



Module 5: Social and Environmental Issues

Women and rural transport in development

Session: 5.2

Part 1

Presentation: 5.2a

The Training Modules

Module 1. Policies and Strategies

Module 2. Planning, Design, Appraisal and Implementation

Module 3. Management and Financing

Module 4. Rural Mobility

This Module

Module 5. Social and Environmental Issues

Module 5: Social and Environmental Issues

Session 5.1 Social benefits of rural transport

This session

Session 5.2 Women and rural transport in Africa and Asia

Session 5.3 Transport and sustainable rural livelihoods

Session 5.4 Environmental impact assessment and management

Session 5.5 Concepts of rural transport surveys

Session 5.6 Role play on rural transport

1. Introduction

Learning Objectives

By the end of the session participants will be able to: -

- ③ Analyse the effect of transport issues on women's main activities
- ③ Develop recommendations for reducing women's transport burden
- ③ Describe strategies for gender based interventions at macro, meso and project levels

Session Overview

- ◎ Background and rationale from a World Bank perspective
- ◎ Analysis of women's activities and transport
- ◎ Reducing women's transport burden
- ◎ Effective strategies for advocating gender based transport interventions

2. Background and rationale from World Bank perspective

The failure of past rural transport interventions

© Women did not benefit from past initiatives because they

- **ignored gender relations** at the household and community level
 - men tended to monopolise IMTs intended to benefit women
 - men refused to allow their wives to use IMTs if they were seen as a threat to the man's position in the household

Gender-analysis, monitoring, evaluation

- ③ Helps identify the economic and social divisions of labour (household, community)
- ③ Recognises cultural, economic and social factors constraining women's access to economic opportunities
- ③ Helps identify intervention strategies more likely to gain men's support

Gender roles

© Women's roles include

- productive, reproductive and community management

➤ ... so they have numerous, diverse travel and transport needs

© Women suffer the physical and health burdens of headloading most of the fuel, water and produce of the household

Gender and transport

- © Cultural traditions and male control of household resources mean
 - women have less access to non-motorised and motorised transport than men
- © ‘multi-tasking’, poor service access, poor vehicle access
 - severely limits the **time available** to women for other activities
 - .. and the **timeliness** for carrying out activities

Policy responsive to women's needs

- ③ Requires more **knowledge** of the effect of transport burden on
 - women's availability for employment, access to markets and social services
 - economic losses
- ③ Requires a **structured** approach to
 - understand women's transport needs
 - identify instruments to address these needs
 - analyse costs and benefits of those instruments
 - establish an appropriate policy framework

Time and transport

- ◎ Most transport projects use **cost-benefit analysis**
 - undervalue the transport needs of women because they inadequately reflect the **opportunity cost of their time**
- ◎ Analytical approaches that put a **value on transport time**
 - are difficult to apply in developing countries with a high proportion of subsistence employment
- ◎ A time saving approach should take into account
 - value of time saved in carrying of water and fuel wood, and domestic activities

Evaluation of transport projects often exclude ...

🌀 **Trade offs** between the private and social benefits of improved transport

- access to health and education services
- economic and social empowerment of women
- social inclusion of marginal rural populations

🌀 **Impact** of better transport on women's

- labour participation and wage rates
- social standing and empowerment
- ... and indirect effect on family health

Are gender focussed strategies and interventions worth the cost?

③ Women have worse/ more expensive transport than men

- may be the result of more general gender inequality
 - access to the household budget, rather than biases in transport service provision

③ Transport interventions CAN be designed to help the most vulnerable, including women

③ Design process in rural road projects should

- **prioritise** the transport needs of rural women
- identify the potential for **time and cost savings** of appropriate interventions

3. Analysis of women's activities and transport

Agricultural activities of women and transport

Domestic activities of women and transport

Marketing activities of women and transport

Non-agricultural income earning activities and transport

Women's activities and transport



Group Discussion

How does women's access to transport affect their ability to carry out these activities?

