Banda Aceh-Meulaboh road, estimated to cost about $90 million, and replacement of bridges on other roads, could be financed under a new project or under a mix of financing sources.

- **Urban road reconstruction** – The rehabilitation and reconstruction of urban roads and bus terminals in Banda Aceh and Meulaboh.

- **Ports and airports** - Redevelopment of the airports and ports, including related coastal protection works and navigational equipment, may be best implemented under a new project, focusing on Banda Aceh and Meulaboh plus other priority locations.

- **Employment-intensive infrastructure investment (EIII)** - A small contract program, with a focus on local employment and labor-based works, could be applied to repair and rehabilitation of drainage structures, local roads, and other essential infrastructure facilities. An EIII approach will help to reactivate the purchasing power of local markets into local economies through laborers' wages, increased business opportunities, the involvement of local contractors and the use of local resources. Activities will include the training of supervisory staff, the development of local construction skills such as masonry, woodworking and culvert production and the development of basic contract management skills.

COSTS

	USD million eq.
REHABILITATION PROGRAM	**45**
Employment-intensive infrastructure investment (EIII)	15
Road rehabilitation	30
Rehabilitation of bus terminals	
RECONSTRUCTION PROGRAM	**150**
Road reconstruction	90
Urban road reconstruction	20
Seaport, ferry port, and airport redevelopment	40

FIDUCIARY CONTROL AND MONITORING

Special procurement procedures should be applied to enable the employment-intensive and rehabilitation works to proceed with the minimum of delay, while ensuring transparency, competition and quality. Rigorous procedures should be applied for overall procurement and financial management, including a project office to coordinate and facilitate implementation.

Reconnecting People: Electricity and Telephones

Aceh Photos donated by: Jez O'hare

8. RECONNECTING PEOPLE: ELECTRICITY AND TELEPHONES

SUMMARY OF LOSSES AND DAMAGES

These three sectors are characterized by their technical sophistication and by the dominant role played by large enterprises, all wholly or partly state-owned. The existing scale of business and the damages and losses for each of the main enterprises is as follows:

PT PLN, the national electricity company, which manages the public electricity supply throughout Indonesia. Aceh, which is the only province whose power supply has suffered significant damage, accounts for less than 2% of PLN total business in terms of capacity, customers and sales, and the affected areas account for a much smaller proportion. The recently completed transmission line connecting Banda Aceh to Medan is unaffected and damage to generation plants, including Banda Aceh's Luengbata plant, is relatively small. The isolated diesel units that serve the rural areas on the west coast have been little affected, and Muelaboh's generation plant is back in operation. However, distribution networks have been badly impacted, with PLN reporting severe damage to 1,100 circuit-km of MV distribution and 1750 circuit-km of LV distribution. Total tsunami-related costs are estimated at around Rp.500 billion.[i] PLN's profitability will not be significantly affected as the avoidable generation costs of lost business exceeds the associated revenues.

PT Pertamina, the national oil company, which manages the supply of petroleum fuels throughout Indonesia. Pertamina has depots in Banda Aceh (Krueng Raya), Muelaboh, and in several other towns affected by the Tsunami. Tanks at Krueng Raya and Muelaboh were ruptured and other smaller depots suffered lesser damage. Many roadside fuel stations (SPBUs), which are privately owned, suffered damage but so far only limited information is available. Total damage is put at around Rp.93 billion, with fuel losses accounting for a further Rp33 billion. Pertamina acts as the agent of the Government in supplying highly subsidized fuels to the general public and small businesses, and earns no profit from these activities. The 2001 Oil and Gas Law has opened the door to downstream competition, but this will not materialize until prices are allowed to align with international market levels.

PT Telkom, now 49% privately-owned, which is the principal provider of fixed line and limited mobility CDMA phone services in Indonesia. It is also through Telkomsel, a majority-owned subsidiary, the largest of three GSM mobile operators. PT Indosat, which is now 85% privately owned, has embarked on developing a

CDMA limited mobility network, and through its subsidiary—Satelindo—has the second largest GSM customer base. Both operators serve Aceh, but customer numbers are small and Telkom has just 15 thousand fixed lines in Banda Aceh. Telkom and Indosat are both internationally listed companies, and invest in network developments that promise adequate returns. Under the Universal Service Obligation (USO) scheme, MOC has starting providing telecoms access to remote and isolated villages that are not commercially attractive. Telkom's exchanges in the tsunami-affected areas suffered some damage, as also did CDMA and GSM base transceiver stations in Banda Aceh. Most installations are now functioning again. There was extensive damage to the copper wire 'last mile' of fixed line services. GSM services were little affected, but MOC reports all of its 62 USO installations throughout the province were damaged.

Restoring services in these three sectors is essential for re-building the economy, for re-establishing basic social services, and for re-empowering the community. Rapid progress has already been achieved, in part because the extent of the damage is comparatively minor when measured against the physical assets of the corporations concerned and in part because they are able to draw upon nationwide personnel and other resource bases. Thus although PLN lost over 100 staff and saw many more injured and traumatized, it was able quickly to inject adequate numbers of trained engineers and technicians to normalize generation operations and to reconnect supplies to vital installations in Meulaboh and other badly affected areas.

GUIDING PRINCIPLES

The following principles should guide the design and implementation of the recovery strategy:

Commercial principles should be maintained. Providers of services in the sectors are limited liability companies and should be allowed and required to operate on sound commercial principles and in accordance with good corporate governance practices. Companies should not be required to make loss-making investments or to provide non-commercial services unless appropriately compensated by Government.

Subsidy mechanisms should be carefully targeted, create incentives for efficient delivery, and include a well-defined exit strategy. Where feasible, for example for rural telecommunications services, consideration should be given to adopting output-based support schemes and competitive tendering to minimize subsidy amounts.

Procurement practices should be made as transparent as possible. While direct contract awards will be necessary during the emergency phase, operators should be seen to be following best practice competitive tendering procedures for their longer-term rehabilitation and reconstruction activities.

Efforts should be made to promote local job creation subject to adhering to sound commercial principles. While opportunities for local job creation may be

constrained by the technologies employed in these sectors, there may nonetheless be opportunities to increase local content and reduce costs. For example, there may be merit in PLN using cast concrete poles produced in situ for rural electrification rather than higher cost spun concrete poles transported in from a distant manufacturing plant. Government should not impose local sourcing requirements unless prepared to compensate for consequent incremental costs.

Opportunities for incorporating improved damage prevention / mitigation measures in reconstructed facilities should be explored. These will be highly sector and facility-specific, and commercial soundness should be the guiding principles subject to compliance with applicable environmental and safety standards.

Establish a special team to create for channeling public funds to corporate operators to finance their rehabilitation and reconstruction costs. Clear guidelines need to be set, particularly for those companies that are partly private owned. Considerable care should be taken to avoid creating precedents that could discourage companies from buying appropriate insurance cover.

REHABILITATION AND RECONSTRUCTION PHASES

The rehabilitation phase in these sectors will involve the reinstatement of facilities and networks to meet immediate needs. The time horizon will be short, and planning and execution are fully within the technical and implementation capacities of the companies concerned.[ii] Reconstruction will be appropriate where the extent of damage makes rehabilitation infeasible, where risk mitigation dictates relocation, or where technology advances make it economically preferable to rehabilitation. In practice the two phases may overlap and the distinction between may be blurred.

In the power sector, rehabilitation of existing distribution networks may be spread out over several years as there are currently no customers to reconnect in some areas. At the same time there will be a need to construct new distribution lines to serve temporary accommodation districts. This may be most expediently done by using materials (distribution transformers, poles) salvaged from existing networks in districts where buildings have been destroyed. High priority should accordingly be given to identifying re-useable materials and equipment and establishing a facility for undertaking repairs (e.g. drying distribution transformers). In the longer term, reconstruction of power distribution networks will be significantly influenced by urban redevelopment decisions. As noted previously, there may be a sound economic case for pioneering use of low cost techniques (e.g. cast in-situ poles) that will contribute to the local economy.

In the fuel supply sector, the current indications are that there may only be a rehabilitation phase. While there could be environmental and safety arguments for relocating tank farms to higher ground, the costs would be high and such investments would likely not make commercial sense.[iii] Requiring Pertamina to relocate facilities in, say, Banda Aceh would then raise the question of whether it should be doing likewise for larger facilities in other cities.

In the telecoms sector, the rehabilitation phase will be completed very quickly and reconstruction planning will be shaped by the economics of the technology options. Given the uncertainties about the pattern and pace of urban redevelopment, it is possible that areas previously served by damaged fixed line networks may in future be offered a CDMA limited mobility service.

EXAMPLES OF PROGRAMS

Pilot low cost rural electrification program. Objective: Improve affordability of electricity connections in low connection density areas. Approach: Identify and adopt lower cost alternative options which could also favor local content, e.g. low cost cast concrete poles and single wire earth return system.

Pilot output-based USO telecoms program. Objective: Reduce cost to Government of providing telecom services in remote rural areas. Approach: Develop scheme under which established operators bid to develop and operate services for a certain period, with the bidding variable being amount of subsidy required.

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[i] Many businesses have their own captive generation plant for primary or back-up supply. The total capacity of this plant, which is mostly located on the east coast—notably at the Arun LNG plant--considerably exceeds PLN's installed capacity. No details of damage are available, although it is likely that plant at the LaFarge cement factory and at some businesses in Banda Aceh have been damaged. This is considered as part of the impact on the productive sectors.

[ii] Pertamina considers its domestic fuel supply obligation requires it to assist private pump station operators to rehabilitate their facilities.

[iii] This could be tested through the insurance market.

Reviving the Economy

9. REVIVING THE ECONOMY

SUMMARY OF LOSSES AND DAMAGES

Economic losses from the tsunami will be severe in the affected region. However, the impact on Indonesia's GDP should be limited, as the Aceh region contributed only 2.2% of Indonesia's GDP in 2003. Estimates of the tsunami's overall effect on GDP range from –0.1% to –0.3% in 2005.[i] Aceh's most important economic assets are oil and gas, but its largest natural gas and mining factory, which accounts for 30% of Aceh's GDP and 26% of the country's LNG production capacity, is reported to be safe. The Andalas/LaFarge cement factory suffered serious damage and will not be able to contribute to reconstruction of the region in the near term. The most seriously affected industries are agriculture, fisheries and small traders. Infrastructure to support economic activity has been devastated and its repair is critical in the post-humanitarian assistance period. It is these sectors on which this paper is focused.

Current estimates show that over 100,000 fishers, 50,000 to 60,000 farms, and 80,000 small enterprises have been severely affected. Prior to the disaster, these provided jobs to over half a million people in Aceh and Nias, which are now feared to be without livelihoods.

GUIDING PRINCIPLES

Three overarching principles should guide efforts to revive the economy and restore local industry and businesses:

1. **Acehnese must be at the center of the process**. It is essential that the Acehnese do not become merely disaffected observers to the burst of economic activity that will surely follow recent donor pledges. Strong local involvement ensures commitment to and ownership of reforms. Community participation in planning, procurement and implementation will further ensure proper targeting and good governance.

2. **Recovery before growth.** Grants, not loans, should be provided to micro and small entrepreneurs, farmers and fishers. Later in the recovery period, funds to the productive sectors should shift to being mainly loan-based.

3. **Utilize existing institutions and programs.** New programs to restore the local economy should build on existing mechanisms and development programs operating in Aceh, where possible. These programs offer in-built infrastructure, staff and experience.

REHABILITATION PHASE STRATEGY (MONTHS 3-12)

During the rehabilitation phase, the economic and business development strategy should focus on the restoration of lost productive assets, restoration of key technical services and rebuilding the economic infrastructure as well as the dignity and confidence of Acehnese.

As a result of the disaster, the implementation capacities at the provincial and district government levels have been seriously affected. Without making the support services functional, it will not be possible to effectively channel any support to the affected areas and sections. Functional support systems will also be needed to undertake detailed assessments and inventories that will provide basis for the reconstruction strategy.

The immediate priority will be to conduct a detailed assessment and inventory of losses and damage. This assessment should be undertaken in cooperation with local government, business associations, local businesspeople and community groups. The assessment should cover losses to key industries, particularly fisheries and agriculture. It needs also to assess damage suffered by local government authorities responsible for economic management and business support services.

While the assessment is ongoing, a number of programs should commence immediately to address short-term employment and income-generation needs and to lay the basis for deeper economic reconstruction. The main focus of these initiatives should be on re-establishing agricultural and fishing communities and micro-enterprises, as they are the major employer in affected regions.

1. **Supply income:** Short-term employment opportunities should be provided to local farmers, fishers, traders and others to supply income and support the clean up and reconstruction process. This work can be implemented through, and linked to, donor supported programs, and cash and food-for-work schemes. Such work will generate household income and stimulate the rebuilding of rural and small-scale infrastructure necessary for commerce and the delivery of essential public services such as health, education and water supply. Selective treatment causes jealousies which can lead to conflict, so income-generating programs should be open to all members of the community, not only those affected directly by the disaster.

   To avoid market distortions often caused by such programs, wages for cash-for-work schemes should be set to a consumer price index, at or slightly below agricultural wages, to prevent pulling people out of other work. Clear

criteria are needed for ending the program to prevent dependence and encourage people to return to productive sectors once the local environment permits.

2. **Restore/rehabilitate legal rights:** Investment in rebuilding on the part of local householders, businesses and farmers requires legal certainty over ownership of land and productive assets. Reports from Aceh indicate that local businesspeople are keen to clarify their rights over land and other legal issues, such as business permits, as an immediate priority. The Land Administration Agency has announced it will impose no charges on local people seeking to reclaim their legal rights. This decision needs to be widely publicized and enforced. Local government should establish business registration centers, preferably close to the economic centers, e.g. marketplaces.

3. **Recover productive assets:** With respect to the fisheries, the activities should focus on the rehabilitation of infrastructure, provision of fishing gears, and reviving fisheries related craftsmanship. The immediate activities in agriculture should focus on rehabilitation of farms, and provision of relevant tools and equipment, and inputs. Timing is critical -- delays may lead to farmers' missing the planting for the next season. A parallel effort to reestablish claims to homes, workspaces and farmland is necessary to provide social and economic security to victims.

4. **Tackle debt issues*:*** Both debtors and creditors are going to be heavily affected by the tsunami. The Bank of Indonesia and commercial banks should agree on relief policy for debtors materially affected by the disaster.

5. **Cash transfers*:*** Not all people will be capable of working to secure income from food-for-work and cash-for-work schemes. This could include orphaned children, widows and widowers, the elderly, the disabled and the incapacitated (both physically and psychologically). Based on a simple registration process at neighborhood level, small cash grants should be made available to individuals for the purchase of replacement clothing, kitchen items and other essential goods. This will be of particular use to households who take in displaced persons, so should be expanded selectively into areas not affected directly by the tsunami.

6. **Exploit linkages to the Private Sector*:*** There is significant interest from the domestic and international private sector to assist in Aceh. Resources and know how that might be provided from this sector on a heavily-subsidized basis should be identified and formalized while the will to assist remains strong.

7. **Restore the financial sector*:*** Basic banking operations must be restored to ensure that cash needs of affected populations and businesses are met. We understand that Bank Indonesia has devised a policy on claiming funds. This needs to be widely publicized. A mapping of non-commercial bank financial organizations or institutions from which small credit programs can be managed is essential along with an assessment of human and physical resource losses in the banking sector.

Underpinning these initiatives, a comprehensive monitoring mechanism needs to be established to track the price of food staples, building materials and other key inputs, in order to prevent shortages or excessive profiteering.

RECONSTRUCTION PHASE STRATEGY (MONTHS 12-36)

During the reconstruction phase productive sector development assistance should focus on finance to firms and entrepreneurs, business development centers, basic business regulation, and key sector-specific development initiatives. Efforts should be refined to reflect developments on the ground during the rehabilitation stage.

Maturation of the reconstruction effort will allow economic development to shift from a humanitarian to a commerce-oriented focus. However, the shift will be delicate and would best be accomplished through a sector-by-sector approach, where specialists would have better knowledge of the reconstruction situation and can adjust programs accordingly.

Sector-specific initiatives focusing on the hardest hit or most relevant industries should be designed and implemented in this period. In Aceh, agriculture and fisheries are key business sectors and would benefit from an infusion of growth-oriented assistance.

Finance and Access to Credit

- **Credit Line and Guarantee schemes**: As commercial banks reestablish operations the demand from SMEs and large firms for new credit to rebuild and purchase working capital will be high. A credit facility through commercial banks to business should be established to promote investment and accelerate rebuilding.

- **Microfinance** is effective at meeting the needs of new entrepreneurs and the smallest of businesses. It is also critical for supporting employment-generating activities in rural areas including agriculture and fisheries. Instead of commercial banks, a vast number of businesses in Aceh access credit through less traditional methods. Entrepreneurs emerging from the crisis will be more likely to seek business finance from non-commercial bank sources, e.g. cooperatives, credit unions, BPRs, development banks, microfinance institutions and high-interest, patron-client relationships. Smaller business credit programs should be channeled through these organizations. Though the business environment may seem at risk, it is important to adhere to best microfinance practices and core principles: high portfolio quality, market interest rates and full cost-recovery pricing.

Successful business finance projects, especially for smaller businesses, will be dependent on **careful separation of grant and loan funds**.

Fisheries

- **Community-led reform** should guide efforts to rehabilitate fisheries-related ecosystems such as mangroves, coral reefs and sea grass beds, as well as promotion

of sustainable mari-culture. Communities can be contracted to undertake the plantation of mangroves and community-based enforcement of fisheries-related laws and regulations. See the separate *Environment and Natural Resources* note for more on assessments and rehabilitation of the marine environment.

- **Public and Private Sector partnerships** should be exploited to support reconstruction of physical, market and processing infrastructures.

- **Assessments** conducted in the rehabilitation stage should be implemented in coordination with MMAF and coastal communities. A new assessment of levels of indebtedness should be undertaken to quantify assets and the financial capacity of the fishing communities.

Agriculture

- **Technology transfer, diversification, commercialization**, and agribusiness development through donor-driven and government technical assistance programs can begin. This work will help improve returns to farmers, support modernization and ultimately restore pre-disaster productivity levels.

Construction

- **Coordination with the Acehnese** to assure participation in reconstruction is essential to the development of this sector and support for employment in Aceh. In this period, the construction sector will boom, but is likely to depend on non-Acehnese firms to manage. Government should devise specific tender language to those paying for, or tendering, contracts that will favor bidders who best utilize Acehnese labor or contractors.

Firm-level /Entrepreneur Technical Assistance

- **On-the-ground technical assistance** is likely to be required by small businesses and entrepreneurs to enable them to identify acceptable financing needs and connect them with relevant finance providers. Firm-level assistance also contributes to economic development through training, consultancy and advisory services, marketing assistance, information, technology development and transfer, business linkage promotion and linkages to finance and financial services.

Enabling Environment

- A coordinated effort by government to address broader business development issues such as permits, licenses, business registration, inspections, property rights, zoning, access to credit, imports, exports etc, should be planned and initial implementation with local civil authorities begun.

- Particular efforts need to be undertaken to ensure complete freedom of internal trade within Aceh and between North Sumatra. Parties responsible for levying unauthorized charges against traders – most prominently trucks on major transport routes – should be held legally accountable.

EXAMPLES OF REHABILITATION AND RECONSTRUCTION

A. Business & Commerce

1. Private sector sponsorship of Kabupatens

Objective: To facilitate delivery from the private sector of material and services needed by Kabupatens and villages.

Program: Program team would facilitate relationships between affected towns/villages in the Aceh region and national and international private sector businesses. The team would establish a highly user-friendly web-based database that identifies legitimate, specific and critical rehabilitation needs on a village-by-village basis. The database would be marketed to private sector businesses looking to actively and significantly contribute to reconstruction and engage in corporate-social responsibility. The result leverages private sector contributions and may result in long-term relationships between towns and businesses.

Program Partners: Private sector business interested in both Corporate and Social Responsibility issues and a more engaged relationship with affected towns/villages in the Aceh region, communities in the Aceh region, website developers and NGOs to engaged in local outreach and monitoring.

B. Finance

1. Payment System Restoration Program (PSRP)

Objective: To facilitate revival of basic financial intermediation functions within six months.

Program: A grant program needs to be formulated by 20 January 2005 and its implementation initiated in the field before 30 January 2005. The PSRP could have several modules. A small team needs to be established, comprising officials from: (i) BI; (ii) Ministry of Finance, Ministry of SMEs and Cooperatives; (iii) selected banks/banking associations, to work with a team of local and international advisors. The Program will focus on:

- Ensuring that payment systems get up and running
- Reestablishing records and facilitating customer identification
- BI/banks compiling basic data together, and establishing procedures/mechanisms for getting money quickly (Example: BRI's "Know Your Customer" policy)
- Undertaking a quick census of debtors in the micro and small and medium enterprise sector, to evaluate the extent of damage suffered by them
- Formulating a clear policy on dealing with delinquent debtors: (i) adopt an approach for dealing with individual debtors; (ii) assess the feasibility of recovering debt from small and medium borrowers – through a classification based on the extent of damage

- Government exploring the merits of utilizing the recently-announced SME Debt Facility for allowing affected banks to write-off loans in the worst affected cases

Financing Modality: Grant support from any institution that can immediately mobilize support. Given the multi-faceted nature of the rehabilitation and reconstruction needs, there will be seamless sharing of information and data among the key external institutions involved in this sector, and they will closely and jointly coordinate with BI and Government.

2. Financial Intermediation Revival Program (FIRP)

Objective: To be designed and implemented in parallel with the proposed PSRP, the FIRP will focus on:

- Assessing the damage to BPD and BPRs and providing support for rebuilding
- Identification of personnel needs, based on damage assessment
- Rebuilding the human resources from within Aceh
- Formulation and provision of training through BI or other donor-driven mechanisms
- Formulating Micro and SME credit support mechanisms, with special attention given to those M/SMEs which are directly involved in the overall Aceh reconstruction initiatives
- Channeling credit quickly – through judicious combination of grant and soft-credit support (preferably through rupiah financing, and/or cross-currency swaps)
- Establishing guarantee mechanisms to reduce risks
- Identification of Medium-sized Uninsured Assets, and Formulating Revival Options
- Construction and Housing Finance – Developing medium-term modalities
- Revival Program for Non-bank Finance and NBMFI

Financing Modality: The assessments and technical assistance will be supported through grant funds. Guarantee or credit enhancement mechanisms will be provided as private sector operations, to the extent possible with no counter-guarantees. For medium-term credit facilities, grant and/or soft loan support will be mobilized.

C. Employment

1. Community Reconstruction & Employment Generation in Aceh:

Objective: To generate short-term employment tied to ongoing relief associated with debris removal and cleanup, and thereafter the rehabilitation/rebuilding of small-scale public infrastructure: water, rural roads, hospitals, schools, etc.

Program: Provide opportunities for household income generation in order to support basic needs and consumption, and simultaneously prepare for longer term employment and revenue generation that would comprise enterprise and private sector-led initiatives that will assist in rebuilding the economy in the affected areas. This initiative is predicated upon community involvement and rebuilding and at the outset is ultimately a cash-for-work effort that would evolve into a micro and small enterprise development project.

2. Establishment of a Emergency Public Employment Service

*Objectiv***e:** To create an Emergency Public Employment Service to become a visible reliable reference point for both job seekers and potential employers.

Program: The core functions of the Service include:

- Registering and advising job seekers
- Advocacy with employers (local, national and international agencies) and obtaining vacancies
- Matching jobs and job seekers
- Collecting and disseminating LMI
- Meeting the needs of special categories of job seekers

3. Enterprise Awareness and Business Start-up for Young Men and Women

Objective: To support the entry of young entrepreneurs or other young people into the business arena for livelihood regeneration.

Program and Partners: Mobilize young entrepreneurs through the IYENetwork partner organizations such as HIPMI, IWAPI, APINDO, KADIN, IBL, etc, to support the delivery of programs such as the ILO's Know About Business (KAB), Start Your Business (SYB) and GET (Gender and Enterprise Together) Ahead for Women in Enterprise. Programs could begin with guidance in the world of business and the identification of opportunities and include the objective of networking and linking these micro- or small-businesses to the larger businesses in supply or production chains. Mentoring support for these fledgling entrepreneurs once they have undertaken the first training programs would facilitate business start-ups, especially in relation to credit.

4. Training for Rural Economic Empowerment

Objective: To create alternative income generation and employment creation for the most marginalized groups in diverse, geographical areas where rural populations have suffered disaster and crisis.

Program: Identify and assess local economic opportunities, design and deliver community-based skills training, and provide post-training services.

D. Agriculture

1. Farmers' production capacity

Objective: To re-establish the capacity of farmers to resume agricultural production.

Program: Identify affected farmers who have the capacity to resume agriculture immediately. Provide them with agricultural tools and equipment and agricultural inputs (seeds, fertilizers and so on). Support farming communities to procure planting material and replace lost or damaged tree crops, or provide assistance to communities to set up nurseries to produce needed planting material. Pilot highly salt-tolerant crops in the irrigation schemes. Support communities to develop alternative livelihood opportunities, especially where resettlement will be necessary.

Program partners: Farming communities, NGO's, Government, donors

Appropriate timing: Rehabilitation phase, before start of next cropping season

2. Reclamation of affected land

Objective: To reclaim the affected agricultural areas for early resumption of agricultural practice.

Program: Identify less-affected areas, remove mud and debris, rehabilitate tertiary canals and drainage systems, prepare hazards maps and update land use plans, in order that new communities are established in safer areas. De-salinization, deep tillage and soil improvement.

3. Livestock

Objective*:* To restock animals.

Program: Replacement of animals from other villages or regions, rehabilitation of veterinary services, support for animal disease control campaigns for restocking and surviving animals.

Program partners: Farming communities, NGO's, government, donors.

Appropriate timing: As soon as an inventory of lost animals is carried out in the rehabilitation phase.

E. Fisheries

1. Sector Assessment and Rehabilitation of Fishing Livelihood

Objective: To ensure the availability of affordable fish to all affected communities, through provision of 200+ seine boats and gear to fishers wanting to return to work. (These fishers would also be engaged to undertake an initial assessment of changes in

fish stocks.) To ensure boat-builders, marine mechanics, fishing gear makers and basic ice facilities are available to support the rehabilitated fishing fleet.

Program:

- Data collection and analysis, including identifying strategic locations to focus initial rehabilitation and fish landing data
- Provision of **suitable** boats and gear
- Provision of starter tools and materials to craftsmen
- Establishment of on-the job training for next generation of craftsmen.

Partners: MMAF, local NGO, *Panglima Laut*, multilateral and bilateral institutions.

2. Rehabilitation of mari-culture and brackish water aquaculture facilities

Objective: To rehabilitate the aquaculture industry as a key source of employment and revenue for the North coast of Aceh.

