

# Measuring impact of Policies and Measures in Belgium

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## Case study



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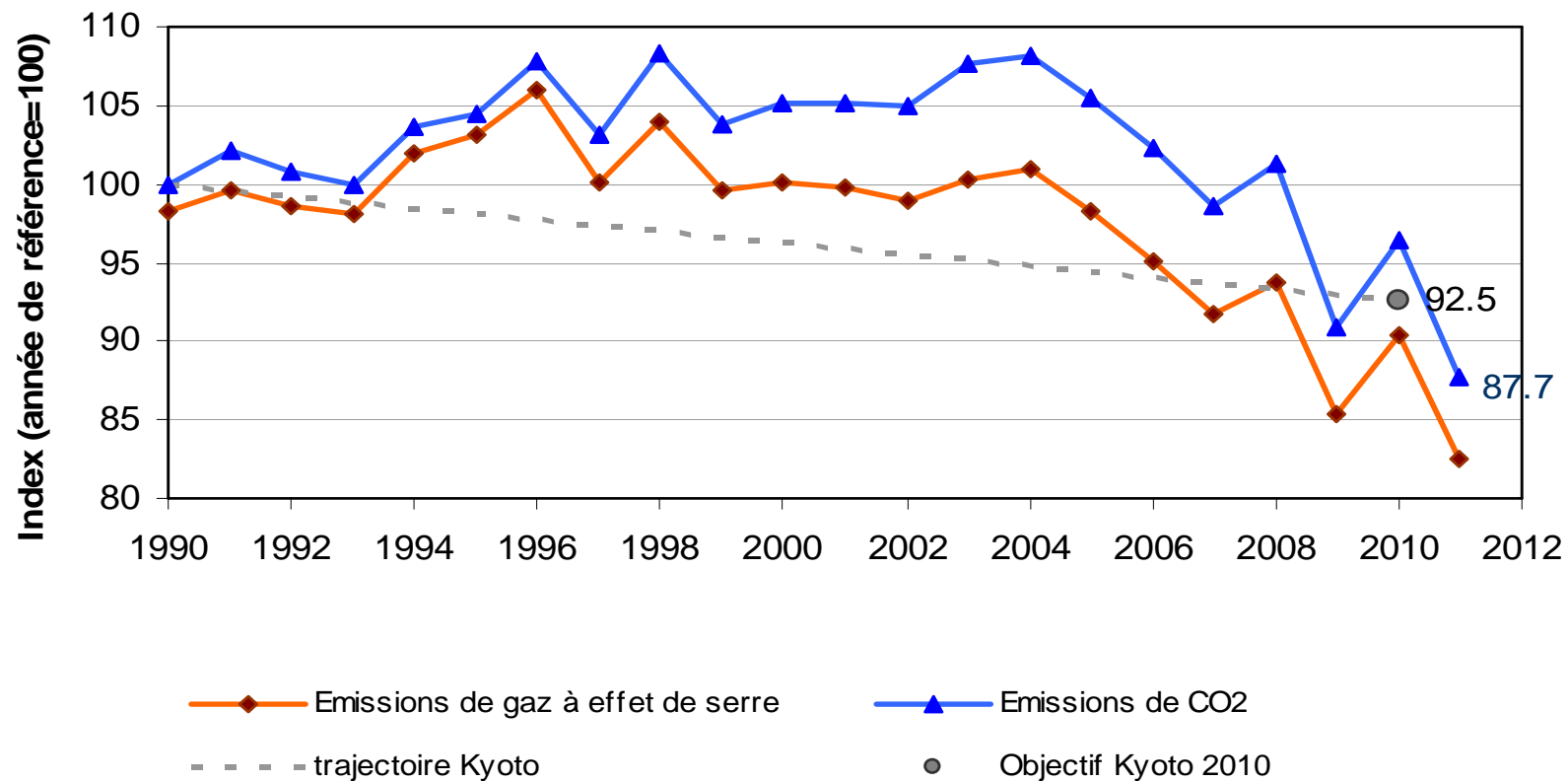
## 'Chinese apothecary' system



