

AN ASSESSMENT OF POLICY COHERENCE AND CONFLICTS FOR WATER AND ENVIRONMENTAL MANAGEMENT

A Report to the Water Forum

Policy Brief

In spite of the myriad of policies developed to prevent or remedy the impact of human activities on the environment and the strong ambitions proclaimed in this regard by governments and international organisations, the quality of our rivers, lakes and estuaries keeps deteriorating, biodiversity is declining at an alarming rate and the objective of limiting global warming to 1.5°C appears increasingly out of reach.

Reversing these negative trends requires a more effective public action, and more specifically improving its *coherence*, that is, in essence, to ensure that one part of government does not undermine what another is trying to achieve. This warrants an evolution of the processes and approaches to policymaking, with greater emphasis on seeking their convergence and developing their potential synergies. It also requires acknowledging the policy dilemmas hidden in the “sustainability” paradigm and resolving the trade-offs that they involve in a transparent and effective manner.

Based on findings from research commissioned by An Fóram Uisce (the Water Forum), the following key recommendations can be proposed with regard to improving policy coherence for water and environmental management:

Key Recommendations

Make the search for coherence a pillar of policymaking by embedding it in institutional processes and structure

1. Systematically carry out a policy mapping exercise at development stage to identify the potential interfaces between all relevant environmental and sectoral policies, as well as the necessary trade-offs between objectives and the required articulation between policy instruments.
2. Increase the transparency and accountability throughout the policymaking process by documenting how “trade-offs” have been managed during the development stage; by providing guidelines to departments and civil servants regarding how they must be managed

during implementation stage, including at the local level; and by making the related documents public.

3. Strengthen the role and the resources of the Environmental Protection Agency – or other relevant public agency - to work collaboratively with government departments, for example, through the organisation of periodic reviews of how their agenda “fits” with environmental preservation objectives; to carry out impact analysis identifying the expected effects, both direct and indirect, of a new policy on the environment at large; to gather, leverage and publicise data on the cumulative and cross-cutting impact of governmental activity on key environmental indicators.
4. Consider revising the perimeter, mandate and accountability of government departments, in order to facilitate the recognition of key trade-offs between environmental and sectoral policies and reduce the risk of operational and cultural “entrenchment” from institutions working in siloes.

Improve the recognition of policy dilemmas and a collective “settlement” of the trade-offs their resolution involves by integrating the perspective and interests from all relevant stakeholders early on and throughout the policy development process

1. Have all government departments review and expand the list of stakeholders who are consulted in the early stages of policy development; and organise such consultations as “roundtable” discussions allowing for the exchange of views and debate rather than just bilateral meetings or written exchanges.
 - The Water Forum is a good model of a body and mechanism where such debate among stakeholders can take place early on in the policy process; its scope could be expanded (or similar bodies could be created) to fulfil the same role in relation to other departments and components of the environment
2. Ensure that stakeholder’s involvement in policy development processes takes place on a transparent and level-playing field and that the outcome of such processes is not structurally skewed towards by the most influential players by publicizing each parties’ mandate, the arguments/proposal they defend and the resources they can avail.
3. Involve social scientists in the conception and facilitation of deliberative processes in order to assist with the management of stakeholder’s participation and facilitate the emergence of collective preferences.
4. Set up a project secretariat with adequate resources for steering large policy development initiatives or sensitive decision-making processes that involve multiple government department or agencies, such as the production of River Basin Management Plans; and with the responsibility of reporting on the key elements contributing to the choices made such as:
 - scientific evidence,
 - assessment of the distributive effects on various groups,
 - potential controversies and supporting arguments.

Improve the understanding and consideration of interlinkages between policy issues and responses

1. Give more space and weight to the social science perspective in “environmental” research and policy development, to reflect that economics, sociology, ethics are part and parcel to developing effective solutions to the current crises:
 - Ensure a dedicated criteria are included in research tender/assessment;
 - Foster collaboration between social science and environmental science academics through joint research calls;
 - Include a social science component in the Water Forum’s research agenda
2. Support research into the use and benefits of alternative policymaking processes allowing to better understand and address the interlinkages and uncertainties that characterise environmental crises and their resolution

Strengthen the dialogue between policymakers and academics to ensure that the former can easily access the most up-to-date and relevant knowledge and make it a robust foundation to inform decision-making

1. Support the co-development of research programmes through the participation of policymakers in the governance of research institutions; and reciprocally, with the involvement of scientific/academics in policy development through “action research” projects;
2. Develop a knowledge dissemination strategy from the outset of research programmes, eliciting responses to the following questions: what information to share, to whom, for what purpose, in which format (with consideration of innovative channels such as videos, infographics, podcasts, exhibitions...), with a view to improving the appropriation of “take-away” lessons;
3. Set up a regular schedule of engagement opportunities between policymakers, academic institutions, think tanks...such as periodic workshops, webinars, informal meetings in order to build trusted relationships.