Program: Provision of mari-culture equipment, seed stock and operational finance. Provision of earthmoving equipment and infrastructure for rehabilitation of brackish water aquaculture.

Partners: MMAF, local NGOs, multilateral and bilateral institutions.

EXAMPLES OF PROGRAMS – RECONSTRUCTION PHASE

A. Business & Commerce

1. Economic Sector Support Program

Objective: To work with local communities to investigate and implement sustainable business opportunities in order to build on and potentially diversify economic opportunity in the affected region. Obvious sectors for consideration are agriculture, palm oil, fisheries and manufacturing etc. Investment in building the competitiveness of the Acehnese economy represents broad-reaching effort to generate long-term growth, employment and prosperity ($20-50 million).

Program:

Stage I: Identify a menu of potentially viable local private sector opportunities.

Stage II: Work with selected local communities to choose, pilot, then implement those opportunities.

Potential private-sector opportunities for further investigation include:

- Seaweed harvesting and processing
- Handicraft production and export
- Palm Oil
- Agribusiness

Program Partners: International donor organizations, local leading businesses.

2. Linkages to Established Business Community

Objective: To work alongside interested local established business to facilitate longer term economic development.

Program:

Stage I: Identify leading local businesses in Aceh (domestic and international) to determine interest in participation with international development organizations to support private sector development. Determine opportunities for facilitation, e.g. SME/supplier linkages, business training, distinct reconstruction project development, etc.

Stage II: Outline specific program initiatives with partner businesses.

- Some leading businesses currently identified:
- PT Arun LNG
- PT Pupuk Iskandar Muda (fertilizer)
- PT Mobil Oil Indonesia
- PT. Aromatic

Program Partners: International donor organizations, local leading businesses.

3. Business Registration Assistance

Objective: To re-register businesses and entrepreneurs and assure growth in the formal economy.

Program: Many business records and many government facilities that process records have been destroyed. Many new businesses will need to be established. To assure a minimal number of businesses remain in the informal sector, an aggressive and business-friendly registration program should be initiated. The program would develop streamlined and standardized registration procedures and registration centers in affected municipalities and promote business registration.

Program Partners: Government, Donors, Local Municipalities

B. Finance

1. Access to Finance

Objective: Revival of the social-economic condition of the effected areas through the provision of **working capital credit** and **investment credit** to regional SMEs and other businesses for the reconstruction efforts.

Program: Establish a fund of perhaps USD 50-100 million and coordinate its disbursement to selected partner banks in Aceh through a special purpose facility. The facility will allow the partner banks to share the risks and costs related to extension of loans to SMEs and selected larger businesses. The facility will be closely managed by an experienced financial organization to ensure that it is being properly extended to the appropriate sectors of the economy. Consider grant funds to support coordinated re-establishment of financial institutions, preferably to support the training and placement of bank staff, but potentially also asset and infrastructure support to attract banks to locations they might otherwise avoid or target later. Also consider technical assistance to facilitate and monitor targeting of credit, in order to encourage and advocate bank financing of more "appropriate" projects.

Program Partners: World Bank Group, Asian Development Bank and other multi-lateral and bi-lateral agencies will develop the facility; key partners would be selected Indonesian Banks/financial institutions. Aceh banks will distribute funds and share risks (with support given to help them re-establish and expand).

2. Build Capacity of Microfinance Providers

Objective: To effectively meet the demand for productive funds at very small levels by the many families and small entrepreneurs affected by the disaster.

Program: Develop regional Microfinance / Small loan programs and support the expansion of other selected microfinance programs into the region. Programs could target housing reconstruction initiatives, food vendors and small traders. Financial institutions would be non-commercial bank financial institutions. A combination of capital and intensive training would be provided by donors and select institutions. The World Bank and UN took a similar approach in Bosnia after the wars in the 1990s which gave rise to both relief in communities at risk and long-term sustainable institutions. The International Labor Organization has training materials, programs on micro-finance in post-crisis situations. Consideration would also be given to the mechanisms by which the cost of financing might be softened for borrowers in effected areas, such as first loss guarantees or interest rate reductions.

Program Partners: IFC, World Bank (CGAP), Asian Development Bank, International Labor Organization, international donor organizations, international microfinance organizations, local bank branches, local NGOs.

3. Enterprise and home finance facility. Donors could expand or establish syariah facilities, either in existing or a newly-created financial institution, to mobilize credit for micro and small enterprise development and for new home or home reconstruction finance. ($10-20 million equity; $90-180 million debt)

4. Loan Guarantee Facilities. Many nations sponsor loan guaranty programs that leverage large sums for specific purposes. In support of Aceh's rehabilitation and reconstruction, special-purpose syariah guaranties might be considered for sectors including home and mortgage finance, micro and small enterprise finance and municipal infrastructure finance. ($100-200 million {facility size})

C. Employment

1. Local Empowerment for Reconstruction

Objective: To enable local Acehnese construction companies to competitively participate in Aceh's reconstruction process.

Program: Aceh will absorb a construction boom in the near term that will last for at least 3-4 years. This boom will mainly benefit non-local firms both in terms of suppliers and builders. Unless managed, the opportunity for Aceh firms to participate in this mainly donor- funded, labor-intensive economic activity will suffer. This program would increase opportunities for local labor and business participation in the reconstruction effort. Program activities include:

- Identification of contractors and firms for re-registration and participation in the program
- Provision of short training courses on biding for contracts
- Acting as a clearing house for information on construction efforts and available local resources / consolidation of local contractors and/or establishing a local association
- Encourage for specific language and requirements to be included in infrastructure contracts tendered in the region

Program Partners: Donor agency infrastructure programs and prime contractors outside of the affected region (where much of the expected activity will initiate) and local (in-region) contractors and government (as necessary).

2. Strengthening SME Support Agencies for Employment Creation and Poverty Reduction

Objective: To ensure enterprise have easy access to a range of practical and efficient business development services (BDS) such as training, consultancy and advisory services, marketing assistance, information, technology development and transfer, business linkage promotion, and linkages to finance and financial services. Many private BDS providers have been lost. Rebuilding these capacities will be a crucial element, but will take considerable time.

Program Partners: Government agencies, business associations and private BDS providers

D. Agriculture

1. Strengthening provision of technical services

Objective: To restore and upgrade the agricultural research and extension system.

Program: Rehabilitation of research laboratories and research and extension infrastructure facilities; identification of private sector partners to provide technical assistance on improving crop production systems and assist in providing alternative livelihoods.

Program partners: Farming communities, government, private sector, donors.

2. Rural infrastructure

Objective: To restore and upgrade the rural infrastructure.

Program: Support for the rehabilitation and/or reconstruction/upgrading of damaged rural infrastructure, such as rural roads which link villages and small towns to the main provincial road network, or the small scale traditional irrigation schemes, which are presently not being covered under interventions proposed in support of either the larger national/provincial infrastructure rehabilitation projects, or the village infrastructure support CDD programs.

3. Irrigation Infrastructure

Objective: To engage the water users' association in the sustainable management of irrigation infrastructure, through empowerment, financial and technical assistance, and to enable farmers to reach or exceed pre-disaster production levels through restoring functioning of irrigation schemes.

Program: Capacity building of the water users' association through empowerment, financial and technical assistance, and improvement of the local government legislation; reconstruction of damaged irrigation scheme program on a contractual basis; WUA-led tertiary and below tertiary canal reconstruction programs.

4. Flood Management

Objective: To protect public and private assets from possible flood damage.

Program: The core function of the services includes:

- Reconstruction on damaged flood control structures
- Dinas PUP capacity enhancement program
- River basin management planning

Program partners: Ministry of Public Works, Dinas PUP, relevant stakeholders and donors

5. Coastal Protection

Objective: To protect public and private assets from possible high tide wave damage.

Program: The core function of the services includes:

- Reconstruction of damaged coastal protection structures
- Dinas PUP capacity enhancement program

Program partners: Ministry of Public Works, Dinas PUP, relevant stakeholders and donors

V. Fisheries

1. Reconstruction of fishing communities

Objective: To ensure the planned reconstruction of fishing communities with provision of basic infrastructure and public services and suitable location of fishing ports, storage facilities, ice factory, etc.

Program and Partners: MMAF – Public Works as coordinator, Donors/international organizations providing finance, Community providing labor

2. Reconstruction of Aquaculture industry

Objective: To reconstruct the aquaculture industry in Aceh by establishing community-owned but vertically-linked, community/private sector cooperation, complimentary to environmental requirements (green belts, zoned cage culture and seaweed).

Program and Partners: Develop and implement expanded aquaculture and mari-culture throughout Aceh based on environmental and economic capacity. Donor/international organization funding for piloting, commercial sector for scaling-up and private finance institutions.

3. Recovery of financial services to the fishing industry

Objective: To refinance the financial services sector of the fishing industry, providing access to equitable finance through traditional financial management systems and community level institutional development.

Program and Partners: Traditional fishery sector microfinance entrepreneurs (*tengkulak)*; microfinance organizations, commercial banks.

4. Establishment of Aceh wide Monitoring, Control and Surveillance system

Objective: To ensure compliance with sustainable fisheries management by engaging fishers, *Panglima Laut,* MMAF and law enforcement agencies to effectively reduce destructive, illegal and unreported fishing throughout Acehnese waters.

Program and Partners: MMAF coordination role, community and law enforcement institutions cooperating at the operational level. Donor/international organization support for communication and tracking equipment.

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[i] Citigroup, Asia Pacific Economies Economic Impact of the Tsunami, 4-Jan-05

Rebuilding Irrigation Systems

10. REBUILDING IRRIGATION SYSTEMS

SUMMARY OF DAMAGES AND LOSSES

The tsunami and earthquake caused serious damage to irrigation structures, canals and dikes; flood protection along the river mouth; and seawall protection along the coastline.

Irrigation. The major impact of the earthquake was on the north west coast of Aceh and the mountainous areas in the central part of the province, which were close to the epicenter. It caused cracks in the irrigation structures, dike, and sliding in the primary canals; there was less damage to the secondary and tertiary canal system. Based on coefficients (preliminary coefficients for each region have been derived, based on distance from the epicenter), the damage to irrigation infrastructure due to the earthquake is estimated at US$20.1 million in NAD (Aceh) and US$ 4.4 million in North Sumatra province.

All irrigation schemes near the coast were severely damaged by the tsunami, the damage being greater in secondary and tertiary canal systems than to headworks and main canals. The preliminary estimate of the degree of damage was derived from satellite imageries, situation maps of the irrigation schemes and spot checks made in the field. The total area affected by tsunami damage to infrastructure (and hence the ability of the canal system to deliver irrigation water) is estimated at 28,000 ha, including technical, semi-technical and simple irrigation schemes. Of this area, the Ministry of Agriculture reports that about 21,000 ha were directly affected by the tsunami wave, resulting in soil salinity and sand deposits. The report also says that 29,000 ha of dryland agricultural areas experienced similar damage. It is estimated that the total damage caused by the tsunami to the irrigation infrastructure is US$37.9 million in Aceh Province.

Flood Control/ River Structures and Seawall. Extensive damage was inflicted on coastal infrastructure (seawall, jetty), which had been put up to protect public facilities and prevent erosion of the coastal line. The satellite images show that a newly constructed floodway in the river mouth in the K. Aceh River was 90% damaged, from the estuary to 2 km upstream. In addition, coastal protection at various points had been constructed, totaling 10,000 meters. The function of seawalls was to protect urban or agricultural land, and/or reduce the scouring of beaches.

Though further assessment with satellite imagery and topological survey will be required to precisely calculate direct damage, 95 percent of this seawall is estimated to have been damaged. The preliminary estimates of direct damage on flood control and sea wall systems is US$72.1 million in NAD, and US$4.2 million of flood control structures in North Sumatera.

In addition, important indirect losses were also incurred. Without the rehabilitation of the flood control infrastructure, agricultural lands and adjoining areas will be subject to annual flooding. Preliminary estimates indicate that annual indirect losses on public and private assets, due to the absence, or sub-standard functioning of flood control are likely to be around US$ 18.4 million.

Key Issues. A few important issues need to be highlighted:

- **The coefficients of damage** that have been used to estimate the damage in each region are based on limited data. The survey teams from the government and other institutions are still in the field, or are to be mobilized to collect more information to calibrate the coefficients and get a more accurate estimate of the total damage.

- **Strategic Spatial Planning**. The long-term consequences due to the absence of the seawalls and due to locally changed coastlines can not be determined now. The rehabilitation of these structures will depend on the condition of the areas to be protected. If the areas have been devastated, especially to the point of abandonment, then rehabilitation or reconstruction of the old structure is not an urgent matter. On the other hand, the changes in the local coastal geography and the population shifts also suggest that changes in land use may need to be considered. Such a program must be included in the new spatial planning: planning that needs to be integrated with other sectors, such as settlements and roads.

- **Disaster Risk Mitigation**. Design considerations for the new seawalls should include cost-effective natural hazard risk assessment. The new design may involve high cost to minimize risk; however, an acceptable level of risk can be discussed with stakeholders in deciding on a cost-effective solution.

- **Construction capacity**. The capacity of local government and the construction industry in Aceh is limited after the disaster. Closer collaboration between central and local government, and related institutional capacity building will be important. The capacity of the construction industry could be accessed from nearby provinces, where many of the plant and equipment assets are available.

KEY GUIDING PRINCIPLES

The recovery effort would take place in two phases:

Phase I: Rehabilitation Strategy (2005-2006)

Phase II: Reconstruction Strategy (2006-2010)

Phase II may be relatively long because parallel reconstruction activities may draw on the same resources (budgets, communities, contractors, etc.) and because of the constraints imposed by security.

Guiding principles to be applied to developing the water resources and irrigation sector recovery plan include:

- **Comprehensive, phased planning**: The first phase of planning for rehabilitation should be based on a rapid participatory damage and needs assessment. As rehabilitation gets underway, more time and resources will become available for subsequent phases in the planning process, allowing more precise and complete analysis and preparation for the reconstruction phase. The planning should be done in an integrated way, taking into account decisions in other sectors (settlements, roads, agriculture) and possible land use changes.

- **Prioritization:** Priority for rehabilitation should be given to activities that (1) improve local working and living conditions in the short run (1-2 years); (2) are relatively cheap and easy to complete without use of heavy machinery; (3) can be partly carried out by local people (such as removing silt from clogged canals and rivers, temporary patching of earthen canal bunds etc.); and (4) offer maximum stimulus for the revival of local economic activity. Rehabilitation of flood control should focus on minimizing losses in the near future on the protected lands or public facilities. Rehabilitation of the structures to protect an area or public facilities which have been devastated by the disaster should be postponed to the reconstruction period and/or when spatial planning has been completed.

- **Participation**: The rehabilitation and reconstruction plans should be based on a participatory damage and needs assessment with the involvement of CBO/CSO/NGOs. Care must be exercised to prioritize those rehabilitation and reconstruction activities that address clear demands from the local population. Importantly, with the basis for income destroyed in many coastal communities, the rehabilitation program should hire and pay local people for carrying out some of these activities. As rehabilitation progresses and economic activities resume over time, this involvement should be phased out.

- **Coordination of programs**: As the operational capacity of provincial and Kabupaten governments has been severely reduced by the disaster, and due to the scale of some projects, the Ministry of Public Works (MPW) should take the lead in programming the rehabilitation and reconstruction of flood control and seawalls, while actively augmenting the capacity of the PUP (PU Pengairan or Water Resources Services Office) at the province and Kabupaten levels. The normal budget allocations for water resources infrastructure in NAD and North Sumatra should continue to address ongoing asset preservation requirements.

- **Capacity building**: Special arrangements between central and local governments will be needed during implementation of the rehabilitation and reconstruction strategies. A possible model is a twinning arrangement, where central government will deputize temporary staff to work together with local government to prepare and implement activities. Over time, central government staff can be gradually reduced by recruitment and training of new staff in PUP province or Kabupaten. Where suitable, the central government may transfer experienced staff from other

provinces or Kabupatens. Mentoring and support for local surviving and new staff should be provided by experienced persons.

- **Procurement and financial management**: Special arrangements need to be identified to assist in expediting the procurement of works and services for the first phase, within a framework to address fiduciary and accountability objectives. The establishment of a special procurement advisory team, and the issuing of a guideline to be used during the rehabilitation (and partly during the reconstruction) phase should be considered. For more, see the separate *Fiduciary Strategy* note.

- **Funding options**: Except for those activities to be managed by the central government, the use of decentralized financial management should be prioritized to promote local ownership and commitment

- **Monitoring and Evaluation.** A monitoring and evaluation system should be set up and diligently applied. A special arrangement with an independent party should be made in order to invite third party evaluation of the project implementation

REHABILITATION PHASE STRATEGY

To be implemented during 2005 –06, the rehabilitation phase strategy includes the following objectives:

- To establish a **twinning institutional arrangement** between central and local governments: Central government to provide temporary staff and other support to local government for a period of time and providing for a gradual phasing out as local government regains its own capacity.

- To prepare **emergency procurement guidelines** in order to ensure that all procurements occur in an adequately transparent, fair, efficient and effective manner.

- To apply comprehensive construction management to ensure **quality assurance, providing room for third party** participation in monitoring, and complaint handling.

- To conduct a **rapid participatory damage and needs assessment** with prioritized planning, with involvement of CBO/CSO/NGOs. To conduct a personnel displacement and **manpower needs assessment** for local government, and recruitment plan.

- **To prioritize** activities based upon the rapid participatory damage and needs assessment. To define and **package** the works or activities to be done, taking into account role sharing amongst stakeholders and community involvement.

- To prepare and implement corrective rehabilitation works using, wherever possible, labor-intensive activities to ensure maximum engagement of local labor and the generating of temporary income for locals.

- To prepare and implement small to medium contracts in local areas through Dinas PUP, applying a rapid-appointment process.

RECONSTRUCTION PHASE STRATEGY

To be implemented during 2006 –2010, the reconstruction phase strategy will aim to restore the structural integrity of heavily damaged or destroyed water resources and irrigation infrastructure in those areas where such reconstruction is generally accepted to be feasible and desirable. For flood control and coastal protection, this could include construction in new places following spatial planning. The reconstruction work will include a plan for upgrading construction standards where necessary: to ensure capacity and resilience of structures within an acceptable cost effective approach. The MPW and local Dinas PUP should review design and construction standards and update these to accommodate the special requirements of this reconstruction. A clear prioritization of activities needs to be based on the involvement of water users in the assessment and planning. Priority should be given to those activities that would provide maximum stimulus to the revival of the local economy in a broad sense and to the securing of regular income for local communities, rather than necessarily to "large works". An assessment of the restoration needs of large structures, dikes and canals will ensure irrigation serviceability, bulk water provision and flood protection in the next planning period. The water users should be fully engaged during this process to ensure a strong foundation for the future proper use and maintenance of those parts of the irrigation systems that are to be farmer-managed.

The strategies adopted during the rehabilitation phase should be reviewed and evaluated on a regular basis. The strategies that proved to be effective and efficient should be continued during reconstruction phases.

EXAMPLE PROJECTS REHABILITATION PHASE

Irrigation

Objective: Assess damages on the main irrigation system, identify priorities for rehabilitation of damaged structures, and conduct high priority rehabilitation of irrigation systems.

Program: The core function of the services includes:

- Rapid participatory damage and needs assessment together with local WUAF (Water User Association Federation)
- Preparation of detailed engineering study for the subsequent reconstruction phase

- Preparation and early start of WUAF and Dinas PUP capacity building
- Labor-intensive urgent rehabilitation program for irrigation and drainage systems
- Urgent small-scale rehabilitation works on a contractual basis

Program partners: Ministry of Public Works, Dinas PUP, WUAF, and donors

Expected Impact: Realize demand-based irrigation scheme rehabilitation and restore human resources for operation and maintenance.

Appropriate Timing: Rapid participatory damage and needs assessment at the early stages of rehabilitation phase. Detailed engineering study and capacity building program will be conducted throughout the rehabilitation phase. Urgent rehabilitation will be selectively conducted with priority derived from the rapid participatory damage and needs assessment.

Flood Management

Objective: To assess damage to flood control structures and conduct urgent rehabilitation for the structures in selected strategic river basins.

Program: The core function of the services includes:

- Field damage assessment and detailed engineering study
- Detailed topographic survey and engineering study for reconstruction phase
- Urgent rehabilitation works for damaged structures in selected strategic river basin
- Dinas PUP capacity building program
- Labor-intensive priority rehabilitation program for drainage stream channelization systems
- River basin management planning for selected river basins

Program partners: Ministry of Public Works, Dinas PUP, local government spatial planning agencies, relevant stakeholders such as the business community and NGOs.

Expected Impact: To gradually increase the extent of protection and security of public and private assets from possible flood damage, while also restoring human resources for operation and maintenance.

Appropriate Timing: Field damage assessment and detailed engineering study at the early stages of rehabilitation phase; the other works will be done throughout the rehabilitation phase.

Coastal Protection

Objective: Assess damage on coastal protection structures and conduct urgent rehabilitation for the damaged structures.

Program: The core function of the services includes:

- Field damage assessment and detailed engineering study under spatial planning
- Detailed topographic survey and engineering study for the reconstruction phase
- Urgent rehabilitation works for damaged structures
- Dinas PUP capacity building program
- Labor-intensive urgent rehabilitation program for coastal protection systems

Program partners: Ministry of Public Works, Dinas PUP, local government spatial planning agencies and relevant stakeholders such as fishery and tourism communities

Expected Impact: To gradually increase the level of protection and security of public and private assets from normal high tide wave damage, while also restoring human resources for operation and maintenance.

Appropriate Timing: Field damage assessment and detailed engineering study under spatial planning at the early stages of rehabilitation phase; the other works will be done throughout the rehabilitation phase.

EXAMPLE PROJECTS - RECONSTRUCTION PHASE

Irrigation

Objective: To enable farmers to produce paddy and other irrigated agriculture products through restoring the function of the irrigation and drainage schemes

Program: The core function of the services includes:

- Detailed review of demand and prioritization of reconstruction
- Reconstruction of damaged irrigation schemes, delivered on a contractual basis
- WUAF-led tertiary and below-tertiary canal reconstruction program
- WUAF capacity enhancement program and arrangement to implement the Participatory Irrigation Management policy to ensure proper operation and maintenance of restored infrastructure.

Program partners: Ministry of Public Works, Dinas PUP, WUAFs, and donors

Expected Impact: To ensure sustainable agricultural production though a decentralized irrigation management framework.

Appropriate Timing: Throughout the reconstruction period.

Flood management

Objective: To protect public and private assets from possible flood damage.

Program: The core function of the services includes:

- Detailed review of demand and prioritization of reconstruction
- Reconstruction of damaged flood control structures
- Dinas PUP capacity enhancement program
- River basin management planning

Program partners: Ministry of Public Works, Dinas PUP, relevant stakeholders and donors

Expected Impact: A sustainable flood management framework through enhancing the planning and management capacity of Dinas PUP.

Appropriate Timing: Throughout the reconstruction period.

Coastal Protection

Objective: To protect public and private assets from normal and, where economically feasible, extreme high tide wave damage.

Program: The core function of the services includes:

- Detailed review of demand and prioritization of reconstruction
- Reconstruction of damaged coastal protection structures
- Dinas PUP capacity enhancement program

Program partners: Ministry of Public Works, Dinas PUP, relevant stakeholders and donors

Expected Impact: A sustainable coastal protection framework through enhancing the planning and management capacity of Dinas PUP.

Appropriate Timing: Throughout the reconstruction period.

Bringing Clean Water and Sanitation to People

11. BRINGING CLEAN WATER AND SANITATION TO PEOPLE

SUMMARY OF LOSSES AND DAMAGES

Prior to the Tsunami disaster, adequate and clean water and sanitation service delivery probably reached 30-50% of the population of the Aceh and North Sumatra provinces. Preliminary assessments of losses and damages due to the earthquake and the tsunami vary across the affected areas, depending on their location and on the vulnerability of the service type.

Very preliminary estimates of the overall damage to water supply and sanitation facilities total about 247 billion Rupiah, while operational losses are estimated at about 29 billion Rupiah. In the most severely affected urban areas, PDAMs are said to be functioning at a reduced level of service, due to damage to infrastructure and facilities, and a reduced level of consumption. Reports of the numbers of PDAM personnel who died in the disaster are not confirmed, but based on the same ratios suffered in the LG sector, it can be assumed this is in the order of 14% but it is likely that the death rate will be much higher in the province's northern cities. Damage and losses to urban water supply networks and facilities are estimated in the region of 73 billion Rupiah. The local private sector, small-scale water providers (SSWP) and on-sellers have suffered damage to assets and indirect losses proportionate to their market segment, which is estimated to be in the range of 9 billion Rupiah; and 20-25,000 wells in urban areas are thought to now be contaminated.

In rural areas, many settlements in coastal areas have been washed away, while others further inland have suffered from both earthquake and tidal wave damage. It is estimated that about 80,000 wells have been damaged and require repair or replacement. Access to safe and adequate water supply to hundreds of thousands of people is affected by this damage, currently estimated in the region of 161 billion Rupiah.

There is no sewerage in Aceh or the affected areas of North Sumatra. Pre-tsunami, the sanitation sector was characterized by on-site sanitation (septic tanks or pit latrines), and damage to these facilities is comparable to the destruction and partial damage of buildings. In terms of disposal and treatment, preliminary estimates of

damage to septage treatment plants (IPLT) and vacuum trucks operating in the six main urban areas are in the range of 9 billion Rupiah. Communal sanitation facilities (MCK), which are particularly important for low-income households, have also suffered severe damage or have been destroyed. The damage assessment and reconstruction strategy for household sanitation is included in the housing section of this report.

GUIDING PRINCIPLES

The guiding principles for reconstruction in the water and sanitation sector are fully aligned with the reconstruction strategy proposed by Bappenas. There is growing experience of demand-responsive and participatory approaches in the development of rural water and sanitation projects, and it is intended that the knowledge developed in rural areas be taken on in the rehabilitation and reconstruction of urban water and sanitation service delivery. Much of this work will occur together with the reconstruction of housing, and efforts will be made to ensure a holistic approach that produces sustainability and efficiency and reduces the unwanted burden on communities and households.

The participatory processes envisaged should ensure that communities are involved in the key decisions about water and sanitation services, women should be clearly targeted as the primary caretakers of water and sanitation services in the household, and the participatory approach adopted should ensure that the people of Aceh benefit from increased choice in services delivered. Care will need to be taken to ensure that the participatory processes developed for the delivery of water and sanitation services are pro-poor. The potential capture of benefits by the elite and those more able to articulate needs should be addressed with mechanisms to strengthen the voice of poor households. The pre-tsunami conditions suggest that only about 9-24% of the people in the affected provinces had access to piped water supply.

