

Connecting TSA and SEEA

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Set up presentation

- Introduction
- Relevance of connecting TSA and SEEA
- Concepts and definitions
- Set of indicators or one composite indicator?
- Production approach, consumption approach and eco system approach
- In practice: what ingredients do we need for compiling TSA-SEEA indicators
- TSA and SEEA data in the Netherlands
- Already relevant existing data on the environment (NACE 51, I, en R)
- Finetuning needed
- Challenges to overcome

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Introduction

- My name is Maarten van Rossum
- Employer: Statistics Netherlands
- Experience: Environmental accounts (7 years), National accounts (10 years), Tourism accounts (3 years)

Why involved: my personal ambition is to connect the TSA with the SEEA framework in order to try to monitor 'sustainable tourism' .

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Relevance of connecting TSA and SEEA

- The UN Sustainable Development Goals (SDGs) leave no doubt: sustainability is at the forefront of policy. Tourism, considered in three of these Goals (Target 8.9, 12.b and 14.7), is more than ever before expected to live up to the expectations of sustainability—not only of tourism itself, but also of tourism as a contributor to sustainable development.
- There is a clear need to monitor progress (both the economy and the environment)
- Therefore there is a clear need for unquestionable indicators based on indisputable conceptual frameworks

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Concepts and definitions

- Internationally agreed conceptual frameworks: TSA, SNA and SEEA
- Linking the SEEA to the Tourism Satellite Account (TSA).
both these sets of accounts have their corresponding methodological frameworks agreed internationally and rooted in the SNA, an explicit link—a SEEA-tourism—is still necessary.
- Resident principle used in both TSA, SNA and SEEA
- Scope of production is the same in TSA, SNA and SEEA

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Set of indicators or one composite indicator?

- It is recognized that “sustainable tourism” (much like sustainable development) is largely a policy construct without a precise definition. So personally in favor of a set of indicators in stead of one composite indicator to monitor the phenomenon.
- **Production approach**
- **Consumption approach**
- **Ecosystem flows (not already covered by TSA accounts, no double accounting)**

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Production approach versus consumption approach

- **Production approach, monitor over time the following indicators**

- Greenhouse gas emissions caused by direct tourism production
- Net energy consumption caused by direct tourism production
- Waste production caused by direct tourism production
- Emissions to water caused by direct tourism production

- **Consumption approach, monitor over time the following indicators**

- Direct & indirect greenhouse gas emissions embodied tourism consumption by residents
- Direct & indirect Net energy consumption embodied tourism consumption by residents
- Direct & indirect waste production embodied in tourism consumption by residents
- Direct & indirect emissions to water embodied in tourism consumption by residents

- **Ecosystem flows (not already covered by TSA accounts, no double accounting)**

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In practice: what ingredients do we need for compiling TSA-SEEA indicators

- **Production approach**

- (1) Tourism related production in mln euro per activity (TSA)
- (2) Residuals per activity (SEEA)
- (3) Production per activity (SNA)

Residuals related to tourism production: $(1) * ((2) / (3))$

- **Consumption approach:**

- Tourism related consumption in mln euro per activity (TSA)
- Source of consumption: domestic production or imports
- IO framework: simple model (domestic technology) or a more complicated MRIO
- Residuals per activity per country (SEEA)
- Input-output modelling experience

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TSA and SEEA data in the Netherlands

- Tourism; key indicators, National Accounts

<http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLEN&PA=82670ENG&D1=a&D2=a&HD=150923-1223&LA=EN&HDR=G1&STB=T>

- Tourist expenditure; National Accounts

<http://statline.cbs.nl/Statweb/publication/?VW=T&DM=SLEN&PA=82671ENG&D1=a&D2=a&HD=150923-1224&LA=EN&HDR=G1&STB=T>

- We also produce and publish information on residuals in the environmental accounts. See for example:

<http://statline.cbs.nl/Statweb/publication/?DM=SLEN&PA=82873ENG&D1=0-9,14-15,17&D2=0-2,37-39&D3=10-12&LA=EN&VW=T>

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Employment in the tourism sector