Charting new paths to initiate the major shifts required for resolving the growing and pervasive environmental crises

1. Organise campaigns on the theme of “living better with less impact” to raise awareness on the footprint of our “everyday” actions on the environment; to promote positive models of sobriety; and to encourage behavioural changes that are sufficiently disruptive and/or at a large enough scale to make a significant difference on current trends.
2. Develop a research agenda and stimulate a public conversation on the notion of “well-being” and explore the relative influence on it of drivers such as relation to nature, access to a healthy environment, provision of utilities and public services, revenues and consumption levels, etc...

WHY LOOK INTO POLICY COHERENCE?

From its starting point in the 70's, the field of “environmental policy” has considerably expanded, with measures aimed at protecting natural resources and the various features of a “healthy” environment (a stable climate, clean waters, a flourishing biodiversity...) being incorporated into an ever larger swath of public intervention. As the perceptions that human societies have of “the environment” and of their relationships with it evolved over time – with notions such as Nature, ecosystem services or “Earth system” being increasingly conceptualized - so have the rationale and approaches to environmental management, from conservation to protection, from ecological modernization to planetary stewardship.

This latter concept emerged with the realisation that:

- human activities and “ natural “phenomena **have become so intertwined that they can only be approached and managed holistically** (Lade *et al.*, 2020): the take-off and dramatic increase in human activities since the second half of the 20th century, which has become known as the “Great Acceleration” (Steffen *et al.*, 2015), has indeed had profound and wide-ranging impacts on the environment, which, as abundant data illustrates, are still on the rise both at local and global level.
- **a significant change of course is now warranted rather than incremental efforts** to make a real difference in terms of preserving our environment, as there is a growing discrepancy between the urgent calls for actions from scientists and the ambitious stance adopted by international institutions or national governments on the one hand; and the results achieved so far in attempting to reverse detrimental trends, on the other.

Having now a myriad of entities concerned, to some extent and at some level, with developing and implementing environmental policies with a growing scope mostly seems in fact to reflect the magnitude and pervasiveness of the crisis rather than offering an effective solution to address it. Such failure to effectively reduce pressures or mitigate impacts results from a combination of causes, including:

- an **insufficient “stringency”** of policies, reflected in “easy to reach” targets, delayed deadlines to achieve them or the multiplication of exemptions (Boeuf, Fritsch & Martin-Ortega, 2016)¹
- **implementation challenges** (Bondarouk & Mastenbroek, 2018), that is the inability to apply or enforce measures that have been decided, in particular due to the limited (financial and human) resources dedicated to control their application (Söderberg, 2016; Hudson, Hunter & Peckham, 2019).
- The fact that environmental policies has mostly been developed in a **piecemeal fashion**, with their design and implementation taking place in a **fractured, multi-level institutional landscape** and involving a very **diverse array of stakeholders**. Looking into the relationships and influences that the various “levers” of public intervention on the environment can have

¹ Exemptions reflect the influence of some groups both in policy agenda setting and in the policy process itself (Boeuf, Fritsch & Martin-Ortega, 2016) to ensure that their interests are given greater or equal consideration to environmental goals.

on each other to foster greater coherence has thus become a “*sheer necessity for more effective environmental governance*” (Visseren-Hamakers, 2018)