Coordination between infrastructure and human development sectors will be vital to optimizing the potential benefits of water and sanitation services in the rebuilding of affected areas in Aceh. Water is dependent on power and transport, and health outcomes are dependent on safe and adequate water supply. The process of delivery in the recovery and rehabilitation programs (with such great interest at all levels of government) will require coordination to ensure consistency and effectiveness. Through the imposition of new forms of monitoring and oversight, a new level of transparency should be promoted.

While the Asian Tsunami has resulted in an unprecedented situation with many unknowns in the forthcoming rehabilitation and reconstruction phases, there is a growing body of international best practice that is relevant and useful in the development of sound development processes. Efforts should be made to build on lessons learned from elsewhere within Indonesia and East Timor.

REHABILITATION STRATEGY

The restoration of adequate and clean water and adequate sanitation to the people of Aceh and North Sumatra is one of the greatest and most urgent needs in the wake of the disaster. It is a key determinant in immediate health outcomes and longer term development outcomes and in reviving communities and rebuilding the local economy. The rehabilitation strategy for water and sanitation services should aim to ensure access levels are restored within the first 12 months.

With the purpose of meeting immediate needs, the rehabilitation strategy will also aim to establish the participatory ethos and the local ownership of the people of Aceh. Further, it should increase local capacity, reduce dependence on outside assistance and prepare for return, resettlement and reconstruction. It will need to address several problems: mobilizing water service delivery immediately, meeting temporary needs during the recovery period and filling gaps left in pre-Tsunami supply mechanisms.

In particular the strategy should:

- **Provide for a coordinated transition.** The transition from the current relief effort into the rehabilitation phase needs to be carefully planned to avoid a shortfall in water supply and sanitation services when temporary treatment plants and aid workers are demobilized. Some of the equipment brought in for the relief effort will probably be donated and plans need to be put in place to ensure their proper utilization and maintenance (including training of local staff and budgeting for operating costs).

- **Focus on understanding the service needs of the people.** The delivery of water and sanitation services, and infrastructure more generally, provides an opportunity for communities to make decisions on matters that affect their lives. The first step is a participatory needs assessment to tell the demand side story and remove some of the assumptions about what the people need. Ensuring community participation and focusing, not only on labor contributions and sustainability, but on the community role in decision-making, can empower communities in the rehabilitation period. Efforts should be made, however, to fully understand the limitations of participatory processes and the burden of this role in the rehabilitation phase in the light of trauma, displacement and the heterogeneity of groups.

- **Pursue an integrated multi-sectoral approach.** Approaches to rehabilitation should mobilize all stakeholders (community, NGO, local and provincial government, utility and the private sector) to work together to rapidly increase service coverage. Efforts should also be made to pursue opportunities to improve services through multi-sectoral programs. Coordination between sectors is vital.

- **Build institutions not just infrastructure.** The key to developing viable service delivery in the affected urban areas of Aceh will not be found in the construction of new infrastructure and facilities alone. While new or rehabilitated facilities are indeed required, the reconstruction of the water sector is both physical and institutional. The service will only be provided when the human resources are also

restored and new and revitalized institutions established. This means new management teams with systems, structures and procedures that facilitate efficiency and financial viability. Efforts to build capacity for sanitation service delivery in local government are essential if the levels of coverage are to change to any significant degree.

- **Optimize the potential role of the local private sector and NGOs in service delivery.** Mobilizing local resources is an essential component of the rehabilitation stage. SSWPs have played a key role throughout urban Indonesia filling the gap between PDAM supply and self-provisioning; and evidence elsewhere strongly indicates they will have a key role in rehabilitation post-conflict and post-disaster. From the range of SSWPs, tanker drivers are able to recover quickly, identify needs and start getting water to people. Developing interfaces between these private tanker operators and PDAMs (providing bulk water supply for instance) significantly boosts coverage (in non-networked areas and areas where wells are damaged) and facilitates greater control over water quality. The role of local NGOs is also vital to build capacity among communities and SSWPs, and to strengthen PDAMs.

- **Providing new job opportunities**. The rehabilitation activities in the sector provide significant job opportunities for people who have lost their livelihoods. The design of the programs for implementation should be labor-based and as much as possible developed to respond to local needs. Support though micro-finance and business development programs are as critical in the service sector as in the productive sectors.

- **Embark on significant human resource and organizational development**. The management skills needed to operate utilities and extend services to new areas in the rehabilitation phase, while planning for the reconstruction and long term sustainability, is likely to be outside the current capacity of local utilities. The funding and TA currently offered by the international community provides a unique opportunity for local government and utilities to embark on a meaningful reform processes. Strategies that promote the early role of skilled utilities (be they national or international) to assist in the PDAM recovery efforts should be strongly supported. Support from skilled organizations to build new institutions could facilitate an unprecedented change in the operation and management of urban water supply.

- **Develop oversight and monitoring procedures.** Establishing new accountability mechanisms for the reconstruction phase should be a key aspect of the rehabilitation strategy. When services are up and running, communities can be encouraged to hold utilities accountable for the services delivered.

- **Prepare an emergency preparedness plan.** A water supply and sanitation emergency preparedness plan, utilizing both the lessons learned during the initial relief phase and experience from other countries, needs to be prepared to facilitate an early response in similar disasters. This would also include a plan for utilizing water supply and sanitation relief equipment and facilities (like portable water treatment facilities), which may remain in Indonesia and are not utilized in the affected areas during the reconstruction phase.

Restoring services and preparing for reconstruction will not happen overnight. In rural areas, just to clean out the wells and provide safe water through existing infrastructure, would probably take 100 tankers with a number of workers over 14 months to complete. In urban areas, there is a need to ensure that PDAM supply is being rehabilitated and used to its optimum. The low levels of coverage pre-tsunami, mean that there are many urban dwellers unserved and there is significant potential for increased coverage.

One of the key lessons learned from experience in other recent crisis-affected countries and areas is the need for a concise link between the rehabilitation and reconstruction strategies to ensure sustainability and continuing use of the facilities provided. An excessive focus on rehabilitation of formerly existing assets may contribute to a lack of consideration of re-design options to improve the services provided.

RECONSTRUCTION STRATEGY

The reconstruction strategy will build on the key parameters set out for the rehabilitation stage such as participatory processes, needs assessments, multi-sectoral and integrated initiatives, multi-stakeholder delivery, stronger institutions and encouraged entrepreneurial activity. The reconstruction strategy should be included as a key part of the rehabilitation strategy and address the medium to long-term water and sanitation needs of the Acehnese people. It may take up to 5 years to implement.

The reconstruction strategy should:

Aim for the development of efficient and viable PDAMs able to extend services. In urban areas, the role of the PDAM is central to the reconstruction strategy for water supply, and the development of institutions, not just infrastructure, should continue with a focus on operation and management efficiencies and financial sustainability of PDAMs. The strategy should take forward the lessons of PDAM reform elsewhere: commercial behavior, management autonomy, customer orientation, capacity building, regional cooperation, and restructuring small non-viable PDAMs. New efforts to emphasize corporate governance, and public disclosure of efficiency indicators to make PDAMs more accountable are sound medium term goals. Rescheduling or writing-off PDAMs' debts should be implemented, and the phasing out of operational subsidies over the time should be considered.

Introduce pro-poor PDAM reforms. Once the PDAMs in Aceh and North Sumatra are on the path to reform and are committed to improving efficiency and financial viability, capacity building and resources should be provided to make ongoing efforts pro-poor. This will include establishing pro-poor units, developing utility action plans and supporting their implementation, continuing work with SSWPs established in the rehabilitation phase, clarifying contracting arrangements, developing tools to promote pro-poor delivery (financing, tariffs, poverty and sector diagnosis), and training for utility staff.

Explore a range of models in rural areas. In rural areas, a variety of models will need to be developed for the reconstruction phase and should respond to the needs and aspirations of those affected in their villages and those displaced by the tsunami. The community-based model, with communities fully in charge of choosing and managing the appropriate facilities, should be the preferred model for communities which either return to their original place of settlement or re-establish themselves with the same social relationships somewhere else. For less coherent or "patchwork" communities, such as villages faced with a large influx of displaced people or temporary settlements turned into permanent ones, the community-based model might need to be reinforced through a system of shared responsibility between the community and local governments/PDAMs, or through delegated management approaches which rely on individuals or forms to operate / caretake the systems.

Provide for an explicit focus on sanitation. Sanitation service delivery faces a different set of problems. The lack of demand and political will for improved sanitation, low willingness to pay and the low priority given to sanitation in both rural and urban areas, has meant that the sanitation sector not only has extremely low coverage but it is a very immature sector with only small scale successes. Public awareness for sanitation and environment, and public health and hygiene training should be launched without delay, with a strong focus on the responsibility of local government to improve sanitation services, treatment and disposal, and to facilitate the development of sustainable service delivery. The reconstruction phase will enable supporting agencies to work with local stakeholders to adopt a range of new models exploring sanitation marketing, hygiene and condominial solutions to meet the requirements of urban and peri-urban areas. The community-based sanitation system developed over recent years provides an Indonesian model for urban sanitation that is achievable within a few years and can be developed alongside more conventional approaches and on-site sanitation. A critical element of a successful sanitation strategy, which is often overlooked, will be to develop sustainable (septic) sludge removal and treatment systems.

Encourage local government to take sanitation seriously. Although many of these models turn away from government as the deliverer of sanitation service, the reconstruction strategy must focus on the responsibility of local government to improve sanitation services, treatment and disposal, and to facilitate the development of sustainable service delivery. Support is also needed to get municipalities engaged and to underpin the sanitation marketplace, to facilitate finance and to understand how subsidies might work for the poor.

EXAMPLES OF PROGRAMS

Existing or planned donor-supported programs in the water supply and sanitation sector could be utilized for both rehabilitation and reconstruction phases and are therefore combined.

Urban Water Supply and Sanitation

Objective: The long-term strategic objective is to deliver good quality, adequate and reliable water supply and sanitation services to urban residents on a sustainable basis, with particular emphasis on delivering services to the poor. The immediate objective is for local governments and water enterprises (PDAMs) to improve operational capacity, enhance urban management, reduce water losses, expand water service delivery and to provide and expand effective wastewater management and sanitation services. Enable urban population to receive financially and environmentally sustainable water supply and sanitation services.

Scope: Support PDAMs in adopting financial discipline and adhering to a financial recovery action plan, through expanding their networks and improving the efficiency of their operation, with special focus on low-income communities. Capacity building will be provided for water supply and sanitation service providers to contribute to a more customer-oriented culture. It will cover measures for financial and operational performance improvement, including tariff setting, cost recovery, revenue collection, financial management, operational procedures, and personnel management. Advice and assistance provided to local governments will include financial management, investment planning, budgeting, and public consultations. Sanitation components will cover wastewater collection and treatment, including: (i) rehabilitation and construction of public sewers, drainage systems, septic tanks, and sludge treatment facilities, and (ii) procurement of equipment for routine maintenance of facilities.

Expected Impact: Establish efficient and viable utilities and expand network coverage, as well as improved health, quality of life, and livelihood of the urban population

Examples: Various ongoing and planned programs from bilateral and multilateral donors, including e.g. the World Bank supported *Urban Water and Sanitation Improvement and Expansion Project.*

Small-Scale Water Providers

Objective: To optimize the potential role of small scale providers in the rehabilitation phase in order to immediately improve access to a reliable water supply.

Scope: The rehabilitation phase is likely to see greater use of transported as against piped or extracted water. The small scale sector can make an important contribution in this function. A program of activities is required to (i) improve the capacity of the local private sector to deliver water to areas of Aceh and North Sumatra not served by PDAMs, and potentially to those households unable to reaccess well water supply, through business development and micro-financing activities similar to those provided through SME programs; (ii) to develop the operating context for these small scale providers to function to their optimal capacity; and (iii) to develop and support new interfaces between the small scale private sector and PDAMs (e.g. bulk pricing, reliable supply points).

Expected Impact: Increased access to reliable and safe water supply at the household level in cities and small towns.

Examples: The PPIAF funded Smalls scale providers in Indonesia project and similar programs undertaken in post-conflict countries.

Rural Water Supply and Sanitation

Objective: To enhance the health status of low-income communities in rural areas based on sustained access to safe water and improved sanitation and better hygiene behavior.

Scope: To (i) improve the capacity of local governments for facilitating, regulating, and delivering quality services in water and sanitation to communities; (ii) strengthen the community capacity to design, co-finance, build, operate, and manage community-based water supply and sanitation facilities; (iii) improve access to water and sanitation services through construction of adequate facilities based on community demand; and (iv) increase hygiene awareness through information, education, and communication campaigns. For the tsunami-affected areas, such programs would particularly address the prevention of water-borne and water-related communicable disease outbreaks and vector control in both displaced- people settlements and affected communities, through basic rehabilitation of community health centers and subdistrict health facilities during the rehabilitation phase, along with recruitment and training of village health staff (midwives and sanitarians) and basic repair of water and sanitation facilities.

Expected Impact: Establish viable community-based water and sanitation systems.

Examples: Various ongoing and planned programs from bilateral and multilateral donors, including e.g. the ADB supported *Community Water Services and Health Project.*

COSTS

Costs will be estimated when an agreed sector development plan is available.

FIDUCIARY CONTROL AND MONITORING

Program monitoring will be both internal and external to the project to ensure transparency in the use of funds and minimize misappropriations. Monitoring will be carried out by independent third parties (universities, NGOs, or other entities), with local process monitoring consultants to be placed at the district level to address implementation problems and to carry out random spot-checks in urban and rural areas, as well as post-construction technical audits focusing on the quality of design and construction and the cost-effectiveness of the infrastructure provided. In addition, community members in urban and rural areas and their facilitators should receive monitoring and evaluation training during the planning phase of construction to enable them to judge the quality of services they are going to receive.

Rebuilding Health Services

12. REBUILDING HEALTH SERVICES

SUMMARY OF LOSSES AND DAMAGES

Before the tsunami, the health status of people in Aceh was one of the lowest in the country. For example, there were high rates of severe undernutrition and infant mortality; utilization of health services was low compared to other parts of Indonesia and the rates of immunization and use of contraceptives by married women was low. There was limited access to water from improved sources and TB case finding and vector control were limited.

In addition, some health facilities had been destroyed or were in poor condition and the distribution of health staff was heavily skewed in favor of urban areas, as many staff fled from conflict areas to Banda Aceh and Aceh Besar. As a result, utilization of services was often low and many facilities were understaffed. Private health providers accounted for as much as one-third of all health services. Even though the number of hospital beds in Aceh is low relative to the population, their occupancy rate (in both public and private sectors) was less than 50% in most cases. The one exception was the mental hospital which has significantly more inmates than beds as many patients from conflict areas refuse to return home once their treatment is finished.

The World Bank estimates that the tsunami resulted in the destruction of 5 hospitals (3 public and 2 private, from a total of 17 public and 10 private hospitals); from a total of 239 health centers, 19 were destroyed, a further 11 will require major renovation and 2 will require minor renovation. The losses were greatest in Kabupaten Aceh Jaya and Banda Aceh city. The total damage is estimated at over Rp 750 billion. Estimates of losses are just over Rp 87 billion. Estimates of staff deaths are not yet available. Teams from the MOH, WHO, CDC and others are currently carrying out further assessments. The strategy for the medium-term will need to take the variation between districts into account: some have had little damage and loss of life, while in others damage is extensive and many staff are missing. Much housing has been damaged and many as 655,000 people are now located in temporary refugee camps.

GUIDING PRINCIPLES

There were problems in delivery of health care before the tsunami. The loss of facilities and staff, disruption of institutions, and displacement of persons by the tsunami, particularly in some districts, means that a new approach to organization and delivery of health services will be needed depending on the degree of damage and loss. In addition to the general population, a part of this change will be providing health services to an estimated 655,000 IDPs. Delivery of these services beyond the immediate emergency phase to the various population groups cannot wait until the system has been rebuilt and new staff recruited. As a result, the organization and delivery of health services will not only be different from what existed prior to the disaster, but it will also vary from the systems adopted for the emergency period, the rehabilitation period and the reconstruction period. However, the following guiding principles will be used for restoration of health services and further development of the sector across all three periods:

1. The overall goal of the program is to address the basic health needs of the population and improve basic health outcomes, with initial emphasis on MDGs and reduced psychological and mental trauma. This includes the development of health policies and a system appropriate to the province and the local situation, which will be necessary to achieve two specific objectives: restoring access to a basic package of services and laying the foundations for the formulation of health policy as well as the development of systems appropriate to the needs of the province's population.

2. Planning and decision-making for all services and institutions should be based on extensive consultation with the local communities taking into account budgetary and other constraints.

3. This will require:

    a. implementation of a sequenced package of essential health services[i] modified to fit the needs of the province's population;

    b. Explicit involvement of the communities, NGOs and the private sector in delivery and financing to reach agreed health status goals;

    c. Effective utilization of all available resources, both in the public and private sector (for-profit and voluntary), to strategically focus efforts on delivery of a program to reach agreed health status goals;

    d. Emphasis on activities which are pro-poor and reach under-served areas;

    e. Emphasis, where feasible, on a demand-based approach to the design and delivery of services;

    f. Inclusion in the basic package of services of interventions for the treatment of mental stress and psychological trauma;

    g. Inter-sectoral collaboration with initial emphasis on education, water and sanitation;

h. Capacity building for the local staff with particular emphasis on policy development, system design and management, monitoring and evaluation.

4. The program will be financed by a combination of public (central, provincial and district), private, community and external resources. It is anticipated that donor financing will initially constitute the largest share with government and private shares growing as the economy improves, the proportion of poor declines and capacity to pay increases. It is expected that significant donor support will continue beyond 5 years.

5. Coordination of donors in which all sources of public funds (government and donor) for the sector are used to implement an agreed health plan for the province and utilized according to agreed procurement, disbursement and financial management procedures.

6. Monitoring of health needs and evaluation of service delivery and and impact by independent third parties.

REHABILITATION PHASE STRATEGY

During the rehabilitation phase the objectives will be to move beyond the immediate crisis and begin to establish a health system which can deliver the services on a sustained basis. This will require a strategy which can quickly deliver basic individual and public health services using different modes of delivery according to the type of service and the local conditions. As infrastructure has been damaged and staff lost, it is critical that this strategy utilizes all available human resources by bringing the public sector, NGOs, communities and the private sector together in a synergistic way in pursuit of agreed health outcomes.

Areas which suffered widespread damage to infrastructure also suffered the greatest loss of health personnel. Conversely, those in which there has been least damage to buildings are likely to have the least loss of staff. Thus, the recovery strategy will differentiate between those areas in which there has been high, moderate or low loss of infrastructure and staff. Overall, the strategy will be as follows:

1. In areas with a high degree of damage and loss of personnel, the provision of basic primary and public health services will be contracted-in from NGOs in the area, with oversight by the communities and the local and provincial governments. The responsibilities of these contractors could include provision of staff, drugs and basic physical infrastructure to be decided in consultation with provincial and local governments and communities, who would provide oversight and supervision, within agreed funding and design limits.

2. In areas in which the damage and loss of personnel has been low, existing services will be strengthened, including rehabilitation of existing infrastructure as needed and agreed by local government and communities, who would provide oversight and supervision.

3. In areas where the damage has been moderate, a mix of existing delivery modes will be supplemented by contracting-in of services where there is a shortage of personnel. Again, this would be done in consultation with local government and communities within agreed funding and design limits.

There will also be a need to re-establish and, in some cases, reorganize, the provincial and kabupaten level government health service organizations that will ultimately be accountable for the delivery of health services. The re-established provincial dinas kesehatan will be responsible for overall health policy, sectoral planning, quality assurance and basic health information functions.

Of particular importance are arrangements for procuring and distributing pharmaceutical supplies of acceptable quality to all service providers. This will initially be done using third parties who would be responsible for the procurement and distribution to the dinas kesehatan kabupaten and the contracted NGOs. Subsequently, a provincial procurement and distribution system (possibly in the form of an autonomous medical store with contracted-out management) will be established for vaccines, essential drugs, medical consumables and family planning supplies.

The provincial public health laboratory will be re-established as part of the provincial dinas kesehatan to monitor quality of drugs, water, food and environmental safety and support epidemic investigations.

The objective in all areas will be to design and deliver the basic package of services according to the principles set out above. In areas where infrastructure has been destroyed and staff lost the contracted NGOs would be responsible for agreeing with the community on the type of services to be delivered and the type and location of facilities to be re-established. These services would build on those provided during the emergency relief phase.

For this reason, it is important to identify NGOs who would be involved in delivery of services as soon as possible, so that staff recruitment and training could commence rapidly and initial discussions be held with the communities to identify the type of services to be delivered and the location of facilities to be provided.

Capacity building for the local staff will commence during this phase with emphasis on system and facility management, policy development, system design and monitoring and evaluation.

There is a need for hospitals at the provincial (general and mental) and district (general) levels. It is important that the private sector is encouraged to invest in hospitals, particularly at the provincial level. Plans will be developed during the rehabilitation phase.

An important output from this rehabilitation phase will be a plan for development of the sector in the longer term in collaboration with the communities, NGOs and the private sector.

To ensure that services of acceptable quality are being delivered on time and in the right place, independent third parties will be contracted to carry out routine monitoring and evaluation of the health services.

RECONSTRUCTION PHASE STRATEGY

An important output from the rehabilitation phase will be a plan for development of the sector during the reconstruction phase. Overall, the aim will be to ensure the sustained functioning of the whole sector in pursuit of agreed priority health outcomes. This plan, to be developed in close collaboration with the communities, NGOs and the private sector, will include attention to participation of the private sector, human resource development (including a human resource plan, pre-service and in-service training, and provision of adequate training facilities and capacity) and sustainable financing of the health services. The delivery strategies to be pursued will be based on experience during the rehabilitation phase and the preferences of the communities involved. The emphasis on capacity building will continue and the importance of sustainable financing strategies will increase. Particular attention will be paid to strategies and plans which ensure:

- Sustainable financing for the health sector. These will include demand-side approaches (e.g. health insurance, vouchers for specific services) which provide access for the poor;
- Priority for use of public funds to ensure that public health programs are delivered and equity is improved;
- Priority in recruitment of civil servants to filling critical skill gaps at the provincial and district levels;
- Recruitment of service providers and other staff on a contract basis, preferably through NGOs and other community groups;
- Human resource plans which estimate requirements over the next decade and put in place activities for ensuring that the supply of skilled manpower is adequate.
- Continued third party monitoring and evaluation of service delivery.

EXAMPLES OF PROGRAMS

The funding approach proposed here is for a donor coordination mechanism in which all public funds (donor and government) used to implement an agreed sector plan according to agreed procurement, disbursement and financial procedures. This approach could apply to the rehabilitation and/or reconstruction phases. All publicly-funded health activities, many of which would be delivered by NGOs and

possibly by the private sector, would be included under this approach. Examples include:

Delivery of inpatient, outpatient and public health services to IDPs.

Objective: To ensure availability of good quality inpatient, outpatient and public health services by involving the public and private sectors and NGOs.

Rationale: As settlements are established for IDPs it is essential that good quality health care and public health interventions to control communicable disease are made available to the population.

Suggested Interventions: Contract provision of health care to local and international NGOs working together.

Interventions for treatment of mental stress and psychosocial trauma.

Objective: To provide services that will help in overcoming mental stress and psychosocial trauma caused by the disaster.

Rationale: It is well known that natural disasters such as the tsunami in Aceh cause widespread mental stress and psychosocial trauma to which health services are not well equipped to respond. Consequently, special provisions will need to be made to train staff to provide this service.

Suggested Interventions: During the emergency phase, provide publicly accessible information on basic needs (medical information, food availability, etc). During the rehabilitation phase, establish simple units of psychosocial support in rehabilitated hospitals and health clinics and create or strengthen capacity building of primary health care workers

Special public health campaigns in isolated and/or underserved areas and for IDPs.

Objective: To ensure delivery of essential public health services to IDPs and people in isolated and/or under-served areas.

Rationale: During the emergency phase, when former systems for delivering public health activities are not functioning, special campaigns are needed to protect vulnerable groups, particularly in under-served areas and populations.

Suggested Interventions: Immunization campaigns, including for measles; disease vector control activities; disease surveillance; nutrition campaigns.

Assistance to re-establish private sector providers of ambulatory care.

Objective: To ensure that private sector providers of ambulatory care re-commence health care activities as soon as possible.

Rationale: Before the tsunami the private sector was responsible for at least one-third of health care in Aceh. As the replacement of government health staff lost during the disaster will take time, it is critical that the remaining private practitioners are assisted to re-commence their practice as soon as possible.

Suggested intervention: Small grants to private practitioners to allow minor renovation to practice buildings and for purchase of drug stocks and small equipment.

Technical assistance to prepare a human resource plan for the province and strengthen training programs.

Objective: To provide outside (including international) technical assistance to the provincial government to prepare a human resource plan for the health sector in Aceh.

Rationale: Against the background of extensive staff losses in the sector, development of the sector in the medium and longer term will be dependent on estimates of the future demand for staff and interventions to ensure that training institutions are able to supply the required numbers and types of staff.

Suggested intervention: Long term technical assistance to the province to prepare and implement a human resource plan.

Technical assistance for planning sustainable health financing.

Objective: To assist the province to prepare a plan for sustainable health financing over the next decade.

Rationale: Although many donors are now willing to assist the health sector in Aceh, this will eventually end. As a result, it is critical that the province commences planning how it will ensure sustainable financing for the sector as the international assistance reduces.

Suggested intervention: Provision of long-term technical assistance and training in health financing with the aim of ensuring a transition to sustainable health financing as the current high volume of international aid decreases.

Reconstruction of health facilities.

Objective: To ensure that critical health facilities in the province are constructed as soon as possible.

Rationale: A number of health facilities critical to the delivery of adequate health care have been destroyed during the tsunami and will need to be rebuilt to ensure that adequate levels of care are available to the population.

Suggested intervention: Design and build the required health facilities.

COSTS

To be estimated when an agreed sector development plan is available.

ENSURING TRANSPARENCY – PROGRAM MONITORING

Periodic monitoring of service delivery and program impacts to be carried out by an independent third party recruited and contracted under the SWAp according to procedures agreed between the central and provincial governments and the donors. The results would be reviewed by kabupaten, and provincial and central governments together with donors.

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[i] The basic package of essential services will cover communicable disease control including TB, malaria and HIV/AIDS; child health (including management of pneumonia and diarrhea) and immunization; reproductive health programs for maternal and newborn health and birth spacing; nutritional supplementation and micronutrient programs; basic curative care; trauma-focused interventions; and disease surveillance.

Restoring Damaged Ecosystem and Protecting the Environment

Aceh Photos donated by: Jez O'hare

13. RESTORING DAMAGED ECOSYSTEMS AND PROTECTING THE ENVIRONMENT

SUMMARY OF LOSSES AND DAMAGES

The damage to coral reefs, land, water bodies and coastal lines is significant. There is potential contamination by damaged industrial installations and acute waste management requirements. Preliminarily, the environmental damage is estimated at **US$664.6 million**. More detailed damage assessments are necessary.

