

Integrated Foresight Approaches for Transformative Environmental Policy

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1

Starting point

- Some environmental problems have been successfully resolved in the past decades
- However, many environmental problems are persistent (and new ones have been added)
- These are closely linked to the basic functioning of the socio-economic-technical systems:
 - the way we do business
 - central aspects of our society
 - lifestyles (that we perceived as attractive)

Scientific evidence abounds:

- efficiency improvements are limited
- rebound and growth effects from increasing income and growing population result in increasing emissions, resource use and pressure on the environment



2

Effectiveness of environmental policies and governance

1. *Effectiveness/goal achievement* – What effects did the policy have on the targeted problem?
2. *Unintended effects* – What were the unintended effects of this policy?
3. *Baseline* – Was the baseline defined at the policy design stage?
4. *Coherence/convergence/synergy* – How does the policy intersect with other related policies?
5. *Co-benefits* – Did the policy design provide for co-benefits?
6. *Equity/winners and losers* – What are the effects of this policy on different population groups?
7. *Enabling/constraining factors* – What external factors are likely to influence intended policy effects?
8. *Cost/cost-effectiveness* – What were the financial/ economic costs and benefits of this policy? Is it the most cost-effective or the least-cost approach?
9. *Time frame* – Was the policy implemented within the expected time frame?
10. *Feasibility/implementability* – Is the policy technically feasible in the institutional context?
11. *Acceptability* – Do the relevant policy stakeholders view the policy as generally acceptable?
12. *Stakeholder involvement* – To what extent were affected stakeholders actively involved in implementation?
13. *Any other factors* – such as transformative potential, intergenerational effects, transboundary impacts, sociocultural concerns, political interference, enforcement issues, compliance with legal standards...

Limited effectiveness of environmental policies and governance

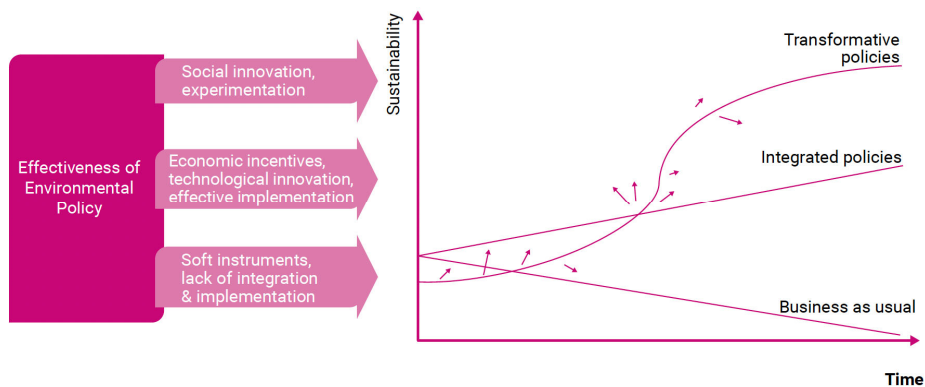
- + High level of innovation in environmental policy across the globe (institutions, policies and policy instruments)
- + A lot of policy innovation happens in developing countries
- Limited environmental policy integration: contested by the affected sectors, negotiation of ambition, compromises, second best solutions
- Vested rights and interests are mostly not touched
- Lack of coherence with other policy domains (trade, agriculture etc.)

Need for *transformative* environmental policies

- The causes of persistent environmental problems being deeply rooted in *culturally influenced, unsustainable societal visions and complex problem interrelations*
- Transformative environmental policy aims to shape transformation towards sustainability in a context of *countervailing actors, interests, institutions and power* within and beyond government.

There is a need but how to do it?

Transformative policy needs to be blended with 'traditional' policy



Complementarity between strategic (BAU, integrated) and transformative policies is essential.

Challenges for transformation

Complexity

- Interplay of technological, societal, economic, and ecological developments (complex feedback relationships and tipping points) makes transformation a complex and uncertain process

Competing visions and objectives

- Path and vision of what a sustainable system should look like are often controversial (at least initially)

Interdependencies and co-evolution within and between socio-technical systems

- Between technologies, institutions, infrastructures, cultural practices...

