



Moving Mountains

*This year the **International Year of the Mountains** has focused global attention on the specific challenges faced by mountain communities. Problems of access and mobility are so integral to mountain regions that they are reflected in discussions from many sectors. IFRTD welcomes the proliferation of these issues into wider development debate but feels that they are so fundamental to mountain livelihoods that they deserve their own platform. As our contribution to bridging this gap Forum News presents a selection of short articles to give a flavour of the issues that arise when we focus on mountain mobility.*



Paul Harris

Pausing for breath, Nepal

On Unbalanced Ground

For mountain communities in the Andean region of Peru, access to basic services and utilities is constrained by geography and a lack of appropriate transport services. Peru's Rural Roads programme has provided the physical means for greater mobility, but has the significance of its impact upon women's mobility been reduced by its failure to address Andean gender roles as a key factor in their isolation?

Upon completion of the first phase of the Rural Roads Programme a study was made of three mountain communities; Sócotá (Cutervo Province, Cajamarca), Hampatura (Yanaoca Province, Cuzco) and Huallhua (Tayacaja Province, Huancavelica), and the extent to which rehabilitated roads and paths have provided women with the resources to meet their practical and social needs. The study took into account the multiple economic and social responsibilities women bear; production, reproduction, household management, community management and maintenance of social infrastructure.

The infrastructure improvements have reduced the travel time necessary for accessing basic services such as health and education, however other factors such as the price of medicines, the lack of priority given to female health and education, and male control of household cash resources have remained a barrier to women utilising these services. The rehabilitated roads have facilitated an increase in the number of women going to markets but have also increased women's productive tasks, with the number of women stockpiling produce now similar to men. Their ability to access distant markets is still hampered by the scarcity of transport services, perishable produce, the issue of child-

care and time, as women cannot afford to spend lengths of time away from home.

Traditionally men are migrant workers but this tendency is slowly changing with 15% more women migrating to look for work. The economic activities of these young women, usually single, are being recognised and have afforded them some social status, although still relatively less than the men.

In some instances improved mobility has encouraged men to assume some traditionally female roles, for example in Huancavelica a few men are attending family planning programmes and taking children to health services.

Increasing women's mobility has the potential to empower them to take greater control of their lives by increasing their access to markets, their exposure to education, training and information, and by providing more opportunities for their political participation. However, as the experience of the Peruvian Rural Roads programme has demonstrated, improvements to infrastructure alone, do not necessarily improve mobility.

Efficient and equitable transport solutions in the mountains, as in the plains, require a greater understanding of the gendered nature of mountain livelihoods, if women are to be encouraged to avail themselves of the opportunities now opening up for them.

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Human Portering – Livelihood or Necessity

"Today, hundreds of porters walk to Namche every week from the end of the bus road. It takes them seven days. They are small men, thin, muscular and mostly young. They typically carry fifty to sixty kilos (110 to 132 pounds) in baskets on their backs. Some, stronger than the rest, carry 150 pounds. The path is mostly steeply uphill or steeply down. Each basket has a strap – or tump-line – that comes across the forehead and takes the weight. It requires practice to carry that way, and strong neck muscles, but they say it's easier on the back. Each man has a short, thick walking stick, shaped like a T. The stick helps with balance, particularly downhill. More importantly, on the uphills a porter stops every few minutes and thrusts the stick under his basket to take the weight. Then he stands silently, recovering his breath."

(Jonathan Neale, *Tigers of the Snow*, Little Brown, 2002)

Despite the rapid extension of rural roads over the last decade or so, porters are still in business and portering continues to provide a significant source of income for the poor in the

mountain and hill regions of Nepal.

To work like this, carrying heavy loads up and down steep and often poorly maintained mountain trails and tracks, is something one does only out of necessity. Sherpa porters talk of dhukpa, and Nepalis of dhuka, it means hardship, or suffering, and

"Those kind of people haven't benefited at all [from the road]. Before they used to carry our goods to and from Sankhu and earn wages, but now they can't get that work so people are out migrating to cities or going higher up to Helambu in search of work. So their economic condition or the living standard has gone down."

Ramji, Age 35 Nepal
www.mountainvoices.org

is often used to describe portering. The men and women who carry loads for others are well aware of the physical toll this activity takes on the body, and significantly the majority of 'long-haul' porters are young men. It is also significant that it is those who have limited access to land for

farming, and few opportunities for other sources of income, whose livelihoods depend most heavily on portering.

