REPÚBLICA DEMOCRÁTICA DE TIMOR-LESTE

REPUBLIC OF IRELAND

KINGDOM OF NORWAY

EUROPEAN UNION

INTERNATIONAL LABOUR ORGANIZATION

Title:	Investment Budget Execution Support for Rural Infrastructure Development and Employment Generation (TIM Works)
Code:	TIM/08/01/MUL (umbrella) Norway: TIM/08/M50/NOR EC: TIM/-8/M51/EEC Ireland: TIM/08/M52/IRL
Keywords:	Employment creation, labour-based infrastructure works, skills development, maintenance, rural infrastructure development, capacity building, contractor training, institutional development, technical education.
Timeframe:	18 months (July 2008 – January 2010)
Budget:	Total: US$ 8,295,270 Donor Contribution: Norway: US$ 2,499,452 EC : US$ 2,322,307 Ireland: US$ 1,090,111 Government of Timor Leste's contribution: US$ 2,383,400 (labour costs)
Implementing Agency:	International Labour Organization in collaboration with the Ministry of Infrastructure, in coordination with the Ministry of Economy and Development and the Secretary of State for Vocational Training and Employment
Support Sectors	Transport, rural development, employment, education & training, peace and reconciliation.

Project Proposal, May 2008

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ABRREVIATION

EB	Equipment-based technology
ILO	International Labour Organization
MOI	Ministry of Infrastructure
LB	Labour-based technology
LI	Labour-intensive technology
GoTL	Government of Timor-Leste
TA	Technical Assistance
CFW	Cash for Work
DEC	District Employment Centers

TECHNOLOGY DEFINITIONS

Equipment-based (EB) technology

The equipment-based (EB) technology is what is known as a "conventional" construction technology in developed countries where there is usually relatively high labour costs ($100+ per day) and competitive costs associated with the purchase and use of construction equipment **and** where such equipment is usually easily able to be maintained and repaired. EB technology maximises the use of equipment while at the same time minimises the involvement of labour due to its high cost.

Labour-based, (equipment – supported) (LB) technology:

Labour-based technology in rural infrastructure works optimises the use of productive labour and complements the use of labour with essential equipment necessary to meet the specified technical and engineering standards. LB methods result in at least 5 times the number of jobs being directly created, in say rural roads and irrigation works, as would be the case using conventional equipment based technology, where the use of equipment is optimised and the use of labour is intentionally minimised (as labour costs of $100+ per day make labour relatively expensive in underdeveloped and developing countries). LB technology is therefore socio-economically ideal for use in countries where there is relatively low costs of labour and high levels of available unemployed or under-employed labour.

Labour-intensive (LI) technology:

LI technology contrasts with LB in that no equipment is usually involved and the operations usually involve labour and hand tools only. Clearly this is a very limited technology but suitable for Cash for Work schemes where no technical inputs are usually available. It is **not** suitable for road construction other than for selected activities such as excavation works for drainage and loading and spreading of topsoil or aggregate by hand.

1. SUMMARY

The successive crises has drawn Timor-Leste communities into fierce poverty and social tensions and exclusion, creating ground for continued cycles of instability that prevent development and promote further social unrest.

The Investment Budget Execution Support for Rural Infrastructure Development and Employment Generation (TIM Works), hereinafter referred to as the Project, will contribute to employment generation, poverty reduction, economic growth and peace building through the rehabilitation, construction and maintenance of rural infrastructure using labour-based (equipment supported) work methods.

The Project reflects the Government of Timor-Leste (GoTL)'s Development Strategy and will contribute to the achievement of the Millennium Development Goals (MDGs), by specifically addressing the following key challenges for poverty reduction in Timor-Leste:

- Providing sustainable and productive employment opportunities for a rapidly growing labour force;
- Improving poor access to social services and markets;
- Private sector development support;
- Improving and maintaining rural infrastructure; and
- Human resource development and institutional strengthening.

The project forms part of an overall strategy which links to and evolves from recent Cash for Work programmes, which has provided temporary employment, to more sustainable employment in the infrastructure sector in which major GoTL investment is now being planned and which can result in significant additional jobs provided that a more labour-based approach is incorporated.

Recognising the enormous twin challenges of job creation and need for infrastructure improvement, the project aims to institutionalise labour-based technology and methodologies within the regular public works programmes. The rationale for this approach being that there is likely to continue be a labour cost situation in Timor-Leste and a demand for jobs which will keep LB methods viable well into the foreseeable future.

The Project will focus on work to develop national and local capacities to plan and programme road rehabilitation and maintenance using labour-based methods, review and optimise maintenance practices to intensify labour use, outsourcing implementation of works to local contractors and community groups. The Project will review, amend and introduce new procedures and techniques aiming at increasing the impact of rural infrastructure investments on poverty reduction, employment creation, crisis prevention, and community-level social stability. The Project will develop strategies and policy positions, procedures and guidelines for labour-based road maintenance and contracting, and advise, guide and support the government in these matters.

The project aims to rehabilitate 300 km of roads, provide periodic maintenance essentially consisting of improvement of problem spots totalling 36 km of roads and establish routine maintenance on 1,500 km of roads in the districts of Baucau, Bobonaro, Dili, Emera, Lautem and Oecusse. This should generate some 1,037,000 workdays of employment, reaching some 23,500 beneficiaries of which 30% will be women.

With respect to technical training the Project will *develop training materials* for road planning and programming, construction and maintenance, contracting, contract management, supervision, community labour organization and management. Timorese academics, public and private sector engineers, community leaders and project personnel will be provided with the skills and experience required to work in these areas.

The Project will also raise the capacity of the government and the private contracting sector to improve, maintain and manage (and supervise) the road network using appropriate sustainable labour-

based techniques. This will ensure that public investment in rural infrastructure creates jobs and builds skills in an efficient manner while developing and sustaining the road assets of Timor-Leste. This will, in turn, improve accessibility, enhance transport and contribute to poverty alleviation.

The project is designed with a duration of 18 months, starting in 2008 and expected to be a primer for a larger scale nationwide workfare and rural infrastructure development programme envisaged to commence in 2009. It also acts as a follow up to previous emergency employment projects, the latest being the Serbisu ba Dame Project, an ILO-UNDP partnership programme with funding from the European Commission, in 2007. The extensive training component in the current project will build up a cadre of local technical and managerial staff both in the public and private sectors to cater for the forthcoming nationwide workfare programme.

Although this project has been designed in this context, i.e. preparing for larger and more comprehensive work programmes, it also secures that its outputs and activities can stand on its own. The end of the project scenario will include:

- a substantial generation of employment offered to job seekers;
- improved access for rural communities;
- full maintenance of the functional road network in the project area;
- capacity strengthening of government institutions; and
- skills development of government and private sector staff to take on similar works programmes in the future.

2. JUSTIFICATION

The present project is being developed at a time when non-oil GDP has stagnated and the economy is increasingly demonstrating its inability to generate jobs/work opportunities.

The mismatch between demand and supply of the labour force is amply demonstrated by an unemployment and underemployment rate considered rather high for the developing county like Timor-Leste where as yet no regular system of social safety nets has evolved.

By the 2006 Human Development Indexes, Timor-Leste ranks 142nd and is among one of the world's 10 poorest countries. Timor-Leste non-oil GDP per capita has decreased from US$450, (half of that of Rwanda) in 2001 to US$343 in 2006,[1] and more than 40% of the population is living below the poverty line of USD 0.55 a day. With a total population of 924,642, Timor-Leste sees an annual population growth rate of about 3% and a fertility rate of 7.8 births per woman[2] The most recent surveys and statistics indicate that 48% of the population are below the age of 17, and young people, aged from 15 to 29, account for about a quarter of the Timorese people. At the present rate of fertility and mortality, the population size will double in 17 years.

