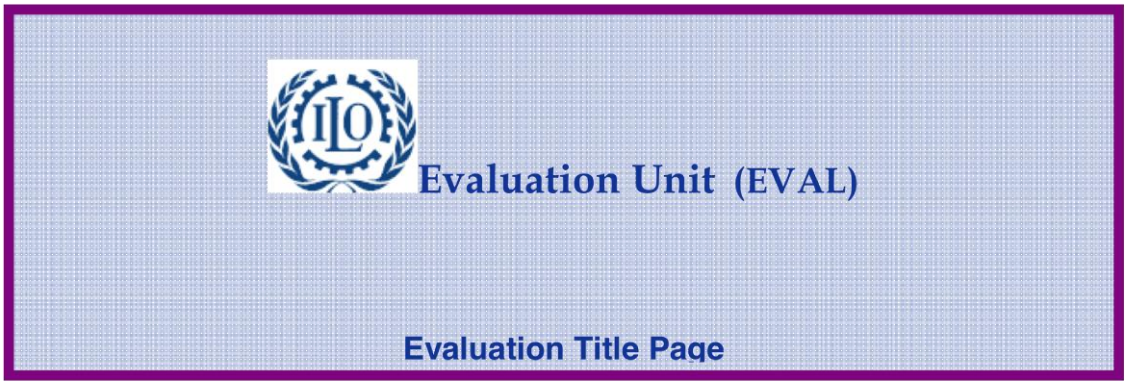

Project Title	**Nias Islands Rural Access and Capacity Building Project**
TC/Symbol	**INS/09/02/IDA, INS/10/02/IDA**
Type of Evaluation	**Mid-Term Independent Evaluation**
Country	**Indonesia**
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Evaluation Manager	**Mito Tsukamoto**
Administrative Unit	**Geneva**
Technical Unit	**ILO/EIIP**
Evaluation Team	**David Stiedl** **Krishna S Pribadi**
Date Evaluation Complete	**November 1st 2011**
Key Words	**road construction, maintenance, labour intensive employment, capacity building, supervisory training, local government, community participation, community contracting, trail and trail bridge construction**

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Abbreviations

ADB	Asian Development Bank
Bappeda	Planning Department at District(local) level
Bappenas	Planning department at National level
Bupati	Head Civil Servant for the District
BRR	Agency for Rehabilitation and Reconstruction
Camat	Head Civil Servant for the sub-District
DAC	Development Co-operation Directorate
DPU	Public Works
EIIP	Employment Intensive Investment Programme of the ILO
EU	European Union
ETESP	Earthquake and Tsunami Emergency Support Project
FIDIC	International Federation of Consulting Engineers
ILO	International Labour Organisation
Kabupaten	District
Kecamatan	Sub-district
KPDT	State Ministry for Accelerated Development of Backward Regions
LEDP	Local Economic Development Programme
LRB	Local resource-based
MOHA	Ministry of Home Affairs
MDF	Multi Donor Fund for Aceh and Nias
NGO	Non Government Organisation
OECD	Organisation for Economic Co-operation and Development
PAD	Project Appraisal Document
PNPM	Program Nasional Pemberdayaan Masyarakat (*Community Empowerment National Programme*)
PSC	Project Steering Committee
RACBP	Nias - Rural Access and Capacity Building Project
RTIP	Rural Transport Infrastructure Plan
UNESCO	United Nations Educational, Scientific and Culturural Organisation
TPK	Community Contract
UNICEF	United Nations Childrens Fund

Exchange Rate: 8,500 IDR to 1 USD

Executive Summary

The RACBP is a 33 month project designed to improve livelihoods and local economic development of communities on the island of Nias by rehabilitating and improving the rural transport infrastructure and building the capacity of small contractors, communities and local government to plan, deliver and maintain the infrastructure.

The project is part of the post tsunami and earthquake reconstruction funded by MDF, and is intended as a partner to the LEDP agriculture improvement project. RACBP is directly implemented by the ILO with a budget of 11.8 million USD. It commenced in October 2009 and is intended to be completed by June 2012.

The project's physical outputs are expected to be 100 km of rural roads and motorcycle trails and 36 bridges, all delivered by small contractors and communities using local resource-based approaches. Maintenance systems will also be put in place. Contractors, supervisory staff, communities and local government officials will be supported and trained in all aspects of the work. In addition there is a small cultural heritage component to rehabilitate traditional houses and megaliths.

This report details the mid term evaluation conducted in July 2011 by two independent evaluators commissioned by the ILO on behalf of the Project Steering Committee. The evaluation examines the relevance, effectiveness, efficiency and sustainability of the RACBP and gives recommendations on some actions that could help to ensure the outputs and outcomes of the project.

The methodology is based upon document reviews, informant interviews in Nias, Medan and Jakarta, visits to nine ongoing construction sites in five districts and a workshop with key Nias stakeholders. Performance is evaluated against the latest revision of the RACBP Results Framework and the DAC evaluation criteria of relevance, effectiveness, efficiency, impact and sustainability.

The evaluation concluded that the RACBP is a well designed and well managed project that is making a positive contribution to the life of the rural poor and fits well with the priorities of the KPDT, the MDF and ILO's Decent Work Programme.

It is making a good contribution to the knowledge base of rural road, and trail and bridge designs with solutions that are appropriate for local skills, cost effective and environmentally sound. It is effectively raising the technical and managerial capacity of contractors and community groups and increasing the skills base by giving young people the chance to join the industry. The high standard of support from Helvetas Nepal engineers in the trail bridge component should be noted.

However the project will not reach its original physical targets without an extension of time and funds. It will probably only deliver 67 km of the intended

100 km of roads and trails by the end of May 2012. In addition the devaluation of the USD against the IDR has effectively reduced the purchasing power of the project by 20%. An additional USD 3.7 million has been requested within the MDF framework but these funds by themselves will not be sufficient. The project also needs a time extension of at least six months.

Because of limited involvement by the district authorities, the project has not managed to find an institutional home for its innovations. A significant extension, possibly a second phase with a project redesign would be required for this. The objective of this extension would be to develop an organisation that could secure and expand the project's innovations within Nias and similarly disadvantaged provinces across the nation. Absorbing and expanding the approach through a national programme such as PNPM is an option supported by KPDT and MOHA.

Recommendations

1. The project should focus on completing a programme of 67 km of road and trails and 1100 m of trail bridges within its current budget by end Many 2012. No additional work should be taken on and no additional funds should be requested unless a time extension is possible. *Action: Now. Responsibility: RACBP and ILO Jakarta*

2. Only two batches of private sector contracts should be awarded within the current time frame. A third batch could be considered if there is a time extension. Given the efficient and effective procedures that have been developed for community contracts, these can be used to finish off uncompleted works. *Action: Now. Responsibility: RACBP*

3. The 3.7 million USD currently being developed should be reconfigured on the basis of a six month extension. The focus should be the delivery of the original 100 km programme, better coordination with LEDP to help with access needs of their target groups, re-design and re-introduction of local government staff training in technology and contractual innovations and the promotion of a culture and tourism programme to support the sustainability of traditional housing. *Action: Now. Responsibility: RACBP, ILO Jakarta, MDF, National and Local Steering Committee*

4. The pavement standards and the community trail bridge programme introduced by RACBP are highly appropriate for low cost low traffic access and could be applicable nationwide. There is a risk of the approaches being forgotten post project unless an appropriate branch of government takes ownership. This should be explored further. *Action: Before December 2011. Responsibility: National and Local Steering Committee*

5. The current minimum district access standard of three metres width could deprive the rural population of a very valuable and useful level of motorcycle-only access. There is scope for a high level policy decision on rural transport to allow districts to modify these standards in remote or "backward" areas. The adoption of motorcycle and power tiller trailers would increase the utility of these trails. *Action: Before RACBP project closure as it*

has the facilities to organise a workshop and study tour for decision makers. Responsibility: National and Local Steering Committee

6. RTI plans should be completed for all districts and the road numbering system re-introduced to facilitate future planning and the final evaluation. The qualitative aspects of the baselines also requires full documentation. This will require the re-filling of the project's head of planning section post, which is even more important if the project is extended to include LEDP access priorities. *Action: Now. Responsibility: RACBP*

7. The apprentice supervisor programme will have produced a good batch of valuable technicians. Pro-active steps need to be taken to avoid this expertise being lost, including dialogue with local government and the contractors association. *Action: before close of project. Responsibility: RACBP*

8. Training of communities in road maintenance should start as soon as possible, even where work has not been completed. Communities should be made aware of their responsibilities before work commences and encouraged to form maintenance committees at that time. *Action: Now. Responsibility: RACBP*

9. A better approach is needed to ensure the survival of traditional houses as neither the poor occupants nor the local government budgets can afford the re-thatching cycle or major repairs. Interventions could include research into alternative roofing materials that are more in keeping with traditional thatching and linkages to tourism initiatives such as home stay or eco tourism to generate revenue. *Action: By December 2011. Responsibility: RACBP, Local Governments on Nias, Museum of Nias*

10. The UNESCO proposal in its revised form is a very positive contribution to the sustainability of the cultural heritage on Nias, fully complimentary to the ongoing RACBP component, and should be supported. *Action: Now. Responsibility: National and Local Steering Committee, ILO, UNESCO*

11. At less than three years, this is a very short time for a capacity building programme, and the project is just now in a position to mainstream its approach. There is a very good case for second phase to this project, focusing on motorcycle trails and trail bridges only, and with a view to national replication. A suitable counterpart organisation needs to be found, one option being PNPM, expanded to include private contractor specialist support while community contracts do the majority of the work. KPDT and MOHA support this approach. *Action: Long term but discussions starting now. Responsibility: Initially the project steering committee and the ILO, in the long term to be decided*

Lessons Learnt

1. 33 months is far too short for a capacity building programme. The project has done very well to identify and start to address the capacity needs in the time

available, but at least one more three year phase would be necessary to ensure that the approach was sustainable without project backing.