More attention to the upkeep of the main portering trails by the District and Village Development Committees, a greater interest in the development of rope-ways by development agencies (a rope-way across a narrow gorge or valley can save enormous amounts of human effort, time and cost), and efforts by trades unions and NGOs to promote better pay and working conditions for long-haul porters, could all increase the effectiveness, and reduce the drudgery and the dhuka, of human portering in the hill and mountain regions of Nepal. The creation of alternative local sources of income will also, both in the short and long term, mean fewer men and women available for portering and so increase the rate of payment and returns to this extraordinarily demanding way of making a living.

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Stone Age or New Age?

Stone age technology still used in the English Lake district has now been exported to rural Africa. Farm Africa, a British NGO working in Tanzania's Rift Valley, is trying to reverse the environmental degradation found on the Dareda Escarpment, 200km south west of Arusha.

Since the Tanzanian policy of 'Villagisation' in the 1970's, overgrazing and the scramble for firewood and building materials, has led to extensive deforestation of the hillside. The resultant soil erosion has made footpaths extremely dangerous with deepened ruts and an unstable surface. Particularly in the rainy season, paths are too slippery to be used safely. The vehicle road connecting local villages takes a 10km detour to ascend the escarpment and although public transport does exist, the majority of villagers cannot afford it and must rely upon the footpaths for the quickest route to markets, health care, church or other destinations. Villagers voiced

IRAP – a Good Planning Tool for Mountain Communities

The Advisory Support, Information Services and Training in Asia-Pacific (ASIST-AP) programme of the International Labour Organisation (ILO) aims to maximize the impact of investments in infrastructure in terms of poverty reduction and employment creation. Development efforts to reduce poverty in mountain regions often include physical infrastructure and accessibility components. ASIST-AP works in 10 countries many of which have mountainous regions such as Laos, Vietnam, Philippines and Nepal.

One instrument introduced by ASIST-AP for infrastructure development and maintenance is the Integrated Rural Accessibility Planning (IRAP) tool, which is used at local government or community level to, in a participatory manner, identify and prioritize access interventions which are based on the real needs and priorities of local communities.

The IRAP planning tool was based on work on rural transport planning carried out in the early 90s in three mountain provinces of the

Philippines, in connection with EU financed Integrated Area Development Projects. It has since been applied in several mountain districts across the region, and was then adapted for use in rolling and plain areas.

Interestingly, the tool is more easily applicable in mountain areas due to specific demographic and topographic characteristics. The identification of access interventions is based on population concentrations, distances and travel characteristics. These variables are more easily quantifiable in mountainous areas due to the sparsely distributed but concentrated communities, few transport corridors and low density of service centers.

Mountain people have similar access needs to their counterparts in the plains, as everyone needs access to water, energy, food, education, health, markets, income earning opportunities etc. regardless of the terrain they live in. Access problems however differ; as data from different IRAP household and village surveys in The Philippines and Laos show. Improving access in mountains is often more expensive

and less cost efficient than in the plains, however from an equity point of view we cannot just decide to ignore access improvements in mountain areas. It is equally important to emphasize that different types of terrain may require different strategies for solving a unique access problem. Road networks, for example, are and will remain limited in mountainous areas, and alternative solutions need to be found. Solutions to access problems in mountain areas could include specific interventions such as improved trails, footbridges, ropeways, animal transport and smaller but more dispersed service centers.

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concerns about the condition of these footpaths that provide such a vital link between their communities.

Assisted by Farm Africa, the community of Bermi village established an Escarpment Committee to co-ordinate their response to the problem. Grazing was banned and stringent byelaws facilitated regeneration, but still the paths remained a hazard and restricted the mobility of the community.

Meanwhile in the UK, the National Trust (Europe's largest and oldest conservation charity) still employ simple 'stone age' techniques to alleviate path erosion. Their methods have been in use for over 2000 years, require no special tools, are long lasting and easy to maintain. Farm Africa commissioned a consultant to set about transferring these skills to the communities of the Dareda escarpment. Rotating work groups arranged through the escarpment committee, ensured that the skills were spread as widely as possible throughout the communities. Three techniques; stone drains, stone paths, and gully revetement walls, proved to be particularly useful.

