



**125 years**

Statistics

Netherlands

# Climate mitigation investments

Sjoerd Schenau

# Content

- Policy and data needs
- Scope and definitions
- Data sources and methods
- Results for the Netherlands
- Conclusions



# Policy needs for climate related expenditures



- Size and distribution of costs and benefits: households, companies, distribution
- Government climate account: prices of fossil consumption and the energy transition (subsidies, taxes, etc.). So also: who pays and who receives?
- Energy and climate-related Investments

# Statistical data needs

## International

- Data gaps initiative (IMF)
- Eurostat → legal base environmental accounts

## National

- Monitoring National Energy plan
- Input for scenario analysis and policy evaluation



# Scope and definitions



# Definitions

**Gross fixed capital formation:** resident producers' acquisitions less disposals of fixed assets during a given period. **Fixed assets** are produced assets used in production for more than one year (SNA)

**Climate mitigation:** involves human interventions to reduce the emissions of greenhouse gases by sources or enhance their removal from the atmosphere by “sinks” (UNFCCC)

**Climate adaptation:** the process of adjustment to actual or expected climate and its effects (UNFCCC)

# Scope (1) Primary purpose



<b>Specific products</b>	Capital goods that have been specifically produced, designed and manufactured <u>for purposes of reducing GHG emissions or lowering GHG atmospheric concentrations</u>
<b>Cleaner and resource efficient goods</b>	Capital goods whose primary use is not an environmental one, but <u>that emit less GHG emissions when produced or used than equivalent “normal” goods which have the same usage and provides an equivalent service.</u>



# Scope (2)

**Capital mitigation expenditure consists of:**

- 1. Capital expenditure on mitigation products** e.g. purchase of solar panels, insulation etc.
- 2. Capital expenditure incurred for mitigation (production) activities** → It also includes expenditure in non-environmental products.
  - *Renewable energy production*
  - *Energy saving activities*



# Scope (3): Classification of environmental purposes

## Primary activities

### 0101 Reduction and control of greenhouse gases

- 010101 Prevention of greenhouse gases emissions
- 010102 Treatment of greenhouse gases
- 010103 Monitoring and measurement of greenhouse gases
- 010199 Others for reduction and control of greenhouse gases n.e.c.

### 0201 Energy from renewable sources

- 020101 Production of energy from renewable source
- 020102 Equipment and technologies for renewable energy
- 020103 Supporting services for renewable energy
- 020104 Monitoring and measurement of energy from renewable sources
- 020199 Others for energy from renewable sources n.e.c.

### 0202 Energy savings and management

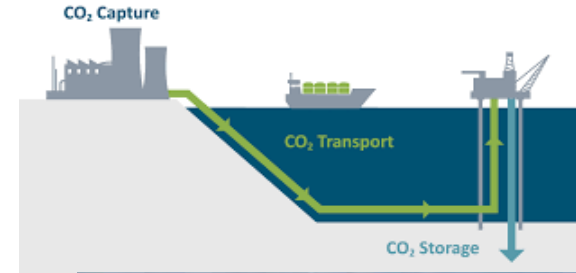
- 020201 Energy savings through in-process modifications
- 020202 Energy efficient buildings; other efficient energy-demand technologies
- 020203 Monitoring and measurement for energy savings and management
- 020299 Others for energy savings and management n.e.c.

### 0701 R&D for reduction and control of air emissions

- 070101 R&D for reduction and control of greenhouse gases

### 0702 R&D for energy

- 070201 R&D for renewables
- 070202 R&D for energy savings



# Scope (3): Classification of environmental purposes



## **Secondary activities**

### **0502 Protection of biodiversity and landscape**

050301 Reforestation, afforestation and forest-related land management

050302 Protection against forest fires

### **0402 Materials recovery and savings**

040203 Reduction of the intake of fossil fuels for non-energy uses

## **Not in scope GEP (and SEEA)**

Activities related to the production of crops for energy use;

Activities related to the transmission and distribution of energy;

Public transport as a whole

Nuclear energy production



# Data sources and methods



# Data sources

1. National accounts and investment statistics
2. Energy statistics and price statistics
3. Mitigation subsidies and related transfers data
4. Specific surveys

# Methodology and issues

- Multiple data sources needed
- Existing classification often do not suffice (e.g. CPC, COFOG)
- Cleaner and resource efficient goods → only include extra costs (?), e.g. electric cars
- Adaptation investments: not yet well defined
- Integration into accounting framework