2. Ownership, in this case of the districts and local government with respect to rural transport, is an essential element of project design. The pressure to rebuild, combined with the government's drive for increased autonomy at a local level, has made this issue very difficult for the project. However this is a common problem: projects are often based on what is, rather than what is likely to happen in the future. The project design and projects in general would benefit from more attention to issues of insitutionalisation and change.

3. Maintenance is another issue with which the ILO has long experience. It is obvious in the case of Nias that districts will not have a sufficient maintenance budget for many years. Communities can be very effective at the level of works required, but only if they are fully involved from the planning stage and fully aware of the long term obligation and inputs required. This component should be built into all rural access projects.

4. The short time span has been compounded by significant delays created by ILO Geneva concerns about the legal basis of FIDIC and community contracts. This is surprising as programmes within ILO have been working with these issues for at least twenty years, and supporting and advising countries on their introduction. These fundamental issues should be resolved in ILO Geneva for general application and not left for as a burden for field projects to resolve. Despite the above, the lessons about the effectiveness of community contracts as a transparent, efficient and participatory process if properly managed have been reinforced.

1. Project Background

Following the devastating earthquakes and tsunami of December 2004 and March 2005, 7 billion USD has been committed to the reconstruction and rehabilitation of Aceh and Nias under the overall direction of the Government of Indonesia's Agency for Reconstruction and Rehabilitation (BRR). The work is considered largely completed, the BRR having handed over responsibility to the respective central and provincial government departments under the coordination of Bappenas in April 2009.

MDF

The Multi Donor Fund (MDF), a consortium of 15 donors under the trusteeship of the World Bank, has supported the Government of Indonesia in this work since 2005 with a budget of 678 million USD.

The fund aims to contribute effectively and efficiently to the reconstruction of a "better" Aceh and Nias by filling gaps in the overall construction programme and bringing together and harmonising the efforts of government, donors, civil society and communities.

The MDFs mid-term review, completed in 2009 was generally very positive about the performance and relevance of its portfolio, particularly the Local Resource Based Roads programme that preceded the RACBP which is the subject of this mid-term evaluation.

The MDF will cease operation in December 2012, and the RACBP is one of its last components, targeted at improving the strategic rural transport network on Nias.

Nias

The island of Nias, located some 125 km from the west coast of Sumatra and a one hour flight from the provincial capital of Medan, has a long history of isolation and economic poverty. Recent investments from the Government of Indonesia together with donors and NGOs have improved the island's strategic transport, and its health and educational infrastructure, to a much higher level that before the earthquake. However the challenge is now to translate those investments into sustainable economic improvements.

The population of 760,000 has a poverty level of 32%, double the national average, with 87% of the workforce dependent on subsistence farming. Local agricultural practice is poor with rice yields at half the national average and rubber some 40% of Sumatran plantation yields (and a reputation for post harvest adulteration). Many of the estimated 100,000 farms are only accessible by foot for large parts of the year and have significant areas of idle land.

Post earthquake reconstruction and rehabilitation work has improved the provincial and inter-district road network, but some 67% of the 2,500 km district network that connects farms and villages is still estimated to be impassible to vehicles[1].

RACBP

The RACBP has been designed to address this constraint by filling some of the more important gaps in the rural network, but also by developing the local capacity to plan, construct and maintain the network in the future.

It is one of two projects funded by MDF to improve livelihoods and local economic development for Nias communities. The complimentary project, the Livelihood and Economic Development Programme (LEDP) is administered independently through the State Ministry for Accelerated Development of Backward Regions (KPDT).

The LEDP deals with training and financing agriculture livelihoods groups and its progress is not the subject of this evaluation. However its interface and collaboration with the RACBP will be assessed and discussed in this report.

The RACBP is implemented directly by the ILO under a Fiscal Agency Agreement with the World Bank . The ILO thus manages all works on-budget and off-treasury using its normal operational procedures. The government and donor interests are represented by the Local and National Steering committees which are chaired by the Provincial Planning Agency of North Sumatra (Bappeda) and the National Planning Agency (Bappenas) respectively.

The expected objectives, outcomes and outputs of the RACBP are set out in the Results Framework attached as Annex 4 to this report, and are summarised below:

The High Level Objective shared with LEDP is to facilitate post-disaster economic recovery and poverty alleviation by creating an enabling environment for improved livelihoods and human development.

The specific Programme Development Objective for RACBP is that residents of participating districts utilise the improved rural transport infrastructure and services and benefit from enhanced access to economic activities and social services.

There are two expected outcomes:

Firstly: cost effective, durable and environmentally sound strategic rural road access to economic and social services for targeted beneficiaries.

Secondly: improved capacities of district level staff, small contractors, supervisors and communities in planning, managing, implementing and maintaining construction works using technically and environmentally sound work methods.

[1] Rural Access and Capacity Building Project, Project Appraisal Document, 24th August 2009

A small Cultural Heritage sub-component is also included, aiming at the preservation of Nias' cultural assets through small scale infrastructure works in the clusters where the project is active.

Specific outputs are quantified as:

- 15 km of light traffic "all weather" access roads and 85 km of motorcycle trails constructed and handed over
- 1,100 m (approximately 36 units[2]) of small bridges and river crossings constructed by private contractors and community groups and handed over
- Off-pavement routine maintenance carried out on all improved roads and trails by community groups
- Maintenance on all bridges by community groups
- Updated Rural Transport Infrastructure Plans for all clusters
- Selected cultural heritage asset works completed and handed over

Initially when the project commenced in 2009, it was expected to cover three clusters of sub districts with a budget of 10 million USD, however in 2010 the budget was increased to 11.8 million USD, which allowed all five districts to participate.

It should be noted that the local government structure of Nias has undergone major restructuring in the past two years. The original two districts and 17 sub districts have been replaced by four rural and one urban district, with all the requisite new staffing and office structures[3]. This has had considerable effect on the local government/project relationships as will be discussed in this report. The five districts and the 21 sub districts covered by the project are shown in Annex 5.

2. Evaluation Purpose and Methodology

An independent project evaluation is a mandatory exercise for the ILO and the MDF, and is specified in the PAD. The clients are the MDF and the Government of Indonesia as represented by the National Steering Committee. The date for this mid term evaluation has been postponed by some four months at the request of the National Steering Committee, to coincide with the delayed start up of the LEDP, thus it is taking place a little later than mid way, but still with sufficient time to allow adjustments to be made if required.

The ToR as agreed with the GoI and MDF is attached as Annex 1. The evaluation norms, standards and ethical safeguards have been followed.

[2] The Results Framework has an estimate of 25 units, but this has recently been revised to 36 by the Bridge Unit to reflect the actual numbers being installed.
[3] The districts Nias and Nias Islands are now divided into Nias, Nias Selatan, Nias Utara, Nias Barat and Kota Gunung Sitoli

The purpose of the evaluation is to examine the relevance, effectiveness, efficiency and sustainability of the Nias RACBP. It will assess whether the project is likely to deliver the expected outcomes in time and budget and will summarise key achievements and provide recommendations on exit strategy, adjustments in programme arrangements, budget allocations and involvement of stakeholders and areas for possible up scaling.

This mid term evaluation follows ILO evaluation policy and procedures and the report is subject to final approval by the ILO Evaluation Unit. An international evaluator David Stiedl (Independent Consultant) and a national evaluator Dr. Krishna Pripadi (Associate Professor, Bandung Institute of Technology) have been appointed following ILO Evaluation guidelines. The international evaluator is responsible for the drafting of this report.

The evaluation has taken place between the 4th and 28th of July and activities have included extensive site visits in Nias, key stakeholder meetings in Medan, Nias and Jakarta and a debriefing workshop for the National Steering Group and other interested stakeholders. The mission itinerary is attached as Annex 2.

The evaluation has used three sources of information: key document reviews, informant interviews and site visits. Baselines had recently been completed on four project sites, but these were primarily pre-construction traffic counts and therefore of limited use for this exercise.

The project has maintained an extensive database of project reports and background information as well as its regular quarterly reports. All this information was made available to the evaluators before travelling to Medan, and a list of documents consulted is included as Annex 3.

The ILO has 49 staff resident in Nias and presentations were provided by all the sections responsible for training, infrastructure and administration. Relevant staff were also interviewed on the worksites and meetings were arranged with key consultants in Jakarta.

Local government offices were visited for four of the five districts with particular emphasis on the departments of public works, planning and cultural affairs. The Bupatis (Head of District) of Nias and Nias Barat and the Mayor of Gunungsitoli arranged general meetings with all their key staff. Although it was not possible to fit in visits to all of the offices in the limited time available, representatives from all five districts attended the wrap up workshop. However the nine worksites visited covered all districts and it was possible to meet with the community and private contractors responsible for executing the works and talk with groups of villagers about their views on progress to date and the expected benefits. The wrap up workshop for all district and sub district stakeholders and participating contractors in Nias gave an opportunity to test the evaluators' initial findings.

