

# Rural Transport Training Materials

## Module 2:

### Planning, Design, Appraisal and Implementation

#### The use of self-help for low volume road construction Case Study: Indonesia

#### Session 2.2

#### Part 2

Presentation 2.2b



The World Bank



**DFID** Department for  
International  
Development



theIDLgroup 

# 1. Introduction

## Learning Objectives

This session enables participants to:

- © Describe the pre-conditions necessary for self-help road projects
- © Analyse key policy, strategy and economic factors affecting self-help road projects
- © Explain the potential and limitations of such projects
- © Make recommendations to ensure the effectiveness of community-based self-help road projects

# Session Overview

- © Background to the case study on Flores Island
- © Analysis of key issues with self-help initiatives for low volume road construction
- © Experiences from Flores

## 2. The Flores Project: Background

### Island of Flores

- ⊙ Located in East Indonesian Province of Nusa Tenggara Timur (NTT)
  - one of the poorest and least developed regions of Indonesia
  - isolation = major development constraint
- ⊙ In Manggarai district (West Flores)
  - only ½ of the population have access to the road network.

# 'gotong-royong'

the Indonesian tradition for voluntary  
communal self-help labour

- ◎ Many villages tried to construct local access roads using gotong-royong
- ◎ But these efforts often failed because
  - difficult topographical conditions
  - villagers lacked skills in road construction and proper tools

# Self-help support in Flores

- ◎ Since **1985**, INTERCOOPERATION has assisted the Catholic Church of Manggarai in constructing district roads
  - using low-cost, labour-based methods
- ◎ **1994** an additional component was started:
  - goal = support traditional self-help efforts to build village roads & motorable tracks
- ◎ **Key measures**
  - training & follow-up of local foremen & surveyors
  - technical and financial assistance for difficult road sections beyond the villagers' capacity

# After 4 years the results were ...

- ◎ **85 km of village access roads** surveyed and constructed in self-help labour
- ◎ **Previously built alignments made passable**
  - total length of project-influenced roads was 250 km
- ◎ **Recognition** of the need for proper road surveying and construction by communities and local leaders
- ◎ **More traffic generated**
  - trucks carry cash crops to the local markets, construction materials and consumer goods to the villages
  - passenger traffic is on the rise

## .... more results

### ③ Reduced costs

- US\$ 3,000 per kilometre about ¼ of the costs of project-built earth roads (including project costs and the value of self-help labour)

### ③ Expansion of services

- on request of 4 neighbouring districts
- result - improved road surveying and construction in those districts as well



# 3. Analysis of key issues with self-help initiatives for low volume road construction

## Self-help: the issues



## Group Discussion

*For self-help initiatives, discuss*

- 1. Pre-conditions necessary*
- 2. Potentials and limitations*
- 3. Key policy, strategy and economic factors*

## 4. Experiences from Flores

1. Pre-conditions necessary
2. Key policy, strategy and economic factors
3. Potentials and limitations
4. Recommendations for road projects

# 1. Pre-conditions necessary for self-help initiatives

## Village internal factors

- ⊙ Road access is a definite need
  - for the evacuation of cash crops and to make use of trading opportunities
  - feelings of backwardness and isolation further contribute to the need for access

# 1. Pre-conditions necessary for self-help initiatives

## Village internal factors

- ◎ Communities are able and willing
  - to provide self-help labour
  - to demonstrate commitment promoted by established self-help traditions
  - show a high degree of social homogeneity and support from local leaders
- ◎ Technically & socially feasible opportunities for road projects

# 1. Pre-conditions necessary for self-help initiatives

## Village external factors:

- ◎ A basic transport system is in place
  - network of main roads and vehicles
- ◎ Self-help efforts are supported by government attitudes and policies
- ◎ External agencies leave ownership of projects to the communities

# Reflections

- ◎ Self-help achievements are often 'invisible'
  - less glamorous than conventional projects and so underestimated
- ◎ Self-help is a viable option
  - in the face of lack of public funds
  - ... often the **only** option!