Timorese first time job seekers are entering the labour market at a rate of 15,000-20,000 per year, leading to the growth rate of a significant 4-5% annually[3]. However, Timor-Leste's distorted and volatile economy is unable to absorb the existing labour force, let alone rapidly expand to absorb the increase of job seekers.[4]

75% of the Timorese population live in rural areas, which do not have adequate basic and development programmes and access to information and knowledge of production and market factors. Thus, Timorese particularly young women and rural residents live in the absence of sufficient education,

[1] International Monetary Fund, *Democratic Republic of Timor-Leste, 2007, IMF Country Report No. 07/79* cited in UNMIT, "Socio-economic Development, Compact and Democratic Governance" in *United Nations System in Timor-Leste: Briefing Kit*, September 2007, pp 15 & 67.
[2] Government of Timor-Leste: *National Census 2004*; *UNDAF 2003-2005*, extended till 2008
[3] *National Census 2004*. The total labour force was 314,000 in 2004
[4] World Bank: "Background Paper for the Timor-Leste and Development Partners Meeting, 3-4 April 2006", pp. 2-6.; *National Census 2004*.

skills training, and economic development services programmes[5] and a third of the population operating entirely outside the cash economy.

The infrastructure bottlenecks, especially in rural areas including access to market, have added miseries to the majority of country's population. Agriculture, being the main source of livelihood of the majority, only a quarter of crops is marketed and farmers have to walk, on average, more than two hours to nearby markets in sub-districts.

Large-scale rural-urban migration in Timor-Leste is building strong pressures on scarce resources, facilities and services in overstretched urban areas, particularly in Dili. The large-scale migration flows, finding no job prospects in Dili, have furthermore promoted the growth of a sub-culture of young men engaging in organized crime and violence, with the potential to spill over into civil unrest, as recently during the 2006/2007 riots and other incidents.[6]

With support from the Asian Development Bank, the GoTL has already developed a comprehensive Transport Sector Investment Programme (SIP), establishing priorities and technical standards for the roads sector so as to:

- Bring the road network up to a sustainable condition where, with regular maintenance, minimising life-cycle costs, reducing road closures, and securing reliable road access.
- Improve key roads to support a growing economy.
- Ensure effective capacity to manage the road system, comprising asset management systems, involving the private sector for cost-effective delivery, and reliable funding and adequate cost-recovery from users.

It is envisaged that the Project will not only follow the SIP strategy but also link up with units of the Ministry of Infrastructure and their field units to mainstream labour-based work methods within the regular and recurrent programmes of MoI.

3. POTENTIALS IN THE ROAD SECTOR

3.1 Roads Sector Needs and Employment Opportunities

While being very much aware that increased employment opportunities in the infrastructure sector alone is *not* sufficient to adequately address the massive overall employment creation challenge, this sector, with its significant recurrent government budgets, presents a major opportunity for permanent job creation by a gradual introduction and institutionalisation of more employment enhancing work methods in these programmes.

The road sector comprises a road network of 6,040 km comprising 1,430 km of national roads linking district centres, 870 km of district roads providing links to the administrative centres, 720 km of roads in Dili and 3,020 km of rural access or feeder roads. The sector has been well studied and roads and programmes have already been prioritised and major programmes have commenced. The current conditions of the national, district and urban roads are known and show a high degree of deterioration. Rehabilitation and maintenance is needed to sustain road access. The condition of the district and rural road network has not however been assessed, but with the backlog of maintenance it is expected that a significant portion of the road network is in need of repair and rehabilitation.

In the SIP preparation, the ADB undertook a poverty impact assessment and looked closely at villagers' perceptions of the project working through focus groups. Five of nine focus groups cited the poor condition of the roads and the lack of good transportation as their major concerns, followed by

[5] ILO: *YES Youth Employment Study 2007*; UNDP: *Timor-Leste Human Development Report 2006*, pages 25-33
[6] World Bank: Background Paper for the Timor-Leste and Development Partners Meeting, 3-4 April 2006; WFP/FAO Mission Report, June 2007; UNDP: *Youth and Violent Conflict*. 2006; *Timor-Leste International Compact* 2006

the lack of access to income generating opportunities, lack of access to adequate water supply, healthcare facilities and schools were also high priority concerns.

3.2 Viability of a Labour-based Approach in Timor-Leste

Labour-based and labour-intensive works have been introduced successfully in Timor-Leste but only on an *ad-hoc* basis on various roads projects of the UN, EU and the ADB since 2000. LB work methods are also well known within the region including in Indonesia, where five universities (including BIT, Bandung and Gadja Mada, Yogyakarta) have together with the ILO adapted and developed materials in Indonesian language for training engineers and technicians to be able to design and implement road works.

In 2005, the ILO successfully undertook a LB demonstration project, the Servi Nasuan Project, in Bobonaro District. The project involved initial technical training for engineers and supervisors and the construction of a 3.5 metre wide and 1.7 km long gravel road. 50% of the project costs were utilized in labour costs and the total construction costs were USD13,000 per km. The unskilled labour workdays generated per km was 2,000 workdays. Similar results were achieved in the Serbisu ba Dame Project in 2007.

There is a huge potential for sustainable jobs within the roads sector if there is a greater and improved use of LB approaches. For example for just the routine maintenance of the entire road network of 6,000 km, 720,000 work days of employment could be created, equivalent to 3,600 full time equivalent jobs. Obviously many more jobs would emerge indirectly as a result of improved accessibility and especially where farm to market access is involved. While the GoTL does not currently fund the maintenance of its entire network, it will eventually have the resources to do exactly that and will be encouraged in this direction using LB work methods.

An ILO report late 2004 concluded, however, that the training of staff of various local governmental institutions, as well as small-scale contractors, in basic local resource-based engineering skills, project management and project supervision tasks is a main priority that needs to be addressed before embarking on an expanded rural infrastructure development programme. These findings were also confirmed when the ILO implemented road works in 2004-2005 in Bobanaro District - as set out in the following table.

Findings from the Bobonaro Demonstration Road Construction project:

- The demonstration project included class room training to Public Works technicians, District / Sub District officers, community development officers and contractors (total 23) and including field exercises took 3 weeks in (November 2004)
- The construction of a 3.5 metre wide gravel road of 1.7 km took 4 weeks
- The construction was done using labour and light equipment only (labour-based)
- During construction both technicians and labourers received on-the-job training
- Wage rate paid to (unskilled) workers was US$2.50 / day and this was considered more than reasonable; the workers claimed to accept 2US$ /day, especially if paid regularly and on a (semi-) permanent basis. The total construction costs, including wages, hire and operation of equipment, tools and structures was US$15,000 per km.
- Close to 50 % of the costs were labour costs; in maintenance this is over 90%.
- The productivity rate for earthwork was set at 1.5 m^3/day; this proved to be too low; the norm can be raised to 1.8 m^3/day.
- Total unskilled work days generated was 4000 (=2,350 WD/km). This translates to about *2000 WD/km* in a contract using *1.8 m^3/day*.

With relatively low costs of labour and very high levels of un- or underemployment, Timor-Leste well and truly meets the main socio-economic criteria for the wider and improved use of LB work methods in the infrastructure sector.

It will be necessary to ensure that the LB works programmes do not interfere with the prevailing local market rate for work of a similar nature (e.g. agricultural or fishery activities) and in any event, there should not be any competition for labour during the peak agricultural labour periods. When there is no

major labour excess from the agricultural sector, the infrastructure works programmes should be temporarily slowed down.

LB work methods are therefore considered to be viable and relevant for much wider adoption in the Timor-Leste infrastructure works programmes in spite of the fact that they will be more management intensive. Given the weight of the proposed TA for this project, it is desirable to see maximum benefits from the outputs, partnerships and training.

