

# EWS Pilot Study: Airports



## Addressing Common and Unique Challenges

The Airport Pilot Study is exemplary of how to address sustainable water management across an entire sector, one with enormous potential and opportunity for strategy development. The Airports Council International (ACI) recognized the need for a new water assessment approach given unique management needs. EWS established a pilot study to develop this new approach and applied it to three volunteer sites, Malaga Airport, Brussels Airport and Göteborg Landvetter Airport. The process began with an important on-site EWS training of airport operators, followed by an exhaustive data collection process on the water performance of the airports leading up to pilot audits of the airport. Communication of EWS along the pilot study demonstrated several common challenges for airport water management.

**Location of airports in population nuclei:** Creates collective water quality issues and requires careful management of storm water over the large areas of impermeable surfaces to prevent flooding.

**Fluctuations in discharge :** The quality of runoff depends largely on the use of various substances to de-ice aircrafts and runways for safety reasons as well as potential fuel spills. This fluctuation requires careful and extensive monitoring grid to manage effluents properly and prevent contamination of nearby water bodies.

Natural climatic and environmental factors shape unique, site-specific challenges. For example, airports, located in naturally drier climates, which experience with demand peaks attributed to tourism during water stressed summer months creates risks associated to water supply, incremented by dependence on a sole water supply source. Alternatively, managers of airports located in northern countries deal with large quantities of storm water and de-icing needs during winter months, are confronted with a different series of management responsibilities.

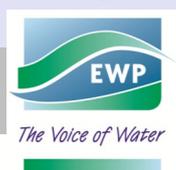
## Evolution of On-Site Performance

Principles	Major Strengths	Key Opportunities and Improvement Points
<b>1) Efficiency of Water Abstraction</b>	Clear knowledge of source(s) and sensitivity. Water measurements taken at least on a weekly basis.	<ul style="list-style-type: none"> <li>Assess alternative water sources (recycled water , rainwater harvesting, etc.).</li> <li>Define efficiency targets for water stressed and non stressed areas.</li> </ul>
<b>2) Good Water Quality Status</b>	Concrete measures for de-icing pollution control . Installation of oil traps at all discharge points (platforms, parking lots etc.)	<ul style="list-style-type: none"> <li>Assess the risk of pollution to ground water from runoff or herbicide use.</li> <li>Improve runoff monitoring and establish self-determined limits if necessary.</li> </ul>
<b>3) High Conservation Value (HCV) Areas</b>	Environmental Impact Assessments covering protected areas exist at all airports. Maps indicating HCV areas available at regional level.	<ul style="list-style-type: none"> <li>Integrate HCV areas into planning and decision making.</li> <li>Establish protective measures for protected habitats around the airport.</li> </ul>
<b>4) Equitable Governance</b>	Established environmental certifications (ISO 14001). High levels of internal and external transparency. Fluent communication with local stakeholders. Environmental awareness campaigns on water topics.	<ul style="list-style-type: none"> <li>Establish a concrete operational water management strategy.</li> <li>Increase participation in the activities of the River Basin District.</li> <li>Improve supply chain management.</li> <li>Assess the four EWS principles in new development projects.</li> </ul>

## Outcomes of the Pilot Studies

One of the principle outcomes was the finalization of all documentation as it applies to the Airport sector. In this regards, EWS is ready to implement the EWS Standard. Results showed the importance of having an exhaustive management strategy in place. EWS identified the manner in which airports could facilitate this process via a compilation of objectives, targets and responsibilities both short term and long term, along with guidelines for an implementation strategy. A more thorough management strategy points to the investment needed to improve water efficiency (i.e. staff training or a water-recycling scheme).

As airports have a relatively large economic and water user responsibility, a cohesive management strategy is an important first step in engaging with local river basin authorities in order to address regional problems with tangible solutions. Additionally, this strategy could preclude measures to improve water management along the supply chain as well as internally, the potential for which is notable although not always straightforward. The transparency brought on by a unified management strategy is exemplary of excellent water stewardship and serves as an excellent tool for future actions.



Pilot Partners:



Brussels Airport  
Welcome to Europe



Aeropuerto de Málaga-Costa del Sol  
aena aeropuertos



Göteborg Landvetter Airport  
SWEDISH AIRPORTS