

## **Executive Summary**

### **First International Rope Pump Policy Workshop Managua 14-19 May, 2001**

**This document summarises the proceedings of the First International Rope Pump Policy Workshop held in Managua, Nicaragua. The Workshop was jointly organised by Agencia Suiza para el Desarrollo y la Co-operación (COSUDE), the Regional Water and Sanitation Network for Central America (RWSN-CA), the Network for Cost-effective Technologies in Water Supply and Sanitation (HTN), the Technology Transfer Division of Bombas de Mecate SA, the World Bank Water and Sanitation Program (WSP) and the International Water and Sanitation Centre (IRC).**

#### **Introduction and Context**

New ideas have emerged in the Rural Water Supply and Sanitation (RWSS) sector in recent years. Increasing recognition of the need for sustainable, demand-driven supply chains and the need for users and other stakeholders to be fully involved in choosing and managing resources has enabled new approaches to be identified. In particular, the private sector is increasingly seen as having a key role in RWSS provision.

But these initiatives have been overshadowed by some alarming developments. The most significant are widespread deterioration in many parts of the world in the quality of water resources management and of the water resources themselves.

Service provision levels are also causing concern. Despite some success in increasing RWSS coverage in Asia, in Africa the situation is becoming critical. Coverage is declining in some countries and reversing this trend will require considerable extra resources.

Also, there is increasing recognition that some of the technology choices adopted in the nineteen-eighties have proved unsustainable. The reasons are still emerging but lack of affordability by poor rural communities is considered a significant factor.

Against this gloomy background, the international water community is keen to examine new technologies, which might alleviate these problems. In the Rope Pump a technology exists which could operate in conjunction with the new management approaches already mentioned, and perhaps solve some of the developing world's rural water supply problems.

Experience in Central America with the Rope Pump has been positive. Based on the old chain pump design, the present-day Rope Pump has undergone considerable development in recent years. The IRC Rope Pump Evaluation Mission in 1995 brought the technology to international attention. The Rope Pump's simplicity, low cost, easy maintenance and suitability for local manufacture could enable users to achieve sustainable management of their handpumps and wells.

Used in several Central American countries, it is in Nicaragua that the Rope Pump has had most impact. The enthusiastic involvement of private sector manufacturers and NGOs has underpinned its success.

Thousands of Rope Pumps have been installed, serving rural families and communities. The experience gained has enabled Nicaragua to provide technical assistance to other countries wanting to share in the Rope Pump technology.

By early 2000 many people felt that it was desirable to bring the knowledge and experience of the Rope Pump gained in Nicaragua to a broader audience, and to find ways of further

exploiting this promising technology for the benefit of the world's poor. This widely felt need led to the First International Rope Pump Policy Workshop.

### **Workshop Fundamentals**

The Workshop theme was 'Rope Pump Technology Transfer', and would take place in Managua. The Workshop's objectives were:

- To place the Rope Pump on the international RWSS agenda
- To inform countries' national water supply policy makers on the Rope Pump technology
- To define structured options to support the Rope Pump technology transfer process
- To use technology transfer expertise as a tool to promote cost-effective rural water supply technologies

The planned outputs of the Workshop were:

- Agreement on the basic principles and guidelines for information sharing in the technology transfer process
- Agreements with representatives of interested countries on introducing Rope Pump technology
- Recommended criteria for defining the interfaces between the private and public sectors
- Agreement on structural support for technology transfer agencies
- Definition of future roles and tasks for the exchange of information on impact assessment, and on lessons learned from choosing Rope Pump technology

The Workshop drew together around 60 RWSS specialists from 22 countries. Addresses from the platform and presentations of papers and contributions from the floor were made in English and Spanish. Workshop participants were equipped with radio headsets with English and Spanish channels and simultaneous translation.

Important documents provided during the Workshop were available in both languages. The Workshop Proceedings and other Workshop outputs will be available in English and Spanish.

### **Workshop Agenda**

The Workshop theme and objectives were reflected in the Workshop agenda, which featured a wide range of activities including:

- Introductory and keynote speeches by invited dignitaries
- Presentations by international experts on RWSS, technology transfer and rural business development
- Question and answer sessions at the end of each presentation
- Working group discussions and presentations
- Plenary sessions to debate and finalise conclusions and recommendations
- Visits to RWSS project sites and manufacturing premises

### **Workshop Conclusions and Recommendations**

Workshop conclusions are summarised below:

- There is a great demand to increase access to safe water through sustainable, low cost technologies
- The Rope Pump has the potential to meet the needs of families and communities in many countries for low cost, sustainable water supply

- The Rope Pump needs to be demonstrated in other countries so that its performance, benefits and social acceptance can be verified under a range of conditions
- The Rope Pump has several very strong attributes including low cost, ease of operation, easy to understand, family-based maintenance, easy to manufacture, and use of local materials for manufacture and repair
- With low start-up costs and using locally available materials, the Rope Pump has considerable potential for local manufacture in most countries
- Rope Pump technology transfer and establishment of local manufacturing capacity requires initiation, or continuation where it has started. Basic standards and specifications are required to ensure quality
- Local production near the user is a condition for a successful supply chain of goods and services
- There are several examples of Rope Pump technology transfer from Nicaragua to other countries in Central America, Africa and Asia

