TREADLE PUMP SUPPLY CHAIN WORKSHOP

Palais des Congrès, Niamey
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SUMMARY

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Initiative on treadle pump supply chains

Organization:

Financing:

Activities:

Study tours in Bangladesh and Kenya
(March 2002, 16 participants / 2 reports produced)

+ Field visit in Niger
(October 20, 2002)

+ Workshop
(Niamey October 18 - 24, 2002)
TREADLE PUMP SUPPLY CHAIN WORKSHOP

Summary

of

Saturday 19.10.02
Activities of the day

- Addresses
- Introduction to the workshop and the proposed methodology
- Presentation: « The global supply chains initiative - WSP »
- Presentation: « Poverty alleviation as a business »
- Restitution of the study tours to Kenya and Bangladesh
- Round table: « The most striking ideas »
- Group work I: « Motivations and questions »
- Presentation: « Pilot project for the promotion of private irrigation (PPIP) - Niger »
**Operational - focussed on Niger (case study)**

1. A first draft of a strategy considering the development of viable and sustainable supply chains for the treadle pump in Niger.
2. A simple monitoring & evaluation tool for the implementation of the strategy.

**Generation and transfer of knowledge**

3. A list of “do’s and don’t’s” regarding the establishment of viable supply chains
4. Generic key elements of the strategy
5. Launching of a post-workshop collaboration
6. Compilation of contributions, discussions and conclusions
7. The publication of a field note in the WSP «Supply Chains» series
Introduction to the methodology

Supply chain Workshop

- General information about supply chains
  - Reports of study tours
  - Overview
  - Field visit

Presentation of three experiences in Niger, Kenya, and Bangladesh

Specific conditions in Niger

Elaboration of a strategy adapted to Niger

- Defining the results
- And the indicators
- To other regions
- To other topics

Identification of generics applicable...
« Supply chains initiative »

Facilitator environment

Associated activities

- Access to finances
- Acquisition of market information

Core activities

CUSTOMERS
- Payment

DISTRIBUTORS (wholesalers, retailers)
- Payment

SUPPLIERS (manufacturers, service providers)
- Goods & Services

- Optimisation of transaction costs

Marketing
Major conclusions drawn from the case studies:

- The public sector is characterised by a lack of motivation for commercialising appropriate goods responding to the client’s needs.
- The practices of donors and governments often hinder the establishment of viable supply chains through the private sector.
- The demand isn’t well understood and the price isn’t appropriate.
- Quality is fundamental, but must be « balanced » by the price.
- Through their interventions, external agencies may stimulate the establishment of supply chains, but they must withdraw on time!
« Supply chains initiative » ③

The 5 key factors for success:

1. An adequate demand (market size):
   - Function / price / quality of the product
   - Localisation of the demand
   - Information of the consumer

2. Effective incentives for the entrepreneurs

3. An efficient information flow among all the stakeholders

4. An competent supply chain management

5. An facilitating environment without constraints:
   - Access to credit
   - Regulations
   - Infrastructures
   - Efficient support mechanisms
«Poverty alleviation as a business»

or: “Market creation for goods benefiting of a high added value and having a strong impact in terms of development”

- **Assertion:** development and poverty reduction can be organised as a sustainable business
- **Condition:** investments have to be done in market creation and efficient techniques of marketing have to be applied
- **Consequence:** the approach requires a long term strategy. Sometimes it may take about 10 years to get to full success
Poverty alleviation as a business

- Effects on poverty reduction
- Sales
- Production units
- Profits

R&D phase
Introduction
Maturity
Saturation

Niamey, 18-24.10.02
Treadle pump supply chain workshop
Most striking ideas - generalities

- Place and role of each actor in the chain is important in order to avoid bottlenecks
- Treadle pumps are a factor of development and poverty reduction
- Promotion in the chain is essential
- Investing is required for the development of supply chains - it doesn’t just work by the sole market forces
- The approach requires very efficient promotion (done by professionals) in order to make people dream
Most striking ideas – the Kenya case

- There exists a huge gap between the manufacturer’s price and the price asked to the final client – the price is doubled
- There are only 3 manufacturers producing treadle pumps
- Strengthens: the quality of the product and the mobilisation of the retailers
- Weaknesses: a supply chain subsidized by Approtech – the centralised production rendering difficult the communication within the chain – the very high price

