STATEC

Climate Change related indicators in Luxembourg

National context

2014 – CC is not an issue for Luxembourg

<u>Academic study</u>
- Mainly positive impacts on territory
- Few adaptation needed at affordable cost

<u>But recognition of our responsibility</u>
- Historical GHG emissions from our steel industries
- Impacts of our decisions on fuels taxes

- Mitigation measures are needed :
  Kyoto cent, Renewable national plan, Energy efficiency plan, e-Mobility

2018 – Visualisation of CC impacts in Luxembourg

Population realizes CC impacts by observing tangible extreme events
- June: important flooding (economic losses 8 millions EUR)
- August: important drought

Population asks government to act

But to take decisions, we need statistics!

Statistical context

2014 – First participation to UNECE expert forum on CCRS

Define the scope of CCRS
- 5 areas: Drivers, Emissions, Impacts, Mitigation, Adaptation

Reinforce official statistical network
- Reinforce data exchanges between Environment agency and STATEC
- CCRS become a regular topic discussed during national WG on Env. statistics

Participation to TF on CCRI
- Participation to methodological discussion
- Participation to pilot testing exercise

2019 – National CC related indicators

- Phase 1: test last version of recommended UNECE CCRI list

- Phase 2: select national key indicators
  Criteria: relevance for country, quality of data set

- Phase 3: define contextual indicators

- Phase 4: validate selected indicators by WGES
  Final approval expected in June

- Phase 5 : implement regular production of this new national indicators list

National indicators list

National indicators list - Drivers

Key indicators
- (5a) Total energy intensity of production activities of the national economy
- (6a) CO_2 intensity of energy for the national economy
- (8a) Energy consumption by households / capita (residence principle)

Contextual indicators
- *Total energy use*
- *Share of fuels sales to non-resident in total fuels sales*
- *CO_2 intensity of energy for Households*

National indicators list - Emissions

Key indicators
- (9a) Total GHG emissions of the national economy
- (11) GHG emissions from land use
- (12) Total GHG emissions of production activities
- (13) GHG emission intensity of production activities
- (14) Direct GHG emissions from households

Contextual indicators
- *share of CO_2 emissions from fuel combustion in total GHG emissions of the national economy*

National indicators list - Impacts

Key indicators
- (16) Mean temperature anomaly
- Precipitation anomaly
- (18) Level of water stress: freshwater withdrawal as a proportion of available freshwater resources

Contextual indicators
- *Number of hot days anomaly (>= 30°C)*

National indicators list - Mitigation

Key indicators
- Amount received from energy taxes
- Amount received from transport taxes
- (33) Average carbon prices
- (34) Mobilized amount of USD per year starting in 2020 accountable towards the USD 100 billion commitment

Contextual indicators
- *Total renewable energy use*
- *Number of permits given for free*
- *Number of permits sold by auctioning*

National indicators list - Adaptation

Key indicators
- (36) Change in water use efficiency over time

Contextual indicators
- *Water use by households / per capita*
- *Share of water losses in total water distributed*

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