Following the path improvements villagers are now able to visit relatives in nearby villages, stretcher bearers transport patients quickly and safely to the Dareda Mission hospital at the foot of the escarpment, and the transportation of goods to and from markets and trading centres is much easier. Residents have unanimously announced the footpaths safe for the elderly and infirm and farmers feel that the risk of flooding is considerably reduced at the escarpment base.

This 'stone-age' approach is suitable for several reasons. It is low cost, easy to maintain and provides a long-term solution to a variety of erosion problems. It can be adapted to almost any set of circumstances from National Parks to isolated villages.

To find out more about using stone-age technology for future solutions please contact:

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The Road to Health?

Faced with low life expectancy, high infant, child and maternal mortality, and a high population growth rate, the government of Nepal has, in recent decades, prioritised road construction as a means to improve the access of rural populations to bio-medical health services. While an overall increase in the use of regional health and family planning facilities has followed in areas provisioned with roads, this trend has varied markedly between communities.

The use of motorised transport to access health services differs widely by ethnicity and caste, economic status and gender. In hill regions, cash-poor subsistence farmers, and women in particular, are least able to afford transport services and take advantage of the shrinkage in distance between their communities and health outlets. They are also least well provisioned with health facilities and in many areas, government health posts offer the only

allopathic medical support at local level. These generally provide poor quality services, characterised by inadequate staffing and supplies. Family planning and primary health care delivery are further compromised by the superior manner in which higher caste, often male, health workers relate to the gender, educational and social status of clients. For overburdened women there is little incentive to walk for hours to health posts that fail to meet their health and contraceptive needs.

While road provision potentially improves accessibility for mobile community health workers, they are often reluctant to make off-road journeys on foot to reach hill and mountain communities. When they do, the chronic communication problems attached to social and cultural disparities hamper dialogue between client and provider, and thwart outreach services.

Transport is just a single component in the complexity of issues surrounding the accessibility of health and reproductive services in rural Nepal. Efforts are called for to increase gender, cultural and social sensitivity among existing health service providers, to more effectively meet the needs of all members of society. Disadvantaged groups, and women in particular, need to be encouraged into active roles within the health professions, prerequisites of which are interventions toward poverty alleviation and education. In so doing, greater equity in access to health care and wider inclusion in the development process might be more effectively achieved.

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Animal Power Advantage

In mountainous areas, animal power provides an invaluable and affordable option for personal mobility and local transportation of goods. Mountain communities are often connected to markets, health centres, schools and government services by narrow tracks on which horses, mules, donkeys, yaks, llamas and other animals can carry loads or be ridden.

Animal power, a natural and renewable energy source, has many advantages. It is widely available in mountainous regions, can help to develop local trade, is labour intensive, provides local employment and is generally affordable by rural communities. Animals consume local feed, reproduce themselves, contribute organic manure and are ecologically sustainable. Draft animals cause less pollution and environmental damage than motorised alternatives, which is especially important in managed forests and conservation areas.

Government officials and planners seldom consider the importance of animal power in mountain regions. The topic is usually omitted from their training, and they may be unaware of the key issues. There is clearly a need to create awareness of the benefits and technological

possibilities of maintaining or expanding the use of transport animals in addition to motorised transport systems.

For example, pack saddle technology can be simple, good designs protect the spine, improve efficiency and avoid animal suffering. In some areas people overload animals, in which

"It is donkeys that transport [the farmers] products, like Irish potatoes, vegetables, maize from the mountain, down the slopes.. donkeys are a common means of transport since our roads are in bad condition. Those sides are rocky and mountainous and the Matatu people can not reach there."

Lois, Kenya.

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case participative programmes of education, supported by legislation and enforcement, are required. Cart technology is often overlooked in mountain areas, where riding and packing are more important. However, carts (with good brakes) can provide valuable additional carrying capacity for on-farm and village-to-main-road transport. Cutting across all animal power

interventions should be consideration of the particular mobility needs of mountain women who take on a greater responsibility for household transport as men seek work in the cities.

For reasons of cost and conservation, road networks will always be minimal in mountainous areas, and feeder transport in these regions will depend on human power; animals and all-terrain vehicles. In poorer mountain areas, sustainable livelihoods will continue to depend on animals for local supplies and market access. In richer areas, meanwhile, the ecological and aesthetic advantages of animals should ensure their continued employment, for example, eco-tourism, using horses and mules, is likely to be increasingly popular in all regions of the world. More attention must surely be paid to this important yet neglected technology.