Addressing environmental concerns is essential in ensuring sustainable development in the long term, particularly as the livelihoods of the affected population depends on natural resources. Environmental considerations must be **mainstreamed** in all rehabilitation and reconstruction efforts, and damaged ecosystems **restored** to better support sustainable livelihoods.

The strategy specifies key guiding principles regarding appropriate, people-centered environmental management focusing on the poorest segments of society. Civil society shall be empowered to engage in the process. The strategy provides extensive examples of recommended interventions listed in Annex 1 which would rehabilitate or reconstruct the environment.

The recommendations are organized according to three time frames:

1. Support urgent human needs related to the environment damaged by the disaster (over the next six months);
2. Rehabilitating the environmental damage from the earthquake and the tsunami in the medium term (between six months and two years); and

3. Restoring environmental conditions and services over the longer term (from six months up to five years) with the aim of promoting environmentally sustainable development in the disaster-stricken region.

It is essential that a rapid strategic environmental assessment be carried out along with a more detailed assessment of the environmental damage in order to develop a comprehensive, accurately-costed rehabilitation and reconstruction effort. A series of program interventions have been identified on the basis of the current assessment for a total cost of between $74 - 79 million over a five-year period, plus the cost of rehabilitation of coastal landscapes and lost coastal habitats and wetlands. Such coastal rehabilitation should be based on coastal zone management plans through which the actual rehabilitation activities and resulting cost will be determined. As the present assessment of environmental damage is uncertain, it has only been possible to establish an estimate of between $80 - 200 million.

Additional interventions are likely to emerge after the completion of the comprehensive damage assessment.

GUIDING PRINCIPLES

The key principles reflect the concerns the Government of Indonesia expressed to the international community during an inception meeting for this report. They also match lessons learned from international experience of major natural disasters and environmental emergencies.

1. **Rehabilitation and reconstruction of the environment should be people-centered and participatory in nature:** Appropriate environmental management should always take as its point of departure the need to involve and engage the affected population.
2. **Focus on the poor:** It is particularly important to focus this effort on the poorest segments of society, which are at the greatest disadvantage when it comes to adapting to the changes in physical environment and habitat. The job and income-creation potential inherent in rehabilitating and reconstructing the environment must be fully exploited.
3. **Rebuild institutions responsible for environmental management:** the rehabilitation and reconstruction effort must focus not only on specific

projects, but also on rebuilding the services and institutions (public, private and civil) that enable good environmental management and services.

4. **Mainstream environmental concerns across the reconstruction program**: environmental issues are mostly cross-cutting in nature, so it will be essential to ensure consistency and effectiveness across sectoral programs.
5. **Fiscal transparency**: effective participatory monitoring should be an integral part of any project design.

REHABILITATION AND RECONSTRUCTION PHASE STRATEGY

The rehabilitation and reconstruction process represents a unique opportunity for environmental concerns to be addressed across the sectors, thereby ensuring sustainable development in the long term. Sector plans for rehabilitation and construction should undergo a regional strategic environmental assessment and be incorporated in the final overall plan. This will facilitate the immediate response to human re-settlements and related needs. Streamlined interim EIA guidelines will ensure that human settlements will be environmentally sustainable.

It is often difficult to distinguish between the rehabilitation and reconstruction of environmental resources, particularly in the absence of a full damage assessment, and it may not be relevant to do so for this sector. If, for example, mangrove forests have been cleared to give way to unauthorized aquaculture in the coastal area prior to the disaster, it may be more relevant to assess the total need for re-establishing mangrove areas and the need for land use to sustain livelihoods, than to distinguish between rehabilitation and reconstruction. In other cases, however, such as industrial pollution, the distinction could remain in order to achieve a minimum standard of environmental quality.

Strategic recommendations have been guided by seven considerations that support efforts to mainstream and restore the environment in Aceh.

Mainstreaming considerations:

1. **Integrate environmental considerations for sustainable reconstruction**. Environmental issues should be considered in all

sectoral reconstruction planning and actions. Following the Indonesian EIA regulations, EIAs are to be conducted in a swift manner so that the planned reconstruction projects are not delayed.

2. **Environmentally-friendly and disaster-resilient spatial planning**. Once reconstruction projects are established, it is hard to change established land use. So, the overall spatial planning principles and strategy should be established prior to any sectoral reconstruction projects. During the spatial planning, issues such as environmental implications and disaster resilience will need to be taken into consideration.
3. **Environmentally-sound planning of temporary housing and other installations**. The lifespan of temporary housing and resettlement camps in the affected areas depends on the reconstruction process. Selection of locations for temporary housing should consider potential longer term environmental implications.

Restoration considerations:

4. **Participatory rebuilding of the environment**. Involving local communities and civil society organizations will help ensure that environmental issues are taken into consideration in the re-construction process, thereby ensuring sustainability. A framework for engaging local communities and NGOs will be key to this.
5. **Ecosystem-based restoration**. The damaged environment can be restored. As much as possible, the restoration should take place utilizing ecosystem recovery potential and in such a manner that the ecosystem goods and services are used for local livelihoods.
6. **A comprehensive environmental assessment of disaster damages should be conducted as a follow-up to the current preliminary assessment**. The conduct of the assessment should at the same time help build national and local capacity to both do this kind of work and to monitor the environmental factors contributing to disaster mitigation and preparedness.
7. **Effective institutional set-up at national, provincial and district levels**. In rebuilding environmental management institutions, an effective accountability structure – coupled with clearly defined responsibilities at national, provincial and district levels – should be put in place.

EXAMPLES OF REHABILITATION AND RECONSTRUCTION

Immediate measures (initial six months)

The following immediate measures should be undertaken over the first six months following the conclusion of the relief effort. The objective of the measures is to support the urgent human needs related to the environment adversely affected by the disaster.

1. **Immediate debris and waste management**

Objective: To assist with the safe and effective collection and disposal of the large quantity of tsunami-generated debris (building rubble, mud, sand, vegetation, etc.) and other solid waste in an environmentally-sound manner.

Program: Assistance would include: a) siting of temporary disposal facilities; b) guidelines and training for waste handling; c) protective equipment for waste handlers; d) establishment of waste recycling program; e) assessment of land filling options that could contribute to coastal protection.

Program partners: Local government, TNI personnel, relief agencies involved in debris removal and disposal and local communities providing labor.

Expected impact: Reduced environmental impact of waste disposal; increased safety for waste handling personnel; possible reduction of waste stream and disposal costs through recycling; possible enhancement of coastal protection.

Appropriate timing: Immediate, as debris removal is already underway.

Estimated cost: Siting (5 studies x $30,000 = $150,000); guidelines and training ($20,000); protective equipment (500 sets x $50 = $25,000); recycling ($10,000); assessment ($15,000) and full scale operational costs. Total is $3.4 million.

2. **Comprehensive environmental damage assessment**

Objective: To obtain a comprehensive overview of environmental damage and the importance of environmental factors in relation to the disaster.

Program: A full assessment should be carried out of the environmental damage caused by the earthquake and ensuing tsunami, as well as linkages between the disaster and environmental conditions. This would include a hot spot analysis, ground verification of satellite images and assessment of critical ecosystems.

Program partners: National and international organisations and institutions, national universities, local and national authorities as well as civil society.

Appropriate timing: The assessment could be carried out over a 3-5 week period following the end of the relief efforts. The rehabilitation and reconstruction plan could be developed over the subsequent 2-3 months.

Estimated cost: US$ 700,000

3. **Strategic environmental assessment of the overall rehabilitation and reconstruction program**

Objective: To ensure that all plans for rehabilitation and reconstruction are strategically assessed for their environmental impact and that existing EIA requirements can facilitate human (re-)settlement needs.

Program partners: Financial and planning authorities as well as human settlement authorities, national and international organisations and national universities.

Expected impact: The overall plan for rehabilitation and reconstruction will promote sustainable development and human needs for early (re-)settlement.

Appropriate timing: The strategic assessment should be initiated urgently (within weeks) and the EIA interim streamlined guidelines should be developed during the next two weeks.

Estimated cost: $300,000

4. **Spatial planning as an integrated part of reconstruction planning**

Objective: To ensure that the implementation of plans for reconstruction is based on sound spatial planning which incorporates environmental and disaster preparedness concerns.

Program: As an integrated part of spatial planning, leading to land use planning, environmental and disaster prevention concerns should be fully taken into consideration through consultation with a wide range of stakeholders. To enable this, spatial plans will be reviewed by environmental authorities at the national, provincial and district levels.

Partners: Local communities and national authorities, national and international organizations.

Expected impacts: Improved spatial plans, based on environmental and disaster-prevention concerns. Measurable environmental and disaster-prevention factors appearing in spatial plans. Established institutional framework to provide input into the spatial planning process from an environmental and disaster-prevention perspective.

Appropriate timing: An overall regional spatial plan will be the basis for coordinated re-construction programs across other sectors. It should start prior to any rehabilitation programs with the overall regional plan to be drawn up first. Parallel capacity building programs will be developed and implemented as soon as program implementation is initiated. Upon development of the overall regional spatial plan, other spatial plans at various levels will be implemented over four years.

Existing program partners: Marine and coastal resources management project, MCRMP (Asian Development Bank)

Estimated cost: US$3 million

Medium-term measures (6 months to 2 years)

Objective: To restore the environmental damage from the earthquake and the tsunami

5. **Mangrove rehabilitation and management program**

Objective: To rehabilitate, protect and expand mangrove stands for both coastal protection and sustainable use.

Program: Assessment and prioritization of mangrove sites in need of rehabilitation and management; capacity building at national, provincial and local levels in rehabilitation and management of mangroves; inclusion and/or consideration of mangrove rehabilitation and management measures in spatial planning; settlement reconstruction, aquaculture development and local policy.

Program Partners: Scientific and academic institutions, government agencies, existing national coastal zone management programs, national and international organisations

Expected Impact: Measurable progress towards restored ecosystem functions; increased local expertise in management of mangroves and related marine resources; established/adapted local policy and enforcement capacity in regard to mangrove rehabilitation and management; increased coastal protection and security for coastal settlements

Appropriate Timing: While rehabilitation measures should start 6 to 12 months after the disaster, this will vary based on site-specific priorities. Capacity building for management should be incorporated in other environmental capacity building measures as an ongoing activity over the coming 5 – 6 years. Local capacity building should be backed up by strengthened national capacity to ensure extension options into other disaster prone areas in Indonesia.

Existing Program Partners:LIPI, Indonesian Mangrove Foundation, Wetland International, Institut Pertanian Bogor, Ministry of Marine Affairs and Fisheries, ISME (International Society on Mangrove Ecosystems), Indonesian Institute of Mangrove Research & Development, Indonesian Biodiversity Foundation KEHATI

Associated Programs: Sustainable Mangrove Management in Indonesia (JICA), Mangrove Action Project - Indonesia Program (Seacology Foundation, The Goldman Foundation, IUCN-Nederland and the Coral Reef Alliance), MCRMP (Asian Development Bank), Community-based Mangrove Rehabilitation Program as part of 'Indonesia's Community-based Natural Resource Rehabilitation Program' (Ministry of Forestry and World Bank), Model of rehabilitation and sustainable utilization of mangrove forest at Langkat, North Sumatra (Directorate General of Land Rehabilitation and Social Forestry (DG LRSF), The Ministry of Forestry and International Tropical Timber Organisation ITTO), Project on Reversing Environmental Degradation Trends in the South China Sea and Gulf of

Thailand - Mangroves Sub-Component (UNEP-GEF), Capacity building of environmental agencies - BRISP project (AusAID)

Estimated Cost: $4 million

6. **Coral reef monitoring and management**

Objective: To support the sustainable use and conservation of coral reef ecosystems.

Program: Assessment and prioritization of affected coral reef areas; capacity building at national, provincial and local levels on coral reef management; institutionalization of marine ecosystem monitoring and management as a component of an integrated coastal zone management approach; inclusion and/or consideration of regional and local coral reef management measures in spatial planning, settlement reconstruction, aquaculture development and local policy.

Program Partners: Government agencies, scientific and academic institutions, civil society organizations, existing national coastal zone management programs, national and international organisations

Expected Impact: Information on reef ecosystem recovery; increased local expertise in management of coral reefs and reef-related marine resources; established/ adapted local policy and enforcement capacity in regard to coral reef resource management; increased coastal protection and security for coastal settlements.

Appropriate Timing: While ground-truthing of remotely-sensed data and wider field assessments should start 6 to 12 months after the disaster, this will vary based on site-specific priorities. Capacity building for management should be incorporated in other environmental capacity building measures as an ongoing activity over the coming 5 – 6 years. Local capacity building should be backed up by strengthened national capacity to ensure extension options into other disaster prone areas in Indonesia and to ensure sustainable livelihoods for coastal communities relying on subsistence fisheries and reef resource harvesting.

Existing Program Partners: Ministry of Marine Affairs and Fisheries, LIPI-P2O, National Universities (in particular Institut Pertanian Bogor (IPB) and University of Riau), Coral Reef Information and Training Centre in

Pekanbaru under the national COREMAP Program, Indonesian Coral Reef Working Group, National and International NGO's, Indonesian Biodiversity Foundation KEHATI

Associated Programs:COREMAP (World Bank, Asian Development Bank, JICA, AUSAID), MCRMP (Asian Development Bank), Co-Fish (Asian Development Bank), Coastal Resource Management Program-Mitra Pesisir (USAID),

Estimated Cost: $4 million

7. **River Rehabilitation to restore drainage functions and prevent flooding**

Objective: To re-establish drainage functions in downstream river stretches affected by mud and sediments from the flash floods after the tsunami. Focus on critical areas in Banda Aceh and other urban areas to reduce impacts of polluted drainage water and avoid floods during heavy rains.

Program: To dredge mud and sediments and remove debris in the rivers, handle mud and sediments according to their assessed risks of effect to humans and the environment, repair river embankments and constructions and clean up and repair drainage channels.

Partners: Local governments, private contractors supervised by a local consulting company, national and international organizations.

Expected Impact: Improved surface drainage and health outcomes; reduced flood risks.

Appropriate timing: as a follow up to the mud debris clean up activities ongoing as part of the relief operations.

Existing Programs: North Sumatra irrigation agriculture sector and Flood management in selected river basins

Estimated cost: $2.3 million for between 5 and 10 km river stretch, including renovation of drainage systems.

8. **Adapting resource-based livelihoods to changes**

Objective: To assist poor communities and individuals whose livelihoods were dependent on natural resources that are now damaged or destroyed (e.g. fishing, raising shrimp, collecting marine plants, subsistence farming, etc.) to adapt to or re-establish livelihoods. Adequate attention shall be given to mangrove and coral reef rehabilitation and environmentally-sound, sustainable farming and fishing practices.

Program: For communities, assistance would be available for financing priority infrastructure and productive investments on a community-based approach. Initially, representative community councils/groups shall be established and empowered so that they will identify priorities, develop proposals with technical assistance and manage their sub-projects. For individuals, start-up grants, microcredit and technical assistance would be available to develop sustainable livelihood options.

Program partners: National and international organizations, community stakeholders, micro credit providers, civil society organizations.

Expected impact: Increased income and employment in Aceh's poorest communities through livelihood development that is environmentally sound and sustainable

Appropriate timing: Community development, employment, micro-credit, and job training programs can be initiated and prepared over the next six months. Investments in related infrastructure development will be integrated with prevailing spatial planning approaches for the reconstruction of the overall affected region.

Existing program partners: Coral reef rehabilitation management, phase 2 and Marine and coastal resources management project (both in North Sumatra), Coastal community and fisheries resource management project (COFISH), Community empowerment for rural development, Kecamatan Development Projects 2 and 3 (World Bank), Support for Poor and Disadvantaged Areas Project (World Bank),

Estimated cost for initial activities: To reach the 27,000 hardest-hit households in 13 rural districts would require an average of $1000 per household ($200 training and technical assistance, $300 start-up grant and $500 micro-credit) or $27 million. Community grants would add another at least $10 million (200 grants x $50,000). Administration and monitoring costs of 10% add another $3.7 million. TOTAL = $40.7 million.

9. **Coastal Zone Management**

Objective: To provide an overview of the coastal landscape and its natural development form, both now and in the future: all subsequent rehabilitation work will depend on this. The overview must be established before strategic planning of the coastal zone can be initiated in the form of a traditional Coastal Zone Management plan.

Program: To provide the basis for location of roads, railways, bridges and dwelling areas in the coastal areas of Aceh and North Sumatra. Planning and Relocation is best addressed within the framework of integrated coastal zone management (ICZM) and Shoreline Management.

Program partners: Local and national authorities, national and international knowledge centres and organisation.

Expected impacts: Improved basis for spatial planning, reconstruction and protection of people and infrastructure and ecosystems in the coastal regions.

Appropriate timing: It usually takes at least one year to prepare a Coastal Zone Management Plan (CZMP), incorporating a strategic environmental assessment, but this plan will be more difficult as it must start from scratch. On the other hand, there is also a good opportunity to establish better conditions than prevailed before the tsunami. Taking all this into consideration, this initial Coastal Zone Management effort should be finalised within 8 - 12 months. Initial results should be used in the strategic planning for the reconstruction plans for Aceh and North Sumatra.

Existing program partners: Coastal community and fisheries resource management project (COFISH), Coral reef rehabilitation management, phase 2 and Marine and coastal resources management project

Estimated cost: A rough cost estimate for establishing the CZMP will be US$12-15 million based on inputs of 20 staff-years of international experts and 30 staff-years of local expertise, equipment, etc.

Long term measures (up to five years)

Objective: To promote environmentally sustainable development in the disaster stricken areas.

10. **Capacity development for local environmental management authorities**

Objective: Institutional redevelopment and strengthening of district Environmental Management Authorities, mainly in disaster-affected districts.

Program: Training in organization and management of environmental impacts, in particular screening and analysis of environmental impacts (EIA -ANDAL), data collection in support of the analysis, impact management and monitoring of implemented measures to prevent and/or mitigate adverse environmental impacts, skills for stakeholder consultations, etc. Management plans for strategic environmental impacts of different sectors to be reconstructed could be designed and monitored.

Program partners: Government agencies, scientific and academic institutions, civil society organizations, national and international organisations

Appropriate timing: The medium and long-term i.e. after 6 months for an implementation period of 5 years.

Existing Program Partners: Capacity development for local environmental management authorities: Good Environmental Governance Program/Bangun Praja (Ministry of Environment), AMDAL Revitalization Program (Ministry of Environment/World Bank), Urban Sector Development and Reform Project (World Bank), Coastal community and fisheries resource management project (COFISH), Coral reef rehabilitation management, phase 2 & Marine and coastal resources management project

Estimated costs: It is foreseen that approximately 500 Bapedalda staff will be trained per annum in different subjects. Community consultation workshops will also be held and relevant research conducted. Total estimated cost is $1.5 million.

11. **Improving environmental data collection and monitoring for rehabilitation and reconstruction**

Objective: To provide the planners and implementers of individual rehabilitation and reconstruction activities with reliable and timely environmental information, and to monitor the environmental effects of those activities

Program: The program would involve: a) creating a clearing house to assemble existing environmental data, including information generated during the relief phase; b)

establishing a Web-based environmental information system (EIS) accessible by the public; c) setting up a network to monitor environmental quality (air, water, soil, terrestrial and marine biodiversity, etc.) with results published on the EIS

Program partners: National and international organizations, universities and research centers, local governments, civil society organizations.

Appropriate timing: The clearing house should be created during the relief period (initial six months); environmental information system should be up and running at the beginning of the reconstruction phase (after six months); monitoring network should be operational during the first year

Estimated cost: Clearing house ($50,000 for personnel and office); environmental information system ($50,000 for personnel and equipment x 5 years = $250,000); monitoring network ($100,000 for personnel, office and equipment x 5 years). TOTAL = $800,000

12. **Longer-term solid waste management**

Objective: To provide citizens and enterprises in Aceh's cities and towns with solid waste collection and disposal services

Program: The program would involve: a) rehabilitation of municipal solid waste management (SWM) services (personnel, equipment, training); b) rehabilitation and modernization of waste disposal sites; c) promotion of programs to reduce, recover and recycle waste.

Program partners: Local governments, private sector, civil society organizations.

Expected impact: Improved quality of life for urban residents through proper waste removal; increased coverage of services (pre-tsunami level was 33%); reduced environmental impact of waste at final disposal sites.

Appropriate timing: This activity should complement the debris disposal work and the efforts to rehabilitate the civil service and could be phased in over a five-year period, after which the operations should cover their operating costs

Existing program partners: Longer-term solid waste management: Second Urban Poverty Project (World Bank); Urban Sector Development and Reform Project (World Bank).

Estimated cost: Rehabilitation of services in four cities and towns ($1 million x 5 years = $5 million); rehabilitation of disposal sites (4 sites x $150,000 = $600,000); 3R programs (4 x $25,000 = $100,000). TOTAL = $5.7 million

13. Rehabilitation of the coastal landscape of Aceh and North Sumatra

Objectives: Rehabilitation of the coastal landscape.

Program: This will be one of the first activities following the completion of the CZMP (see proposal 10). It will be performed through a number of labor-intensive projects for selected sections along the coast following planning for each section. It will involve environmentally-sound interventions, primarily sand filling for nourishment and reclamation with sand, coastal protection with quarry rock material at selected sites based on the result of the CZMP. In addition to this work, selected areas of ecological importance (following the CZMP) will need to be restored. The scope of this activity is contained in proposal 14. Other works related to rehabilitation of infrastructure, such as roads, railway, bridges and ports etc. are not included.

Program partners: Local authorities, private contractors, local communities, international and national organisations.

Appropriate timing: Following completion of CZMP. Some critical rehabilitation activities may need to be initiated urgently.

Existing program partners: Coastal community and fisheries resource management project (COFISH), Coral reef rehabilitation management, phase 2 and Marine and coastal resources management project.

Preliminary cost assessment: $147.8 million. The cost of rehabilitation depends on the actual level and extent of damage as well as the result of the coastal zone management planning in which priorities for coastal rehabilitation will be set. The estimated cost of full rehabilitation per km is $1.1 million.

14. **Rehabilitation of coastal eco-systems and critical habitats**

Objective: To restore the ecological functions of the coastal ecosystems, critical habitats and wetlands in order to improve the livelihood basis of the poor and the ecosystem values.

Program: Following completion of the CZMP, various eco-systems will be rehabilitated or re-established. It may involve rehabilitating wetlands and will be supplementary to proposals 6 and 7 and incorporate the longer-term management of mangrove forest and coral reefs.

Program partners: Local authorities, private contractors, local communities, international, national and local organisations.

Expected impact: A basis for improved livelihood for the coastal population, in particular the poorer segments, while maintaining the value of the biological diversity in the critical ecosystems.

Appropriate timing: After a more detailed assessment of the damage (proposal 2) and the coastal zone management plans (CZMP) (proposal 9), and to be executed in conjunction with the rehabilitation of the coastal landscape as described in the above-mentioned activity (proposal 13).

Existing program partners: Coastal community and fisheries resource management project (COFISH), Coral reef rehabilitation management, phase 2 and Marine and coastal resources management project (in North Sumatra).

Estimated cost: Similar considerations as for coastal landscape rehabilitation apply to coastal habitats and wetlands. The cost is included in proposal 12 ($147.8 million).

ANNEX 1: SUMMARY OF SUGGESTED INTERVENTIONS

Immediate measures (first 6 months)	1. Immediate debris and waste management	3.4 mill
	2. Comprehensive environmental damage assessment	0.7 mill
	3. Strategic environmental assessment of overall rehabilitation and reconstruction program	0.3 mill
	4. Spatial planning as an integrated part of reconstruction planning	3 mill
Sub-total		**7.4 million**
Medium-term measures (6 months to 2 years**)**	5. Mangrove rehabilitation and management program	4 mill
	6. Coral reef monitoring and management	4 mill
	7. River Rehabilitation to restore drainage functions and prevent flooding	2. 3 mill
	8. Adapting resource-based livelihoods to changes	40.7 mill
	9. Coastal Zone Management	15 mill
Sub-total		**66.0 million**
Long term measures (up to 5 years)	10. Capacity development for local environmental management authorities	1.5 mill
	11. Improving environmental data collection and monitoring for rehabilitation and reconstruction	0.8 mill
	12. Longer-term solid waste management	5.7 mill
	13. Rehabilitation of the coastal landscape of the Aceh Province and North Sumatra and	147.8 mill
	14. Rehabilitation of coastal eco-systems and critical habitats	
Sub-total		**155.8 million**
Total		**229.2 million**

Restoring Local and Provincial Governments

Photo by: USAID / Michael L Bak

14. RESTORING LOCAL AND PROVINCIAL GOVERNMENTS

SUMMARY OF LOSSES AND DAMAGES

The Aceh and North Sumatra public administration, justice and security systems have been paralyzed since December 26, 2004. 14 out of 21 local governments in Aceh, and 3 out of 23 in North Sumatra, have been severely affected and are not yet operational. Currently the institutions and agents through which law and order is upheld are dysfunctional or absent. Police presence is thin on the ground, and the command hierarchy is fragmented or has collapsed. Investigatory, prosecutorial and adjudicatory services have collapsed. There are reports that detention facilities are absent. No standing procedures are reportedly in place to assist the police to maintain law and order. There are reports that judges have fled to other parts of the country. Affected people continue to suffer from an absence of contact with district or sub-district officials (for assessment for relief needs, damage assessment or information on the status of Government actions for recovery and rehabilitation): they are relying on passing NGOs and charities for information, relief materials, food and water. Municipal services such as water supply, drainage, and electricity are non-existent in the core disaster areas. There does not seem to have been any contact by the Kabupaten or Kecamatan offices with the Internally Displaced Persons (IDPs).

The initial needs assessment for Aceh and North Sumatra provinces estimates total public administration losses and damage at about US$82 million. In addition, more than 10,000 public employees in Aceh province were affected. This amounts to about 21 per cent of the complement of 47,569 civil servants (excluding teachers, doctors and para medics but including police, justice and local legislatures) working in Aceh province. This figure includes loss of life, injury and displacement. Second, about 20 percent of government buildings in Aceh were damaged or destroyed. Of these, provincial government buildings seem to have borne a disproportionate share of the damage. Third, about 20 percent of equipment and vehicles in Aceh (valued at US$12 million) were damaged or lost. Fourth, the damage to and loss of public records are estimated at US$18 million[i]: it is essential that a process be determined, and work started, for reconstructing these records on an emergency footing.

KEY ISSUES

The provincial and local governments in Aceh and North Sumatra face two over-riding challenges: (a) in the immediate term, returning affected communities and provincial and local governments to normal functioning, and (b) over the medium term, strengthening institutional capacity and accountability so that rehabilitation and reconstruction activities can be completed as efficiently and effectively as possible.

