



Environmental Impacts of Tourists

It is commonly believed that people are greater consumers when on holiday. Researchers have recently estimated that the Ecological Footprint of tourists in some areas of Italy is equivalent to that of residents. However, when arrival transport is taken into account, this Ecological Footprint is multiplied by more than 7. These results provide new insights into the impact of tourism, which could be helpful when designing policies.

Tourism, as one of the world's largest economic sectors, places direct and indirect pressures on species and habitats and thereby threatens their conservation. In addition, it may disturb wildlife and increase pollution caused by transportation. These potential impacts on nature and biodiversity are reinforced by the fact that tourists tend to consume more than the local population and also more than at home. In addition, images of luxuriance and abundance that are traditionally associated with holidays often stimulate the over-consumption pattern.

In this context, an international team of researchers recently determined the Ecological Footprint (EF) of tourists in the Val di Merse region of Italy, where the number of tourists is 685 "resident equivalent" (i.e. as if there were 685 tourists in this region, present throughout the year). This increases the resident population by 5%. The EF is a method that converts the consumption of resources and the production of waste into the areas of land and water (in billion hectares, gha) that would be needed to absorb the amount of resources consumed and waste produced. To this end, the scientists collected data on arrival transport, on food and fibre consumption, on accommodation, on land use, utilities and waste, on local transport and on activities of tourists on holiday in the Val di Merse region.

Converting consumption and waste generation into land surfaces shows that:

- Excluding arrival transport, the EF of tourists amounts to 5.28 gha/year per resident equivalent, which is comparable to the EF of one resident (5.47 gha/year). It is notable that the EF attributable to accommodation is greater for tourists than for residents; the reverse pattern is observed for goods and services.
- The total impact of one tourist is 38.08 gha/year per resident equivalent. Arrival transport accounts for 86% of this impact. Food and fibre consumption, local transport, accommodation and waste accounts for 6%, 4%, 3% and 1% respectively. The environmental impacts associated with the activities (e.g. energy and materials for entertainment and souvenir purchase) were negligible in comparison.

These results clearly show that arrival transport is the major environmental impact of tourism (about 86% of the total environmental impact). However, when arrival transport is excluded, the environmental impacts of tourists are comparable to those of the resident population, contrary to common opinion. This was attributed to the prominence of agro-tourism in the area. The scientists further note that the EF of tourists in Val di Merse is lower than the average EF of the residents in the tourist's home country of origin (going from around 5.5 gha/year per resident in Italy and Austria to 12 gha/year per resident in the USA).

The authors suggest that increasing the number of tourists in this region can have a net consumption impact at a local scale similar to increasing the resident population, while from a global climate perspective, the two alternatives differ greatly. Nevertheless, they note that their results do not take into account the seasonal characteristics of the tourism activities, or other social and economic considerations.

In the aim of better regional and spatial planning policies, the researchers advocate the ecological footprint in assessing the environmental impact of tourism. It could also serve as a framework for assessing the civil and industry capacity for tourism growth, which is one of the objectives of the European Community Biodiversity Strategy¹.

¹For more information: European Community Biodiversity Strategy, available at <http://ec.europa.eu/environment/docum/pdf/9842en.pdf>

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