3.3 GoTL Capacity for a LB Infrastructure Works Programme

The current capacity of the MoI to design, tender, implement and manage and monitor the road network, irrespective of the technology chosen for the execution of the works, is very limited and weak with the result that technical support is necessary for the sector programme to function. At the moment the Directorate of Road, Bridges and Flood Control in the Ministry of Infrastructure employs a total of 15 engineers distributed between the centre and 5 regional offices. This team is in charge of network management, project design, works programming, contracts management and overall supervision of a works programme which had a turnover of US$ 30 million last year. According to senior management in the Directorate, its organisation was designed and set up at a time when the turnover was between US$ 1-2 million

The number of capable technicians, engineers and supervisors available to independently supervise and manage works, is a serious limiting factor for the execution and management of a public works programme of such magnitude. Furthermore, there are now plans to implement large-scale workfare programmes which will use the road sector as a vehicle for providing productive employment. In order for these programmes to succeed, there is a desperate need to augment the number of qualified supervisors, technicians and engineers to cater for the additional management capacity required by the new programmes.

The expanding road sector activities are also placing new performance requirements on the private sector. To meet the envisaged works implementation capacity there will be a demand for a well-developed private sector contracting industry and eventually also a private sector consulting capacity to outsource field supervision.

These challenges currently limit the volume and the speed of road asset development and maintenance. Outsourcing of implementation of works in road maintenance and rehabilitation is new to the country but now the preferred mode of implementation. The use of labour-based technology and outsourcing to private contractors as the implementation strategy for road maintenance and rehabilitation is a feasible approach in a country with predominantly low-volume trafficked roads, a large labour surplus and a weak private sector still lacking capital, equipment and technical skills. Adopting this approach will also allow for the creation of significant numbers of employment for the rural poor.

The current ADB technical assistance (TA) within MoI is also partly responsible for capacity building, however, it is important to acknowledge that this TA is targeted towards the entire Ministry covering road and bridges, flood control, buildings, urban planning, maritime and air transport, electricity, water and sanitation. Obviously, the TA will therefore have to concentrate on the main upstream challenges and provide limited support at downstream level were works are designed and implemented. With the emphasis on practical skills development in this project, it is believed that these two capacity building initiatives will complement each other in terms of institutional strengthening of the Ministry and its field units as well as the road sector as a whole.

3.4 Linking up with Academic and/or Training Institutions

While there are currently limited capacities and opportunities available through the local training institutes to support skills training to enable greater local participation in proposed labour-based works programmes, there is great potential to involve local training providers in the skill development programme. A concentrated effort using a training of trainers approach to quickly expand the expertise necessary for labour-based works can be achieved with supplementary technical assistance.

Training packages will be produced in collaboration with local training institutions so they will eventually have the capacity to run training programmes for engineers, technicians and supervisors with the project and MoI facilitating on-the-job training on the project work sites.

4 PROJECT OBJECTIVE, OUTPUTS AND ACTIVITIES

The main emphasis of the project will be to provide specific training and capacity building in order to scale up road maintenance and rehabilitation works. By applying labour-based works technology, the project will achieve the desired employment generation.

Development Objective: To contribute to economic development and poverty reduction by spurring growth in the infrastructure sector

Immediate Objective: Livelihood improvement and social stability in rural communities through rural development and employment generation

Outputs:

The following outputs are envisaged as a result of the joint contributions from the Government of Timor Leste:

1. **Road Rehabilitation and Maintenance**: 300 km rehabilitated/constructed, 36 km periodic maintenance and 1,500 km of routine road maintenance. In addition the civil works programme includes a limited provision for the rehabilitation of other public/community infrastructure identified by project stakeholders at local level.
2. **Employment Generation**: 1,037,000 workdays generated providing short-term employment to 23,500 beneficiaries, at least 30% being women.
3. **Capacity Building for Infrastructure Providers in the Private and Public Sectors**: Capacity established within private and public sectors for the effective provision of rehabilitation and maintenance of national, district and rural roads and LB method training arrangement and materials, inclusive of appropriate technical standards, employment procedures, field manuals, planning procedures, contracting, community involvement, occupational safety and health, gender equality promotion, mitigation of negative social impacts, and HIV/AIDS.
4. **Policy, Strategies, Guidelines and Standards**: Policies and regulations adopted and implemented for further scaling up LB methods.

4.1 Activities relating to the Project Outputs

Output 1: Road Rehabilitation and Maintenance Works

Activity 1.1: A rapid assessment is carried out to identify suitable roads for new construction and/or rehabilitation during the start of the project, with adequate consideration to the fact that the selected sub-projects will need to meet particular training requirements and will also involve an intensive supervision input as part of the on-the-job training programme.

Activity 1.2: A trial and intensive training programme is implemented with the following coverage:

a. Three 6 km road rehabilitation work sites are initiated as part of the start-up training/demonstration phase.

b. Negotiated contracts are subsequently awarded to selected contractors for approximately 4 km of road rehabilitation. Concurrently, local contractors are engaged in a similar manner to carry out culvert construction, bridge works and side slope stabilisation works.

c. Routine maintenance works is organised in parallel on roads in good and fair conditions, involving local community contractors. Coverage is gradually increased, incorporating roads rehabilitated and improved by this project as well as others.

Activity 1.3: In parallel to the intensive training, project and counterpart staff identifies the remaining road works programme in close collaboration with central and local government authorities. This includes road condition surveys, preliminary and detailed designs, quantity surveying, traffic surveys, applying agreed selection and appraisal criteria.

Activity 1.4: Contractors are eventually involved in competitive bidding for works under supervision of project and counterpart staff with technical and managerial advisory support from the project.

Output 2 Employment Generation

Activity 2.1: Labour-based methods, using a balanced mix of labour and equipment with equipment only being used where labour is not effective, implemneted in rehabilitation and maintenance activities to maximize employment outputs.

Activity 2.2: Labour from local villages close to the work sites will be engaged to carry out works on the roads with equal employment opportunities given to men and women. The project will ensure that recruitment and employment practices are in line with national labour standards and basic standards of the ILO, and enforce these through the on-the-job training and supervision provided throughout the project.

Activity 2.3: In order to secure good work outputs, the supervisory staff will be trained in the effective organisation of large groups of workers. An essential part of this training will be the introduction of incentive schemes such as task and piece work.

Activity 2.4: Government staff and contractors will also be trained in the essential regulations pertaining to employment of skilled and un-skilled labour.

Output 3 Capacity Building for Infrastructure Providers in the Private and Public Sectors

Activity 3.1: Training materials developed and tailored to contractors, government counterpart engineers, technicians, and inspectors covering:

a. Design and works execution, contracts management, administration and supervision of rural road rehabilitation and maintenance using labour-based work methods.

b. Site management; administration; work methods and organisation, and technical aspects of road rehabilitation and maintenance.

c. Business management for contractors (book-keeping; budgeting; cost control; cashflow planning; material purchase; personnel and labour management; banking; labour regulations) and contract management (bidding and tendering; estimating; contract documents; variations; claims; payment procedures).

d. Financial and administrative procedures for Government staff in road work system which takes account of rehabilitation and maintenance needs

e. Government staff: environmentally sound design practices, social safeguards, occupational safety and health, gender equality, and HIV/AIDS prevention measures.

Activity 3.2: Government counterpart engineers, technicians and inspectors will be trained and/or received technical assistance in the following topics:

a. Design and works execution, contracts management, administration and supervision of rural road rehabilitation and maintenance using labour-based work methods

b. Roads planning, based on socio-economic criteria; road traffic levels; development needs and project design; contract preparation and management.

c. Effective routine maintenance management procedures, implementation, and preparation of annual workplans and budgets

d. Maintenance training by District Technicians to petty contractors

e. Vocational skills training in masonry and concrete works for supervisory staff

f. Administrative and financial procedures thereby establishing effective support services to the road works programme.

