

Role of the NSO on climate change related statistics and reporting

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EGES 17 May 2018

Conference of European Statisticians' (CES) *Recommendations on Climate Change-related Statistics* (UNECE, 2014):

“Environmental, social and economic data that measure the human causes of climate change, the impacts of climate change on human and natural systems, the efforts of humans to avoid the consequences as well as their efforts to adapt to the consequences”.

To narrow the scope in the context of the statistical system:

- **Drivers:** human causes of climate change that deal with sources of emissions;
- **Emissions:** GHG emissions and their human causes;
- **Impacts:** impacts of climate change on human and natural systems;
- **Mitigation:** efforts of humans to avoid the consequences;
- **Adaptation:** efforts to adapt to the consequences.

Contents

- **Organization of Climate change –related statistics and reporting**
- **Climate change –related statistics and indicator sets:**
Greenhouse Gas Inventory, Energy Statistics,
Environmental Accounts, SDG indicators

Statistics Finland's tasks

- To compile statistics and studies
 - To collect and maintain data files on society
 - To provide information service and promote the use of statistics
 - To develop statistical methods and conduct research that supports the development of statistics
- **To develop the National Statistical Service in cooperation with other government officials**
 - **To coordinate the National Statistical Service in Finland**
 - **To participate in and coordinate Finland's international statistical cooperation**



Main environmental statistics of other authorities

	State of the Environment	Pressures	Renewable Natural Resources	Non-Renewable Natural Resources
Finnish Environment Institute	<ul style="list-style-type: none"> ❖ Water ❖ Biodiversity 	<ul style="list-style-type: none"> ❖ Air Emissions (excl. traffic) ❖ Waste Water Discharges 	<ul style="list-style-type: none"> ❖ Water 	
Natural Resources Institute Finland	<ul style="list-style-type: none"> ❖ Forest 		<ul style="list-style-type: none"> ❖ Forest ❖ Fish and Game ❖ Agricultural land 	<ul style="list-style-type: none"> ❖ Land (National Land Survey of Finland Ministry of the Environment)
Finnish Meteorological Institute	<ul style="list-style-type: none"> ❖ Air Quality 	<ul style="list-style-type: none"> ❖ Long-range transport of air pollutants: 		
Technical Research Centre of Finland		<ul style="list-style-type: none"> ❖ Air Emissions from Traffic 		
Finnish Safety and Chemicals Agency				<ul style="list-style-type: none"> ❖ Mineral (Geological Survey of Finland)



Climate Change Related Reporting

Statistics Finland – the national entity for Finland’s greenhouse gas (GHG) inventory

GHG inventory unit

Statistics Finland – the national entity for Finland’s greenhouse gas (GHG) inventory

- Responsible for national GHG inventory submissions and their reviews under the UNFCCC, Kyoto Protocol (KP) and the European Union
- Legal basis: Government resolution 2003, Climate Act 2015
- Overall responsibility for general management, coordination and QA/QC, coordination also of participation in UNFCCC/KP reviews and GHG inventory related IPCC work
- Produces emission estimates for energy & industrial processes
- Agreements with expert organisations for production of emission/removal estimates of the other sectors, as well as with ministries to secure resources and support
- Publishes and archives the inventory results

National system for the greenhouse gas inventory in Finland

Finland's National Greenhouse Gas Inventory System, based on the Statistics Act, the Climate Change Act, protocols, agreements and contracts

- Administrative data sources
- Environmental permits
 - Emission trading registry
 - Other

Finnish Environment Institute

Natural Resources Institute Finland

Statistics Finland National Entity
Energy, Industrial processes

VTT Technical Research Centre of Finland Ltd

Annual inventory submissions to EU, UNFCCC and Kyoto Protocol

Advisory Board:
Relevant ministries, the Energy Authority, Finnish Environment Institute and Natural Resources Institute Finland

Other climate change related tasks

- Compiles technically the National Communications and Biennial Reports under the UNFCCC
 - National circumstances, impacts of climate change
 - Climate policies on mitigation and adaptation, including how Finland is fulfilling its mitigation commitments
 - Support to developing countries
- Expert support for decision-makers in issues related to emissions/removals (trends, reporting, monitoring of targets) at domestic and regional level
 - Information to support planning on mitigation
 - Advice on reporting and reviews at international climate negotiations

