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CAMBODIA

LABOUR-BASED INFRASTRUCTURE REHABILITATION PROJECT
(CMB/92/008)
LABOUR-BASED RURAL INFRASTRUCTURE DEVELOPMENT COMPONENT OF THE
CAMBODIAN AREA REHABILITATION AND REGENERATION PROJECT (CARERE2)
(CMB/95/011)

Report of the Evaluation Mission

Draft Final July

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This report was prepared by Messrs. **Renato Schulz** (consultant, project economist, team leader) and **Steve van Huyssteen** (consultant, engineer). The views expressed in this report are the consultants' own and not necessarily those of the Royal Government of Cambodia, UNDP, ILO, UNOPS or any other intervening United Nations agency.

Abbreviations and Acronyms

APSARA	Autorité pour la Protection du Site et l'Aménagement de la Région d'Angkor.
ADB	Asian Development Bank
CARE	International Aid Agency (NGO)
CARERE	Cambodian Area Rehabilitation and Regeneration Project
CDF	(United Nations) Capital Development Fund
CMAC	Cambodian Mine Awareness Centre
COFRAS	French Demining Agency
EU	European Union
HALO	Hazardous Area Life-support Operation (NGO Trust)
IALA	Inter Agency Letter of Agreement
ILO	International Labour Organisation
ITC	Cambodian Institute of Technology
LBAT	Labour-Based Appropriate Technology
LDF	UNCDF"s Local Development Fund
MAG	Mine Awareness Group (NGO)
MAT	Mine Awareness Training
MPW&T	Ministry of Public Works and Transport
MRD	Ministry of Rural Development
NGO	Non-Governmental Organisation
NPA	Norwegian Peoples Aid (NGO)
NL	Government of the Netherlands
OPS	(United Nations) Office for Project Services
PDPW&T	Provincial Department of Public Works and Transport
PDRD	Provincial Department of Rural Development
PIP	The RGC's Public Investment Program
RGC	Royal Government of Cambodia

RIIPADB's Rural Infrastructure Improvement Project	
RE	Resident Engineer y
SIDA	Swedish International Development Agency
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Programme
UNHCR	United Nations High Commission for Refugees
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development WB
World Bank	
WFP	United Nations World Food Programme
WUG	Water User Group

INTRODUCTION

This is the report of the terminal evaluation mission that reviewed two projects carried out by ¡LO between 1992 and 1999 in Cambodia. The first was the Labour-based Infrastructure Rehabilitation Project (CMB/92/008) a UNDP project of which ILO was the executing agency. The second was the Labour-based Rural Infrastructure Development (CMB/95/011) that was incorporated as a component of the Cambodia Area Rehabilitation and Regeneration Project (CARERE2) of which UNOPS was the executing agency, and ILO the associate agency for purposes of carrying out the specific component.

The mission visited Cambodia from July 22 to August 7, 1999 and was composed of Messrs. **Renato Schulz** (project economist, consultant, team leader) and **Steve van Huyssteen** (engineer, consultant). The mission wishes to acknowledge the assistance and help it received from government officials, the ILO team in Cambodia, as well as that of the UNDP, UNCDF and CARERE staff.

Phnom Penh, August 12, 1999.

I. EXECUTIVE SUMMARY

Background

Largely in response to repatriation and resettlement problems, in 1992 the UN launched an emergency employment-generating program for the northwestern provinces of Cambodia framed under UNDP's Area Development Programme. As a by-product, it also aimed at rehabilitating essential rural infrastructure, particularly roads and irrigation schemes. The program was to be carried out using labour-based techniques to maximise its employment impact particularly in rural areas. It was universally recognised at the time, that under- and unemployment were major problems in rural areas especially the war-torn northwestern provinces.

In this context ILO's Employment Intensive Programme fitted perfectly. It had been in existence since the early 1970s and was known for its ability to respond in emergencies, and for having developed effective labour-intensive technology choices. ILO became the executing agency for a

UNDP and donors financed project, the "Labour-based Infrastructure Rehabilitation Programme" (CMB/92/008). The program originally intended to be carried out in 18 months (1993 and 1994) was interrupted by, and successively extended due to the political events. It was finally closed in March 1996, and followed by another ¡LO Project (CMB/95/01 1) finaced with SIDA and Dutch funds, which was incorporated within the aegis of the second Cambodian Area Rehabilitation and Regeneration Project (CARERE2) of which the first had been assisting refugees since 1992.

However, by 1994 and in 1995, when CARERE2 was being developed, a radical change in philosophy, approach and methods vis-à-vis CARERE1 had taken place. The successor project had become "an experiment in decentralised planning and financing of participatory rural development aimed at alleviating poverty, strengthening civil society, promoting dialogue between the constituents of Cambodian society, and contributing to the spread and consolidation of social stability and peace throughout the country." The design and framing of the new project was largely the work of UNCDF, which had been working closely with UNDP in the formulation of a Local Development Fund for Cambodia.

Thus, the UNCDF/UNDP programme under which the ILO project was to be placed was a policy experiment in decentralised planning, decision making and implementation, while ILO was more concerned about the continuation, through capacity building, of the labour-based appropriate technology and the rehabilitation and maintenance of rural roads started under its first project. The ILO project was eventually placed under CARERE2, but while the new arrangement effectively provided continuity to the labour-based rehabilitation and maintenance activities ILO had been carrying out in four north-western provinces, two important changes took place: ILO's main government counterpart, which had been the Ministry of Public Works and Transport, became the new Ministry of Rural Development (one of the counterparts to CARERE2), and the force account method of carrying out works which ILO was using would gradually be switched to contracting.

The second project began in July 1996 and was to extend to December 1997, it was later continued into 1998 with 5 million SK (about US$622,000) additional funds from SIDA and with budget remnants carried forward from 1997, it was closed in January 1999.

Objectives

The immediate objectives of the first project were to provide employment for up to 4,000 persons, to rehabilitate and maintain essential infrastructure (roads and irrigation schemes), and to build up local capacity. The second project was aimed at (i) funding (from July 1996 to December 1997) the cost of infrastructure rehabilitation works (roads and irrigation schemes), (ii) carrying out maintenance on the infrastructure that the first project had rehabilitated (roads and canals), (iii) providing technical assistance, (iv) undertaking a road inventory in the four provinces in which CARERE2 was operating, and (v) developing a maintenance strategy for each of the four provinces. Both projects included labour-based clean up and rehabilitation of the ponds and monuments at Angkor Park in Siem Reap province. These objectives were all clearly identified and expected outputs were quantified in verifiable terms.

Modalities of Execution

Arrangements between UN agencies under the first project seem to have worked well as there was a clear common objective. However, development of the second project revealed differences of opinion over objectives, and what, and how things should be done. In addition, UNCDF's withdrawal from their commitment to finance the labour-based road construction and maintenance

created a serious funding problem. Fortunately donor agencies, particularly SIDA, stepped in and helped to close the gap. Subsequent ILO activities, notably the Upstream Project, are being financed directly by SIDA without the intervention of other UN agencies.

Complementary support to ILO from other UN agencies for the execution of the second project in particular was less proactive. While political and technical support for the projects from counterpart ministries and provincial departments as well as APSARA was unquestionable, UN partners in the second project (UNDP and UNCDF) became little involved in its technical implementation.

Project Implementation

Both projects followed the planned schedules as set out in the project documents with minor deviations and delays, mostly connected to funding problems. All outputs were according to the predefined standards and of high quality, and were produced substantially according to schedule, which is commendable given the budgetary and physical constraints, as well as the security restrictions under which the projects were executed.

Project Results

The two Terminal Reports and the socio-economic impact study (Sakko, 1999) show that the development and immediate objectives of the projects were amply achieved.

Project Costs

The two projects had a cost of US$18.1 million (including the cash value equivalent of *food-for-*work provided by WFP). Of this total 40% went to overheads, and 60% (about US$ 10.9 million) to roads, canals, and the Angkor temples reconstruction, rehabilitation and maintenance, as well as to training. Of the US$10.9 million that were spent on works about 40% was used in purchasing handtools and equipment and renting offices, 34% went to wages and salaries, 24% to procuring and hauling construction materials and 2% to training. This distribution of expenditures was in line with similar projects elsewhere.

