

# Rural Transport Training Materials

## Module 5:

### Social and Environmental Issues

Environmental impact assessment  
case study: Mkuze river crossing to  
Phelendaba, South Africa

#### Session 5.4

#### Part 2

Presentation 5.4b



# 1. Introduction

## Learning Objectives

This session enables participants to:

- ③ Examine South Africa's EIA system in design and practice
- ③ Weigh the environmental costs and benefits of a specific road project
- ③ Explore the role of participation in environmental decision making
- ③ Reflect on key lessons learnt and how they might be applied to other settings

# Session Overview

- © Background & South African EIA regulations
- © Background and context to the proposed development
- © Environmental issues
- © Conclusions of EIA

## 2. Background & EIA regulations

- © In South Africa, EIAs are compulsory on development proposals
  - result of 1997 Environmental Conservation Act
- © Applies to construction or upgrading of
  - national roads
  - toll roads
  - provincial, arterial and municipal roads
  - any road in a sensitive area

# Also...

## © South African Constitution

- upholds right of individuals to environment that is not harmful to their health and well-being

## © Environmental Management Act

- seeks to 'provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment'

# South African EIA regulations

## Three major components

### ③ Scoping

- determines scope of assessment
- consultation with 'interested and affected parties'

### ③ Assessment

- explores impact, magnitude, duration and significance

### ③ Decision

- relevant authorities, coordinated by 'lead agent'

# 3. Background & context to proposed development

- ◎ Last gravel section of tourist access from Hluhluwe to Mozambique border
- ◎ Proposal
  - tar existing road
  - construct new crossing over bottom of Mozi Pan
  - upgrade bridge at lower Mkuze Crossing
  - upgrade the crossing over Mseleni River

# Context

Biophysical environment

Development

Social environment



# Biophysical environment

## © Biodiversity 'hot spot'

- many lakes (e.g. Lake St. Lucia)
- many endemic plant species
- 112 reptile species (20 inadequately protected, 7 threatened with extinction)
- 102 mammal species
- 462 bird species (47 of which need protection)

# Development

- ◎ Project area part of Spatial Development Initiative (SDI)
  - programme to encourage rapid investment in designated areas
- ◎ Area of high eco-tourism potential
- ◎ Road upgrade provides infrastructure to
  - unlock area's economic potential
  - improve access for local people, tourists and commercial activities
  - effect a direct link between northern KwaZulu-Natal and Mozambique

# Social environment

- © Maputaland among poorest and underdeveloped areas of South Africa
  - 38% unemployment
  - most rely on subsistence agriculture
- © Tourism has potential to increase development

## 4. Environmental issues

Two alternative routes for the road:

1. Existing (eastern) alignment and upgrading Mozi Swamp crossing
2. Alternative (western) alignment

# Eastern (existing) alignment

## ⊙ Benefits

- roadway already cleared
- shorter and cheaper

## ⊙ Negative impacts

- passes through Sodwana State Forest thereby creating hazards for game and hazards for traffic

# Upgrading Mozi Swamp crossing

## © Benefits

- removal of barriers to fish migration
- improved access to Kwa-Jobe
- increased frequency of water exchange
- reduced salinity in Lake St. Lucia
- improved fish yields

## © Negative impacts

- constricting water movements
- possible embankment collapse in floods
- reduction in hydrologic pressure on Mkhuze Swamp during floods

# Western (alternative) alignment

- ◎ Proposed by KwaZulu-Natal Nature Conservation Service
- ◎ Benefits
  - expanded width of migration corridor
  - no need to cross Mozi Swamp
  - easier access for eco-tourists to Mozi and Yenguenie Pans
  - avoids Sodwana State Forest
  - provides better access to poverty stricken Kwa-Jobe Tribal authority
- ◎ Negative impacts
  - need to clear 140 HA of mature sand forest
  - easier access to woodcutters → potential deforestation

Weighing the evidence:  
which road alignment  
should be selected?



## Group Activity

*Given the benefits and negative impacts outlined above, which road alignment should be selected and why?*



# 5. Conclusions of EIA

- ◎ Existing (eastern) alignment was selected
- ◎ Due to:
  - environmental considerations
  - vehement opposition to alternative route by tribal authorities
- ◎ Recommended stringent Environmental Management Programme (EMP)
  - to mitigate negative impact of upgrade
  - especially for Mozi Swamp crossing

- ③ Highlights complexity of EIA in terms of dynamics of social and natural systems
- ③ Indicates importance of public participation
- ③ Extended scoping study (not full EIA) was adequate for decision-making
  - EIA regulations therefore ‘development friendly’ without compromising environmental protection
- ③ Indicates types of issues typical of road building in rural and ecologically sensitive setting
- ③ Emphasises importance of EMP to ensure that EIA recommendations put into practise