



Land use and water consumption patterns in urban and tourist areas

A new Spanish study has highlighted current developments in the tourism sector that have significant implications for water supply and demand, but are barely addressed in recent land use policies. The findings indicate that any tourist destination that is to follow the 'quality tourist' model will have an increased water demand in domestic residential areas, which is one of the biggest threats to sustainable water management.

Water consumption patterns provide a useful tool in decision-making, defining policies and strategies, and for assessing the impact of future tourism projects. At a time when the Mediterranean's water supply situation is critical and is expected to worsen with climate change, tourist resorts are creating more activities that increase permanent water demand. Thus, more efficient water management is necessary in Mediterranean countries and the tourism sector; this has become one of the major challenges for land use policy in the immediate future.

The MEDSTAT II project, funded by the European Commission, found a lack of detailed data on water consumption by the tourism sector¹. Such data are essential for state and local authorities to define priorities for water conservation or demand management programmes.

The researchers used the municipality Calvià in Mallorca as a case study to evaluate the land use and water consumption patterns. Calvià is the most important tourist municipality in the Balearic Islands and one of the Mediterranean's leading tourist resorts. Water consumption was compared between 'quality tourism' (holiday homes), mass tourism, and residential urban areas by using population and monthly water consumption data from six areas within the municipality. In addition, the magnitude of water consumption by leisure structures, such as gardens and swimming pools, was measured.

The results revealed significant underestimates of actual summer water consumption in quality tourist areas. In fact, quality tourism consumed more water levels per capita than mass tourism. The main cause was garden irrigation, which accounted for more than 70% of these areas' total water consumption in summer. In mass tourism and residential areas, garden irrigation accounted for up to 20 and 30%, respectively. Individually owned swimming pools caused an additional average water consumption of 22 litres per person per day.

Extensive analyses on water availability, quality, cost, and protection of water resources were carried out during implementation of the EU Water Framework Directive². In addition, the island's government action programme specified ways to reduce water consumption. However, current water policy mainly focuses on indoor uses and does not consider water consumed for outdoor use (e.g. garden irrigation).

The authors emphasise that the issue of water supply and demand in urban and tourist areas is a critical problem that needs to be addressed by land use policy in the Mediterranean in the immediate future. Sustainable water management may be a determining factor for the long-term viability of tourism, but this will require the political will to impose stricter water policies. Planning authorities and other stakeholders in the tourism sector should take the water issue into account when defining future tourism policies and strategies.

1. See: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-78-09-699/EN/KS-78-09-699-EN.PDF
2. See: http://ec.europa.eu/environment/water/water-framework/index_en.html

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