Activity 3.3: Contractors will be trained in the following:

a. Design and works execution, contracts management, administration and supervision of rural road rehabilitation and maintenance using labour-based work methods

b. Business management and petty contractors for routine maintenance works will be trained mostly on-the-job.

c. Masonry and concrete works skills training

Activity 3.4: LB technology will be developed and incorporated into current course curricula at the appropriate technical faculties at the universities and polytechnics.

Activity 3.5: The project will regularly organise awareness raising and briefing seminars for project stakeholders such as government officials, donor representatives, private sector associations, and community groups.

Activity 3.6: Study tours will be organised for key technical and managerial staff to other similar projects and works in the region as well as outside the region.

Output 4 Policies, Strategies, Guidelines and Standards

Activity 4.1: Review existing technical standards applied in TL for rural road works and assess their appropriateness in general as well as in relation to the use of LB work methods, and on this basis make recommendations for future standards for rural roads.

Activity 4.2: Review technical specifications currently in use for road construction and maintenance and assess their appropriateness for the application of LB methods with the objective of creating a set of national standard specifications which will eventually allow for the mainstreaming of these practices and work methods.

Activity 4.3: Contract documentation and management procedures already under development by MoI will be adopted to the specific requirements of LB rehabilitation and maintenance works and disseminated to both government and contractors' staff.

Activity 4.4: Assessment and documentation of the initial experience of the contractor selection procedures, through public awareness meetings; detailed questionnaires to interested companies; technical and financial assessment and subsequent performance, a documented procedure will be established for the government for future use.

Activity 4.5: Reporting and dissemination of Project results and outputs to all stakeholders involved with rural infrastructure development and maintenance.

Activity 4.6: The training programme, technical support and training literature, manuals and procedures will be made available to other projects involved in rural infrastructure development. As part of this, provide access to work sites for purpose of training staff from other projects.

Activity 4.7: Preparation of appropriate rural infrastructure policies and strategies for the inclusion in national development plans. As part of this exercise, ensure active participation in current Government discussions and development work pertaining to sustainable infrastructure provision in the rural areas.

5. STRATEGIC FRAMEWORK

The overall strategic framework for addressing the prevailing socio-economic challenges in Timor-Leste through this Project consists of:

- Cash for Work (CFW) programmes, which can quickly provide work and place cash in the hands of vulnerable persons, and
- Restarting and accelerating more sustainable economic activities such as infrastructure works programmes using labour-based work methods.

The restarting of more sustainable economic activities needs to include accelerating skills development for employment, the development of the local construction industry and building sufficient capacity in the public sector to manage the increased volume of works in a timely and professional manner. This can be realized provided that there is a solid commitment by GoTL with donor support to adopt these work methods as a mainstream approach in its public works programmes.

The GoTL with support from the ILO and funding from EU has recently concluded a CFW programme thereby proving that large numbers of jobseekers can be provided employment while at the same time protecting past infrastructure investments as well as developing new infrastructure assets in the rural areas.

The current challenge facing such programmes is the necessary transition from being project interventions with a limited period during which these services are provided, to building long-term arrangements in which these types of employment as well as infrastructure services are provided on a continuous basis.

5.1 Project Beneficiaries and Target Group

The project strategy is a capacity building strategy, which takes account of local needs, capacity, and existing skills and knowledge.

Target groups:

- 30 Government counterpart staff (engineers, supervisors, and technicians) within the Ministry of Infrastructure who will be in trained in all aspects of LB methods in road contract system and supported in budget development and planning.
- 75 contractors of Classes A, B, and C who will be trained in all LB methods and awarded road contracts through a competitive bidding process
- 100 community contractors who will be engaged in routine maintenance

Beneficiaries: The project activities will generate short-term employment to at least 1,039,200 workdays, for at least 23,500 workers, at least 30% being women.

5.2 Project Implementation

The project will be implemented by the ILO with the Directorate of Roads, Bridges and Flood Control in the Ministry of Infrastructure as the key government counterpart institution with a strong links to the Ministry of Economy and Development and the Secretary of State for Vocational Training and Employment.

The technical responsibility for the project will be provided through the Project Coordinator with technical backstopping support from the Regional Rural Infrastructure Adviser of the ILO in Bangkok. Day to day administrative and financial services support will be provided by the ILO Office for Timor-Leste and Indonesia based in Jakarta, as delegated to the Liaison Officer based in Dili.

It is understood that national expertise should be favoured over international expertise but for this type of work there are limited qualified Timorese at the moment. The ILO will, therefore, recruit several international and local specialists to work with MoI and GoTL counterparts. In addition to this, specialised technical inputs will be required through consultants for shorter-term periods.

To further strengthen the capacity at the regional offices, locally recruited technicians and engineers will be employed under government conditions but paid for by the project. A similar arrangement is made in the GoTL's STAGE project and this has been very successful. The project is used as training ground and after the project period the government can decide to take on the technical staff to become permanent or contracted personnel of relevant government authorities.

The rural works programme will require a heavy TA personnel presence due to the heavy bias on and need for extensive on-the-job-training and technical support while carrying out the works. The shortage of capacity therefore demands a technically proficient team to allow for a continuous presence at site level to ensure the right supervision is provided in order to reach expected quality levels. The emphasis on training and skills development will remain throughout the project period as it is intended to carry out several batches of training, essentially using all project work sites as continuous training grounds.

There is also a demand for qualified tradesmen in the fields of carpentry, masonry, concrete works, motor mechanics and road works supervisors. Training institutions in the country already provide courses in some of these trades while others may need to be established. The project will link up with ongoing vocational training projects to ensure sufficient recruitment of skilled artisans. There is also a need to establish permanent training facilities for the trades which the vocational training centres in the country still do not provide.

The District Employment Centres (DEC) under the Secretariat of State for Vocational Training and Employment for the job-mediation and registration of labourers and employers will serve the purpose of bringing skilled and unskilled labour in contact with small-scale (road) contractors. The DECs are envisaged to take up responsibilities for contract mediation and processing. The centres may fulfil an important role in information dissemination of labour rights, complaint handling and extension services with regard to gender equality promotion, occupational health and safety including HIV/AIDS prevention and Environmental protection.

5.3 Project Monitoring and Evaluation

Three types of monitoring and evaluation will be conducted: technical, project, and financial. Technical monitoring and evaluation will be managed by the ILO's ASIST AP, which provides technical support to the project. This will be carried out on a regular basis. Project monitoring will be carried out by the ILO Programme Office in Dili and the ILO Jakarta Office to ensure the project makes progress towards achievements of outcomes and outputs. The independent project mid-term evaluation will be managed by the ILO Jakarta Office as per the ILO's policy and regulations concerning technical cooperation project evaluations. The final project evaluation will be internal evaluation managed by the ILO Jakarta Office with the support of the project team to review project experiences and follow-up to the recommendation of the project's independent evaluation.

6 PROJECT BUDGET

The table below presents an overall project budget. Specific contributions from each donor are shown in Annexes F-H.