- A. Agricultural*
- B. Domestic*
- C. Marketing*
- D. Non-agricultural income earning*

Agricultural activities of women and transport

- ③ Rural household labour has to meet **time allocation requirements**, e.g. agriculture
 - women: subsistence crops
 - men: cash crops
- ③ Division of labour assigns
 - heavy physical activities to men
 - time-consuming activities to women
- ③ Women have limited
 - control over financial resources
 - limited incentives to participate in many kinds of agricultural production

Agricultural activities of women and transport

⌚ **Seasonal variations** in labour demand affect time allocation of household members

⌚ **Kenya survey of farm labour**

- women spend 4.5 hours/day in the low season
- 6 - 9 hours/day in the peak season
- hours women spent on other activities increased in low season - water and fuel wood collection

Agricultural activities of women and transport

⊙ Transport **requirements** for agriculture influenced by

- distances between fields: 1 - 20km
- transport means used
- loads carried: headload 20kg per trip
- topography
- travel speed
- health status of travelling person

Agricultural activities of women and transport

- ◎ Women tend to make **more trips** than men
 - combine agricultural activities with domestic responsibilities (preparing meals, collecting water, child-care)
- ◎ Location of fields
 - cash crops tend to be closer to the homestead than food crops
 - women tend to travel further than men

Agricultural activities of women and transport

- ③ Women's **limited access** to motorised transport for marketing
 - added burden - longer trips
 - post-harvest losses
- ③ Access to simple equipment may **double the volume** of produce women can take to market
 - wheel-barrow, bicycle

Agricultural activities of women and transport

- ③ **Path and track problems** make travel and transport by walking and headloading
 - arduous, time-consuming, dangerous
 - inefficient due to the limited load being carried

Domestic activities of women and transport

- ③ Women combine farm and household activities, and have limited access to transport
 - limits the degree to which they can engage in agriculture
- ③ Domestic activities:
 - collection of water and firewood
 - preparation and cooking of meals
 - food processing and storage
 - child rearing
 - cleaning and washing
 - household purchases and errands

Domestic activities of women and transport

© Conventional economic analysis

- **failed to capture** the high economic & social value of domestic activities
- **grossly underestimated** role of domestic work in livelihoods of households

© Women perform **80%** of domestic work

- ... so bear the brunt of corresponding transport tasks

Domestic activities of women and transport

- ③ Transport tasks for domestic work are almost **inflexible**
- ③ **Timing** of different transport requirements means
 - a choice has to be made between conflicting responsibilities, such as
 - immediate need for water or longer term need for food production
- ③ **Zambia and Tanzania**
 - **90%** of all energy spend on load carrying was for **water, firewood, food for grinding**

Domestic activities of women and transport

A closer look at:

Fuelwood
collection

Water collection

Food processing
and preparation

Childcare

Fuelwood collection

© Women provide 90% of wood that is consumed by the household

- but only 70% of wood collected for sale

© Firewood

- transported by headloading a few times a week



Credit: TRL Limited

Fuel wood collection

⊙ Collecting firewood

- becoming more arduous & time consuming
 - depletion of firewood reserves
 - women have to travel further
 - impacts on family nutrition and health - fewer cooked meals

⊙ Other energy sources of energy tend to be

- too expensive or unavailable

Fuel wood collection

- ◎ Transport burden of firewood collection also depends on the location of the source
 - firewood collection may be combined with trips for agricultural purposes (if appropriate)
- ◎ Substitution of wood sources with agricultural residues - cow dung and cassava stalk
 - cultivatable land is being denied valuable fertiliser
 - reducing the potential for surplus crop production

Water collection

☉ Travel time for water collection

- 2 - 4 hours per day
- excluding the time spent queuing at the source
- significant increase in the number of trips for water collection in the wet season

Food processing & preparation

◎ **Trips** to grinding mill/ hammer mill to process maize, cassava, wheat, millet

- usually **by foot**

◎ **Tanzania studies**

- 2 – 8 trips to grinding mill/month
- overall distance 3 - 9km
- average weight 18kg/trip

◎ High transport requirements =

- women served fewer cooked meals per day

Childcare

③ **Inefficiency** of 'passenger traffic' on women's productivity

- **weight of a child goes unrecorded**

- women carrying loads with additional weight
- further increases travel time
- health implications of overloading & risk of injury

