How do policymakers use climate mitigation scenario information?

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Performative pathways: The role of policymakers

- STS research on the politics of anticipation focuses on IAMs, modellers, and the IPCC process (e.g. Beck and Mahony 2018; Low and Schäfer 2020) – less on use, uptake, and the traditional sites of politics

- Reflexive discussion in modelling community: Turn to ‘user involvement’ and policy relevance (e.g. NAVIGATE, PARIS REINFORCE)

- Similar assumption: Users have not been sufficiently involved, complexities and uncertainties tend to ‘get lost in the chain of translation from model developer to model user’

- But **how do users actually use and understand modelled scenarios?**
- And **how does this differ across countries and user groups**?

Studying scenario users

- Method: Semi-structured interviews with civil servants in government bodies and energy industry actors across several European countries

- Status as of August 2020:
  - Interviews conducted with government representatives in Norway
  - Interviews with industry actors in Norway planned
  - Interviews planned in UK (delayed due to pandemic)
  - Possible interviews in Germany, Sweden

Preliminary findings: Norway

- Seven interviewees representing five government bodies (ministries and agencies dealing with climate and energy policy)

- The Norwegian context for climate and energy policymaking:
  - Stated ambitions on climate policy and active involvement in multilateral settings (IPCC, UNFCCC) over many years
  - Oil and gas production dominates the economy, increasingly difficult to reconcile with climate ambitions (Bang and Lahn 2019)
  - Economists have a strong role in most government bodies (Christensen and Holst 2017)

How are scenarios used?

- Scenarios are used primarily in analysis informing or justifying policy (examples mentioned: white papers, budget documents, information provided in response to Parliamentary inquiries)

- Primary use is to assess consequences of or pathways towards specific policy targets – in particular the Paris Agreement

- Information used included carbon prices, energy prices (oil in particular) and emission levels / carbon budgets

Which scenarios are used?

- Many sources, but some dominate the field
  - IEA most prominently mentioned, followed by IPCC
  - Other multilateral sources (IMF, OECD, IRENA)
  - A range of private providers (BP, Bloomberg NEF, DNVGL, Equinor…)

- Different sources are compared to provide a broad picture
  - Seeking ‘consensus’ estimates, disregarding perceived outliers
  - Comparing change over time, i.e. in annual reports

- …but not all sources are equally ‘citeable’ in official documents
  - Strengths and weaknesses of different institutions recognized
  - Officially recognized institutions preferred over scientific credentials

How are scenarios perceived?

- Informed use: Model outputs are not used uncritically, but assessed in relation to other results as well as in-house expertise on modelling, energy markets etc.

- Uncertainties are acknowledged…
  - ‘All models are wrong’, ‘nobody has the answer’, ‘garbage in, garbage out’

- …but numbers are needed
  - Quantification ‘makes things more concrete’

The politics of scenario choice

- Organisations trust institutions with similar problem-definition and approach
  - e.g. IEA favoured by energy actors, IPCC and IRENA favoured by climate and environmental actors

- Organisations choose scenarios that back up their own views vis-a-vis other government bodies
  - Ministry of Finance favours ‘prudent’ oil price scenarios
  - Ministry of Climate favours ‘more ambitious’ RE scenarios

- Organisations trust institutions with which they have existing relationships
  - Ministries of oil and finance work closely with IEA and OECD, respectively
  - Environment Agency as national IPCC focal point

Questions and caveats

- How do these findings compare to other countries?
  - National differences related to different civic epistemologies, policy priorities and dominant forms of expertise are to be expected

- These may be ‘expert users’ – what is the role of further translations (e.g. to politicians, media, publics) ?

- How do these users act compared to private-sector decisionmakers?

Challenges to the modelling community

- It’s not necessarily about *participation*, rather *trust* and institutional ties
- Most users look for pathways to specific targets, ‘likely’ ranges, and ‘what if’ scenarios based on clear storylines – and their own preferences
- Calls to communicate uncertainty and assumptions clearly – but too much variation reduces relevance
- The generic ‘user’ or ‘policymaker’ does not exist!

Challenges to STS research

- The IEA seems to have a very strong position with policymakers, but is less empirically explored than the IPCC
  - Use and uptake neither explored systematically by the IEA

- If prices are central to how scenarios are used, this suggests relevance of valuation studies and literature on economics ‘in-the-wild’

- If scenario choice is explicitly political, understanding performativity requires engagement with power dynamics and institutional structures

Literature

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