SAUDI ARABIA:
ESTIMATING THE ENVIRONMENTAL EFFECTS OF TOURISM

Considering the recognized pressures of tourism on the natural environment, it is important to quantify and understand these impacts. The Ministry of Tourism has adopted an analytical method based on the TSA approach in order to provide estimates on the environmental effects of tourism activity in the Kingdom of Saudi Arabia. This method enables us to partially examine some environmental consequences of tourism, e.g. energy and water consumption and CO2 emissions attributed to tourism demand.

THE KSA INITIATIVE ON MEASURING ENVIRONMENTAL PRESSURES OF TOURISM

**Main question**
How can a country estimate environmental effects of tourism, based on the TSA, when it does not have environmental accounts?

**Key measures**
- Average water use (L/person/night).
- Average fuel (diesel) use (L/person/night).
- Average electricity use (kWh/person/night).
- CO2 emissions attributed to tourism demand.

**Pilot**
- Environmental Measures For Tourism Commercial Accommodations Services.
- Environmental Measures For Domestic Tourism Land Transportation

**Key Indicators**
- Inbound & Domestic Tourist Consumption of Fuel, Electricity and Water
- Domestic Tourist Consumption of Fuel in Land Transportation
- CO2 emissions

**Policy Implications**
- Examining the potential environmental pressures and financial costs of attracting new tourist.
- Adopting analytical alternative methods in case of the absence of SEEA.
- Starting point for developing MST indicators
POLICY AIMS/CONTEXT OF THE PILOT

What are the demands and pressures that tourism development processes impose upon limited natural resources, and how these pressures can be measured and managed in the interest of sustainability?

PILOT FOCUSED ON:

<table>
<thead>
<tr>
<th>Economic dimension</th>
<th>National</th>
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<tbody>
<tr>
<td>Social dimension, incl. culture &amp; institutions</td>
<td>Subnational region</td>
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<tr>
<td>Environmental dimension</td>
<td>Municipality or location</td>
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KEY DATA GENERATED

ENERGY & WATER CONSUMPTION OF TOURISTS IN COMMERCIAL ACCOMMODATION SERVICES IN KSA, 2016

<table>
<thead>
<tr>
<th>Items</th>
<th>Inbound Consumption</th>
<th>Tourism Domestic Consumption</th>
<th>Tourism Total Consumption</th>
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<tbody>
<tr>
<td>Fuel</td>
<td>151.4 million liter</td>
<td>173.4 million liter</td>
<td>324.8 million liter</td>
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<tr>
<td>Electricity</td>
<td>1,156 million Kwh</td>
<td>1,324 million Kwh</td>
<td>2,480 million Kwh</td>
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<tr>
<td>Water</td>
<td>11.0 million m3</td>
<td>12.6 million m3</td>
<td>23.6 million m3</td>
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ESTIMATED CO2 EMISSIONS, 2016
UNIT: TON CO2

COMMERCIAL ACCOMMODATION SERVICES: 83,817
DOMESTIC TOURISM LAND TRANSPORT: 259,348
KEY FINDINGS

- 86% of total domestic tourists travel by private cars inside the KSA. Domestic tourists travelled a collective approximately 14-billion-kilometers, requiring 1,005 million liters of fuel.

- CO2 emissions produced by the combustion 1,005 million liters of fuel consumed during domestic trips is estimated at 259,348-ton CO2.

- 263 million guest nights in commercial accommodation resulted in the consumption of 324.8 million liters of fuel, 2,480 million Kwh of electricity, and 23.6 million m3 of water.

- Fuel consumption by guests in commercial accommodation produced 83,817 tons of CO2.

For policy context, this means that each additional 1 million guests at hotels and similar would require a further 7 million liters of fuel, 53 million Kwh of electricity, and 500 Km3 of water.
POLICY ACTION

A report of the findings of the pilot was presented in a meeting with key stakeholders (2018).

This perspective and that of stakeholders will be a key input for defining a strategy, identifying the data assets needed, and the analytical use of related cases.

The next step that the Ministry of Tourism is focusing on is to build multi-stakeholder partnerships to develop a national MST statistical framework investigating the sustainability of tourism in a comprehensive way that covers the economic, social, environmental aspects of tourism.

ORGANIZATION

Year(s) the pilot study was carried out in: 2017
Lead institution(s): Ministry of Tourism

LINKS TO MORE INFORMATION

- https://mt.gov.sa/