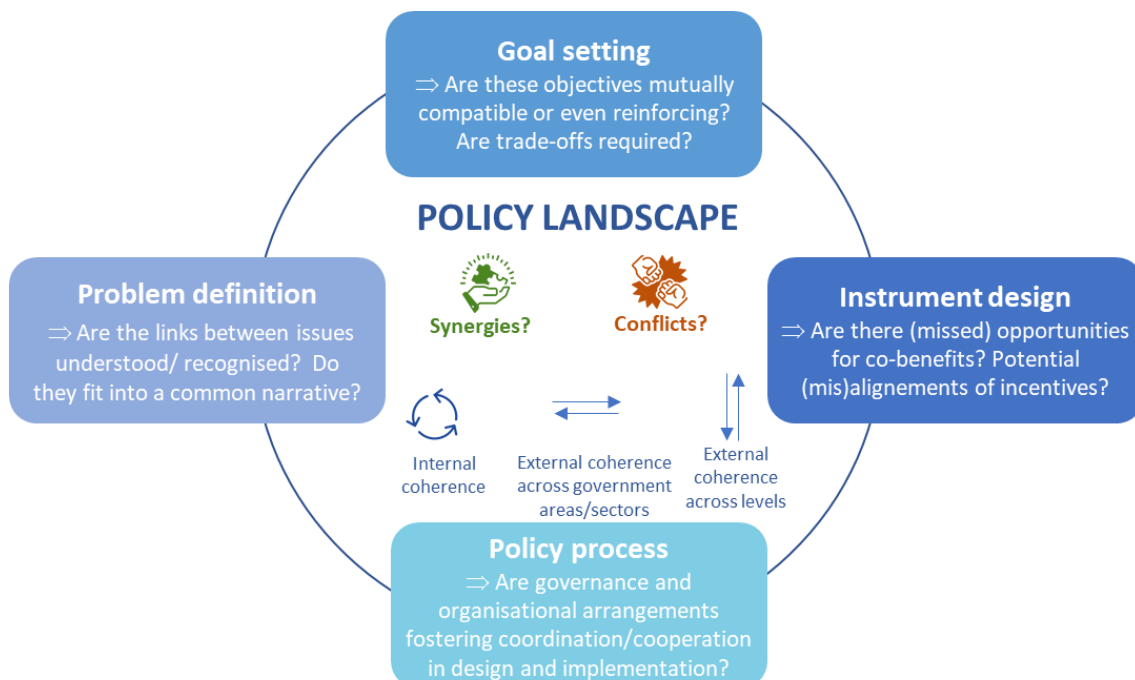
It is therefore highly relevant for the Forum, given its position at the interface between policy and science through its role as a “think tank”, to gain and diffuse insight into this matter, by exploring the notion of coherence and using it as a lens to analyse some of the challenges, obstacles and “contradictions” that undermine our collective ability to protect the environment.

Coherence as a policy evaluation criterion

In its most narrow interpretation, coherence is one of the key criteria used for policy appraisal or evaluation, with a view to characterizing how well they “fit” in the wider context in which they are deployed, that is, whether they are “compatible” with other policies or instruments applying in the same “realm”, to what extent they reinforce or conflict with each other, how much they are adding value while avoiding duplication of effort. Several perspectives on coherence can be differentiated:

- *Internal* coherence refers to the interlinkages between the interventions carried out within a same organisation and/or the consistency of these interventions with the norms and standards to which it adheres; and *external* coherence concerns the way in which an organisation’s interventions articulate with those of other actors (coordination, harmonisation, complementarity).
- Coherence can be assessed at different *stages of the policy process* (e.g. design or implementation) as well as for distinct *components* of a policy (e.g. goals or instruments): for example, two policies can state similar, or at least compatible, objectives but introduce measures that are misaligned, as is the case with “harmful subsidies” providing conflicting incentives or in situation of “policy leakage”;
- A distinction can also be made between *normative* coherence (regarding the substance of policies), *institutional* coherence (allowing for integrated policy development) and *operational* coherence (at the stage of policy implementation) (Koff, Challenger & Portillo, 2020).

► **An illustration of the various perspectives on coherence**



Despite its importance, policy coherence remains an elusive criterion (Bocquillon, 2018): firstly because it is not easy to define in a “normative” way - as it can hardly be informed by quantitative analysis; but also because it must be assessed in relation to a specific perimeter, as it does not characterise a policy intrinsically but pertains to its relations with other interventions, across different areas or levels of government. Therefore, although it should primarily be considered during policy development, coherence is all too often assessed *ex post* and only given due attention only when it appears it is lacking. These situations arise most notably when:

- Potential linkages **between policy domains** have been overlooked, either due to a lack of understanding or an insufficient awareness of the issues that are less salient on the scientific or political agenda.
- **Conflicts in objectives** have remained implicit and/or unresolved – potentially due to the political bargaining required for the policy to emerge at all.
- New **policy instruments** are redundant or in conflict with existing ones, because the real, “on the ground”, conditions of their deployment have not been thought through.

From coherence to integrative governance

Beyond calling for coherence or assessing it, the most pressing issue is to understand the requirements and possibly map out the processes to achieve it. The broad concept of “*integrative governance*” (Visseren-Hamakers, 2018) – encompassing notions such as coordination, mainstreaming, integration, landscape management, integrated management or nexus approaches – has indeed been introduced in literature to provide such an explanatory framework and gain normative insight.

