

# **Mainstreaming Poverty Alleviation Strategies through Sustainable Rural Infrastructure Development**

## PART I INTRODUCTION

### Background

Our economy plunged into a deep recession after the Asian crisis in 1997, seriously affecting the economic and social conditions in our country. Three decades of economic and social progress were wiped out in a relatively short period of time. We are still in the process of recovery from this financial crisis. In addition, we now have to face a downturn in the global economy as well.

Indonesia was praised for its miraculous economic growth rates during the pre-crisis period. This economic growth however, was not evenly distributed, and did not result in a full integration of the poorer members of society. Before the crisis, massive differentials still existed between the richer and poorer members of society not only in direct income terms, but also in their access to education, health-care, drinking water, transport, markets and many other basic goods and services.

The crisis drastically changed the pattern of income and expenditure for many households in our country. Table 1 shows that on the one hand people had to cope with sharp price increases as a consequence of the depreciating Rupiah and high inflation while on the other hand people found less job opportunities as a result of falling output and employment and decreased Government spending.

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**Table 1: Increase in poverty in Indonesia due to the crisis**

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Due to unemployment in millions	Due to Inflation in millions	Total increase in the number of poor in millions
12.3 (30.8% of total increase)	27.6 (69.2% of total increase)	39.9 (100%, equals 20% of total population)

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Source: Lee, 1998, as compiled from IMF, 1998

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In the aftermath of the crisis, unemployment has continued to be significantly on the increase, while inflation rates were reduced to acceptable levels. In the period 1997 to 1999 the official rural unemployment rates increased by 35.9 %, while “only” an 30% increase in the official urban unemployment was registered (BPS, Sakemas 1997-1999).

It has also often been highlighted that the limited institutional support for the rapid economic growth that took place during the pre-crisis era, resulted in a high vulnerability of the poorest sections of our society especially during economic downturns. In 1999 around 15% of our population lived below the poverty line of 1 dollar a day and, around 66% below the poverty line of 2 dollar a day (UNDP World Development Report 2001).

## Poverty and Accessibility

Poverty is the cause of many problems in our Indonesia of today. Poverty as we all know has many different causes and effects. Lack of income however is a primary cause of poverty. During the crisis, inflation eroded incomes in Indonesia further, sometimes below the 1 dollar a day equivalent. Income levels however, albeit important, are just one single cause. Less often it was noticed that a lack of access to basic goods and services was also a contributing factor, as well as a result, of poverty. Lack of market access and access to employment centers reduces income opportunities.

Poor access to education leads to poorly educated people. Poor health is caused by a lack of access to (adequate) health services and lack of access to clean water. Access to information can help people in myriad ways, including a better understanding of the agricultural techniques, which can lead to increased productivity even in subsistence agriculture. Clearly, access to information alternatively contributes to improved education and to better health standards being applied.

Precisely this lack of access to basic goods and services is still a major impediment for many people in many communities of our country. These poor communities are isolated not only in physical terms but also in terms of their access to employment, financial resources, skills and information. Since poverty has many different causes and effects, it can only be tackled in an integrated way. Different alternative options to attack poverty exist and could complement each other. One option, emphasized in this strategy paper, is to ensure that the existing and future capital investments in rural infrastructure development, investments to improve accessibility, will maximize the impact on employment creation and poverty alleviation by optimizing the use of local resources including labour in the planning, design, implementation and maintenance of the rural infrastructure works (see box 1).

### BOX 1

In February 2001, UNDP signed a \$300,000 technical assistance agreement with our government to support preparatory work to establish an agency on poverty. The agreement, signed by UNDP Resident Representative Ravi Rajan and the Coordinating Minister for the Economy Rizal Ramli, lays the groundwork for developing concrete strategies for poverty reduction in our country with a population of more than 200 million people.

"Approximately one-fifth of our population is now classified as extremely poor and another one-fifth is vulnerable to falling back into poverty. This is an unacceptable situation," according Minister Rizal.