③ **Time** used taking children to school and health clinics

③ Women may travel home from the farm or market at midday to feed children

- travel burden and **complexities of multi-tasking**

Marketing activities of women and transport

🌀 Sub-Saharan Africa

- majority **trips** to market - by **men**
- **women** play a major role in **marketing transport**
 - especially West Africa: **4 out of 5 women** engage in crop marketing

🌀 Women tend not to be involved in marketing initiatives

- if transport infrastructure & means is inefficient

🌀 South East Asia (+ India)

- rural **women travel extensively** outside the village
- major responsibility for marketing

Marketing activities of women and transport

☉ Men

- tend to capture all **external contacts**
- responsibility for marketing activities **outside** the local sphere
- **exception of West Africa - Nigeria**, where women dominate marketing and transport

☉ Women

- trip rates = high
- distances = shorter
- travel times = shorter

.... than those of men

Marketing activities of women and transport

- © Farm to market distances vary according to the **permanent** or **periodic** character of markets
 - **90%** of rural households travel **10-13km** to reach a permanent market
 - except coastal areas

Non-agricultural income earning activities and transport

③ Increasing **landlessness**, plus **economic** and **demographic** forces

- created need for non-agricultural employment in rural areas
- **women particularly vulnerable** to displacement from land by commercialisation of agriculture

③ Increasing non-agricultural occupations for women (low labour demands for agriculture):

- more **female headed households (22%)** in sub-Saharan Africa
- need for **surplus income** for basic household items
- ... and school and health centre admission fees

Non-agricultural income earning activities and transport

☉ Majority of income earning activities carried out by women require

- significant **inputs** of water and firewood
- **time** consuming due to transport involved in fetching these resources

☉ In sub-Saharan Africa

- fuel **availability** and distance to fuelwood sources affect women's ability to earn income directly

Non-agricultural income earning activities and transport

Tanzania study

- 73% of women studied brewed local beer
- of these 75% said brewing was main source of income
- each preparation of beer requires the same firewood as the weekly requirement for cooking
 - = 2 extra trips per week to collect wood
 - = 9.6 hours/week extra added to women's time budgets

Addressing women's transport issues



Group Discussion

In what ways might the issues facing women with regard to transport be addressed?

4. Reducing women's transport burden

Transport interventions

Non-transport interventions

Transport interventions

☉ Traditional means of transport - headloading

- huge direct costs
 - not taken into consideration in economic analysis
- enormous indirect costs
 - diversion of time and effort from productive work, ill-health

☉ Requires a strategy with appropriate interventions

- performance matches women's needs
- cost is related to income
- can generate income
- can be maintained locally

Transport interventions

🌀 Intermediate Means of Transport (IMTs)

- virtually the only operable modes of transport in many rural areas
- though not a universal panacea!
- innovations in IMTs can be far reaching
- adoption often hindered by the absence of an effective demand and supply relationship
- e.g. bicycles with carriers, ox carts, pack donkeys
- most carts & bicycles owned and used by men
- few IMTs used by women (Sub Sahara Africa)

Transport interventions

- ◎ Rural women can collect water and fuelwood more effectively by **bicycle**
- ◎ **Motorised IMTs** not widely adopted in Africa
- ◎ Power tillers most successful
 - in areas of irrigated rice production
 - high population density
 - close to towns - for maintenance
- ◎ Other motorised IMTs
 - most successful in peri-urban areas with economic demand & supporting infrastructure
 - used almost exclusively by men

Transport interventions

- ☉ Adoption of IMTs (especially Africa) is **hampered by**
- lower economic activity
 - lower availability of certain materials
 - fewer cultural exchanges
 - smaller information flows
 - high seasonality of cash flows and transport demand
 - concentration on traditional economic uses
 - lack of credit for initial capital outlay
 - suppliers reluctant to invest in IMTs if they feel demand is low

Transport interventions

- © Rural development programmes need to create conditions that **favour IMT adoption**
 - viable support services near local markets
 - where women's needs can be directly addressed

Transport interventions

© Most IMTs

- owned and used by men
- initiatives determined by and designed for men
- major beneficiaries are men

© Women are marginalised from use of IMTs

- lack of purchasing power relative to men
- cultural issues e.g. bicycles, ox carts considered 'male' domains
- less access to information, capital, credit, cash incomes, profitable transport activities
- viewpoints less heard
- few transport projects incorporated gender analysis in designing IMT components