# More reflections

- ③ External support affects the commitment of communities
  - encourages and motivates communities
- ③ Low-budget NGOs can support self-help initiatives
  - road construction can be implemented at extremely low project costs
  - ... if local communities are ready to contribute self-help labour



# More reflections ....

## ⊙ Road maintenance is most likely if

- roads are built under self-help schemes
- considered important for the local economy
- responsibility will not be taken over by an external agency

## ⊙ Chances of sustainability high

- communities accepts technology & skills which proved useful

# More reflections ....

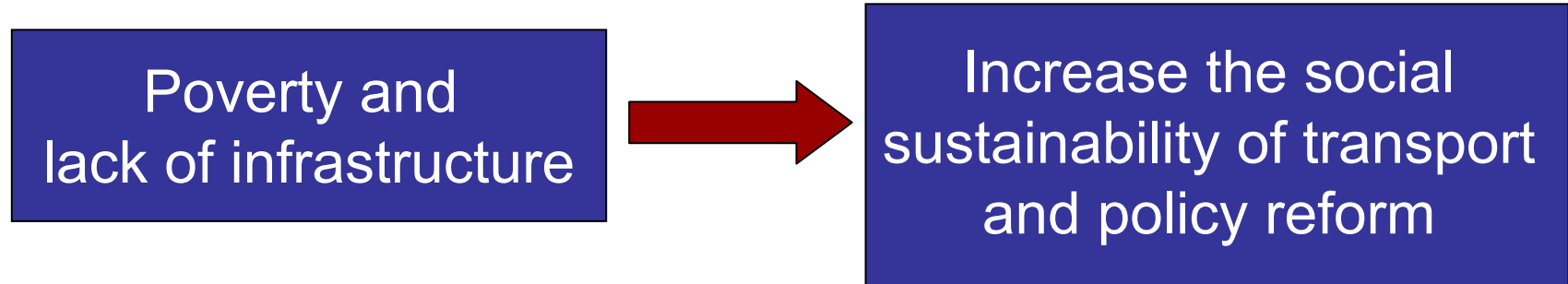
## 🌀 A step towards empowerment

- experience of completing a local access road successfully
- ..... enhances an attitude of self-reliance when facing further challenges in local development

## 🌀 Factors that undermine self-help!

- paid work
- incentives
- the prospect of generous external support

## 2. Key policy, strategy and economic factors



### Key Strategies

- ☉ Mobilisation of local communities
- ☉ Promotion of self-help schemes
  - offer smaller-scale infrastructure
  - provide effective and affordable service
  - offer the only feasible approach at present

# Key principles of economics and rational planning should be observed

- ◎ Focus on 'needs for access' rather than 'needs for mobility'
- ◎ Develop low-cost roads for remote communities
- ◎ Adopt 'phased development'
  - begin with minimal standards to save on construction costs
  - later, as traffic increases - make improvements
  - 'efficient response to effective demand'
  - in tune with community participation through self-help labour

# Key principles of economics and rational planning should be observed

## ③ Invest in projects that give the highest return

- provides a reasonable level of access & mobility for people living along main roads
  - ... without neglecting people living at a distance from the existing road network

### 3. Potential and limitations of self-help initiatives

- ⊙ Potential where it is impossible for governments to meet major needs for motorised access in the foreseeable future
- ⊙ Comparisons between self-help achievements and conventional road construction and the existing road network are misleading
- ⊙ Self-help initiatives vary with the kind and degree of available external support

### 3. Potential and limitations of self-help initiatives

- ⊙ Significance of past achievements should be assessed in local terms only
- ⊙ External support should promote self-help and assess community's commitment & potential for self-help
- ⊙ Statements to support/ deny the potential of self-help must be based on field surveys

## 4. Recommendations for road projects

Low-cost, labour-intensive road projects can support self-help initiatives.

If pre-conditions are favourable, supporting measures =

- ③ Training of project staff
  - participatory road planning, surveying, design
  - construction of ultra-low-cost structures
- ③ Develop & disseminate appropriate low-cost solutions to frequent infrastructure problems
- ③ Offer villages:
  - inclusion of village representatives in training
  - technical advice to the villages' own road projects, checking and correcting planned alignments
  - grant or loan of tools



# More recommendations ...

If pre-conditions for self-help support are sufficient in a country/ region – then set up projects designed to promote self-help in road construction.

## Key principles:

- ③ Project only reacts to requests for support
- ③ Project assists the communities
  - in discussing the purpose
  - possible alternatives of roads, needed inputs, feasibility, etc.
- ③ Project activities only start after a community has proven its willingness and capability to provide voluntary labour
- ③ The community decides on the pace of implementation