

## 1.5 An expert-based participatory evaluation of public policies for sustainability transitions

### 1.5.1 Overview

How can innovation policy mixes for sustainability transitions be compared between countries? This paper introduces a conceptual framework, a set of appraisal criteria and a participatory expert-based method for appraising country-level public policies for sustainability transitions. Our Sustainability Transition and Innovation Reviews (STIR) framework combines a methodological approach inspired by the Bertelsmann Transformation Index with existing theoretical frameworks on sustainability transitions, notably Technological Innovation Systems (TIS), Multi-Level Perspective (MLP) or Strategic Niche Management (SNM). In doing so, it seeks to provide an enhanced framework for comparative assessment of, and reflection on, the capacity of policy systems to enable and drive sustainability transitions.

### 1.5.2 Theoretical and conceptual background

There are several existing indicator systems and evaluation frameworks that are used to examine the performance of countries' efforts to foster a greener economy. Examples include Yale's 'Environmental Performance Index', the European Eco-Innovation Scoreboard, and the Global Green Growth Institute's 'Global Green Economy Index', and the OECD's 'Environmental policy stringency' indicator (Botta & Kozluk 2014). The approach presented in this paper differs from these efforts in both the focus (which is specifically on policies enabling transformative change towards sustainability) but more particularly in the process.

The framework presented here starts from the assumption that any attempt to provide a comparative assessment of country performances should be responsive and open to the divergent contexts and institutional capacities of the countries in question. Moreover, the uncertain and contested nature of many potential policies for sustainability transitions demand a framework that is reflexive and open to divergent perspectives, and that allows situated interpretation of relevant indicators. Unlike most other scoreboard exercises, our approach is based on both quantitative indicators and qualitative expert commentary on a country's performance. The choice of expert-based appraisal rests on the assumption that available quantitative data require an informed and situated interpretation to arrive at a useful appraisal of countries' performance.

The appraisal framework draws on well-known approaches in analysing innovation systems (notably TIS), research and innovation policy mix (policy consistency and coherence) as well as the sustainability transitions literature (MLP and SNM). The appraisal is broad in scope and ranges from analysing agenda centrality of sustainability transitions in the public debate to asking questions on effectiveness of policies in enabling and diffusing eco-innovations. The exercise also aims to take account of the main phases of policy cycle, including agenda setting, policy design, strategy and decision making, policy implementation, and policy evaluation.

The policy appraisal framework is structured around 12 criteria:

- **Agenda centrality** - the relative position of issues related to innovation for sustainability in the policy debate and policy agenda. The criterion draws on the role of stakeholder dialogue and engagement in governance and deliberative democracy as well as the engagement of stakeholders in the agenda in transition management.
- **Policy relevance** - the assessment of the extent to which policy vision and objectives are consistent and adequate for sustainability challenges. This criterion draws on the field of policy evaluation. Systemic relevance assesses whether and to what extent policy objectives respond to sustainability challenges.

- **Directionality** - the extent to which policy mix is oriented towards sustainability. While relevance focuses on objectives and vision, directionality focuses on the entire policy mix and implementation of policies on the ground. It draws on both the economics literature and role of environmental prices and regulations. It is also influenced by 'guidance of search' concepts in TIS; also draws on the relevance of directed technological change for environment from the economics literature (Acemoglu et al 2012).
- **Environmental policy stringency** - the extent to which policy protects environment by installing and enforcing regulations that protect the environment from overexploitation. The criterion draws on traditional environmental economics focus on regulatory-driven innovation (Ashford et al. 1985; Porter & van der Linde 1995)
- **Alignment** - the extent to which public policy facilitates alignment of change agents for the vision of sustainability transition and transformative eco-innovation. The criterion draws on the MLP emphasis on alignment. It also resonates with the transition management literature in recognising the importance of 'guiding visions'.
- **Legitimation** - the extent to which policy choices on direction of transition pathways have democratic and social mandate. This criterion draws on governance and deliberative democracy literature as well as on the emphasis on legitimacy in TIS.
- **Demonstration** - the extent to which policy creates strategic arenas for experimentation and demonstration of transformative system innovation. This criterion resonates with the emphasis on lead market formation, entrepreneurial experimentation as well as the notion of niches in MLP.
- **Specialisation** - the extent to which policy encourages entrepreneurial and industrial specialisation in the areas taking into account their sustainability impact. This criterion echoes calls for prioritisation and 'smart specialisation' widely found in practical policy advice. Interestingly, the dimension of specialisation does not emerge in TIS or MLP literatures.
- **Policy Coherence** - the extent to which policy mix is consistent, coherent and comprehensive. This criterion is based on the policy design and policy mix literature indicating the role of policy coordination and coherence for delivering impactful public intervention.
- **Distributional impacts** - the extent to which policy redistributes costs and benefits of transition between societal groups and regions. Sustainability transition will create positive and negative impact for different businesses and societal groups. Recognition of varying destruction of impacts contributes to better policy design and implementation. This dimension is taken into account in political economy literature and in the practice of policy evaluation and strategic impact assessment.
- **Effectiveness** - the extent to which policy is effective in achieving transformative impact. This is a core evaluation criterion used in policy evaluation. In relation to sustainability transition it is assessed against sustainability goals which may or may not be reflected by policy objectives.
- **Policy evaluation and learning** - the extent to which policy is based on evidence and supported by learning environment. The role of evidence and learning in policy making is central for the evidence-based policy paradigm and is part of 'good governance' criteria.

