

Waterways and Livelihoods: Journey to the Mainstream?

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ABSTRACT

For many of the poorest people in the world water transport is their only means of mobility and access to basic services. Improvements made in rural water transport technologies, infrastructure and services have the potential to eliminate poverty and reduce isolation. Yet in a transport climate dominated by motorised vehicles and roads, traditional waterways have been neglected and de-prioritised.

This paper draws upon the outputs of the International Forum for Rural Transport and Development's Waterways & Livelihoods networked research project to explore the importance of rural water transport (RWT) in the lives of the rural poor and ask why RWT has become a marginalised issue. It also introduces a new networking and information resource developed to promote the integration of rural water transport through improved policy and practice both within the transport sector and in the wider development community.

The lack of integration of RWT in mainstream transport and development planning is manifest in the deterioration of traditional waterways and infrastructure, and in conflicts between waterway use and land transport (or other) interventions. Its consequences are the lost opportunities for poor people to improve their livelihoods, and the lost potential to develop ecologically and financially sustainable transport technologies.

So why has rural water transport been neglected? The Waterways and Livelihoods research identified a lack of positive visibility as the prevailing factor. Products of which include poor perceptions of RWT as outmoded and unsafe, a dearth of reliable statistical information on the sector, and an 'unfair playing field' through which RWT suffers in comparison to other transport options.

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Introduction

For many of the poorest people in the world water transport is their only means of mobility and access to basic services. Improvements made in rural water transport technologies, infrastructure, and services have the potential to eliminate poverty and reduce isolation. Yet in a transport climate dominated by motorised vehicles and roads, traditional waterways have been neglected and de-prioritised.

This paper draws upon the outputs of IFRTD's Waterways and Livelihoods research programme to explore the importance of rural water transport (RWT) in the lives of the rural poor and ask why RWT has become a marginalised issue. It also introduces a new resource that has been developed to promote the integration of rural water transport through improved policy and practice both within the transport sector and in the wider development community.

The Waterways & Livelihoods Programme

Waterways and Livelihoods is a programme of the International Forum for Rural Transport and Development (IFRTD). It aims to raise the profile of RWT in the transport sector and among development planners; increasing its visibility, contributing to new knowledge about the impact of RWT on poor people's mobility and access needs, and highlighting its potential benefits for the environment.

The programme initiated an international research project funded by the UK Department for International Development (DFID) knowledge and research programme. This project adopted a networked research methodology working with a team of researchers across Asia, Latin America and Africa. The team, including development practitioners, government transport ministries, and academics in universities, were well placed to investigate the institutional and policy contexts within which people use water transport. They identified locations in vulnerable areas where there is a significant incidence of poverty and where rural water transport is a principle or sole means of transport. The case studies did not aim to be representative of each country context but to illustrate a wide range of rural water transport environments: delta environments in Bangladesh (1), and Vietnam (2), canals in Kerala (3) and Madagascar (4), rivers in Cambodia (5), Indonesia (6) and Peru (7), lakes in Uganda (8), lagoons in Nicaragua (9) and Cote d'Ivoire (10), and inter-island waterways in Indonesia.

The research culminated in a three day researcher workshop to synthesise findings in preparation for an international seminar. The international seminar held in Pontianak, West Borneo (April 2003) attracted other interested stakeholders including; government planning officials, donor agency representatives, transport professionals and rural development planners. Participants evolved strategies for improving rural water transport in countries in Asia, Africa and Latin America.

Rural Water Transport and Rural Livelihoods

Sceptics argue that rural water transport is not important to the majority of the world's nearly 6 billion people. This is true, but for many of the world's poorest people water transport is their only means of mobility and access to basic services.

Access to basic services such as schools, health centres, markets, government services and clean water are the basic right of all citizens. But these services are not equally accessible to all people, and those living in remote rural communities are the most likely to suffer. People living on the islands in the middle of Uganda's Lake Victoria and in Cambodia's floating Kampong Lournng commune have to travel long distances, using water transport, to get to hospitals and schools on the mainland or in the district centre. In some parts of Madagascar the only way to get to hospital is by motorboat. Vietnam, a country with a longer history and greater dependence on water transport, has produced creative alternatives including boat ambulances that bring health services to people, and boats that take children to and from school. Similarly in Brazil floating courts bring legal services to remote communities of the Amazon.