Chapter 3 of this report summarises the evaluators' findings on the achievements to date and Chapter 4 gives an assessment of the project in terms of the DAC Criteria for Evaluating Development Assistance[4]. Chapter 5 contains the main conclusions, and Chapter 6 the recommendations for short-term amendments to secure the project outcomes and the potential for longer-term replication of some promising technologies and approaches. Lastly chapter 7 contains some lessons learnt that could be considered for the knowledge sharing and learning environment.

The Draft Report has been shared with the stakeholders. All comments received have been taken into consideration by the evaluators in finalising this report.

The evaluators gratefully acknowledge the help provided by the RACBP staff in Nias and Jakarta especially all the excellent logistic and administrative support. The evaluators also wish to thank everybody involved for their willingness to participate in interviews and meetings and their readiness to provide additional information, however obscure.

3. Achievements to Date

RACBP is the last in a series of post disaster interventions, and as such most of the focus from both recipients and local partners has been on delivery of physical infrastructure.

However this project design also places considerable emphasis on capacity building to try and ensure that Nias improves its government, private sector and community skills to continue to deliver and sustain its infrastructure.

100km makes a useful but only a limited contribution to the overall needs of Nias . Even on current estimates, 1800 km of the district network (67%) is impassible to vehicular traffic. This evaluation thus places an equal emphasis on both the achievements in capacity building and to work on the ground.

3.1. Roads, Trails and Bridges

3.1.1. Planning and Prioritisation

Prioritisation of rural access is a complex and time consuming process. Most district roads and trails in Nias are relatively short (less than 5 km and often no more than one or two), and are part of a complex network of paths evolved over years, featuring difficult river and swamp crossings.

Communities often have conflicting priorities of agricultural, health, education and administrative access. The recent changes brought about by the massive post earthquake investments have also created changes that are yet to be fully felt.

The increase of district centres from two to five will show up the inadequacies of the current strategic network with a whole new network and orientation needing to be developed. As another example the investment on education (119 new schools from

[4] DAC Principles for the Evaluation of Development Assistance, OECD

UNICEF alone) has increased expectations island wide and children have to be able to reach their new schools.

The project has put considerable emphasis on developing planning systems that fully involve the communities and local government. The evaluators have spent some time studying and discussing the methodologies with the concerned staff and the consultant and are satisfied that the approaches represent best practice.

The RACBP have been at pains to emphasise that interventions were often critical points on existing networks rather than stand alone individual roads or trails. This of course makes it difficult to be precise about direct and indirect beneficiaries in some cases.

The process makes full use of the excellent mapping produced by ETESP (the ADB's – Earthquake and Tsunami Emergency Support Project), and in the few cases where this was not available it has produced work of a similar standard. The process is clear and concise and demonstrates an excellent approach that can be adopted for future district and sub-district planning.

Overall benefits are well demonstrated and environmental, agricultural and social issues are factored in. Most importantly, there has been full dialogue with communities and local government to validate the findings and endorse the conclusions.

A document entitled the Rural Transport Infrastructure Plan has been compiled for the northern district (Nias Utara) summarising the process. A similar exercise has been carried out for the other two clusters and the evaluators have been assured that this will be written up and handed over to the relevant districts before project completion.

It should be noted that poverty criteria were not used, but a population criteria was used to ensure equal distribution of investments across the 21 sub districts. There is apparently no poverty mapping as such for Nias, although overall some 67 % of the population is reported as below the poverty level[5]. However most of the rural population (90 % of Nias) are subsistence farmers living in low density disbursed settlements and make up the majority of the poor. We saw no evidence of large plantations or obvious wealth differentiation during our site visits.

One of the major characteristic of the islanders, emphasised by the literature and district officials, is their independence, village focus and often reluctance to collaborate or cooperate with government or perceived "outsiders". A major endorsement of the planning and prioritisation process must therefore be the comparative lack of problems with securing access and rights of way for the works. Compensation payments are not part of the project, and although problems have been encountered they are relatively minor. Where there were obvious obstacles the projects were generally properly identified and dropped at prioritisation stage.

[5] Indonesia: Aceh – Nias Rehabilitation and Reconstruction, Progress Report, ADB, August 2009

District officials often remarked that the lack of problems with rights of way was one of the project's main achievements and that they experienced many more problems with their usual procedures.

3.1.2. Linkage with LEDP

The LEDP is designed to improve the agricultural production of small farmers through training to improve agricultural techniques, processing and marketing and small grants to supply inputs to enhance the training activities.

The target is 100 groups, 50 mixed gender and 50 women only. At about 40 households per group this represents some 20,000 beneficiaries, a significant impact. Components are also included for support to local government agricultural services in extension work and developing their management, monitoring and evaluation capacity.

LEDP was originally intended to run in parallel with the RACBP, the logic being that LEDP would increase productivity and RACBP would intervene to help groups where access was a major restraint. Unfortunately there have been major delays with procurement and RACBP had to make its priority list in 2010. Although the process included productive agriculture areas, the criteria for the selection of the farmer's groups was not yet decided and could not be included.

LEDP has only just commenced the mobilisation of the principal consultant package. The consultants now have a list of community groups, selected by the sub-districts, but their location has not yet been accurately mapped and compared with the RACBP interventions. There are thought to be 14 groups where the two projects coincide, but this is still to be verified.

It is thought that many of the groups may not have accessibility problems, so it is not correct to conclude that there is only a 14% coincidence, however even if only 50 of the groups have access problems, an opportunity has clearly been lost.

With RACBP's very tight timetable there is no opportunity to adjust the location of its interventions, however if, as will be discussed later, there is any opportunity to extend the timescale and budget it may be possible to offer LEDP more assistance, provided that they can give RACBP information and mapping on group location and access conditions.

3.1.3. Standards

Roads and Trails: A very high standard of innovation has been pioneered by the RACBP. Considerable thought and experimentation has gone into producing roads and trails that can cope with the high rainfall, steep gradients and poor soils with a minimum maintenance requirement.

The basic Telford standard[6] is superior to the work of other agencies, and in many places improvements have been made by simply re-shaping and re-setting existing materials and re-instating drainage. However the main improvement is in the introduction of emulsion-based pavements as a cost effective and environmentally preferred substitute for penetration macadam.

Figure 1: Telford Surfacing

The methods and their benefits are well described in the Technical Monitoring Mission Reports of Jon Hongve[7] and will not be repeated here except to emphasise that traditional methods of heating bitumen to lower its viscosity and then pouring over open textured stone is wasteful of materials, noxious for the workers and produces an inferior running surface.

Figure 2: emulsion based pavement

Figure 3: mixing pavement materials

Alternatives have been used for the islands main road rehabilitation, but this involves an asphalt production plant to produce "hot mix". Haulage costs alone would make this solution prohibitively expensive for these small and dispersed sites, especially as the only access is by motorcycle and wheelbarrow.

There has been some objection from public works departments to the use of emulsions[8] in that they are currently not available on Nias and the project had to go to some lengths to procure the correct quality. However emulsions are available in Indonesia and should be well within the competence of local government to arrange.

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[6] Hand placed stone, tightly packed, voids filled with sand and edge stones to retain the pavement.

[7] RACB Technical Monitoring Missions, December 2010 and May 2011

[8] Emulsions are bitumen disbursed in water by the use of an appropriate chemical emulsifying agent. Additives improve adhesion to aggregates.

Figure 4: stone haulage by motorcycle

Haulage of suitable materials is a problem throughout Nias and the use of motorcycles with panniers is common. This is not efficient for very heavy loads, and in fact is quite dangerous with the weight of sands and stone. The introduction of motorcycle trailers, or even power tillers as commonly used in other part of South East Asia would seem to have potential.

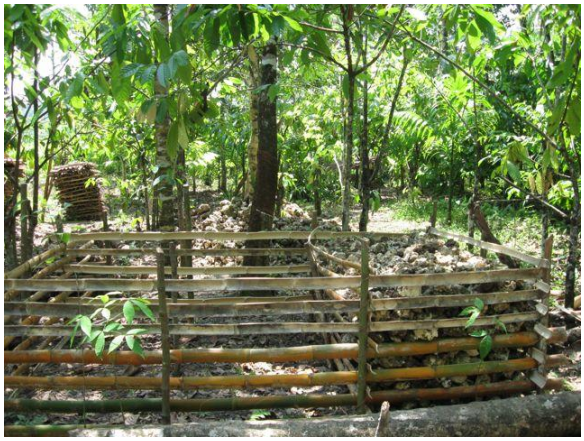

Figure 5: coral stockpiles

The project has also started to use coral deposits stabilised with cement (0.5%) and bitumen (1.5%) to make an alternative base course. Coral materials can easily be collected by the communities from the surrounding land, and sold to the contractors. This approach seems to be very popular with communities wherever it has been adopted, as seen by the well-organised stockpiles along the trails, although there is a concern over the stability of quarries on steep sloped hillsides.

However the evaluators have concerns about some aspects of the innovation. There have been a number of revisions to pavement details in the last six months following expert consultancy inputs. The inputs will obviously result in a better product, but the benefits gained should be weighed against the disruption to progress caused by delaying contracts and retraining in methods. Concrete kerbs and bamboo shoulder drain pipes are now being proposed for all Telford bases. With only eleven months to go this adds an unnecessary complication and may well distract the contractors from the more important priorities of camber and improved run-off drainage ditches.