Re-establishing basic public administration and security functions is the key issue, since there is significant potential for partial or structural collapse of law and order. Based on the needs assessment, the immediate need for Aceh and North Sumatra is to re-establish a functioning administration that supports the relief, rehabilitation and reconstruction efforts in the affected areas. A collapse of law and order would complicate the recovery and rehabilitation process, and dramatically weaken foreign assistance. Specific challenges include ensuring protection and security; helping refine initial estimates of loss and damage to human and physical assets; and restoring minimally required public services (cleaning up and disinfecting affected areas, extending health and education services; restoring communications; etc).

For the time being, the central government will continue to provide guidance and supervision on the ground. In the interim, the Ministry of Home Affairs has deployed a rapid assessment team to Aceh to support the leadership and collect data. The Aceh team comprises 382 officers including trainee civil servants from the Ministry's civil service training institute. This support will continue till end-February on a rotation basis. Other teams from central ministries are also making visits of shorter duration to the affected areas.

Restoring the decentralized representative bodies is a high priority. Ensuring the participation of the local population in assessing local needs and priorities as part of the rehabilitation activities is an immediate and continuing challenge. For this to be done effectively, it is essential to re-build representative institutions of governance such as DPRDs and KPUDs. However, given the magnitude of the devastation, the central government will need to play a significant role in relief and rehabilitation, particularly for large infrastructure reconstruction. At the same time, Aceh is an autonomous province which has experienced a long-lasting conflict, including a secessionist movement. Hence, the management of the relationship between the national government agencies, sub-national entities of governance and civil society assumes great significance, calling for the restoration of the functioning of regional representative entities as a priority.

Decisions on election timing and process will need to be taken soon. Election preparations are likely to start in February 2005 if local government elections are held in Aceh province in June 2005 as scheduled. Immediate issues for decision include (i) determination of whether and where the proposed local government elections can take place in mid-2005; (ii) decisions on the mechanism and mode of consultation to be employed, since it would be desirable to have a consultative decision process involving key groups (humanitarian groups and those concerned with wider governance)[ii].

Establishing viable administrative arrangements, and ensuring transparent and accountable management of public funds, are key to credible management of relief and recovery. One option could be establishing a dedicated administrative body for overseeing rehabilitation and reconstruction, empowered to fast-track decision-making. In order to ensure transparency and efficiency, it would be desirable to agree clear rules and procedures in advance. The involvement of the general public in the entire process is essential. Building on international experience, a multi-tier institutional approach is proposed – to include the national government, the provincial government, representatives of kotas and kabupatens, and a multi-stakeholder Supervisory Board (possibly under the leadership of a civil society/NGO consortium), and using an existing entity for implementation. Furthermore, Aceh has had a track record of corruption and weak governance. The Governor is being prosecuted for alleged corruption. Financial statements of many local governments are not reported, and leakage of funds appears to be significant. With the expected inflow of substantial funds for reconstruction, the establishment of effective public financial management systems in Aceh and North Sumatra ranks as a high priority.

9. **It would be desirable to design and implement a recovery strategy that is sensitive to and supports the resolution of Aceh's long-lasting conflict**. There is an emerging consensus that relief, rehabilitation and reconstruction measures from natural disasters taking place in conflict-affected areas have to be as conflict-sensitive as possible, to prevent furthering of tensions and to maximize opportunities to promote peace-building.

C. KEY GUIDING PRINCIPLES

The Government has already outlined six principles which will underpin rehabilitation and reconstruction. These incorporate lessons learned and comprise:

- **People-centered and participatory processes.** (a) Key instruments to guide rehabilitation and reconstruction should be based on the Special Autonomy Law 18 for Aceh, and law 32/33 including MoHA's Ministerial Decree on participatory planning. Given the possibility of a transitional administration in the near future, there may be a need to draft by-laws to provide a regulatory framework. (b) There should be an agreed period to transfer authority from central to local governments for the implementation of the reconstruction. A multi-stakeholder national/Acehnese forum or oversight committee could be set up to provide inputs into the time-line, approach, mechanisms of this transfer and monitor progress towards the re-establishment of Acehnese administration. (c) The management and delivery of recovery and reconstruction by central Government will require agreed time-lines for transfer of authority, and agreed guidelines to merge and/or dissolve temporary structures to ensure local authorities have full authority for local governance (critical amongst this will be the strategy for short and medium term recruitment of civil servants, a minimum agreed percentage of whom could be drawn from Aceh). (d) The detailed design of reconstruction plans at Kabupaten level should use proposed local planning consultation mechanisms (e.g. MoHa's Ministerial Decree) to inject life into moribund systems, ensure local voice and participation and provide an opportunity to recreate administrative structures "with a new face" focused on responsive delivery and accountability to create trust between authorities and population. (e) An Aceh Reconstruction Forum could be established in Jakarta with participation of GoI, civil society and the private sector, to ensure policy initiatives are reflective of local needs in Aceh and acceptable to the communities. A participative dimension needs to and can be built into each phase, with the earlier ones admittedly working with small groups of stakeholders and specialists. The longer-term processes are highly participative, involving government, political parties or forces, the private sector, the international community, academia, the press, and all levels of civil society. Elaboration of joint visions between principal stakeholders creates synergies for sustainable responses and common frameworks for reconstruction. Building civil society capacity to participate in the design, implementation and monitoring of relief, recovery and reconstruction activities is essential: capacity-building could be supported by donor financing if needed, with special attention given to participatory monitoring and evaluation (see Technical Annex 4).

- A holistic approach based on a comprehensive strategy. Comprehensive responses are needed to address the needs of the populations in disaster areas. Despite the trauma and competing demands of survival needs, in order for recovery to be truly sustainable, it needs at each of the stages to aim beyond rehabilitation and be focused on, infused with, and build upon a foundation of participatory governance and peaceful dispute resolution. Early emergency relief can re-establish the outline of the affected area, rehabilitation puts back some passable form of administration, reform strives to make that form efficient, and reconfiguration finally installs governance. The former needs to be dealt with quickly under emergency conditions and the latter though a long transformative process and over a substantial period of time.

- **Effective coordination to ensure consistency**: sound coordination and monitoring mechanisms are needed to guarantee transparency and prevent the misuse of relief; at the same time, decentralized coordination ensures that mechanisms do not disempower local communities and civil society

- **Distinguishing between rehabilitation and reconstruction, with clear strategies for both**. International experience demonstrates that reconstruction involves several related and sequential phases of relief, rehabilitation, reform and reconfiguration. Reconfiguration and transformation of the affected area's systems and institutions must be incremental, phased, and tailored to the specific nature of the disaster, the characteristics of the destruction, and the needs of different segments of the society.

- **Capacity-building as an integral part of rehabilitation and reconstruction**, especially for entities delivering front-line services, and those performing core governance-related functions.

- **Embedding fiscal transparency and effective monitoring into the strategy**. This entails establishing and strengthening public access to information on reconstruction programs and progress; contract awards; anti-corruption and complaint mechanisms; inter-agency coordination; results framework. (See also separate note on Fiduciary Strategy)

The focus should be on "reconstruction plus", not on rebuilding poverty. The affected population in Aceh and North Sumatra is overwhelmingly poor, and the affected local economies are among the most autarkic and poorest in Indonesia. The disaster offers the central and local governments a unique opportunity to begin poverty-proofing the local economies through the participative design and implementation of high-quality rehabilitation and reconstruction strategies, implemented by a proactive public administration and a revitalized civil service, catalyzed and overseen by an engaged civil society.

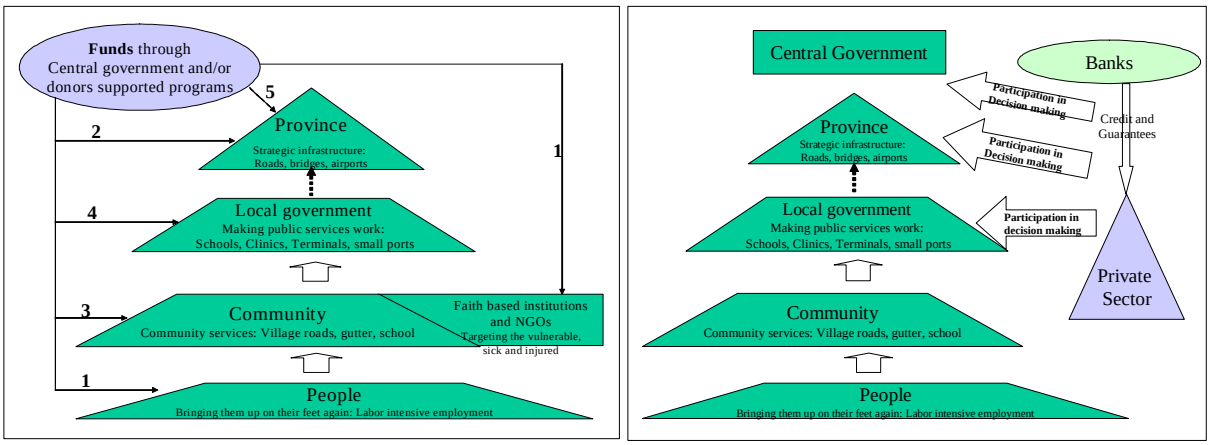
Shifting from a military to a political response to the conflict in Aceh to provide a comprehensive response to local needs. Natural disasters provide a unique window of opportunity to address the causes of conflict and build in conflict mitigation and prevention mechanisms that promote sustainable recovery and reconstruction. Protecting the civilian population and major investment on the part of the Government of Indonesia (GOI) and the international community will require a political settlement to the 30-year conflict, acceptable to all interests. Reconstruction could be accompanied by a process of political dialogue with participation of GOI, GAM and civil society to come up with a comprehensive peace settlement. In the immediate term, all communities in Tsunami and conflict-affected areas need to be protected from harassment and abuse by parties to the conflict to prevent misperceptions about the use of aid for political purposes[iii].

REHABILITATION STRATEGY: REGIONAL GOVERNMENT SYSTEMS

Public administration damage and losses have been severe, surviving victims and public employees traumatized, and the security situation still fragile. Understandably, there has been a vacuum in the management of the special autonomous region since 26 December 2004. In the immediate term, it would be desirable to focus on restoring the basic functions of state institutions to pre-disaster levels, while sowing the seeds for structural and functional improvements in the longer term. In the first phase, it would also be essential to protect the vulnerable people from potential security threats. As a provider of public services, the basic function of the executive branch should be restored immediately. The restoration of the formal

and informal justice systems should also start immediately to deal with disputes arising from the disaster.

The regional government rehabilitation strategy could focus on addressing immediate needs of affected people, then empowering local communities, then the local governments and finally the province. The charts below depict the suggested sequence:



Key issues in public administration and civil service: Till administrative and judicial offices are restored, the government could immeasurably help the affected population, especially the poorest and elderly, by rapidly deploying mobile "single-window" offices staffed with functional officials (for providing core administrative and relief-oriented functions) and mobile courts for settlement of simple disputes through mediation, counseling or summary procedures. A widely publicized itinerary for these mobile offices would alleviate uncertainty and reduce the uncertainty, cost and time to go to government offices.

The disaster offers an opportunity that few governments have – to establish a professional, proactive and modern public administration composed of civil servants of integrity who are transparently recruited, performance- and service-oriented, and well-paid. A first step is to begin an institutional and facilities assessment of the regional government structures, led by local governments and NGOs, with support from central bodies (including the judiciary) and donor partners. This assessment could form the basis for a strategy and action plan to strengthen the public administration in Aceh. Special attention needs to be given to how all these interventions/networks might support a new nascent peace process.

The immediate actions include:

- *Putting in place services, facilities and procedures through which public order and the rule of law can be upheld* such as community policing, locally recruited police for security, and designation of temporary premises for nodal government functions to resume. Such actions aim to uphold the rule of law, begin to provide basic legal services for destitute citizens and communities through interim measures, help secure and uphold the security and integrity of the assistance agencies and the goods and services they deliver, help ensure proper other facilities including traffic control, interim zoning measures and emergency facilitation. Also, by upholding the rule of law in a manner that is prompt, equitable and effective, the state upholds its legitimacy and authority.

- *Establishing local government presence in the IDP camps is now essential* for completing damage assessment by household; assessing and providing information on relief entitlements for

each household; beginning the process of recovery/reconstruction of records of land rights, inheritance, deaths etc; initiating a consultative process for rebuilding homes and livelihoods and linking these discussions with line ministry representatives and civil society; feeding the consultations to BAPENAS/line ministry; receiving information from Bappenas on over-all rehabilitation plans as they apply to relevant IDP camp communities; and providing feedback to co-coordinating/implementing Government .agencies.

- *Beginning reconstruction of Kecamatan offices* in villages which are not going to shift, e.g. those beyond 5 kilometers from ground zero (an exact check needs to be made through participative consultation);

- *Establishing temporary offices co-located with temporary shelter sites* is essential for towns and kecamatans likely to be relocated.

- *Restoration of core security, judicial and legal services* focusing on identification and notification of temporary premises and wide advertisement of their location and hours of business. Immediate actions to be taken include: emergency regulations allowing for expedited processing of specific categories of crimes directed against property and persons; notification of interim courts and appointment of interim judges; establishment of interim prosecutorial and advocacy services; strengthened police deployment for security, traffic control, guarding relief supplies and convoys, and strengthened police command structures and communications; notification of interim detention facilities; and establishment of public information services notifying affected communities of regulations, measures and their rights; and re-equipping the police to enable them to protect affected communities in affected areas and engaging the population in a manner that enhances trust and police-community relationships.

- *Immediate regional administrative actions* include (i) completion of a quick seismic engineering assessment of all partially damaged public buildings - all repairable buildings could be restored on an emergency footing to re-establish multiple governance functions, without having to wait for the entire reconstruction plan to be completed (ii) establishing a participatory process for communities' and local government units' identification and implementation of (sub-) projects; (iii) establishing a participatory monitoring and evaluation system independent of formal structures; (v) establishing a Joint Office and single window in [Banda] Aceh for national-provincial government coordination and information sharing; (iv) adequately staffing the administration through secondment of employees from unaffected parts of the provinces in the short term and, where necessary, through contracting out functions such as program management, procurement, and financial management; and (v) clarifying minimum standards of service for obligatory functions including, if necessary, temporarily redefining such standards.

- *Rethinking the design of the administrative structure and restoring the civil service*: This involves taking stock of the positions that are still filled, reviewing the administrative structures, and the very role, structures and incentives of the civil service. Aceh also needs to quickly get civil servants of high quality and integrity on the ground, with incentives that are appropriate and effective. Emergency recruitment, if required, will need to be "corruption-proofed" so that it offers a fair opportunity for entry for all, regardless of gender[iv], ethnicity, religion or linguistic background. Such recruitments can be made observable by the media, NGOs, and donors, as has been done in other countries.

- *Arranging direct implementation by communities of rehabilitation work.* Contractors may not be available and there may be little equipment available. Since most people will have lost their sources of livelihood and there is likely to be minimal equipment available, direct implementation by the community may well be the most appropriate method for reconstruction to start with.

- *Help families and businesses obtain relief.* The administration could identify and train community paralegals to provide legal advice and mediation services to the communities in which they live. Paralegals could be put on the ground urgently to help households and businesses obtain/reconstruct documents for inheritance and regaining of assets.

- *Expert support for strategy development.* It would be desirable for district governments to obtain expert advice on developing a 5 year and 20 year strategy for reconstruction, and assessing the technical assistance needed to translate these strategies into costed and prioritized plans. This process should be participatory and form part of the budget cycle.

- *Information dissemination.* Information compilation and dissemination arrangements would need to be established at all levels.

- *Preparations for conduct of elections.* A clear plan of action is required to deal with technical aspects of the election process: removal of names of dead/missing voters from the electoral rolls, clarification of documents acceptable for identity if voters do not have official documents to prove their identity, verifying existence of polling stations and designation of alternative polling stations if existing ones are damaged/destroyed and cannot be repaired in time.

- *Conflict mitigation.* The disaster offers a unique opportunity to expedite the conflict resolution and reconciliation process, by establishing an appropriate conflict mitigation mechanism and process.

- Key issues in restoring local legislatures. The role of the legislature is limited at this moment. The government can incur expenditure without DPRD approval for emergency purposes[v]. Nevertheless it would be important to reestablish the DPRD as soon as possible because they should play an important role in obtaining and translating the needs of their communities into government action. Hence the following sequential actions are suggested:

- *Swear in the new DPRD members as soon as possible.* Legally, DPRD members who have passed away will automatically be replaced by the next person on the open party list as submitted to the KPU in the beginning of 2004. It will be important to ascertain whether these lists are still available in Aceh. If not, the KPU at the national level would still have these lists.

- *Facilitate consultations with constituencies for consensus on prioritizing.* DPRD members should be encouraged to go out and meet with their constituents and civil society groups. They should build consensus on the priority reconstruction issues. This participatory process should lead to the approval of district budgets in 3 or 4 months time. Once local budgets are approved, local governments can fully resume their normal operation.

- *Technical assistance and expert support* should be provided to enable DPRD members in conducting consultations. Effective communication with the widest possible constituency is essential re-establishing confidence in the government. Expert support for strategy development should be provided to DPRD members and representatives of civil society as well as to the executive.

- *Complete assessment of damage/loss to premises to be used for upcoming election.* In view of the local government elections scheduled for June 2005, a quick assessment needs to be completed of election premises needing rebuilding, repair or relocation, and remedial action completed within the prescribed deadline.

Key issues in security and law enforcement. The police face a triple challenge: they have lost personnel and equipment; they have to deal with an increased need for security and order; and

there will be a need for specific rules to deal with people who do not have proper documents for identification and ownership. At the same time, the needs resulting from the crisis provide a unique opportunity for improving police community relationships and to strengthen the police's standing as arbiters and leaders of law and order. Transparency, accountability and professionalism need to be the central tenets for the re-establishing of their functions to enable the police to reach affected communities and rebuild police-community relationships. Priorities include:

Re-equipping the police **to enable it to protect affected communities, including:**

- Providing uniforms, vehicles, firearms, and salary to police units to be placed in affected areas;
- Providing immediate short-term training on enhancing police-community relations, conflict mediation and basic rights of crisis affected populations;
- Engaging the police in rehabilitation through the community, e.g. getting former policemen with other public officials and paralegals to be part of the assessment of loss and needs (records, priorities, etc), supporting victims in finding remains of their personal property, family items and homes, etc.

Strengthen police-community relations. Putting in place a process for the police to link up with the community and cooperate on security issues, and establishing a civilian oversight mechanism reporting directly to the reconstruction administration authority.

Key issues for judicial functioning:

- Identify high-priority material resources, human resource management and administrative skills needed within each institution, and provide the necessary support either through infrastructures, short-term training or additional personnel.
- Prioritize Alternative Dispute Resolution mechanisms to address the range of disputes which will emerge as a result of the disaster. The majority of these disputes, likely to be over land and inheritance, are not suited to lengthy and costly litigation. Establishing a Land and Inheritance Mediation Body at provincial level, with district level branches, would help anticipate and address these problems.
- While courts are being re-established, the General and Religious Courts should establish mobile/circuit courts for settlement of simple disputes through mediation, counseling or summary procedures. The Supreme Court's court-annexed mediation program should also be extended to Aceh.
- Create incentives for prosecutors, judges and legal personnel who are willing to go to Aceh (Aceh has for some time been considered a hardship post, however no formal incentives have been given for judges to go to the province).
- In the longer term, the Judiciary should re-examine the recommendations from the UNDP Report for the Judiciary and prepare, with donor support if necessary, an action plan for implementing the most appropriate and urgently applicable recommendations.
- Support for clarification of titles, property rights and the recovery of registries and supporting dispute resolution mechanisms to deal with conflicting claims, as detailed above.
- Provision of legal service facilities and legal aid centers, mediation services, supported by active community awareness campaigns. Paralegals and University law students could be used where others are not available. Such support is necessary for various tasks, from

obtaining new land titles to resolving inheritance issues while people are missing but not yet confirmed dead.

- Aceh had a very inefficient and ineffective case management system. Several years ago the floods destroyed all the case files stored on the lower shelves of the filing cabinets. The filing system had to be overhauled. This should be addressed once immediate urgent needs are met.

Key issues in strengthening civil society:

- Using the MoHA Ministerial Decree, local planning processes could be accelerated for reconstruction sub-projects, so as to facilitate government-civil society consultation. This could be mandated and would help identify and implement community-prioritized reconstruction projects

- Establishing Government/civil society and local private sector partnerships for rebuilding towns and villages. It would be desirable for Bappenas, as the lead agency on procurement reform, to develop procurement procedures that enhance these partnerships and encourage implementation by small and medium enterprises and affected groups. This would also help generate local employment.

- Rebuilding and supporting civil society organizations working on reconstruction, human rights and justice issues or specializing on particular groups e.g. women and IDPs. These organizations may also be effective vehicles for the provision of immediate legal and paralegal services as well as for expanding human rights and legal awareness among disadvantaged communities.

- Enhancing information and transparency to enable participation (e.g. through the creation of an open Web-site on rehabilitation and reconstruction funds, activities and actors; and an information service centre for victims based in Banda Aceh and able to respond to district and sub-district enquiries).

- Facilitating the funding of civil society forums and networks and providing technical assistance to enhance their advocacy and policy dialogue skills.

RECONSTRUCTION STRATEGY: REGIONAL GOVERNMENT SYSTEMS

Building upon the rehabilitated governance structure, the Government of Indonesia can take this opportunity to modernize and strengthen it in terms of efficiency, accountability and transparency in a conflict-sensitive manner. It would also be desirable to embody the recognition in the governance mechanism that it is the primarily the government's responsibility to protect the citizens from the recurrent hazard and risk of natural disasters. The following paragraphs outline key actions and initiatives in the reconstruction period.

A. Public Administration and Civil Service

Strengthening the public administration and civil service – this is an opportunity to establish a modern and accountable civil system and administrative structure for Aceh. Such an exercise would first prepare the analytical underpinnings for a strategy covering issues such as the appropriate civil service model, transparent competitive recruitment, phased implementation of

performance contracts, installing modern establishment controls, transparent performance evaluation systems, a competitive incentive framework, and discipline/integrity arrangements. In the second phase the recommendations would be implemented.

B. Local Legislatures

Developing a plan to support legislative capacity at all levels to ensure effective representation of their constituencies, law making and approval and regulation of reconstruction budgets.

Capacity strengthening of the provincial legislature so that it can effectively discharge its oversight role over the recovery and reconstruction programs.

Provide opportunities to DPRD members to develop good communication and consultation skills.

Build knowledge and information systems to enable parliamentarians to better understand a post-conflict and post crisis environment in which they operate.

C. Security and Law Enforcement

Police reform remains a critical element of post-conflict and post-disaster justice. Priorities in the reconstruction phase are the rebuilding of the police force drawing from Acehnese population, based on open and transparent recruitment and focused on building their capacities and professionalism to maintain law and order and protect the population.

- Ensuring quality police services by increasing accountability through better internal oversight and the establishment of civilian police commissions.
- Development and publicizing of a code of conduct for police officers in consultation with the population and with effective mechanisms for redress..
- Undertaking a police assessment to identify priorities, capacity building needs and confidence building measures as part of a police rebuilding strategy.
- Speeding up police reform and introduction of community policing by providing training and technical advice.

D. Judicial Offices

- The disaster represents an opportunity to assess the allocation of courts across the province, based on need and public demand.
- In Aceh, the relationship between General Courts, the Syariah Courts, and adat institutions (Perda 7/2000 has re-established adat institutions and adat dispute settlement mechanisms in Aceh) and the jurisdiction of each has not been properly defined and clear procedures have not been resolved. Technical assistance could be provided in the drafting process of legislation and in the development of legal systems to resolve these outstanding issues, including linkages and coordination between the systems.
- A legal documentation centre could be established in Banda Aceh to systematically collate all legislation and authoritative court verdicts. Facilitate access for districts courts and prosecutors offices to access legislation.
- Improve access to information: the issue of public access to information needs to be addressed to allow maximum transparency on court proceedings through the publication of orders and judgments; public outreach programs, customer information booths at the

courts. Providing information about the courts to the public through publication, radio, help lines, ICT etc.

- Address intimidations and reprisals faced by actors involved in the delivery of justice remedies. Facilitate dialogue among the operators of the justice system on these issues in order to design strategies to strengthen protection to judges, prosecutors, defense counsel, police officers as well as victims and witnesses.

- Examine how adat can link to the formal system and how human rights standards and principles may be applied in supporting adat systems of justice. Support should be provided on legislative developments which lead to the development of minimum standards, definition of jurisdiction and procedures to be applied.

- Explore the potential for DDRRR initiatives and initiate a dialogue on this issue. The existence of armed groups is a powerful impediment to peace building and reconstruction efforts and a major threat to access to justice.

- Participation is critical. All activities and consultations must enable people to voice their views and include community involvement, especially women, marginalized, and other disadvantaged groups. Justice system reconstruction and reform needs to focus on actors beyond legal professionals as it affects and concerns the entire society.

E. Civil Society

- Establish an independent civil society justice system monitoring program at provincial and district levels to conduct monitoring, legal reporting, judicial system analysis and public outreach. Creating civic oversight mechanisms, supporting civil society in monitoring public appointments and law implementation, developing research capacities, enhancing skills for investigative journalism and human rights reporting, and involving civil society in the establishment of access to justice indicators and baselines.

F. Monitoring and Evaluation Framework

Such a framework could facilitate the functioning of a complaints handling and tracking system, and the evaluating the impact of reconstruction funds. (See Fiduciary Strategy Note on a proposed Bappenas-run ICT-based system for monitoring and tracking reconstruction funds, and an open-access web site - e-Aceh).

Technical Annex 3 outlines the objectives and activities of a suggested participatory M&E system.

G. Governance Issues

- Governance framework for disaster-related expenditures. This will cover financing arrangements and their governance structure for all tiers of government; aid coordination, management, tracking and reporting arrangements; participatory planning and budgeting processes for prioritizing the use of rehabilitation/reconstruction funds; technical assistance for strengthening the policy-planning-budgeting linkage; independent verification and validation (IVV) of relief, rehabilitation and reconstruction expenditures and activities by engaging one or more reputable firms; assessing whether the appointment of a procurement agent is necessary; credible and effective complaint handling mechanisms; and effective oversight arrangements.

- Civil service capacity and integrity. Key actions include strengthening capacity of local civil servants; rationalize distribution of civil servants across regions; clarify the appropriate role and model for civil service with equal opportunity for all, and new recruitment, training, and performance evaluation processes.

- E-Aceh – empowering communities and governments through information, through an electronic information and monitoring portal, part of which will be publicly accessible. An prototype is being developed by Bappenas with technical support from the World Bank.