Rural water transport facilitates poor people's access to economic opportunities, helping poor people to access employment in the cities while living in less expensive locations, and forming an integral part of fishing and marketing livelihoods. 18,000 fishermen living alongside the Pangalanes in Madagascar ply the waterways daily in motorboats to take fish to markets. Meanwhile in the remote areas of Amtali, Bangladesh, the case study's female respondents frequently stated that it was impossible for them to get to markets without using rural water transport.

Boats are an important vehicle of trade carrying consumer products and medicines to remote communities and serving as shops for their owners (often women). Floating markets are widespread in the Mekong delta of Vietnam and without water transport the farmers of the Mekong delta would be unable to take fertiliser or seed to their fields or to carry away the resultant crops.

Water transport is an important source of employment, based on skills such as boat building, that have developed over generations. In Bangladesh men work as boat operators transporting goods and passengers along the waterways. It is estimated that these boats provide 60% of all employment in the transport sector and are the main source of income for 4 million people supporting 10 million dependants. Rural waterways also provide an indirect source of employment. For example in India's Southern state of Kerala up to 2000 people are employed in houseboats and other motorboats that cruise inland waterways filled with tourists.

The sector is also of importance at the macro level to national economies; for example Uganda earns approximately US\$8.8 million from fish exports caught by fisher folk using small boats.

Integrated or Ignored?

Rural waterway users are mostly poor and isolated and therefore invisible. If policy makers, donors and practitioners genuinely want to reach the 'poorest of the poor' improving rural water transport is a strategy that holds much potential. Water transport on its own will not solve all of the people's problems all of the time. But, supported alongside other transport options in a complementary and integrated fashion it can open the door to better mobility for some of the world's most vulnerable people. Instead of leaving remote areas without any infrastructure because roads are difficult or expensive to build such as in Nicaragua and Madagascar, it is possible, with the appropriate financial and political support, to increase rural mobility by utilising existing waterways or renovating those that have fallen into disuse.

Yet RWT has failed to make it onto the mainstream agenda for transport and development. Its invisibility is a recurring theme, both the cause and effect of; a dearth of reliable statistical information, a poor public image, and an unfair institutional playing field through which it suffers in comparison to other transport options.

All of the studies completed for the Waterways & Livelihoods research reported a lack of data both locally and nationally. For example, in Iquitos, Peru, it was impossible to determine the number of vessels that operate in the region as official registrations at the Ministry of Transportation are incomplete and do not consider the smallest crafts. This lack of consistent and accurate information about rural waterways contributes to an ignorance of its significance to the development of rural areas and perpetuates its marginalisation at policy level. It is difficult to quantify the importance of RWT or establish trends due to the lack of reliable statistical information. Even in for example Bangladesh, where RWT has been studied comprehensively, the available data is dubious and produces conflicting results. This lack of accurate data is generally interpreted as a reflection of the lack of official interest in, and recognition of RWT. For many who make policy at national level, RWT is a symbol of a rural unsophisticated past they prefer to forget.

Box 1

Road Bias in Bangladesh

In Bangladesh transport receives the largest allocation of development funding and all but a minute fraction is allocated to road transport. This is despite the fact that official estimates (known to underestimate the contribution of the non formal sector) indicate that the modal share of water transport is around 20%. "The effort made by government institutions to maintain the waterways are very limited and stand out in strong contrast to the attention and financial allocations for the road transport sector".

Source: www.ruralwaterways.org RWT Overview (synthesis of case studies)

The ability to compare and contrast the social, economic and environmental characteristics of different transport modes is an important component of transport planning. With little comparative data available on the costs of road construction versus waterway development it is difficult for policy makers to make informed choices. This has exacerbated the neglect of isolated areas where road building is difficult and expensive. Hidden subsidies disguise the real

costs of competing forms of transport, particularly roads, and create the illusion that RWT is an unviable alternative. For example in Indonesia imported public vehicles are tax exempt whereas boat engines for public service boats are not. In Madagascar, Indonesia, Cote d'Ivoire and Cambodia individual boat owners cannot access credit from private banks and micro credit institutions while land vehicle owners can. To address this 'unfair playing field' more data about the exact nature of the institutional frameworks that influence the face of rural water transport is required.