A second and more important concern relates to road width. It appears that a road less than 3 metres width cannot be adopted by the districts as it falls below their minimum standard. This is a serious issue in terms of ownership. Who owns the motorcycle trails? Who is responsible for their maintenance?

In general the district officials and even the communities expressed a preference for roads that allowed access of 4 wheel vehicles. The fact that the roads and bridges would cost considerably more and thus less could be built did not seem to concern them. This

probably reflects the perception that the money is from central government or donors and therefore not an issue.

It was more of a concern that the importance of moving from head loading over a muddy track to reliable motorcycle haulage on an all-weather path is not given a higher priority by district engineers and planners. Motorcycle transportation probably represents 95% of all vehicle movements on Nias, and motorcycle ownership has been growing exponentially in recent years. Every household met either owns a motorcycle or aspires to one once the road is built. Given the state of the network, making an island-wide policy to start with motorcycle only access for the district network seems an obvious route for decision makers. To leave the decision at the mercy of an old public works standard is surely unwise.

Bridges. As with the roads and trails, RACBP has introduced a number of new approaches that could have wide scale application in Nias, and Indonesia in general. The Nias transport network has many river crossings, and with the narrow valleys and high rainfall these crossings can be very hazardous even on foot. Poor soils pose a particular problem to bridge foundations and floating debris to bridge decks.

Figure 6: poorly maintained suspension bridge

Suspension bridges have been adopted, in the past, mainly for foot traffic, but these have usually been poorly constructed, badly sited and requiring continual maintenance of the wooden decking (or more usually no maintenance and thus very dangerous).

Figure 7: Modular Suspension Bridge

The project has introduced a modular suspension and suspended bridge programme developed by Helvetas in Nepal. This type of bridge has been designed to be erected by community labour without the requirement for heavy equipment, is virtually maintenance free and utilises steel decking and pre-stretched cables.

Over 4,000 of these bridges have now been erected in Nepal and Bhutan and the system has been refined to be easily replicable for a range of spans and loadings, with a simple training scheme for technical staff to decide on the basic parameters and monitor the key moments of installation.

The project has already erected four bridges under the supervision of a Helvetas technician[9], and has ordered the materials for the construction of nine more. Steel decking and superstructure are being manufactured in Medan, and the pre-stretched cable has been ordered from China. All items can be transported manually to the site.

An important feature of these bridges is that they can be easily crossed by motorcycle and are designed for that load. The project will be using a maximum span of 135 metres, although the system can be adapted for much wider crossings.

Bappeda North Sumatra have expressed interest in adopting this approach province wide and have identified ten bridge locations for initial implementation. These sites have been visited by the RACBP bridge team and they consider nine are technically feasible and economically justifiable. RACBP have also submitted a report setting out options for a wider scale replication[10].

Designs have also been tested for short span bridges to replace the traditional timber deck with its very limited life span. The treated palm wood log bridge is particularly promising with its use of easily available materials, as is the swamp crossing based on lightweight steel piles and steel plate decking.

Figure 8: swamp crossing

3.1.4. Physical Output

Roads and Trails: According to the work plan included in the revised scope of work and budget submitted[11] in June 2010, the intention was to start awarding construction contracts that month, with final completion and hand over by May 2012. In practice the first contracts were awarded in December 2010 and work commenced in January 2011. The work plan is included as Annex 6 of this report.

The main reason for this delay would seem to be extended discussions on the form of contract that would be acceptable to the ILO and to the GoI. ILO does not have construction as it main business and normally provides Technical Assistance to on-budget financial arrangements managed by the government agency it is supporting. In this case, being off-budget, the ILO had to adapt its normal operating procedures. However all parties seem to have appreciated that for capacity building it is necessary

[9] Although erected during the RACBP phase these have been funded by the previous ILO/UNDP project - Creating Jobs: Capacity building for local resource-based road works in selected districts in NAD and Nias

[10] EIIP Consultants Report, JM Tournee, May 2011

[11] Project Revision Document: Scope of Works and Budget, RACBP, June 2010

to adopt a procedure that has normal industry wide application. The work that has been done to adopt and adapt the FIDIC short form of contract for local resource based works is judged to be a worthwhile investment even if it did create some delays.

Figure 9: contractor at work

The first batch of 18 contracts (34 km) was intended to be completed by July 2011, immediately followed by a second batch with a target of 23km. The final batch was expected to start by the end of 2011. However the first batch have taken much longer than planned and as of July 2011 the average progress is only 31%.

Many contracts have already been extended to August and judging from current performance will not finish until October or even November. Of the total of 18, one has been terminated and four more are below 20% completion.

The contractors that were interviewed gave various reasons for the delay, including cash flow problems, unexpected difficulties with transporting materials, land ownership issues and design changes. However it seemed that the main issue is that Nias contractors were hoping for flexibility over the schedule, and the prospect that the project might enforce the contract and terminate if not compliant has been a shock.

If the project does strictly adhere to the contracts its only current option will be to retender which would result in even more delays. Meanwhile the second batch of contracts is also delayed, and the chance of a third is becoming increasingly remote.

Community contracts related to road works are reported to be progressing well. Of the 29 contracts, 23 are already completed.

Were the commercial contracts over-ambitious? Contract lengths are quite small, less than 2 km on average, and based on experience elsewhere[12] the scope of works is feasible, even generous, within a six month time span.

Could the plan be amended to increase the number of contracts let in the second phase? This is possible but would mean creating a new group of contractors who have not been properly trained. From our observations, the small contractors who are the target of the project are not skilled in technical road works or modern management techniques. They require extensive on the job training and support from the RACBP team to produce the necessary quality. This was anticipated in the project design, and the approach is working well. If the number of contracts were expanded in the second batch the projects supervision capacity would be overstretched, the quality would suffer, and the capacity building outcomes would not be achieved.

[12] Labour-based works of similar complexity normally progress at 0.5 to 1 km a month.

Two actions are suggested:

Firstly the project should amend its current target to terminate with the second batch of contracts. This would give an overall reduced output of 67 km or 67% of the original target, but would still ensure a satisfactory capacity building output and tie in with the bridge component of the programme. The contracts that are currently below 20% completion should be terminated and completed by community contract under direct supervision of the RACBP.

Secondly the project should explore the possibility of an extension. Even a six month extension would allow a third batch of contracts and could achieve the original target of 100 km. It is appreciated that the MDF officially terminates in December 2012 and projects are expected to wrap up by May 2012 to allow for a proper closure of accounts and contracts, however if there is a possibility there are additional benefits, especially in potential synergy with LEDP, which are discussed in section 5.1.5.

Bridges. Bridges are delivered by a different arrangement from the roads and trails, using community contracts for the construction of abutments and erection of superstructure, but with all procurement and construction supervision provided by the RACBP.

Bridge construction is also delayed against the original plan. The principal reason was the form of the community contract which was considered not compatible with ILO legal procedures. This was finally resolved in April 2011. Ten community contracts are ongoing for bridge related work and completion is estimated at 10%.

A very well thought-through but very ambitious procurement plan is in place for the nine suspension bridges, with pre-stretched cable coming from China and deck assembly under way in Medan, however work has barely started in the field. We observed partial abutment excavation on several sites, but no concrete works or signs of formwork, steel or cement in readiness.

There is now only eleven months left with the wettest season about to start. . The RACBP bridge section people are fully committed, but the schedule is tight and will need a major effort to be achieved in time. Given that the materials have been ordered, and many of the bridges are linked in with the road programme it is not a simple matter to reduce the targets. As with the road component, a six month time extension would be very beneficial.

Figure 10: community preparing bridge foundation

3.1.4 Costs and Budget

The current estimate to complete the 67 km of road and trial works ongoing and proposed under the batch 1 and 2 contracts, plus the bridge programme, is 4.46 million USD. This should be compared with the original budget figure of 4.39 million USD. This was originally intended to cover the full 100 km and the bridges.

The original budget does not separate out the bridge and road costs, so it is difficult to be accurate as to the exact reasons for the cost increase: how much is materials and how much design changes. However a major factor has been the depreciation of the USD against the IDR since the development of the PAD. The exchange rate was 11,000 IDR to the USD in 2009 and is now 8,500. With local resource based works, most of the costs are incurred onshore. It is estimated that at least 20% of the cost increases can be attributed to this depreciation. In IDR terms the costs per km of road and trail work is currently 422 million. From a consultants estimates in 2008[13], similar work then would have cost 400 million IDR, which represents a very reasonable increase of 5%.

The capacity building and support expenditure are within budget, and there should be sufficient funds to cover the project costs with the revised output of 67 km provided the value of the USD does not drop significantly in the next few months.

There is a proposal from RACBP for additional funding[14] of 3.7 million USD which revises the total road and trails to 80 km, and increases the targets for bridges and houses while adding a new component for a cultural heritage water supply.

Based on present performance, the project does not have the capacity to utilise these funds within the current time span whereby all works must be completed by the end of May 2012, and the project closes by the end of June 2012.

However if a six-month extension is possible these funds could be used very effectively. A third batch of contracts would allow the original target of 100 km to be achieved, and the additional time and roads would give the opportunity to collaborate with LEDP to provide access for more of their target communities.

The current proposal only suggests an additional 13 km of roads with the balance of the funds going to the other components. The evaluators recommend that the proposed budget should be amended to focus on 37 km of roads and trails, which could be easily accommodated within a works sub-contract of 2 million USD.

3.1.5. Ownership and Maintenance

A fundamental part of the project is the close collaboration with local government district officials for planning, execution and eventual ownership and maintenance. As previously noted, this appears to have been done well for the original project identification, but there seems to have been limited involvement at district level since.

