

# Labour-based Technology for Poverty Reduction

## Introduction

Over the next 30 years the world's population will grow by two billion, with most of this growth in developing countries, predominantly in urban areas. Currently 2.5-3 billion people in developing countries live on less than US \$2 per day. The core development challenge is to ensure productive work and a much better quality of life for these people<sup>1</sup>.

In sub-Saharan Africa alone the total population is projected to reach 854 million by the year 2010. The labour force is expected to double in the next 25 years<sup>2</sup> in this region where un- and under-employment are already serious problems, particularly for young people. The lack of formal employment opportunities has led to an increase in the informal economy and in self-employment. However, the conditions and security of such employment are poor, resulting in an increased share of working poverty,<sup>3</sup> the level of which rose by around 2% between 1990 and 1998 and now accounts for around half the total working population.

The challenge for African nations is enormous. Productive and decent jobs need to be created, and in great numbers. Faster economic growth and policies that promote the creation of decent and productive work opportunities are needed.

Addressing this growth in poverty is a major challenge and creating employment is a key strategy. In recognition of this, the theme for this issue of the Bulletin and of the forthcoming 10<sup>th</sup> Regional Seminar for labour-based practitioners has been chosen as 'Labour-based Technology for Poverty Reduction'.

## Labour-based technology (LBT)

LBT entails the use of a judicious mix of labour and equipment to produce cost-effective infrastructure of sound quality. LBT makes optimum use of local resources such as material, tools and light equipment. It is promoted as a

<sup>1</sup> World Bank (2003) *Sustainable development in a dynamic world: Transforming institutions, growth and quality of life*. World Development Report 2003.

<sup>2</sup> ILO (2003) *Global Employment Trends*. Geneva. (See Chapter 6).

<sup>3</sup> Working poverty: any worker living on USD 1 per day, or less.

<sup>4</sup> Poverty is defined here in its broadest meaning, i.e. including the material level of living, social needs and rights in terms of access to resources, public services, and to the political system.

<sup>5</sup> The full paper prepared by Kaj Thorndal and entitled 'Labour-based technology for poverty reduction' is available on the web or directly from ILO/ASIST.

means of reducing poverty<sup>4</sup> by incorporating social concerns into public investment policy in order to:

- > create employment, income and skills development opportunities;
- > support local enterprises;
- > create appropriate, sustainable, cost effective infrastructure;
- > facilitate community participation in the planning, construction and maintenance of assets; and
- > ensure peoples rights by maintaining labour standards.

## The 10<sup>th</sup> Regional Seminar

The 10<sup>th</sup> Regional Seminar, which will be held in October 2003 in Arusha, Tanzania will embrace a broad range of issues including policy, planning, procurement, and social aspects related to labour-based technology. The intent is to:

- > investigate the true impact of labour-based technology on poverty;
- > collate an evidence base; and
- > identify key ways in which the impact of labour-based technology on poverty can be maximised.

The Ministry of Works Tanzania will host this seminar, and have commissioned a paper<sup>5</sup> to provide background information and identify key issues related to this theme. Papers related to these issues are invited to *share knowledge, best practices, lessons learned* and to *stimulate discussion and debate* on controversial issues.

## Key Issues

This centrefold highlights the four key issues identified in the paper as contributing significantly to the impact on poverty reduction that is realised through the use of LBT. These are:

- > stimulating economic growth through the increased use of local resources, the income gained from employment, more efficient investments, and savings in foreign exchange expenditure;
- > generating employment and enabling the introduction of fundamental labour standards into investment programmes;
- > creating appropriate and sustainable infrastructure assets; and
- > involving the private sector and communities in order to improve efficiency of investments and promote local participation and empowerment.

Some of the pertinent and related issues, questions and considerations that bear on the potential impact on poverty are also identified.

## ECONOMIC GROWTH

Infrastructure is of strategic importance in and for any economy. The construction, rehabilitation, and maintenance of infrastructure accounts for almost half the domestic capital formation, absorbs up to 70% of public investment funds, and accounts for some 40% of the international development assistance given to developing countries.<sup>6</sup> Where feasible and cost-effective, the application of LBT approaches in infrastructure investment results in savings in foreign exchange and an increased utilisation of local resources, which in turn stimulates the national economy. In addition, income gained from the employment created is ploughed back into the local economy, further stimulating the economy and creating a multiplier effect.