50% of the funds were provided by the government of the Netherlands through UNDP, 25% was financed by UNDP itself, 15% by SIDA also through UNDP, 5% of the costs were contributed in kind (food-for-work) by WFP and 3% was funded by UNHCR.

Assessment

Using UNDP's rating criteria' both projects rank as highly relevant, well performed and successful.

Findings

The mission found that in addition to producing quality rural infrastructure, the labour-based approach is an effective and efficient method of achieving two high priority goals in Cambodia, namely (i) employment generation and (ii) the rehabilitation and maintenance of needed roads and canals. Effective because it can operatively reach these objectives, and efficient because, under current circumstances in Cambodia, it can do so economically.

Inspite of the above, the mission finds that conditions that would need to be met for the labour-

based appropriate technology methods to operate, are not always present. For instance, the view exists among some donors and lending institutions that labour-based projects (roads in particular) supported by local communities and villages are just make-work projects aimed at earning an income and not a reflection of need. As a result, those donors and lending institutions have decided to curtail expenditures on unskilled labour. This, of course, negates one of the important purposes of carrying out labour-intensive infrastructure works, which is to create employment and transfer income to local people and thus help them to join the market economy. The mission finds that in as much as those views on labour-based projects and the resulting procedures continue and, if, as is proposed, are extended nation-wide, it will become quite difficult to put together and carry out labour-based projects financed by those agencies.

The mission fords that commitment to decentralisation and to grass-roots participatory planning should not prevent, as seems to have occurred in the past, the full development and exploitation of synergies between labour-based methods of project execution and effective` local planning and development.

The mission finds that despite the governments strong and emphatic statements endorsing labour-based methods of carrying out rural infrastructure works as an appropriate response to Cambodian conditions, it still has a key role to play in clarifying for donors and lending agencies its policies, desires and seriousness vis-à-vis labour -based work methods.

Another *sine-qua-non* condition that must be present and that the mission found lacking is appropriate financing. This is particularly critical for labour-based operations as small labour-based contractors do not have the financial capacity to sustain operations without timely payments

Despite the effort and success of the projects in training labour-based engineers and supervisors, who could eventually become small-scale contractors for rural works (the effort to train contractors now continues under the Upstream Project financed by SIDA), not much use is being made of contracting. Under the two projects most contracts were for the procurement and hauling of latente

[1] Contained in UNDP's "Guideline for Evaluators," August 1993, Matrix for Rating Project Relevance, Matrix for Rating Performance, and Matrix for Rating Success, which are reproduced on 23, 24 and 25 of the report.

and much of the work was done by force account. Under parallel projects most contracting is not for labour-based works.

Recommendations

The mission recommends that, as much as possible, the government use labour-based appropriate technology methods to develop rural infrastructure, hopefully using more extensively competitive contracting procedures. To this effect we recommend that appropriate - tender and bidding documents, as well as contracts be developed.

In this context, the government should intensify its efforts to create an enabling environment in which donors and international lending agencies take full advantage of the labour-based appropriate technology approach and methods.

In our view, the labour-based technology has an important role to play and therefore a way should be found to accommodated local aspirations embedded in labour-intensive projects, in the

participatory planning process. To this effect, it would seem appropriate to make sure that the choice of technology to be used to implement projects is fully and accurately appraised as part of the decision-making process that leads to the selection of projects to be financed.

Since future sustainability of project works, i.e. the ability of the assets to continue to generate benefits, hinges largely on the ability to secure funding for maintenance, we recommend to develop for roads similar procedures as are being used for irrigation, which directly link use to pay. The possibility should be explored of contracting maintenance, and funding it from fees collected directly by the contractor (the competitive tendering process would include the proposed toll as a decision-making criteria). Meanwhile, interesting and practical ideas are proposed in ITTransport's Rural Road Maintenance Consultancy for the ADB project.

Closure of the second project meant that necessary maintenance on the roads built under the projects was suspended. We recommended that renewed efforts be made to resume the maintenance. Donors and lending agencies should help the government fund this activity while self-financing means of carrying out the work are found.

II. PROJECT CONCEPT, DESIGN AND STRATEGY

A. Background to, and Context of the projects

Cambodia has had an uneasy recent history. It has been virtually at war over the past thirty years. A social experiment in the 1970s reduced incomes and standards of living to levels well below those of the 1960s. In April 1975, Cambodia came under the rule of the Khmer Rouge. In 1979 the National United Front for National Salvation, deposed the Khmer Rouge with the backing of Vietnamese troops and established the People's Republic of Kampuchea. The United Front government established a People's Revolutionary Council. A draft constitution was promulgated in March 1981, and in May elections were held for a National Assembly. Executive power was vested in the chairman of the Council of State and the chairman of the Council of Ministers (the premier). However, remnants of the Khmer Rouge and other groups organised a Coalition Government in opposition to the Vietnamese-backed regime and were able to retain Cambodia's seat at the United Nations (UN). Continued armed conflict between the factions made it virtually impossible to govern the country effectively.

In October 1991 the Paris peace agreement was signed, providing for the UN and a Supreme National Council to share power until a Constituent Assembly was elected. Prince Norodom Sihanouk was elected Council chairman. However, the Khmer Rouge opted out of the peace agreement and boycotted the elections. The election, in May 1993, resulted in a coalition government. More than 20 political parties participated in the election; however, two -the royalist United Front and the Cambodia People's Party (CPP)- obtained more than 85 percent of the vote. In September 1993 the government ratified a new constitution that provided for a pluralistic democratic government with a limited monarchy. Under the new constitution, the Constituent Assembly was converted to a legislature.

Soon after the UN took control in 1992, and particularly after the elections in 1993, Cambodia faced the imminent resettlement of around 700,000 persons, 380,000 of them refugees returning from camps in Thailand, 140,000 were soldiers to be demobilised as part of the peace process, and 180, 000 internally displaced persons. The provinces most affected were those in the North Western part of the country, close to the border with Thailand: Siem Reap, Battambang, Banteay Meanchey and

Pursat. The Khmer Rouge boycott of the 1993 elections and the nondemobilisation of troops caused the civil war to flare up again after the elections. The Northwestern provinces were again serious affected and security problems continued. In May 1994 the Khmer Rouge forces briefly reached Sisophon and Battambang towns.

In early 1996 they still controlled autonomous zones in all the Northwest provinces. In August 1996 agreement was finally reached to end the armed confrontation. Still, some breakaway, hardline Khmer Rouge factions continued to create security problems until early 1998 when a government offensive finally led to an organised mutiny of Khmer Rouge commanders who fled to government controlled zones effectively disintegrating the Khmer Rouge.

In July 1997, however, one of the coalition parties accused the other of plotting with the remnants of the Khmer Rouge, and took power after violent clashes. The military confrontation and the repressive actions that followed stopped the recovery the country had slowly been experiencing since 1993. The 1997 conflict, which seriously damaged the international image and credibility of the Royal Government, was followed by elections in 1998, which redressed the situation and created a new more positive environment for Cambodia.

Largely in response to the repatriation and resettlement problems, in 1992, the UN launched an emergency programme for the northwestern provinces. It was mainly an employment-generating program to assist refugees framed under UNDP's Area Development Programme. Yet, as a by-product, it also aimed at rehabilitating essential rural infrastructure, particularly roads and irrigation schemes. The program was to be carried out using labour-based techniques to maximise its employment impact particularly in rural areas. It was universally recognised at the time, that under- and unemployment were major problems in rural areas especially the war-torn northwestern provinces.

Moreover, termination of UNTAC operations, which during 1992 and 1993 had employed up to 50,000 workers, was leaving a large number of unemployed people. Also, the reduction in the civil service, police and military personnel would swell the number of people looking for jobs in both urban and rural areas. In addition, many of the un- or under-employed were women heads of households, handicapped persons injured by mines, or other disadvantaged groups.

While it was recognised that agriculture would continue to provide the majority of employment opportunities in largely rural Cambodia, it was also clear that there were large numbers of unemployed who would not be absorbed by farming in the short term. In this sense, cleaning and clearing of the Angkor monuments, in, and close to Siem Riep City, which had not been maintained or cared for in 30 years and were overgrown with vegetation, was a suitable addition to the projects. It was a task that typically would be done by hand and, thus, fitted well with the nature of the projects.

