



Creating Jobs: Capacity Building for Local Resource-Based Road Works in Selected Districts in NAD and Nias

Project Brief



Roads and rural development

"It is not wealth that makes good roads possible but, rather, good roads that make wealth possible." (John F. Kennedy)

Roads and poverty reduction

Aceh's and Nias' district and rural roads and bridges impact significantly on the livelihoods of the population who live and work in rural areas. In fact the availability of adequate rural transport infrastructure is central to the socio-economic growth and development of the provinces.

Creating job opportunities, building capacity among stakeholders and empowering the local communities are cornerstone of the government's Poverty Reduction Strategy (PRS). Rural development has long been recognised as crucial in promoting economic growth. Infrastructure development is an effective strategy for poverty alleviation and generates employment. This project's local resource-based approach has wide implications as unemployment in Aceh's and Nias rural areas is very high. By transferring financial resources and skills to the local level, local resource-based methods can have a substantial and immediate poverty-reducing impact.



Head loading - a heavy burden for the rural poor



Can Aceh and Nias afford to have poor roads?

No. Aceh and Nias cannot afford poor roads. Poor access not only results in isolation, but is also a real constraint to productive activities which contribute to factors that cause poverty. In contrast, improving the access and mobility of the rural population and their access to employment opportunities and other socio-economic activities and facilities is therefore an effective means of promoting development and reducing poverty.



Muddy road and rudimentary bridge in Nias suffering from lack of maintenance

*"My country was never so rich that it could afford poor roads."
William the Conqueror, Doomsday Survey, 1066 AD*

The district road network

The Tsunami of December 2004 caused massive loss of life and destruction of infrastructure and livelihoods in Aceh and Nias. Moreover, in March 2005 Nias was hit again by another earthquake resulting in further devastation on the island. The road sector was one of the worst affected sectors by the Tsunami. The re-construction has so far been slow, but it is now getting underway, and there is a lot to do.

However, the poor condition of the road network in NAD and Nias is not only the effect of the Tsunami and the earthquake – road maintenance has been neglected for too long prior to December 2004, due to problems of access and the impact of decentralization and regional autonomy (issues of funding and capacity etc.).



Earthquake affected road in Nias



Temporary "Tsunami bridge" in Aceh Besar



Disappearing surfacing means disappearing road

Roads and rural development

The ILO's overall commitment to Aceh and Nias

The ILO's response to the Tsunami in Aceh and Nias focuses on generating maximum employment for Acehnese men and women, empowering the socially and economically vulnerable, and recovering sustainable economies of Aceh and Nias. Building institutional capacity and delivering direct services to affected communities and the people are the guiding principles of ILO work, consisting of six integrated programme components including local economic recovery/development, prevention of worst forms of child labour, employment services, vocational training, entrepreneurship development and microfinances, and local resource-based rural road rehabilitation.

Gender equality promotion and involvement of workers' and employers' organizations are mainstreamed in the work of all components.

Pilot projects

Following the Tsunami and earthquake disasters, UNDP launched a programme of support entitled the Aceh Emergency Response and Transitional Recovery (ERTR) Programme. The ERTR programme built on the proposal submitted by UNDP in the United Nations India Ocean earthquake/Tsunami Flash Appeal. The programme was designed to serve as a crucial link between immediate short-term and longer-term recovery and development activities. The ERTR programme is being undertaken through partnerships with local and national authorities, national NGOs, civil society groups, the private sector, and international organisations. One example of this cooperation is the funding provided to ILO's programme, in particular in this context the "Employment Intensive Infrastructure Development". As part of the programme, the ILO started a demonstration project on rehabilitating of roads in Aceh Besar, working closely with the Public Works Department.



Training in setting out,
Banda Aceh

Training courses on the local resource-based road rehabilitation approach were conducted in May 2005 for the staff of local small-scale contractors and the Public Works. A total of 19 engineers and technicians and 15 supervisors were provided technical training, while 5 contract managers and 13 engineers were training in contract management in parallel to the technical training.