Mr. Malloch Brown said at the signing that poverty reduction is crucial for political stability in Indonesia. "At a moment like this in Indonesia with so many challenges, perhaps it's easy to forget that the greatest threat to political stability in the long term in Indonesia is poverty," he said. Mr. Malloch Brown stressed that UNDP would support the government's efforts to fight poverty, implement decentralization and strengthen democratic institutions.

## Rural Infrastructure Development

The provision of infrastructure has often been seen as a means to improve the access of the population to goods and services and thus as a means to reduce poverty. However the experience in different parts of the country over the years has shown that the provision of the infrastructure itself is necessary but not sufficient to achieve the goal of reducing poverty.

Firstly, important is the manner in which infrastructure is provided. Making use of the resources or assets that rural communities have – physical, capital, institutional, technical – coupled with a process that gives them some ownership of the facilities provided has been shown to have a high potential for success.

Secondly, the decentralization of responsibilities and authority, as decided in the new Law on Regional Administrations of 2001, is essential for local decision making and the development of good governance (see box 2). This will be a key factor in our effort to mainstream the poverty alleviation strategies in rural infrastructure programmes. Responsibilities for rural infrastructure development will increasingly be decentralized to the local governments. This presents us with an excellent opportunity to increasingly rely on local resources in our efforts to attack poverty and create jobs.

## PART II OUR PROPOSED STRATEGY

### Background

Indonesia has been involved in local resource-based rural infrastructure projects for many years. To a large degree this has concentrated on the promotion and use of community works. There have been many successful projects, which have improved the accessibility situation of the population of many of our communities, and have created significant numbers of jobs both short and long term. They also have ensured that public funds have been invested within the country, and in particular in the rural areas, rather than being spent on imports while depleting the foreign exchange reserves.

Despite the successes however, it has to be recognized that local-resource based infrastructure development in general and labour based technology in particular have rarely been mainstreamed in regular investment programmes, institutionalized or sustained after the funding from donors or financing agencies has been withdrawn.

KIMPRASWIL now believes that in order to mainstream these poverty alleviation strategies, which have proven to be successful within the rural infrastructure sectors, it is necessary to concentrate on a more general framework. Our strategy now is to influence the overall policy and implementation of rural infrastructure works. Our aim is to maximize the use of local resources within the constraints of technical and economic viability. Creating jobs, alleviating poverty while developing good quality, cost-efficient, infrastructure. Moreover, our proposed strategy is concerned with the fact that the infrastructure implemented is

#### BOX 2

The Government has stated that it envisions amongst others ... "the implementation of decentralisation and development of good governance enhancing local government transparency, accountability to reflect local aspirations and needs"...

Further, it was agreed by the Government and the ADB that the poverty reduction priorities should be:

- (i) pro-poor growth by increasing the productivity through empowerment;
- (ii) human resource development by improving access and quality of basic services for the poor;
- (iii) good governance by creating transparent and accountable decentralised institutions responsive to the needs of the poor.

The proposed strategy therefore will meet exactly, in timing as well as in contents, the current donors orientation. The strategy will be pursued in collaboration with the ILO and the multilateral and bilateral funding /development agencies.

sustained, thus ensuring not only short term employment benefits but also long term potential for the improvement of access, sustainable employment opportunities, the development of skills and, hence, the reduction of poverty.

### **A local resource-based rural infrastructure development strategy**

In line with the above mentioned drive for decentralization and poverty reduction, KIMPRASWIL has recently been collaborating with the International Labour Organization (ILO) to identify a possible poverty reduction strategy which would both address poverty and employment issues through the realization of cost-effective labour-based construction programmes within the mainstream of regular recurrent public works programmes.

The overall goal of this poverty reduction strategy would be to increase the access of the rural population in Indonesia to employment opportunities and to economic and social goods and services through an effective provision of sustainable rural infrastructure.

