



WATER, SANITATION, ENVIRONMENT and DEVELOPMENT

Thinking things through

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Introduction

This paper is about making the provision of basic infrastructure more responsive to the needs of poor people in both urban and rural areas, more affordable to both the users and the providers, and more sustainable in the long term.

It suggests that these ends can be achieved by accepting three complementary basic principles:

- a limited role for government and the public sector;
- staged development to affordable standards at each stage; and
- optimum use of locally available resources;

and thinking through their implications concerning the formulation of policies and programmes for infrastructural development.

A limited role for government and the public sector

In most developing countries the provision of basic infrastructure is in the hands of (central and local) governments with international agencies and NGOs in support. There have been many attempts at community participation but all too often these have been seen as a way of keeping down costs and shedding maintenance responsibilities rather than making programmes more responsive to people's needs.

It is probably fair to say that the idea of asking communities to participate in what are essentially government projects has not worked very well. There is a strong case for a new approach to the provision (and maintenance) of basic infrastructure in which governments:

- restrict their direct interventions to the provision and maintenance of publicly owned and used infrastructure and utilities, through their normal programmes of *public works*;
- encourage and help people to identify and meet their basic needs, with a minimum of government involvement, through programmes of *community works*; and
- draw a clear distinction between public works and community works.

This distinction should be based not so much on who pays for the works, as on who initiated them and who owns, manages, uses and maintains the assets created.

Public works are usually initiated and financed by government agencies and executed according to pre-determined programmes. The assets created are owned, managed and maintained by the responsible agencies and used by the general public which pays for them either directly (through user-charges) or indirectly (through taxation).

There are three main ways of limiting the role of government and the public sector in public works:

- by decentralizing and delegating decision-making and local resource mobilization to the appropriate level of government (according to the significance of the infrastructure) but allocating central government support on the basis of national guidelines and criteria (thereby limiting the influence of local politics);
- by making as much use as possible of the private sector (consultants and contractors) to prepare and implement public works projects, and also to manage, maintain and where necessary operate the assets created; and
- by simplifying and streamlining the regulations and procedures relating to the provision and maintenance of basic public infrastructure, such as rural feeder roads.

Public works are by definition not community-oriented. Thus, community participation in public works should be essentially consultative (through participatory planning) rather than active (during implementation). Indeed, people who work on public works projects do not necessarily benefit directly from the assets created. Thus, they are workers and should be remunerated in full for their labor, a reasonable proportion being in cash.

Community works are quite different. They are initiated by clearly identifiable communities or common-interest groups (or even individual households) for the mutual benefit of their members. They are usually prepared and implemented, at a pace determined by the beneficiaries, with the help of *facilitating/implementing agencies* which provide technical, material and financial assistance. The assets created are owned or at least managed, used and maintained by the beneficiaries, who have to decide how to share the costs (and in some cases the benefits) amongst themselves.

So, rather than talking about community participation in government projects, we should be talking about government participation in community projects and this should be essentially:

- **promotional**, eg. publicizing the benefits of sanitation and telling people how they can get help to build a pit latrine;
- **enabling**, ie. encouraging people to help themselves and providing indirect support ; and
- **regulatory**, through the granting of planning permission and technical approval (but this should be made as straightforward as possible).

This does not relieve governments of their responsibility to support community works (which should be subsidized to at least the same extent as public works) but it does mean that community works should be de-politicized and, ideally, that all resources (from government, donors and the beneficiaries themselves) should be channelled through *independent executing agencies* (like the AGETIP-type agencies in Francophone West Africa). This offers several important advantages, notably:

- **responsiveness**, in that people should be able to take their problems (as they see them) directly to the independent agencies without going through the various tiers of local government;
- **flexibility**, in that (i) the agencies should be able to accept beneficiaries contributions in cash (with access to credit) or in kind (but costed), and (ii) the levels of subsidy and priority ratings allocated to different types of projects can be varied (according to pre-determined rules) to reflect government and donor policies and the needs of the beneficiaries (as perceived by the agencies);
- **efficiency**, in that the executing agencies being independent can short-circuit cumbersome government regulations and procedures, and employ NGOs or the private sector as facilitating/implementing agencies.

In short, it is recommended that:

- community works be supported to at least the same extent as public works but with the support being indirect and pooled (albeit with the possibility of favoring specific sectors and activities through higher priority ratings and subsidies); and
- the beneficiaries become the clients, with donors and governments placing more reliance on their innate commonsense than they have in the past.