The special case of Aceh: it may be necessary to re-examine the legal framework for local autonomy. This could cover: (a) assignment of responsibilities/functions and resources, (b) streamlining/augmenting administrative structures; (c) strengthening the budget (process, transparency, coverage, execution accountability and oversight, expenditure tracking, transparent procurement); (d) strengthening financial controls and audit, and publication of audit findings; (e) civil society participation in budget formulation and oversight/monitoring of budget execution and procurement. The exercise would also be aimed at removing the conflict of laws on accountability structures among different levels of government.

G. EXAMPLES OF Programs

Examples of existing and new programs have been illustrated in Section F above and in Technical Annex 3.

H. Costs

The cost of financing rehabilitation and reconstruction is very preliminarily and conservatively estimated at US$81.2 million. However this cost is likely to increase since (a) loss and damage reports are still preliminary, (b) numerous buildings still standing may be discovered during seismic assessment to be structurally damaged and may need major repair/replacement, and (c) it is assumed that reconstruction will seek to strengthen and 'disaster-proof' physical infrastructure by rebuilding to higher standards and modern building codes. The phasing of the costs over the next three years is likely to be 20 per cent-40 per cent-40 per cent given the design and procurement processes applicable.

TECHNICAL ANNEX I SECURITY AND JUSTICE: IMMEDIATE ACTIONS

Law and Order

The post-disaster situation has significant potential for partial or structural collapse of law and order. This will complicate the recovery and rehabilitation process, and dramatically weaken foreign assistance. Currently it appears that the institutions and agents through which law and order is upheld are dysfunctional or absent. Police is not present in a structural manner, and the command hierarchy is fragmented or has collapsed. Investigatory, prosecutorial and adjudicatory services have collapsed. There are reports that detention facilities are absent. Also, reports have come in that no standing procedures are in place to assist the police to maintain law and order. There are reports that judges have fled to other parts of the country.

There is an immediate need to put in place services, facilities and procedures through which public order and the rule of law can be upheld. Such services, facilities and procedures are directed to uphold the rule of law, begin to provide basic legal services for destitute citizens and communities through interim measures, help secure and uphold the security and integrity of the assistance agencies and the goods and services they deliver, help ensure proper other facilities including traffic control, interim zoning measures and emergency facilitation. Also, by upholding the rule of law in a prompt, equitable and effective manner, the state reinforces its legitimacy and authority.

The effectiveness or legitimacy of services does not depend on buildings being restored: much can be done from temporary premises. Restoration of the core judicial and legal services should focus on identification and notification of temporary premises and wide advertisement of their location and hours of business.

Several responses need to be realized within the next 3-5 days. They include:

- Emergency regulations allowing for expedited processing of specific categories of crimes directed against property and persons;
- Notification of interim courts and appointment of interim judges;
- Establishment of interim prosecutorial advocacy services;
- Strengthened deployment of police for security, traffic control, guarding relief supplies and convoys, and strengthened police command structures and communications;
- Notification of interim detention facilities;
- Establishment of public information services notifying affected communities of regulations, measures and their rights.

Legal Rehabilitation

Legal rehabilitation refers to the re-establishment of legal rights. This is necessary in conditions in which the specific nature of rights or the holder of such rights have gone missing and must be deemed to be legally dissolved. Such can occur in the event that public registers in which rights are lodged have disappeared, or the distinguishing markings by which property rights are defined have disappeared, or the holder of rights has disappeared, and the rights need to be re-assigned, to name a few examples.

The re-establishment of rights involves two main elements: (a) a method by which the rights are verified and if need be re-defined, and (b) a procedure by which they are formally established. An example of the first occurs in the event of an adult claiming legal guardianship over an orphaned minor on the basis of kinship. In such event the claim of such adult needs to be verified (i.e. his right according to Indonesian law needs to be established), and if agreed, his guardianship needs to be affirmed. A similar example can be conceived for property rights.

Legal rehabilitation therefore involves establishing (i) an institution or council properly empowered to formally establish rights and (ii) a procedure and method by which this is effected. Indonesia has a precedent in this area from the late 1940s. It remains to be seen whether this is a useful model.

In the estimation of informed Indonesian observers, this process cannot be delayed, as there is considerable social fluidity in the area that, if continues unchecked, is in danger of creating faits accompli that are very difficult to undo subsequently. Examples are unlawful expansion of buildings, construction of buildings on land said to belong to different persons, informal adoption and the like.

Immediate actions to be taken by the Ministry of Justice in consultation with the Supreme Court include:

- Establishing an inventory of the problems and definition of responses (eventually considering Indonesian precedent and practice in other countries);
- Creation of a Council for Legal Rehabilitation, and promulgation of the procedure for Legal Rehabilitation;
- Notification of specific sectors of activity where legal rehabilitation will be required (urban property, agrarian properties, family, inheritance & insurance claims etc.), and promulgation of procedures for the creation or reconstruction of the requisite records and documents (e.g. new public registers, etc.)
- Notification of modes of public information and access to such records/documents.

Public Information, Access and Empowerment

The current conditions and the rehabilitation process is liable to significant abuse, and close and sustained attention must be spent to putting in place proper information, access, due process, monitoring and empowerment instruments to maximize access and minimize abuse. Complaint handling methods would be a necessary complement. Civil society organizations can play a significant role in ensuring that the system works, especially for the poor and vulnerable sections of the population in the affected areas.

Assessment of Damage and Physical Restoration

Loss and damage information needs to be compiled quickly. Information on loss and damage to justice and security entities is still scanty. It is essential that reliable information be obtained by the justice and security entities and shared with Bappenas and relevant entities so that the cost of repair and restoration can be estimated and resources allocated. Attention will need to focus on the core infrastructure of security and justice comprising court houses, prosecutorial offices, police facilities, detention centers, public registers, etc. The physical repair and restoration will follow.

Technical Annex 2

OVERVIEW TABLE: PUBLIC ADMINISTRATION AND GOVERNANCE

	Rehabilitation Phase	"Reconstruction Plus" Phase
Possible programs (will be divided into existing and new after consultations)	Public administration: Cleaning of debris through community-based labor intensive methods Re-establishing full central and provincial government treasury functions for disbursement of salaries, social assistance and relief expenditures Rehabilitation of public buildings and basic infrastructure through a contractor Procurement of basic office equipment Incentives for displaced civil servants to return to work Recovery and reconstruction of public records Law enforcement and justice: all of the above plus Emergency regulations allowing for expedited processing of specific categories of crimes directed against property and persons; Notification of interim courts and appointment of interim judges; Establishment of interim prosecutorial advocacy	Public administration: Reconstruction of damaged and destroyed physical infrastructure and facilities Strengthening the functioning of oversight institutions (Bawasda and others) so as to enhance transparency and accountability of the autonomous province Providing civil servants with training opportunity for disaster management and prevention, through seminars, workshops, and study tours. Law enforcement and justice Establishment of a special panel if necessary to investigate and resolve crimes committed during the disaster Work with NGOs and local government to strengthen access to justice of those affected Reconstruction of damaged and destroyed physical infrastructure and facilities (court houses, prosecutorial offices, police facilities, detention centers, public registers, etc) Legislature: Resolve the conflicting laws on civil service, e.g, authority to

	Rehabilitation Phase	"Reconstruction Plus" Phase
	services; Strengthened deployment of police for security, traffic control, guarding relief supplies and convoys, and strengthened police command structures and communications; Notification of interim detention facilities; Establishment of public information services notifying affected communities of regulations, measures and their rights If necessary, recruitment of judicial personnel, legal professionals Establishing an inventory of the problems and definition of responses (eventually considering Indonesian precedent and practice in other countries); Creation of a Council for Legal Rehabilitation, and promulgation of the procedure for Legal Rehabilitation; Notification of specific sectors of activity where legal rehabilitation will be required (urban property, agrarian properties, family, inheritance & insurance claims etc.), and promulgation of procedures for the creation or reconstruction of the requisite records and documents (e.g. new public registers, etc.) Notification of modes of public information and access to such records/documents	recruit civil servants at the local level Provision of incentives for displaced civil servants in the parliament and provincial parliamentarians to come back to work Recruitment of local civil servants

	Rehabilitation Phase	"Reconstruction Plus" Phase
	Engagement of paralegals by NGOs/CSOs for assisting households and businesses to recover/reconstruct legal records Recovery of court decisions and records <u>Technical assistance</u>: Assess urgent public administration TA needs Finalize immediate training needs with Indonesian and other (e.g. ASEAN/ Asian/ Australian countries) training institutes	
Fiduciary issues likely to impede speed of rehabilitation and reconstruction	<u>Procurement</u>: Enhanced disclosure by all bidders for contracts above a threshold agreed with GOI (e.g. US$100,000) The existing PMU structure is likely dysfunctional. One option may be to bring in PMU staff from other regions. Fiduciary risks will remain high. <u>Suggestion</u>: direct contracting by PMU or appointment of a procurement agent. Procurement through local shopping by communities for CDD and block grants? Single-sourcing local individual consultants and facilitators for UPP/KDP projects? If moved from other provinces, additional hardship allowance on temporary basis? <u>Implementation</u>: Strengthen oversight arrangements, especially for rehabilitation civil works, and engage reputable consultants. Where local PIUs are dysfunctional in Aceh, assistance may be obtained from neighboring provinces (GOI concurrence will be needed, and this will need to be included in the MOU) Community involvement in monitoring: can be applied to KDP, UPP, Basic Edu block grants (for transparency,	

	Rehabilitation Phase	"Reconstruction Plus" Phase
	community involvement to be documented and submitted to PIU) Use of existing project Operating Manuals: (a) modifications and training will be required where Aceh was not included in existing project design, or where new reconstruction components are being added; special travel allowances to be specified for facilitators and local individual consultants brought from other regions <u>Payment to vendors and contractors</u>: For payments through KPKN, existing KPKNs are to be used where these are functional. In areas where KPKNs are destroyed, nearest functioning KPKN to be activated and authorized (MOF DG Treasury has promised details of Aceh KPKNs Tuesday) Payment validation for expenditure eligibility: (a) Rely on traditional Govt. agencies (PIU) and staff for all ex-ante payment validation, or (b) introduce regular interim validation (value for money) by contracted third parties, or (c) intensive validation (value for money) by project auditors BPKP on an interim basis <u>Disbursements and replenishments:</u> Preparation of Withdrawal Applications from Special Accounts to continue Management and reconciliation of Special Account <u>Accounting, reporting, financial controls and audit:</u> Completing financial statements for 2004 Completing regular financial reports for reconstruction work 2005 Completing audits for 2004 Completing audits for reconstruction work 2005	

TECHNICAL ANNEX 3 PARTICIPATORY MONITORING AND EVALUATION

- **Objectives**. Monitoring involves observing change and assessing activities and trends on an ongoing basis, while evaluation is comprised of the assessment of strategic issues, changes, achievements, impact, and efficiency of projects. By allowing for local participation in both activities, the community is not just a source of information, but has an opportunity to build capacity and ownership for rehabilitation and reconstruction, and help formulate and implement corrective action during implementation. For participatory monitoring and evaluation (PME) to truly be effective however, it must include four core principles: participation, learning, negotiation, and flexibility. PME also allows for managing and resolving conflicts – a skill that if transferred would help enrich the development process. In addition, PME strengthens self-development initiatives in communities and provides public accountability of local and national government programs to communities.

- **Continuity in participation**. Baseline information on the community before the disaster must exist. Thus PME builds on the relationships and conclusions already established in the initial social assessment. PME can take place by the stakeholders themselves, while results are standardized for comparison. In order for communities to be successfully involved in PME efforts, some brief training should occur during the initial stages, preferably during an initial social assessment (who does it, why is it important, how and what to do with the results).

- **Constraints**. People's participation in monitoring and evaluation is mitigated by several factors, including: their perceived benefits (and partial or short-term costs) to participating in monitoring and evaluation; the relevance of PME to the priorities of participants; quick and relevant feedback of findings; attempting to meet expectations that arise from the ongoing PME process (or at least address these concerns if they cannot be met) - this helps ensure long-term participation; not overly focusing on either short-term or long-term needs, but balancing efforts on addressing both; degree of capabilities, leadership, and identity of the groups involved, including openness to sharing authority; local political economy, as this influences society's openness to stakeholders' initiatives; and incentives and resources to make the PME possible (pens, books, paper, etc.).

- **Activities**. PME consists of data collection, registration, compilation, analysis and sharing the data again with those who are to use the information. The key PME question is who will interpret the information (e.g. the community to ensure relevance and appropriateness) and who will use the information (e.g. provincial government to improve service delivery). The information derived from PME should be integrated into the periodical progress reports. Not only would PME help verify technical and financial reports, but it would also produce perceptions

of how the community views the rehabilitation/reconstruction activities, and their effectiveness, problems, local involvement, and impact.

- PME indicators. Some PME indicators are chosen by participants. This is an essential process: it helps build consensus on the development vision in the community. In addition, a set of indicators to standardize results must be selected. However, it is important not to utilize too many indicators for monitoring and evaluation, for it can obfuscate and misdirect the exercise. Instead, there should be relatively few, precise indicators which cover a broad base of areas; it is also important to make sure that these few indicators meet the different information needs of those involved, including short- and long-term aspects, general development process issues and concrete initiatives, and qualitative and quantitative standards.

1. Implementing monitoring. During implementation, teams would regularly visit the community to undertake PME. With reference to the baseline information established in the initial assessment, the team would also: (i) assess the degree of community participation in monitoring; (ii) review the community's in-kind contributions and identify related problems; (iii) facilitate meetings between community development committees, other beneficiaries, government staff and contractors; (iv) undertake applied training in participatory methods; (v) assist in the solution of problems encountered, using community-based and/or workshop-based approaches as well as different interview methods; and (vi) gain local perceptions on the developmental impact of the activities. The teams would submit short monitoring reports [to xxx] after each visit, containing qualitative analyses (including results from diagram, mapping, and ranking exercises) describing information obtained in monitoring workshops, while bearing in mind the results and structure of the social assessment and community action plan. In addition, the monitoring reports should include a standardized form to facilitate comparison over time and in relation to other communities.

Implementing evaluation. A final evaluation exercise ("social audit") would be undertaken annually for a randomly selected number of completed activities. This evaluation would employ participant observation as well as various participatory interview techniques. The assessment would evaluate the effectiveness of the institutional and implementation arrangements, assess the development impact of the activities, and analyze the effect on the level and density of community social capital. Furthermore, it would include a set of questions similar to the appraisal and monitoring forms to standardize results. The final evaluation would be carried out by independent consultants who have not been involved in the initial assessment and monitoring activities. The lessons emanating from these evaluations would be used to improve activity implementation.

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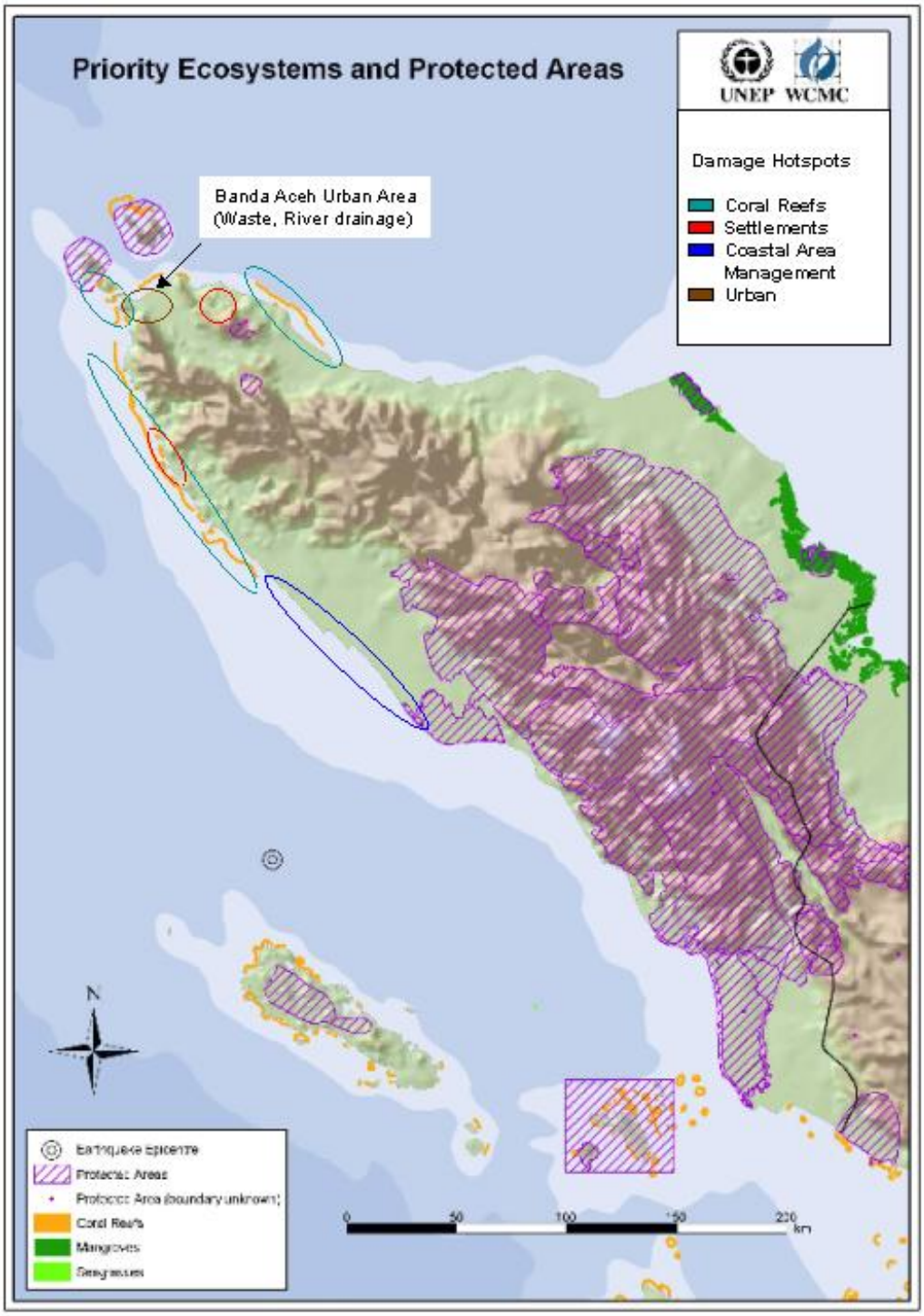
[i]Many of these records (e.g. land titles, survey records, bank documents, business registrations, tax records, etc) are needed by both government and beneficiaries for relief, rehabilitation and reconstruction.

ANNEX 2: DAMAGE HOT SPOTS



Such a decision would most likely be based on a combination of technical issues (e.g. which regions still have functioning KPUDs and DPRDs) and political considerations, where local concerns are fed into the entity mandated to take the formal decision. However, if postponement of Bupati and Wali Kota elections is agreed upon, consideration should be given to postponing the election for Governor, also scheduled for the same time: although the election could be conducted across most areas of Aceh province, the inability to conduct them in certain coastal regions may raise issues as to the legitimacy of the victor, especially if voting patterns vary between the urban coastal regions and the hinterland. There are already press reports about the military in Aceh selling relief supplies.

Some gender balance, though, may be desirable, especially for services affecting women and children

[v] The most important legislative documents lost are the budget documents for 2005. They were most likely in the last stages of the approval process. However, since the needs will have changed drastically, it is unlikely that these documents will have any value now.

Managing Reconstruction Transparently

Aceh Photos donated by: Jez O'hare

15. MANAGING RECONSTRUCTION TRANSPARENTLY

OVERVIEW

This note recommends the adoption of a fiduciary strategy as part of the government's overall disaster response strategy. The future development of Aceh and North Sumatra will very much depend on the design and financing of the reconstruction program. For the reconstruction program to succeed it is important that: (a) a comprehensive damage and needs assessment is conducted and a framework put in place to update and monitor needs; (b) reconstruction funds are mobilized quickly; and (c) fiduciary concerns are addressed in the reconstruction strategy and in the use and management of the funds. A fiduciary strategy will help Indonesia (a) strengthen coordination arrangements within the donor community and between donors and the government; (b) manage the foreign currency inflows and ensure that short-term spending responds to the needs for emergency assistance, rehabilitation and reconstruction, in line with government priorities; and (c) ensure adequate accountability arrangements for monitoring the effectiveness of emergency spending to prevent waste and misuse of funds.

KEY FIDUCIARY RISKS

The disaster has occurred at a key point in Indonesia's public financial management reform process. These reforms address key accountability weaknesses and focus in the first phase on mitigating fiduciary risks. While significant risks remain, therefore, there has been progress on implementing fiduciary reforms. Most importantly, implementation of three landmark laws (on State Finances, Treasury and Public Audit) is under way, and the Ministry of Finance is undergoing a functional reorganization.

Key fiduciary risks remain to be addressed. These emanate from (a) a still-incomplete regulatory framework for cash and asset management (thousands of bank accounts are held by government entities at all levels – many of these are unauthorized bank off-budget funds – and a redundant and uncoordinated proliferation of stand-alone computerized government accounting systems); (b) a weak institutional environment exemplified by a manual treasury payments system which makes it difficult to stop leakage and corruption, fragmented and often unreliable accounting and reporting, and sub-national government capacity

constraints; (c) persistent budget formulation inefficiencies and major gaps in budget coverage due to off-budget operations of entities; (d) delays in budget execution, inefficient spending unit budget management systems and weak monitoring arrangements; (e) deeply-entrenched corruption and collusion in procurement and contract implementation processes (corruption and collusion also limit competition and add to costs, while the lack of capacity in working level staff of the tender committees makes them vulnerable to undue and improper influence); (f) the mandates of government audit entities are characterized by unclear roles, responsibilities, authority, funding, reporting, and accountability.

Fiduciary risks are particularly high in Aceh province, which has a long history of weak governance and a more recent history of alleged high-level and pervasive corruption, for which the Governor has been indicted. Furthermore, Aceh has received substantial inflows of public funds following decentralization, and the transparency and accountability for the use of these funds is less than satisfactory compared to prevailing standards in the rest of Indonesia. This makes it even more imperative to quickly develop and implement effective fiduciary safeguards for the management and use of reconstruction funds.

GUIDING PRINCIPLES

Indonesia's fiduciary strategy could be guided by the following principles:

- **Government ownership and coordination**. The Government of Indonesia (GOI) should play the principal leadership role in coordinating aid and ensuring that all funds – pledged and otherwise - are managed appropriately. Donors would play an advisory role to the GOI, with appropriate coordination arrangements to avoid donor duplication of effort[i].

- **Budgetization of aid.** Official aid would be budgetized in the GOI budget: inflows, including debt relief, would be shown as revenues or financing; outflows would be shown as spending, using the GOI's budget classification system.

- **Consolidation of funds.** The pooling of donor resources in a single account is recommended. Separate donor-managed funding arrangements for channeling the aid should be avoided.

- **Accounting and reporting.** To the fullest possible extent, the GOI's accounting system should be used for recording and reporting donor-financed outlays.

- **Audit.** Special arrangements should be set up to ensure adequate accountability for the use of donor-provided assistance.

The Government decision on the mode of financing the reconstruction will influence the shape and elements of the fiduciary strategy. It is assumed here that the Aceh Reconstruction Fund is the most likely option that will be considered.

LESSONS LEARNED

Lessons from other countries point to the importance of encouraging donors to relinquish control over their "own" funds, conditional on adequate control, reporting and accountability mechanisms being established and used. Other important lessons comprise:

- **Ownership and coordination**. The assessment of needs was typically carried out jointly by donors and governments, with extensive use of coordinating committees. In the face of weakened analytical and implementation capacity, this approach could raise the risk of "donor-driven programs" in a particular sector, which would be disadvantageous if the donor's priorities for that sector were not aligned with those of the government. However, close oversight of the process by the authorities can mitigate this risk.

- **Harmonization**. In none of the three recent country examples (Afghanistan, Haiti and Timor Leste) has there been full harmonization between donor-financed expenditures and those covered by the budget and accounting system. In all three countries, budget documents incorporated donor inflows and donor-financed expenditures comprehensively. However, only a portion of the reconstruction spending from a multi-donor trust fund in Afghanistan passed through normal budget execution procedures. Timor Leste's reconstruction spending—also through a special trust fund—was outside the budget entirely and each project had its own accounting arrangements, resulting in a fragmented system. In both countries, different disbursement modalities to those were put in place for recurrent and investment expenditures, in part to facilitate swifter implementation, without compromising coordination and accountability. Some bilateral donors or expenditures of a particular type may remain outside the budget of the recipient country.

- **Reporting and accountability**. Given the weaknesses of domestic auditing mechanisms, a special independent audit arrangement was set up to provide oversight for donor-financed recurrent budget disbursements in Afghanistan. It appears to be working satisfactorily. The domestic external audit offices, as well as an independent international auditor, provide financial oversight of donor-financed outlays. In the other two countries, donors' own auditing mechanisms were used to a greater extent

Applying the general principles for aid management in emergency situations. Good principles for aid management have been established by the donor community. In 2003, in Rome, donors recognized the burden on recipient countries resulting from widely differing donor requirements and processes for the preparation and delivery of aid. Accordingly, bilateral and multilateral donors made a declaration of important principles.[ii] The same principles can be applied to emergency aid. These include:

- Ensuring that development assistance is delivered in accordance with partner country priorities and based on a needs assessment.

- Ensuring that harmonization efforts are adapted to the country context.

- Identifying ways to amend individual institutions' (donors') and countries' policies, procedures, and practices so as to facilitate harmonization, reduce donor

missions, review, and reporting, streamline government actions and simplify and harmonize documentation.

- Strengthening governments' ability to assume a greater leadership role and take ownership of development results.
- Providing budget, sector, or balance of payments support where it is consistent with the mandate of the donor, and when appropriate policy and fiduciary arrangements are in place.
- Aligning budget and sector support with the national budget cycle.

Significant benefits can arise when the government takes pro-active responsibility for coordinating donor assistance and allocating it according to government priorities and needs. The development of a national reconstruction framework, based on a needs assessment and endorsed by donors, was a critical first step by the authorities. Another critical element was the rapid establishment of mechanisms for recording, reporting and accounting for donor assistance.

ELEMENTS OF THE FIDUCIARY STRATEGY

Establishing the parameters and procedures for the proposed Aceh Reconstruction Fund if this option is decided upon by Government. These will include:

(a) **Principles and design issues.** The Fund must fulfill both a fiduciary and an executive function. It would have to be part of a realistic, comprehensive, national government budget, and consistent with the reconstruction program. It should strike a balance between the needs on the ground and the supply-side considerations from donors. This includes that the recovery fund addresses perceived priority purposes while precluding earmarking of aid. The coverage of an umbrella reconstruction fund can encompass all civilian expenditures, including start-up costs, salaries and pensions, operations and maintenance, investments (except very large flagship investment projects) and non-project Technical Assistance.