The appraisal process includes not only assessment and scoring, but also mapping questions (which enable recording of policy practice) and analytic questions (which ask experts to provide analytic commentary and context for the policies applied). Thus the process is designed to reflect on context and the particularities of each country, rather than simply providing a quantitative scoreboard.

### 1.5.3 The STIR Methodology in brief

The appraisal process has followed the following stages:

- Recruitment of country experts based on transparent criteria.
- Lead authors are briefed and provided with supporting material by the Inno4SD coordinating team: the STIR toolkit includes annotated template, secondary data, glossary, examples of cover letters and (when at the later stages) examples of completed reviews.

- Lead authors gather data, through analysis of existing secondary data and literature and through interviews with selected experts and stakeholders in the country (including policy makers, academia, business, civil society and media).
- Lead authors conduct stakeholder workshop with a collective reflection on the appraisal criteria. Stakeholders are invited to provide commentary and suggested scores on each appraisal criterion, reflecting on the specific context and developments in a country.
- Lead authors suggest overall scores against criteria based on all gathered evidence. An example of the scoring guide for an appraisal criterion is shown in Figure 1.
- The reviews and scores are subject to peer review by selected country experts. When scores suggested by the author and reviewers are significantly different, a meeting or teleconference is arranged to discuss and record the reasons for discrepancies and, if possible, to agree on the final scores.

**Figure 1. An example of annotated appraisal criterion: Environmental policy**

### **Environmental policy stringency**

#### ***Public policy protects the environment and enhances eco-system services***

- 10 - 8: The country has a policy and regulatory framework ensuring the protection of nature and improvement of eco-system services. The framework is based on scientific evidence, and takes a full account of the state of local and global ecosystems. The policy goes beyond obligations stemming from international agreements. While eco-innovation is at the core of the transition policy, all public support for innovation has to recognise the importance of the precautionary principle in order to avoid pursuing innovation pathways that present a considerable environmental and social risks.
- 7 -5: The country has a policy and regulatory framework ensuring the protection of nature and eco-system services. The framework is based on scientific evidence. The policy complies with obligations stemming from international agreements. Precautionary principle is used in taking policy decisions, however, economic benefits are often considered a priority, and seen as an opportunity to compensate for possible negative environmental impacts.
- 4-2: The country runs environmental policy with formal objectives to ensure the protection of nature. The policy is largely reactionary and focuses on the acute environmental problems. There is limited use scientific evidence in designing the environmental policy. The policy formally complies with obligations stemming from international agreements, but their implementation is partial.
- 1: The country runs a rudimentary environmental policy with formal objectives to protect the nature. The country, however, does not provide a legally binding framework for environmental protection and lacks the implementation capacity.
- 0: N/A

#### *Reference data*

- SGI network indicators – environmental policy (<http://www.sgi-network.org/2016> and [http://www.sgi-network.org/docs/2016/thematic/SGI2016\\_Environment.pdf](http://www.sgi-network.org/docs/2016/thematic/SGI2016_Environment.pdf))
- OECD database on environmental policy (<http://www2.oecd.org/ecoinst/queries/>);
- LSE Grantham's Global Climate Legislation Database (<http://www.lse.ac.uk/GranthamInstitute/legislation/the-global-climate-legislation-database/>)
- EUROSTAT data on implementation of environmental legislation (EU)

#### 1.5.4 Preliminary findings and applications

The STIR process has developed a policy appraisal framework based on a synthesis of relevant literatures and established approaches to measuring green economy and eco-innovation. There are three main purposes:

- Policy evaluation and policy research – STIR is a systemic policy evaluation tool based on a mix of self-assessment and expert appraisal focused on individual countries.
- Public debate and policy learning – STIR is to contribute to a policy learning process providing a comprehensive policy appraisal framework for national debates and policy reflection on concrete steps to improve current policies.
- International collaboration – STIR aims to stimulate international debate and collaboration on the current and future role of public policy in enabling systemic changes in economies and societies towards sustainability.

The pilot country appraisals (South Africa, the UK and Turkey) will be completed by the end of October 2017. Initial reactions from policy stakeholders have been positive, with many expressing interest in the process and in particular in the balance that the process provides between a simple scoreboard approach based on indicators, and a richer analytic-reflexive perspective. In our initial consultations, policy stakeholders have confirmed that this provides value both because it enables understanding of relative performance and activity in light of national contexts, and also because the process helps to initiate or reframe a strategic dialogue about innovation policy.

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