

# Official Statistics on GHG emissions - the Norwegian Model

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#### **Contents**

- Climate change and the (current) role of Statistics Norway
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- New challenges
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## CONCENTRATION OF GHG IN ATMOSPHERE

## CLIMATE CHANGE - average temperature increase

#### **EMISSIONS OF GHG**

#### **HUMAN ACTIVITY**

- transport
- heating
- industry
- agriculture



## CONSEQUENCES ON PHYSICAL ENVIRONMENT

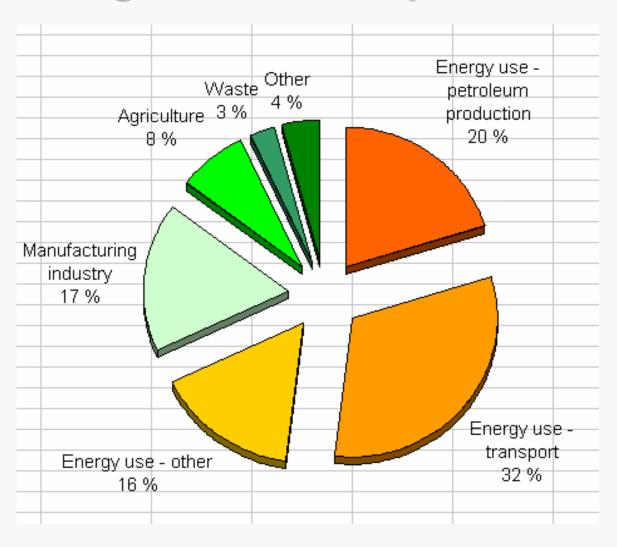
- changed precipitation pattern
- melting of ice
- rise in sea level

#### **IMPACT ON SOCIETY**

- imigration/emigration
- economy
- loss of traditional ways of living
- spread of diseases
- loss of lives



# Norwegian emission profile 2006

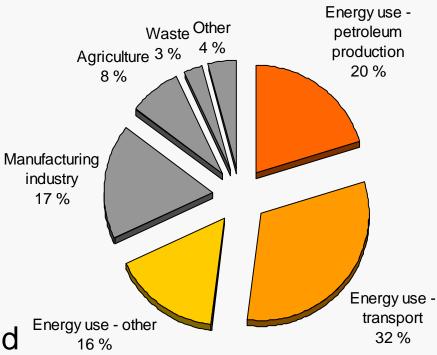




# **Energy production and use**

- Energy and petroleum statistics
  - Energy consumption by fuel and equipment
- Transport statistics
  - Road and air transport

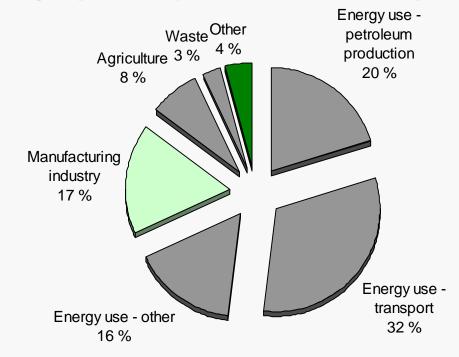
 Living condition surveys and consumer surveys





# Manufacturing industry (and product use)

- Production statistics
- Foreign trade statistics

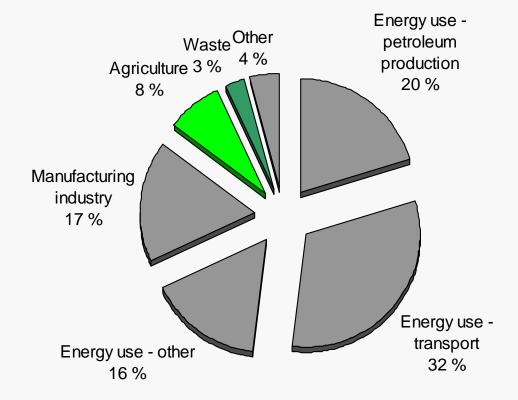


- Reported data from industrial plants
  - Replace estimated emissions
  - Source:Norwegian Pollution Control Authorities



