

# Rural Transport Training Materials

## Module 2:

### Planning, Design, Appraisal and Implementation

Employment creation and labour-  
based technology in road works:  
Ugandan case study

**Session 2.4**

**Part 2**

Presentation 2.4b



The World Bank



**DFID** Department for  
International  
Development



theIDLgroup 

# 1. Introduction

## Learning Objectives

**This session enables participants to:**

- ③ Describe the economic benefits of using labour-based methods in the Uganda scenario
- ③ Provide recommendations for increasing the scope of the use of labour-based methods for feeder road works

# Session Overview

- © Background to the case study
- © Key findings
- © Recommendations for increasing the scope of labour-based methods

## 2. Background to the case study

### Assessing the potential of employment-intensive technology in the rehabilitation of feeder roads

- ◎ The study focused on the **economic** aspects rather than technical aspects
  - assumption .....
  - most rehabilitation work on feeder roads can be carried out by labour as well as by the use of heavy machinery

# Hypothesis of the Uganda study

## ☉ Labour-based approaches are:

- viable
- offer high employment potential
  - and combat poverty
- greater indirect benefits to the national economy
  - compared to conventional, equipment-based technology

# Scope of the Ugandan study ...

- ③ A comparative study of the use of **labour-based** and **equipment-based** methods for feeder road rehabilitation
- ③ Carried out as part of the Labour-Based Policy Promotion Initiatives and the broader context of poverty reduction through employment creation
- ③ Examined feeder road programmes 1993-1997
  - some used labour-based methods and some equipment-based methods
  - standard of the road works carried out was broadly similar
    - ... although some programmes involved full rehabilitation, and others spot rehabilitation

# 3. Key findings

- ◎ Economic growth rates (highest in the sub-region) have **not been matched with positive social indicators**
  - reflected in poverty indices, and massive under employment = 3.8 million people
  - growth in labour force is 300,000 people per year,
    - but only 100,000 are absorbed, mostly in the agricultural sector
  - *Poverty Eradication Action Plan* includes increasing wage-employment and income generating activities as a way of stimulating local demand and production



**Labour-based methods** and less use of heavy equipment are the **best option**:

- for reconstruction and maintenance of badly needed infrastructure
- provide productive employment
- **But!** planners, project evaluators, engineers, politicians and the intended beneficiaries need **evidence** on which to base their day-to-day decisions



# The evidence of benefits from using labour-based methods compared to equipment based methods

- ③ In **direct financial terms**, labour-based methods are
  - 18% cheaper for full rehabilitation of feeder roads
  - 50% cheaper for spot rehabilitation
- ③ In **economic terms**, labour-based methods are
  - 38% cheaper for full rehabilitation
  - 60% for spot rehabilitation
- ③ For **costs**, labour-based works are competitive as long as
  - the unskilled daily wage does not exceed US\$ 4
    - ... the current [1999] rate in rural areas is US\$ 1.2

## ... more evidence for labour-based works ...

- ③ **Employment generation** is higher
  - the proportion of the cost spent on wages (unskilled) = 44% - 60% in labour-based works
  - compared to 3% - 8% in equipment-based works
- ③ **Indirect effects** even greater than the direct effects (macro-economic model)
  - for each job directly created another 2 jobs are generated elsewhere in the economy through a *multiplier effect*
  - generate more income to households
  - increase GDP faster
  - a stronger stimulus on local private investment

# Selective use of labour-based methods

- ◎ In some cases equipment-based methods are more suitable
  - .. and should not be replaced by labour-based methods
- ◎ But! - huge potential for increasing the use of labour-based methods
  - such as in rural feeder roadworks
- ◎ If the financial and economic benefits of using labour-based methods are higher than equipment .....
- then labour-based methods should be used as an alternative to equipment

## Increasing the use of labour-based methods



### Group Activity

*What recommendations would you make for increasing the scope for the use of labour-based methods in feeder roads?*

## 4. Recommendations for increasing the use of labour-based methods in feeder roads

### ③ **Partnership** between government and private sector

- to increase participation of small local contractors in public sector works

### ③ **Project evaluation criteria** to include

- employment creation potential
- shadow pricing of labour
- assessment of the indirect costs & benefits of public investments

## More recommendations ...

- ③ **Removal of existing bias** in conditions of tender and contract provisions which favour equipment-intensive contractors
- ③ **Increased use of subcontracting** to provide more work opportunities for small, local contractors
- ③ **Feasibility studies and designs** consider the use of labour-based methods as well as equipment-based methods

# More recommendations ...

## ⊙ Relax tight construction time constraints where possible

- the longer duration sometimes inherent in the use of labour-based methods can be more than compensated for by the greater benefits and faster mobilisation times

## ⊙ Change attitudes to labour-based methods

- inclusion of the concepts of appropriate technology in the formal training of civil engineers

# Conclusion

- © A switch towards more labour-based methods could generate very significant benefits for:
  - **the poor** in the form of employment opportunities
  - **the country** in terms of GDP and foreign exchange saving