



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



Expedient	LIFE10 ENV/ES/000520	Date	01-JAN-2012 to 31-MAY -2014	Location	Spain
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Consortium	Universidadae de Santiago Compostela		Universitat de València		
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Objective	<p>The main objective of the project is to provide decision-making tools to optimise eco-efficiency in the urban water cycle, through environmental and economic life-cycle analysis (LCA). It thus seeks to provide for more sustainable management of the urban water cycle.</p> <p>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 potential to reduce these impacts. 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.</p> <p>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. This will enable policy makers and public and private water managers to make better decisions and produce overall eco-efficiency gains.</p> <p>The tool will be demonstrated in two case studies in Mediterranean and Atlantic locations and validated with additional case studies from stakeholders to obtain a generic tool applicable to any city. The project expects to show that by measuring the life-cycle impact of the urban water cycle, the tool will help to identify the most cost-effective processes and technologies, with the least environmental impact, and promote the sustainable use of natural resources and the reuse of end-products such as sludge and wastewater</p>				
Expected results	<p>Expected results:</p> <ul style="list-style-type: none">• 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.				