Staged development to affordable standards at each stage

One of the major drawbacks of conventional infrastructural development is the practice of building infrastructure to an unnecessarily high standard in the first place and then upgrading it to its ultimate standard in one or two large

steps. This practice is reinforced by master planning exercises which, while they are useful for setting ultimate targets, are seldom realistic as regards the resources available and time needed for implementation.

The simple fact is that this is not an appropriate approach to provision of low-cost, basic infrastructure where coverage needs to be maximized and risks and costs minimized. This requires that infrastructure provides the minimum acceptable level of service initially and is upgraded in several small steps to affordable standards (in line with demand) at each stage.

The main implications of staged infrastructural development may be summarized as follows:

- infrastructural development policies and master plans should make provision for staged implementation or interim developments to appropriate, affordable standards;
- effective participatory planning procedures are needed at all levels of government;
- staged development provides a mechanism whereby community assets can be upgraded and transformed into public assets;
- the size and timing of each stage/step should be based on:
 - changes in significance, function and ownership;
 - technical thresholds;
 - demand (or use); and
 - the availability of resources;
- when the significance, function and ownership of infrastructure change, upgrading should be the responsibility of the new owner (the opposite of conventional practice); and
- as mentioned before, decision making and local resource mobilization should be decentralized and delegated to the level of significance of the infrastructure, but central government resources should be allocated according to national guidelines and criteria.

Optimum use of locally available resources

Conventional infrastructural development tends to be capital-intensive and heavily dependent on imported technologies, skills, materials and equipment. This makes it very expensive (especially in foreign exchange) but with relatively little money being spent in the locality of the work.

Such an approach may be appropriate for large-scale, technically complex works, but it is certainly not appropriate for the provision (and maintenance) of low-cost, basic infrastructure, where much more use should be made of locally available resources, especially labour. However, in many African countries there is still considerable resist-