RWT has a tendency to 'fall out' of regulatory frameworks, and there is often no clear line of responsibility for the sector. In the Amazon region of Peru rural water transport management is limited. Centralisation in decision making by the national government has reduced the capacity of local authorities to implement specific RWT policies and regulations in the region. Similarly there is often no line of authority to enforce regulations. The Bangladesh study revealed policies 'in black and white only' with the government failing to oversee the maintenance, supervision and development of the sector. Meanwhile in Uganda where safety is a big issue that has had a considerable influence on negative public perceptions of RWT, the regulations that govern it are obsolete and/or disjointed.

Both waterways users and operators lack the organisational and lobbying power to influence government decisions and defend their rights. With influence they could demand regulations to protect themselves and improve the transport options available to them. For example in Bangladesh boatmen could lobby for registration of their vessels, to protect themselves from the discrimination and harassment they face at landing places from government officials and the police.

Potential Overlooked?

The consequences of allowing RWT to remain outside of mainstream transport and development planning are manifest in the deterioration of traditional thoroughfares and the vessels that ply them. For example in Peru vessels are said to be characterised by antiquity and subsequently users face increased maintenance and operation costs. Similarly a lack of investment in maintaining or establishing waterway infrastructure increases the inefficiency of RWT as a means of mobility. In Lake Victoria, Uganda, much time is wasted loading and off loading passengers and cargo due to poor waterway infrastructure, increasing travel times for all.

In addition conflicts can develop between the use of waterways for boat transport and other uses, for example interventions related to irrigation or energy use may obstruct traditional waterways or land transport interventions such as land bridges may limit the height of vessels able to ply waterways.

Box 2**Conflict with Roads in Madagascar**

The City of Tomasina is situated towards the northern end of the lagoon/canal system of Madagascar and in former times there was a link to the seaport and onwards through the city to waterways further up the coast. Recent road building has blocked this route, with the result that the canal ends some distance from the seaport, which means that goods have to be trans-shipped by road across the already congested city roads. As the study from Madagascar notes "there used to be a direct link with the sea harbour which was very useful, but because of lack of maintenance and probably a deliberate will to reinforce road transport, that part of the canal is used no more."

Source: www.ruralwaterways.org RWT Overview (synthesis of case studies)

Without investments in the development of RWT we lose the potential to improve the livelihoods of the rural poor through improved access to basic services and economic opportunities. In particular RWT is a means to target the marginalised poor, for example women or the elderly. In Bangladesh women expressed dissatisfaction with some prohibitive characteristics of the boat services on offer to them, particularly privacy and the unstable infrastructure used for boarding the boats.

We also lose the potential to develop ecologically and financially sustainable transport technologies for the future. The technological choices for RWT are often limited in a particular area or location, although viewed as a whole the sector demonstrates a wide range of options and a high level of innovation. Some poor communities, in for example Madagascar, use imported and inefficient technologies such as outboard motors originally developed for completely different conditions, but have little knowledge of alternatives. By contrast in countries such as Vietnam there are a wide range of very effective RWT technological options that could be adopted for use in other locations.

Because boats can be built locally, using locally available skills and materials, they offer scope for innovation to respond to changing markets and operation conditions. Most boats using diesel engines and modern design concepts can be combined with traditional building skills to produce boats that are fast enough to compete with road transport while retaining the advantages of accessibility and local input. The longtail boats of Thailand, Cambodia and Peru are a far cry from the old paddle steamers and manually propelled craft of the past, and carry passengers and cargo at great speed. They are a good example of the sector's ability to innovate and meet changing demands. Where people have been able to use locally available technology the operators avoid a high dependence on imported technologies and therefore retain control of developments ensuring sustainable operation, maintenance and repair.

The technology of water transport is energy efficient in operation and more sustainable than road transport, with energy use per unit demonstrably much less than on roads (11).

Joining the Mainstream?

RWT clearly needs to project a more accurate (therefore positive) image and raise its profile within the transport and development sector. To support the arguments for its inclusion in mainstream policy and practice there is a need to generate qualitative and quantitative data regarding the nature of rural water transport technologies, services and infrastructure, in addition the sector needs to exercise its voice, to encourage debate both internally and externally to initiate the cross pollination of ideas. For example exposure to different technologies at the Waterways and Livelihoods Seminar has begun a dialogue between participants from Madagascar and Vietnam. The Malagasy participants are keen to explore the more efficient engine technologies available to their Vietnamese counterparts.