Most striking ideas – the Bangladesh case

- There are many actors in the supply chain, but nevertheless the price remains affordable
- A very interesting practice of using traditional means of information and communication
- Profit is made at every link of the chain, so each stakeholder has an interest in maintaining the chain viable in order to increase his own profits
Lessons learned:

- Irrigation is a profitable activity.
- The progressive adoption of new technologies is a guarantee for sustainability.
- The promotion of technologies through the private sector is an efficient approach.
- Well targeted publicity campaigns are a decisive factor for the promotion of technologies.
« Pilot project for the promotion of private irrigation (PPIP) - Niger » ②

For the PIP2, conceived on the basis of the PPIP experiences, emphasis must be put on:

- the « faire-faire »
- seeking synergies of action
- the establishment of a sustainable supply chain for small-irrigation equipment and the marketing of agricultural products
- involving the private sector in extension work
- informing producers and assisting them in decision taking
- putting in place appropriate financing mechanisms
TREADLE PUMP SUPPLY CHAIN WORKSHOP

Summary of Sunday 20.10.02
Activities of the day

- Field visits
  - Group 1: Tibiri
  - Group 2: Torodi
Task for the field visits

Analyse the 4 Ps of marketing:

**Product:**
means the goods-and-services combination the company offers to target the market (...quality, models, branding, packaging, characteristics and options, guarantee, after sales service...)

**Price:**
is the amount of money customers have to pay to obtain the product (...discount, reduction, conditions of payment, access to credit, leasing...)

**Place:**
includes company activities that make the product available to target consumers (...stocks and warehouse, distribution channels, stockist, means of transport...)

**Promotion:**
means activities that communicate the merits of the product and persuade target customers to buy it (...publicity, product marketing, public relations, demonstrations...)

Target customer intended positioning
Field visit – group Torodi

Relationships between the actors of the chain:

The farmer:
- Intermediary between the manufacturer and other farmers
- Experiments new technologies

The manufacturer:
- Pump installation by his well-drillers
- Follow-up and advise to the farmer
- After sales service, maintenance of the pump and other services to the farmer
- Participation in demonstration activities
- Selling pumps to the project

The project:
- Training of the manufacturers
- Promotion of the pump (marketing tools)
- Follow-up and advise to the farmer
- Further development of the technology
- Control of the selling price of the pump
- Provides credits to the farmers
Field visit – group Torodi ②

Some observations:

- The potential demand for the treadle pump is substantial in this region
- The market is not yet in its saturation phase
- There are few (no) intermediaries
- The price of the pump is affordable for the farmers
- The manufacturer is located near to the users / clients but far from the competitors
- After sales services, follow-up and advice are provided by the project and the manufacturer
- The benefits of the manufacturer are apparent
- The benefits of the farmer are less perceptible
TREADLE PUMP SUPPLY CHAIN WORKSHOP

Summary of Monday 21.10.02
Activities of the day

- Restitution of the field visits
- Summary of Saturday
- Presentation: « The art of supply chain development »
- Official opening of the workshop
- Presentation « The experience of Enterprise Works - example from Niger »
- Presentation « Bangladesh’s Treadle Pump Story »
- Group work II - detailed understanding of a strategy
Restitution of the field visits

According to the 4 Ps of marketing:

- Users master the technology well
- The actor’s expertise of the technology at each link of the chain
- The accessibility to the product
- Product marketing and promotion
- The capacities of producers and intermediaries
- Access to micro-credits
- Adoption of a business approach rather than a project approach
- Clear definition of roles and scope of the actors in the chain
- Improvement of water management beyond flood irrigation
- Awareness creation through agricultural extension services
Facilitator role - changes over time...

- Sometimes push
- Sometimes stand besides
- Sometimes pull
Lesson 1: People take time to decide

Awareness: People must know, see and touch

Information: People must see others doing it

Desire: People must want it for themselves too

Action: People must take action and pay

Lesson 2: People are different

Innovators
Early adopters
Early majority
Late majority
Laggards
«The art of supply chain development»

- Farmer
- Trader / Wholesaler
- Processor
- Consumer

Value added

Input Seeds

Input Water

Decision

Niamey, 18-24.10.02

Treadle pump supply chain workshop
Official opening of the workshop

Minister for Agricultural Development:
...the SPR allots its utmost importance to rural development and considers water management for irrigation as a primary field of intervention...

