Greenhouse Gas Emissions from Tourism

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The need for tourism emissions statistics

- As a cross cutting industry, tourism’s emissions profile not readily observable in standard air emissions accounts or greenhouse gas inventories

- Significant interest in New Zealand from industry and researchers to understand the industry’s emissions profile

- Pre-COVID, tourism directly contributed around 6 percent to GDP and was New Zealand’s main export
In general, there are three approaches to measuring GHG emissions:

- Inventory approaches are not based on standard industry classifications, so cannot be linked to tourism industry data for estimation.
- SEEA approach enables comparisons to GDP but not emissions targets.
- Both the production and consumption approaches give valuable insights into tourism emissions, but neither give a complete picture.
About tourism GHG statistics

- Production-based tourism emissions are estimated using two datasets:
  - Total industry emissions from the air emissions account
  - Industry output ratios from the tourism satellite account

- Consumption-based tourism emissions use:
  - the air emissions account
  - consumption-based emissions methodology, and
  - tourism satellite account

- Both approaches are top-down and model based (i.e., require assumptions)
Results

Tourism emitted 2.7Mt CO$_2$-e in 2020, down from 5.7Mt in 2019

Top contributors to tourism-related emissions in 2020 were:
- domestic tourism (household use of own vehicles for tourism), 42%
- air and space transport, 35%
- road, rail, and water transport, 8.0%
- manufacturing, 5.6%
Results – emissions and economic performance

- From 2019-20, tourism-related emissions decreased 3Mt (53%) mainly due to:
  - domestic tourism (households), down 12%
  - air and space transport, down 74%
- Contribution to CO₂-e dropped from 6.8% to 3.4% from 2019-20, while contribution to GDP dropped from 5.5% to 2.9%
Reflections: Insights and policy relevance

• Tourism emissions can be estimated if air emissions accounts and tourism satellite accounts are available.

• These data are of high interest to tourism industry organisations, economic consultants, central and local government, emissions researchers, media.

• The production approach is a solid start, and will often give information currently otherwise available.

• Consumption approach gives a fuller picture by covering emissions across the supply chain (e.g., purchased electricity).

• Engaging with industry bodies is important given the nuances of interpreting the data.

• Frameworks give boundaries and rules for compilation, and allow for example comparisons with TSA but boundaries can lead to exclusions that are of high interest to customers (e.g., international passengers using non-resident airlines).
Where to find our information

**Quarterly greenhouse gas emissions (industry and household): Sources and methods**

**Industry and households (annual) emissions**

**Industry and households (quarterly) emissions**

**Consumption-based emissions**

**Regional emissions**

**Approaches to measuring New Zealand’s greenhouse gas emissions**
Thank you for listening