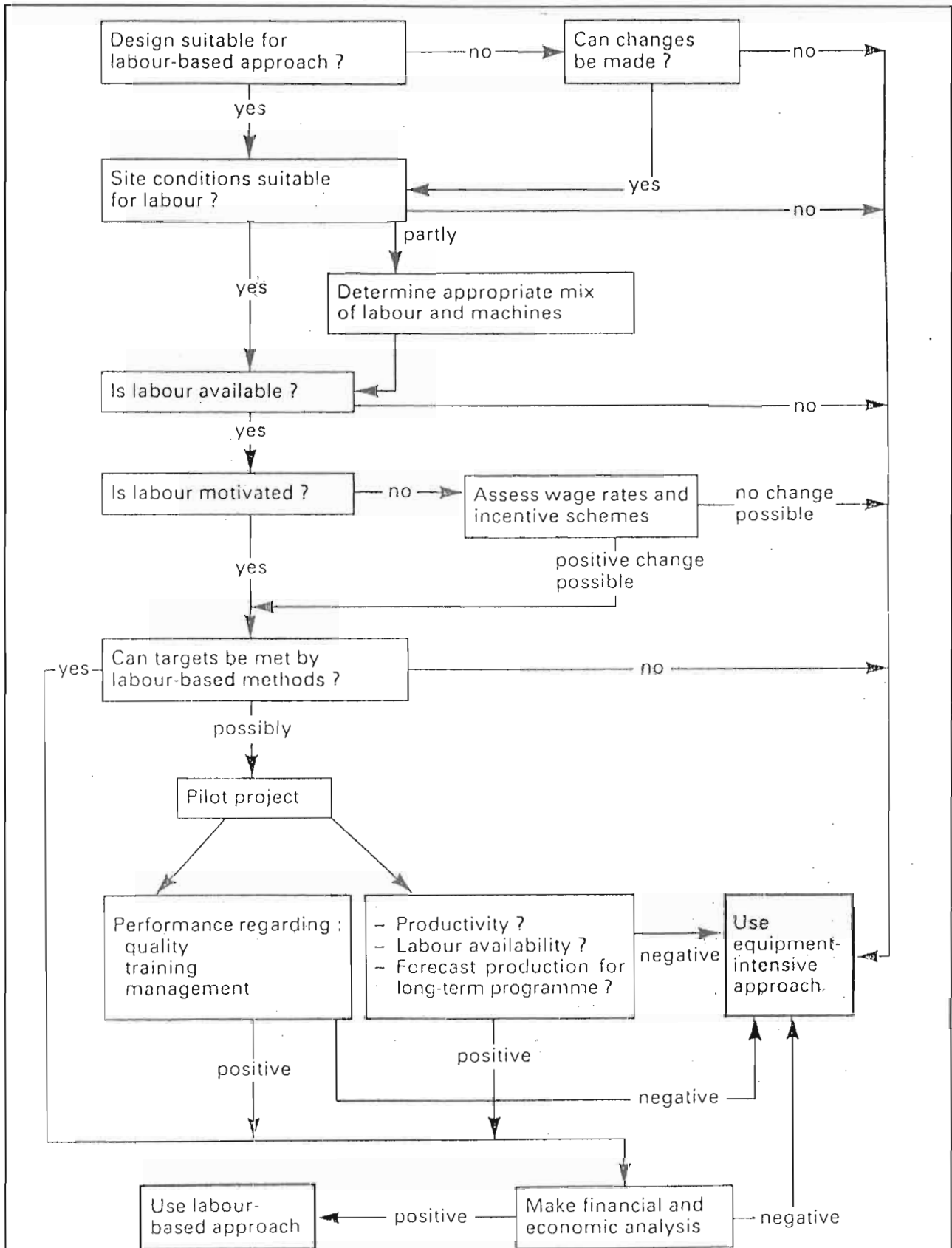


Figure 1. Decision making regarding technology choice

(Source: Edmonds G. A. and J. J. de Veen, 1992. *A labour-based approach to roads and rural transport in developing countries* in *International Labour Review*, Vol 131, No. 1 pp 95-110)

ance to local resource-based, labour-intensive technologies which tend to be seen as backward, slow and second-rate. This is not so; the aim is to produce infrastructure of comparable quality but at a lower cost than that produced by conventional capital-intensive methods.

Optimum use of local resources implies cost: effective substitution of labour for capital and local resources for imports, and it is based on rational technology choice, as illustrated in Figure 1.

Adopting a local resource-based labour-intensive approach to basic infrastructural development offers several important advantages, notably:

- making external assistance go further (provided that governments regard external assistance as supplementing rather than replacing their own resources);
- reducing dependence on scarce foreign exchange and expensive (but often unreliable) imports;
- generating gainful employment from public works and making community works more affordable; and
- in the longer term, bringing local resource-based, labour-intensive methods into the mainstream of infrastructural development which should result in substantial and sustainable increases in employment.

However, the realization of these advantages is dependent on certain conditions being fulfilled:

- there needs to be a framework of explicitly supportive policies and reinforcing measure ;
- the concept of rational technology choice and the application of local resource-based, labour-intensive technology need to be introduced into the curricula of universities and technical colleges;
- advisory support, information services and training should be available to all interested parties government and public sector, private sector and NGOs and workers' organizations and cooperatives;
- actions taken in the short term should lay a foundation for gradual expansion (in line with capacities to identify, prepare and implement projects and to maintain the assets created), and under no circumstances should they be allowed to jeopardize the prospects for expansion in the long term.

Conclusions

Each of the three principles helps to make the provision (and maintenance) of basic infrastructure more responsive, affordable and sustainable. However, it is only when all three are applied in a concerted way that their full impact will be felt.

The most important implications concerning the formulation of policies and programmes for infrastructural development may be summarized as follows:

- a. A clear distinction needs to be drawn between public works and community works, and this should be based on who initiated the works and who owns, manages, uses and maintains the assets created.
- b. Decision making and local resource mobilization should be decentralized and delegated to the appropriate level of government (according to the significance of the infrastructure) but central government resources should be allocated according to national guidelines and criteria (to limit the influence of local politics).
- c. Participatory planning is needed at all levels of government.
- d. The bureaucratic regulations and procedures governing the provision and maintenance of basic infrastructure need to be simplified and streamlined.
- e. Community works should be supported to at least the same extent as public works but indirectly and without the support being tied to specific sectors or activities so that the beneficiaries are able to seek help with what they see as their most pressing problems.
- f. Much more use should be made of the private sector (especially as regards public works) and NGOs (especially as regards community works).
- h. Local resource-based provision and maintenance of basic infrastructure can create substantial and sustainable increases in employment and this should be taken into account when planning infrastructural development.

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