It underscores two critical points: firstly, policymaking is not a “*purely technical exercise*”, it implies weighing interests and setting priorities so that aiming for coherence requires taking into account **how political economy considerations** (distributive effects, power structure) shape decisions. In addition, the development of policy does not occur in a vacuum: improving coherence thus requires overcoming the obstacles associated with siloed institutions, resulting both from “hard” infrastructure as well as soft processes, including ordinary politics. At a larger scale still, seeking an integration of environmental considerations “across the board”, in a “whole of government” approach may only proceed from an evolution of the *regime* - the set “*of implicit or explicit principles, norms, rules, and decision making procedures around which actors’ expectations converge*” (Krasner, 1982) – within policymaking is embedded.

A clearly stated ambition for coherence

The willingness to address environmental issues more holistically features prominently in many policy statements and documents published at every level of public action, with two key levers actioned to that end. Firstly, “integrated frameworks” are developed to draw out the links between various environmental issues and ways to address them, either at a conceptual level or from a policy perspective. This approach has long been present in water policy, with the introduction of the Integrated Water Resources Management framework as early as the 1990’s and significant efforts invested since then to operationalise it. In addition, a strong emphasis is increasingly placed on the selection of measures or course of actions that can generate multiple benefits or positive feedback loops, in particular, by having recourse to “nature-based solutions” (European Environment Agency, 2021).

While the aspiration to coherence has emerged *within* the environmental policy “realm”, there is also an increased recognition that it needs to extend much further beyond. Environmental considerations are thus (slowly) permeating into an ever larger domain of public intervention:

- Through sectoral policies: agriculture, forestry,...
- Through “macroeconomic” policies: trade policy, the recent Green Deal of the European Union,...
- Through “structural “integration: consideration of environmental criteria in public procurement, green budgeting efforts...

However, notwithstanding such initiatives and the proliferation of ambitious commitments, the integration of environmental considerations into policy domains remains largely confined to declarations of intent, with little impact on the substance of policies or on the effectiveness of their instruments for environmental protection, as evidenced by the lack of tangible results obtained to date in this area.

While there is hardly a “recipe” on how to achieve greater coherence, several areas can be identified to foster progress on the matter, in relation to the two distinct, yet related, goals below:

1. Ensuring a better alignment between policy objectives and instruments, with a view to increasing effectiveness and impact;
2. Acknowledging and overcoming the inherent tension within the sustainability paradigm, to improve the congruence between policy objectives.

BETTER ALIGN POLICY OBJECTIVES AND INSTRUMENTS

An ongoing focus on knowledge development

Improving knowledge is a first basic foundation to support efforts aimed at better comprehending environmental issues and their causes but, more importantly, at designing and implementing solutions that are “optimal and optimised” to address them. Key areas for development include the following:

- Enhancing monitoring capacity in order to precisely assess the state of the environment and have a finer grasp of the phenomena at play in its evolution;
- Developing integrated approaches to provide a holistic view of environmental challenges, by drawing insight from a variety of disciplines including economics, ethics or political science....
- Using social sciences to help identify the barriers between specialized, fragmented knowledge areas and overcome the obstacles to collaboration across sectors;
- Defining new “units of analysis”, with a focus on interlinkages between natural/physical components and anthropogenic components, in order to gain a better understanding of behavioural, societal and socio-economic challenges;
- Providing for the involvement of scholars, scientists, public servants, citizensin context-specific, problem-driven and solution-focused research as a way to achieve effective transdisciplinarity (Niles & Tachimoto, 2018).

⇒ **Policy recommendation** Give more space and weight to the social science perspective in “environmental” research and policy development, to reflect that economics, sociology, ethics are part and parcel to developing effective solutions to the current crises:

- Ensure a dedicated criteria is included in research tender/assessment
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Strengthen the dialogue between science and policy

It is abundantly documented that politicians and policymakers give only limited attention to the insight provided by scientific research; and that their decisions are too rarely – or not informed by evidence (or not explicitly tied to it). Enhancing the dialogue between science and policy is thus an essential prerequisite to ensure that policy responses are “congruent” with the best knowledge available on what triggers environmental impacts and how best to address them. However, the divide between the policy and the research “worlds” is not merely a communication challenge, it also reflects that they function with their own logics and timing. New approaches must therefore be introduced to build deeper connection, such as the development of (informal or policy) networks or knowledge co-production initiatives. Enhancing the value of this dialogue also requires making explicit the expectations of each parties’ roles and responsibilities.