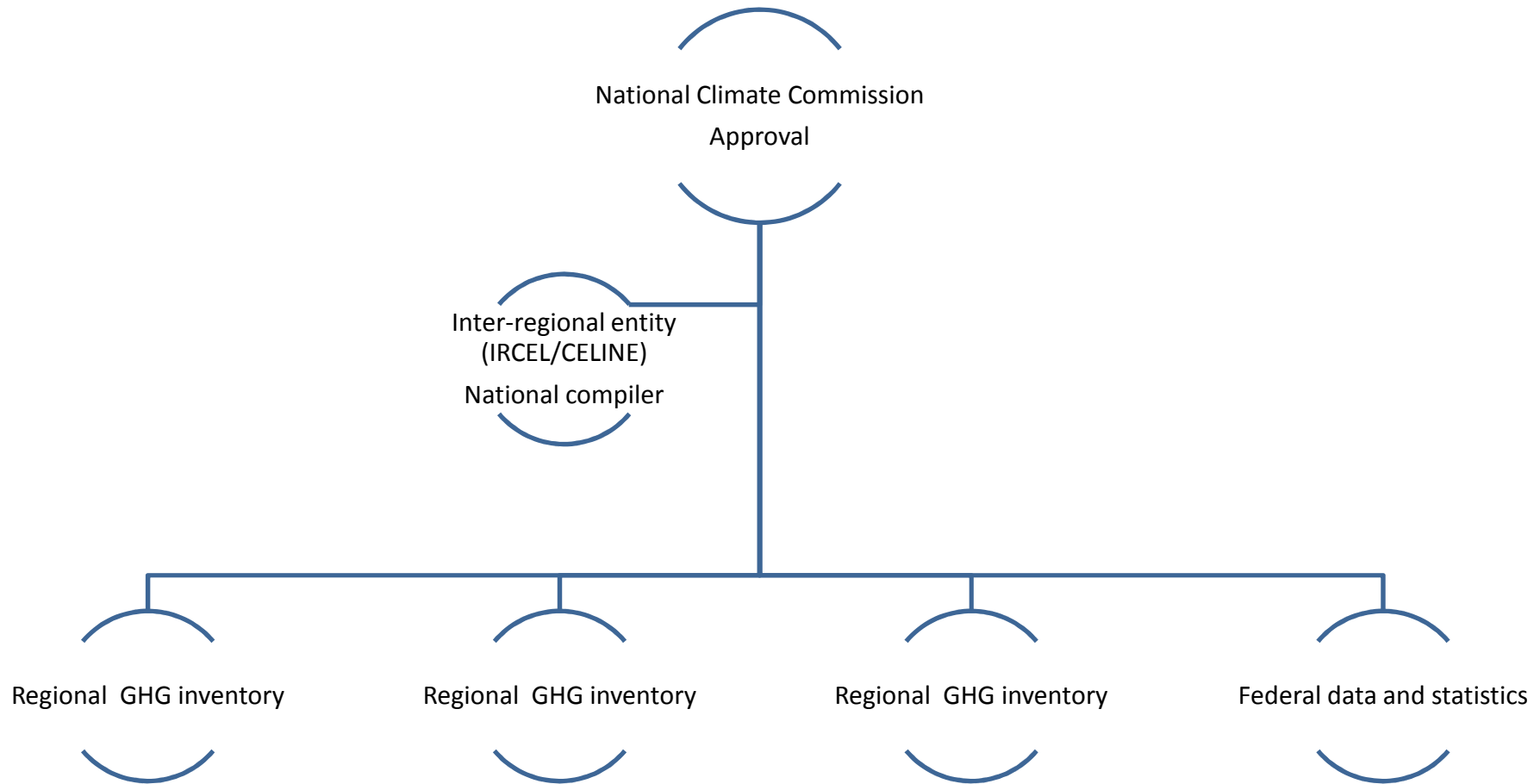
- Belgium is a federal state composed of 3 regions, 3 communities and 1 federal state
- Climate change competences are scattered between the federal state and the 3 regions
- Reporting modalities and data/information exchange between the federal state and the regions is regulated by a cooperation agreement (14 november 2002)