Surfacing in Aceh Besar

Five successful contractors were then awarded they completed their road works in December 2005. In January 2006 five more contracts were awarded. A total of 8.8 km were fully rehabilitated by April 2006. The last stretch is under way and this will make the total length almost 13 km of rehabilitated roads in Aceh Besar.

In November 2005 the ILO expanded its road rehabilitation operations to Nias to meet the need of restoring the district road network on the island. The road network in Nias is in appallingly poor conditions due to various reasons, such as difficult climatic conditions, isolated island without enough resources, lack of funding etc.

The activities in Nias started up with emergency work on some of the provincial roads in November and December 2005. As commencement of the pilot project in Nias came at the end of the financial year, there were not many local contractors available for new projects as they were engaged in finalising that year's work. Two trials contracts were awarded in December and these were completed in February 2006. Three new contracts started up in February 2006 and the plan is to award 5 more contracts in the near future. The total road length to be rehabilitated is 5km under this funding by OCHA.

The ILO's pilot projects in Aceh Besar and Nias demonstrate the use of these local resource-based methods while having road rehabilitated is a suitable means of building capacity in the road sector at the same time as road are being rehabilitated. Both local government staff and contractors have been through process of refining the contract management aspects. The approach has received positive responses from Government, local contractors and their associations, it is a step in creating a more enabling environment the small-scale contractor industry.



Capacity and Road building

“We have always supported this project since the early stages, as we believe this project will not only provide jobs for the individuals but also reduce the overall poverty in the rural areas. And we should not forget the possibility to provide ex G AM people with another chance to live and work together with the rest of the community, hence having their livelihoods back”
 – Eddy Puruwanto, Chief of Operations, BRR”.

Project formulation

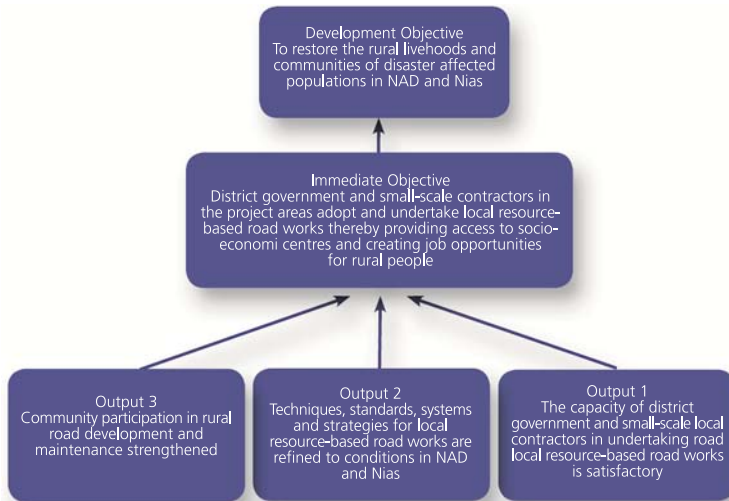
This project has been prepared by the International Labour Organisation (ILO) in collaboration with BRR and Provincial and District Governments in NAD and Nias through a series of stakeholder workshops.



Workshop LFA-exercises

Objectives and Outputs

These workshops, which were organised around the Local Framework Approach (LFA), saw stakeholders from various Local Governments, BRR, BAPPEDA, and other secondary stakeholders such as KDP, donor organisations (ADB, EU and JICS) take an active participation in preparing the project logframe. The result of this workshop programme is shown below in the form of objectives and outputs (while the full LFA matrix contains a lot more information).



Selection of project areas

An outcome of the workshops was the preliminary selection of districts to be included in the project. Further analyses of the proposed districts: Nias; Nias South; Aceh Besar; Pidie; and Bireuen were done with data provided by ADB. Data, such as the damage and accessibility of the road network, population density and the proportion of rural poor people, community establishment etc., revealed that this preliminary selection was valid.



Aceh and Nias Clusters

As the five districts are spread out the ILO has decided to form two clusters of districts, namely Aceh

Besar, Pidie and Bireuen as the cluster in the north, and Nias and Nias South in Nias. This set-up means that the project will have to establish two bases – one in Banda Aceh and one in Gunungsitoli. As the ILO is currently undertaking pilot projects in Aceh Besar and Nias the road work operations in this project will start in these two districts as not to lose momentum. The remaining three districts will be phased in according to the priorities and timing given by the steering committee, hence the lengths of road to be rehabilitated will vary between districts depending on the project's launch in the individual districts.