PROJECT BUDGET FROM EU, NORWAY and IRELAND FOR SERVICES PROVIDED BY THE ILO

		2008		2009		2010		Total	
Code	Budget Item	W/M	US$	W/M	US$	W/M	US$	W/M	US$
11	International Experts								
11	Project Coordinator	5	79,167	12	190,000	1	15,833	18	285,000
11	Regional Engineers	15	150,000	36	360,000	3	30,000	54	540,000
11	Training Engineer	3	30,000	6	60,000		0	9	90,000
	Technical Monitoring and Evaluation		31,044		81,437		12,195		124,676
11	Consultants		0		0		0		0
	Curricula Development		0	3	54,000		0	3	54,000
	Needs Assessment	3	54,000		0		0	3	54,000
	Project financial audit		0		15,000		0		15,000
13	Administrative Staff		0		15,150		0		15,150
13	Finance/Admin Assistant	5	5,000	12	24,000	1	1,000	18	30,000
13	Pay Clerk	5	5,000	12	12,000	1	1,000	18	18,000
13	3 Regional Office Assistants	15	15,000	36	36,000	3	3,000	54	54,000
13.1	4 Drivers	20	12,000	48	28,800	4	2,400	72	43,200
15	Travel Costs (local)		8,000		20,000		1,500		29,500
16	Monitoring and Evaluation Missions		0		0		0		0
	Backstopping missions		3,000		3,000		3,000		9,000
	Independent mid-term evaluation		0		21,000		0		21,000
	Internal final evaluation		0		0		15,000		15,000
	Project financial audit		0		10,000		0		10,000
21	Sub-contracts Works		860,500		2,259,300		238,400		3,358,200
31	Study Tours		0		20,000		0		20,000
32	Training		10,000		10,000		5,000		25,000
41	Equipment		0		0		0		0
	4 vehicles		88,000		0		0		88,000
	15 motorcycles		40,500		0		0		40,500
	10 rollers		80,000		0		0		80,000
	15 sets of hand tools		60,000		0		0		60,000
	Office Equipment		35,000		0		0		35,000
51	Operation & M'ce of Equipment		12,645		30,350		2,529		45,524
53	Sundries		4,000		9,000		1,000		14,000
53	Printing		20,000		0		0		20,000
	Sub-total		1,602,856	165	3,259,037	13	331,857	249	5,193,750
67	Programme Support Costs		169,633		326,620		24,754		521,007
81	Provision for Cost Increases				179,283		17,831		197,113
	Grand Total		**1,772,489**		**3,764,940**		**374,441**		**5,911,870**

Technical Assistance	1,734,492
Civil Works covered by donor contributions	3,957,030
Total Donor Contribution	5,691,522
Government contribution on labour wages	2,383,400

7 PHYSICAL WORKS PROGRAMME

Formation width 3.5 - 5 metres
Carriageway width 3 - 4.5 metres
Type of surface Laterite gravel
Camber slope 8% after compaction
Cross drainage structures: Concrete pipe culverts and short single-span bridges
Average no. of culverts per km: 5
Average Cost of New Construction: 15,000 $/km Emplmnt: 2200 wd/km
Routine Maintenance 400 $/km Emplmnt: 150 wd/km

Type of Works	2008			2009			2010			Total			Labour		Donor Contribution	
	km	wd	USD	km	wd	USD	km	wd	USD	km	wd	USD	USD	%	USD	%
Routine Maintenance	420	63,000	168,000	1000	150,000	400,000	80	12,000	32,000	1500	225,000	600,000	447,200	75	152,800	25
Periodic Maintenance	10	22,000	75,000	24	52,800	180,000	2	2,200	15,000	36	77,000	270,000	172,500	63	97,500	36
Road Rehabilitation	75	165,000	1,125,000	210	462,000	3,150,000	15	33,000	225,000	300	660,000	4,500,000	1,620,000	36	2,880,000	64
Other Civil Works		25,000	100,000		50,000	200,000					75,000	300,000	150,000	50	150,000	50
Total		275,000	1,468,000		714,800	3,930,000		47,200	272,000		1,037,000	5,670,000	2,239,700	42	3,280,300	60

23,568 beneficiaries

Number of contractors to be trained for each type of work activities:

Type of works	No of contractors	Remarks
Road Rehabilitation	20	Class A and B contractors
Culvert works	30	Local builders and C contractors
Bridge works	5	Class A and B contractors
Periodic maintenance	20	Local builders and C contractors
Routine maintenance	100	Community contractors

ANNEX A: JOBS DESCRIPTIONS FOR PROJECT PERSONNEL

Summary Job Descriptions for the International Specialists

The **Project Coordinator (PC)** will be an experienced Labour Based Expert with proven skills in institutional support and management, rural road engineering, planning and programming and contract management.

The PC will be responsible for the overall supervision and coordination of the technical assistance. He/She will be responsible for providing backstopping and supervision to all technical assistance activities. The PC will also be in charge of scheduling the TA inputs and securing their timely outputs, providing technical support to the Ministry of Infrastructure in relation to works implementation issues, participate in the training activities and assist in ensuring adequate quality on work sites and provide guidance to contractors in how to most effectively reach production and quality targets.

3 Regional Engineers (RE) with hands-on experience in labour-based road works design, construction and maintenance and contractor development and training will be based in the districts. The REs will support the regional offices with the supervision and delivery of works.

The Regional Engineers will have a solid and proven experience in rural road construction works. They will assist in securing high quality outputs in the road construction and maintenance activities. The REs will act as resource persons for the technical staff in the MoI regional centres during the review of works plans, technical designs and contract documents, as well as during regular monitoring of actual works carried out in the districts. During regular site visits, the intention is that the REs will also provide technical advisory support to the district technical staff and contractors in the effective organisation and execution of works. In addition, the REs will be important players in the design and conduct of the technical training programmes.

The Regional Engineers will support the training programme and supervision of works and will undertake the following activities:

- Provide advice on technical design standards, work methods and organisation, bill of quantities, appropriate unit rates, contract documents, procedures for contract award;
- Review and prepare detailed designs, choice of alignments, quantities of work, detailed cost estimates and choice and design of structures;
- Participate in the preparation of bidding documents. Review the status of current Government documentation for contracting of civil works, including in the context of applying labour-based works technology and for the specific purpose of rural road works;
- Assist the project in securing adequate bridge designs, hydrological assessments, as well as quantities of works for the individual bridge sites;
- Facilitate the testing of gravel materials from the quarries identified during the detail design. Review results of material testing and provide necessary recommendations;
- Assist the project in the timely implementation of key tendering activities such as preparation and review of bidding document, announcement of works, tender opening, evaluation and award;
- Provide guidance on arrangement for contract award, advance payments and securities and monitor mobilisation and commencement of works by contractors;
- Approve the contractors work programmes, methods statements, material sources etc and any of its proposed modification or update. Advise the project of events or circumstance which significantly impact on contracts; in terms of quality and time.
- Provide management advice and support to the MoI field personnel in carrying out the following activities relating to work supervision:

    - Approve working drawings; approve setting out of works; issue instructions to contractors;
    - Monitor quality assurance practices for compliance with specifications;
    - Make measurements and keep measurement records; maintain site (test) records; ensure that daily work request and reports are kept; verify work volumes (when quality is to specification); and
    - Initiate and keep appropriate correspondence; check and verify as-built drawings for the works prepared by the contractors; closely monitor critical construction activities such as concrete testing and ruing foundation preparation; certify work and payment certificates.
- Inspect the works at appropriate intervals to ensure compliance with quality standards. Monitor the work of staff in the area of contract supervision and quality assurance and provide onsite training in quality assurance to staff and contractors;
- Advise on all matters relating to disputes and to the execution of the works and assist with processing contractor's possible claims;
- Monitor payments to contractors with specific reference to the requirements of regular payments, including assisting the project with expenditures forecasts and preparing financial statements and withdrawal applications;
- Recommend certificate of completion of part or all of the works and issue of defects liability certificates;
- Evaluate maintenance needs and submit clear recommendations for specific routine maintenance to be carried out during the defects liability periods; and
- Participate in project reviews, evaluation and monitoring missions.

Training Engineer (TE) with experience and skills in training needs assessment, training curriculum design, training of (local) government agencies, labour-based contractor training, community contracting and social mobilisation.

The TE will be responsible for all initial technical training related activities in these TA services. The TE will also work closely with the vocational training and business enterprise development project components of the current ILO TA programme in Timor-Leste. He/she will also provide training to local training providers thus starting the process of building up an in-country training capacity. The Training Engineer will also develop appropriate course materials as well as being engaged in the preparation and conduct of the training courses.