# Results for the Netherlands



# Scope for the Netherlands

## Investments in renewable energy

- *Wind mills*
- *Solar panels*
- *Heat pumps / biomass*

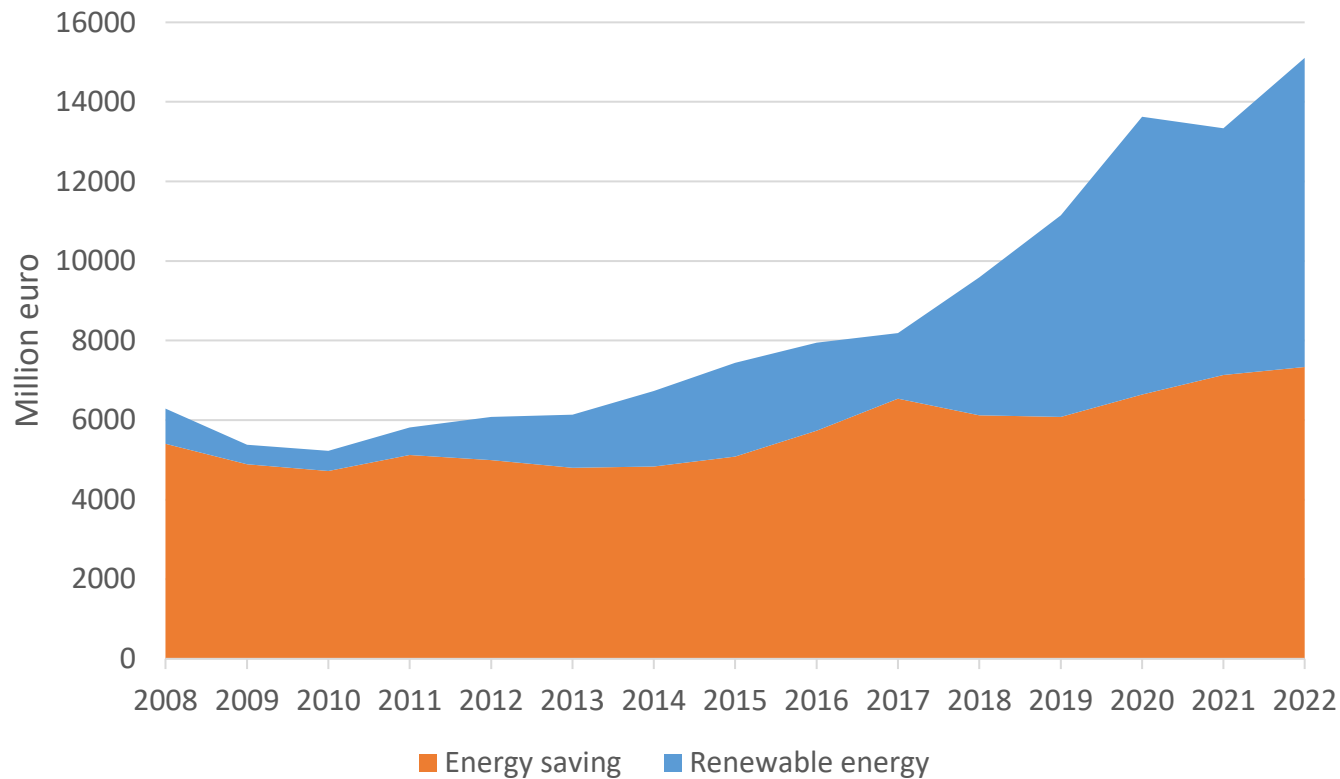
## Investments in isolation / energy efficiency