Donor and partners

The final project proposal was presented to the Multi Donor Fund for Aceh and Nias (MDF) in Jakarta in early December 2005, and approved two weeks later by the donor committee. The project budget is estimated as 6.42 million USD, which is solely funded by MDF. The project proposal was also scrutinised and approved by UNDP's Project Appraisal Committee (PAC) including relevant Government Representatives. To implement the project, the ILO will work with UNDP who will act as a Partner to the MDF for the handling of the funds, passing it on to the ILO under a standard UNDP/ILO arrangement.

UNDP, which will be ILO's partner in this project as well, will enter into an agreement with the World Bank following the standard procedures set out for such agreements and subsequently sign with the ILO a standard 'Memorandum of Understanding' to apply the pass-through fund management modality as established by the United Nations Development Group.

Management and implementation arrangements

The ILO Jakarta Office will execute the programme as part of its wider programme for Aceh and Nias, which is being managed by the 'Programme Management Unit (PMU)' in Banda Aceh. The ILO has now also established a "cluster office" in Gunung sitoli, Nias, from where the operations in Nias will be managed. The ILO will work closely with the district government offices directly related to the work, in particular the District Governments, represented by the Public Works Offices. At the provincial level, the ILO will coordinate its interventions with the Provincial Government as represented by the Public Works Office. Oversight from and reporting to BRR is also foreseen. . The programme will be implemented by these district governments. Relationships with district government counterparts will be governed by Letters of Agreement (LOAs) between the ILO and each district department.

A Programme Steering Committee will be constituted for the purpose of providing overall guidance and direction to the programme and for periodical review. The Committee, which will meet at least once every three-month, will include broad representation from all relevant stakeholders, including District and Provincial Governments, BRR, UNDP and the ILO.

The project will be headed by a Chief Technical Advisor working closely with a National Senior Programme Officer based in Banda Aceh. These two officials will ensure proper coordination between the operations in the two clusters.

The Northern Cluster will be staffed with a Resident Engineer in Banda Aceh who shall receive support from a Senior District Engineer, based in Sigli and two District Engineers based in Banda Aceh and Bireuen respectively. In addition there will be a Contract Administration Engineer support all three districts in this cluster.

The Nias Cluster will be staffed in a similar set-up – one Resident Engineer, based in Gunungsitoli, supported by a Senior District Engineer and a District Engineer, of which one will be based in Teluk Dalam . Also here, there will be a Contract Administration Engineer to look after the contract procedures, payments requirements etc. The Nias Cluster office will also have administrative support staff to ensure the logistics of the project runs smoothly.



Resident Engineer Eav Kong (right), Northern Cluster with Public Works staff and the ILO Director Alan Boulton

Commencement and project duration

The project will be launched in Aceh Besar and Nias and take on from where the pilot projects stopped. The project is expected to commence in June 2006 and will run for two years until the end of May 2008.

The Project

In brief this project has been designed to capacitate district governments and small-scale local contractors in undertaking local resource-based road rehabilitation works in the project areas, wherever this is feasible and viable. This means that some of the techniques, standards, systems and strategies for this approach will be developed during the course of the project. Furthermore the project is envisaged to involve the local communities in the provision of district and other rural roads in order to ownership of the road projects. It is essential that stakeholders and intended beneficiaries are involved in the entire process for a sustainable solution.

The local resource-based approach will be applied to the rehabilitation of rural infrastructure in the project areas, wherever feasible and viable, starting with the district road network, although flexibility will be used for the selection of roads as to optimise the effects on the road network.

The local resource-based approach – what does it mean?

Rehabilitation of rural roads lends itself very well to the use of the local resource-based approach for which there is extensive international and regional experience.

What are the important elements of this project? The approach permeates all stages of the project cycle from the initial planning, through design, procurement and rehabilitation and maintenance of the road network.