## Belgium committed to reduce its GHG emissions by 7.5% under the Kyoto protocol first CP

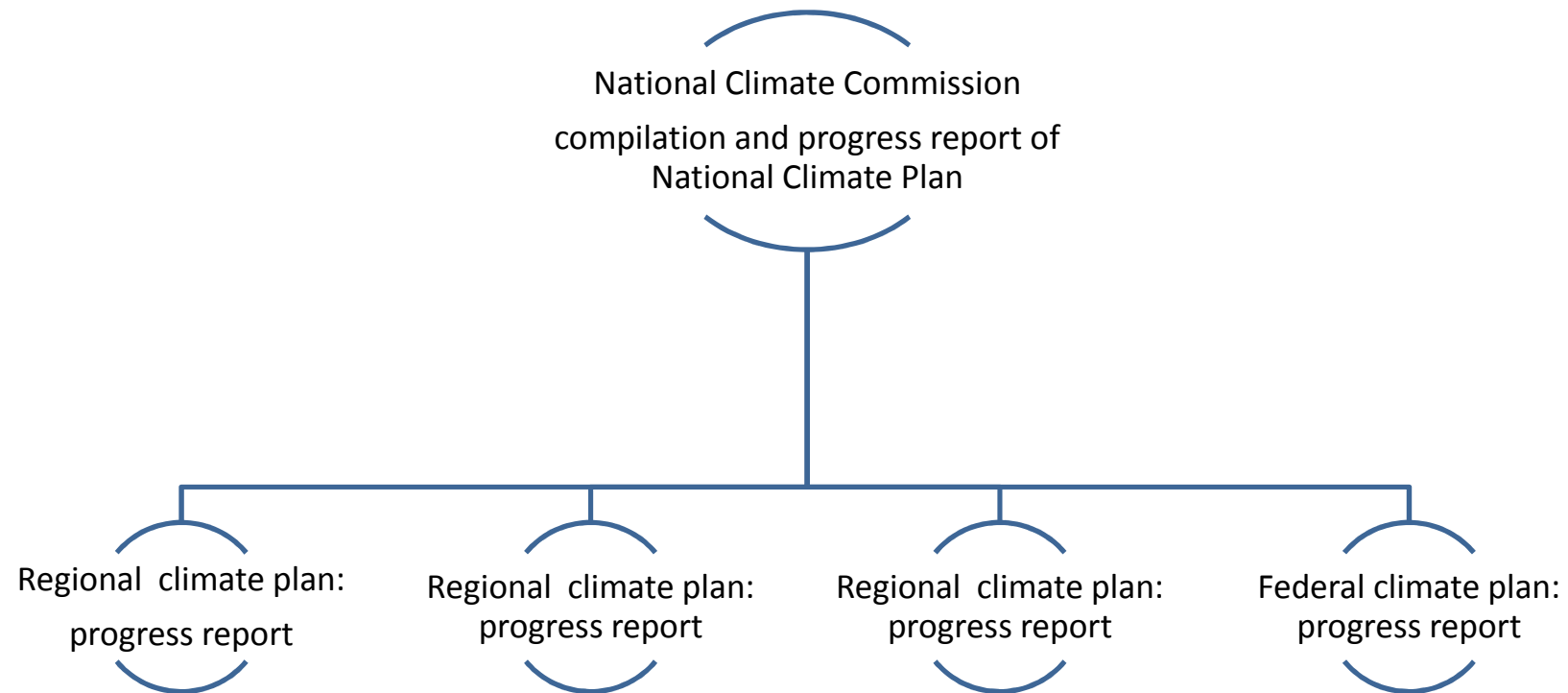
- Total GHG emission in 2011 decreased by 12,3 % wrt 1990 base year



# Institutional arrangements for GHG inventories



# Institutional arrangements for Policies and Measures



## Example 1: 'overlapping PAMs'

- Fiscal reduction for energy saving investments by citizens (condensing boilers, heat pumps, roof insulation, solar panels...)
- Regional subsidies for energy saving investments (for similar types of equipments)
- PAM impacts are assumed to be proportional to the size of the financial support provided by federal or regional entities: if the federal measure constitutes a tax reduction of 40 € and the regional measure a grant of 10 €, 80% of the emission reduction is allocated to the federal PAM and 20% to the regional PAM.