Consultants

Curricula Development
As part of the project technical assistance, appropriate curricula development related to rural road rehabilitation and maintenance will be developed for the inclusion in the relevant course programmes of the academic institutions where engineers and technicians are trained in Timor-Leste. This initiative will also explore how technical assistance of this nature can be used to strengthen these academic institutions and also how the academia can interact closer with the physical works programme of this type of projects.

Needs Assessment
The needs assessment is a mapping exercise to establish the actual extent of rural road network and the degree to which it meets rural access demands in the country. This assessment will involve a basic road inventory survey, establishing the overall condition of the rural road network in terms of passability throughout the year. On this basis, and by combining the collected data with existing demographic data, the needs assessment will carry out an estimate of the total investments required to provide the majority of the rural population with all-weather access. Investment numbers will be both in terms of funding for rehabilitation and maintenance as well as investments required in institutional capacity and HR development.

ANNEX B: PRODUCTIVITY NORMS

This section is indicative only and based on assumptions regarding the wage rate, contracting profits, allowances and costs of supervision and transport. A further assumption is that all works are executed by small and petty contractors, using LB techniques.

Productivity norms for routine maintenance

Work Item	Description of Routine Maintenance Activity	Unit	Routine Maintenance Activity Outputs Average Output 1 Worker per Day (WD)
RM1	Inspection and Removal of Obstructions	Km	Entire Road Section length every day
RM2	De-silting Culverts and Clearing Culvert Inlets and Outlets	No	Partly Silted : 2-3 no culvert line per WD Fully Silted: 0.5-1 no culvert line per WD
RM3	Clean Side, Catch-water and Mitre Drains	M	Partly Silted: 50 m per WD Fully Silted: 25 m per WD
RM4	Repair Erosion on Shoulders and Drains	M	20 m per WD (hard soil) 30 m per WD (soft soil)
RM5	Repair Scour Checks	No	5 no per WD
RM6	Grub Roadway	Km	20 m per WD
RM7	Clear Structures and their Waterways	No	< 3 metres wide - 1 no per worker per day > 3 metres wide - on agreement with employer
RM8	Fill Potholes/Ruts on the Carriageway	m^2	10 m^2 per WD
RM9	Cut Grass and Bush (on both sides)	M	100 m (along the road length) per WD
RM10	Other Activities as Instructed	-	Only following instruction by and agreement with the Employer (Site Supervisor)
Routine maintenance activities on sealed roads exclude RM6 and RM8, but include specific activities in maintaining the road pavement:			
RM11, 12	Edge repair, patching and Crack sealing		Refer for schedule and inputs for RM on bituminous to the DRTL-ADB Transport Sector Improvement report.

The estimated costs for routine maintenance depend largely on the cost of labour. As a general rule, on gravel roads of approximately 4 m wide, one worker can routinely maintain a stretch of 2 to 3 km for roads carrying 25 to 75 vehicles per day. Taking into consideration the maintenance backlog in Timor-Leste, there will be a demand for an increased labour input when commencing this activity.

Overall labour input for gravel roads is approximately 150 work days per km per year

If the road is surfaced with bitumen or asphalt-cement, maintenance work still concentrates on repairs of shoulders, desilting of drainage ditches and structures and surface patching. Compared with gravel or earth roads, labour inputs may be slightly less, however, overall costs may include repairs on the sealing. As the roads in Timor-Leste experience very low traffic densities, it is expected that a majority of the routine maintenance works will be related to maintaining the drainage system for both gravel roads as well as roads with bituminous surface layer.

The costs estimated for routine maintenance are detailed below. The costs are based on gravel roads as most rural roads follow such design standards if they are not plain earth roads.

In terms of costs through contracts this translates to the following rate analysis for routine maintenance on *gravel* roads:

Wage rate: $ 2.00 for unskilled labour
Productivity: 2-3 km per worker per year (say 150 WD/km/year)

Tools and equipment	10 %
Materials:	10 %
Supervision:	10 %
Total mark-up:	30 %

Annual cost/km =Wage rate x WD x mark-up = 2.0 x 150 x 1.3 ≈ **400 US$/km**

Inputs and Costs for Periodic Maintenance Using LB Work Methods

The cost estimates used for the periodic maintenance works is very much of a tentative nature as the works envisaged will consist of spot improvements of bad spots, essentially installing measures which halts the current deterioration of the road and its key components.

A key element in this work will therefore be to remove landslides, reopen the drainage system and install retaining walls to protect against future landslides. The retaining walls will in most cases be erected using gabion cages, thereby relying to the extent possible on local labour and materials.

Other periodic maintenance works may include repair or installation of culverts, repair of small bridges and similar measures thus re-establishing all-weather access to the communities which the roads are serving.

Since the specifics of the works are yet to be identified, the unit costs and the labour inputs for this component are more of indicative nature and to be used as a guiding criterion for the selection of the sub projects.

ANNEX C: TIMOR-LESTE CONTRACTING INDUSTRY

Contracting Industry

The contracting industry in Timor-Leste consists of Class A, B and C contractors. There are seven A-class contractors; these are either subsidiaries of or joint ventures with foreign owned international companies. Typically these contractors are capable to undertake rehabilitation and construction of national roads.

The 40 class-B contractors are capable of undertaking medium scale construction works and road maintenance contracts. The contractors' capabilities in road maintenance and construction vary and none of these contractors are familiar with labour-based techniques, although all contractors are familiar with labour mobilisation and management.

There are about 150 class-C contractors (C1, C2, C3), among which 28 contractors fall into the smallest (C1) category. C contractors are typically one person businesses with no or only very limited number of light equipment and tools. C1 are the least developed businesses and C3 is somewhat better equipped. For each contractor class contract bidding ceilings are set. C-class contractors are normally labour only contractors. The C-class contractors suffer from financial and managerial power; the procurement and the payment procedures are too complicated, too cumbersome or too long for them. Often C-class contractors lack basic technical skills.

Currently the market for contractors is not flourishing; the A-class contractors incur high costs of unproductive machinery and equipment. B-class contractors operate in a market that is insufficiently transparent for them and the number of public works contracts let is few.

Capacity

Most roads are yet to be brought back into a maintainable condition and therefore require significant rehabilitation investment costs. Furthermore, the capacity of the government to plan, design and manage implementation of both rehabilitation and maintenance work, limits the volume and speed in which these works can be realised. Finally, the current ability and capacity of the private contracting sector is a seriously hampering factor in the development.

However, the investments in money and time to create the capacity are opportunity costs. The effects will be almost immediate. The more the capacity of the government and the contracting sector increases, the more jobs are secured and a greater part of the road network investment is preserved, in its turn contributing to improved access and better economic opportunities and poverty alleviation by both cash injections through employment and improved access in the rural areas.

It is therefore necessary to train the government staff (especially at the regional level) and contractors and develop the capacity in all aspects of the road asset management and implementation, using labour-based techniques.

In addition it is necessary to hire engineering staff to supplement the capacity at the regional offices. This is further necessitated by the backlog in rehabilitation and maintenance work and the very likely long lead-time before the capacities are brought up to an acceptable level.

Contractor Training

Training of B and especially C class contractors is deemed necessary for the effective execution of LB road construction and maintenance. Training in programming and labour management is another important point of attention. The construction industry has room for expansion, especially in the mid and lower range, subject to improved programming of routine and periodic maintenance works.

Appropriate training packages and implementation procedures will be prepared and training conducted to small-scale contractors. All three classes of contractors will be targeted: the A and B-class for rehabilitation and B and C class contractors for periodic maintenance activities as well as culvert works. In addition, the project will organise contracting through community groups for the routine maintenance. To institutionalise the contractor training, the project will initiate contractor training to become a standard and become part of the qualification criteria. Trial contracts will be part of the process of training and qualification.