Transport interventions

- © Integrating gender into IMT strategies requires ways of
- identifying gender differences in transport needs and priorities
 - addressing gender inequalities in transport interventions
 - including women's perspectives in decision making processes – policies, IMT initiatives
 - supporting low cost manufacture, marketing, distribution systems
 - addressing supply issues - credit, subsidies
 - developing income generation schemes e.g., labour-intensive construction methods

Transport interventions

- ⦿ Differences in the design requirements of IMTs for women and men
- ⦿ Market for IMTs was dominated by sales to men
- ⦿ Few economic incentives to design IMTs for women
- ⦿ IMT programmes need to create a ‘critical mass’ of women users to justify the manufacture and sale of suitable IMT designs

Transport interventions

- ◎ Transport planners and decision makers
 - potential for women transport contractors
- ◎ **Senegal & Niger** - biases against women entrepreneurs
 - small women-owned firms had difficulty raising the deposit when bidding for contracts
 - in labour-intensive construction & maintenance - women tend to be excluded from employment opportunities (cultural inappropriateness, other responsibilities)
- ◎ To increase **opportunities** for women
 - ensure a proportion of the labour force for road maintenance is women (Zambia, Lesotho)

Non-transport interventions

③ Magnitude of the transport task

- may have little to do with the direct transport constraints
- **access** and **availability** of the goods to be transported - water, fuel, crop processing

③ Interventions to relieve transport problems include equipment/technologies to

- process food crops
- collect and store water
- reduce the amount of firewood and charcoal needed for cooking

Non-transport interventions

- ③ Unlikely that non-transport interventions will solve all women's transport problems
- ③ Rural planners should focus resources in optimising access to basic facilities and services
 - water wells, woodlots, schools and health centres to reduce the time and energy expended by women on a daily basis
- ③ Requires
 - thorough consultation with service users
 - liaison with other sectors - transport

5. Effective strategies for advocating gender based transport interventions

National policy level

- ③ Gender capacity building in ministries to
 - ensure gender equality in hiring and promotion
 - develop expertise in gender analysis and participatory planning
- ③ Economic and transport planning tools
 - value women's economic contribution and time

National policy level

- ◎ Co-ordination between sectoral agencies
 - education, health, agriculture
- ◎ Gender-sensitive approaches incorporated into national Poverty Reduction Strategy Papers

Regional and district level

③ Establish inter-agency co-ordinating committees

- Rural Travel and Transport Programme (RTTP)
 - how to finance transport services for education, health and economic development which involve different agencies

③ Promotion of gender-sensitive participatory planning and consultations

Project Level

- ◎ Participation by women in the planning and design of interventions
- ◎ The Action-Research Programme (ARP)
 - initiated in 1998 – part of Government of Tanzania's *Village Travel & Transport Programme*
 - example of a project that advocates community empowerment for planning, self organisation and implementation of appropriate interventions
 - promotes gender mainstreaming as a pre-requisite
 - ARP was successful in stimulating self development of vulnerable groups, including women

Approaches for women's involvement in transport programmes

③ Better identification of the problem

- gender disaggregated data and research - rural transport problems, needs and priorities

③ More interventions

- appropriately designed and disseminated to address gender inequalities

③ Greater understanding of impact of transport programmes

- little evidence of impact on women's transport burden, lives and livelihoods.

Approaches for women's involvement in transport programmes

Increased women's participation

- in decision-making about transport policies, priorities and investments at national level, decentralised (district) level, within communities
- without such participation - difficult to see how rural transport strategies can address gender issues with practical implications for the lives of women

Concluding Remarks

- ③ Continued gender inequality in transport
- ③ Women spend more time and energy on transport tasks than men
- ③ Transport interventions, including IMTs have favoured men more than women
- ③ Transport programmes need to address these inequalities
- ③ Effective advocacy requires awareness raising amongst policy makers

For more information on gender and transport issues: World Bank Gender and Transport Thematic Group (GTTG) website at:

[www. worldbank.org/gender/transport](http://www.worldbank.org/gender/transport)