In this context ILO's Employment Intensive Programme fitted perfectly. It had been in existence since the early 1970s and was known for its ability to respond in emergencies, and for having developed effective labour-intensive technology choices. ILO became the executing agency for a UNDP and other donors financed project, the "Labour-based Infrastructure Rehabilitation Programme" (CMB/92/008). The program originally intended to be carried out in 18 months (1993 and 1994) was interrupted by, and successively extended due to the political events. It was finally closed in March 1996, and followed by another ILO Project (CMB/95/011), which was incorporated within the aegis of the second Cambodian Area Rehabilitation and Regeneration Project (CARERE2) of which the first had been assisting refugees in parallel with CMB/92/008 since 1992.

However, by 1994 and in 1995, when CARERE2 was being developed, a radical change in philosophy, approach and methods had taken place. The successor project to CARERE1 had become "an experiment in decentralised planning and financing of participatory rural development aimed at alleviating poverty, strengthening civil society, promoting dialogue between the constituents of Cambodian society, and contributing to the spread and consolidation of social stability and peace throughout the country." The design and framing of the new project was largely the work of UNCDF, which had been working closely with UNDP in the formulation of a Local Development Fund for Cambodia.

Thus, the UNCDF/UNDP programme under which the ILO project was to be placed, was a policy experiment in decentralised planning, decision making and implementation, while ILO was more concerned about the continuation, through capacity building, of the labour-based appropriate technology and the rehabilitation and maintenance of rural roads started under its first project.

The partners in CARERE2, UNDP/UNCDF, gave ILO the choice of either integrating under CARERE2, in which case ILO would become an associate agency carrying out a component of the new project under UNOPS, the UN agency chosen to execute the project, or phase out. If the

former was the case a two month extension of the old project would be granted (April-May, 1996) to blend in with the new. After consulting with the government and key donors, ILO acceded to have its project placed under CARERE2 and an Inter-Agency Letter of Agreement was signed between ILO and UNOPS. This allowed ILO to continue to manage SIDA and Dutch funds, which had been channelled for the purpose of road rehabilitation and maintenance through UNDP. Under the new project, donor funds became Trust Funds established at UNDP, but the infrastructure portion of them would be earmarked to be transferred by UNDP through UNOPS, net of their respective administration costs, to ILO.

The new arrangement effectively provided continuity to the labour-based rehabilitation and maintenance activities ILO had been carrying out under the earlier project in the four north-western provinces of Pursat (rural roads), Banteay Meanchey (rural roads), Battambang (rural roads and the Bavel irrigation system), and Siem Reap (rural roads, the Barai irrigation system, and the clearing and cleaning of the Angkor temples and surrounds), and in Takeo (road rehabilitation and maintenance) and Kandal (road rehabilitation and maintenance) provinces. But two important changes took place: ILO's main government counterpart, which had been the Ministry of Public Works and Transport, became the new Ministry of Rural Development (one of the counterparts to CARERE2), and the force account method of implementation ILO was using would gradually be switched to contracting.

The project (a sub-project under CARERE2) began in July 1996 and was to extend to December 1997, it was later continued into 1998 with 5 million SK (about US$622,000) additional funds from SIDA and with budget remnants carried forward from 1997, it was closed in January 1999.

B. Project documents

1. The problem and the technical approach

The first project was clearly meant to address the lack of employment opportunities for returning refugees, internally displaced people, and demobilised soldiers, all notably vulnerable groups and

basically unskilled labourers. In addition, the northwestern provinces, and the target areas within them, were severe poverty areas. In using labour-intensive methods to carry out infrastructure works, the project reached these groups and was highly effective in providing them with a basic income in exchange for productive work. The second ILO project continued to reach the same groups in the same areas despite being framed within CARERE, which clearly had different objectives and methods.

The need to rehabilitate essential infrastructure in Cambodia was, and still is unquestionable, not only in traditionally neglected rural areas but everywhere. Access to schools, health and other social services and facilities and especially to markets was, and still is difficult, time consuming, demanding on body and vehicles, and consequently expensive. At the time, relief activities and the work of development agencies was severely hampered, if not made impossible by the condition of the infrastructure. Security in the areas where the projects occurred was a threat because of the isolation created by the poor road infrastructure. Initially as a by-product, but later as a main objective, the projects addressed these shortcomings and in rehabilitating over 450 km of tertiary roads contributed not in an insignificant manner to lessen isolation for many people.

The choice of labour-based technology to carry out the works was not only supported by the need to create employment described above, but endorsed by the degree of development of the country and the level of wage rates. The first determines whether the country can afford the capital-intensive equipment and the second determines whether it is economic to use large numbers of labour. On

both scores Cambodia ws the right place for the technology. It ranked among the poorest in the world with wages around US$1 a day.

Given the appalling condition of the country's primary and secondary roads, which chiefly due to neglect and the effects of flooding and traffic have practically disappeared, it could be argued that improving a small number of tertiary roads to a relatively good standard is pointless. Perhaps so, but the two projects are redeemed by their large impact with a small budget. The argument is much stronger in connection with other multilateral, bilateral and NGOs programs that spend millions of dollars at the micro level and do not tackle the country's bigger picture either.

The third problem addressed by the projects was the lack of trained technical personnel, with knowledge and experience in organising and implementing labour-based works. The on-the-job training of over 100 engineers, technicians and supervisors in labour-based construction techniques was perhaps the only way of building up a core cadre of professionals that could either implement more projects of the same kind, help to train others in the use of the technique, or advance to become themselves independent small scale labour-based contractors.

Finally, the lack of awareness of the need for, and importance of maintenance was a serious problem. Under the first project a labour-based maintenance strategy document was produced as part of the overall capacity building effort of the project. The implementation of this strategy would have served as a model to be transferred to other provinces, but this was not to be the case as the strategy has not been implemented. Also, having translated to Khmer PIARC's International Road Maintenance Handbooks was a remarkable effort to support the building of road maintenance capacity that should be credited to the ILO.

2. **Objectives**

The immediate objective of the first project was to provide employment for up to 4,000 persons.

However, to rehabilitate and maintain essential infrastructure (roads and irrigation schemes), and to build up local capacity were also part of the purpose. The latter was to be accomplished through the establishment of a sustainable labour-based infrastructure construction and maintenance capacity, and through the development of a longer-term labour-based strategy for rural roads and irrigation works maintenance.

The second project was aimed at (i) funding (from July 1996 to December 1997) the cost of infrastructure rehabilitation works (roads and irrigation schemes), (ii) carry out the maintenance of the infrastructure that the first project had rehabilitated (roads and canals), (iii) providing technical assistance, (iv) undertaking a road inventory in the four provinces in which CARERE was operating, and (v) develop a maintenance strategy for each of the four provinces.

Both projects included labour-based clean up and rehabilitation works on the ponds and monuments at Angkor in Siem Reap province.

These objectives were all clearly identified and expected outputs were quantified in verifiable terms. Secondary project objectives included improving access to markets and other social services especially health and schools, improving water storage, and expanding irrigation coverage, all of which would contribute to the development of agriculture and, the creation of long-term employment opportunities.

3. Beneficiaries

Both projects were clearly aimed at benefiting returning refugees, internally displaced people especially female household-heads, and demobilised soldiers, all notably vulnerable groups and basically unskilled. In addition the first project also targeted women and physically disabled persons, and the second project female heads of households. While these targeting statements were made in the project documentation, it appears that the monitoring process has only reported the involvement of women in the projects[2]. Apparently there were only limited opportunities for the physically disabled, which is understandable due to the physical nature of the work.

The concerns of ILO that there would be no hiring but selection of labour by village or commune leaders, which may have resulted in coercion and/or forced labour (an event of sombre memory in Cambodia), led to the use of a lottery system for hiring. The adoption of the system promoted equal opportunity and prevented forced and/or child labour.

The target groups were reached actively, except the service personnel because they were not demobilised as expected when the projects were formulated. The impact of the projects on the targeted groups is well documented in the Terminal Report of each project.

4. Modalities of execution

The first project operated within LTNDP's Area Development Programme (ADP). ILO was the executing agencies for the labour-based project and UNDP established priorities and determined where ILO could carry out the road and irrigation works. Cambodian engineers, technicians and site supervisors who had received training in labour-based methods during the preparatory phase of the project, planned, organised and supervised the works. The project provided hand tools and simple equipment, as well as funds for materials (especially laterite) and for wages and salaries of non-government staff as well as slary supplements to government officers.