⇒ **Policy recommendation** Support the co-development of research programmes through the participation of policymakers in the governance of research institutions; and reciprocally, with the involvement of scientific/academics in policy development through “action research” projects;

⇒ **Policy recommendation** Develop a knowledge dissemination strategy from the outset of research programmes, eliciting responses to the following questions: what information to share, to whom, for what purpose, in which format (with consideration of innovative channels such as videos, infographics, podcasts, exhibitions...), with a view to improving the appropriation of “take-away” lessons;

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Facilitate cooperation across institutional boundaries

The integration of environmental concerns between government levels and across sectors can be hampered right from the outset of policy development, at the appraisal stage, because of the different “logics” that prevail between policy actors (Russel *et al.*, 2018). These differences in perspective, which can be rooted in the educational (disciplinary) background of the players, the policymaking history and interests at play within their institutions or even procedural requirements, create barriers to effective cooperation. This fragmented approach results in environmental issues still being approached, to a significant extent, in “siloes” even though they epitomize what Jochim & May (2010) call “*boundary-spanning problems*”. This situation should evolve so that every public body have and “feel” a shared responsibility in delivering on environmental preservation objectives.

More generally, it is important that civil servants could benefit from insight and perspectives coming from outside the close circle of their “usual” stakeholders, by involving a diverse array of actors in early thinking on policy development and not just at the stage of formal public consultations when most of arbitration have been made and change can only occur at the margin.

⇒ **Policy recommendation** Have all government departments review and expand the list of stakeholders who are consulted in the early stages of policy development; and organise such consultations as “roundtable” discussions allowing for the exchange of views and debate rather than just bilateral meetings or written exchanges.

- The Water Forum is a good model of a body and mechanism where such debate among stakeholders can take place early on in the policy process; its scope could be expanded (or similar bodies could be created) to fulfil the same role in relation to other departments and components of the environment.

⇒ **Policy recommendation** Strengthen the role and the resources of the Environmental Protection Agency – or other relevant public agency - to work collaboratively with government departments, for example through the organisation of periodic reviews of how their agenda “fits” with environmental preservation objectives; to carry out impact analysis identifying the expected effects, both direct and indirect, of a new policy on the environment at large; to gather, leverage and publicise data on the cumulative and cross-cutting impact of governmental activity on key environmental indicators.

Improve transparency in policy development

In addition to (or as a result of) being disjointed between departments, the policymaking process often leaves the trade-offs inherent to policy choices unaddressed or implicit – either deliberately or not, most notably by considering policy objectives individually and formulating them in such a generic way that they are hardly disputable in principle.

As a consequence, the “operational” integration of all the various policies addressing environmental issues or having an influence on them, that is the appropriate articulation of their objectives and of the measures taken to achieve them, is left to the stage and level of implementation. It will thus depend on public agents in charge of applying the policies “on the ground” to resolve the conflicts that may emerge; the outcome will thus be subject to the conjunction “individual” factors such as the (re)interpretation of objectives, resistance to change or bounded rationality, rather than proceed from a structured and deliberate process.

These various challenges can be further aggravated by the complexity of multi-level governance arrangements, with the lack of a “steering” player with the authority and/or legitimacy to make trade-offs or settle conflicts when coordination mechanisms result in protracted decision-making processes or even fail to reach a clear outcome (Schubert & Gupta, 2013).

⇒ **Policy recommendation** Systematically carry out a policy mapping exercise at development stage to identify the potential interfaces between all relevant environmental and sectoral policies, as well as the necessary trade-offs between objectives and the required articulation between policy instruments.

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⇒ **Policy recommendation** Set up a project secretariat with adequate resources for steering large policy development initiatives or sensitive decision-making processes that involve multiple government department or agencies, such as the production of River Basin Management Plans; and with the responsibility of reporting on the key elements contributing to the choices made such as :

- scientific evidence,
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- potential controversies and supporting arguments

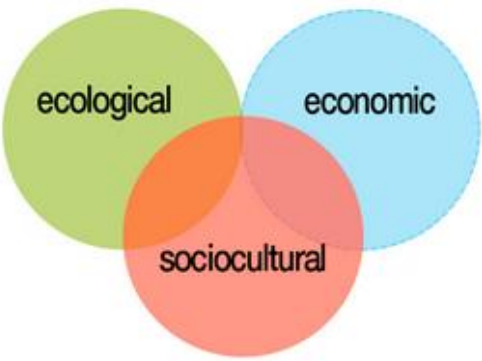
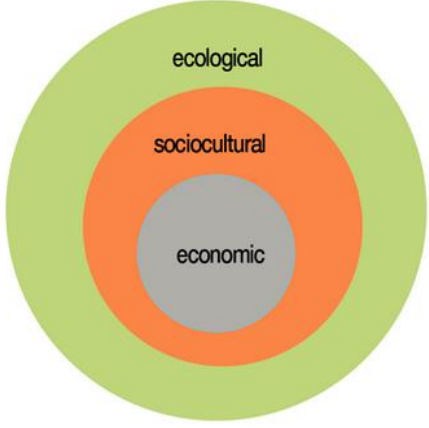
The previous recommendations focus on procedural aspects, however the main challenge to coherence lies in the policy dilemmas inherent to the sustainability paradigm.