Figure 2, Employment per activity

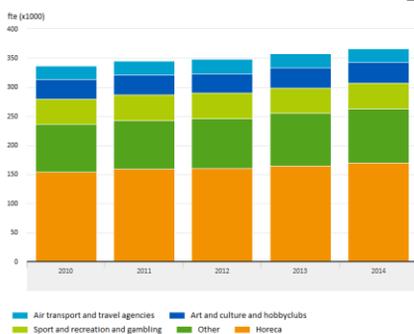
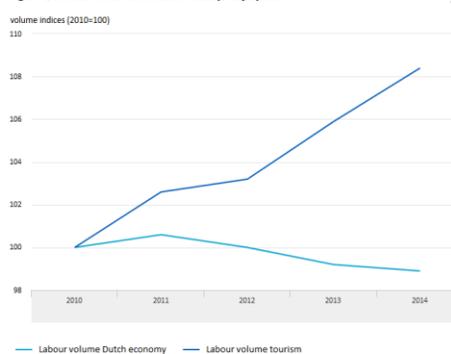


Figure 1, Tourism versus total Dutch economy, employment

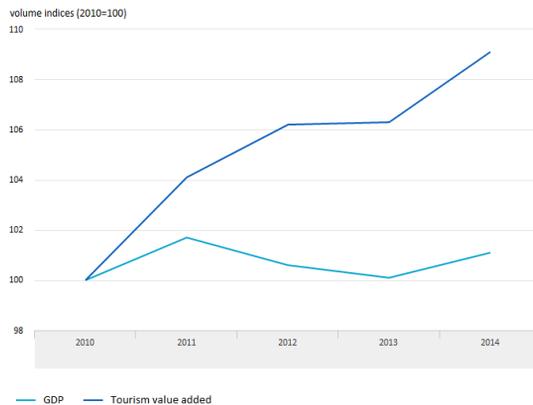


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Economic growth and value added growth of the tourism sector

Figure 2, Tourism economy versus total Dutch economy

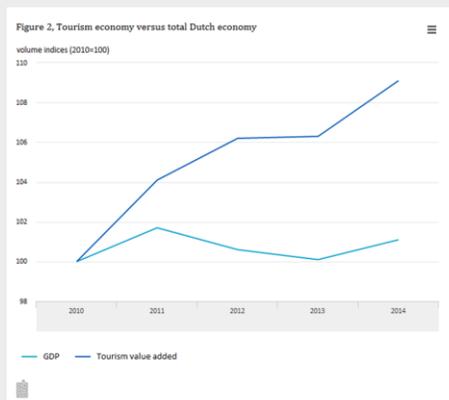


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Way forward: Case study in the Netherlands in 2016

- Ambition for 2016:
Compile figures for the production approach and add these indicators to the framework



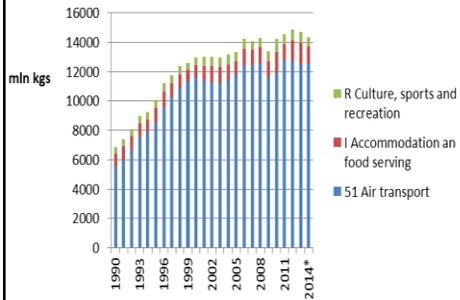
- ?? Add an indicator for waste production
- ?? Add an indicator for CO₂ emissions
- ?? Add an indicator for emissions to water

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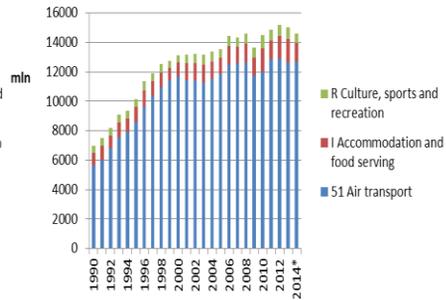


Already relevant existing data on the environment, NACE 51, I, en R (Statline CBS)

