



FEALAC Meeting on Eco-Business Promotion

Water and Sanitation including waste disposal Dominican Republic



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General Information

Second largest island of the Caribbean:
74% of the Hispaniola Island (Oriental part)

Total Extension
48.442 KM² : 350 km² rivers and lakes, 1.6% of the national territory

Population

Total: 9,445,281 (2010)

Density: 208.2 hab/Km²



Official language:
Spanish

Currency:
Dominican Peso (DOP)



Presidential Democratic Republic

President: Danilo Medina

Vice president: Margarita Cedeño



Successful Experiences In Water and Sanitation Including Waste Disposal





Integrated Watershed Coastal Area Management (IWCAM).

- ❑ **Responsible:** Ministry Of Environment and Natural Resources
- ❑ **Objective:** Mitigation of impacts of industrial wastes on the lower Haina river basin and its coast.
- ❑ **Results.**
 - a) Cleaning Strategy : Use of waste from the source all the way through recycle. This translates to population benefits, such as: health, aesthetics, job creation, economic benefits (income from the sale and use of resources), and environmental benefits (final disposal).
 - b) Integration of local government agencies, industry and local communities to implement the strategy.



RED 3Rs: Reduce, Reuse, Recycle. -Solid Waste-

- ❑ **Objective:** To encourage the reduction, reuse and recycling of solid waste nationwide.
- ❑ **Management Committee:** Ministry of Environment, Ministry of Education, Proconsumidor, ADN (local municipalities) , NGOs (Fundazurza), universities (UNPHU) .
Coordination and secretariat: JICA, CEDAF
- ❑ **Results:** Integration of government agencies and private sector in an effort to recover and separate solid waste: *paper, plastic and glass.*



RED 3Rs: Reduce, Reuse, Recycle.
-Solid Waste-



- **Moldosa**: Paper recycling company that manufactures egg cartons (for later packaging), operating in the country since 2001.

Moldosa receives **20 tons of paper** every day for their operations. They purchase the waste produced by national companies, as well as landfills nationwide.





RED 3Rs: Reduce, Reuse, Recycle. -Solid Waste-

- Recycling Program for plastic bottles (*Maltamarena*) - PET- that started in 2011.
- 66 schools, with a population of 40,000 people.
- 22.000 pounds of PET plastic collected in 4 weeks.
- Awareness for education on waste removal (streets, roads, rivers and beaches).



Wastewater System

Reed Beds : Pilot Scale Plant



Leather Goods "Los Favoritos": Leather industry interested in implementing a green system to reduce operative cost of waste water treatment

Approximately 800 plants were planted in two reed beds with a separation of 20 cm.



Daily treatment capacity of 30m³, and composed of three layers of stones, gravel and sand, with larger rocks on the bottom and the gravel and smaller sand on top.



Wastewater System

Reed Beds : Pilot Scale Plant

Results: An evaluation and monitoring experiment (2010 – 2011) showed:

- COD: Efficiency averaged 75% removal, with values up to 85%
- BDO: Efficiency averaged of 78% removal, with values up to 85%



Benefits:

- Due to the user friendly nature of the technology, highly trained technicians are not required.
- No mechanical or electrical equipment needed.
- Minimal sludge production, (a major problem in the operation of conventional biological systems).

Converting Waste to Energy – the Case of “APORLI”

APORLI(known by its Spanish acronym) : Pork Producers’ Association of Licey al Medio



Biodigestors for energy production from swine

The Problem: The increasing urbanization in the neighborhood has brought the possibility of conflict with respect to air pollution (odors) and the lack of treatment of liquid and solid wastes as by-products of intensive swine production.

The project: Installation of 20 anaerobic bio-digester installed on member farm, and facilities for utilizing the gas produced via small electric plants, as well facilities for processing liquid and solid waste into organic fertilizer

Benefits: This project dramatically reduced air and water pollution in this important – but increasingly urbanized – pork production region, while increasing profitability through the utilization of wastes to produce energy for on-farm use and organic fertilizer for sale, benefiting hundreds of participants, family members, employees, and neighbors.

Opportunities

- ☐ Use of established platform and experiences for investments in eco-businesses through waste recycle (metals, industrial waste, sludge, biomass).
- ☐ Nationwide expansion of the recovery, separation, recycling, and reuse efforts.
- ☐ National capacity strengthening for appraisal of recovered waste and subsequent installation of new companies.
- ☐ Expansion of the reed bed system experience for future replication and use as domestic wastewater treatment in rural areas.

Thank you