The immediate objective of this strategy would be to increase the use of local resources (labour and materials), planning on the basis of people's needs and productive job opportunities through infrastructure development and maintenance.

The aims of this strategy would be to develop appropriate institutional arrangements, effective management mechanisms and training approaches in order to introduce, promote and support labour-based planning, design, implementation and maintenance technologies in the infrastructure sectors. And expanding their use in the existing and pipeline capital investments in the infrastructure sectors to maximize impact on poverty and employment.

The main activities would relate to this integration of local resource based strategies for sustainable rural infrastructure provision into Government and donor supported capital investment programmes. Therefore the following four instruments as depicted in the next figure would be used.



These four fields represent the totality of the process of infrastructure provision from planning through to maintenance. As can be easily understood, this strategy is defined within a framework of employment creation, decentralization, the optimum use of local resources, a focus on local participation and the promotion of good governance. Also, the decentralization of responsibilities and authority, essential for local decision making and the development of good governance, is a key factor in our effort to mainstream the poverty alleviation strategies in our rural infrastructure programmes. It presents us with an excellent opportunity to increasingly rely on local resources in our efforts to attack poverty and create jobs.

### **The focus of the strategy**

In terms of the practical implementation of the strategy, KIMPRASWIL proposes to work with partners in the Government of Indonesia and the donor community to influence present, pipeline and future investments in the rural infrastructure sectors in the direction of employment creation and poverty alleviation.

Our opportunities for influencing investments with each instrument are numerous:

- At the planning stage one can ensure that contemplated investments actually respond to the real needs of the population. This applies at macro level where public investment can be directed towards employment intensive infrastructure development, as well as at micro level where a participatory planning process could provide local planners with a simple but effective tool for assessing the actual needs of the population.
- In the implementation of the infrastructure works, there are numerous opportunities to maximize the use of local resources without compromising cost, quality or timing by the use of efficient labour based methods.
- During the actual execution of the works, small local contractors can be involved, thus developing the private sector and local skills.
- Finally, to ensure sustainability of the facilities provided, there is the opportunity to develop effective, locally based infrastructure maintenance systems.

Over recent years there has been a move on the part of donors and financing institutions to put poverty alleviation at the forefront of their operations. This implies their concern to direct investments towards the root causes of poverty. In practice this means providing income to those without it and access to basic services and facilities where it does not exist. This strategy fully subscribes to these efforts and complements this recent trend. Given that our Government has recently committed itself to the development of a so-called Decent Work<sup>1</sup>

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<sup>1</sup> Decent Work is the unifying theme, which brings together fundamental principles and rights at work, employment, social protection and social dialogue in an integrated and cohesive matter.

action plan, any programme that optimizes the use of local resources, which includes labour, would naturally incorporate the fundamental concepts of Decent Work.

## **Decentralization**

An immediate opportunity for us to mainstream the poverty alleviation strategies within our own public investment programmes is the new decentralization process, which was enacted in early 2001. This new Law on Regional Administrations provides for more regional autonomy to regulate and take care of the interests of local communities at their own initiatives and on the basis of their aspirations. One of the immediate tasks to be decentralized is the responsibility to develop and maintain rural infrastructure. It is here where we could influence and assist the local administrations to optimize the use of their resources.

Labour based methods, for example, will be best accepted by the people who will directly benefit from their use. Decentralized financing, management and implementation provides an considerable potential for mainstreaming labour based methods. However to take advantage of this potential requires that our focus is on assistance to the local governments in developing capacity and tools to effectively use the resources that they have available. This means understanding and assisting in the planning process, the management structure and the financial administration.

Taking the focus closer to the beneficiaries also means that we have to become much more preoccupied with community involvement. In dealing with community involvement in infrastructure, we need to look in detail at issues of ownership, responsibility and authority. As a matter of fact, Indonesia has a long and successful track record in community development, which would further facilitate the integration of the proposed poverty alleviation strategies in mainstream public works programmes.

