Strengthening the science-policy interface for sustainable investments

Policies that serve current and future generations should be developed with a robust science-policy interface. The EU Taxonomy process teaches valuable lessons on the need to strengthen the elements that underpin decision-making. IEEP, together with Marzia Traverso (RWTH Aachen University) draw conclusions on transparency, independence and accessibility of scientific evidence in the political decision-making process.

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The recent destructions we saw in Europe and elsewhere due to extreme weather demonstrate the real-world impacts of climate and environmental change that are evidenced in the IPCC's AR6 report. They make yet another urgent and science-based case for **sustainable investments to safeguard future generations**. The responsibility that current decision-makers have towards future generations should be reflected in the way policies are developed.

Besides being underpinned by the science, EU policies need to be made with democratic transparency, coherence and accountability, so as to inform society and involve them in the decisions made. The need to **strengthen the science-policy interface in political decision-making** is therefore clear and essential.

One such example of a science-policy interface is the EU Taxonomy. The unified EU-wide system of the Taxonomy was established to **guide private investments** towards those activities that are essential to achieving the European Green Deal objectives. In a move to facilitate environmental and social information sharing between issuers, investors and policymakers, requirements to report are set to bring more transparency and encouragement for the private sector. The Commission's sustainable finance package includes policy-decisions about several large-scale environmental issues, that are essential to support bridging the €260bn investment gap by 2030 to address environmental challenges.

Science-policy interface and the EU Taxonomy

Defining the Taxonomy framework of substantial contribution and do-no-significant-harm to guide sustainable investments is about is about looking to the science and evidence on what is needed in practice to deliver impact and/or corresponding response, rather than about perspectives, opinions or existing standards.

The Taxonomy lays down criteria for what and how much an economic activity must deliver for an environmental objective in order to list a (financial) product sustainable or green in Taxonomy terms. The reporting requirements, which apply to a number of financial and corporate actors, are set to create transparency and link reporting requirements. Private finance investors can thereby more easily align portfolios to support the delivery of climate and environmental goals manifested in international and EU agreements.

The European Commission is adopting the EU taxonomy as a series of Delegated Acts under the Taxonomy Regulation. These are based on advice from the Platform on Sustainable Finance (PSF), which gathers and coordinates input from external experts from the public and private sectors. The recommendations for the Commission are drafted in a transparent process with the involvement of stakeholders, using as much as possible robust methodologies and scientific evidence. The preparatory work from the Joint Research Centre of the EU Commission (JRC) and the Taxonomy Regulation served as a basis to define a methodology and conditions that need to be complied with in setting robust, scientific and evidence-based technical screening criteria.

In April 2021, the European Commission published the first Delegated Act on criteria in for climate mitigation and adaption (currently under review by the European Parliament and the Council). In the meantime, the Technical Working Group (TWG) of the PSF worked on establishing its first batch (set of economic activities) of recommendations for further criteria for the remaining four environmental objectives as it works to build a more comprehensive Taxonomy to guide investments. Now EU citizens and organisations are asked to provide their opinion on the first batch of criteria in a public consultation until 24 September 2021.

Following the scientific evidence is not always a comfortable process, it can challenge the status quo and require action to go beyond what is already set out in public policy or industry good practice. As a tool to build confidence in the contribution of economic activities to environmental objectives, it has been crucial for the Platform on Sustainable Finance (PSF) to build their recommendations upon **robust and transparent methodologies** and processes to ensure that science-based criteria are developed. This is necessary to build understanding of why certain actions are needed and how different economic sectors of society can contribute to common environmental goals. For both the development of new legislation and the implementation of existing policy, the Taxonomy process proved that it is vital to integrate effective communication between science, policy and society.

Strengthening the evidence basis for decision-making

Good policy decisions benefit from improving the elements that underpin them in the decision-making process, including the **base on scientific evidence,** the transparent and accessible nature of that evidence and the interpretation of that evidence through **independent advice**.

Science - the evolving basis for decisions

Scientific evidence is a culmination of ongoing research at a given point in time. Therefore, whilst being objective in nature, research and evidence grows and changes over time and presents an **evolving basis for decision making**. As such, decisions made on this basis need to be under cyclical review and take account of new information as it becomes available.

When there are scientific uncertainties in a decision-making process, it should not lead to inaction. There are many no-regret measures that could deliver benefits under various scenarios, while the evidence develops. At the same time, it is necessary to avoid lock-ins, whereby a policy cycle or implementation period needs to play out before the decision can be changed. If done poorly, these risks causing greater harm than good in the process

Transparent decisions on the basis of evidence

To strengthen credibility and understanding of policy decisions, the **evidence and rationale used for those decisions should be presented and accessible to all**, policy makers and society. The basis for decisions should be able to stand up to scrutiny and be challenged to allow policy to remain dynamic and improve over time, as the evidence develops and as understanding grows. The move from the evidence to the decision is not always self-evident. Transparency in the use of scientific evidence includes **explaining what the evidence is and how** and why it was used in the decision-making process. Clarity from the researchers' side on any methodological limitations, as well as the funding source for the work, further supports transparency in communicating evidence.