RESOLVE THE POLICY DILEMMAS ASSOCIATED WITH THE SUSTAINABILITY PARADIGM

Since it emerged in the 1970s, the concept of “sustainability” has become ubiquitous in the realm of public policies, political discourses and the media (Meadowcroft & Fiorino, 2017). It relates to a vision where environmental, social and economic considerations are integrated with a view to creating or preserving conditions under which humans and nature can coexist in harmony, today and in the future. While it seeks to reconcile aspirations for “prosperity” with a greater awareness of the onus it places on the environment and of the need to manage the ensuing impacts, the notion presents two main shortcomings:

- It has no operational significance, in that it does not provide any guidance or even decision - making support helping to devise a specific course of action or chartering a path to the future;
- In focusing on the suggestion that win-win situations are always achievable, it conceals the fact that trade-offs and “hard choices” may be required and distracts from looking where and when some form of arbitration and/or regulation may be warranted.

As a result, the paradigm has given rise to an “*ambiguous consensus*” (Larose-Tarabulsky, 2019), allowing everyone to project their expectations, priorities or interests through it. In fact, two different interpretations of it have eventually emerged reflecting the distinct and almost irreconcilable visions (Mensah, 2019).

	
<p>Weak sustainability posits that man-made capital can always substitute natural capital, that is, innovation and increasing technological efficiency will enable to offset resource depletion. This suggests that perpetual economic growth is “within reach” without consideration of physical limits, a perspective encapsulated in the <i>green growth</i> narrative.</p>	<p>Strong sustainability considers that economic, social and environmental “goals” are of a different nature and nested within each other. It can only be achieved through a profound transformation of production and consumption systems, associated with changes in behaviours, enabling to drastically reduce our “needs” and all the associated externalities (resource depletion, emissions, physical footprint)</p>

Debates on the definition and interpretation of sustainability are much more than semantic battles or scholarly debates: they highlight the lack of consensus on the “*problem definition*” that public intervention seeks to resolve, without which there cannot be a coherent strategy. However, the little consideration given to how the three pillars could or should articulate in practice do not mean that they “naturally” do; and the declared ambition of pursuing them simultaneously conceals an implicit hierarchy that puts economic objectives above the others. This prioritisation is apparent in the way most public interventions are targeted, designed and assessed.

- As an example, economic crises are usually followed by cuts in environmental budgets and a weakening of regulatory pressure (Burns, Eckersley & Tobin, 2019); and recovery plans largely focus on stimulating economic growth, while their impact on the environment is at best a secondary objective and evaluation criteria.
- Despite academic research and even policy initiatives having sought to shift focus, increasing growth as measured through GDP remains to these days central to most government policies.

This reflects how much the logic of mitigating the impacts of economic activities (weak sustainability) has taken precedence on that of regulating them to comply with physical limits (strong durability). Yet, the pursuit of infinite (and exponential) growth inevitably comes to face, at some point, constraints such as natural resources depletion or pervasive pollution. To overcome this tension, the notion of “decoupling” has been introduced, referring to a trajectory where “*resource use or some environmental pressure either grows at a slower rate than the economic activity that is causing it (relative decoupling) or declines while the economic activity continues to grow (absolute decoupling)*” (IRP, 2017)

Yet, the ambition and call for actions towards this “decoupling” agenda seems to be a case in point of cognitive dissonance, as data show no evidence that delinking GDP from resources consumption may have started to occur, at least not at a global scale (Sanyé-Mengual *et al.*, 2019); and neither that it could be envisioned in the future without transformative change of a major scale (UNEP, 2011; Parrique *et al.*, 2019; Haberl *et al.*, 2020). The “*overwhelmingly clear and sobering*” evidence of the sheer incompatibility between ever increasing consumption and environmental protection (Parrique *et al.*, 2019) explain the rapid expansion of “post-growth” studies and the attention it attracts, including from policy circles.

Halting environmental degradation requires recognizing the biophysical limits to growth and ensuring that they are not merely a 'backdrop', or an aside, to political and social affairs, but rather that they define what the “*safe operating space*” (Szuba, 2017) is for our societies/economies. This paradigm shift appears to be the only way to ensure the consistency of public action in favour of environmental protection, in substance and not only from a procedural point of view or in political discourse. To implement such a process of “*normative management under environmental constraints*”, the bio-economist René Passet (cited in (Szuba, 2013)) proposes a three-stage process :

- firstly, setting the limits of a truly “sustainable” exploitation of the environment;
- then defining how the constraints arising from such (binding) limits must be distributed within society;
- then, establishing new institutions ensuring that economic actors will make optimal decisions according to these constraints.