[13] Notes on Pavement Options for Nias, Andreas Beusch, August 2008
[14] Draft Project Revision Document 2, Scope of Works and Budget, RACBP, June 2011

During the mission it was noticeable that many district officials had very limited knowledge of the project, and even technical staff from Public Works knew little about the technical innovations. However it was also noted that as a consequence of the recent expansion of districts, many officials were very new, especially senior staff. Some had only been in place for a few weeks.

During discussions and the final debriefing workshop in Nias, one of the main concerns raised was the construction of 1.5 metre wide motorcycle trails and bridges. According to regulations it appears that anything below three metres cannot be adopted by the district as it is considered sub-standard. This means that as far as district offices are concerned they cannot be involved in construction or maintenance. So who will be the owners? This does not seem to have been resolved.

As previously noted, these trails and bridges are a crucial component of Nias's infrastructure that will continue to be the appropriate and most cost-effective standard for many years to come. It is recommended that this policy be revisited at a senior level. It is difficult for district technical staff to get involved while this policy is in place.

The project output includes provision for maintenance to be in place on all completed roads, trials and bridges. As none of these have been completed there has been no progress in this area to date. It is obvious that the communities are going to be the owners of most of the infrastructure for the immediate future and it would be wise to start their maintenance training as soon as possible.

It is important for communities to have been made aware of their responsibilities from the time of identification of the project, and maintenance committees set up at that time. In practice maintenance is not done properly unless communities have a real sense of ownership and the resources to pay maintenance workers. Methods can be put in place to help communities raise these resources through annual donations, levies on commercial users, fund raising events etc, but it takes time and the sooner it is started the better.

Bappenas has noted that it would be very advantageous if PNPM could be included in maintenance training as their current approach could be improved. This would be very worthwhile but would be a major expansion of the current remit which only covers the maintenance of work upgraded by the programme. However such an approach should be central to any future expansion of the programme.

KPDT and MOHA are very concerned that the innovations and techniques being developed in construction and maintenance should not be lost as they have a wide application for similarly disadvantaged provinces across the nation. If the districts are unable to go forward with the programme under their own staffing and budget then absorbing and expanding the approach through a national programme such as PNPM could be an option.

3.2 Capacity Building

A great deal of work has gone into the capacity building programme. It follows good practice with comprehensive training needs assessments, a clear curriculum, and a good balance of theoretical, practical and on the job training tailored to the various target groups.

A summary of training inputs to date in terms of person days is attached as Annex 7. A total of 15,801 days of on-the-job and classroom training against an overall plan of 22,320 has already been delivered. With the exception of training for government officials, it is expected that training inputs will have exceeded the plan by close of project.

3.2.1 Contractors

For this work, all contractors are certified as Grade 4 or Small Contractors capable of carrying out works up to a value of one billion IDR (approx 100,000 USD).

The contractors' technical training is on the job with a project team of field engineers and mobile trainers visiting sites at least once or twice a week. However the business part of the training has also been critical, with orientation and workshops on tendering, contract mobilisation and contract implementation.

The classroom training is aimed at company directors. Subjects include understanding tender documents, pricing, work programmes, quality control, accounting and reporting.

57 contractors have embarked on the training programme to date. 18 of these have completed the whole process as part of the first batch. The second batch have attended their pre-qualification training and will continue with training during their contracts. All those interviewed appreciated the training and felt that it really helped to improve their work practice and efficiency.

Although they found the project very strict compared with the contracts they had been used to with local government and others, once they became used to the process they found the process transparent and straightforward and appreciated knowing what was expected of them.

The contract documentation is clear and well structured, but perhaps a little over-complex for such small contracts. The FIDIC short form already has a good international reputation for small and simple contracts. However RACBP have added 33 Particular Conditions to the 51 sub clauses of General Conditions in the FIDIC document.

Many of these particular conditions relate to worker conditions and payment, presumably because these are not clearly covered under Indonesian employment law. Some conditions relate to the method of construction to ensure that heavy machinery is not used.

Despite all the assistance and training, contractors are still struggling with basic problems such as getting an advance. Under the contract conditions, getting an advance is only possible if contractors have a bank guarantee, and guarantees are only available if contractors can provide sufficient collateral, which is difficult for them. There are successful examples in other similar projects where advances are made without bank guarantees. Maybe this sub clause could be re-assessed by the project. Consideration could be given to the use of land or vehicle ownership certificates if there is real concern on default.

The project has a comprehensive process for judging and awarding contracts, which includes rejecting bids that are lower than 80% of the engineers estimate, and ensuring no contractor has more than one contract in any one batch. All contractors must have completed the pre-qualification training to be allowed to bid.

3.2.2 Apprentice Supervisors

Figure 11: apprentice training

The apprentice supervisor course was devised to address the shortage of qualified technical staff in Nias. Apparently this shortage became very obvious during the post disaster phase when Donor and NGO programmes had to import most of their qualified staff from outside Nias.

The programme has recruited two batches of vocational college/high school leavers, and just completed the training programme for the first batch. The course consists of a one month intensive classroom and practical introduction to the principles of road construction followed by three months practical training on a training site going through every aspect of work they would be expected to deal with on a road contract. This is followed by a six-month attachment as an apprentice supervisor to a contractor implementing the works, but with continued coaching by the project's mobile trainer.

The apprentices are paid a basic salary and living costs, but there is no guarantee of employment after the training is complete. The first batch of 12 men and 6 women was chosen from 96 applicants, and the second of 16 men and 8 women from 121. There is obviously a high demand for this training.

Figure 12: 2nd batch apprentices and members of evaluation mission

The evaluators managed to interview all the trainees in the second batch but

only three from the first as their attachment period had ended. All were very positive about the experience and hoped to find employment in the industry either as supervisors or by starting their own business. All said that finding good technical jobs was difficult in Nias, other than in government.

What will happen with the apprentices in the long term was unclear. From the first intake five have now joined the RACBP project team, five resigned during the course and the remaining eight await offers. Some contractors reported that they were unsure as to the apprentices' allegiance, were they there to help them or as the eyes and ears of the client? Other contractors said that although they had good theoretical knowledge, their practical skills were too limited. A few reported that they were very pleased to have such people available and intended to offer them full time jobs if they were awarded more road contracts.

The evaluators conclude this part of the project has created a very good asset for Nias, but some proactive steps need to be taken to ensure that the experience will not be lost. Letting the market decide is not enough and more dialogue is necessary with contractors, their professional contractors association and with local government to see how these people with their apprentice supervisor skills could best be used. Government has its own procedures for recruiting civil servants, but it makes extensive use of consultants to deliver infrastructure programmes. If a suitable organisational role such as forming a consultancy firm or a professional body could be found this might be a way forward.

3.2.3 Communities

Community contracts have proved to be a major strength for the project. These contracts have been used to do initial clearing and earthworks before the contractors start, to collect materials, and to build bridge foundations and erect the superstructure.

Essentially they act as a force account operation under the direct supervision of the projects technicians, but they also learn skills and form the basis for a future maintenance group. The rationale of the community contract is that a committee is elected to be responsible for supplying and directing the workers. The rules for election and composition ensure gender balance and exclude village leaders to minimise elite capture.

The community committee (TPK) is given training in administration of the budget and payments, record keeping, basic technical skills of measurement and setting out, and social issues relating to working hours, safety, gender balance and environmental protection. A total of 44 committees have been trained to date.

One of the main benefits of this approach has been to simplify the whole process of land acquisition. Because the community are fully involved in the process they can settle disputes internally and arrange compensation using their own processes. Local Government officials report that this area is normally a great challenge with issues of compensation blocking contract progress. With the RACBP approach the contractor has

a prepared right of way and only needs to negotiate about materials. They also have a local trained work force they can recruit from.

It has been suggested that community contracts could be used more extensively, for example to replace private contractors on other aspects of road work. The evaluators agree that this is feasible especially for specialised work such as suspension bridges, however it does require a skilled team of supervisors to direct them and an organisation to procure specialised materials. RACBP has such a team, but local government does not. If this approach were to be adopted in the future, a new approach possibly utilising consultants (as is done by PNPM) would have to be developed.

There is a provision to train communities in road and bridge maintenance. This would mainly be carrying out routine activities such as bush clearing, drainage and slip removal in the case of roads and trails, and inspection of fixings on cables and decks for bridges. This work has not started as the intention is to wait until the works are completed and handed over. As previously noted, this is missing a good opportunity to involve the communities from the start. The TPKs are ideally placed to form a road or bridge maintenance committee, and could be tasked from the beginning with coming up with ways of organising and funding future maintenance. The ILO has good experience of these processes from projects in other countries and could mentor the maintenance groups right from the start. Just hoping that the communities will take responsibility on their own accord and know what to do, seldom proves a successful approach.

3.2.4 Government Staff

The intention of the project had been to invite district staff to join the training courses that would be useful for them. Thus public works staff could attend the contracting and technical training, and planning staff could attend the training relating to community orientation workshops and project prioritisation.

In practice, no pubic works staff have been able to attend any courses in any of the three clusters. Interviewed staff have given various reasons such as invitations arriving too late, but the most common reason is that they have been too busy with other priorities.

From the evaluators' visits around Nias it is very obvious that the new districts have a huge task just to put their new office infrastructure in place, and ensure connections to sub district offices. Senior staff have been very newly deployed from other parts of Indonesia and are yet not familiar with their districts. Many people met were not even familiar with the RACBP let alone its courses, but this was hardly surprising when they had only been on the island for a few weeks.