## **PART III THE 4 INSTRUMENTS OF THE STRATEGY**

The strategy addresses the way in which infrastructure is planned, designed, implemented and maintained. It encompasses the whole process of infrastructure development and delivery. As a holistic approach, the strategy comprises 4 main instruments. The following parts will describe them in more detail.

### **Labour-based technology**

Labour-based technology can be used for those construction tasks in which the use of labour, supported by light equipment, is equally or more efficient and socially desirable than the use of machines alone, when looking at it from a cost, time and quality perspective. An important effect of labour-based technology in rural areas would be to increase the flow of money through rural economies, often a pre-condition for diversifying their livelihood activities. Using

labour-based technology will create additional jobs and generates income. An increased demand for locally made products in turn creates more indirect employment.

If infrastructure is to be constructed or maintained, a choice can be made to use either labour or equipment as the predominant input in the process. The choice should be objective and depend on:

- the type of construction;
- the relative costs of labour and equipment (true and un-subsidised) in the country or locality;
- where the work is to take place; and
- the technical specifications for the completed works.

It is important to distinguish between an optimum and efficient use of labour (labour-based) and a maximum, and possibly inefficient, use of labour (labour-intensive). A maximum use of labour may be preferred over the efficiency use when income generation and job creation are the over-riding, short-term objectives - for instance disaster relief, or food-for-work projects.

The term labour-based on the other hand indicates that a flexible and optimum use is made of labour as the predominant resource, accompanied by appropriate light equipment to ensure cost-effective and quality aspects in construction. Labour-based technology therefore implies properly planned use of labour in an economically efficient, humanly fair, and hence sustainable manner. It must produce technically sound results and be socially and economically competitive with alternative equipment-based methods. It is this labour-based technology that KIMPRASWIL will promote as a poverty alleviation strategy.

The use of labour-based methods also implies the increased use of associated local resources. These may include locally available materials, tools and equipment, skills and knowledge as well as finance. For example if in certain regions the agricultural sector is flourishing, then it should be possible to tap into and use the tools and equipment produced locally for agriculture, with perhaps some adaptation to make it suitable for use in labour-based construction. This reinforces the amount of investment, which remains in the country and often in the locality of the works, and reduces the dependence on costly imports.

We should approach the idea of labour based methods more from the point of view of a rational use of local resources rather than as a technology to supplant the conventional, equipment-based, methods. We also need to design a future programme in recognition of the lessons learned in Indonesia over the years. We understand that the development of employment intensive infrastructure strategies implies much more than the implantation of labour based technology alone. It relates to a whole range of issues that need to be addressed and indeed targeted if the goal of more local resource based programmes of infrastructure development is to be achieved.

Above all, it needs the commitment of our Government agencies and donors alike. A commitment to use the available resources for rural infrastructure not only to provide the infrastructure required but also to maximize the impact of the investments on poverty alleviation in general and employment creation in particular.

## **Small contracting development**

Small private contractors play a key role in the implementation and maintenance of rural infrastructure in the country. A thriving local contracting industry generally requires the development of a conducive environment, the production of appropriate contract documentation, the training of local contractors, and establishing an efficient contract administration capacity in local government agencies. This includes contracting methods in a decentralized context, appropriate bidding procedures, announcement of works, submission of bids, bid opening, evaluation of bids, contract awarding, contract documents, mobilization and contract implementation and contract qualification and awarding.

The development of such a local contracting industry also provides an alternative avenue to mobilize and effectively utilize the private sector to apply labour-based methodologies in our country. Indeed, an increased focus on labour-based construction and maintenance techniques in the development of the local contracting industry may significantly improve upon the effectiveness and efficiency of the operations, and at the same time, increase the poverty alleviation efforts through increased employment creation and income generation.