...the Niger experience provides you with an excellent occasion for understanding better the constraints and opportunities related to a sustainable distribution, through the private sector, of affordable products to the rural poor...

Resident representative WB:
...this workshop comes at the very best moment, because it perfectly rounds off the information and knowledge acquired during the last 6 years in developing private irrigation in Niger...

...today, all conditions are met in order to succeed in spreading out small-scale private irrigation in Niger...
« The experience of Enterprise Works
- example from Niger »

How to develop a viable supply chain?

a) Do market research
b) Identify areas with a high potential
c) Carry out product demonstrations on the markets
d) Identify production sites for irrigated crops
e) Perform product demonstration in the field
f) Identify local artisans and train them in treadle pump production and well drilling
g) Promote the products through advertising
The experience of Enterprise Works – example from Niger ②

The project’s support to the supply chain in Niger:

- Clients
  - Quality control - installation
  - Plays the role of an animator
- The projet
  - Feedback of the clients
- Training
  - Commercial agents
  - Promotion
- Manufacturer
  - Quality control - production
- R&D
- Feedback of the clients

Niamey, 18-24.10.02
The experience of Enterprise Works - example from Niger

A sustainable supply chain - conclusions:

- All actors in the chain have to make profit.
- The support of the facilitating organisation has to happen next to the actors of the chain, not in between.
- The number of actors in the chain is a function of the market.

Treadle Pumps Sold through Private Sector Supply Chain: 1.5 million

Supply Chain Strength:
- Producers: 120
- Dealers: 3,268
- Installers/Well-Drillers (Mistiries): 9,500

Net Additional Annual Income to the Smallholders: US$100
Lessons learned:

- Direct service provisions at the start-up is sometimes critical with an upfront exit strategy.
- The situation need to be defined where direct service provisions are critical or essential.
- Timely interventions are required to prevent a downward quality spiral.
- Customers should be given the option to choose the price-quality combination that best meets their need.
- Once the quality benchmark is set, let the market decide how much quality for how much price.
- Facilitators should work with diverse market actors so as not to create a monopoly.
- A strong customer focus and timely response to customer needs are central to effective market intervention.
- Flexibility and openness to learning from the marketplace is the key to successful product marketing.
- Identification of new appropriate technology.
- Timeframe for phasing out should be product specific.
TREADLE PUMP SUPPLY CHAIN WORKSHOP

Summary of Tuesday 22.10.02
Activities of the day

- Summary of Monday
- Restitution of group work II
  - In depth understanding of a strategy
- Group work III
  - Design a strategy for the distribution of the treadle pump in Niger
- Demonstration «bucket kit»
Restitution of group work II

In depth understanding of a strategy:

The Niger case

Knowledge of the environment

Identification of potential sites

Public demonstrations

Assessment of the demand

Identification of potential and interested artisans

Training of artisans in-situ / in his workshop

Promotion / selling of first pumps

Quality control of fabrication

Follow-up of product utilisation at the farmers

Product marketing

Analysis of constraints

Impact assessment

The Bangladesh case
Restitution of group work II ②

In depth understanding of a strategy:

Future options for Niger:

- Improve the promotion of well-drilling
- Improvement and intensification of marketing
- Decentralised financing systems
- Perpetuate the activities through organised artisans
- Closer link between technology and credit
- Improvement of technology
- Exploration of innovative uses (e.g. stock breeding - drinking water)

Future options for Bangladesh:

- Better organisation of the actors
- Improvement of product quality
- Utilisation of external financial means without damaging the supply chain
- Replication of the strategy in other sectors
Group work III

Design a strategy for the distribution of the treadle pump in Niger

Context:
- Surface: 1 267 000 km²
- Population: 10.8 millions
- National brut gross income per capita: 180 $US
- Illiteracy rate for men (+ 15 years): 77%
- 120 000 market gardeners
- 360 000 other potential clients for irrigation

Objective:
Design a strategy for the distribution of the treadle pump in Niger

Vision:
Reaching a maximum of clients by using a sustainable supply chain

Task:
Based on what has been accomplished up to now:
- define the next steps
- describe the role of the actors
- identify intermediate results
- and estimate the time you need to reach them

Niamey, 18-24.10.02
Treadle pump supply chain workshop
Restitution of group work III ⊱
Restitution of group work III ②
TREADLE PUMP SUPPLY CHAIN WORKSHOP

Summary of Wednesday 23.10.02
Activities of the day

- Summary of Tuesday
- Presentation: « The 4+1 Ps of marketing »
- Group work III - continued
  - Design a strategy for the distribution of the treadle pump in Niger - following the 4+1 Ps
- Restitution of group work III
- Podium of questions
Definitions:

Product: means the goods-and-services combination the company offers to target the market.