A few planning and public works staff who were aware of the project were appreciative of what it was doing and have recently requested to be able to become more familiar with its technical innovations, but this is very late in the life of the project, and many of the relevant courses have been completed.

There is a proposal to provide specialist training in laboratory techniques following the projects initiative to equip a Soils Laboratory for the district. This is useful but not the main priority which is to ensure familiarity with the technical innovations if there is to be any sustainability and ownership post project.

If there is a possibility of extension, the project has proposed a new round of training needs assessments for the districts, followed by a tailor-made course for district technicians to be presented by a senior road specialist together with the existing training team. The evaluation team fully endorse this proposal.

3.2.5 RACBP Staff

All together there are 52 RACBP technical and administrative staff involved in this project, all employed by the ILO. Many of the staff have benefited from their involvement in previous similar projects in Nias and Aceh, and the overall impression is of a highly capable and committed team.

Several of the new staff are recent recruits, with only a year or so of exposure to ILO procedures but we only became aware of this from in-depth interviews. The team presents as an experienced unit and internal training and mentorship is obviously working well to support their professional development.

Management is quite decentralised with cluster units responsible for day to day supervision, a bridge unit, training unit, planning unit, cultural heritage and administration. With the exception of planning, each unit was able to present independently to the evaluation team and respond to all questions, and were obviously competent in their area. This is a credit to the management team as well as the process of internal training and mentoring.

The planning team currently has no head, as she recently resigned. The project felt that this was not an issue as most of the planning work has been completed. However the evaluators consider that if a project extension proves feasible, and if the RTIPs are to be properly completed this post should be refilled.

3.3 Cultural Heritage

3.3.1 Traditional Houses and Megalith Renovation

The main focus of this cultural heritage component has been the renovation of traditional houses. Nias has a tradition of constructing wooden thatched houses that are unique to the island and of considerable interest to architects and anthropologists.

The houses have a unique earthquake proof design, and contain many features of cultural significance. There are also unique styles for different parts of the island that reflect their different traditions.

Post earthquake there were a number of projects to rebuild these houses, several hundred as part of an Asian Development Bank (ADB) programme, and the Nias

Museum has an excellent collection of reconstructions and models, plus knowledge on techniques and materials.

The evaluation noted that in fact the houses had generally survived the earthquake very well, except those with deteriorated, rotten structural elements and connections caused by long term neglect. Without community support these houses are very expensive to maintain and now beyond the means of individual families unless they have access to external funding. Occupants interviewed by the mission said that they would have let damaged or deteriorated houses fall down and then replaced them with simpler structures if help was not available.

Figure 13: completed renovation

The project has collaborated with Nias Museum to design an innovative approach that will renovate 78 traditional houses, one meeting hall and four megaliths. Implementation has been sub-contracted to the museum and a comprehensive island-wide selection procedure has been completed and work started following two pilot house reconstructions.

The process requires that selected owners will renovate their own homes, finding or purchasing the required materials, with technical support from museum specialists. All submitted houses had been inspected and assessed as to feasibility and commitment from the owners. The museum will reimburse owners by installments as the work progresses and is certified. The average investment is USD 6,500 per house.

While the evaluation approves the approach adopted to implement, and appreciates the reasons to preserve the heritage of Nias, there are concerns about long-term sustainability. The palm thatching needs to be replaced every five to eight years and the particular palm is becoming harder to find. In fact houses are often being re-roofed with galvanized sheet (not in the project), which is not aesthetic but is affordable. There would seem to be scope here for researching a new kind of roof material which is more in line with the traditional properties and appearance of palm thatch.

Figure 14: ongoing renovation

Districts have a small budget for supporting cultural works, but only sufficient for about two houses per district per year. There are said to be over two thousand traditional houses in Nias, so this has little impact. What is needed is a

funding system to assist owners of traditional houses to help themselves. Tourism linked to home stay or ecotourism is one possibility. The evaluation was surprised to find that district departments responsible for culture and tourism, even in the south, did not seem to have any initiatives on the drawing board to exploit tourism potential in this area.

Lastly there is an issue with sanitation, particularly in the south where houses are tightly packed in terraces. There is a component in the additional funding proposal from RACBP for an improved water supply to the traditional village of Bawömataluo in Nias Seletan.

Figure 15: waiting for water

Figure 16: open sewage discharge

The evaluators have visited this village and agree that the current supply is woefully inadequate (mainly because of breakages in the old system). The proposal would allow connections in every house. This is obviously desirable for the families, but inspection of the sanitation arrangements revealed that all waste, both grey water and human excreta is simply discharged untreated into open waterways and waste ground at the backs of the houses. The proposed increase in water flows would compound the problem and introduce as many health risks as it cured. If this water supply was to go ahead, there should be a parallel sanitation intervention such as micro sewerage and communal septic tanks.

3.3.2 UNESCO Proposal

At the time of this evaluation there was a parallel initiative by UNESCO to reintroduce a proposal to be involved in the cultural heritage component of the RACBP. The mission met with UNESCO towards the end of the evaluation and received a draft copy of their revised proposal.

Briefly, the proposal for 2.1 million USD included a major component for renovating a village of 75 houses in South Nias, mainly re-roofing but also 16 re-builds. The proposal also included components that address cultural heritage tourism potential, including developing a legal framework for the preservation and management of cultural heritage sites, the promotion of craft industries and the publication of promotional materials.

The project would be funded by MDF through the current arrangements with ILO, would thus be managed by ILO, and executed by UNESCO with their own experts and consultants, to be completed in the next 10 months.

The evaluators considered that the tourism-related component addressed many of the sustainability issues raised by our mission, but there was a concern that some aspects were very ambitious for the time frame, particularly the renovation. There was also a concern that it was not very inclusive, focusing on one village in the south, and it would have been preferable to see something utilising the renovation method already established by the project and the Museum of Nias.

The proposal has now been revised[15], removing the renovation component and strengthening the traditional craft component especially the introduction of measures to conserve and develop native plants that are used in the thatching process. The proposal budget has been reduced to 0.5 million USD.

The evaluators consider that this revised proposal is now a very positive contribution to the sustainability of the cultural heritage on Nias, and fully complementary to the ongoing RACBP component.

3.4 Monitoring and Evaluation

3.4.1 General Procedures

The first meeting of the Programme Steering Committee responsible for monitoring and guidance of both RACBP and LEDP was held on December 10th 2010, 14 months after the official commencement of the RACBP, and one of its first actions was to activate the Local Steering Committee. A second combined meeting was held in January 2011. No other meetings have been held and the evaluation team therefore conclude that there has been fairly limited guidance provided by the committees to date.

The minutes of the discussions express no particular concerns about the progress of report from the RACBP. The main issue was the delay of the LEDP, as the selection of the project management consultant was still ongoing at that time.

RACBP has a thorough monitoring process in place, with good documentation on most aspects of the work. Quarterly reports are clear and concise and financial reports up to date.

Financial reporting of course has to follow ILO standard procedures and is not really geared for monitoring progress on a construction site. The major part of the work is

[15] Sub-Project to the Cultural Heritage Preservation Work within the RACBP through Safeguarding of the Cultural Heritage in Nias, Indonesia, Masanori Nagaoka, UNESCO, 9th August 2011

covered by two budget lines: road works contractors and road works community contracts. Fortunately an independent system has been set up to monitor individual contract financial progress, but the physical progress is less easy to monitor.

A case in point is the bridge progress, where although all the steps from feasibility through design, and community training are clearly set out and very well documented, the planed time scale for materials delivery, erection and completion are single bars on a bar chart (one for each cluster), so that all that can be said at this stage is that progress is substantially behind the plan shown in the revised work plan Annex 6.

However, in general the project has been able to provide the evaluators with information requested, quickly and efficiently. RACBP has proactively requested an audit from ILO Jakarta to comply with the PAD conditions.

3.4.2 Baselines

The project design has included a component for the establishment of baselines to facilitate the measurement of impact. From the various reports it is obvious that there has been considerable dialogue on exactly how many baselines were needed and when they should be done, but four sites where eventually chosen and the work completed as construction was ongoing in April 2011.

The baselines process focuses on traffic counts and origin and destination surveys together with semi-structured interviews with key informants (village representatives, school principles, health workers and shop keepers). The mission saw a translation of the results of the surveys and had some concerns as to the usefulness of the exercise. Traffic counts on rural roads with little or no vehicular traffic can be misleading and very dependent on season or weather.

However the mission subsequently spoke with the ILO Jakarta staff member responsible for commissioning and managing the surveys, inspected the enumerators' terms of reference and talked through the additional analysis that is ongoing. Behind the traffic counts there are in fact very useful quantitative and qualitative data, disaggregated by gender, and it should be possible to build a good impression of the economic and social impact if the surveys are repeated next year provided that the respective projects have been completed this year.

72 interviews were conducted at each baseline location (288 in total), of which 65% were men and 35% women. In terms of transport mode, for men the ratio is currently 69% foot, 27% motorbike and 3% bicycle. For women it is 87% foot, 9% motorbike and 4% bicycle.

A small observation: the planning section had developed a comprehensive and logical numbering system for the roads network prioritisation process. For some reason this system has dropped from use post-contract, and roads are now referred to by their

contract name[16]. This makes it very difficult to trace back to the original mapping. We would recommend that the numbering system is reinstated before project completion to aid the final evaluation and future prioritisation exercises.

