WS 12: Market Systems Development & Environmental Management in Developing Countries

Systemic Waste Management

Example: EcoVecindarios - “Eco Neighbourhoods” (Bolivia)

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Goal of this presentation

Demonstrate potential of closing Material Flow Loops in Waste Management:
- Harnessing supply and demand-based mechanisms for solving environmental challenges
- Job and income creation in recycling and disposal-service businesses
- Saving public financial resources

Demonstrate methodological approach:
- Addressing social and institutional changes
- Framing waste issues as waste value chain issues
- Identifying space for entrepreneurship and strengthening new businesses
Key questions

- What opportunities does the Inclusive Markets (IM) approach offer for sustainable environmental management and what are its limitations?
- Which elements of IM have proven to be successful?
- What is the role of entrepreneurs/green businesses for income creation and environmental management?
- What are the key levers in a market system (framework conditions and ecosystem) to promote green growth?
Swisscontact’s work in LatAm in Environmental Topics - since 1991
Solid Waste Management Project EcoVecindarios
Unlocking Value Chains

Swisscontact representations in LatAm

Guatemala
El Salvador
Honduras
Costa Rica
Ecuador
Peru
Dominican Republic
Nicaragua
Colombia
Bolivia
The Waste Life Cycle
Interventions in all stages

Waste separation

Differentiated Collection & Transportation

Treatment of recyclables

Secondary raw material sales

Final treatment

“Microenterprises for the Integral Management of Solid Waste in Rural Municipalities of Bolivia”, co-financed by the Multilateral Investment Fund, member of the IDB, and Swisscontact.

EcoVecindarios: Dismanteling eWaste
BOLREC, FUNDARE

EcoVecindarios: urban gardening with compost from organic waste

Association of waste pickers in Bolivia
Project Approach
Intervention Levels, Activities, Beneficiaries

 Awareness among Population
  Sensitization Campaigns

 Regulatory Frameworks
  Technical Support to Law-Makers

 Public Environmental Management
  Technical Support to Municipalities

 Private Sector
  Business Friendly Environment

 Value Chains
  Linking Demand & Supply
Project Approach

Activities

Awareness among Population

Sensitization Campaigns

Strengthen the municipalities’ and other stakeholders’ capacities to sensitize residents to the importance of waste separation.

Goal: Trigger separation at source and handing of residential waste.
Project Approach

Activities

Regulatory Frameworks

Technical Support to Law-Makers

28 October 2015: The Bolivian President Evo Morales signs the new law on solid waste

The project works with the Ministry of Environment to support municipalities in implementing waste management through developing norms and disseminating manuals for municipalities to apply.
The project supported 12 municipalities to improve their waste collection systems.

It supports these municipalities to design and promote segregated waste collection & collection routes in order to increase efficiency of the collection system.
Project Approach

Activities

Private Sector

Business Friendly Environment

Association of waste pickers

Linking supply and demand through platforms like the chamber of commerce in Cochabamba

Start-up for disposal of light bulbs and tubes

A local packaging company launches additional collection bins for PET

The partnership with municipalities aims to **support waste collectors and processors** to separate and process **organic, non-organic and toxic waste properly**. **Goal:** identify and develop economic incentives for environmental conservation.
Value Chain Development enables small businesses & entrepreneurs to grasp and use market and business opportunities in order to increase income and employment.
Impact

Quantitative

- 79 decent jobs created in private companies (FTE)
- 140 decent jobs created in public institutions (FTE)

People

- - 45’000 tons of CO2e
- 2.1 million tons of waste collected
- 17’000 tons of recyclable waste collected
- 50’000 tons of organic material collected & processed (compost*)

Planet

- 38 green businesses strengthened
- USD 2.3 million generated in sales of recyclable waste, incl. services
- USD 400’000 investments made by 38 green businesses
- USD 11 million investments by public and private partners
- USD 1.3 Mio. estimated saved landfill costs for municipalities

Profit

*Despite some efforts, is still no residential waste is being converted into biogas in Bolivia - with the only exception of the pilot plant at the public university UMSS in Cochabamba.
Sustainability

Scale

Wider impact: 170,000 residents started to separate waste at source for more than one year.

Ownership: Independent investment by the ten partner municipalities in equipment and infrastructure. USD 11 million invested

Copying: Uptake of good practices by other municipalities that were not supported directly

Impact Qualitative & Systemic
Systemic impact
Framed in terms of the Inclusive Markets approach

**Waste Collection & Disposal Structures**
- Differentiated Collection
  - Classification
  - Sanitary Landfills

Supporting Functions:

Core transaction:

Value Chains

Supply of secondary raw material

Demand for recycled material

Waste categories like PET, Wood, Metal, Paper, Plastics, Organic, WEE, Tires, Glass, Batteries

Rules:

Behaviour

Policies, Regulation

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Success Factors

- Organising UPSTREAM supply → creating employment
- Organising DOWNSTREAM Demand for homogeneous types of waste.
  - Organise Recycling, Upcycling
  - Organise demand: foreign demand (export), bottle-to-bottle technology, textile fibres, etc.

- Green Businesses
  - Matchmaking Platforms
  - One-on-one coaching
  - Public orders

- Drivers for public actors:
  - Cutting costs (avoiding waste)
  - Efficiency: Award of public contracts (professionalism)
Downstream demand for complex waste (e-waste, batteries, etc.)

- Technical issues, dismantling necessary
- Often the hazardous waste can only be collected and stored, but not disposed or recycled
- ROOT CAUSES:
  - Batteries: large-scale systems for recycling lacking
  - Overseas Export necessary (Umicore/Belgium)
Limitations

- **Framework conditions**
  - Acceptance for landfills
  - Payment schemes: who pays? Polluter or Recycler? Mandatory take-back schemes; extended producer responsibility?

- **Opening up a new value chain** can be cumbersome (used motor oil, biogas, paper bags)

- **Energy prices**, especially the volatility of crude oil prices

- Still limited size of markets (link to national actors, link to international markets)

- Financing mechanism (e.g. VER)

- Smuggling of goods

- Distortion by municipal initiatives

- Lacking eco-systems (platforms, involvement of actors like universities etc.)
We create opportunities

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