



# Appropriate transport options for the rural communities in post disaster situations



The tsunami caused serious damage to rural roads, including feeder roads, bridges, culverts, footbridges and access roads, in the Western, Southern, Eastern and Northern Provinces. Difficulty of access to some of the affected areas delayed rehabilitation activities including urgent construction work and distribution of relief and humanitarian assistance. This followed the destruction of linkages with service centres that served the coastal area communities. A total of 13 districts suffered the effects of the tidal waves. Transport undoubtedly plays a positive role in the overall development of the affected areas. Re-building of rural regions has to be a major planning issue as a large proportion of the population still live in rural areas that are

plagued by inadequate services and facilities and limited scope for improving living standards. Many research studies have well established the potential role of rural transport infrastructure including roads, bridges & culverts in facilitating flows of people, goods, services and information to villages to promote development.

In response to this situation, ITDG - South Asia has already commenced rebuilding the transport sector to accommodate the country's diverse and urgent needs. Our rebuilding activities on transport infrastructure have been focussed mainly on providing community-centred transport infrastructure and modes to affected communities in the East and the South. Further, we support rebuilding plans and implementation programmes to incorporate appropriate transport options for poor communities.

## Issues involving rebuilding

Both local and international organizations are currently involved in reconstruction and rehabilitation of affected rural transport infrastructure. However, there are no acceptable technical standards or approved methodology in this

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otherwise laudable effort. Community's participation is very limited in this process which is inevitable.

## What can Practical Action offer...

### Our Experience

Over a decade's experience in the area of rural transport has earned Practical Action credibility locally and globally in transport planning, implementation and research spheres.

- We have worked in more than 70 sites in Sri Lanka's poorest district, bringing direct benefits to over 100,000 people. We have also trained over 600 village women and men to work as community leaders in earth/gravel road construction, and nearly 100 technical officers in various organisations including technical officers of local government authorities.
- Innovative solutions in the form of intermediate modes of transport, and community managed transport systems have also been used to help meet the mobility needs of the communities. These intermediate modes of transport includes (both motorized and non-motorized) the introduction of different types of bicycle trailers which are adapted to meet the specific needs of the user, such as people with disabilities.

Since the early 1990s ITDG- South Asia has been involved with Sri Lanka's transport sector. Its work in this area covers research and specific needs and features of rural transport at a time when it was not a significant concern of the transport authorities. Practical Action (ITDG) was responsible in bringing the rural transport issue to development planning forums, identifying appropriate approaches/technologies to meet rural transport requirements. We initiated, demonstrated and piloted such mechanism/systems and influenced policy and practices to support and mainstream such mechanisms. Our approach to community development is essentially participatory and builds up on the strengths of the communities we work with. In doing so we adopt a holistic approach and identifies the key stake holders linked to development issues to which the communities give priority. An integral part of this process is to promote strong links and networking among key stakeholders at both micro and macro levels for sustaining their development initiatives.

- We have experience in engaging people at the heart of post-disaster (tsunami) rebuilding efforts.
- Community-based approaches to plan the reconstruction of damaged rural roads and related structures.
- Introduction of locally available road building-material.

## Information and knowledge



- Appropriate technology of constructing cost-effective rural roads that require small capital. Such roads depend less on heavy machinery. They can be maintained as and when minor damages occur.
- Cost-effective, easy-to-use equipment and tools that can be manufactured locally. (e.g. camber boards, ranging rods, boning rods, spirit levels, simple compacting equipment etc.)
- Database on damaged assessment to the rural roads sector.
- Training manual on community based road construction for technical experts and the community.

**People centred processes** - mechanisms to include those who are unheard and ignored are at the heart of our approach when developing technologies.

(Practical Action develops any project by planning with people using community consultative processes. E.g. selection of the sites, involving the community in planning, monitoring the construction processes, and sharing the project costs and contribution to maintain the road to use).



The approach adopted by ITDG-South Asia involves all stakeholders, the rural community in the decision making in all aspects of the project to ensure sustainability.

## Cost effective transport solutions

Practical Action can use its experience and working relationships with communities and stakeholders in the transport sector to provide assistance to transport initiatives. We also provide cost-effective transport solutions with maximum community participation.

### Rural Transport Infrastructure

- Roads
- Pipe culverts, Box culverts, Stone culverts,
- Timber culverts, Masonry arch culverts
- Drifts or Irish bridges
- Vented Drifts
- Small Bridges
- Foot bridges
- Suspension bridges
- Retaining walls
- Footpaths
- Water ways

### Other transport solutions

- Bicycle based transport modes
- Community managed transport system
- Motor cycle trailers
- Non transport interventions

## Training & capacity building

Transferring community based road construction approach through this process gives a good opportunity for sharing skills.



### Practical Action can undertake training on

- Community based rural road
- Construction & maintenance technology
- Social mobilization of community based Road construction.

### Target groups for training:

- Technical training for engineers, technical officers & village leaders
- Social mobilisation training for field level development workers

The course content focused on areas such as the concept of community managed village road construction and maintenance, available options and choice of technology, basic principles in transport infrastructure designing, management and reporting systems of community based construction programmes, use of appropriate tools and equipment, construction steps of community based road constructions, social aspects in rural road construction, community participation and social mobilising, leadership and motivation, existing situation/experiences, lessons, learnt in other countries and practical training at sites.

Training schedules are drawn up as and when requests are made for such – 25 participants for technical training (engineers and technical officers) 30 participants for training of community/village leaders



## Statement of principles

### An outline of Practical Action's core values and aspirations guiding reconstruction

#### Introduction

All human activity is guided by a set of values and beliefs. Practical Action respects the diversity of human belief systems – social and religious – but has a set of principles underpinning all of its work. This section outlines the values and basic principles underlying the approaches and practices Practical Action adopts and encourages others to replicate.

#### Putting people at the heart of reconstruction

Technology options adopted in reconstruction should be people-centred. Technologies should concentrate on;

- what matters most to the people with whom we work,
- respects their rights, and
- supports their own efforts to improve the quality of their lives.

#### Building in partnership

Poor people work hard to find their own solutions to poverty. In the aftermath of the tsunami it is evident that all sectors of society have suffered from the loss of life and possessions yet the economically disadvantaged are perhaps most vulnerable.

Reconstruction efforts should; aim to give them access to information, knowledge and options - to identify their priorities and makes choices for themselves.

#### Respecting diversity

Reconstruction efforts should respect basic human rights regardless of differences in gender, ethnicity, caste, livelihood, religion or physical ability. The practical expression of this respect should be evident in the dialogue that takes place to inform planning and resource allocation, in designing and delivering the services that will contribute to rebuilding lives and livelihoods.

#### Showing concern for future generations

Reconstruction efforts and the related technology choices should aim to be sustainable - economically, environmentally, socially and institutionally.