Environmental Impacts of European Tourist Transport

Environmental impacts of transport activities have been quantified in a large number of studies but very few have addressed the specific issue of tourist transport. Recently, a European team of scientists has investigated the environmental impacts of five tourist transport modes on five impact categories for tourism between the places of residence of the EU citizens and their destination. Their analyses reveal that climate change which is mainly caused by air transport is by far the most significant impact. Consequently, policies aiming at mitigating the environmental burdens of European tourism should focus on air transportation and intercontinental tourism.

Tourism constitutes between 15% and 20% of all kilometres travelled by passengers in Europe. In 2000, the total number of tourism journeys by EU25 citizens was 875 million journeys of which 61% were domestic, 29% inside the EU, 4% to European countries outside the EU and 6% to other continents. The development of long distance air travel markets, European enlargement and the realisation of EU transport infrastructure suggest that the demand for tourism transport will continue to grow considerably in Europe. It is therefore necessary to better understand EU citizens' habits, travel destinations and associated impacts in order to set up efficient policies.

Research on the environmental impacts of tourism mainly focuses on the impacts at the tourism destination but neglects the impacts associated with transport to the destinations. This is mostly due to a lack of integrated data as in most cases transport models fail to represent (intercontinental) tourism trips and tourism data does not include information on travel distances, transport modes or domestic journeys.

In this study, the authors adopted the World Tourism Organisation definition of tourism, meaning that the trip must encompass at least one night at the destination and last less than a year. Two complementary databases were used to build a model that provides data on domestic and international passenger transport volume by mode (air, rail, coach, car, ferries) for the year 2000-2020. Five impact categories are considered: noise, climate change, accidents, air quality, and landscape. Their results are as follows:

- With regard to the number of journeys, tourism is dominated by the domestic and EU25 markets (90% of journeys) and by ground transportation (80% of all journeys).
- Outbound tourism is forecast to represent 1371 million journeys by 2020 (a 60% increase compared to 2000). Air transport is expected to show the largest increase at 190% especially for flows originating from the new Member States and for long distance trips. Rail demand comes second and is expected to grow significantly between countries with recent high-speed link realisations. Volume by road is predicted to increase in some areas but to decrease in others.
- Climate change is by far the most significant environmental impact and is followed by air quality. Air transport has a share of 50%-78% of all impacts and was responsible for 80% of greenhouse gas emissions in the tourism transport sector in 2000. Road transport causes the greatest impacts on air quality while rail, coach and ferry represent almost 20% of all trips but have a very limited environmental impact due to relatively low emissions on a per passenger basis.

The authors conclude that as almost 80% of the impacts are caused by air transport which represents only 20% of all trips, there are some opportunities to mitigate environmental burdens while affecting only a relatively small part of the tourism economy. Environmental policies in tourism should therefore consider measures reducing both air transport and intercontinental travel as these sectors have the strongest growth and are associated with the strongest environmental impacts.

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