However, applying these steps in practice is no easy feat, for two reasons. Firstly, exposing and challenging the implicit assumption that natural resources and the biosphere capacity to “absorb” the by-products of human activities are infinite amounts to **reframing the “problem definition”** which has prevailed so far and determined the environmental policy agenda, goals and instruments. Then, in addition to the scientific challenge of defining environmental limits, charting a path to respect them and

managing the implications - especially the redistributive effects – amounts to **addressing a “wicked problem”** - an issue characterized by extreme complexity, major uncertainty, fragmentation of viewpoints and divergence in strategic intentions – which requires new approaches to policymaking.

Developing new narratives

Because of the dominance of weak sustainability and growth paradigms, many actors will “shy away” from the discussion on environmental limits (Hausknost & Hammond, 2020) and associated notions such as sobriety; as well as resist the introduction of regulation setting an “absolute” – rather than a “per unit” cap on resource consumption or emissions. Providing insight about these concepts and approaches is thus warranted to raise their profile in academic circles, media coverage and eventually the political discourse. This, in turn, will prompt new ways of framing problems, defining policy goals and developing solutions (Smith *et al.*, 2014).

⇒ **Policy recommendation** Organise campaigns on the theme of “living better with less impact” to raise awareness on the footprint of our “everyday” actions on the environment; to promote positive models of sobriety; and to encourage behavioural changes that are sufficiently disruptive and/or at a large enough scale to make a significative difference on current trends.

⇒ **Policy recommendation** Develop a research agenda and stimulate a public conversation on the notion of “well-being” and explore the relative influence on it of drivers such as relation to nature, access to a healthy environment, provision of utilities and public services, revenues and consumption levels, etc...

Adapting institutions

The design of policies, and even their implementation, do not occur in a vacuum: they take place within institutions defined by “hard” infrastructure as well as soft processes, including ordinary politics (Smith *et al.*, 2014). Mainstreaming environmental concerns “across the board” in governmental business will thus require a change in the way such institutions are built, managed and work together. Beyond the “pragmatic” organisational changes required to foster greater cooperation between departments or improving policymaking processes, a deep-seated transformation will be required to foster the “cultural” change that would result in a shift towards truly integrated and preventative action towards environmental preservation.

This could materialize through changes in government structures and/or the development of new accountability frameworks, where environmental protection would become, along with budgetary constraints, a shared responsibility.

- Germany has taken an important step forward in this regard by creating a "super ministry" for economics and climate protection with veto power on any legislation incompatible with the 2015 Paris Agreement on the same way as the finance ministry can halt plans conflicting with the national budget.

⇒ **Policy recommendation** Consider revising the perimeter, mandate and accountability of government departments, in order to facilitate the recognition of key trade-offs between environmental and sectoral policies and reduce the risk of operational and cultural “entrenchment” from institutions working in siloes.

Changing the way policy are developed

Because of the specificity and unique nature of wicked problems, there is no template for action on how to address them. In relation to most environmental matters, the impact of any given policy option or

decision is indeed all but impossible to unequivocally appraise: outcomes cannot be guaranteed (due to the intrinsic unpredictability of natural phenomenon or uncertainties about policy uptake), are likely to be ambiguous (positive on some aspects, negative on others) and generally controversial (welcomed by beneficiaries, opposed by others...). Therefore, the classical approach based on policy analysis must be replaced by alternative approaches to make decisions under deep uncertainty with a high level of complexity. These could include in particular the following:

- Use of **system modelling** tools helping to identify interlinkages so as to prioritize actions with larger synergetic impact and select “no-regret” options allowing to build resilience;
- Use of **foresight tools and methods** (e.g. scenarios, vision building, trends analysis, Delphi surveys) to factor in emerging challenges, face the possibility of disruptive events or tipping points and broaden the “solution space”;

More generally, it will be necessary to move away from “command and control-type” policies and develop responses that are flexible and provide for ongoing adaptation, all with a degree of humility since, *“when dealing with complex systems, even with appropriate instruments it is nevertheless necessary to adjust the expectations of what can realistically be achieved”* (Mueller, 2020).

⇒ **Policy recommendation** Support research into the use and benefits of alternative policymaking processes allowing to better understand and address the interlinkages and uncertainties that characterise environmental crises and their resolution.