Overall philosophy - using scarce resources efficiently

Although the district road network represents a large value of the road asset it often receives very little funding, hence the resources available for provision of district and rural roads are limited. If such infrastructure is to be provided efficiently, careful planning of the allocation of these resources is essential so that the very large Number of persons living in the rural areas of the country can gain access to locations that allow them to meet domestic, economic and social needs. The planning process should seek a rural transport system which maximises the net benefits from rural access by keeping the costs of access as low as possible and by providing a transport system that meets the needs of its users and, therefore, yields benefits.



Discussions on road alignment.

Determining rural access needs

Rural access planning is increasingly being based on effective demand for such access rather than mere need. Thus, the orientation of the local planning process should be on determining the type of access which local users want and are also willing and able to help support through their own contributions of resources. Such an orientation can also help to overcome the tendencies to design roads that far exceed the requirements of local users and, because they are costly to maintain, are ultimately unsustainable because their costs exceed their benefits.

The district road network is a part of a larger transportation network. That is, the set of local roads is connected to, and hence is a part of, the national road network regardless of official classification. Local road planning decisions should not be made fully independent of national decisions about the transportation network. The benefits from upgrading a local track may be significantly affected by central road authority decisions to improve a secondary road serving a village. Thus, there is an important linkage between national and local transport planning efforts which should be carefully considered in road planning.



Provincial road in Nias!

Deciding on the appropriate level of access

The design process begins with the identification of local users' problems to be overcome and alternatives to address them. Local knowledge of problems need to be integrated at an early stage of the design planning process as a basis for deciding on the appropriate level of access to be provided and the related standards to be adopted.

Promoting participatory planning

Indonesia's decentralisation policy places greater responsibilities for rural development on local authorities, local organisations and local people as beneficiary, and increasing emphasis has been given to "community participation in development strategies. The participatory planning process recognises the fact that development programmes are unlikely to succeed if the stakeholders and intended beneficiaries are not involved in the entire process.



Local accessibility problems can only be identified at local level with the full involvement of the communities

Local people must be involved not only in the implementation of projects, but throughout the process from identification and planning to operation, maintenance and evaluation.

Adopting appropriate standards

Cost-effective design of roads requires sound engineering judgement with emphasis on providing low-cost, locally maintainable and reliable all-weather access. It is important to tailor interventions to specific situations and not to impose rigid, conventional designs which are often inappropriate. Road standards should take account of the local environment in relation to specific serviceability requirements defined in terms of access by type of vehicles and seasons as well as construction by local resource-based methods, with emphasis being placed on access and durability rather than on geometry and speed.

The partial rehabilitation approach, or spot improvement, is an appropriate method to provide cost-effective basic access when resources are limited. Improving short sections of roads or bridges will often give a high return on the investment made.



Temporary bridge in Nias that would need to be permanent.

Making the best use of available materials

For economy, it is essential to maximise the use of in situ material close to the road for the pavement build up. As the project roads already exist there is a matter of adding material to strengthen the pavement before a new surfacing is applied. Haulage of gravel material and stones have proved to be an expensive exercise in the pilot projects. It is therefore important in the full scale project to source and “shape” the material on site to the extent possible.

It is essential to ensure that untreated sections have sufficient capacity for the prevailing conditions and transport types. Simple test procedures involving the grading and plasticity properties can be used to assess the suitability of in situ or borrow materials for road construction. The project will ensure simple assessment of pavement materials.



“Producing” materials on site.

Paying close attention to drainage

Environmental factors, particularly rainfall, play a dominant role in the performance of roads. Washed away roads are prevalent in Nias, which has a very high annual rainfall. Unless adequate counter-measures are taken to combat rainfall, road failure is most likely to occur, particularly on steep hills, at water crossings or in low-lying areas. It is therefore critically important to efficiently control and dispose of run-off water. This can be achieved by a variety of measures such as provision of a good camber, adequate side and mitre drains, scour checks and carefully designed relatively simple, low-cost, cross-drainage structures such as stone or concrete drifts and submersible bridges. The use of these simple structures can reduce seasonal or sporadic periods of poor passability quite significantly and can easily be constructed using local resource-based methods and locally available materials.