When the project was formulated in 1992, UNTAC with the Supreme National Council of Cambodia (SNC) were the temporary government. The project document was signed by SNC. The

project worked with counterparts nominated by SNC; however, technical counterparts have been taken from the Ministries as well as outside.

Before the UNTAC organised elections the project operated out of rented offices outside government buildings. After the elections the provincial project offices moved to the provincial Department of Public Works buildings. The project had four different government counterparts:

- the Ministry of Public Works and Transport. It is from this department that technical staff were drawn and trained for work on the project. However, the project has done little work on secondary roads most of the work done was on tertiary roads.

- as of 1995, when tertiary and rural roads were placed under the responsibility of the Ministry of Rural Development the project worked with MRD and developed the close links with it. However MRD was a new Ministry and lacked technical and administrative capacity.

- for irrigation works the project dealt with the Department of Hydrology of the Ministry of Agriculture. The project trained their staff to be technical counterparts.

[2] Though this seems to have been done for the specific purpose of not categorizing people in " groups" and thus creating differences that were to be avoided in the spirit of national reconcilation.

- for the Angkor works the counterpart was the Angkor Conservation Office of the Ministry of Fine Arts and Culture. Their staff were trained to be technical counterpart and then worked on the project from the Angkor Conservation Office. When the Autorité pour la Protection du Site et l' Aménagement de la Région d'Angkor (APSARA) was formed they became the project's counterpart. Most of the staff trained under the project was moved to AP SARA.

When ILO's first project (CMB/92/008) finished and its successor CMB/95/011 was placed under CARERE2, the United Nations Office for Project Services (UNOPS) became the executing agency and ILO the associate agency for purposes of executing the project. Thus ILO was placed under the direct supervision of UNOPS. Infrastructure rehabilitation and especially maintenance works on the roads and canals built in the first project then continued under the new arrangement in the four northwestern provinces: Pursat, Battambang, Banteay Meanchey, and Siem Reap, and in Takeo and Kandal provinces. Co-ordination with the RGC continued but the counterpart organization was changed from the Ministry of Public Works and transport to the Ministry of Rural Development under whose responsibility rural roads had been placed.

The newly formed International Co-ordinating Committee for the Safeguard and Development of the Historic Site of Angkor (APSARA) requested that the clearing and cleaning of the Angkor Park be continued under the second project until 1997 when it took over the work and continued with its own budget.

In addition, both projects had close collaboration with the World Food Programme (WFP) in selected WFP target areas. Cash wages were supplemented with food for work provided by the WFP. Also, the HALO Trust, the Mine Awareness Group (MAG), COFRAS and the Cambodian Mine Action Centre (CMAC) each of which worked in different provinces, provided mine clearing services and mine awareness and safety training.

Arrangements between UN agencies under the first project seem to have worked well as there was a

clear common objective. However, development of the second project revealed differences of opinion over what, and how things should be done (see project context, above) and as a result relations between ILO, UNDP and -UNCDF became less proactive. In addition, UNCDF's withdrawal from their commitment to participate in labour-based road construction and maintenance created a serious funding problem. Fortunately donor agencies, particularly SIDA, stepped in and helped to close the gap. Subsequent ILO activities, notably the Upstream Project, are being financed directly by SIDA without the intervention of other UN agencies.

III. **PROJECT IMPLEMENTATION**

A. **Activities**

Both projects followed the planned schedules as set in the project documents with minor deviations and delays, some of them connected to funding problems.

The second project was stretched out in the hope that it could be linked up with a UNCDF and a USAID funded project, but these did not materialise. The project was then continued using bridging finance from the SIDA financed Upstream Project.

The basic strategy applied was the implementation of a range of construction and maintenance activities to generate employment by means of labour based methods, and to ensure sustainability

through ongoing maintenance and capacity building of counterpart government departments. The second project focussed particularly on maintenance and had only limited additional construction.

Initially the road projects were implemented through the MPW&T. In 1995 the responsibility for rural infrastructure was transferred to the newly created MRD and continued implementation of the project was with MRD. While the MPW&T had a large staff of engineers, technicians and supervisory staff, the MRD was established with very few resources and continues to have a shortage of skilled personnel.

Turnover of counterpart staff, engineers and technicians, was consequently high, as participation in the projects became a training assignment for them. Counterpart staff was frequently redeployed by MRD to areas that did not necessarily match the projects'. This turnover though not planned had a positive impact in that it created a pool of young engineers and technicians trained in labour-based appropriate technologies, all of whom were able to find work in the public or the private sector.

B. **Quality of monitoring and backstopping**

Detailed workplans of all operations were prepared for the duration of the projects and updated against physical achievements on a monthly basis. ILO's Management and Monitoring Aid system was used to update the project status on a monthly basis, and there is full documentation of all project activities.

However, complementary support from other UN agencies, particularly during the execution of the second project was less proactive. While political and technical support for the projects from counterpart ministries and provincial departments as well as APSARA was unquestionable, UN agencies related to the second project (UNDP and UNCDF) became little involved in its technical

implementation.

Senior officials interviewed by the mission were unanimous in their appreciation of ILO's effort and commitment, and subscribed strongly to the objectives of the projects. The government made available counterpart personnel through the appropriate ministries, and although budget constraints meant that no financial support was given to the projects, every effort was made (especially through donors) to ensure that funding continued to flow for the labour-based works. The recent signing of a US$30 million loan from the ADB for labour-intensive rural infrastructure is telling evidence of the government's commitment to labour-based methods of improving and maintaining rural infrastructure.

IV. PROJECT RESULTS

A. Relevance

Generating employment and developing rural infrastructure were at the time, and, in the words of the Secretary of State for Rural Development, still are today, first priorities of the government. As a result of the mission's field visits and interviews with officials and local residents, we are convinced that the Secretary is right.

In comparatively empoverished rural Cambodia the development of road and irrigation infrastructure, and its subsequent maintenance, is critical to improving people's standard of living. The use of labour-based techniques has proven to be an effective means of achieving both high

„ality rural infrastructure and income generation. The development of local capacity to
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implement labour-based works, both within the government and in the private sector, are a fitting

means to achieve those goals.

Technical assistance in management and implementation not only of labour-based, but any kind of project, is and will be for some time required in Cambodia. Similarly, as expressed unanimously by all high ranking officials the mission met, technical assistance is still required at the central level, in particular by the Ministry of Rural Development. The government's capacity

to co-ordinate and monitor investments, needs

support **B. Efficiency**

Both projects were well managed and executed as evidenced by the generally timely achievement of yearly outputs under trying conditions. The second project in particular experienced great difficulties in achieving its physical outputs because of the inadequate and unstable flow of funds caused by the institutional arrangements described above and CDF's withdrawal from financing rural roads. Interventions in infrastructure programs require a timely cash flow to adapt to climate and local circumstances, especially farming activities, which determine the availability of local labour.

Because of the shortfalls, training of small-scale local contractors was made very difficult. As

opposed to machines, labour will not work if not paid on time and small contractors do not have the financial capacity to sustain the expense of salaries without timely contract payments. In 1997 and also in 1998 several stretches of road were left unsurfaced for long periods, exposing them to rain, floods and traffic, because of the untimeliness of funds. In 1998 training of PDRD staff on routine maintenance activities could not be done because the budget was insufficient.

C. Outputs

Physical outputs of the first project were:

- over 2,100,000 workdays of direct employment;
- training of 180 engineers, technicians and supervisors in labour based construction techniques;
- construction/rehabilitation of 585 km of rural roads;
- periodic maintenance of 3 84 km of rural roads;
- maintenance of 585 km of rural roads;
- rehabilitation and maintenance of 96 km of secondary canals in Barai and Bovel systems;
- establishment of Water User Groups in the two irrigation systems;
- establishment of a maintenance programming system;
- the clearing and cleaning of the temples and environs of the Angkor monuments and the development of an annual workplan for this work;
- the preparation of a curricula on labour-based techniques to be included in the training of engineers at the Institute of Technology of Cambodia.