(b) **Organizational and procedural arrangements**.

- Establishing a "Reconstruction Management Agency" as a bridge between donors and government.
- Time is of the essence in post-disaster situations. The proposed Aceh Reconstruction Fund should start implementation after the first pledges are deposited, after clarifying how and where it will be established, how it will be administered and by whom.
- However, no compromise can be made with the need to minimize corruption and leakages before the Fund starts disbursing. While it is desirable to apply international best practice with respect to procurement, financial management and auditing. it may be unrealistic to expect this in emergency situations. Where departures from best practice need to be made (e.g. for procurement there may be

single source selection, and shopping for high values) these should be done on an exceptional basis to respond quickly and effectively to the emergency, subject to clear safeguards (e.g. appointment of an independent procurement agent and monitoring agent for procurement processes).

- While the agreed reconstruction program is essential, an unallocated financial cushion should be maintained for urgent expenditure needs as they arise.

- The administrator should be prepared to halt disbursements in the event of serious deviation from the agreed policies and expenditure composition, and/or corruption, with measures put in place to identify and report such instances promptly.

Reaching agreement with donor partners on specific actions to harmonize their accounting, reporting and auditing arrangements so that Government is not burdened with duplicate requirements.

Establishing procedures to balance the need for speed in processing transactions (so that aid delivery is not adversely affected by bureaucracy) with fiduciary reassurance on proper use of funds. Such procedures will cover:

- *For procurement,* it would be desirable to agree on special procedures with implementing agencies to allow direct contracting of goods and services and sole-source appointment of individual consultants where required and justified. Procurement guidelines of the World Bank could be used. The use of Procurement Agents will be explored for larger value transactions: they will be given complete authority to execute procurement transactions based on specifications agreed to ex-ante by the Government implementing agencies. Major procurement transactions will also be publicly disclosed in local communities after award of contracts, and on a website owned and managed by the Government. Prior review of procurement transactions will be based on predetermined financial levels agreed at the outset and based on the needs **assessment.**

- ***Implementation of works in the field*** will essentially be supervised by regional Government agencies. However, for payment purposes, satisfactory completion of works will be certified by community groups and NGOs, where feasible. Completion of local works will also be publicly disclosed in local communities and local mass media. Completion of larger value contracts will be publicly disclosed through on a website. Supervision missions will be undertaken jointly with GOI and donors on a 6 monthly basis.

- *Fund Flows and Payment Validation procedures.* The government has three broad options to channel the funds to reach the beneficiaries on the ground: (i) Deconcentrated spending (DIPs); intergovernmental transfers (DAU or DAK), or (iii) Emergency Grant (Dana Darurat). Each of these challenging mechanisms has advantages at different stages of the recovery. DIPs are a useful tool for large infrastructure rehabilitation which is likely to coordinated by the center and provincial authorities. DIPs are not likely to be an effective tool for the whole recovery effort given that they will need to be phased out (according to law 33/2004) because they contradict current decentralization laws. DAK and DAU

should both be considered when local governments are functioning again. Finally, the Dana Darurat has been used in previous crisis situations (e.g. after civil strife in the Mulukus) and seems to well suited to provide targeted, flexible and unconditional assistance in crisis situations.

Overall, a phased approach with a preference towards the Dana Darurat for most of early the recovery spending, possibly converted into a DAK at a later stage of the reconstruction, and some DIP-spending, is probably the best option. This would highlight the exceptionality of the assistance and allow for easier phasing out or transfer to local governments through DAKs which would allow at the same time that national (reconstruction) priorities are met.

Most of the disbursements will be made from central treasury offices (KPKN) located in North Sumatra Province. More details on which KPKN Offices are functioning is awaited. Based on preliminary discussions with Ministry of Finance, it is anticipated that fully manned and functioning KPKN offices in North Sumatra will be available within the next 4 months to provide this service. After an initial advance from donors, further replenishment will be based on cash forecasts and satisfactory accounting and reporting of the previous 6 month reporting period.

Payments will be made based on properly authorized contracts, where applicable, and payment requests initiated by designated sectoral agencies in the regions. Special instructions will have to be issued by the Ministry of Finance to specify that comprehensive primary accounting evidence will be retained at KPKN offices for audits. These include all original third-party documents that prove in a verifiable manner that the transactions have been incurred, i.e. contracts authorized, transactions invoiced, goods received, civil works constructed, expenses incurred and services implemented and accepted.

A separate bank account at Bank Indonesia will be used to channel funds for aid work, so that all transactions can latter be reconciled with accounting records. Operation of the account would be authorized under existing GOI authorities (which include a single operating authority for approved treasury officers).

- *Accounting and Reporting.* All aid transactions will be recorded into a separate set of account heads for which GOI Treasury will have to make arrangements, including a modified chart of Accounts. The chart of accounts will allow a simplified classification that reflects the kinds of expenditure incurred. The transactions will be captured at the first instance at the disbursement point - the central Treasury Offices (KPKN) in Sumatra Region. Consolidation of transactions will be done at the Provincial level. Reconciliation of accounted transactions with the Special Bank Account is a key step to ensure integrity of reporting, and will be undertaken at the central level, at the Ministry of Finance, Directorate General Treasury. Quarterly reporting will be undertaken by a Ministry of Finance monitoring cell. These reports will allow comparison of disbursements made with budgetary authorizations, on a quarterly as well as cumulative basis.

- *Auditing.* All financial transactions will be audited jointly by a leading private audit firm and the Supreme Audit Agency, BPK, on a quarterly basis, based on which a quarterly audited report will be prepared and submitted to the central government as well as donors. The contents of the report as well as audited financial statements will be publicly disclosed. Terms of reference to be developed

for this audit work will include a requirement to certify the quarterly financial statements, and a requirement to verify physical implementation has been as documented and if reasonable value for money has been received. All significant exceptions will be reported to the Government of Indonesia.

- *Sanctions & Remedies.* A regime for sanctions and remedies for cases of malfeasance and fraud will be set up as an integral part of the accountability arrangements. This regime will be well publicized. It will include a mechanism to receive and investigate public complaints with respect to utilization of aid, and will be managed by the BPK, which is empowered to investigate such cases and proceed to law enforcement where warranted. Separate funding for this work will need to be provided by donors for this purpose.

Design and implementation of an ICT-enabled aid management, coordination and tracking system. Such a system can assist Indonesia and its development partners to manage resources allocated to development and reconstruction activities. It will promote information sharing on aid activities from conceptualization to implementation, and facilitate collaboration between government and donors leading to more transparent and efficient processes for allocating and reporting on funding and resources. The key role of the system is to track and report on the delivery of aid for better planning and service delivery. The system will be integrated into Indonesia's financial and budgetary processes and will also provide for the monitoring of results associated with the provision of aid. Ultimately, the system can support aid management, coordination and planning by leveraging information technologies to access real-time information on donor activities as they are initiated and implemented. The outline of such a system, used in other countries, is in Technical Annex 2.

System components. A primary focus will be the provision of up-to-date information on requests for and allocations of donor funding, for administrators in the government. The Coordination of Aid and Monitoring of Projects System (CAMP) will include components that will: (i) capture information on aid flows; (ii) capture information on the progress of aid related activities at various stages—from inception through implementation to completion; (iii) monitor the impact of aid (physical progress); (iv) enable more informed decision-making through scenario modeling; and (v) provide tools for analyzing and reporting captured information. CAMP is an information technology tool that will pool data on aid flows in a consistent manner, thus allowing Indonesia and its development partners to: (i) view data provided by development partners and cross-check with their own data, thus reducing double-counting and under-reporting of development assistance; (ii) better capture development resources channeled directly to regions through increased donor transparency; and (iii) increase the speed of information collection and timeliness of dissemination. More details on the CAMP, and its relation to the governance arrangements for reconstruction in Aceh and North Sumatra, are in Technical Annex 2.

Establish processes to govern transparency and accountability in the use and disposal of public assets. International experience has shown that disposal of damaged public assets immediately after a disaster – and before reconstruction begins - provides great scope for corruption and collusion resulting in the enrichment of the bidders for the assets and corrupt government officials. In Aceh, it is very likely that damaged infrastructure and movable assets will have to be auctioned off before

reconstruction, raising the specter of a new category of fiduciary risks. Key elements to be covered in a fiduciary strategy include:

- *Typology of public assets and fiduciary risks.* Public assets include: (i) *immovable assets* such as land, public infrastructure (electricity, water, telecommunications, roads, and gas), military installations and other public buildings (e.g. schools, health and community centers); (ii) *intangible but productive assets* such as agricultural businesses, manufacturing and industrial enterprises owned by state entities; and (iii) *movable assets* such as equipment and vehicles. Post-disaster fiduciary risks include (a) incomplete inventorying and/or under-valuation facilitating asset-stripping in a fragile governance environment, (b) non-transparent, collusive and/or corrupt modes of disposal of damaged assets; and (c) failure to adequately guard valuable assets leading to loss or damage through theft, looting or negligence.

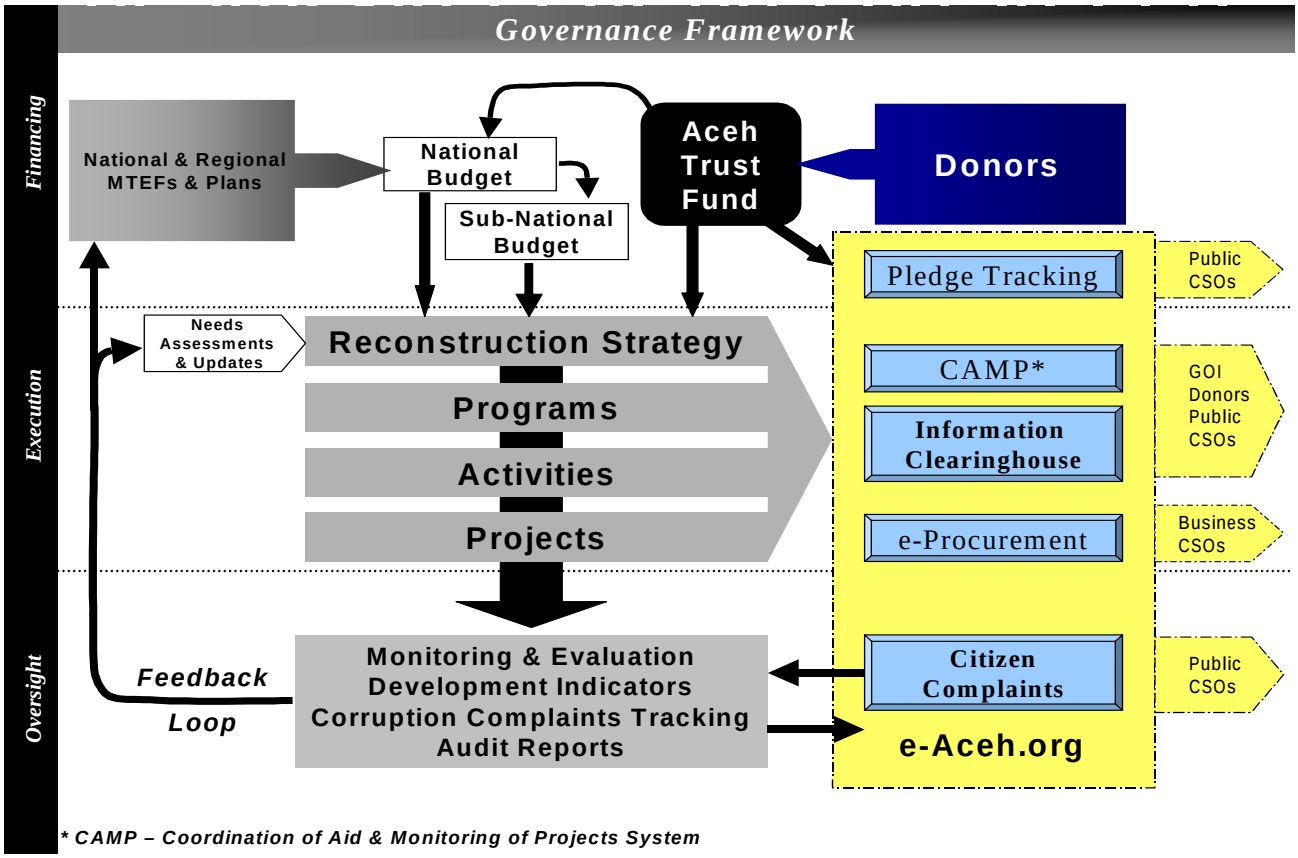
- *Disposal of damaged government property and assets.* The disposal of damaged government property and assets needs to be well-planned, speedily executed and publicly reported. It is desirable that the disposal process be transparent and agreed between the national and provincial governments, from the accountability, security and technical perspectives.

- *Inventorying and re-valuing assets owned by different agencies* is another task that has been started. However it is recommended that this be done systematically, in a uniform format, and that agency lists be compared to eliminate double counting and to ensure uniformity of valuation methodology. This is especially important in urban areas where land values are likely to be significantly higher. This work will have to be coordinated with sectoral agencies.

- *Re-verification of title to public assets.* Where title to government lands and other assets requires to be verified or re-established (e.g. where the boundaries or configuration of such lands have been altered by the earthquake/tsunami or occupied without authorization), such work should be started without delay, after formation of a single coordinated national-provincial-kota-kabupaten team with the requisite skill mix and following a transparent and participative process involving community organizations and civil society.

- *Survey and boundary-marking services for individuals and businesses.* To minimize legal and administrative complications, an action plan be prepared by the authorities, if necessary with donor technical support, for rapid survey and boundary marking, so that households and businesses alike can obtain documentary proof of their land holdings where boundaries may have been altered or proof of boundaries lost/damaged. An option could be to use specialized human skills available with the armed forces' survey, reconnaissance or engineering units, which can help "ground-truth" data from satellite imagery and aerial photographs.

Lastly, the fiduciary strategy should be informed by feedback from a participatory monitoring and evaluation process (more fully described in Technical Annex 3).


Governance Framework
Financing
Execution
Oversight
National & Regional MTEFs & Plans
National Budget
Sub-National Budget
Aceh Trust Fund
Donors
Needs Assessments & Updates
Reconstruction Strategy
Programs
Activities
Projects
Pledge Tracking
CAMP*
Information Clearinghouse
e-Procurement
Citizen Complaints
e-Aceh.org
Public CSOs
GOI Donors Public CSOs
Business CSOs
Public CSOs
Feedback Loop
Monitoring & Evaluation
Development Indicators
Corruption Complaints Tracking
Audit Reports
* CAMP – Coordination of Aid & Monitoring of Projects System

TECHNICAL ANNEX I: KEY FIDUCIARY RISKS

KEY FIDUCIARY RISKS EMANATE FROM:

A still-incomplete regulatory framework to address fiduciary concerns: implementing regulations for the new Laws on State Finances, State Treasury and State Audit are incomplete, a Treasury Single Account is not yet effectively established, the manual treasury payments system makes it difficult to stop leakage and corruption, a new law on public procurement is still under preparation and government accounting standards are not yet modernized. The continuing reorganization of the Ministry of Finance and an inadequate regulatory framework for cash and asset management add to the risks.

A weak institutional environment. There are still thousands of bank accounts held by government entities at all levels, significantly weakening public financial management. In addition procurement and contract management processes are prone to corruption, compounded by weak institutional capacity and opaque and dilatory processes. Capacity weaknesses in regional governments add to these risks.

Budget formulation inefficiencies persist. In the past, it was difficult to quantify basic components of the budget, e.g. total public investment or sectoral allocations. This led to enormous inefficiencies because it was difficult to evaluate government programs. There are also major gaps in budget coverage owing to the prevalence of thousands of off-budget funds. The new budget preparation process is still in its infancy. Efficient preparation and coordination processes will need to be worked out by MOF and Bappenas.

Budget execution is often delayed and monitoring arrangements are weak. Currently, delays and inefficiencies in the treasury payment system raise the cost of supplies to government and are the source of significant governance-related problems. In addition, the highly detailed nature of the budget allocations implies tight control in theory. However, in reality, the MOF was overburdened implementing the budget. Spending units were - and still are - often unable to get full or timely access to their budget allocations during the course of the budget year. When spending units do obtain their allocations, their management systems have been unable to disburse them with efficacy.

Procurement processes are prone to corruption and collusion. Corrupt and collusive practices are deeply entrenched in public procurement. Multiple legal instruments continue to regulate public procurement and limit competition. No

agency has a clear mandate for formulating procurement policy, monitoring compliance, and ensuring clear and enforceable sanctions. The lack of capacity of tender committees' staff makes them vulnerable to undue and improper influence.

Accounting and reporting are fragmented and not always reliable. The lack of segregation of key accounting duties in spending units, and lack of oversight of these functions either by spending ministry or MOF staff, is a serious weakness. The financial controllership function is non-existent at the spending ministry/agency level. Ex-post reviews of payment orders are compliance-oriented. Treasury and cash management functions are not well coordinated, and there is a redundant and uncoordinated proliferation of stand-alone computerized government accounting systems.

The mandates of government audit entities are not yet clearly defined. The under-resourced internal and external audit bodies in Indonesia are characterized by unclear roles, responsibilities, authority, reporting, and accountability. Furthermore, responsibilities between external and internal audit, between the BPK and BPKP, and the BPKP and the Inspectorate Generals respectively, have not yet been clearly defined.

TECHNICAL ANNEX 2

TRANSPARENCY AND ACCOUNTABILITY IN THE USE OF FUNDS

Co-ordination of Aid and Monitoring of Projects System (CAMP)

An ICT-enabled Co-ordination of Aid and Monitoring of Projects System (CAMP) – could be a very effective tool to support aid co-ordination. Member countries of the World Bank and the International Monetary Fund have placed considerable emphasis on implementing projects aimed at improving the management of public finance and assets. Many of the Bank's operations in the area of public sector modernization (including in Indonesia) deal with the introduction of Integrated Financial Management systems (IFMS) that track financial events and summarize fiscal information. By compiling and synthesizing this data, IFMS supports management reporting, policy decisions, fiduciary responsibilities and the preparation of auditable financial statements. Just as for any other financial activity of government, aid management would benefit from appropriate systems to support information sharing, planning, monitoring and reporting. Yet no common system[iii] exists to support this key activity of developing country governments.

The objective. The Co-ordination of Aid and Monitoring of Projects System (CAMP) will assist Indonesia and donors to manage resources allocated to development activities. It will promote information sharing on aid activities from conceptualization to implementation and facilitate collaboration amongst Government and donors leading to more transparent and efficient processes for allocating and reporting on funding and resources. The key role of CAMP is to track and report on the delivery of aid for better planning and service delivery. CAMP will be integrated into the financial and budgetary processes of GOI and will also provide for the monitoring of results associated with the provision of aid. Ultimately, CAMP will support aid management, coordination and planning by leveraging information technologies to access real-time information on donor activities as they are initiated and implemented.

Components. A primary focus will be the provision of up-to-date information on requests for and allocations of donor funding, for administrators in the government. CAMP will include components that will: (i) capture information on aid flows; (ii) capture information on the progress of aid related activities at various stages—from inception through implementation to completion; (iii) monitor the impact of aid (physical progress); (iv) enable more informed decision making through scenario modeling ; and (v) provide tools for the analysis and reporting of captured

information. CAMP is envisioned as an information technology tool that will pool data on aid flows in a consistent manner, thus allowing GOI and donors to: (i) view data provided by development partners and cross-check with their own data, thus reducing double-counting and under-reporting of development assistance; (ii) better capture development resources channeled directly to regions through increased donor transparency; and (iii) increase the speed of information collection and timeliness of dissemination.

Expected benefits. CAMP will benefit GOI and donors alike through streamlined processes, resulting in:

- Reduction of transaction costs on the overall process, as well as, an increase in effectiveness due to the more comprehensive gathering and more efficient (and earlier) use of information.
- Access to timely information that facilitates communications and coordination among national governments, non-governmental organizations, and international donors
- More transparent and efficient processes for allocating and reporting on development funds
- Greater harmonization of procedures for management and reporting

CAMP will:

- Reflect a country-specific perspective and allow governments and donors to share more timely and accurate aid information required for the annual budget preparation process. In due time, it will also address problems associated with multi-year predictability which is required for multi-year budget planning and prioritisation.
- Recognise that donors have their own processing cycle and procedures which can continue to exist. However, CAMP will derive information from donors according to the timetables required in support of the government budget cycle.
- Allow for multiple classifications (government, donor) to allow each entity to view data by their classification.
- Reduce transaction costs associated with data collection, processing, and management and reporting—saving time and liberating limited resources to allow government staff to shift focus to strategic tasks.
- Provide a consistent view of aid across sources of information (government and donors) and lead to the establishment of an authoritative source.
- Produce timely accurate and comprehensive reports covering all modalities of aid for the government and customised reports for donors on demand.
- Facilitate information sharing within government and with donors at federal and other administrative levels within a country.

- Provide a secure space for sharing sensitive information by limiting access to users with government permission—to ensure that the right information is available to the right people at the right time.

- Incorporate information sharing standards widely used within donor agencies

CAMP is envisioned to have the following modules: (i) An aid information module, consisting of the following information: Project information, information on physical progress, information on financial performance (including commitments - pledges, indicative and actual), and disbursements, and have some reference information on donors supporting the effort, countries contributing, currencies of commitment, sectors, etc. (ii) A management reporting and analytics module, allowing Government staff and donors to analyze information by amounts provided, areas of focus, results achieved. (iii) A knowledgebase module providing access to all relevant documents, correspondence, and assessments, related to the aid effort, and (iv) a what-if analysis module, allowing governments to use scenario modeling to help with more accurate budget processes and the predictability of donor aid.

TECHNICAL ANNEX 3

PARTICIPATORY MONITORING AND EVALUATION

Objectives. Monitoring involves observing change and assessing activities and trends on an ongoing basis, while evaluation is comprised of the assessment of strategic issues, changes, achievements, impact, and efficiency of projects. By allowing for local participation in both activities, the community is not just a source of information, but has an opportunity to build capacity and ownership for rehabilitation and reconstruction, and help formulate and implement corrective action during implementation. For participatory monitoring and evaluation (PME) to truly be effective however, it must include four core principles: participation, learning, negotiation, and flexibility. PME also allows for managing and resolving conflicts – a skill that if transferred would help enrich the development process. In addition, PME strengthens self-development initiatives in communities and provides public accountability of local and national government programs to communities.

Continuity in participation. Baseline information on the community before the disaster must exist. Thus PME builds on the relationships and conclusions already established in the initial social assessment. PME can take place by the stakeholders themselves, while results are standardized for comparison. In order for communities to be successfully involved in PME efforts, some brief training should occur during the initial stages, preferably during an initial social assessment (who does it, why is it important, how and what to do with the results).

Constraints. People's participation in monitoring and evaluation is mitigated by several factors, including: their perceived benefits (and partial or short-term costs) to participating in monitoring and evaluation; the relevance of PME to the priorities of participants; quick and relevant feedback of findings; attempting to meet expectations that arise from the ongoing PME process (or at least address these concerns if they cannot be met) - this helps ensure long-term participation; not overly focusing on either short-term or long-term needs, but balancing efforts on addressing both; degree of capabilities, leadership, and identity of the groups involved, including openness to sharing authority; local political economy, as this influences society's openness to stakeholders' initiatives; and incentives and resources to make the PME possible (pens, books, paper, etc.).

Activities. PME consists of data collection, registration, compilation, analysis and sharing the data again with those who are to use the information. The key PME question is who will interpret the information (e.g. the community to ensure relevance and appropriateness) and who will use the information (e.g. provincial government to improve service delivery). The information derived from PME should be integrated

into the periodical progress reports. Not only would PME help verify technical and financial reports, but it would also produce perceptions of how the community views the rehabilitation/reconstruction activities, and their effectiveness, problems, local involvement, and impact.

PME indicators. Some PME indicators are chosen by participants. This is an essential process: it helps build consensus on the development vision in the community. In addition, a set of indicators to standardize results must be selected. However, it is important not to utilize too many indicators for monitoring and evaluation, for it can obfuscate and misdirect the exercise. Instead, there should be relatively few, precise indicators which cover a broad base of areas; it is also important to make sure that these few indicators meet the different information needs of those involved, including short- and long-term aspects, general development process issues and concrete initiatives, and qualitative and quantitative standards.

Implementing monitoring. During implementation, teams would regularly visit the community to undertake PME. With reference to the baseline information established in the initial assessment, the team would also: (i) assess the degree of community participation in monitoring; (ii) review the community's in-kind contributions and identify related problems; (iii) facilitate meetings between community development committees, other beneficiaries, government staff and contractors; (iv) undertake applied training in participatory methods; (v) assist in the solution of problems encountered, using community-based and/or workshop-based approaches as well as different interview methods; and (vi) gain local perceptions on the developmental impact of the activities. The teams would submit short monitoring reports [to xxx] after each visit, containing qualitative analyses (including results from diagram, mapping, and ranking exercises) describing information obtained in monitoring workshops, while bearing in mind the results and structure of the social assessment and community action plan. In addition, the monitoring reports should include a standardized form to facilitate comparison over time and in relation to other communities.

Implementing evaluation. A final evaluation exercise ("social audit") would be undertaken annually for a randomly selected number of completed activities. This evaluation would employ participant observation as well as various participatory interview techniques. The assessment would evaluate the effectiveness of the institutional and implementation arrangements, assess the development impact of the activities, and analyze the effect on the level and density of community social capital. Furthermore, it would include a set of questions similar to the appraisal and monitoring forms to standardize results. The final evaluation would be carried out by independent consultants who have not been involved in the initial assessment and monitoring activities. The lessons emanating from these evaluations would be used to improve activity implementation.

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[i] One option under discussion is for the World Bank to engage a Monitoring Agent, to monitor progress and implementation on behalf of the Bank and other donors.

[ii]The Declaration was made in Rome in February 2003. For details, see: http://www1.worldbank.org/harmonization/romehlf/Documents/RomeDeclaration.pdf.

[iii] There have been several initiatives aimed at providing a view of donor information, however they mostly provide this from the donor perspective and have not been completely integrated into the country's financial management systems.

Developing a Disaster Mitigation Strategy

Aceh Photos donated by: Jez O'hare

16. DEVELOPING A DISASTER MITIGATION STRATEGY

SUMMARY OF LOSSES AND DAMAGES

The 26 December 2004 disaster has focused national and international attention on the lack of early warning and appropriate immediate response mechanisms in the face of the tsunami. While in the case of Indonesia, a minimal amount of time was available to warn communities (less than 15 minutes) between the occurrence of the earthquake and the arrival of the tidal surges, lack of established international and national communication channels to alert populations and locations in harms way has gathered much attention.