Together with calls for engagement of stakeholders in the decision-making process, this move to better communication and transparency should create more space for knowledge creation and learning in the political process.

The Taxonomy policy process can serve as an example, as the criteria move from working texts to final recommendations. In the political process, from the first proposal to final adoption through the co-legislators, it is normal that changes occur over negotiations and compromises. However, it is extremely important that all changes are still be based on a scientific rationale.

At this stage, it is significant for the decision-makers to apply the same **rigour and precision when taking the recommendations of expert groups forward**. This suggests justifying changes and additions during the process with corresponding evidence and rationale. The transparency of presented evidence, which is overall lacking in the EU policy cycle, can lead to greater confidence in proposed changes and tools. The transparency of these political decisions is as important as those based on the science.

Accessible evidence to underpin decision-making

A significant body of science and evidence is not accessible even to think-tanks, research organisations and policy makers as it is held in subscription journals and other published works behind a paywall. To ensure **access to publicly financed research**, there is a move towards more Open Access research, such as through the Plan-S initiative, which in principle will allow greater access to such information. However, to ensure that researchers and academics are not disadvantaged in the process, this will require the right framework conditions to be in place to ensure they retain their intellectual property, are recognised for their work and are not financially penalised through for example a pay-to-publish mechanism – particularly across academic disciplines.

Not everyone is a scientist and not everyone has had scientific training – as such, Open Access does not mean accessible. Therefore, whilst access to the underpinning evidence is important, its communication to different audience is equally so. In essence, **scientific advice needs to be contextualised and understood** to have meaning in the real world and to make it relatable to decision makers and the public alike. The science-policy interface is that point in which understanding should happen and requires both researchers and policy makers to interact more and at different stages of the evidence and policy-development process. Science and research communication in the context of policy development is also a skill, and the role of intermediaries (such as think-tanks) is important in helping to bridge a communication gap.

Independent and objective advice

Scientific evidence requires interpretation to allow actions to be taken on the ground. For example, evidence may point to the negative impacts caused by certain activities or practices, and a decision could be taken to halt or limit those practices. But the evidence will not necessarily identify how much they should be limited, or what alternative practices could be adopted. These secondary decisions require further evidence, and often an interpretation of needs based on the objectives. **Independent and objective advice** is therefore essential to avoid subjectivity when making these decisions in a transparent way.

Independent and objective does not mean agnostic and detached. It means gathering the views and different interpretations of a range of stakeholders and taking a dispassionate view of the evidence against the objective need. Whilst gathered for their technical expertise, PSF members represent a wide variety of interests and perspectives.

With this variety, it is important to share understanding of the impact and importance of making decisions based on science, as well as taking also a practical view. This **builds transparency into the process** whilst allowing the advice to remain independent and objective, increasing the credibility and acceptability of the resulting recommendations.

Whilst the Taxonomy process works through an independent expert group (the PSF) this group is unfunded and not mirrored across environmental policy in general. Creating an independent scientific advisory council - a multidisciplinary body in the spirit of the IPCC, dedicated to Europe – could support democratic transparency, coherence and accountability in EU policy making.

Recommendations for improving the use of science and evidence in decision-making

The Taxonomy approach highlights the importance of providing and encouraging the use of scientific evidence and independent advice to steer decision making in the political process. As this process evolves, it provides lessons for how good policy decisions can be made in future. Key takeaway recommendations can be drawn from the experience so far and applied to the science-policy interface more generally:

- The scientific evidence is often partial and evolving, therefore decisions made on this basis need to be **under cyclical review** and take account of new information as it arises.

- Where evidence is insufficient to support a science-based decision, a **precautionary approach** should be taken to allow no-regrets options to proceed whilst the evidence develops.

- The **decision-making process needs to be transparent, well communicated** and accompanied by a clear rationale so that those decisions can be understood and accepted by a wide audience and adapted as new evidence emerges.

- To be utilised, the **science and evidence needs to be accessible** to those informing the decision-making process, by being:

    - **Available to the audience that needs it.** For example, Open Access to academic works will enable greater use of more current information to inform better policy decisions. However, to ensure that academics are not disadvantaged in the process, this will require the right framework conditions to be in place to ensure they retain their intellectual property, are recognised for their work and are not financially penalised through for example a pay-to-publish mechanism.

    - **Understandable to the audience who uses it.** Open Access doesn't mean accessible – with a continuing need to communicate more clearly to a lay-audience on the content and meaning of the science and evidence underpinning decisions. To do so requires both researchers and policy makers to interact more and at different stages of the evidence and policy-development process, as well as intermediaries to help in the communication of science in different policy contexts.

- The **involvement of citizens in knowledge production** and accessibility in the transition to a sustainable peer-to-peer-society
- The creation of an independent scientific advisory council – a multidisciplinary body in the spirit of the IPCC, dedicated to Europe. Such a mechanism can support democratic transparency, coherence and accountability in EU policy making. Once a year, well-renowned scientists from different disciplines would **evaluate the EU's progress against the Commission's headline objectives** based on distance to targets. The Sustainable Development Goals (SGDs) and the European Green Deal would serve as a benchmark on whether decision making is representing evidential needs in practice.

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