- *Households*
- *Companies*

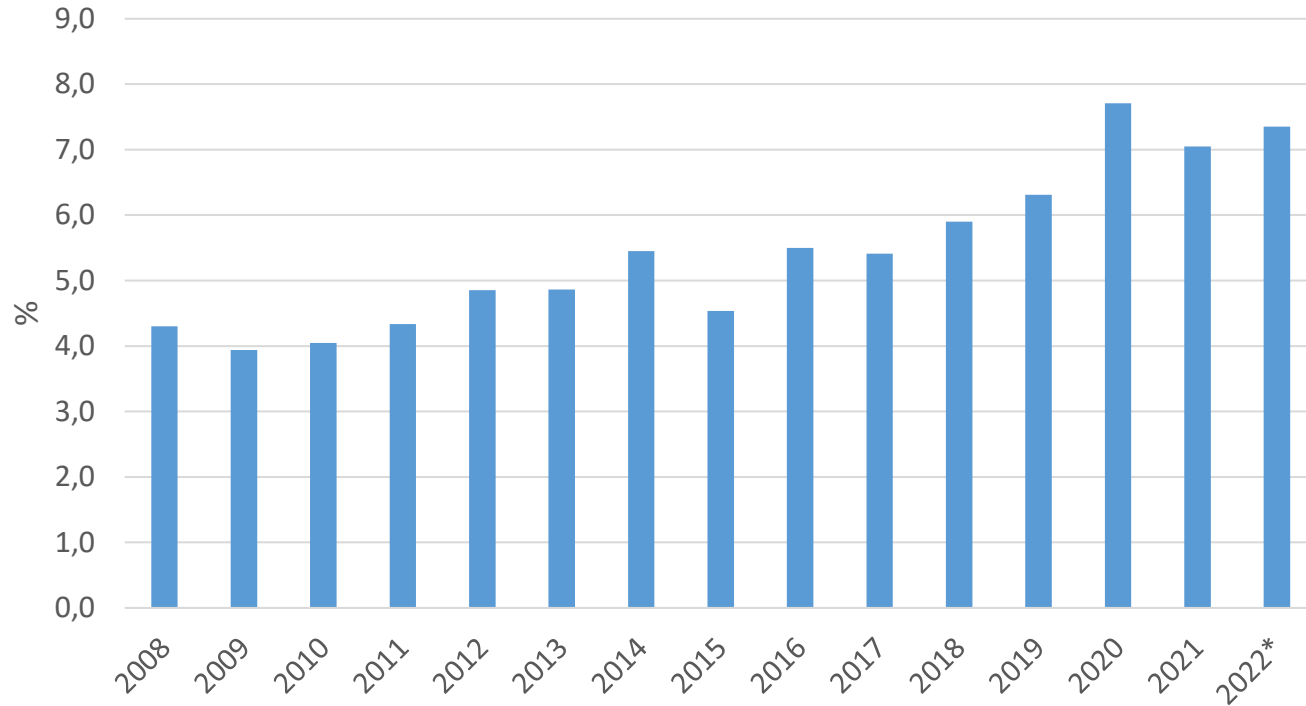




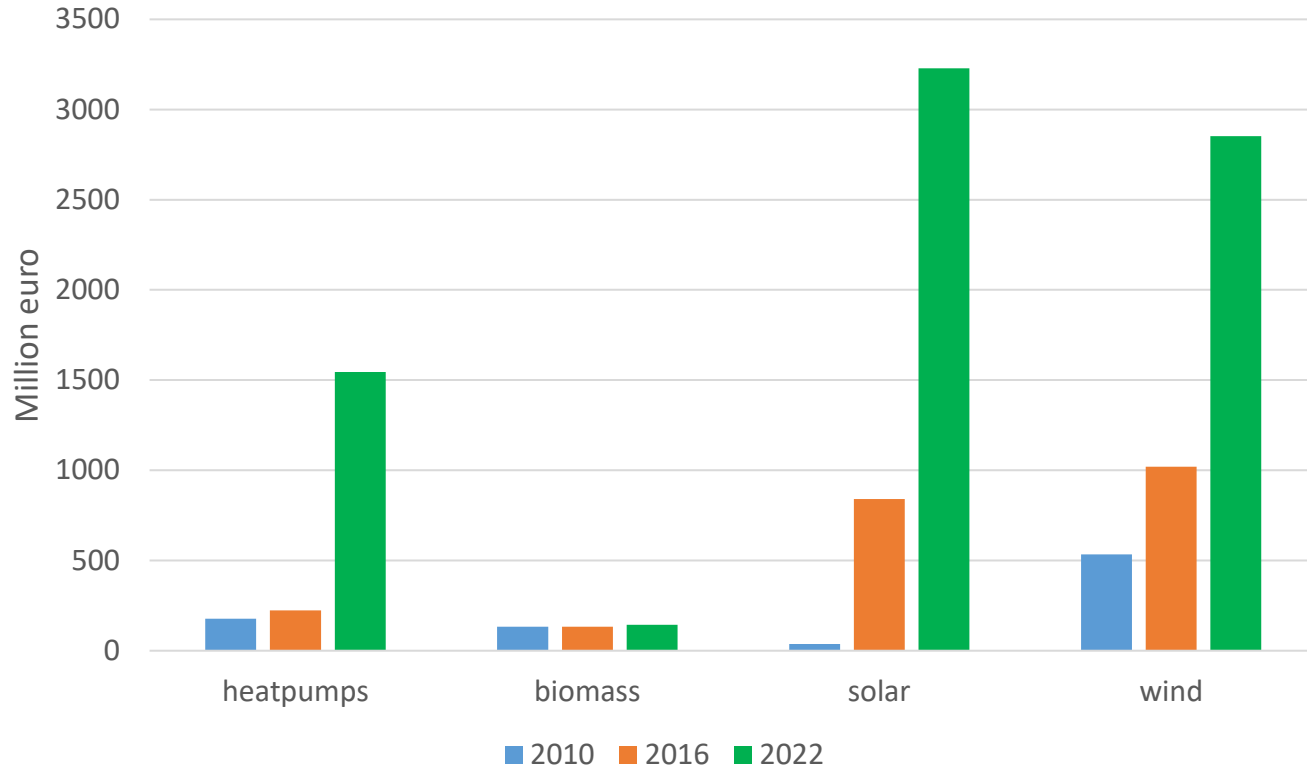
# Climate mitigation investments (current prices)