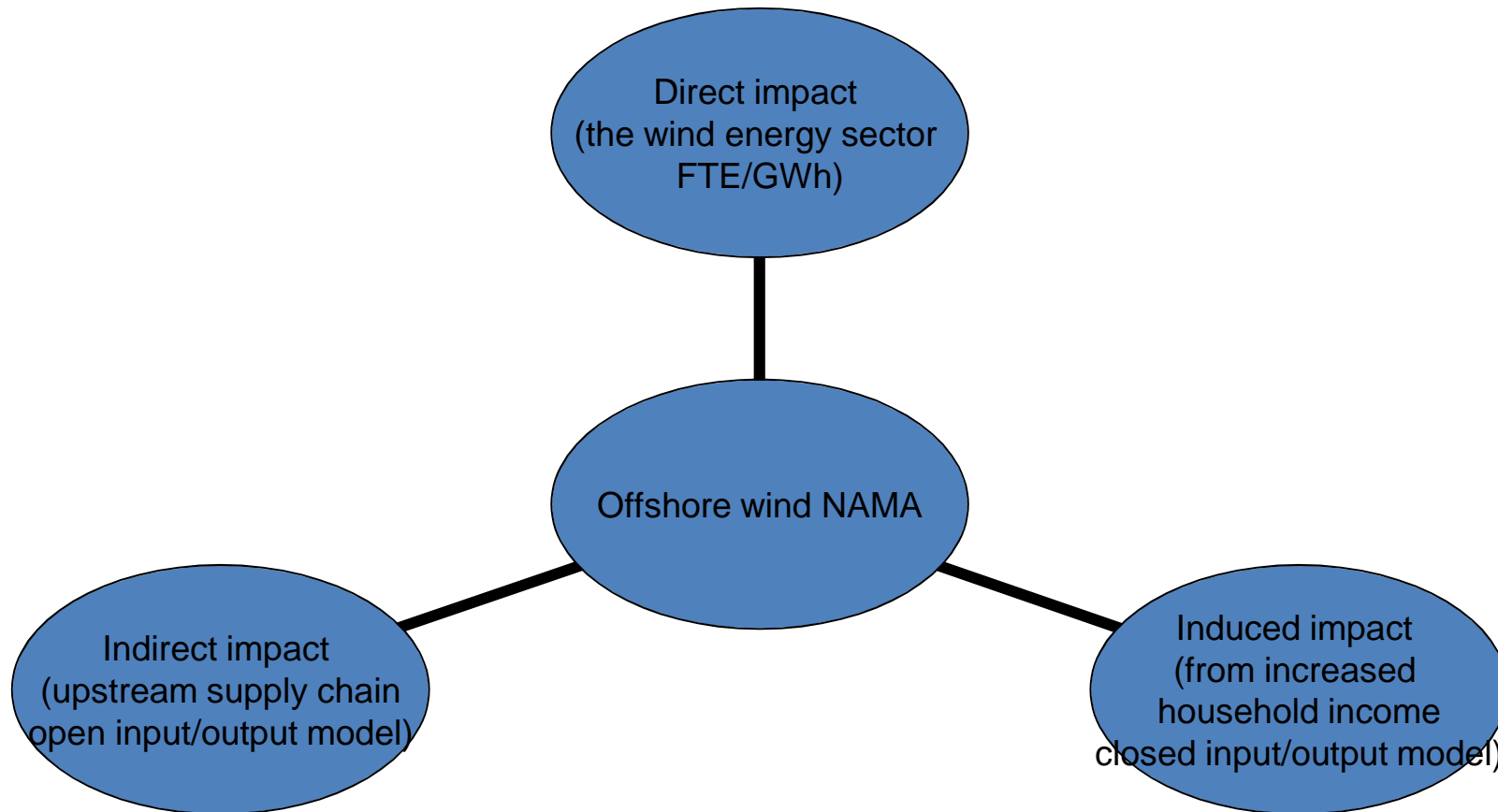
# Example 2: Socio-economic impact of

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## federal PAMs

- As a first attempt, focus on estimating the impact on employment of an offshore wind PAM : 2004 target of 2.000 MW for electricity from offshore wind in 2020
- The analysis takes into account:
  - **'gross impact'**: the number of jobs linked to the implementation of the technology promoted by the PAM
  - **'direct impact'**: the employment created in businesses supplying goods or services directly linked to the technology being promoted by the PAM (e.g.manufacturers, developers/producers of energy, and service providers).
  - **'indirect impact'**: the employment created upstream, in the “supply chain of companies”, i.e. the companies supplying goods or services to the sectors or sub-sectors directly involved, as well as, the companies supplying goods or services to the latter and so on. This indirect impact is generally evaluated using input-output models.
  - **'induced impact'**: are linked to the increased production needed to satisfy the consumption of households resulting from an extra revenue. On the other hand, if the PAM has an impact on consumer prices, for instance for energy this will also influence the available income for other expenditures.

# Example 2: Socio-economic impact of federal PAMs





## Example 2: Socio-economic impact of federal PAMs

- the impact is expressed in terms of full time equivalents (FTE)
- The study evaluated the avoided CO2 emissions and the avoided fossil fuel imports, but does not address the loss of employment in the sectors displaced

3 year average 2009-2011	Flanders onshore	Wallonia onshore	Offshore	Belgium
Direct employment	1101	1365	92	2558
Indirect employment	1465	1817	124	3406
Total	2566	3182	216	5964

study by Deloitte (2012)



## International review recommendations

- Report of the in-depth review of the fifth national communication of Belgium, 2011
- The ERT encouraged Belgium to undertake a number of improvements regarding transparency and completeness of reporting, e.g.
  - Aggregate the impacts of PaMs at the sectoral level and elaborate on how synergies and overlap among various PaMs were taken into consideration when the effects of PaMs were estimated

# Opportunities and challenges

- Concrete involvement of sub-national levels
- System developed bottom-up in accordance with specific needs/situations
- Data, methodologies, comparability at national level