Road or water canal?

Providing appropriate packaging of projects

When working with local small-scale contractors, it is important to package the works appropriately. Although this may involve some additional work in terms of contract preparation and supervision, the result is that local authorities can carry out work relying on locally available resources and reduces the need for mobilising contractors a long way from the project work sites.

The pilot projects have provided valuable information about contracting modalities and the ILO is now preparing a set of refined contract documents and procedures for legal contract documentation.

Promoting public and private sector development

Developing some of the responsibilities for executing rehabilitation and maintenance works to the private sector enables greater use to be made of local resources and has clear advantages in terms of obtaining more responsive and sustainable implementation. Moreover, there is also the opportunity to create employment through the use of local resource-based methods for the implementation of works.

Providing on-the-job training

The approach propagated by the ILO is a somewhat new approach for NAD and Nias. It combines appropriate technical and organisational

work solutions with sound contracting and project management practices. evident from the training needs analysis made for contract supervisors and contractors, training will have to cover a wide range of topics.

The training approach to bring about the quick results, as demanded by the project, has to respond to the very needs of the participating training population in the given work environment and actual work situation. Consequently, the training provided will be problem-oriented and the trainer will be more of a teaching coach and mentor.



Training and supervision during rehabilitation

Putting maintenance high up on the agenda

Although the project serves to rehabilitate damaged and deteriorated district roads efforts will be made to put maintenance high up on the agenda for the districts as it is an essential aspect of rural road provision. Proper maintenance contributes to the preservation of the road asset and to prolong the road's life to its intended service duration.

Simple contracts for routine maintenance can effectively be undertaken by petty or small-scale contractors with people from the vicinity of the roads.

Optimising the use of labour

The local resource-based approach to road rehabilitation is considered to be the most appropriate approach for the majority of the district roads to be rehabilitated and maintained. Provided labourers are given proper tools and supervision, they can undertake most rehabilitation and maintenance activities. This will have financial advantages for the contractor over equipment-based operations as it gives flexibility in the execution of the works and is less dependent on the availability of equipment on the market.

The project will strive to improve the working conditions of workers at the same times as being effective road work operations. The ILO's strategy "Decent Work" will form the base for labour related issues on the rehabilitation sites.

Promoting gender equity

Overall, the Tsunami disaster has increased poverty levels and caused social structures and gender roles in the NAD society to change rapidly. Not only did the Tsunami hit women much harder than men in terms of numbers of casualties, it also affected the traditional division of labour by either exacerbating or changing the traditional tasks of men and women. Due to family care responsibilities and socio-cultural constraints, a great number of women are not able to involve in gainful and decent employment outside of the house.

Those women that do work outside the house are mostly engaged in lower status jobs with little upward mobility or security provisions. Discrimination in the labour market and workplace results in the under-representation of women at the higher levels of the formal economy, where decisions about their future tend to be made. Therefore, the project will give special attention to have a mechanism in place to sensitise stakeholders on gender equality concerns within the project and to ensure access for women and men to equally participate in all stages of the project activities.