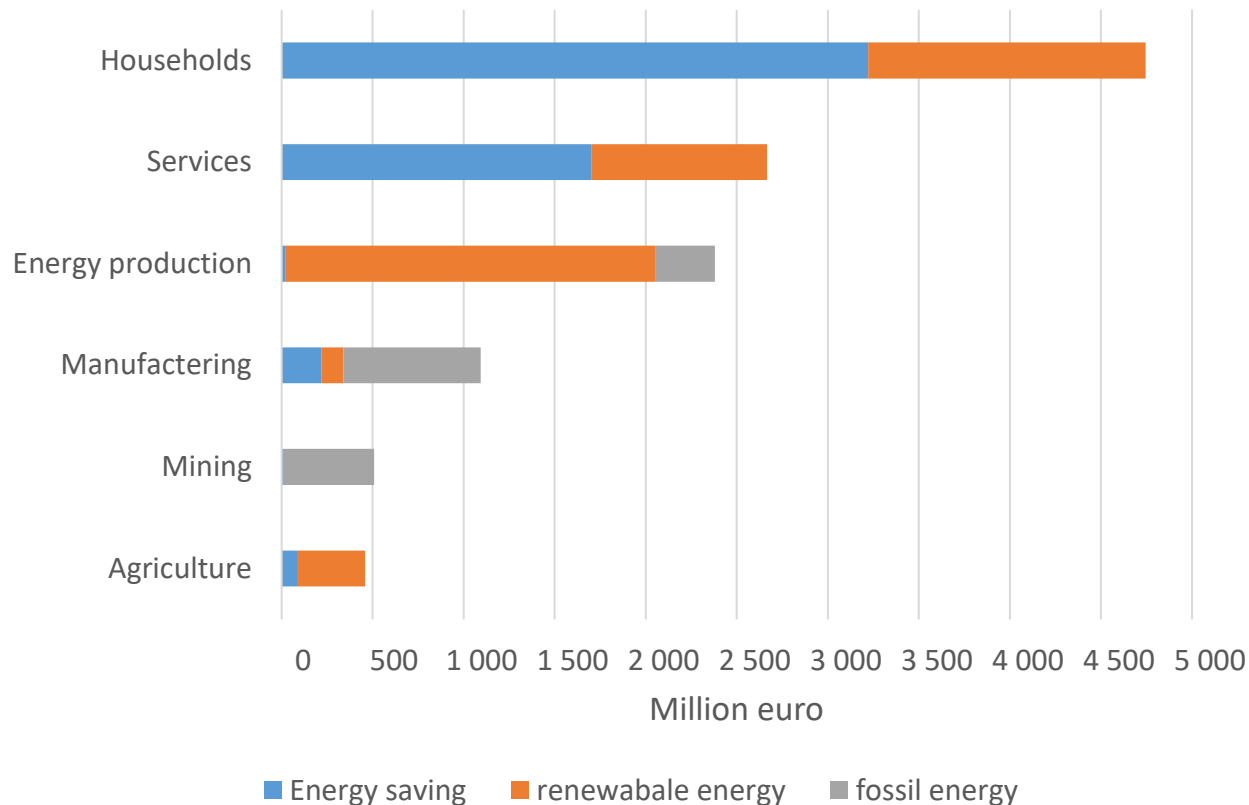
# Share in total investments



# Investments in renewable energy



# Energy related investments by sector (2019)



# What is still missing ?

- **Investments in CCS**  
→ *Not yet important*
- **Investments related to reduction in other greenhouse gasses**  
→ *overlap with other environmental investments*
- **Investments in Electrification, including electric vehicles**



# Conclusions

- High demand for the data on climate expenditures!
- Mitigation investments become more important
- Scope issues: what to include...
- Methodological issue: Extra costs calculation
- Adaptation investments: a new challenge....





**125 years** reliable statistics