In seeking to develop local capacity in the construction sector, i.e. contractors as well as consultants, it will be important to look at the environment in which they operate. This includes the capacity and ability of the client organisations including KIMPRASWIL to cope with their new and changed role as contract managers. For small-scale contractors, creating an enabling environment includes removal of barriers to their entry into the market, and to their growth and sustainability.

## **Rural Infrastructure Maintenance Systems**

We all recognize that maintenance of rural infrastructure is often insufficiently addressed in Indonesia. This is often due to a lack of resources, or a proper understanding of preventive and corrective maintenance mechanisms. Preventive maintenance comprises the repairs and inspections to prevent failures, while corrective maintenance covers the repairs after (a part of) the infrastructure has failed its function(s). An increased use of local resources could be a key to improving maintenance practices and systems. The development of appropriate rural infrastructure maintenance systems deserves a high priority. Implementation by local authorities while engaging local petty contractors could further prove to be a most effective approach for ensuring the continued serviceability of infrastructure.

The impact and sustainability of rural infrastructure, as argued above, is partly based on local participation during planning and implementation. Therefore the use of local resources for maintaining this infrastructure should be seen as another key factor in providing sustainable access in rural areas. Implementation by local authorities while engaging petty contractors could prove to be a most effective approach for ensuring the continued serviceability of infrastructure throughout the country.

Although it is impossible to prevent all failures, and corrective maintenance will always be necessary, proper maintenance schedules developed at local level could monitor the

condition of the infrastructure through inspections and identify priority tasks to minimize the total cost of keeping the infrastructure functioning. Strengthening the local capacity to undertake these activities will be crucial.

## **Rural Access Planning**

Rural Access Planning is concerned with improving levels of accessibility in rural areas and comprises a set of planning procedures that look at access, transport and mobility from a broader perspective. It promotes community participation and the optimum use of local resources including labour. It comprises a set of planning procedures and techniques that cut across sectors and can be used at the local government level for spatial access and infrastructure planning. The procedures and techniques respond to the real access needs of the rural population, which include access to the transport system, potable water supplies, primary health care, education, land, markets and agricultural inputs and hence to improved income opportunities. The interventions that emanate from the planning process relate to improving people's access and in reducing poverty. This would mean either through improving people's mobility or by bringing the goods and services closer to the people.

For our local governments a major issue is rural development and investment choices that are associated with this process. Transport is obviously an important factor in their rural development, poverty alleviation and employment creation strategies in that its existence or absence limits the opportunity that rural people have to improve their social and economic well being.

Transport in itself is a means to an end. The ultimate aim is to obtain access. Access to the basic, social and economic goods, services and facilities rural communities need to have to be able to live a social and economic productive and decent life. The transport needs of rural people are associated with basic needs such as water, food and firewood, social welfare aspects of rural life such as health and education and with economic welfare aspects of rural life such as agriculture, livestock and home industries.

Rural transport is a subject that is receiving increasingly more attention from development specialists. Over the last years, organizations and individuals in Indonesia concerned with rural development and poverty alleviation have started to better understand the role that rural transport plays in the local economy and to demonstrate the importance, variety and extent of rural transport.

This interest has resulted in the Yogyakarta Initiative, formulated in May 2001. This initiative identifies the importance of rural transport development for rural social-economic development and recommends that the role of transport should be emphasized in policies, strategies and programmes.

If our aim is to improve rural transport in the country, as a strategy to alleviate poverty and improve access to employment opportunities, we have to address the real transport needs of our rural people. This requires to work with the rural people to identify their transport needs, possible interventions, priorities and to design the most appropriate projects that will either improve people's mobility or lessen their demand for transport. This can not be done by

specialized institutions in Jakarta far away from where rural people move themselves and their products.

The opportunity to bring rural access planning closer to where rural transport happens came with our recent drive to decentralize. The decentralization process enables a situation in our local government units can plan, provide and manage the rural transport system. Local government units are not only closer to the communities and therefore in a better position to understand their real needs, they are also in a better position to facilitate the organization of villages and to improve their technical capabilities to perform certain tasks.

