
Case study: Sustainable Wastewater Treatment for Small Villages

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Short summary

The Duero Basin Agency has carried out a program called Sustainable Wastewater Treatment for Small Villages. According to the Spanish regulations local councils are responsible for wastewater treatment, but in our basin there are still many villages that do not have any facility for this. We have built different pilot plants as a kind of demonstration of sustainable solutions for small villages. The key is to be able to choose the right technology to each place, regarding climate, orography, population... and how other values can be added in these plants for recreational or educational purpose.

But the main problem we face is not a technical problem but a cultural one, that is, the lack of awareness about water quality, with the local councils preferring to spend the money on sports facilities or festivals rather than in wastewater treatment plants.

That is why another part of our program is focused on raising awareness and giving training and support to small villages through a project called Mayors School, with workshops and field visits to the pilot plants. We are also promoting agreements with other stakeholders and public bodies to engage them in the implementation of the water quality regulations.

Key words:

Issues addressed:

Water quality (pollution, dumping of toxic materials, wastewater management, recycling, reuse, restore ecosystems and aquifers)

Waste Water Management: Urban wastewater treatment and management in small villages in the Spanish part of the Duero basin.

Tools for implementation:

Capacity development:

Provide local councils with information and training about wastewater management and raise citizens' awareness regarding this issue. This is the main one but there are others related to Governance (cooperation between different public administrations) and Technology (right choice of the suitable technology for each village)

Who is involved?

The Duero Basin Authority, local councils of small villages in the basin and sometimes the public administration at a local level and NGOs.

What were the objectives of the intervention?

- Implementation of pilot projects of sustainable wastewater treatment plants as a kind of demonstration for small villages.
- Provide information and training for local councils
- Raise citizens' awareness about water quality
- Improve the ecological status of the water bodies

Implementation challenges

A lot of small and scattered villages, with very little resources; local councils are reluctant to have relationships with basin authorities; it constitutes a completely new tool for the local authorities, good at carrying out works but not used for public participation processes.

Main task/activities undertaken / Tools used

Project and execution of 13 pilot wastewater treatment plants.

Project "Mayors Schools" (workshop and field visits to learn on the field)

Book "Guide to sustainable wastewater management in small villages" (can be download freely from the Duero Basin website:

<http://www.chduero.es/Inicio/Publicaciones/ManualesGuíasInventarios/tabid/585/Default.aspx>



Main outcomes / impacts (what has changed?)

- Development of mutual trust (local and basin authorities), more contacts and cooperation
- More knowledge awareness about wastewater treatment as a key.
- Local councils more prone to invest in wastewater treatment plants
- More reliable information about operational costs in this kind of sustainable plants.
- Replication potential

Lessons Learned:

Triggers and drivers: Municipalities are the main bodies responsible for urban wastewater treatment. This makes them instrumental for the compliance with the Urban Wastewater Treatment Directive, which in turn is one of the cornerstones for the improvement of river water quality required by the WFD. The relationship between river basin authorities and municipalities is perhaps one of the least explored but probably one of the most interesting ones because of the closeness of municipalities with society, and their potential as agents of change, and as a potential mediator between users and water authorities in rural areas.

Barriers: Hostility from local councils towards water basin authorities.

Lack of expertise of the technicians working for the Duero authority in public participation process.

What has worked well?

- Commitment and involvement from Duero Basin Agency managers and technicians.
- Support from other organizations (NGOs and provincial administration).
- Good outcomes from the pilot plants.

What can be improved?

- Training in public participation would be useful for Duero Basin Agency technicians
- Communication should be improved to get more people attending the workshops and field visits.

The way forward: Go on organizing more Mayors Schools in other parts of the basin. This program is starting to be replicated in other Spanish basins (Ebro, Tagus...) and has now the support from the Ministry of Agriculture, Food and Environment. This pattern can be used to provide training and raise awareness in other issues (flood risk management, f.e.)

Links:

<http://www.conama2012.conama.org/web/generico.php?idpaginas=&lang=es&menu=290&id=1896700047&op=view>

http://www.magrama.gob.es/ministerio/pags/Biblioteca/Revistas/pdf_SAU%2FSAUCE_6_27-29.pdf