To sustain rehabilitation investments made on roads, this must be followed by a comprehensive and well-planned maintenance regime. The implementation of construction works is a good learning ground for labourers and contractors, continuing to apply these skills in the maintenance stage. This only applies if the skills and techniques applied during the construction stage are appropriate that can be applied in routine and periodic maintenance.

In the projections on costs and labour inputs on maintenance works, the assumption is that the network is in a maintainable condition. The reality is that many roads need intensive repair and rehabilitation works, if not total re-construction. The initial work on roads will therefore predominantly be construction. Construction using labour-based methods will generate much more employment, albeit only for a short period. This however is a very good training ground for skills transfer to labourers and contractors.

As the construction generates a substantial financial injection into the local economy in the area near the road, initial construction projects of rural roads are chosen (through participatory methods) to be poverty-targeting projects and beneficial to improving access to socio-economic services. The first sub projects will be constructed as training sites and thereafter as **trial contracts** for trained LB contractors. The trial contract is a tool to guide and supervise the contractor and provide practical on-the-job training to supervisors, labourers and contractor.

ANNEX D: LOGICAL FRAMEWORK

	Description	Verifiable Indicator	Means of verification	Assumptions
Beneficiaries: Government staff (engineers, technicians, and supervisors in Ministry of Infrastructure); contractors; local communities in project districts; training and academic institutions; and women and men workers in project districts				
Project Title: Investment Budget Execution Support for Rural Infrastructure Development and Employment Generation (TIM Works)			**Project duration: 18 months (July 2008 – January 2010)**	
Project goal: To contribute to economic development and poverty reduction by spurring growth in the infrastructure sector				
Immediate Objective: Livelihood improvement and social stability in rural communities through rural development and employment generation		1. Total km of road networks restored/created 2. Number of workdays generated and amount of cash injected into local communities 3. Labour-based methods integrated into national Workfare programmes	Project final report Government annual budget for 2010	Government policies and priorities with regards to the Workfare Programmes remain unchanged – likely National and provincial security conditions are stable – unlikely
Outputs	1. Roads rehabilitation and maintenance with labour-based technologies 2. Employment generation 3. Capacity building for infrastructure providers in the private and public sectors 4. Policies and regulations adopted and implemented for further scaling up LB methods.	1. 300 km rehabilitated/constructed, 36 km periodic maintenance and 1500 km of routine road maintenance. 2. 1,037,000 workdays generated providing short-term employment to 23,500 beneficiaries, at least 30% being women 3. A. 30 engineers and technicians trained in LB approaches; 75 contractors and 100 community contractors trained in LB approaches B. Number of academic and training institutions participating in project activities C. 30% labour cost is reflected in Government 2010 annual budget for infrastructure. 4. Policies and regulations in support of scaling up the LB methods adopted by the Ministry of Infrastructure and integrated into the Standards Of Practices in the Workfare Programmes	Project Final report	Community are accessible – likely No natural disasters affecting road work progress – medium risks Road materials are available – likely Small contractors have access to financial services - likely Academic and training institutions interested in participating in the project – likely Government staff are released to attend training and participate in project activities – likely Project has access to government standards, specifications, and contract document - likely

	Description	Verifiable Indicator	Means of verification	Assumptions
Output 1	**Road Rehabilitation and Maintenance Works**	**300 km rehabilitated/constructed, 36 km periodic maintenance and 1500 km of routine road maintenance.**		
Activity 1.1	Rapid assessment for design of the initial training programme	Completion of the assessment within 3 months of project starting date	Rapid Assessment Report	
Activity 1.2	A trial training programme on rehabilitation, contracting procedures, and maintenance	LB approaches demonstrated on 18 kms road length Contractors awarded contracts for 4 km road rehabilitation, culvert construction, bridge works, and side slope stabilisation works Community contractors conducted routine maintenance on roads with fairly good conditions.	Trial training report	Community are accessible – likely No natural disasters affecting road work progress – medium risks Road materials are available – likely Small contractors have access to financial services - likely
Activity 1.3	With central and local government authorities, appraisals and surveys of targeted roads conducted to effect the road rehabilitation and maintenance programme for implementation by the project, e.g., road condition surveys, preliminary and detailed designs, quantity surveying, traffic surveys, applying agreed selection and appraisal criteria.	Government authorities agreed to road and contractors' selection and appraisal criteria	Project implementation plan	
Activity 1.4	Rehabilitation and maintenance programme implemented through competitive bidding process	Progressive number of contracts awarded, completion within time and budget, and road lengths rehabilitated and maintained	Project M&E database	
Output 2	**Employment Generation**	**1,037,000 workdays generated providing short-term employment to 23,500 beneficiaries, at least 30% being women**		
Activity 2.1	LB methods used in rehabilitation and maintenance	Rehabilitation contract cost contains 30-50% wage Maintenance contract cost contains 70-80% wage	Project M&E database	Community are accessible – likely No natural disasters affecting road work progress – medium risks
Activity 2.2	Recruitment of local men and women for road works	30% of workers are women	Project M&E database	
Activity 2.3	Supervisory staff trained in the effective organisation of large groups of workers, including implementation of incentive schemes.	70% of contract work completed in time	Project M&E database	
Activity 2.4	Government staff and contractors trained in the essential regulations pertaining to employment of skilled and un-skilled labour.	Workers' received wages and benefits in accordance with national regulations	Project M&E database	
Output 3	**Capacity building**	**Number of government counterpart staff and contractors trained**		Community are accessible – likely

	Description	Verifiable Indicator	Means of verification	Assumptions
		Number of training and/or academic institutions participating in project activities **maintenance allocation**		Government staff are released to attend training and participate in project activities – likely Government policies and priorities with regards to the Workfare Programmes remain unchanged – likely Academic and training institutions interested in participating in the project – likely
Activity 3.1	Training materials for government staff and contractors developed	Training materials tailored to the specific requirements in Timor-Leste	Training materials	
Activity 3.1	Government counterpart engineers, technicians and inspectors trained in LB methods	30 government counterpart engineers, technicians, and inspectors trained Government annual budget balanace allocation for rehabilitation and maintenance	Project M&E database Government 2010 annual budget	
Activity 3.2	Contractors trained in LB methods	75 commercial contractors and 100 community contractors trained	Project M&E database	
Activity 3.3	LB methods incorporated into curriculum of local universities and polytechnic	Number of local universities and politechnic institutes participating in project activities	Project M&E database	
Activity 3.4	Awareness raising and briefing seminars to key stakeholders	Number of attendants	Project M&E database	
Activity 3.5	Study tours to government management staff	Number of government counterparts participating in the study tours	Study tour reports	
Output 4	**Policies, strategies, guidelines, and standards**	**Policies and regulations in support of scaling up the LB methods adopted by the Ministry of Infrastructure and integrated into the Standards Of Practices in the Workfare Programmes**		Project has access to government standards, specifications, and contract document - likely Government policies and priorities with regards to the Workfare Programmes remain unchanged – likely
Activity 4.1	Review existing technical standards for application of LB work methods	Number of technical standards reviewed, revised, and presented to GoTL	Project M&E database	
Activity 4.2	Review technical specifications for application of LB methods	Number of technical specifications reviewed **Or** **Percentage of existing national technical specifications reviewed and revised**	Project M&E database	
Activity 4.3	Contract documentation and management procedures already under development by MoI adopted to the specific requirements of LB methods and disseminated	Contract documentation and management procedures integrated requirements of LB methods	Contract documentation	