The following table shows the physical outputs of the first project:

Activity	1992-3	1994	1995
Roads			
Rehabilitation/Construction	167 km	65 km	95 km
Upgrade of roads constructed by others*		152 km	106 km
Periodic Maintenance		*384 km	
Routine Maintenance			*585 km
Canals			
Rehabilitation/Construction	51 km	13 km	
Maintenance		72 km	86 km
Upgrade/Repair		8 km	14 km
Angkor			
Angkor clearing and cleaning	V'	V	V

* Upgrade of roads constructed by CAREREI/USAID/CONCERN/DCC and others, required about one half the work of a normal ILO rehabilitation to bring them up to standard.

Physical outputs of the second project were:

- over one million workdays of direct employment;
- training of 100 engineers, technicians and supervisors;

•a system to maintain 500 km of rural roads, including;
  - the routine maintenance of 511 km of rural roads
  - the periodic maintenance of 147 km of rural roads
  - the emergency repair of 51 km of rural roads
- rehabilitation of 104 km of rural roads
- maintenance of over 100 km of primary and secondary canals in Barai and Bavel including:
  - the daily routine maintenance of 103 km of primary and secondary canals
  - the rehabilitation of 27 km of secondary canals
  - the upgrading and repair of 16 km of secondary canals
- clearing and cleaning of the temples and environs of the Angkor monuments;
- the development of a rural road maintenance strategy;

The following table shows the physical outputs of the project.

Activity	1996	1997	1998
Roads			
Rehabilitation/Construction	77 km	17 km	10 km
Periodic Maintenance		100 km	47 km
Routine Maintenance	537 km	472 km	511 km
Emergency Repair	16 km	35 km	
Canals			
Rehabilitation/ Construction	23 km	4 km	
Routine Maintenance	96 km	96 km	104 km
Upgrade/ Repair		13 km	3 km
Angkor			
Angkor Cleaning and Clearing	./	V'	r

All outputs were according to the predefined standards and of high quality, and were produced substantially according to schedule, which is commendable given the budget and physical constraints, including security restrictions under which the projects operated.

Another output of the projects was the preparation of training materials and handbooks for engineers, technicians, supervisors and gangleaders of labour-based roads and irrigation works in Khmer. The handbooks have been broadly distributed to government departments and agencies, and have been keenly sought by donors and development banks.

D. Quality of

Outputs

Geometric design

The Transport Rehabilitation Study proposed geometric design specifications for Cambodia. These have been reviewed and found appropriate to the circumstances and have been generally followed in the execution of the projects.

Specifications

The provision of an all-weather road requires a pavement structure that is sufficiently elevated above flood levels to prevent wash-aways and soaking of upper layers, is sufficiently strong to resist traffic loads, and has an adequate camber and drainage to shed rainwater. The width of the carriageway should be governed by traffic considerations. The above factors are incorporated into standard specifications for road design in most countries. Although Cambodia does not, as yet, have an officially recognised specification for rural roads, the projects used recent Cambodian and international experience as a guide. This led to the subsequent introduction (through ADB's RIIP project) of a technical specification manual, which can now be adopted by MRD and MPW&T as a rural road specification.

Wearing course

The gravel loss experienced on the roads constructed and maintained under the projects has been the most conspicuous cause of defects such as potholes. The number of years over which accumulated gravel loss depletes the average thickness of the wearing course to the minimum acceptable thickness is the regravelling frequency. In Cambodia, because of the quality of the laterite surfacing, regravelling frequencies of three to four years are typical. For comparable roads in countries where more suitable gravels are available, regravelling would be done every six to ten years. In the four provinces in which roads were constructed more suitable gravels are not available. The laterite sources are also limited in size and location, making the material expensive.

The lack of more suitable wearing course materials than the latentes currently in use means that the adoption of international wearing course specifications would not be appropriate. International specifications would tend to reject Cambodian latentes because they result in too rapid gravel loss. Consideration will have to be given to the cost-effectiveness of the laterite surfaced roads and alternative engineering approaches should be compared through economic analysis, laboratory and field trials. Particular attention should be given to determining the location, availability and properties of laterites and alternative materials in Cambodia.

Construction quality

The mission visited a labour-based road construction site where work was in progress (under the Upstream Project financed by SIDA). Drainage ditch excavation, trimming and wearing course compaction tasks were being done. It was evident that setting out of the work had been well done, that the tasks had been demarcated, and that good levels of workmanship were being achieved.

Site visits to several roads in Pursat, Battambang and Banteay Meanchey were undertaken, including roads on which maintenance had been discontinued (because of lack of project financing), and roads that had not received periodic maintenance (regravelling) in three or more years. The mission noticed that the high construction standards achieved under the projects had allowed the roads to continue to perform well, except in cases where periodic maintenance was long overdue. The good performance can be ascribed to adequate compaction of the embankments and gravel wearing course, and to the adequate camber provided during construction.

E. Immediate Objectives

The first project's immediate objectives were:

- to design and implement an effective labour-based infrastructure rehabilitation

programme providing employment for up to 4,000 persons, particularly aimed at socially and economically disadvantaged groups, and

- to develop strategies for longer term sustainability of rural roads and irrigation projects and the site of Angkor using labour-based technology.

The immediate objectives of the second project were:

- to provide the capital costs from July 1996 to December 1997 for the labour-based infrastructure rehabilitation work in the four north west provinces in which UNDP/CARERE was operating, and the provision of technical assistance;
- to carry out maintenance on the roads and canals rehabilitated under the first project;
- to undertake a road inventory in the four provinces; and,
- to develop an infrastructure maintenance strategy for each of the four provinces that relied on the use of local resources.

These immediate objectives were achieved in a timely manner except for the 1996 workplan which was completed in early 1997, and some road surfacing which was also delayed due to exceptionally high rainfall and severe local flooding. Each project's outputs are described in detail in the respective Terminal Reports.

The development objectives of the two projects were: (i) the short- and long-term creation of employment opportunities particularly for highly vulnerable groups (female heads of households, internally displaced people, returning refugees, demobilised service men), and (ii) the short- and long-term economic development of Cambodia through the construction and rehabilitation of essential infrastructure (roads and canals) and the establishment of a sustainable maintenance capacity. The latter was to be done by means of labour-based methods that reinforced the

F.

Development Objectives

achievement of the first objective. Anticipated secondary effects included improving access to markets and social services, improving water storage and expanding irrigation coverage, all of which would contribute to the development of agriculture and multiply the longer-term employment generation effect of the projects.

The socio-economic impact study (Sakko, 1999) clearly demonstrates that these objectives have been amply achieved.

G. Effectiveness

Costs of the two projects in US Dollars were as follows:

Item	Total	Donors				
		UNDP	UNHCR	NL	SIDA	WFP
Administrative costs						
ILO (CMB/92/008)	1,020,762	371,278	58,361	591,123		
ILO (CMB/95/011)	366,715			137,205	229,510	
UNDP (CMB/92/008)	197,370			197,370		
UNDP (CMB/95/01 1)	33,893			8,392	25,501	
UNOPS (CMB/95/01 1)	33,893			8,392	25,501	
Intntnl personnel & UNVs	3,402,331	2,201,868		832,446	368,017	
Administrative Support	1,227,783	284,006		695,446	248,331	

Field (counterpart) allowances	516,657	-145,528	15,000	504,450	142,735	
Duty travel	366,461	76,530	1,000	228,213	60,718	
Mission costs	29,980			29,980		
NPPP	8,019			8,019		
Sub-Total	7,203,864					
Labour wages"	3,747,834	447,141	340,279	1,581,229	418,672	960,513°
Constr & maintce contracts	1,763,856	324,261		884,961	554,634	
Other contracts	309,528	66,968	44,324	177,788	20,448	
Training	245,614	45,095		136,148	64,371	
Eqpmt prcmt & office rental	4,297,988	895,348	234,000	2,611,211	557,429	
Miscellaneous	575,009	82,048	7,036	371,177	114,748	
Sub-Total	10,939,829					
Total[s]	18,143,693	4,649,015	700,000	9,003,550	2,830,615	960,513

a/ Includes cash value equivalent of food-for-work contribution to the project b/ WFP food-for-work contribution to the project converted to cash value

Roughly, 40% of total costs for the two projects went to overheads, and 60% (about US$ 10.9 million) into construction, rehabilitation and maintenance of the roads, canals and the Angkor temples (including small equipment and handtools purchases), and training and miscellaneous expenses related to the works and training. Of this total about 40% went into purchasing handtools and equipment and renting offices, 34% went into wages and salaries, 24% to procuring and hauling construction materials and 2% into training. This distribution of expenditures is in line with similar projects elsewhere.