Some pertinent issues that impact on LBT's potential contribution to economic growth include:

### Creation of an enabling environment

An enabling policy environment that supports LBT is essential if it is to impact on economic growth. Different countries have adopted different policy instruments in an attempt to achieve this. For example, targeted procurement is used in South Africa, whereas Kenya and Tanzania have incorporated employment-intensive works into their Poverty Reduction Strategies,

*"...In areas where labour-intensive technology is appropriate, especially in rural and minor feeder roads, the Government will sub-contract maintenance to communities which will use labour-intensive methods." Interim Poverty Reduction Strategy Paper, Government of Kenya, July 2000*

while Guinea, Mali, Mauritania, Senegal, and Togo are establishing Employment and Investment Policy Units. However, how effective have these policy instruments and frameworks been towards creating enabling environments for the sustained use of LBT? What has been the impact on poverty? What are the successes and failures? *The lead article in this bulletin focuses on this issue.*

### Capacity for planning and implementation

Sufficient capacity to develop and operationalise these policies, and to plan and implement LBT programmes is also required. It must be established that there is sufficient capacity to implement these policies, and what is the best approach to strengthening implementation capacity?

### Expanding the scope of LBT investments

LBT has been proven as a viable and cost-effective means of constructing and maintaining rural feeder roads, and in a range of different economic and physical environments. LBT has been used in other types infrastructure works such as secondary roads, social infrastructure, water supplies, sanitation facilities, and agricultural and natural resource conservation infrastructure. The opportunities and challenges of expanding use in these works should be identified and investigated further.

## EMPLOYMENT AND LABOUR STANDARDS

The relationship with, and rate of return to, employment influences the impact of economic growth on poverty. Employment-led growth is now the centre of most strategies for reducing poverty. LBT programmes provide the means to achieve such growth. For example, in the roads sector, labour typically accounts for only around 10% of the total investment in equipment-intensive works, as opposed to between 50 and 60% in LBT works. In LBT works, this translates into the creation of 3-5 times more direct employment for the same level of investment. The stimulus to the local economy, through the injection of cash wages, generates further indirect employment that can be between 1.5-2.8 times the amount of direct employment during construction. Moreover, depending on the type of programme, LBT can be used to tackle poverty through the creation of both short- and long-term employment. Two types of LBT programmes exist:



*"... With the money that I earned in 1998 and 1999 on road rehabilitation work, I have extended my house from one bedroom to three, added a lounge, and it is built with baked bricks. I then bought a radio, bicycle and clothing for myself and my children. Next I will buy iron sheets to cover my house...."*

<sup>6</sup> ILO (1994): Towards full employment, *the contribution of ILO to the second session of the Preparatory Committee for the World Summit for Social Development 1994*. Geneva

<sup>7</sup> A quote (not verbatim) from a 22 year old single mother, working on a road rehabilitation programme in Derre, Zambézia. Source: *Reopening Mozambique: Lessons learned from the Feeder Road Programme 2002*. ANE, UNDP, Sida, ILO.

- **Labour-intensive employment programmes** – usually implemented in response to crisis situations, where the focus is on mitigating the effects. Employment created is usually short-term and targeted towards vulnerable communities affected by the crisis. In some cases, these programmes develop into longer-term, labour-based investment programmes.
- **Labour-based investment programmes** – where the focus is on asset creation, rehabilitation, or maintenance, as well as the creation of employment. The impact on poverty is through the assets created as well as the employment generated.

Some important issues related to employment creation and the introduction of good labour standards that need to be addressed include:

### Targeting employment

LBT provides the opportunity to target employment at those segments of the population who are often not in formal employment, including a high proportion of women and rural workers. Targeting may take place either through wage setting, task rates, means testing<sup>8</sup> or community selection. *Job rotation* can be used to ensure that more people become beneficiaries, i.e. workers are employed for a limited period and thereafter replaced by others. Issues of concern here are how effective the various targeting mechanisms are in impacting on poverty; whether they exploit poor and worsen rather than improve their livelihoods and if targeting is feasible with profit-driven private sector implementation.

### Opportunity costs

Studies have shown that workers incur income losses ranging from as little as 10% to as much as 100% from undertaking LBT roadworks as opposed to alternative



work. The location and timing of LBT roadworks has an important bearing on opportunity cost. Therefore, it must be decided if timing considerations should be incorporated into tender documents and whether this would impact on private sector implementation.