Capacities and resources distributed among actors to influence transformations

- From politics, science, business, consumers, media, and civil society

Role of time and path dependencies

- Design of transformations influenced by political windows of opportunity, societal adaptation speeds, ecological times

Building blocks for transformation

To guide, shape and enable transformative environmental policy:

1. Visions to guide systemic innovation towards sustainability
2. Social and policy innovation
3. Phasing out unsustainable practices (exnovation)
4. Policy experimentation
5. Engaging and enabling actors and stakeholders

Role of integrated foresight approaches in the building blocks for transformation

A range of foresight methods are used in a (more or less) integrated way:

- Scenarios
- Modelling
- Trend analysis
- Actor analysis
- Cross-impact analysis
- Intuitive and narrative approaches
- Road mapping and path development
- ...

Integrated foresight approaches play an important role in transformative policy

1. *Development, analysis, and evaluation of possible futures*
 - identify, evaluate, and address societal trends
 - identify knowledge gaps and limitations
 - support the development of societal visions and objectives
 - promote the emergence of a shared understanding of a problem
 - make future developments tangible
 - form normative ideals
 - evaluate options for action
 - make strategic decisions about future paths
2. *Inter- and transdisciplinary deepening*
 - system-based approaches and modelling, integrated assessment approaches combined with scenario development
3. *Shape interfaces within and between systems*
 - thinking in border areas of the systems and the interfaces
 - levers for the promotion of transformations can be found in the boundary areas between systems and system elements
4. *Promote societal and institutional innovations and experiments*
 - identify more sustainable paths and demonstrate their feasibility.
 - legitimise societal visions and break up path dependencies

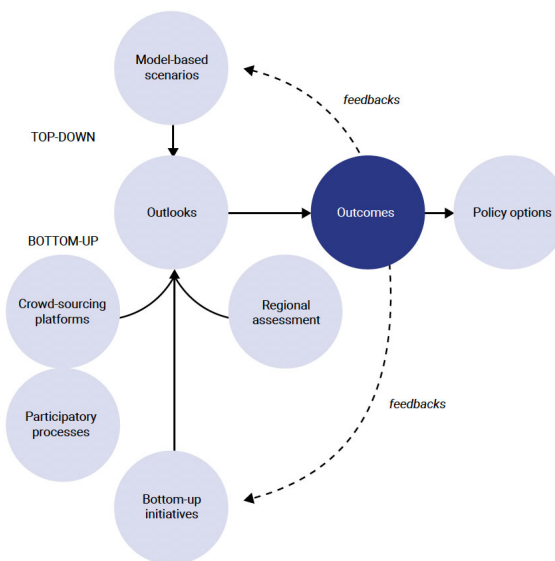
Role of integrated foresight approaches Example of what we have done in GEO 6

Characteristics of model-based scenarios:

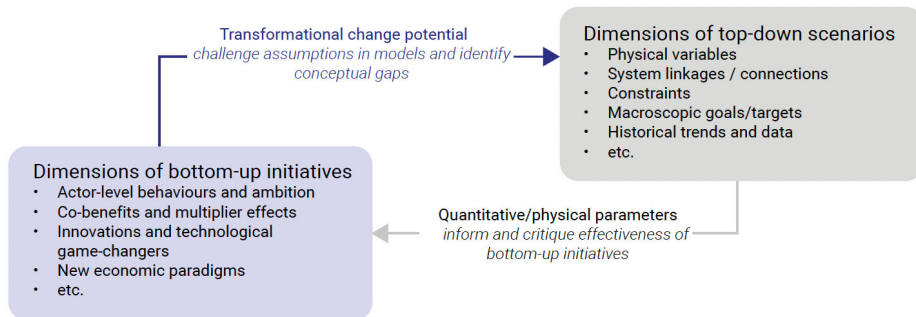
- Quantification
- Simulation
- System dynamics

Characteristics of participatory approaches:

- Practicality
- Relevance
- Acceptance



Mutually beneficial feedbacks between top-down and bottom-up approaches to generating sustainable scenarios



Implications and conclusions

- Most tentative to build transformative policies are still mostly focused top-down
- The lack of bottom-up built futures in the context of sustainability poses major challenges
- In terms of legitimacy, large-scale global or regional futures do not represent the diversity of many different lived experiences, world views and discourses
- Insufficient space is given for the concerns and needs of different societal actors
- It is difficult to imagine transformative change if large-scale sustainability futures do not draw on insights and perspectives from local level
- Many of the seeds for transformative policies exist today in the very margins of current systems
- Policy experimentation needs to be more bottom-up