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News and Events

A Vision to Transform Rural India

The Pradhan Mantri Gram Sadak Yojana (PMGSY) is a mega programme initiated by the Indian Prime Minister in December 1999 with a view to providing all villages with a population of at least 500 with year-round road access. The PMGSY has two phases: the first, to be completed by 2003, is to provide connectivity to all villages with a population of at least 1000; and the second, to be completed by 2007, is to bring the villages with populations of 500 or more into the network. The programme is implemented through the central government's Ministry of Rural Development, with guidelines that have been drafted by the Central Road Research Institute (CRRI). The funds for the PMGSY (60,000 crores of rupees) are allocated only for construction. The roads are expected to be well engineered and maintenance free for the first five years, after which the responsibility for their upkeep will lie with individual states.

In February 2002, the Orissa Regional Forum for Rural Transport and Development and the Rajasthan Forum Group initiated a stakeholder workshop, to discuss the PMGSY. A first of its kind, the workshop was supported by the DFID Civil Society Challenge Fund and the Swiss Agency for Development Cooperation (SDC). It was held in Bhubaneswar and brought

together participants from national and state governments, technology and research institutions, NGOs, CBOs, other specialist organisations, and international development agencies. A field trip to four locations where PMGSY is being implemented in Orissa, enabled the voices of the villagers to be heard in the debate and to strongly influence the discussions on the issues.

Participants welcomed the initiative, but made strong recommendations for increasing the impact of the investment. They called for a review of the Guidelines with a view to making provision for long term maintenance, and to increasing community involvement in the planning, monitoring and implementation of the programme.

For more information on the workshop please contact:

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IV Latin America Encounter on Animal Traction and Appropriate Technologies

During March 20-22, 2002 around 130 people from five different countries (El Salvador, Honduras, Nicaragua, Bolivia and Peru) met in San Salvador to participate in the IV Latin America Encounter on Animal Traction and Appropriate Technologies.

The meeting had three objectives: to exchange information and experience on current use of working animals in Latin America; to promote the use of appropriate technologies in rural and urban production systems; and to encourage inter-institutional and international co-operation in the Latin American region. The papers presented a wide variety of experiences and contributed to the discussion on use and management of working animals, micro-enterprises that provide services using animal traction, and rural road

maintenance using animal traction and micro-enterprises.

It was agreed that there is need for more research and learning about animal power management, and micro-enterprises that provide different services using animal traction, e.g. transport to forest services, rural road maintenance.

For Raúl Torres of the Peruvian Ministry of Transport's Rural Roads Programme the meeting was an opportunity to learn about the different applications of technologies, to see the simplicity of some solutions and also the complexity of keeping the balance between modernity and tradition in local communities.

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Emerging NFG

IFRTD members in Cameroon have gathered together to form a National Forum Group (NFG). The potential role of the Cameroon NFG in processes of formulating rural transport policy was explored at a recent workshop in Yaoundé to discuss policy instruments for improving mobility.

We welcome this emerging national network to the wider international forum and look forward to hearing more about their work in the near future.

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About us:

The International Forum for Rural Transport and Development (IFRTD) provides a framework for collaboration between individuals and organisations interested in issues of access and mobility as they affect the lives of rural people in developing countries.

Over 2400 individuals or organisations, in over 90 countries, subscribe to Forum News as members of the IFRTD, and in over 20 countries active members have joined together to form National Forum Groups (NFGs).

The IFRTD Secretariat is a small team tasked with furthering the aims of the Forum and facilitating networking at national and international level. If Forum News has wet your appetite for

more involvement with the IFRTD or you would like to get in touch with an NFG established in your country then please take a look at the IFRTD website www.ifrtd.org or contact the Secretariat as below:

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www.mountainvoices.org*

Mountain Links

www.mountains2002.org – The official International Year of the Mountains site.

www.mountainvoices.org – Oral testimonies from mountain people offering a personal perspective on change and development.

www.icimod.org – International Centre for Integrated Mountain Development.

www.sustainabletrails.org – Environmental consultancy, specialising in the design, planning and implementation of sustainable trail management projects.

www.mtnforum.org – The Mountain Forum, a global network of organisations and individuals.