Price: is the amount of money customers have to pay to obtain the product.

Promotion: means activities that communicate the merits of the product and persuade target customers to buy it.

Policy: means a favourable environment which allows the target customers to enjoy the product.

Place: includes company activities that make the product available to target consumers.
The 4+1 Ps of marketing

The role of the promoter:

- No role
- Facilitator
- Service Provider

- A lot of training at all levels is required.
- A lot of lobbying activities and networking activities are required, especially, if one looks at new market segments, i.e. those who did not irrigate yet.
- The supply chain cannot take over these lobbying, training and networking activities.
- Facilitator role is very much required at policy level to create a good environment.
- Working together with other institutions, projects, etc.
Restitution of group work III - continued

Strategy for the distribution of the treadle pump in Niger
Restitution of group work III - continued

Strategy for the distribution of the treadle pump in Niger
Restitution of group work III - continued

Strategy for the distribution of the treadle pump in Niger

- **Approach**
  - Private Sector Supply Chain

- **Government Role**
  - Government's Role
    - Need of the Actors
    - Role of the Providers
    - Role of the Consumers

- **Place**
  - Locations where the product is available and customers have easy access
  - Constraints
    - 1. Roads
    - 2. Access to raw materials

- **Place**
  - Build capacity of local institutional organizations
  - Marketing and Promotion
    - Back-up with other input impacts

- **Place**
  - Marketing and Distribution
    - 1. Distribute to suppliers
    - 2. Distribute to retailers
    - 3. Promote sales

- **Place**
  - Training for Government
    - 1. Training for Government
    - 2. Training for suppliers
    - 3. Training for retailers
    - 4. Training for consumers
Restitution of group work III - continued

Strategy for the distribution of the treadle pump in Niger
Podium for questions

Gender
Credit systems
Cost reduction
External means
Applicability elsewhere
Needs of the users
TREADLE PUMP SUPPLY CHAIN WORKSHOP

Summary of Thursday 24.10.02
Activities of the day

- Summary of Wednesday
- Poster presentation:
  - Centre Écologique Albert Schweitzer (CEAS) - Burkina Faso
  - Association W≈3≈W - Switzerland
- Follow-up of the workshop and networking
- « Market of personal expertises »
- Group photo
- Evaluation of the workshop
- Round table on main insights
- Final remarks and closure
Post-workshop collaboration

Provide a window on the Web-sites below to:

- disseminate the outcomes and products of the present workshop
- make available other resources on small scale private irrigation in general and on treadle pumps in particular

www.promopme.net: « Cercle pour la promotion de la micro-entreprise en Afrique de l’Ouest »

www.ceas-ong.net: « Centre Ecologique Albert Schweitzer »

www.wsp.org: Site of the Water and Sanitation Program (WSP)
« Market of personal expertises »
# Evaluation of the workshop

## Operational - focussed on Niger (case study)

1. A first draft of a *strategy* considering the development of viable and sustainable supply chains for the treadle pump in Niger.
2. A simple *monitoring & evaluation tool* for the implementation of the strategy.

## Generation and transfer of knowledge

3. A list of “do’s and don’t’s” regarding the establishment of viable supply chains
4. *Generic key elements* of the strategy
5. Launching of a *post-workshop collaboration*
6. *Compilation of contributions, discussions and conclusions*
7. The publication of a *field note* in the WSP «Supply Chains » series

![Realized](realized)

![Not realized](not realized)

![Ongoing](ongoing)
Evaluation of the workshop ②

1. What is the added value of the workshop for my own knowledge?

2. To what extent was I able to contribute to the workshop?

3. To what extent does the workshop and its outcomes of this workshop benefit my project?

4. I consider that the workshop and its outcomes are a significant contribution to the strategy development for Niger

5. Degree of satisfaction regarding logistical aspects

Niamey, 18-24.10.02