Good practice policies

Definition, global potential, policy learning

4 September 2019 | Mark Roelfsema

Potential impact of good practice policies

- **Aim**
  - What if countries could learn from other country successes and implement similar policies?
  - Evaluate the potential impact on global GHG emissions if all countries worldwide were to implement climate policies similar to successful examples already implemented by other countries[*]
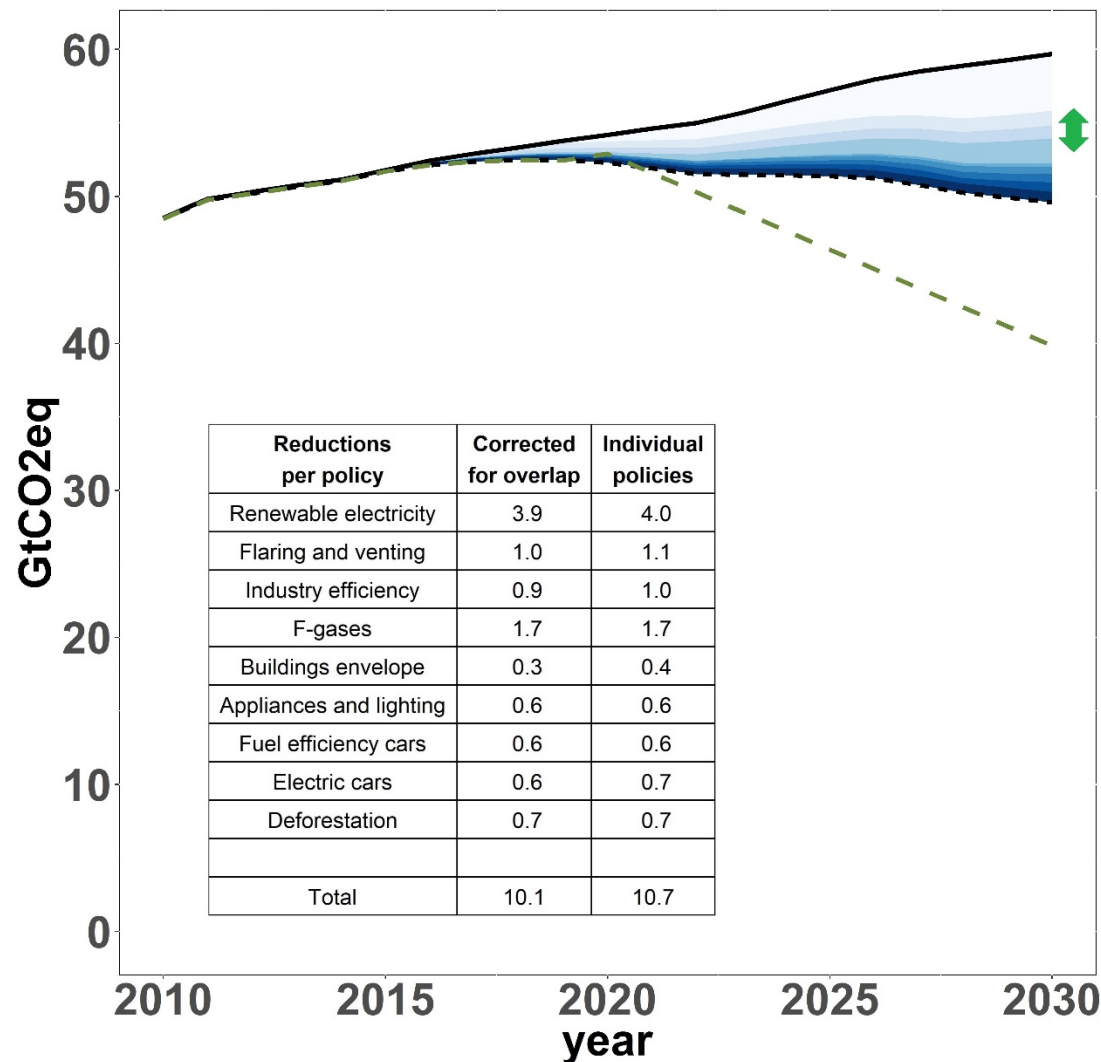
- **What is a good practice policy?**
  - Successful example already implemented in specific country
  - Have either proven their feasibility or consider such policies to be realistic options in reducing greenhouse gas emissions
  - Not necessarily in terms of cost-effectiveness, compatibility with national processes or stakeholder interests
  - Policy instruments are translated to policy targets that can be adjusted to the local policy environment