The Waterways and livelihoods programme has developed a resource with the wider aim of improving the efficiency and appropriateness of rural water transport to improve the livelihoods of the rural poor. The resource achieves this by addressing the issue of positive visibility as a first step towards the integration of RWT in mainstream policy and practice. The resource, comprising three complementary components provides an independent hub for networking, information and the support of advocacy.

The first component, an advocacy folder, briefs its user with an overview of the issues and advice on how to promote them to key audiences. Four different generic audiences are explored; people working in the transport sector, people working on inland water transport, people working on poverty issues, and professionals who understand RWT issues but do not know what to do about it. In a step by step approach the folder walks the user through the What, Who, Why, How, Where and When of an advocacy strategy to identify the evidence needed and the strategies that might be used to influence them to bring about the change desired.

Box 3

People Working in the Transport Sector (Extract from 'Audiences' p.9)

What are their interests? What do they know?

People working in the transport sector are most likely to be focused on road transport, on technical and institutional aspects of road construction and maintenance.... They will be familiar with techniques such as 'modelling' and are comfortable with the use of technical and economic indicators to measure the impact of transport interventions, usually infrastructure. In the current climate they will be under pressure to take into account their agency's or their government's poverty reduction goals, and will be working within the frameworks developed by the governments and agencies (eg. Poverty Reduction Strategies, Sector Wide Approaches etc). ... Few in this group are likely to be familiar with the issues relating to rural water transport, particularly the priority of users.

Source: www.ruralwaterways.org Advocacy Overview

The overview provided in the folder is supported by a CD-Rom containing information (facts, figures, photos) that can be used to support existing knowledge and experience and to illustrate the value of integrating RWT in transport and development policy and practice. The information

contains the research outputs of the Waterways & Livelihoods programme, and other relevant publications and links.

Box 4

The Waterways and Livelihoods Cases Studies posted on www.ruralwaterways.org and provided in the CD-ROM are a first step towards creating a hub of waterways information.

Taken from Bangladesh Case Study

The people interviewed in the Amtali study area were asked to rank their preferences for mode of transport. They were critical of water transport because it was frequently overcrowded, which gave rise to fears for their safety. Women commented on the lack of privacy and absence of toilet facilities as well as the inadequacy of land stages or jetties.

For short trips around their immediate area people expressed a preference for rickshaws despite the fare being as much as twice that for non motorised boats. In the monsoon they have no choice but boats. The results also showed that on most travel by boat (about 80%) was taken by men, but did not show whether the gender difference was similar for other modes... For Abdul Hossain, a day labourer who lives in the project study area, a greater cause for concern was the need to pay high fares, which were inflated because the boatmen had in turn to pay 'taxes' and bribes along their routes.

Source: www.ruralwaterways.org Chowdhury 2002 Bangladesh Case Study

Finally a web site www.ruralwaterways.org provides a virtual home for the information provided on the CD-Rom, enabling it to be updated regularly and creating a hub for the dissemination of existing and future RWT knowledge and experience. It is also a focus for RWT networking, designed as a portal through which to access people, organisations and further resources that will strengthen the users work. It is an access point to the rural waterways discussion group and thus encourages debate and the cross-pollination of ideas. Participants of the Waterways and livelihoods International Seminar formed this email discussion group to enable the community of practice formed at the seminar to continue their dialogue, to share new research and information, and to continue to advocate for greater visibility and integration of rural water transport issues. It is a forum for debating issues, exchanging information and seeking answers to RWT questions. Its members include transport planners, NGOs, members of transport ministries, academics, and development workers, from countries across Africa, Asia, Latin America and Europe. Anyone with an interest in rural water transport issues is welcome to join the email group. To subscribe send an email to ruralwaterways-suscribe@yahogroups.com

Conclusion

The Waterways and Livelihoods research has highlighted the importance of rural water transport not for its own sake but for the contribution that it makes in the livelihoods of the rural poor. The research also highlights the sectors struggle for recognition in mainstream transport and development debate and the limiting nature of this invisibility at policy level and in practice.

To continue to ignore the potential contribution of rural water transport as a financially, socially and ecologically viable transport solution for the rural poor is a missed opportunity for both the transport sector and the wider development community..

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