3.5 Gender Equality Promotion

The project PAD has no specific outputs or outcomes in the results framework linked to gender promotion. However the project has adhered to the principal of assuring equal opportunity for men and women in access to employment opportunities by setting a minimum target of 30% employment of women in community and private contracts. Contracts include a clause to this effect. Also there has to be female representation in the TPK committees.

It is understood that project facilitators have encouraged the setting up of child care facilities amongst women workers, and there has been active encouragement of women to join the apprentice scheme. A survey conducted in 2010 of experience under the previous ILO projects in Aceh and Nias[17] concluded that there were no specific obstacles to women's employment and that they would like to continue to be employed on this type of work. However there was an implication that contractors were only employing women because this was an ILO requirement and that the practice might cease when the project ended.

Figure 17: contractor's representative and her team

It is the evaluators' impression that there are no specific obstacles other than childcare, and the 1st quarter report for 2011 reports that 29% of worker days on the construction sites are women. The RACBP team have women in many key positions from deputy project manager down, but mainly deployed in administrative positions.

4 Evaluation by DAC Criteria

4.1 Relevance

GoI and MDF priorities: The overall goal of the MDF is efficiently and effectively to contribute to the reconstruction of a better Aceh and Nias following the earthquakes and tsunami. In this context, a □better□ Aceh and Nias means not only improving infrastructure in accordance with the Government's Master Plan, but also adhering to social concerns such as reducing poverty, improving livelihoods, and increasing equity.

The evaluators consider that the project objectives are exactly aligned with the donor and government priorities. MDF have stated that the local resource based approach of

[16] Tanaya'o – Paddy Field is one example of a 1.5 km road name of limited usefulness
[17] Creating Jobs: Capacity building of local resource-based road works in selected districts in Aceh and Nias, ILO, June 2010

the RACBP has been one of its most positive features, closely involving the communities in improving their own infrastructure.

ILO Priorities: Employment creation through employment intensive works, youth education and training and the enforcement of labour standards are central to the ILO's Indonesia Decent Work Country Programme. All these concerns are well reflected in the projects outputs and activities. The enforcement of labour standards in the FIDIC contracts and the apprentice scheme are particularly important elements.

Activity and output link to objectives: The framework generally demonstrates a very logical linkage to achieving the objectives. The one exception is the cultural heritage component. While it is obviously useful and appreciated, it makes no direct contribution to the development objective, although it might if a tourism element was added.

Risks and Assumptions: The PAD contains a comprehensive and realistic risk assessment addressing 19 separate assumptions. This was updated in the June 2010 Inception Report to include the risks of a reduced budget because of the devaluation of the dollar, and the pressures on local government participation because of the increase in the numbers of districts and their increased responsibilities. The situation with the budget is discussed in section 3.1.4 and the local government participation in 3.2.4. The project is managing the risks well and they do not need to be re-assessed.

Monitoring and Evaluation Arrangements: The monitoring and evaluation framework is well thought through and adequate for assessing the project's progress in most areas. It was not possible to assess impact on traffic and transport costs at this stage as no projects were complete, but communities interviewed have high expectations.

It might have been useful for the management to have more specific indicators on local government involvement and capacity building. The evaluation can only state that 3,600 days of on the job training and 180 days of classroom training were expected for government officials, but none has taken place. While it is apparent that local government have had very little involvement in the survey, design, tendering and supervision of the construction projects, how much involvement would have been considered sufficient to guarantee the objectives? Because of the way the project design is structured, the lack of local government involvement has not hindered physical progress (outcome 1), or the capacity building of the private sector and communities (outcome 2).

Capacity Building: The evaluation ToR is very explicit in its concerns about local government capacities being fully taken into account in the project design. In the evaluators' opinion the PAD makes every effort to incorporate local government and with the original two districts the approach could have been successful. With the recent expansion to five districts, the staffing situation is still being resolved and capacity building can only effectively commence when this is completed, which is beyond the project's control. With the benefit of hindsight it might have been possible to accommodate some of the changes in district structure, but this would have required a significant extension to the projects duration, which is not an option within the MDF

requirements to cease all operations in 2012. It is to the credit of the design and the project's management that so much has been achieved during this period with the other project deliverables.

4.2 Effectiveness

In the area of producing cost effective, durable and environmentally sound rural transport infrastructure, the project appears to be highly effective. The designs are appropriate, the quality of construction looks good to date, and the work to prioritise and place the interventions has been well done.

It is too early to know how well the cultural heritage intervention will proceed, but the process has been well designed and definitely makes good use of local resources and will improve skills.

As discussed in section 3.2, the delivery of training and capacity building is good but does need improvement in certain areas. The capacities of contractors, site supervisors and communities are being improved. In fact the standards being achieved by many of the trainees is very high. However, so far there has been a negligible impact on technical staff at local government district level.

As discussed in detail in section 3.4 and 3.5 there is a thorough monitoring process in place, with good documentation on most aspects of the work. Quarterly reports are clear and concise and financial reports up to date. The main limitation is that ILO financial procedures are not designed to track civil engineering projects and thus it is sometimes difficult to correlate physical and financial progress. All employment and impact data is disaggregated by sex.

The RACBP has evolved as an efficient but largely autonomous organisation. It appears to get the political support it requires at local level, but is very much the lead partner in terms of technical and administrative matters. There has only been one official National and Local Steering Committee meeting to date. From the minutes they appear to be satisfied with RACBPs progress. The committee's contributions have thus been to endorse decisions already made by dialogue between the various partners. It is understood that individual members of the committees are in continual dialogue with the RACBP on all important strategic matters.

The main concern of the one National Steering Committee meeting was the coordination between the LEDP and the RACBP. Although these are separately managed projects, the original intention was to ensure collaboration to maximise impact. Unfortunately because of the delays in contracting TA for the LEDP there has been no synergy to date and there is little opportunity to improve the situation unless both projects are extended.

4.3 Efficiency

Cost efficiency: As noted in section 3.1.4, the overall costs of the road and bridge works have significantly increased from the original estimate. The amount of funds that should

have delivered 100 km of roads and trials and 1100 m of bridge span will now only be sufficient for 67 km of roads and 1100 m of bridge span. However most of the increase is thought to be due to the devaluation of the USD against the IDR. Construction costs in IDR terms have not changed very much. The results framework had included this devaluation as a risk, assuming the USD value would not drop below 10,000. It is currently 8,500. The increase in costs are thus largely outside the project management's control.

The cost per km for a cold mix/ETB/Telford specification based on Batch 1 contracts varies from 19,000 to 49,000 USD/km. However this covers a range of standards from 1.5 metre wide motorcycle trails to 3m roads. The average cost per km has been estimated at 39,545 USD/km[18]. As a rough comparison, a report on the costs and benefits of rural roads in Aceh[19] gives the average cost for a PWD road at 40,000 USD/km (presumably at 2009 exchange rates). RACBP costs would therefore seem to be reasonable although this needs to be confirmed by a thorough comparison of like with like in the final evaluation.

Time efficiency: The project is also running late, and will not be able to complete all the required outputs in the original timescale. The evaluators feel that the timescale was very tight in the first place, less than three years. The contracts are taking longer than expected, and there have also been significant delays against plan at the start. This has been discussed in some depth with project staff, and one of the principal problems appears to be related to ILO internal discussions on forms of contract and approval procedures.

As noted in section 3.1.4, it is not usual for the ILO to directly implement construction projects and their procedures are not geared to this type of work. Construction has thus commenced six months later than originally planned. This would not normally be a great problem, but with the tight time scale and rigid closing date this is proving to be a major issue.

It should be noted that the procedural problems do now seem to be successfully resolved and the project is running smoothly. In fact it is going remarkably well for a non-construction agency now tasked with awarding and supervising numerous small contracts.

Alternative modalities: Might there have been a more efficient way to deliver these outputs? The only obvious choices to address the time issues would be larger contracts or more use of directly supervised communities. The second option does have some attractions but the aim of empowering the local construction industry would have been lost.

[18] RACBP Technical Monitoring Mission Report, Jon Hongve, December 2010
[19] Comparative costs and benefits of the local resource-based approach to rural roas development, findings from Aceh, ILO, 2010

Larger contracts would have the benefit of scale and allow contractors to make more investments and speed up as they get more experienced. Unfortunately there was a procedural limit of 100,000 USD per contract above which all approvals would have to be done in Geneva. This would have been rather cumbersome. Currently every detail of the contracts are managed decentrally by the RACBP team in Nias. There is also a question as to whether larger contractors are available and would have been interested, particularly in these small and remote roads and trails. Thus the project is probably following the best path, it just needs more time.

4.4 Impact.

The expected impact is that people's livelihoods should improve as a consequence of the improved access plus the LEDP interventions on improved agricultural practice.

However the immediate and measurable impact is expected to be reduced travel time, reduced travel costs, increased traffic volumes and increased travel safety, which will be measured on the four baseline sites pre and post construction.

Figure 18: potential beneficiaries

It is not possible to judge the impact of the infrastructure at this stage as no work has been completed, however the signs are positive with new traders coming in to purchase rubber at better prices as access improves, and signs of house construction and renovation being seen as the roads progress.

The baselines have been done very thoroughly, but are very traffic-centered. It is notoriously difficult to get good quantitative data from this type of intervention, and to disaggregate findings from all the other changes that might be talking place in the area.