	Description	Verifiable Indicator	Means of verification	Assumptions
Activity 4.4	Assessment and documentation of project experiences with regards to contractor selection procedures and contractor performance for government for future use and report disseminated to all stakeholders	Areas for further improvements in government system identified Number of stakeholders receiving project report/documents	Project reports submitted to the GOTL	
Acitivity 4.5	Introduction and technical assistance to government staff in the use of progress monitoring and reporting system.	Number of government staff using progress monitoring and reporting system	Project M&E database	
Activity 4.7	Sharing of project' training programme, technical support and training literature, manuals and procedures with other projects involved in rural infrastructure development.	Number of other infrastructure projects benefiting from project's training facilities	Project M&E database	
Activity 4.8	Preparation of appropriate rural infrastructure policies and strategies for the inclusion in national development plans.	Rural infrastructure policies and strategies addressing national development priorities	Project report submitted to GOTL	

ANNEX F: BUDGET CONTRIBUTION FROM THE EUROPEAN COMMISSION

PROJECT BUDGET FROM THE EUROPEAN COMMISSION FOR SERVICES PROVIDED BY THE ILO

		2008		2009		2010		Total	
Code	Budget Item	W/M	US$	W/M	US$	W/M	US$	W/M	US$
11	International Experts								
11	Project Coordinator			6	95,000			6	95,000
11	Regional Engineers	5	50,000	12	150,000	3	30,000	20	230,000
11	Training Engineer								
	Technical Monitoring and Evaluation		20,596		65,437		12,195	0	98,228
11	Consultants							0	0
	Curricula Development								
	Needs Assessment								
	Project financial audit				15,000			0	15,000
13	Administrative Staff	0	0	12	12650			12	12,650
13	Finance/Admin Assistant	5	5,000	6	6,000	1	1,000	12	12,000
13	Pay Clerk	5	5,000	12	12,000	1	1,000	18	18,000
13	3 Regional Office Assistants			12	12,000			12	12,000
13.1	4 Drivers	20	6,000	24	14,400			44	20,400
15	Travel Costs (local)				10,000			0	10,000
16	Monitoring and Evaluation Missions							0	0
	Backstopping missions				3,000			0	3,000
	Independent mid-term evaluation				7,000			0	7,000
	Internal final evaluation						5000	0	5,000
	Project financial audit				10,000			0	10,000
21	Sub-contracts Works		225,500		899,200		238,400	0	1,363,100
31	Study Tours				20,000			0	20,000
32	Training				10,000			0	10,000
41	Equipment							0	0
	4 vehicles	2	44,000					2	44,000
	15 motorcycles	5	13,500					5	13,500
	10 rollers	4	32,000					4	32,000
	15 sets of hand tools							0	0
	Office Equipment		35,000					0	35,000
51	Operation & M'ce of Equipment		4,215		10,117			0	14,332
53	Sundries		4,000		3,000		1,000	0	8,000
53	Printing							0	0
	Sub-total		444,811	84	1,354,804	5	288,595	135	2,088,210
67	Programme Support Costs		31,137	6	94,836	0	20,202	9	146,175
81	Provision for Cost Increases				72,482		15,440		87,922
	Grand Total		**475,948**	**90**	**1,522,122**	**5**	**324,236**	**144**	**2,322,307**

Technical Assistance	782,004
Civil Works covered by donor contributions	1,540,303
Total Donor Contribution	2,322,307
Government contribution on labour wages	2,383,400

ANNEX G: BUDGET CONTRIBUTION FROM THE GOVERNMENT OF IRELAND

PROJECT BUDGET FROM IRELAND FOR SERVICES PROVIDED BY THE ILO

		2008		2009		2010		Total	
Code	Budget Item	W/M	US$	W/M	US$	W/M	US$	W/M	US$
11	International Experts								
11	Project Coordinator			1	15,833	1	15,833	2	31,666
11	Regional Engineers	5	50,000	6	60,000			11	110,000
11	Training Engineer							0	
	Technical Monitoring and Evaluation		10448		16,000			0	26,448
11	Consultants							0	0
	Curricula Development							0	
	Needs Assessment							0	
	Project financial audit							0	0
13	Administrative Staff			2	2500			2	2,500
13	Finance/Admin Assistant			6	6,000			6	6,000
13	Pay Clerk							0	0
13	3 Regional Office Assistants			12	12,000	3	3,000	15	15,000
13.1	4 Drivers					4	2,400	4	2,400
15	Travel Costs (local)				5,000		1,500	0	6,500
16	Monitoring and Evaluation Missions							0	0
	Backstopping missions						3000	0	3,000
	Independent mid-term evaluation				7,000			0	7,000
	Internal final evaluation						5,000	0	5,000
	Project financial audit							0	0
21	Sub-contracts Works		225,500		388,100			0	613,600
31	Study Tours							0	0
32	Training						5,000	0	5,000
41	Equipment							0	0
	4 vehicles	1	22,000					1	22,000
	15 motorcycles	5	13,500					5	13,500
	10 rollers	4	16,000					4	16,000
	15 sets of hand tools	15	60,000					15	60,000
	Office Equipment							0	0
51	Operation & M'ce of Equipment		4,215		10,117			0	14,332
53	Sundries				3,000			0	3,000
53	Printing							0	0
	Sub-total		401,663	27	525,550	8	35,733	65	962,946
67	Programme Support Costs (10%)		40,166		52,555		3,573		96,295
81	Provision for Cost Increases				28,905		1,965		30,871
	Grand Total		**441,829**		**607,010**		**41,272**		**1,090,111**

Technical Assistance	396,743
Civil Works covered by donor contributions	693,368
Total Donor Contribution	1,090,111
Government contribution on labour wages	2,383,400

ANNEX H: BUDGET CONTRIBUTION FROM THE GOVERNMENT OF NORWAY

PROJECT BUDGET FROM THE GOVERNMENT OF NORWAY FOR SERVICES PROVIDED BY THE ILO									
		2008		2009		2010		Total	
Code	Budget Item	W/M	US$	W/M	US$	W/M	US$	W/M	US$
11	International Experts								
11	Project Coordinator	5	79,167	5	79,167			10	158,334
11	Regional Engineers	5	50,000	15	150,000	0	0	20	200,000
11	Training Engineer	3	30,000	6	60,000		0	9	90,000
11	Consultants							0	0
	Curricula Development			3	54,000			3	54,000
	Needs Assessment	3	54,000					3	54,000
	Project financial audit							0	0
13	Administrative Staff							0	0
13	Finance/Admin Assistant			12	12,000			12	12,000
13	Pay Clerk							0	0
13	3 Regional Office Assistants	15	15,000	12	12,000			27	27,000
13.1	4 Drivers	10	6,000	24	14,400			34	20,400
15	Travel Costs (local)		8,000		5,000			0	13,000
16	Monitoring and Evaluation Missions							0	0
	Backstopping missions		3000					0	3,000
	Independent mid-term evaluation				7,000			0	7,000
	Internal final evaluation						5,000	0	5,000
	Project financial audit							0	0
21	Sub-contracts Works		409,500		972,000			0	1,381,500
31	Study Tours							0	0
32	Training		10,000					0	10,000
41	Equipment							0	0
	4 vehicles	1	22,000					1	22,000
	15 motorcycles	5	13,500					5	13,500
	10 rollers	4	32,000					4	32,000
	15 sets of hand tools							0	0
	Office Equipment							0	0
51	Operation & M'ce of Equipment		4,215		10,116		2,529	0	16,860
53	Sundries				3,000			0	3,000
53	Printing		20,000					0	20,000
	Sub-total		**756,382**	**77**	**1,378,683**	**0**	**7,529**	**128**	**2,142,594**
67	Programme Support Costs (13%)		98,330	10	179,229	0	979	17	278,537
81	Provision for Cost Increases				77,896		425	0	78,321
	Grand Total		**854,712**	**87**	**1,635,807**	**0**	**8,933**	**145**	**2,499,452**

Technical Assistance	938,357
Civil Works covered by donor contributions	1,561,095
Total Contribution from Norway	2,499,452
Government contribution on labour wages	2,383,400