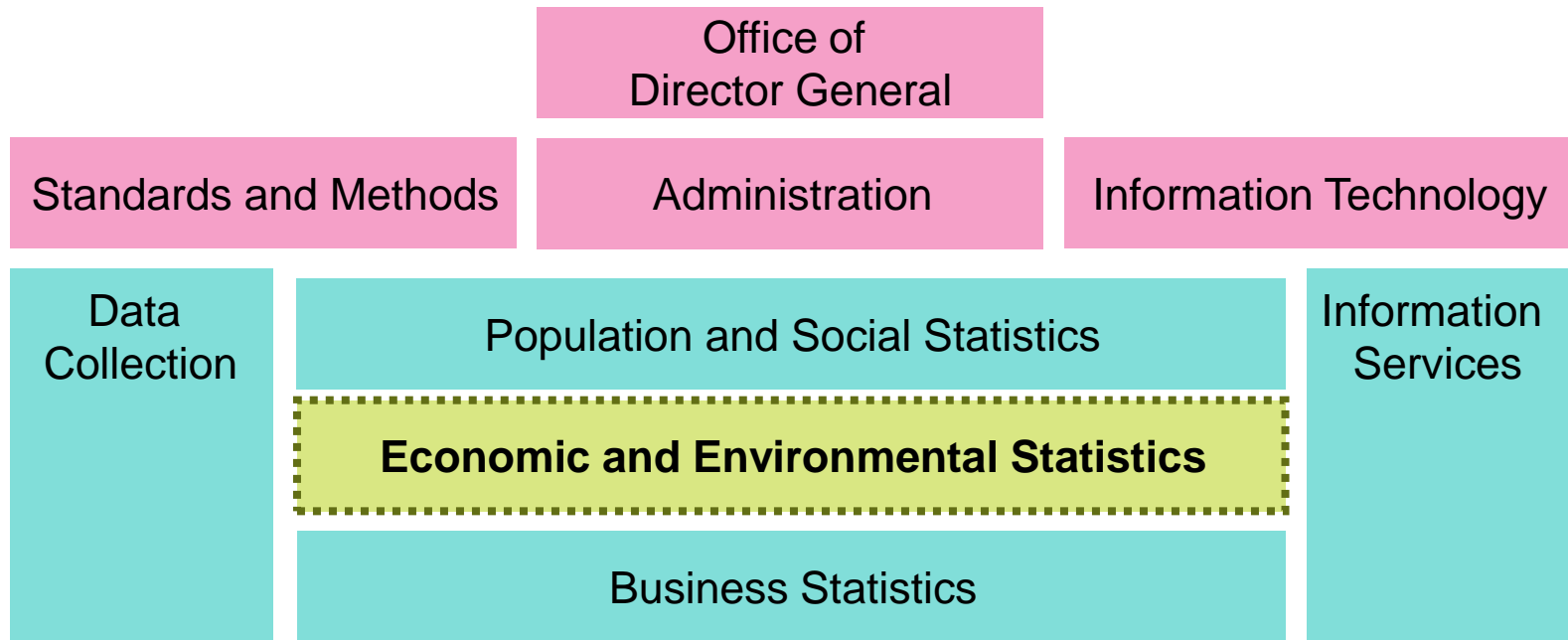
National entity in a statistical office

- **Experiences on where we have been successful**
 - Independency and objectivity – our data are trusted
 - Access to information – helps to ensure completeness, quality of data
 - Close collaboration with energy, industrial and waste and other environmental statistics – coherence, mutual benefits in efficiency
- **Challenges**
 - Confidentiality vs. transparency – agreements needed with some industrial companies to be able to report transparently, also aggregated reporting for small sources



Organization and co-operation on other climate change –related statistics and reporting

Statistics Finland organization



Centralized data collection

Centralized data dissemination

Economic and Environmental Statistics

Steering group
for
price statistics

Steering group for
national accounts

Steering group
for
environmental
statistics

Consumer
and
Housing
Prices

Cost
Indicators

National
Accounts

Government
Finance and
Sector
Accounts

Balance of
payments
statistics

Environment
and Energy

Greenhouse
Gas
Inventory

Steering Group for Environmental Statistics

- Follows and advises ongoing work in Greenhouse Gas Inventory and Environment and Energy Statistics
- *Works as advisory board for director in matters that concerns these statistics*
- Group members:
 - Director from Economic and Environmental Statistics, Heads of Statistics, Senior Advisers and Team Leaders from Environment and Energy and Greenhouse Gas Inventory
- Meetings once a month

Energy Statistics and Environmental Accounts of Statistics Finland

Energy Statistics

- Consumption of hard coal
- Energy consumption in households
- Energy prices
- Energy supply and consumption
- Energy use in manufacturing
- Production of electricity and heat

Environmental Accounts

- Air emission accounts
- Energy accounts
- Economy-wide material flow accounts
- Waste statistics
- Environmental protection expenditures
- Environmental goods and services
- Environmental taxes

Co-operation Group for Energy Statistics

- Coordination of general development of energy statistics
- Development of co-operation of organizations involved
- Setting priorities of demands on energy statistics
- Preparation of Finnish statements to preparation processes of international legal base and instructions.
- Members from
 - Ministry of Employment and Economy
 - Ministry of the Environment, Ministry of Finance
 - Energy Authority, National Emergency Supply Agency
 - Natural Resource Institute Finland, Tax Administration, Customs
 - Motiva Oy (company of experts promoting efficient and sustainable use of energy and materials).

Co-operation Group for Environmental Accounts

- Communication with / between interest groups
- Co-operation in international affairs
- Other possible issues
- Members from
 - Ministry of the Environment, Finnish Environment Institute
 - Ministry of Agriculture and Forestry, Natural Resource institute Finland
 - Ministry of Employment and Economy,
 - Ministry of Finance, Government Institute for Economic Research
 - Prime Minister's Office Finland
 - Thule-institute of University of Oulu
 - The Federation of Finnish Technology Industries

Co-operation between authorities is a key to effective use of all possible data sources for climate change –related statistics

- Statistics Finland focuses on environmental statistics and accounts describing pressures, responses and driving forces.
- Statistics on natural resources and state of the environment are compiled mainly by research institutes close to the government.
- Co-operation between Statistics Finland, ministries and research institutes is regular and well organized, including regular meetings and written agreements on co-operation.
- Co-operation groups on greenhouse gas inventory, energy statistics and environmental accounts can support each other.
- The development of dissemination (incl. statistical information and publications) is an increasingly important part of co-operation.

SDG project at Statistics Finland 2018

- **Project will create:** Procedures for co-operation between the producers of indicators and basic data behind those indicators, a system to collect indicators, to report to international organizations, and to take care of the first round of data collection.
- **Challenges and risks:** Motivation of producers of SDG indicators to provide data to reporting platform for 13 years, commitment of producers of indicators, data, and metadata; all producers are not organizations that regularly provide data for national statistics.
- **The Concrete ‘final result’:** An open reporting system/platform for dissemination of SDG indicators and metadata to international and national users
- **Role of environment and energy statistics and accounts in the SDG:** 7 energy, 12 sustainable production and consumption, 13 climate change, 6 water, 14 marine areas, 15 land degradation and biodiversity loss.