To strengthen the capacity at local level to plan for improved accessibility and rural transport we promote the Rural Access Planning approach and the Integrated Rural Accessibility Planning (IRAP) tools to strengthen capacity at local government level for improved rural infrastructure planning. The whole process is participatory and involves the local communities and local government officials representing the different sectors. We consider these approaches as unique in that they seek to maximize participation during the planning phase and promote the use of local resources including labour for project implementation.

## **PART IV OPERATIONALIZING THE STRATEGY**

The strategy's overall objective is to attain optimal employment generation and poverty alleviation through the realization of cost-effective, labour-based, rural infrastructure projects within existing current capital investment programmes. To make the strategy work we need to immediately address several critical issues:

### **Produce and disseminate best practice case studies and guidelines.....**

Given the economic situation in our country and the need to develop and rely on our own resources, the proposed methods are the logical approach to rural infrastructure development. Our country has a long history of using different methods of rural infrastructure development with different levels of success. To be effective and to be accepted, past and present experiences with the technologies proposed in this strategy paper have to be well documented, promoted and disseminated. These should include case studies and guidelines on local level planning, community participation, labour-based technology, infrastructure maintenance and local contracting. It is of particular importance that the local governments are aware of success stories and failures for that matter elsewhere in the archipelago. Documentation, awareness raising workshops, seminars and study visits could all contribute to this.

### **Strengthen training facilities.....**

It is necessary to first strengthen the training facilities in the country to provide training of staff in the labour-based, local level planning and maintenance concepts. The initial focus should be on a training's needs assessment, the definition of a training strategy, the development of

appropriate training materials, curricula and methods and the development of trainer's training programmes. These activities should be undertaken in close collaboration with Universities such as ITB in Bandung and GMU in Yogyakarta. To sustain the methods introduced, in the long run, it will be necessary to integrate the training materials into regular training courses provided by training institutions or universities.

### **Provide training.....**

Training needs to be provided at several levels to disseminate and sustain the proposed procedures and techniques. The most immediate need would be to provide training at levels where decisions about the prioritization, design and funding of rural infrastructure works are taken. The training should be field oriented and practical and concentrate on developing implementation capacity for labour-based technology and local level planning at the different levels to utilize the procedures, techniques and tools and provide follow-up training.

### **Develop and implement demonstration projects..... and**

To see is to believe. Adoption of the proposed strategies to reduce poverty and create employment would require the identification, planning, implementation and evaluation of a number of demonstration projects. Small, locally executed, projects in the fields of rural accessibility planning and rural infrastructure development and maintenance would provide further means to develop interest and support for the technologies introduced. The demonstration projects activities would include hands-on training on local level planning and labour-based demonstration projects. Capital funds for these demonstration projects should be made available under new or existing rural infrastructure development projects. These projects could then provide the necessary support for the strategy in terms of dissemination of information, technical assistance, training and the preparation of guidelines, manuals and training materials.

### **..... mainstream the poverty alleviation/employment creation tools.**

The final activity would be to integrate the procedures, tools and techniques into recurrent capital investment programmes of the different Government agencies and development banks. This would require a technical overview of these programmes, the identification of possible entry points and the review of planning procedures, contract documents and technical specifications. In the long term, the programmes aiming at developing good quality infrastructure with a maximum impact on poverty alleviation and employment creation need to be driven by the different government agencies. This only happens if these are willing to mainstream the proposed procedures and techniques over their investment programmes. It's only when large scale, recurrent, investment programmes are used in this process that a substantial impact is achievable. This, understandably, won't happen overnight and that's why the dissemination of information and best practices, training and capacity building and demonstration projects are a necessary first step in this strategy. We hope those different financial and technical international agencies and their Indonesian counterparts would all contribute to this.