H. Capacity building

On completion of the first project 51 local staff and 180 technical counterparts had been trained. Those trained came from a variety of political factional backgrounds. Workers were also given a one day training sessions labour-based work techniques and on ILO standards of employment.

Under the second project new counterpart engineers were given basic courses on labour-based work methods, and engineers, technicians and supervisors already trained earlier were given refresher courses. Senior counterpart engineers went on international courses, through fellowships arranged by the project. Training in language, management, business organisation, accounting, and computer skills for counterparts and local project staff who were interested, was provided by local institutions and paid for by the project.

Many organisations, including CARE, USAID, NPA, ADB, World Bank, CARERE itself, and private firms have recruited engineers and supervisors trained under the projects. The project encouraged this turnover as a means of developing human resources.

I. Impact

The evaluation mission did not undertake an independent assessment of socio-economic development resulting from the road improvements, time did not allow for that. Instead, the mission relied on the results of a socio-economic impact study (Sakko, 1999) which surveyed various socio-economic indicators by sampling users of four roads rehabilitated under the second project, and comparing them with those obtained from four non-rehabilitated roads. Roads with similar

characteristics were selected. The differences noted are between the two samples in the study and not the before-and-after situation on individual roads.

Trade

The amount of goods transported per vehicle was 24 per cent higher on rehabilitated roads. However, the increase in trade can not be clearly determined from the results of the survey.

The number of market stands at local market places was higher, and price of goods lower on the rehabilitated roads, but it is difficult to determine the degree to which the rehabilitation influenced these factors. The number of household enterprises was higher on rehabilitated roads than non-rehabilitated roads, however, the author of the survey cautions that household enterprises are small and vulnerable and may not be sustainable sources of income.

Fares and transport costs

There was little evidence of lower passenger fares on rehabilitated roads, rather it appeared that fares were higher and that passenger transport had become a more profitable business for operators. This may relate to both the ability and willingness of transport users to pay realistic fares.

The cost of transporting goods was 38 per cent lower on average on rehabilitated roads. Reasons for the reduction in cost included: savings on operation and maintenance costs; "the good road"; transporting higher loads; and better security.

Vehicle operating costs

The survey was not structured to determine all components of vehicle operating costs but only direct operating and maintenance costs, particularly for motorcycles. Considering that 85 per cent of respondents on rehabilitated roads had doubled their number of trips, and that operation and maintenance costs of motorcycles were 30 per cent lower on rehabilitated roads, vehicle operating cost savings may be assumed to be substantial. If depreciation and interest costs are included over the extended life of vehicles this saving may be even greater. Models that predict

vehicle operating costs as a function of road condition may not be appropriate to compare unrehabilitated roads to rehabilitated roads as factors such as seasonal impassability would not be included and unrehabilitated road profiles may be beyond the limits of these models.

Reduced travel time

Travel times were 44 per cent lower on average on rehabilitated roads. Travel time from village to market was 37 per cent lower and travel time from village to health services was 44 per cent lower.

Negative Impact

Users of all rehabilitated roads reported the negative effect of dust from the laterite-surfaced roads, in their view this increased health problems. Other negative impacts reported included the obstruction of water drainage created by the roads, the easing of logging activities, changes in the traditional culture, and the hazards of higher traffic volumes.

J. Environmental Impact

The use of labour-based methods of construction and maintenance proved to limit degradation of the immediate surroundings of the roads rehabilitated, in contrast to the disturbance that would normally occur with the movement of large earthmoving equipment. As a result of the slower daily production rate of a group of roadworkers worksites were kept compact, which differs sharply from machine-based construction sites where daily works may reach 2 kilometres or more.
Project works are clearly, at this point, not sustainable without outside help, as there is no proper financing. The government is not in a position to provide for the continuation of the type of activities the two projects carried out, especially the maintenance; and would have a difficult time, despite the training and capacity building achieved under the projects, to technically sustain the works. Thus, continued financial help should be considered and further training and technical support should be provided.

The emergence of serious attempts to address the sustainability of infrastructure, including the many kilometres of rural roads built under many different projects done by the UN, the banks and NGOs, must be noted. A rudimentary inventory of rural roads has been prepared, and the ILO is carrying out a more detailed inventory that can serve as a model. Also, the MRD has applied for a share of the national budget for infrastructure maintenance and has made applications to the PIP to maintain 300 kilometres of rural roads. While there are different levels of enthusiasm toward the ability of PDRDs to fund and undertake the maintenance of rural roads, there is an appreciation of the need to sustain investments and work with MRD to resolve the issuse. The inclusion of three years of routine maintenance in ADB's RIM project is significant. Given the gap between maintenance needs of the expanding inventory and the government's ability to budget for maintenance, donor-funded maintenance is likely to be required for some time. The high return of maintenance projects compared to construction projects would tend to support making maintenance a high priority for assistance.

K.

Sustainability

L. Follow-up

The projects have had no UN follow-up activity as UNDP/UNCDF have concentrated their efforts on CARERE2, within which the labour-based appropriate technology method of improving infrastructure does not seem to have found a place. In contrast, the ILO approach has attracted donors independently, SIDA in particular that is funding a continuation of ILO's effort through the Upstream Project.

Yet, the UNDP/CDF CARERE2/SEILA approach and ILO's approach have synergies that have not been exploited. The selection and execution of projects eligible to be financed under CDF's Local Development Fund is clearly an area of disagreement. ILO's chief concern is the promotion of approaches that maximise employment opportunities. The approach adopted by CDF on the other hand, in trying to avoid financing make-work projects that create employment but are not necessarily of high priority does not pay for unskilled labour, and, as a result, machine-based contracts are frequently used. These issues may need to be addressed in such a way that approaches and principles affected by them are accommodated properly.

V. **ASSESSMENT**

The mission has assessed the projects based on UNDP's three assessment criteria and strictly followed their rating formula.

Relevance

	Yes/High	Partial	No/Low
Purpose	affordable, use of comparative advantages of ILO/UNDP and responding to relevant needs from the perspective of the beneficiaries		
Approach	Suitable, aimed to strengthen capacity building and consistent with other initiatives		
Modality of execution		between high and low	
Recipient institution	good selection of the recipient institution and identification of its strengths and weaknesses		

Based on the above criteria the mission rates the projects highly relevant although the modality of execution, especially of the second project, could have been improved by better exploiting the natural synergies between ILO's labour-based appropriate technology approach and the aims and objectives of the CARERE program under which it was carried out.

Performance

	High	Partial	Low

Efficiency	Personnel	Appropriate-ness	Skilled, arrived on time and able to transfer skills
		Use	Efficient experts used to build capacity
		Composition	Good mix
	Train íng		High quality, full use of the trainees and very low turnover
	Equipment		Appropriate, delivered on time and well maintained
	Management		between high and low
	Government contribution		Open to policy dialogue, on time for delivery of inputs and adequate allocation of human resources
Outputs			Achieved
Immediate Objectives			Achieved

The above rating criteria reveal that the projects performed well except, as explained earlier in this report, for the backstopping provided to the second project by other UN agencies that participated in their execution.

Success

	Successful Partially successful Failure

Effectiveness		High
Capacity building	Context	Enabling environment
	Inst.devp .	Very good/good
	HRD	Very good/good
	Target Groups	Positive and significant impact
	Direct Beneficries	Positive and significant impact
Sustainability	Environ-ment	Positive or no impact
	Institution	Positive and significant impact
	Governme nt commit-ment	Positive and Significant
	Socio-econ factors	Positive and Significant
	Manage-ment	Efficient effective
	Finance	Fully subsidised
	Technolo-gy	Suitable, used and developed

The ratings show that the projects were highly successful except in as much as their future sustainability is not guaranteed by the current financing arrangements. As it is at the moment, the government has no funds for maintenance, and while the Water User Groups are contributing by paying a minimal fee for the water they use, road users are not contributing at all.