* Roelfsema et al. (2018)

Method

1) A shortlist of successful policies was identified for nine major emitting sectors

2) For each sector, we selected the most successful policy based on historical trends of a sector-specific indicator

3) For each policy (instrument) we determined the average impact, based on the historical performance of the sector indicator, and translated them to suitable parameters for input to the models

4) Subsequently, the policy impacts were replicated for the period 2015 to 2030 for all regions using the IMAGE energy model and for the period 2010 to 2030 for the GLOBIOM/G4M land use models

Table 1. Overview of the nine selected good practice policy actions with corresponding country policy instrument and translation to policy impact.
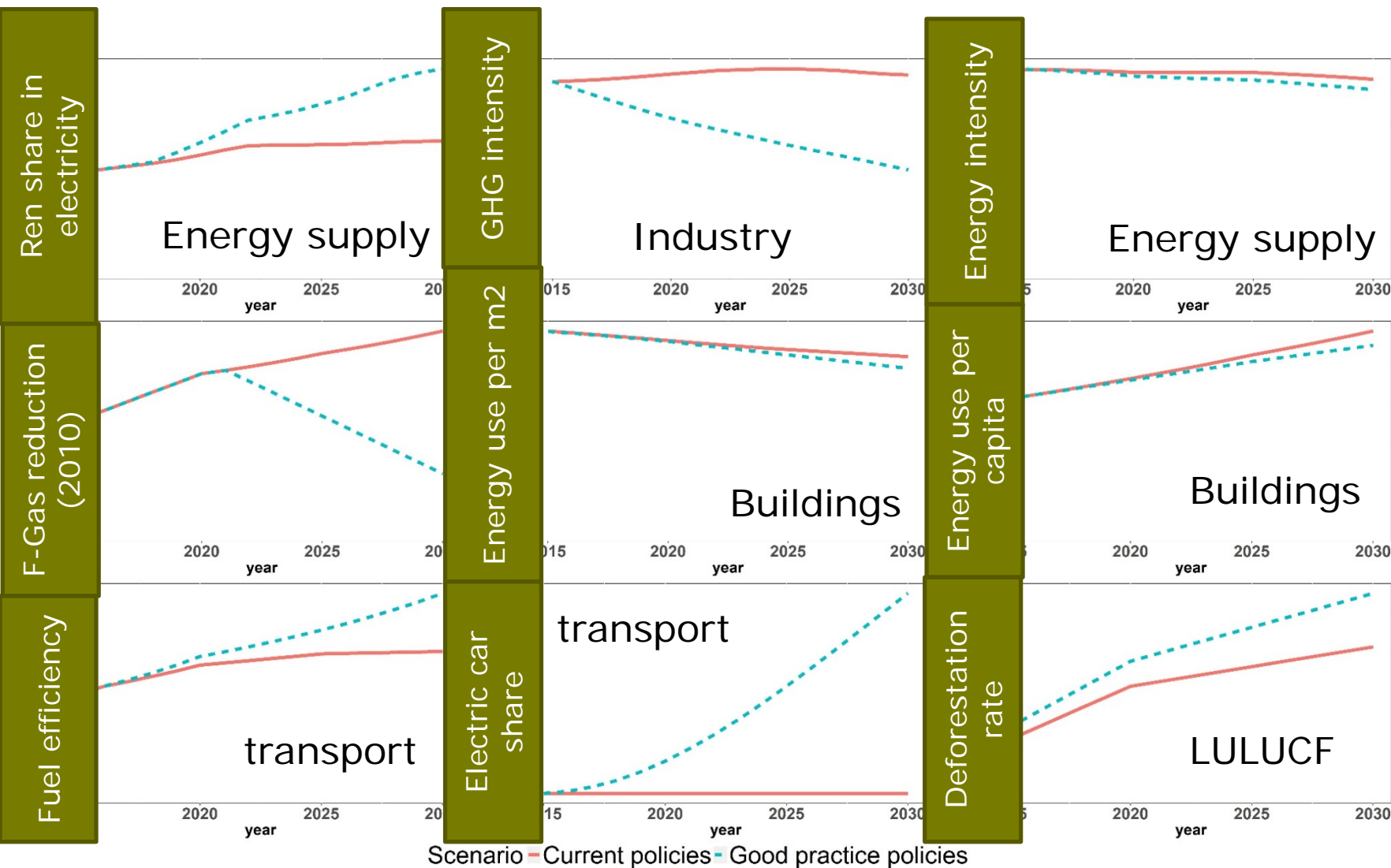
Main sector	Policy action	Successful policy instrument	Policy impact
Energy supply	Increase renewables in electricity production	Renewable portfolio standard, feed-in-tariff in the UK and Germany	+1.35% points growth in share of renewable electricity generation per year
	Reduce flaring and venting in oil and gas production	Regulation and carbon tax in Norway	4.4% annual reduction of oil/gas intensity ($ktCO_2e$/Mtoe) until 2030
Industry	Enhance energy efficiency of industrial production	Energy agreements in Ireland	1% annual energy savings improvement above current efforts until 2030
	Reduce fluorinated emissions	North American Proposal to the Montreal protocol	70% reductions of F-gas emissions below 2010 levels by 2030
Buildings	Enhance efficiency of residential building envelope	EU regulation	Energy intensity of 0 kWh/m^2 by 2030 (space heating)
	Set efficiency standards for appliances and lighting	Appliance standards in EU countries	Average efficiency improvement of 1.8% per year until 2030
Transport	Improve fuel efficiency of cars	Fuel economy standard in the EU	Fuel economy standard of 26 km/l in 2030
	Increase number of electric cars (charged with renewable electricity)	Tax levies and investments in infrastructure in Norway	25% share of new electric vehicles in 2020, 50% in 2030
LULUCF	Reduce deforestation	Regulations and enforcements in Brazil	Decreasing deforestation rate relative to 2010 by 22% in 2020, 44% in 2030.