Public Works' supervisors

Promoting occupational health and safety

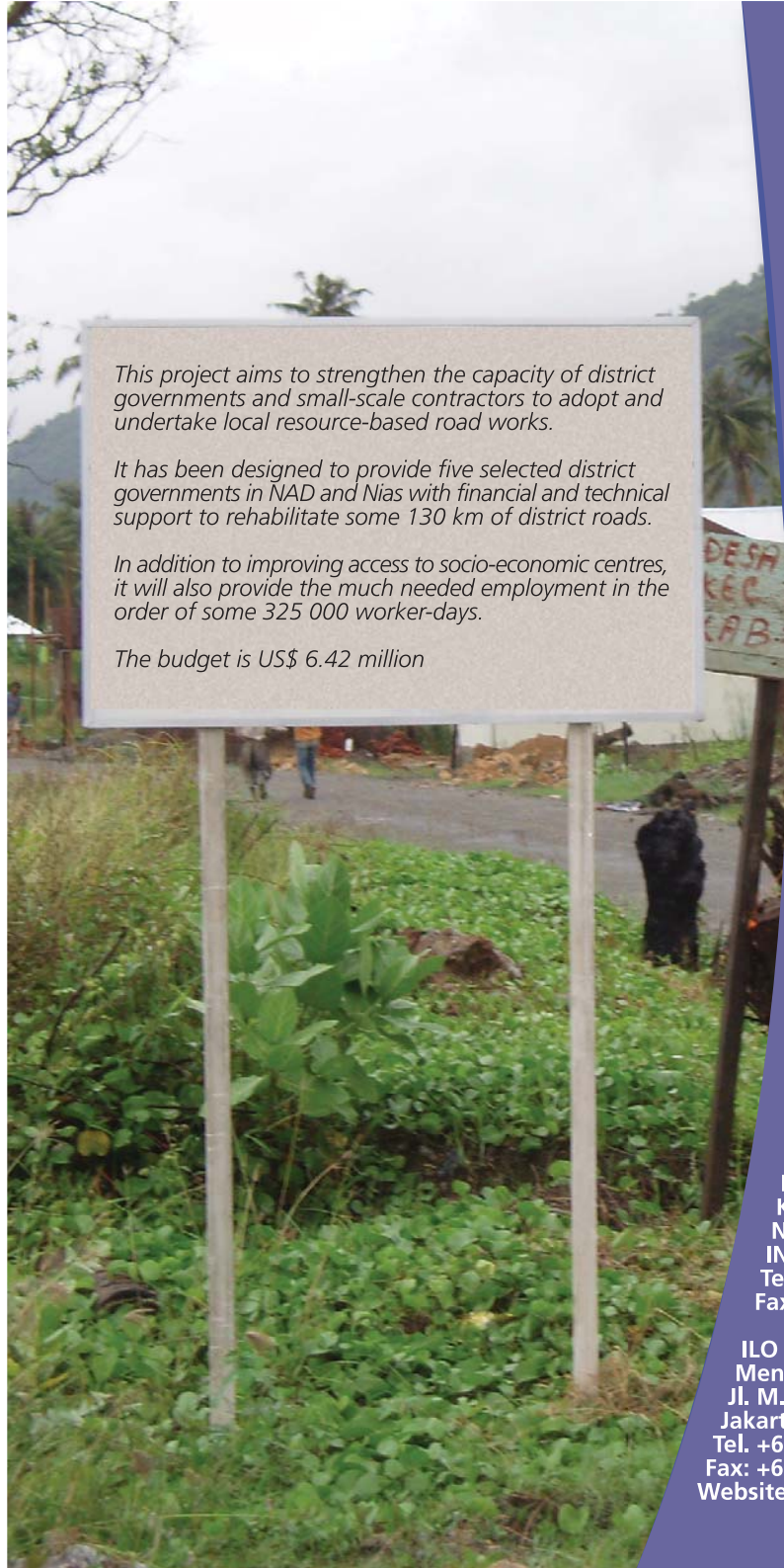
Occupational safety and health is, by law, the employer's (contractor) responsibility to provide information as well as preventive and protective measures. This is reflected in the legislation, which is – at least in principle – subject to enforcement. However, the ILO has a wealth of information and experience in this field that will be guiding both the contractors as well as the district government staff.

Reducing environmental impacts

Environment is generally regarded as the price to be paid for development and is often neglected. However, as this project will rehabilitate already existing roads it is not envisaged any major impacts on the environment, albeit the environmental aspects will be adequately covered in the training sessions. The contracts will stipulate the need to restore the sites for sand and stone quarrying; removal of trees is compensated by replanting. In Nias, special measures will be taken to improve the understanding and the techniques for erosion protection on the land adjacent to the roads.



The road to Aceh's and Nias' recovery is through the development of their roads!



This project aims to strengthen the capacity of district governments and small-scale contractors to adopt and undertake local resource-based road works.

It has been designed to provide five selected district governments in NAD and Nias with financial and technical support to rehabilitate some 130 km of district roads.

In addition to improving access to socio-economic centres, it will also provide the much needed employment in the order of some 325 000 worker-days.

The budget is US\$ 6.42 million

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