VI. FINDINGS AND RECOMMENDATIONS

A. Findings

The mission finds that in addition to producing quality rural infrastructure, the labour-based approach is an effective and efficient method of achieving two high priority goals in Cambodia, namely (i) employment generation and (ii) the rehabilitation and maintenance of needed roads and canals. Effective because it can operatively reach these objectives, and efficient because, under current circumstances in Cambodia, it can do so economically.

Inspite of the above, the mission finds that conditions that would need to be met for the labour-based appropriate technology methods to operate are not always present. For instance, the view exists among some donors and lending institutions that labour-based projects (roads in particular) although supported by local communities and villages, are just make-work projects aimed at earning an income and not a reflection of need. As a result, those donors and lending institutions have decided to curtail payments to unskilled labour. This, of course, negates one of the important purposes of carrying out labour-intensive infrastructure works, which is to create employment and transfer income to local people and thus help them to join the market economy. The mission finds that in as much as these views and procedures continue and, if, as is proposed, are extended nation-wide, it will become quite difficult to put together and carry out labour-based projects financed by those agencies.

The mission finds that commitment to decentralisation and to grass-roots participatory planning should not prevent, as seems to have occurred in the past, the full development and exploitation of synergies between labour-based methods of project execution and effective local planning and development

The mission fmds that despite the governments strong and emphatic statements endorsing labour-based methods of carrying out rural infrastructure works as an appropriate response to Cambodian conditions, it still has a key role to play in clarifying for donors and lending agencies its policies, desires and seriousness vis-à-vis labour -based work methods.

Another *sine-qua-non* condition that must be present and that the mission found lacking is appropriate financing. This is particularly critical for labour-based operations as small labour-based contractors do not have the financial capacity to sustain operations without timely payments

Despite the effort and success of the projects in training labour-based small-scale contractors for rural works (an effort that is now continuing under the Upstream Project financed by SIDA) not much use is being made of contracting. Under the projects most contracts were for the procurement and hauling of laterite and structural works (bridges, culverts, drifts) as the roadwork were done by force account.

B. Recommendations

The mission recommends that, as much as possible, the government use labour-based appropriate technology methods of developing the rural infrastructure, hopefully introducing a more extensive use of competitive contracting. To this effect we recommend that appropriate tender and bidding documents, as well as contracts be developed.

In this context, the government should also intensify its efforts to create an enabling environment in which donors and international lending agencies can take full advantage of the labour-based appropriate technology approach and methods.

In our view, the labour-based technology has an important role to play and therefore a way should be found to accommodated local aspirations embedded in labour-intensive projects in the participatory planning process. To this effect, it would seem appropriate to make sure that the choice of technology to be used to implement projects, is fully and accurately appraise as part of the decision-making process that leads to the selection of projects to be financed.

Since future sustainability of the assets and benefits generated by the projects hinges principally on the ability to secure funding for maintenance we recommend to develop for roads similar procedures as are being used for irrigation, which directly link use to pay. The possibility should be explored of contracting maintenance and funding it from fees collected directly by the contractor (the competitive tendering process would include the proposed toll as a decisionmaking criteria). Meanwhile, interesting and practical ideas are proposed in ITTransport's Rural Road Maintenance Consultancy for the ADB project.

Closure of the second project has meant that necessary maintenance on the roads built in the first project was suspended. We recommend that renewed efforts be made to resume the maintenance. Donors and lending agencies should help the government fund this activity while self-financing means of carrying out the work are found.
A:\CMBrpt.doc 12 August, 1999

In 1994, the project began to collaborate closely with WFP in providing employment opportunities to those affected by emergency situations. Using food as a component of the labour payment, the project assisted many war displaced people, as well as people who could not establish a crop in their fields because of mines and other problems. WFP had, by late 1998, contributed partial labour wages to more than two million workdays of employment.

In 1995, the Royal Government of Cambodia (RGC) established the Ministry of Rural Development, which was given the responsibility for the development of rural roads. The project has established close links to this Ministry. The MRD has developed its own program of labour-based works for the improvement of rural infrastructure in six provinces in the south-east of Cambodia, based on the experiences of the ILO project. The ILO CMB/95/011 project played a key role in preparing the MRD technical staff for this US$ 31M Asian Development Bank supported rural infrastructure project.

In 1996, UNDP incorporated the CMB/92/008 project into the multi-sector UNOPS/CARERE development project. Since then the ILO project has focused increasingly on the vital issues of maintenance and the sustainability of the investment in rural infrastructure. In 1997 the ILO project began the development of a maintenance strategy for the maintenance of the rural road network within the project, and for future application on a national scale. Counterpart technical staff have been trained in inventory methods, traffic count systems and GIS mapping. In 1998 the project introduced testing apparatus and systems for quality control of road surfacing materials, embankment compaction and concrete structures, for use in labour-based contracting.

The project worked in close co-operation with other UN organisations and international donors and NGOs in providing expert technical advice, training and assistance to their rural infrastructure programs.

Due to the Cambodian political problems in 1997, donor funds became increasingly scarce for Cambodia. The project stretched out what resources it had through 1998, but had exhausted its funds and closed at the end of January 1999.

The project leaves behind an important and successful legacy. It convinced the Royal Government of Cambodia that Labour-based Appropriate Technology (LBAT) and the employment that this method causes to be generated is a viable and desirable approach to both poverty alleviation and rural infrastructure development. In turn the Government has adopted LBAT as a key component of

their national strategy to address these two important problems. The project has put the importance of rural infrastructure maintenance into the forefront. Through its practices in the field, the project has introduced many of the relevant important International Labour Standards to Cambodians. The training and capacity building for Cambodians to increase their abilities to develop rural infrastructure to high technical standards at cost effective rates will impact for a long time to come. The infrastructure developed by the project has had an important socio-economic impact in the areas of influence. Finally, through the project rural people found more than 3M workdays of employment at a time when they most desperately needed a job.

Summary

Labour Based is an important component of the RGCs strategy to develop Cambodia. At the opening of the National Assembly for the formation of the new Government in December 1998, in outlining the new Government's strategy and priorities, H.E. Prime Minister Hun Sen referred to LBAT a number of times including "...the Royal Government of Cambodia will pay attention mainly to the utilisation of intensive labour technology, especially the organisation and construction of infrastructure in the rural areas. Through this, we can use the types of resources

and local technology, create jobs, and promote rural handicrafts. In case of implementing projects, there should be a link between the utilisation of the capability of government officials, workers and local enterprises".

CMB/92/008- Labour-Based Infrastructure Rehabilitation

UNDP budget:	$ 4,660,803
Cost Sharing from Govt. of The Netherlands:	$ 7,367,484
UNHCR	S 700.000
SUBTOTAL:	$12,728,287

Duration: Starting date: May 1992. Current completion date: February 1999.

CMB/92/006 - CAREREI

Govt. of the Netherlands $ 746,884

Duration: Starting Date: July 1996. Current completion date: February 1999.

Govt. of Sweden: $2,830,614

Duration: Starting date: July 1996. Current completion date: February 1999.

CMB/92/AI 115F- Netherlands Trust Fund.

Govt. of the Netherlands: $ 931,581

Duration: Starting date: October 1997. Current completion date: February 1999.

GRAND TOTAL: $17,237,

366 III. SCOPE OF MISSION

The mission will undertake a full in-depth evaluation, reviewing all aspects of the ILO LB project from July 1996 until February 1999. As the ILO LB project is a component of the CARERE2 project the existing linkages between them *will* also be evaluated.

In doing so, the mission is requested *inter alia* to address the following:

Program concept, design and strategy:

The mission will assess whether the Inter Agency Letter of Agreement between the UNOPS and the ILO as signed is clear and explicit regarding the issues the ILO project was meant to address.

The mission will address the following when assessing the program:

1. What are the linkages between the **ILO LB** with other relief and development programs (Government and non-Government) in Cambodia, including **CARERE, WFP, UNESCO,** USAID/CARE, **ADB, WB,** Sida, Deminers, etc.? How adequate/relevant/effective were these linkages?

2. Given the level of capacity and resource constraints at the national level, to what extent has the program achieved the desired impact with national institutions? Can further " Cambodianisation"/ internalisation of the programme be achieved? What steps are necessary to achieve this?