### Labour standards

Appropriate contract clauses can be introduced into contract documentation regarding recruitment, minimum wage and age, non-discrimination, forced labour, safety and health, work injury insurance, etc. Without adherence to labour standards the impact on poverty is diminished. It must be asked if internationally recognised labour standards are appropriate for conditions in developing countries, and if not, then what labour standards are. There are other questions that need answering. For example, how does adherence to labour standards affect the cost of LBT works? Who should bear this burden? How best can labour standards be supported and monitored and are the existing mechanisms adequate? *Read further in article on Labour Standards in this issue.*

## INFRASTRUCTURE CREATED

Poverty is often characterised by an absence of access to both economic and social infrastructure and services. It has been proved that LBT provides a cost-effective means of producing appropriate infrastructure assets that are durable, sustainable, and of good quality. Some of the issues related to the creation of sound and sustainable infrastructure that impacts on the livelihoods of the poor include:

### Planning

Proper planning is essential to ensuring that the assets created benefit the communities for which they were created. Local-level planning involving the participation of target beneficiaries in the identification, prioritization, and actual implementation results in the creation of assets that address the real needs of the communities, and



*Community participating in planning*

engenders the sense of ownership within the community that is crucial to the future operation and maintenance of the assets. The Integrated Rural Accessibility Planning

<sup>8</sup> This implies that beneficiaries are selected according to the indicators of their poverty; i.e. lack of employment or lack of agricultural assets.

(IRAP) tool developed by the ILO, which facilitates local-level planning and has been applied in a number of countries. Now, its impact on poverty in these countries needs to be clarified, as does the issue of whether there was/is sufficient capacity at local level to support local-level planning? Do the recent trends in decentralisation support such a bottom-up approach?



*Model road built with labour-based methods in Mbale, Uganda*

Source: G. Johnson-Jones

### **Appropriated engineering standards and quality control**

It is important that the assets created are of the appropriate standards and quality required for their intended purpose. As always with infrastructure development, the question is how quality and standards can be assured during

construction. This is even more important when LBT methods are used as compromises in standards and quality prove negative in terms of promotion of the technology. See also article on Access in Emergency in this issue.

### **Maintenance**

Often infrastructure is created without due consideration as to how it will be maintained. Thought must be given to the kind of maintenance systems that exist, how maintenance can be funded, and who should be responsible. Is it the role of national authorities, local authorities and/or communities, and are road funds and boards set up to administer these adequate and effective? What opportunities exist for long-term employment?

### **PRIVATE SECTOR AND COMMUNITY INVOLVEMENT**

Trends in privatisation and decentralisation have increased the involvement of the private sector and communities in infrastructure delivery. Is this approach more cost-effective? How does private sector involvement impact on poverty? Is it the appropriate choice for achieving social benefits, and does private sector involvement empower or exploit the communities concerned?

Other issues related to private sector and community involvement include:

#### **Procurement**

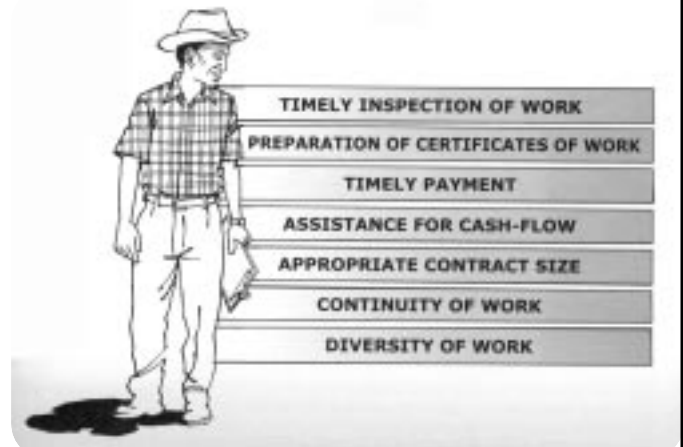
Procurement systems that favour small local private and community contractors need to be developed and mainstreamed. The concern is how to bring this about. As some corrupt governments may prefer to deal with large contracts where 'kick-backs' are easier to gain, the ways of dealing with conflicts of interest must be clear.

#### **The role of the public sector**

Implementation through the private sector requires reorganisation and capacity-building within the public sector that is to take on the responsibility for contract management and community involvement. In this area, it must be ascertained whether the government has the capacity, or the will, to monitor numerous small contracts, let alone the time and the skills needed to build capacity and develop organisation within communities.

#### **Contractor development**

The capacity of small local contractors needs to be built up if they are to take on LBT works. Issues of importance here are how successful have contractor development programmes been, whether the contractors survive in



the open market, and how community contractors can be supported and recognized.

#### **Private sector investments**

Traditionally, LBT works have been limited to public sector investment. However, is there a potential market for LBT within private sector investments?

#### **Community contracting**

Community contracting has been effectively used in the implementation of LBT programmes, particularly in urban settlement upgrading. In addition to producing sound infrastructure, community contracting empowers communities, and builds their organisational and negotiating capacities. Whether this is true for other sectors needs to be determined. The article on Community Contracting in Sri Lanka shows how it can be mainstreamed and institutionalised in government systems. Lastly, what institutional reforms and capacities are required before community contracting can become more widespread?