IMAGE/GLOBIOM/G4M

Reductions per policy	Corrected for overlap	Individual policies
Renewable electricity	3.9	4.0
Flaring and venting	1.0	1.1
Industry efficiency	0.9	1.0
F-gases	1.7	1.7
Buildings envelope	0.3	0.4
Appliances and lighting	0.6	0.6
Fuel efficiency cars	0.6	0.6
Electric cars	0.6	0.7
Deforestation	0.7	0.7
Total	10.1	10.7

Reduction
Renewable electricity
Flaring and venting
Industry efficiency
F-gases
Buildings envelope
Appliances and lighting
Fuel efficiency cars
Electric cars
Deforestation

Scenario
Current policies
Good practice policies
NDC range (2030)
2-degree scenario (2.6 W/m2)

Guidance in terms of sector indicators

Ren share in electricity — Energy supply

GHG intensity — Industry

Energy intensity — Energy supply

F-Gas reduction (2010)

Energy use per m2 — Buildings

Energy use per capita — Buildings

Fuel efficiency — transport

Electric car share — transport

Deforestation rate — LULUCF

Scenario — Current policies — Good practice policies

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Discussion

- Drawback
  - No local circumstances were taken into account
  - We replicate policy trends
    › Can policies / policy instruments be replicated to other countries?
    › Or policy targets can be implemented trough different policy instruments?
  - Country contexts matter, but examples of policy transfer exist

- Using successful policies and translating these to policy impact per sector is a more bottom-up and reality-based alternative to most mitigation pathways, which need to make theoretical assumptions on policy cost-effectiveness.

Policy learning

- **Policy diffusion** is the concept of policy spreading (space and time) from one setting to another
- **Policy convergence** is the tendency of countries to adopt similar types of policies
- **Policy learning** is a voluntary process where policymakers draw lessons from policy implementation in other countries
- **Policy transfer** goes one step further
  → (how) mechanism: copy, emulate, inspire
  → (what) policy goal, policy content, policy instrument, policy program