Other issues to be covered will include: were the project's interventions based on broad, longterm objectives? Is the mix between official and traditional institutions appropriate? What steps have been taken to modify them if necessary **to** ensure that vulnerable groups are taken into account? To what extend have women effectively benefited from the program activities?

Project concept, design and strategy:

The mission will address the following issues:

1. Project strategy and design:

- Was the issue the project was designed to address clear ?
- Does the approach used by the project sound?
- Consider whether the strategy **of** upgrading a small set of secondary and tertiary roads **to** a relatively high standard, and then maintaining **those** roads at that standard from donor funds, is really the most cost-effective way of spending the funds available for road maintenance.

2. Project Objectives And Outputs

- Were the objectives and outputs of stated clearly, precisely and in verifiable terms? Were the objectives achievable, was the relationship between the objectives, outputs, activities and inputs clear, logical and proportionate, given the time and résources available? Were the inputs, activities, and project management timely and what was the quality of these? Did the project produce its outputs effectively and efficiently? What is the quality of these outputs? Has the project achieved its objective?

3. Standards And Cost Effectiveness

- What is the evidence for economic and social development resulting from road improvements? What standard of road is actually needed to achieve these effects?;
- comparison of the costs of LBAT road construction, and of maintenance, task by task, with machine methods, based on actual prices quoted by private sector contractors for similar work.
- Was the assistance cost effective? comparison of the supervision and technical assistance costs associated with LBAT compared with machine based methods, and with informal labour-intensive methods as are used on WFP food-for-work programme roads;

4. Maintenance:

- What are the maintenance systems in place?
- Are these systems sustainable?

- Is there a potential capacity for the costs of road maintenance to be met from local (i.e. non-donor) sources? Is donor funding of rural road maintenance encouraging the development of a local or national commitment to take over these costs in the long term ?

5. Beneficiaries

- Were the beneficiaries of the project clearly identified? What is the involvement of the beneficiaries in project activities? Are women benefiting from project activities to the extend expected in project design ?
- The effect of the project on target groups and institutions. Are there any unintended effects? analysis of the social benefits derived from use of LBAT methodology. Can these benefits be achieved in other ways?

6. Effects and lessons learned:

- What are the implications/relevance of project activities in Cambodia?
- Was the project design sustainable ?
- How is it possible to get adequate Government funding for rural roads ?
- Has a technical capacity of National and Provincial agencies to plan and implement these activities been established/developed during project implementation to date?
- How does the approach/impact of the project compare to similar projects in the country?
- Lessons learned from the

project. **Recommendations:**

In answering the above, it is expected that the mission will formulate recommendations on the means to improve the effectiveness of the activities of future projects. Depending on its findings, the mission will also formulate recommendations on whether the new interventions in the sector should be promoted and the scope of any future interventions. The mission will make recommendations, where necessary, on changes to the project design, means to improve the future project effectiveness, and collaboration in the sector.

The mission will also formulate recommendations on what should be the support of UN agencies or management support agencies in supporting the Royal Government Strategy for rural employment generation and infrastructure sectors at the local level.

IV. OUTPUTS OF THE MISSION

The main output of the mission will be TWO Reports, including an executive summary of findings and recommendations. The first report constitutes the terminal evaluation as such (according to UNDP guidelines) and cover the project synthesis as well as its relation with other similar development initiatives. The second report should be forward looking and cover the internalization of the program into government structures[3].

[3] See UNDP GUIDELINE FOR EVALUATORS - INCLUDING THE PROJECT EVALUATION INFORMATION SHEET - AUGUST 1993 -" Terminal evaluations focus on project results, effectiveness and performance. They should provide an assessment of the likely impact and sustainability of project results. Capacity-building efforts should also be assessed. These evaluations should provide a judgement on the impact of the project on sustainable development and on capacity-building in the following areas: poverty alleviation, environment, women in development and transfer of technology. Terminal evaluations

The mission will produce a draft report prior to leaving Cambodia, and will present the findings of this report with the Government, UNDP Phnom Penh, CARERE2, and the ILO prior to leaving Cambodia. The final report of the mission will be submitted to UNDP no later than five days after completion of the mission.

V. **METHODOLOGY**

The mission will perform the majority of its work in the field and report to the UNDP Resident Representative in Phnom Penh. In performing its task, it will consult closely with ILO personnel, counterpart staff assigned to the project, the concerned agencies of the Government including local authorities in the relevant province, personnel of related UNDP projects, multi/bi donors based in Cambodia, and in particular the beneficiaries of the project themselves.

The mission will have access to all relevant documentation including reports of missions undertaken in the identification and formulation of the project, as well as all project documents, project reports, and assessments. All files on the project and related projects will be made available to the mission upon request.

Although the mission is free to discuss with the authorities concerned anything relevant to its assignment, it will not be authorized to make any commitments on behalf of the UNDP or the ILO.

VI. COMPOSITION OF THE MISSION

The mission will consist of two consultants ***without*** any prior involvement in the formulation, implementation or monitoring of the Project. More specifically, the mission will consist of the following:

1. **UNDP Team Leader** with relevant experience in infrastructure development and employment generation in LDCs, ag well as experience and knowledge of UNDP activities and procedures;

2. **ILO Consultant** who is a Civil Engineer with hands-on experience in labour based infrastructure (roads and irrigation structures) construction (to be provided by ILO);

3. **A Representative of the Government**

4. An Interpreter recruited locally with a proven ability to translate effectively and accurately between Khmer and the primary common language of the other team members.

VII. DURATION OF THE MISSION

are also expected to make recommendations for future action, particularly to consolidate the sustainability, identify the conditions for a successful replication and draw generic lessons. Terminal evaluations should try to identify the groups that are benefitting or losing as a result of the project implementation."

The mission will last a total of fifteen days, including a minimum of ten days in Cambodia. A first draft should be available prior to the departure of the mission from the country. Mission members will be accorded one full day to review background documentation prior to official commencement of the mission. Documents will be sent to them in advance by ILO Bangkok. The mission will spend one day in Bangkok briefing with the ILO Regional and Area Offices, prior to proceeding to Phnom Penh. Briefing and debriefing will be provided by the UNDP Field Office in Phnom Penh.

The mission will be fielded in Cambodia from Tuesday 20 to Friday 30 July 1999.

VIII. BACKGROUND DOCUMENTATION

The following documents will be made available to the Mission by the ILO Phnom Penh. Other documents may be obtained upon request:

1.) UNDP/ILO CMB/92/008

- Labour-Based Infrastructure Rehabilitation Project Termination Report, June 1996.
- Evaluation Mission Report, May 1994.

2.) UNDP/UNOPS CARERE2 CMB/95/011

- CARERE Project Document, CMB/95/011.
- 1997 CARERE2 Project Performance Evaluation Report.
- 1998 CARERE2 Project Performance Evaluation Report.

3.) UNDP/UNOPS/ILO CARERE2 CMB/95/011 Labour-Based Infrastructure Rehabilitation and Maintenance Project.

- Inception Report, August 1996.
- UNOPS-ILO Inter Agency Letter of Agreement, Description of Services. July 1996.
- 1996 Annual Report.
- 1997 Annual Report.
- 1998 Annual Report.

• Termination Report.
• Report on the Provincial Maintenance Strategy for Rural Roads. Dec. 1997.
• Report on the 5 Year Maintenance Plan for Rural Roads. April 1998.
• ITC Development Course Curricula.

4.) ILO CMB/97/M02/SID
• Project Document. June 1997.
• Inception Report. August 1998.

5.) ILO.
• An Independent Thematic Evaluation: ILO's Employment Intensive Programme. February 1998.
• Socio-economic study of the Impact of the Labour-based Rural Infrastructure Project in Siem Reap. Jan. 1998.

6.) SIDA
• Appraisal of the Project Labour-Based Infrastructure Rehabilitation and Maintenance Project. May 1997.
• Follow-up of the ILO/Roads, Cambodia. CMB/95/011 Labour-Based Infrastructure Rehabilitation and Maintenance Project.
• Developing Rural Cambodia.

7.) ADB
• Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance to the Kingdom of Cambodia. September 1995.
• Rural Road Maintenance Consultancy. June 1998.
• Inception Report for the MRD/ADB REP.