As part of the baseline exercise a number of stakeholder interviews have been carried out on the current situation and we would suggest that these be the basis for a thorough follow up and post intervention qualitative study to judge how the situation has changed.

4.5 Sustainability

The physical infrastructure will continue to benefit the communities for many years after completion. Even with minimal maintenance the roads, trials and bridges will provide reliable access for at least five years, and if community systems are put in place most of the network should manage 10 to 15 years without rehabilitation. The unsurfaced Telford trails will require more attention, but nothing that should be outside the competence of the communities provided heavier non-motorcycle traffic is excluded.

The sustainability of the capacity building and the techniques developed is more difficult to judge if the districts do not take them up. The contractors have acquired good skills but knowledge of FIDIC will have limited use if this approach does not continue after the project. Similarly the supervisor apprentice scheme risks being a one off without a government agency, employers association (e.g. contractors association) or technical college taking on the challenge. There is no sign of this at the moment.

If the districts can be made more involved in the final months of the project, the chances of sustainability will be much enhanced. Alternatively government needs to decide on some new institutional structure that could take forward the local resource based approach to rural transport infrastructure.

5 Conclusions

1 The RACBP is a well designed and well managed project that is making a positive contribution to the life of the rural poor. It fits well with the priorities of the KPDT, the MDF and ILO's Decent Work Programme.

2 RACBP is making a good contribution to the knowledge base of suitable rural road, trail and trail bridge designs. The solutions they are developing are appropriate for local skills, cost effective, environmentally sound and will have a longer life span and require less maintenance costs than existing methods. The high standard of support from Helvetas Nepal engineers in the trail bridge component should be noted.

3 KPDT and MOHA are very concerned that the innovations and techniques being developed in construction and maintenance should not be lost as they have a wide application for similarly disadvantaged provinces across the nation. Absorbing and expanding the approach through a national programme such as PNPM could be an option.

4 RACBP is effectively raising the technical and managerial capacity of contractors and community groups on Nias in the production of rural infrastructure. It is also increasing the skills base by giving young people the chance to join the industry with useful managerial and technical skills.

5 The ILO has created a good decentralised system to deliver the project and the team are competent and knowledgeable in their various areas.

6 However the project will not reach its original physical targets without an extension of time and funds. The contractors are delivering at a much slower pace than expected and will probably only deliver 67 km of the intended 100 km by the end of May 2012. In addition the devaluation of the USD against the IDR has effectively reduced the purchasing power of the project by 20%.

7 It is understood that an additional USD 3.7 million has been requested within the MDF framework. Additional funds by themselves will not be sufficient. The project

also needs a time extension of at least six months. Extra funds without extra time will exceed the capacity of project to deliver and the quality and sustainability of the work would then be jeopardized.

8 Because of the limited involvement of the district authorities, the project has not managed to find an institutional home for its road, trail and trailbridge technology innovations. A significant extension, in fact a second phase with a project redesign would be required. The objective would be to develop an organisation that could secure and expand the projects innovations within Nias and to larger targets in the province or the wider mandate of KPDT .

9 Road planning and prioritisation has been very well done, taking full account of the existing network, communities' opinions, and environmental concerns. However the work was completed well before the partner project LEDP started. LEDP has been given a list of 100 farmers groups but there has been no opportunity to consider or address their access needs. There is thought to be an overlap of 14 groups between the two projects but this is coincidental. Only extension of project time would allow more roads to be considered and thus the possibility of improved synchronisation between the two projects.

10 The capacity building programme has helped contractors improve the efficiency of their business, has improved the transparency of the contracting process, improved site conditions for workers and women's opportunities for employment, and opened opportunities for educated youth in the industry. However local government, particularly Public Works, have not benefited.

11 Much of the problem is due to the rapid expansion of districts from 2 to 5 in the last two years. All district offices are understaffed and overstretched and many of the staff met during the evaluators' visit were very newly in post. The districts priorities are often building the new district HQ and then connecting to the sub districts. Access to the more remote communities, and new technologies for low traffic trails and roads are some way down their list. The problem is compounded by the project's focus on motorcycle trails and bridges. These are below district standards and therefore not considered as their concern.

12 The cultural heritage component is a useful contribution to the existing traditional house renovation programmes. However its linkages to a rural transport programme are rather tenuous. There is also an issue of sustainability, as many householders cannot afford to keep these houses up to standard.

13 The modality adopted by the project in collaboration with the Nias Museum is considered very sensible. It has been very open to the whole island and allowed the selection of the most sustainable houses and most committed owners. It will help to enhance and preserve local skills and should be completed on time and on budget.

14 The revised UNESCO cultural heritage proposal is a very positive contribution to the sustainability of the cultural heritage on Nias, and fully complimentary to the ongoing RACBP component

6 Recommendations

1. The project should focus on completing a programme of 67 km of road and trails and 1100 m of trail bridges within its current budget by end Many 2012. No additional work should be taken on and no additional funds should be requested unless a time extension is possible. *Action: Now. Responsibility: RACBP and ILO Jakarta*

2. Only two batches of private sector contracts should be awarded within the current time frame. A third batch could be considered if there is a time extension. Given the efficient and effective procedures that have been developed for community contracts, these can be used to finish off uncompleted works. *Action: Now. Responsibility: RACBP*

3. The 3.7 million USD currently being developed should be reconfigured on the basis of a six month extension. The focus should be the delivery of the original 100 km programme, better coordination with LEDP to help with access needs of their target groups, re-design and re-introduction of local government staff training in technology and contractual innovations and the promotion of a culture and tourism programme to support the sustainability of traditional housing. *Action: Now. Responsibility: RACBP, ILO Jakarta , MDF, National and Local Steering Committee*

4. The pavement standards and the community trail bridge programme introduced by RACBP are highly appropriate for low cost low traffic access and could be applicable nationwide. There is a risk of the approaches being forgotten post project unless an appropriate branch of government takes ownership. This should be explored further. *Action: Before December 2011. Responsibility: National and Local Steering Committee*

5. The current minimum district access standard of three metres width could deprive the rural population of a very valuable and useful level of motorcycle-only access. There is scope for a high level policy decision on rural transport to allow districts to modify these standards in remote or "backward" areas. The adoption of motorcycle and power tiller trailers would increase the utility of these trails. *Action: Before RACBP project closure as it has the facilities to organise a workshop and study tour for decision makers. Responsibility: National and Local Steering Committee*

6. RTI plans should be completed for all districts and the road numbering system re-introduced to facilitate future planning and the final evaluation. The qualitative aspects of the baselines also requires full documentation. This will require the re-filling of the project's head of planning section post, which is even more important if the project is extended to include LEDP access priorities. *Action: Now. Responsibility: RACBP*

7. The apprentice supervisor programme will have produced a good batch of valuable technicians. Pro-active steps need to be taken to avoid this expertise being lost, including dialogue with local government and the contractors association. *Action: before close of project. Responsibility: RACBP*

8. Training of communities in road maintenance should start as soon as possible, even where work has not been completed. Communities should be made aware of their responsibilities before work commences and encouraged to form maintenance committees at that time. *Action: Now. Responsibility: RACBP*

9. A better approach is needed to ensure the survival of traditional houses as neither the poor occupants nor the local government budgets can afford the re-thatching cycle or major repairs. Interventions could include research into alternative roofing materials that are more in keeping with traditional thatching and linkages to tourism initiatives such as home stay or eco tourism to generate revenue. *Action: By December 2011. Responsibility: RACBP, Local Governments on Nias, Museum of Nias*

10. The UNESCO proposal in its revised form is a very positive contribution to the sustainability of the cultural heritage on Nias, fully complimentary to the ongoing RACBP component, and should be supported. *Action: Now. Responsibility: National and Local Steering Committee, ILO, UNESCO*

11. At less than three years, this is a very short time for a capacity building programme, and the project is just now in a position to mainstream its approach. There is a very good case for second phase to this project, focusing on motorcycle trails and trail bridges only, and with a view to national replication. A suitable counterpart organisation needs to be found, one option being PNPM, expanded to include private contractor specialist support while community contracts do the majority of the work. KPDT and MOHA support this approach. *Action: Long term but discussions starting now. Responsibility: Initially the project steering committee and the ILO, in the long term to be decided*

7 Lessons Learnt

1. 33 months is far too short for a capacity building programme. The project has done very well to identify and start to address the capacity needs in the time available, but at least one more three year phase would be necessary to ensure that the approach was sustainable without project backing.

2. Ownership, in this case of the districts and local government with respect to rural transport, is an essential element of project design. The pressure to rebuild, combined with the government's drive for increased autonomy at a local level, has made this issue very difficult for the project. However this is a common problem: projects are often based on what is, rather than what is likely to happen in the future. The project design and projects in general would benefit from more attention to issues of insitutionalisation and change.

3. Maintenance is another issue with which the ILO has long experience. It is obvious in the case of Nias that districts will not have a sufficient maintenance budget for many years. Communities can be very effective at the level of works required, but only if they are fully involved from the planning stage and fully aware of the long term obligation and inputs required. This component should be built into all rural access projects.

4. The short time span has been compounded by significant delays created by ILO Geneva concerns about the legal basis of FIDIC and community contracts. This is surprising as programmes within ILO have been working with these issues for at least twenty years, and supporting and advising countries on their introduction. These fundamental issues should be resolved in ILO Geneva for general application and not left for as a burden for field projects to resolve. Despite the above, the lessons about the effectiveness of community contracts as a transparent, efficient and participatory process if properly managed have been reinforced.