By contrast, insufficient attention has been given to the question of whether local response capabilities, local guidelines or linkages between internationally-known scientific information and national and local monitoring systems would have been good enough to prevent the terrible human tragedy that ensued.

Similarly, little attention has been paid to the issue of how many assets and lives were lost to the tsunami due to the high level of vulnerability in most of the coastal areas affected. That vulnerability is related both the level of poverty and to the increased risk associated with high-income activities such as tourism in the affected areas. As a result, the disaster's consequences –and by extension the reconstruction processes contents—are connected to wider, cross-cutting issues. These include appropriate environmental management, involvement of local communities, recognition of traditional cultural patterns that have been disregarded and the need for risk management (i.e. disaster prevention) in addition to disaster (i.e. emergency) management.

In very concrete terms, the losses and extended needs for rehabilitation and reconstruction in Indonesia demonstrate BAKORNAS' current requirements for increased capacities in addressing present national interests. The availability of likely additional resources provides an opportunity to develop essential capacities that have previously been identified, but have yet to be significantly realized.

It is important to keep in mind that the capacities and interventions needed for reducing the impact of future hazard events in the country are long-term investments. In developing plans for recovery and reconstruction, and sequencing activities, the Government of Indonesia and the World Bank need to be realistic about what can be achieved in the short-term recovery period (first 1-3 years) and the longer-term (3-10 years). While some decisions affecting long-term disaster risk reduction will need to be addressed in the immediate recovery phase, time needs to be taken to design

carefully and plan for the longer-term. In short, these are issues of development, and should not be dealt with only in the context of disaster recovery and rehabilitation.

GUIDING PRINCIPLES

The Government of Indonesia has laid out key principles that will guide the reconstruction strategy. These principles are essential not only to rebuilding physical infrastructure and supporting livelihoods, but also for the area of disaster risk management and the strengthening of BAKORNAS:

1. Participative and people-centered approach

- A high level of public awareness and active participation at the local level is crucial for effective disaster prevention, preparedness, response and recovery.

- Community-led recovery activities ensure ownership and sustainability of disaster risk management efforts. They can build capacity at the local level, foster improved governance, increase social capital, and foster the inclusion of traditionally marginalized groups,

2**. Going beyond mere rehabilitation to the development of a more disaster-resilient society**. Enhanced disaster management capabilities need to be based in institutionalized capacity-building to ensure sustainable levels of expanded performance.

3. **Contributing to the development of indigenous capacities**. As discussed above, ensuring a participatory approach will facilitate the development of local level capacity for risk management.

4. **Holistic approach**. A comprehensive and multisectoral strategy is essential for a holistic approach to disaster risk management, which is made even more evident in consideration of the many types of possible disasters which threaten Indonesia.

5. **Effective coordination vertically between the national government, local authorities and civil society**

- The expanded scope and increased complexity of all aspects of disaster management, with the many technical abilities required and governmental functions involved calls for increased coordination capacities.

- Such coordination of disaster and risk management by implementing ministries and departments concerned needs to be based on a fuller recognition of the physical, social and financial dimensions of disaster risks, and their implications for national development.

6. Appropriate transparency mechanisms for monitoring and accountability
The cross-sectoral nature of disaster risk management and the need for participation at all levels (national, regional and local) requires a level of transparency and accountability for the governance of such systems.

RECONSTRUCTION STRATEGY

Essential measures to strengthen BAKORNAS in light of its expanded responsibilities with the reconstruction process of Aceh and North Sumatra are listed below. These activities will also provide benefits for the longer-term disaster risk management capacity of the country.

Institutional Arrangements. Clear separation between the roles of emergency response vs. disaster prevention. Emergency response is reactive, and requires authorization and coordination at the highest political level. Disaster prevention and risk reduction needs to be integrated in the development practices of line ministries, of PWD, Finance, Agriculture, Education, Environment, etc., and can be better coordinated from within BAPPENAS.

Related to its role of disaster prevention, a strengthened capacity is necessary to enable BAKORNAS to audit the disaster risk elements of all development programs of line ministries to sit within BAPPENAS. This will require enhanced information and communications abilities, and the development of expanded collaborative relationships with line ministries and relevant departments.

Decentralization. Strengthening BAKORNAS' capacity to enhance the capacity of SARKORNAS, and the District Level Disaster Response functions. With the Government emphasis on decentralization and strong encouragement of wider popular participation in all aspects of national life, BAKORNAS needs to be able to expand and deepen its own participation and influence at the regional and local levels.

Legal Framework. There is a need for an updated and comprehensive legal basis for the present and forward-looking requirements of disaster management coordination. Given present and future disaster risks, there is justification to support expanded emphasis to disaster mitigation and risk management coordination responsibilities. Special initiatives are needed to review and strengthen such areas as building by-laws, land use zoning, and environmental management guidelines to ensure increased resilience against the hazards facing Indonesia.

RECONSTRUCTION STRATEGY FOR LONG-TERM RISK REDUCTION

It is difficult to draw a clean line between the immediate recovery, rehabilitation, and reconstruction phases. As mentioned previously, a reconstruction strategy will need to be realistic about what can accomplished in the short and longer-term. The strategy needs to take into account the weakened administrative capacity brought on by the disaster, while also taking advantage of the post-disaster window of opportunity to strengthen capacity for disaster risk management. Some of the steps discussed below feed into each other, and they will need to be considered in the planning and sequencing of activities.

Secondly, disaster risk management touches upon every area of people's lives, and needs to be linked to sectoral plans and national development goals.

Both for short-term rehabilitation and longer term reconstruction that will reduce vulnerability, there are important considerations for a post-disaster strategy's prevention, mitigation and risk management components:

- Earthquakes are a higher level hazard for the country, given their shorter return periods as compared with tsunamis. Hydrometeorological events are similarly a higher risk, coupled with landslides and flooding. This supports the idea of improving and/or establishing hazard monitoring and early warning systems, to include a seismic-sensor based network. Hazard monitoring should have a multi-hazard focus, rather than concentrating solely on tsunamis. Despite the severity of the impacts of the December 26 disaster, tsunamis are by no means the main hazard for the country.

- Ensuring the protection of lives is the first priority for disaster risk management. In this context, the establishment of a network of seismographs along the country's territory, coupled with an appropriate automated, real time alert system is cost-effective, and could be easily linked to a regional one –as is being proposed for the Indian Ocean's rim countries—and would provide a lead advance time for rapid mobilization to safer ground if coupled with appropriate community participation, education and ownership.

- Structural measures to reduce disaster impacts must be coupled with non-structural measures. For example, related to the point above, a technical warning system must be complemented by public education campaigns for appropriate reaction to the warning, and effective evacuation and preparedness plans.

- The protection of assets and property implies appropriate land zoning and spatial planning coupled with construction codes for better protection against a number of hazards. Reinforcement of existing codes (construction and zoning), improved enforcement of them and incentives for their use need to be part of the strategy for reconstruction. In a very real sense, the disaster in Aceh and Northern Sumatra make the point clear that a return to the pre-existing conditions is undesirable. In many places, the coastline has been severely altered and new land use planning and siting is inevitable. This will have to be balanced with the needs and desires of communities regarding relocation or rebuilding in situ. For example, for tsunami risk, the designation and zoning of tsunami run up areas for open-space uses such as agriculture or parks and recreation is recommended as the first land use planning strategy to consider. However, where communities need to be near hazard areas for their livelihoods, siting and engineering solutions that avoid, slow, steer, or block tsunami inundation can greatly reduce impacts.

- Disasters create the opportunity to reshape existing patterns of development to minimize future losses. On the other hand, they can also create enormous pressure to rebuild the community quickly and just as it was before the disaster. These rebuilding issues should be addressed through the land use planning process with the active participation of the affected communities.

- Organizational increased resilience (implies) involves education and participation campaigns in risk reduction, starting from a better understanding, at the

community level, of the hazards faced and the appropriate prevention or mitigation actions and measures. This entails better dissemination of existing scientific knowledge, appropriate teaching of risk, its prevention and reduction, at all levels in the formal education system as well as in adult-oriented, community-based campaigns.

- Financial instruments to reduce risk and prevent disaster's dire consequences are multi-varied and must be considered: from an improved registry of property and assets, to the use of insurance mechanisms both in the formal financial market and in the traditional lending forms that prevail in small and medium sized economic activities. The question of spreading and transferring risk, as in the case of early warning systems, must be seen as a multi-level approach, from community-based measures to supranational, regional cooperation.

Specific activities that can be advanced by providing more support for BAKORNAS in the areas of disaster risk management identified in its National Information prepared for the World Conference on Disaster Reduction (Kobe, 18-22 January 2005) include:

- Strengthening public awareness and preparedness of local government and local communities with the priority on disaster-prone areas;
- Disseminating hazard zone mapping to the local levels with its integration into land-use planning;
- Strengthening capabilities in disaster detection by providing infrastructure and human resources;
- Developing a disaster management information system;
- Strengthening people's capacity through training and education;
- Establishing integrated rapid and accurate response mechanisms;
- Issuing procedures and guidelines in disaster management; and
- Preparing legislation in disaster prevention, mitigation and response.

As noted, longer-term disaster risk reduction must be incorporated into development planning. The strategic elements outlined above bridge the gap between reconstruction and development process and transcend the present institutional and legal framework of the national coordinating agency for disaster management. (In this connection) As a result, it is proposed that these two interrelated aspects be addressed through a dedicated capacity within BAPPENAS linked to BAKORNAS with following functions:

- Expanded requirements for hazard and risk assessment with special attention for housing, infrastructure, and future community planning;
- Review and necessary revision of design practices, implementation guidelines and construction standards;
- Training of replacement public administration officials;

- Environmental and natural resource management with special regard to land use; zoning, ecological conservation of mangroves as safeguards against coastal disasters;
- Restoration of livelihoods and development of social welfare and protection measures;
- Identification of financial instruments that can spread, share or offset risk;
- Coordinated development of information and communications opportunities for public education.

A clear example of this new role of the disaster management institutionality, which will occur in all sectors (thus the cross-cutting nature of disaster risk management) will be in the implementation of the Action Plan for Reconstruction of Housing and Settlements in Aceh and North Sumatra, where the present proposal of the Ministry of Home Affairs (4 January 2005) cites overall management of the disaster management activity falling under the coordination of BAKORNAS.

Finally, instruments for sharing, transferring, and financing disaster risk should be actively explored as part of a comprehensive disaster risk management strategy. Catastrophe insurance is a common mechanism in industrialized countries, but is not sufficiently prevalent in developing countries. Indonesia is no exception. Insurance requires a complex series of laws, regulations, and administrative agencies. The requirements to operate an effective regulatory and supervisory scheme are complex. In addition to the regulatory issues, other issues relate to the fundamental structure of the market for insurance. For example, many countries may be too small to provide adequate risk diversification to properly support a national insurance scheme. Proposals to create regional insurance markets hope to increase risk diversification and potential market size, thereby making the market more attractive for the insurance industry and lowering the cost of insurance. A larger potential market, subject to a uniform regulatory scheme, may encourage the international insurance industry to help develop viable markets. Regional proposals, like the World Bank's initiative for a Central American insurance market, depend upon overcoming impediments to the supply of insurance.

Other market-based mechanisms such as catastrophic bonds and weather derivatives are emerging as alternative risk transfer mechanisms. Similarly weather derivatives are instruments based on one or more independently measurable climatic parameters. Microfinance institutions have also provided a range of services which seem promising to reduce risks for poor households. [i] Little effort has been committed to understanding and evaluating policy alternatives to finance risk in Indonesia, and developing countries in general. Insuring government-owned facilities is a natural first step. Limiting the role of government in providing post-disaster aid for housing loss, and shifting that burden to the private sector, is another policy concern. Finally, crop insurance, microfinance, reserve funds, and derivative instruments are all policy tools warranting further exploration.

EXAMPLES OF PROGRAMS

There are many examples of programs aimed at improving disaster risk management underway in other countries in Asia and the world. It is worth learning from good practice to develop activities for Indonesia. A few examples include:

1. **Cyclone Protection Program of Bangladesh** – long-established, community-based, volunteer, Red Cross-managed partnership to educate, train and inform coastal communities of onset of storms, floods and other coastal disaster threats. Full time program of disaster mitigation practices in small community environments.

2. **Core Shelter Housing Program, Philippines** - local and economical housing improvements for local construction at community levels.

3. **Asian Urban Disaster Mitigation Program** – in 11 Asian countries, managed by Asian Disaster Preparedness Center over past 10 years, engaging local officials, development of institutional capabilities, and increased education and active participation of local population at community and/or municipality levels in on-going disaster mitigation.

4. **Community Hazard and Risk Management (CHARM) Program** – 14 Pacific Island States with a common approach and coordinated set of activities (which) support the sharing of resources and information to develop and sustain community education and local involvement in practical mitigation practices suited to coastal communities.

5. **Microinsurance for Disaster Risk of the Disaster Mitigation Institute (DMI) in Gujarat, India** – This is a scheme for risk transfer and disaster mitigation based on three pillars, the first of which is a livelihood relief fund, which through targeted assistance helps those with the greatest needs achieve a minimum level of stability after a disaster. The second one is a revolving fund which provides grants for disaster recovery: and the third is a member organization made of small businessmen that are affected by disasters through which disaster insurance can be accessed. It is important to note that on the revolving fund about 65% pay back their grants ahead of schedule and 98% pay back on schedule.

COSTS

Indonesia early warning system: US$28 million (for the region)

Further details on this component are provided in the annex. The proposed system is based on seismic and tide parameters. The idea is to give a warning and an alert to the people and to the local authority in local tsunami area to be aware, followed immediately by evacuation. The warning would be (is) forwarded to BMG office nearby and to BMG Headquarter through the communication link.

The effectiveness of this design must be supported by the program of socialization to the local authority and to the people nearby the stations.

The (scenario) success of evacuation before a tsunami hits the coastal area depends on a close understanding of signs from nature as a precursor, as well as equipment output, and coordination among institutions.

While (Since) Indonesia already has a gauging system, it would have to be supplemented by additional detecting devices and by completing the communications and alert system. (In terms of additional equipment,) According to BMG, additional equipment and actions required include: an accelerograph, an automated communication system, locally located and maintained alarms, and locally developed response mechanisms in case of alarm.

The tsunami early warning system should be developed in the context of a broader program for strengthening hazard monitoring and early warning for multi-hazards facing Indonesia.

Estimated Costs for Disaster Mitigation – Risk Management Reconstruction

Totaled US $4,150,000 for 3-5 years

I. Institutional capacity and expanded embodiment of disaster mitigation and risk management practices, with particular attention focused on decentralized communities or locations as well as multiple dimensions of relating disaster and risk management to sectoral and/or line ministry subject matters. The time period of 3 to 5 years is envisioned to ensure establishing roots of a culture of proactive risk management and building capacity to achieve this goal.

Increased BAKORNAS institutional capacities to deepen decentralized activities, presence: US $ 1,500,000 for 5 years

- Support creation of national disaster legislation
- Support civil service training in DRM with priority for Provinces/Districts in disaster prone areas
- Local establishment and support costs
- Staff costs
- Coordination meeting and workshop
- Develop Standard Operation Procedure for multi hazards

Far-reaching, concentrated public awareness campaigns for tsunami and other hazards preparedness (Nationwide scope, initiated in Sumatra, other high disaster risk coastal areas) : US $ 750,000 for 3 years

- National DRM Information Center as core element and national focal point for disaster mitigation and risk management
- Development, production, dissemination multi/media processes and materials over 24 months, entire country
- Initiate local capabilities to develop, produce and disseminate at selected primary regional/local levels
- Dissemination of Standard Operation Procedure for multi hazards

Capacity-enhancement in BAPPENAS for disaster risk management, linked to BAKORNAS : US $ 750,000 for 3 years

- Establish institutional presence for disaster management mitigation and planning
- Technical audit review capability, linkage to line ministries
- Guidelines, standards development processes
- Improve integration of disaster mitigation and risk management planning across sectors

The following relate to comparable programs such as those suggested elsewhere, not that they should be exact replicas, but may provide some useful experience that can guide appropriate Indonesian approaches.

Develop and pilot appropriate analogue of community-based coastal, village warning and training system (selected pilot areas, Sumatra and other comparable locations): US $250,000 for 2 years in cooperation with Indonesian Red Crescent, NGO, similar civil society partners at local levels (e.g. Cyclone Protection Program example in Bangladesh)

Develop and pilot appropriate local house / public facilities improvement and protection program of community-based, hazard-specific improvements and learning processes. (Banda Aceh and North Sumatra reconstruction areas): US $400,000 for 2 years in cooperation with NGO, professional/technical institute, private sector or similar civil society partners at local levels (Core shelter program in Philippines and Katmandu Valley Schools Protection Program in Nepal)

Initiate local authority municipal/urban program for institutional capacity development in DRM (in Banda Aceh, Meulaboh and other suited North Sumatra municipalities): US $500,000 for 3 years in cooperation with the Ministry of Home Affairs (MoHA), local institutions and civil society partners at local levels (e.g. Asian Urban Disaster Mitigation program and others)

The maintenance of these systems (namely, the local alarms) and the preparation of response mechanisms at the community level may result in added cost that has to be projected over time and built into the budget of the local disaster prevention or disaster management administration, local government and educational system.

FIDUCIARY CONTROL AND MONITORING

Same as in other projects in terms of accountability, clear accounting practices, external auditing and monitoring by appropriate fiscal authorities, contributors to the project and donors.

ANNEX

Brief On Establishing a Tsunami Early Warning System in the Indian Ocean

Immediate Steps Towards Implementation of a Comprehensive Tsunami Early Warning System

In order to quickly assess the tsunami warning capabilities and capacities in the region, interim networks among practitioners and authorities should be established. In the aftermath of the tsunami disaster, donors have discussed support for a regional early warning system as a high priority. A regional workshop to assess existing capacity, coordinate efforts on regional issues, and ensure that the stakeholder countries remain in the driver's seat of this initiative is recommended.

The first phase of activities that focus on evaluation through preliminary meetings, a main conference, and interim support could be executed in a period of six months. Subsequent phases that aim at institutional strengthening and capacity building at the regional, national, and local levels as well as equipment deployment will require another 18-24 months[ii].

Tsunami Early Warning System in the Indian Ocean

A tsunami warning system consists of a network of seismic-monitoring stations, tidal/sea-level gauges, and Deep Ocean Assessment and Reporting (DART) linked via satellite to monitoring centers. These monitoring or warning centers then issue warnings for potential tsunamis in the region. If a tsunami is detected, coastal areas lying in the predicted path are warned of the approaching waves and arrival times are predicted using tsunami travel-time maps. Accordingly, before warnings can be issued, these vulnerable areas must be identified. For coastlines that are particularly prone to tsunamis, risk assessments are performed long before a tsunami occurs. An area that may be vulnerable to tsunamis is assessed by:

- The likelihood of an event that may cause a tsunami
- The expected location and size of an event
- The shape of the seafloor where an event may take place

- The shape of the coastal land that may be affected by a resulting tsunami
- The presence of any headlands or harbors in the region that may cause a tsunami to change direction.

This information is used to predict the potential speed, direction, height, and destructiveness of any tsunami that may reach the area[iii].

It is estimated that a tsunami warning system in the Indian Ocean could consist of 30 seismographs to detect earthquakes, 10 tidal gauges, and 6 DART buoys with costing at around US$20m[iv].

However, for a tsunami warning system to be useful, it requires an effective communications infrastructure across communities and countries at risk. There also needs to be a systematic approach to educate people to be "tsunami ready" and to know what to do after the alarm is raised. The cost to establish tsunami readiness in the region is estimated to be US$8m.

Key Guiding Principles to Establishing Tsunami Readiness

Tsunami early warning system is generally neglected due to the comparative rarity of tsunamis. As a result, individuals and communities are not as "tsunami-aware" as they should be. Furthermore, the level of tsunami readiness varies significantly from community to community. However, casualties and property damage can be greatly minimized if communities at risk are properly prepared for tsunami events.

According to the United States National Weather Service (NWS), a tsunami ready program requires inter-governmental cooperation that spans central to sub-national levels of governments. This collaboration supports better and more consistent tsunami awareness and mitigation efforts among communities at risk with the following key principles:

- Create minimum standard guidelines for a community to follow for adequate tsunami readiness
- Encourage consistency in educational materials and response among communities and states
- Recognize communities that have adopted some agreed upon tsunami ready guidelines
- Increase public awareness and understanding of the tsunami hazard
- Improve community pre-planning for tsunami disasters

Processes and guidelines used by NWS's tsunami ready program include the following elements:

1. **Communications & Coordination**

A key to effective hazards management is effective communication. This is especially true in tsunami emergencies, since wave arrival times may be measured in just minutes. Such a short time frame requires an immediate, systematic and appropriate response.

2. Warning Reception

There needs to be multiple ways for communities, be they 24-hour warning points or emergency operations centers, to receive tsunami warnings.

3. Hydro meteorological Monitoring

While receipt of warnings is crucial to the success of any EOCs or warning points, there should also be a means of monitoring weather information, especially radar data.

4. Warning Dissemination

Upon receipt of warnings or other reliable information suggesting a tsunami is imminent, local emergency officials should communicate the threat with as much of the population as possible through a pre-defined network of communication practices.

5. Community Preparedness

Public education is vital in preparing citizens to respond properly to tsunami threats. An educated public is more likely to take steps to receive tsunami warnings, recognize potentially threatening tsunami events, and respond appropriately to those events.

6. Administrative

For a successful program, there needs to be formal planning and pro-active administration that includes:

- Tsunami warning and hazardous weather plans must be in place and endorsed by local governing body
- Local officials conduct regular visit/discussion with local centers.

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[i] ISDR, *Living with Risk,* 2004 version, vol. 1, 2004.

[ii] See UN's Flash Appeal 2005 for Indian Ocean Earthquake – Tsunami dated January 6, 2005.

[iii] See http://www.ga.gov.au/urban/factsheets/tsunami.jsp retrieved on January 10, 2005.

[iv] See Knight, W. Tsunami warning system is not simply sensors. *NewScientist.com.* Retrieved on January 10, 2005, from http://www.newscientist.com/article.ns?id=dn6839&print=true

Maps, Satellite Imagery, Photos

Indonesia - Banda Aceh Subset 2

1 : 10.000

IKONOS - January 10, 2003 - PRE-DISASTER IMAGE

IKONOS - December 29, 2004 - POST-DISASTER IMAGE

Legend

Coastline before Tsunami

Scale

1 : 10.000

Data Source

IKONOS Imagery provided through

CRISP
National University of Singapore

SPACE IMAGING

Map created December 29, 2004 by DFD/DLR DC

Estimated Collapsed Structures–Banda Aceh

Primary Impact Zone (PIZ)
6,466 ha
36,016 structures digitized (before tsunami)
5.6 structures per ha (before tsunami)
29,545 structures collapsed
82% structures collapsed in PIZ

Notes:
- **The number of collapsed buildings does not include number of structures severely damaged or destroyed** in the Primary Impact Zone that cannot be directly observed from satellite imagery.
- The boundary for the Primary Impact Zone does not include Lho Nga.
- See attached methodology.

29,545
structures collapsed, est

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Source:
QuickBird (60cm), Landsat 7, ETM+, and SRTM (90m DEM)

Imagery and Mapping by:

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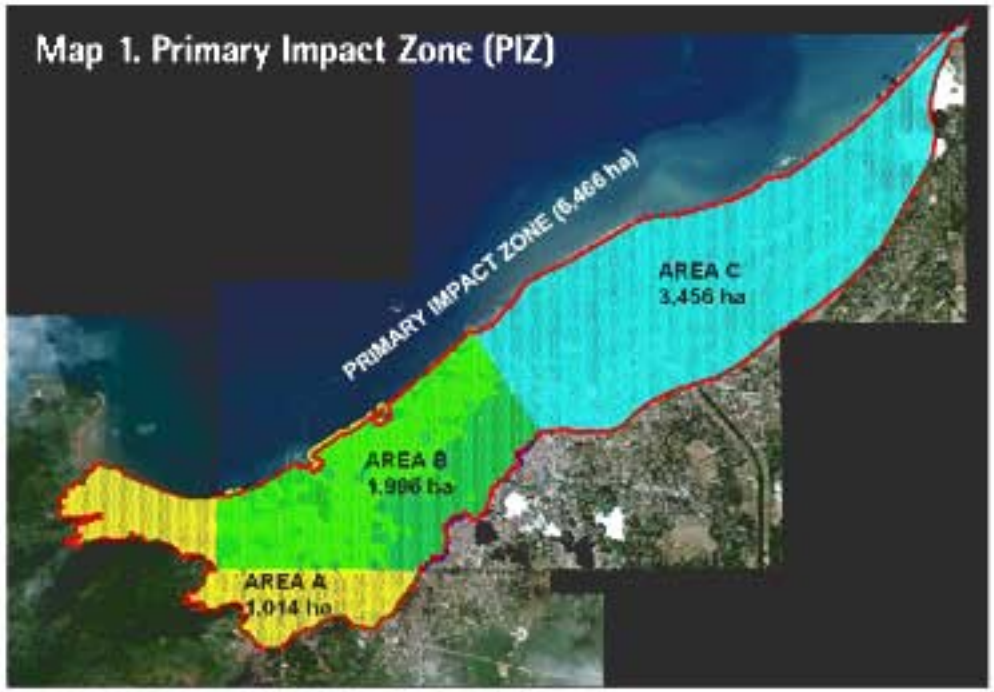

Methodology

Estimated Collapsed Structures

Methodology

The Primary Impact Zone (PIZ) was determined by observations based on QuickBird (60cm), LandSat 7, ETM+, and SRTM (90m DEM). The range of heavily damaged structures was estimated and digitized using QuickBird imagery viewed at large scale (maps 2 & 3). For the areas beyond available post-tsunami QuickBird coverage (map 1, area C), the PIZ was estimated based on interpretation of post-tsunami LandSat 7 and low elevation (<25m) areas defined by DEM.

All observable existing structures pre-event were digitized (map 2) using QuickBird at large-scale, covering areas B&C on map 1.

For areas within the PIZ, not covered by pre-event QuickBird (map 1, area A), an estimated density of 4 structures per ha. was applied

Available pre and post-event QuickBird images (map 1, area B) were analyzed, and remaining structures post tsunami (map 2 & 3) were digitized and counted. A ratio of pre and post-event structures collapsed in the PIZ was calculated (82%), and applied to the remaining area (map 1, area A & C) of the PIZ not yet covered by pre *and* post-event QuickBird.

Summary

Primary Impact Zone (PIZ)

6,466	ha
36,016	structures digitized (before tsunami)
5.6	structures per ha (before tsunami)
29,545	**structures collapsed**
82%	**structures collapsed in PIZ**

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Critical Infrastructure Destroyed

Coastal Communities Devistated

Homes and Shops Turned to Rubble

Earth Quake Damage, Leveling Shops