SEEA as a framework for assessing policy responses to climate change

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The interrelationships between the economy and climate change

- Economic activities
- Climate change
- GHG emissions
- Enhanced GHG concentrations in atmosphere
- Radiative forcing
- Impacts
- Policy measures
  - mitigation
  - adaptation
- Economic activities
- Climate change

Enhanced GHG concentrations in atmosphere

Impacts
the DPSIR framework

Increased production, transportation
Increased demand for energy etc.

Greenhouse gas emissions

GHG concentrations
Climate variables etc.

Mitigation
Adaptation

On agriculture, water supply, health sector etc.
Climate change in SEEA

• Not specifically addressed → Volume III
1. Physical flows accounts

- Air emission accounts
- Energy flow account
- Water flow accounts
- Waste accounts
- Other
2. Asset accounts

- Energy resources
- Water resources
- Biological resources
- Land and ecosystems
3. Accounts for environment-related transactions

- Environmental protection expenditure
- Resource use expenditure
- Environmental taxes and subsidies
- Emission trading
- Environmental goods and service sector
Other parts of the accounting framework relevant to climate change

- Regional economic accounts
- Agricultural accounts
- Tourism accounts
- Health accounts
Integrating the accounts into the DPSIR model

- National accounts
- Energy flow accounts
- Agricultural accounts
- Land use / cover accounts

- Air emission accounts
- Stocks and flows of carbon

- EPEA
- EGSS
- Env. taxes
- Env. subsidies
- Emission permits

Adaptation expenditure

- Water flow / asset accounts
- Energy flow / asset accounts
- Forest accounts
- Fisheries accounts
- Land and ecosystem accounts

- National accounts
- Agricultural accounts
- Tourism accounts
- Regional accounts
- Health accounts
Conclusions

• The SEEA, together with the SNA and related satellite accounts, has the potential to bring together in one consistent analytical framework all relevant information with regard to the relationships between the economy and climate change, that can be used for climate change assessment, policy and decision making.

• The accounts are very useful to assess both the driving forces and the pressures, but also the impacts and responses with regard to the interrelationships between the economy and climate change.

• Information on the state of the environment, which are not part of the accounts, can easily be added from other data sources.
Some remaining issues

• **Expenditure related to climate change mitigation** is not well described within in the EPEA. The CEPA code for climate change is at this moment at a three digit level. Also, expenditure concerned with energy saving is not included.

• **Adaptation expenditure** is not part of EPEA. Further research is needed into the concepts, definitions and classifications to add this subject to the accounting framework.

• The development of **land and ecosystem accounts** is still in a preliminary phase. As these accounts are very relevant to climate change further research to implementation or a partial implementation is worthwhile.

• The **social dimension** is as yet not part of the framework, but this could potentially be added to the system. Further research is needed here.