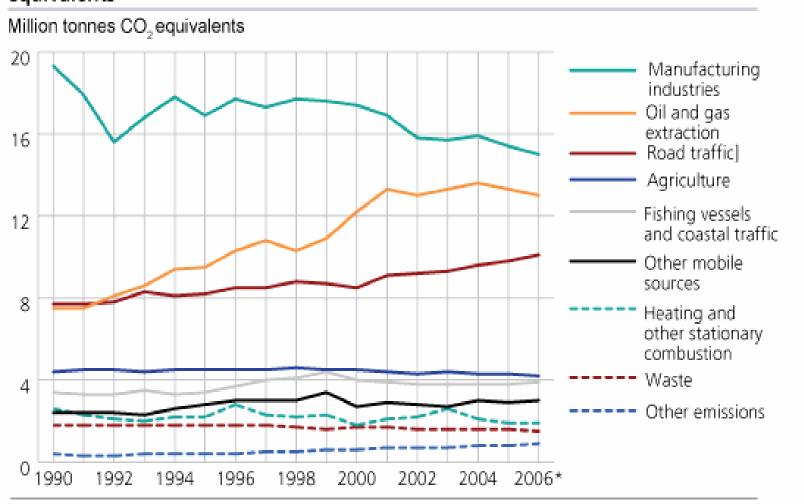
# **Agriculture and waste**

- Agriculture statistics
  - Livestock
  - Area
- Waste water statistics
  - Fertilizer
- Waste statistics
  - Material



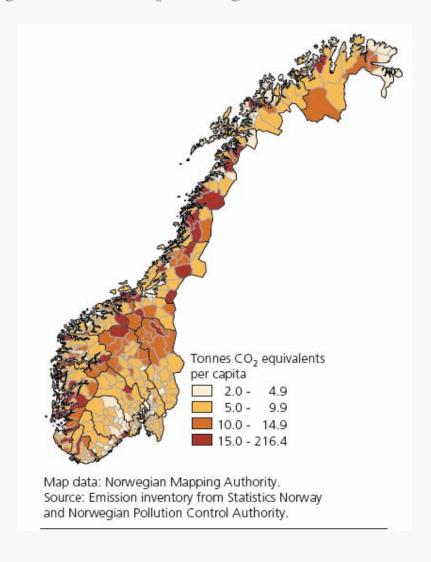


# Emissions of greenhouse gases by source. 1990-2006\*. Million tonnes CO<sub>2</sub> equivalents





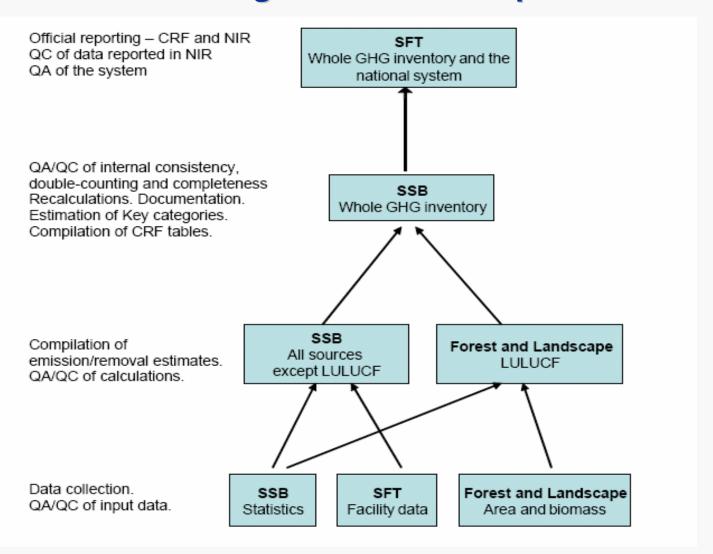
# **Emissions by Municipality**





### **Reporting to UNFCCC**

## - Institutional arrangements and cooperation





# **New challenges**

#### Abatement

Statistics on mitigation measures, carbon trading etc

#### Climate footprint or indirect emissions

- Imported food, clothing etc.
- International air transport: Norwegian passengers
- International sea transport: Norwegian fleet

#### Additional effects

Impact of particles etc



## **Conclusions**

- Statistics Norway in unique position: Trusted as independent and serious, providing the "correct answer" on GHG emissions
- Norwegian GHG emission estimates benefit from being Official Statistics, hence high quality also ensured through European Code of Practice and the UN Fundamental Principles of Official Statistics
- Great advantage for emission compilers to work in close contact with the expertise on activity data used in estimating emissions, and valuable to have easy access to other data describing the drivers and structures of society
- Future work: Find resources to meet the greatly increased demand for information and provide new statistics on for instance abatement measures



For documentation of the emission inventory, see Aasestad, K.:

The Norwegian Emission Inventory 2007 <a href="http://www.ssb.no/emner/01/04/10/rapp\_emissions/">http://www.ssb.no/emner/01/04/10/rapp\_emissions/</a>

For more emission figures, see <a href="http://www.ssb.no/english/subjects/01/04/10/klimagassn\_en/">http://www.ssb.no/english/subjects/01/04/10/klimagassn\_en/</a>

Thank you!