Greenhouse gases (climate change), CO2



Greenhouse gases (climate change), Greenhouse gas equivalents

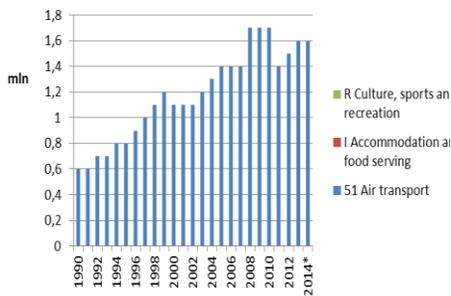


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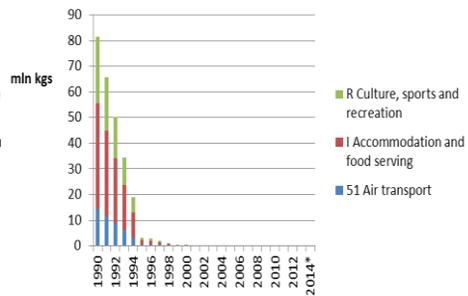


Already relevant existing data on the environment, NACE 51, I, en R (Statline CBS)

Acidification, Acidification equivalents



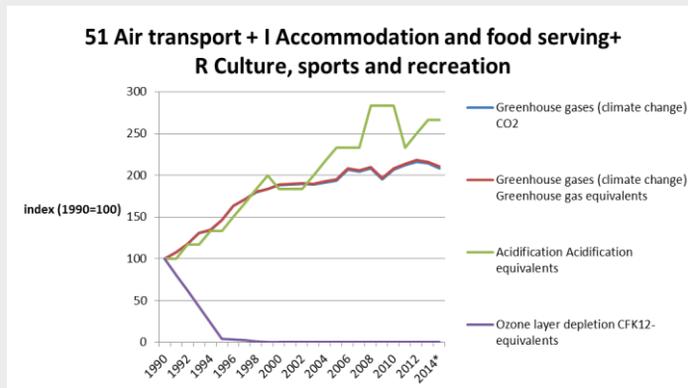
Ozone layer depletion, CFK12-equivalents



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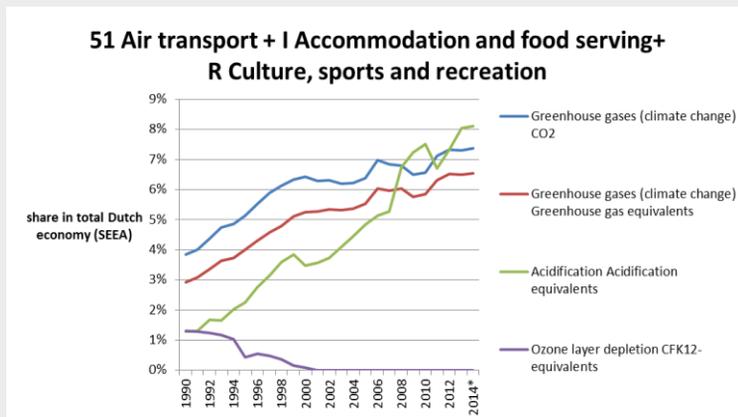
Al ready relevant existing data on the environment, NACE 51, I, en R (Statline CBS)



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Al ready relevant existing data on the environment, NACE 51, I, en R (Statline CBS)



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Finetuning Scope economy=scope environment

- Not all so-called characteristic NACE classes are 100% percent tourism related (lunching bar, snack bar not included in tourism economy) → you need to correct for this overestimation
- Also non-characteristic activities have emissions and use natural resources. Emissions related to these activities should also be taken into account. → you need to correct for this underestimation

- Production approach

(1) Tourism related production in mln euro per activity (TSA)

(2) Residuals per activity (SEEA)

(3) Production per activity (SNA)

Residuals related to tourism production: $(1) * ((2)/(3))$

→ Tourism activities are present in all kind of different NACE classes. In order to produce figures for the complete tourism sector this finetuning is needed in order to produce unquestionable indicators for policy making.

Scope used for the economy should be the same as the scope used for residuals and natural resource use; fair comparison.



Challenges to overcome

→ Tourism activities are present in all kind of different NACE classes. In order to produce figures for the complete tourism sector extra finetuning is needed in order to produce unquestionable indicators for policy making.

Scope used for the economy should be the same as the scope used for residuals and natural resource use; fair comparison.

- Connecting TSA and SEEA very important
- We are very enthusiastic to execute a case study for the Netherlands
- One problem: budget cuts. This case study is extra work (not included in the statistical programme).
- External finance needed.

→ We acknowledge: contradictory messages



Thank you for your attention!

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