Workshop recommendations are summarised below:

- Rope Pump technology must be disseminated to explore its viability under varying conditions in other countries. Funding agencies are called upon to support the technology transfer process and to explore the Rope Pump's potential for use with micro-irrigation schemes
- Countries planning Rope Pump technology transfer must establish the feasibility and economic viability of the technology before initiating the process
- Feasibility appraisals should include a comparative evaluation of different pumps, with an independent assessment of performance, reliability, maintainability and water quality
- Sharing experience among all stakeholders in each country is important, focusing on opinions from users. Their participation and support is key to successful technology transfer
- It is essential to supplement the promotion of hand pump technology with hygiene and environmental sanitation education
- At international level, the sharing of experience through networks will facilitate efficient Rope Pump development. South-South contacts should be a strong element of the technology transfer process
- In technology transfer the private sector has an important role to play in the development, promotion and provision of goods and services to users
- Procurement and supply mechanisms need to be adapted to enable users to select and purchase their handpumps and take over full ownership
- The Workshop recognises the pivotal roles that Bombas de Mecate SA and other Central American manufacturers and NGOs have played in technology transfer. It recommends that, in conjunction with funding agencies, they take steps to ensure their long term capability to provide equitable support for technology sharing

## The Managua Declaration

The Workshop started with participants experiencing a mix of emotions. Everyone was moved by speakers who described the grave problems faced by the water sector. And yet the Workshop also started with a message of hope and, as the week progressed, the mood of participants reflected confidence and determination. Confidence in the commitment and skills of fellow participants. And determination to explore and share the opportunities offered by the Rope Pump technology.

In the closing sessions, participants turned their attention to producing a text, which would reflect this mood of optimism and encapsulate the outputs of the Workshop.

The result is the **Managua Declaration**. The Declaration symbolises the Workshop's broad vision for the future and it is hoped the Declaration will serve as an inspiration to participants and the international community in addressing the challenges that the Workshop has presented.

During the final Workshop session, various distinguished speakers and Workshop participants themselves welcomed the success of the Workshop. They thanked all those who had made it possible and reaffirmed their commitment to realising the goals of the Workshop. Everyone expressed satisfaction at the warm spirit of friendship and co-operation which had prevailed throughout the week.

## Sources of Further Information

First International Rope Pump Policy Workshop Proceedings (full length document) containing full report of Workshop and including:

Appendix 1 – Workshop Agenda

Appendix 2 – List of Registered Participants

Appendix 3 – List of Papers Presented

Appendix 4 – List of Websites (*giving information on RWS networks and information sharing, including website with full-length versions of workshop papers in English and Spanish, Proceedings in English and Spanish, Appendices, etc*)

List of Abbreviations

Platform Panel for Inaugural Session

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**The Managua Declaration, 18 May, 2001**  
***Exploring Opportunities by Sharing Knowledge***

Almost 2 billion people worldwide are without access to safe water. Advances in coverage have masked limitations of project-based approaches that result in unsustainable supply chains for technologies, which are often difficult to maintain at user level.

The First International Rope Pump Policy Workshop was jointly organised by COSUDE, RWSN-CA, HTN, the Technology Transfer Division of Bombas de Mecate SA, WSP and IRC, and was held in Managua, Nicaragua, from 14-19 May, 2001.

This venue was chosen in recognition of the successful dissemination of the Rope Pump technology in Nicaragua. Representatives of governments, external support agencies, NGOs and private sector enterprises from 22 countries attended the workshop. It offered an opportunity for the participants to familiarise themselves with Rope Pump technology, to assess the feasibility of its application in their countries, and to consider methodologies for sharing the technology. The participants felt that the Rope Pump technology can have a significant potential in many countries, due to these key attributes:

- Affordability and accessibility to families and communities
- Ease of use
- User-level maintenance and repair
- Potential for local manufacture
- Use of local materials for manufacture and repair
- Adaptability
- Likely social acceptance

As a potentially feasible water supply technology option, the Rope Pump technology warrants the initiation of technology transfer processes to explore its viability under the varied conditions in other countries.

Effective technology transfer to establish local production was recognised as being central to launching the Rope Pump in other countries. This involves sharing knowledge and experience already gained in introducing the Rope Pump.

The Technology Transfer Division of Bombas de Mecate SA and other Central American manufacturers and NGOs play a pivotal role in providing support for the technology sharing process through direct South-South contacts. Structured action should be taken to ensure that these organisations can continue to provide equitable technical assistance to all stakeholders.

Additional structured initiatives to support technology transfer must include the definition of clear roles and responsibilities for the public sector, private sector, external support agencies, NGOs and the users themselves. Procurement and supply mechanisms need to be changed to enable users to select and purchase their handpumps themselves. This will ensure that the Rope Pump technology is demand-driven and that effective and sustainable supply chains exist.

The participants pledged to work towards the goal of placing the Rope Pump technology on the international agenda through established networks such as HTN and others, and by the sharing of experience among all stakeholders. The introduction, evaluation and promotion of the technology require commitment from international technical assistance and financing agencies.

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