

Project acronym

AQUAENVEC

Project title

Assessment and improvement of the urban water cycle
eco-efficiency using LCA and LCC

Start and end date

1/1/2012 – 31/12/2014

Funding programme

LIFE+

The topic the project:

Eco-efficiency improvement of urban water cycle activities.

Keywords: Eco-efficiency, Urban water cycle, Life cycle assessment, Life cycle costing.

A short summary of the project:

The project will work to assess all the major environmental impacts of the life cycle of urban water systems, including on: global warming; terrestrial and water toxicity; eutrophication; acidification; and depletion of resources. It will also assess the economic impact of the different operations, in terms of operating costs, capital costs and other indirect costs throughout the life-cycle, and identify possible cost savings.

To support life-cycle assessment by non-experts, the team will define appropriate indicators to monitor and evaluate environmental and economic efficiency and a user-friendly support tool for small-medium cities. This will enable policy makers and public and private water managers to make better decisions and produce overall eco-efficiency gains.

The project expects to show that by measuring the life-cycle impact of the urban water cycle the most cost-effective processes and technologies with the least environmental impact can be identified and promote the sustainable use of natural resources and the reuse of end-products such as sludge and wastewater.

The main objectives of the project:

- Assessment of the environmental and economic impacts generated by the urban water cycle activities
- Definition of indicators to monitor and support decision-making based on environmental, economic and eco-efficiency issues
- Development of a user-friendly tool for environmental and cost impact assessment to support non-expert LCA (Life Cycle Assessment) and LCC (Life Cycle Costing) users and useful for policy makers and public and private water managers

All factsheets are available at:

www.stream-project.eu

www.wise-rtd.info

- Provide a set of recommendations on case-specific best practices to improve eco-efficiency indicators and reduce the associated impacts

Link to EU water policy:

1. Water Framework Directive
6. Urban Waste Water Directive
7. Priority Substances Directive
14. Other: Resource-efficiency Flagship Initiative

Link to business:

2. Research sector
3. Policy sector
4. Private sector – business

Link to research:

1. Drinking water
2. Waste water
4. Storm water
5. Ground water

The main results the project already achieved:

Expected results (project started on January 2012):

- A demonstrated common methodology for assessing the eco-efficiency of the urban water life cycle, including quantifiable indicators
- A user-friendly tool for non-expert life-cycle eco-efficiency assessments
- A life-cycle inventory database for urban water cycles
- Recommendations of case-specific best practices to improve the eco-efficiency of urban water systems in small-medium cities

Already achieved:

- Methodology framework establishment for the application of LCA and LCC to the different urban water cycle activities and their integration

Dissemination activities and events planned in 2012 within the project:

- CETaqua's LIFE 20th anniversary event (21st May 2012 in Barcelona): Open day organised where the project was presented in a special session and also a poster was displayed.
- The project will be presented at the 1st USAR conference in London (4-5th November)
- No events are planned to be organised by the Project till 2013. In 10/2013, 06/2014 and 11/2014 working/training sessions and workshops are planned in Spain (undefined place, probably in Barcelona)

Dissemination material:

- At the end of October, project brochure and official presentation of the project will be ready
- For the moment the project does not have any official material ready to disseminate

Contacts

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Organisations in the consortium

Name of institution	Country	Role
CETaqua, Water Technology Centre	ES	Coordinator
Universidade de Santiago de Compostela	ES	Partner
Universitat Autònoma de Barcelona	ES	Partner
Universitat de València	ES	Partner