Incorporating socio-political dimensions

In addition to uncertainty and complexity, to which “technical” responses can offer partial solutions, wicked environmental problems also entail a strong “political” dimension, in that they have at their heart a confrontation of interests. As a result, the selection of best policy options cannot emerge from a purely rational approach, it is a socially complex process that will incorporate considerations of stakeholder’s goals, norms, and visions (Mielke *et al.*, 2016). This process should be carried out through open, transparent debate rather than kept implicit or contained to the expert sphere.

Deliberative processes provide indeed an opportunity to elicit the trade-offs that are at the heart of solving environmental issues; and addressing them by facilitating the expression of “collective preferences” regarding the objectives to be prioritised as well as the allocation of a costs and benefits resulting from policy decisions. In the end, participatory, open-ended approaches to policy development enable to legitimize both the decision-making process and its outcome, which may not be regarded as “better” but at least more acceptable to the participants. However, they may be strongly influenced by power structures so that it is essential to ensure that they takes place on a transparent and “level playing field”, that is, without being distorted by difference in access to policy-makers or resources to influence them.

⇒ **Policy recommendation** Involve social scientists in the conception and facilitation of deliberative processes in order to assist with the management of stakeholder’s participation and facilitate the build-up of collective preferences.

⇒ **Policy recommendation** Ensure that stakeholders involvement in policy development processes takes place on a transparent and level-playing field and that the outcome of such processes is not structurally skewed towards by the most influent players by publicizing each parties’ mandate, the arguments/proposal they defend and the resources they can avail

BIBLIOGRAPHY

Boeuf, B., Fritsch, O. and Martin-Ortega, J. (2016) 'Undermining European environmental policy goals? The EU Water Framework Directive and the politics of exemptions'. doi:10.3390/W8090388.

Bondarouk, E. and Mastenbroek, E. (2018) 'Reconsidering EU Compliance: Implementation performance in the field of environmental policy', *Environmental Policy & Governance*, 28(1), pp. 15–27. doi:10.1002/eet.1761.

Burns, C., Eckersley, P. and Tobin, P. (2019) 'EU environmental policy in times of crisis', *Journal of European Public Policy* [Preprint]. doi:10.1080/13501763.2018.1561741.

Haberl, H. *et al.* (2020) 'A systematic review of the evidence on decoupling of GDP, resource use and GHG emissions, part II: synthesizing the insights', *Environmental Research Letters*, 15(6), p. 065003. doi:10.1088/1748-9326/ab842a.

Hausknot, D. and Hammond, M. (2020) 'Beyond the environmental state? The political prospects of a sustainability transformation', *Environmental Politics*, 29(1), pp. 1–16. doi:10.1080/09644016.2020.1686204.

Hudson, B., Hunter, D. and Peckham, S. (2019) 'Policy failure and the policy-implementation gap: can policy support programs help?', *Policy Design and Practice*, 2(1), pp. 1–14. doi:10.1080/25741292.2018.1540378.

IRP (2017) *Assessing global resource use: A systems approach to resource efficiency and pollution reduction*. A Report of the International Resource Panel. Nairobi, Kenya: United Nations Environment Programme. Available at: <https://www.resourcepanel.org/reports/assessing-global-resource-use> (Accessed: 7 February 2022).

Jochim, A.E. and May, P.J. (2010) 'Beyond Subsystems: Policy Regimes and Governance', *Policy Studies Journal*, 38(2), pp. 303–327. doi:10.1111/j.1541-0072.2010.00363.x.

Koff, H., Challenger, A. and Portillo, I. (2020) 'Guidelines for Operationalizing Policy Coherence for Development (PCD) as a Methodology for the Design and Implementation of Sustainable Development Strategies', *Sustainability*, 12(10), p. 4055. doi:10.3390/su12104055.

Krasner, S.D. (1982) 'Structural causes and regime consequences: regimes as intervening variables', *International Organization*, 36(2), pp. 185–205. doi:10.1017/S0020818300018920.

Larose-Tarabulsy, F. (2019) 'L'agenda 2030: Un consensus ambigu (1/5)', *Raison d'Etat*, 30 January. Available at: <https://raisondetat.com/2019/01/30/agenda2030-consensus-ambigu/> (Accessed: 25 December 2020).

Meadowcroft, J. and Fiorino, D.J. (2017) 'Conceptual Innovation in Environmental Policy', in. doi:10.7551/mitpress/10246.001.0001.

Mensah, J. (2019) 'Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review', *Cogent Social Sciences*. Edited by S. Ricart Casadevall, 5(1), p. 1653531. doi:10.1080/23311886.2019.1653531.

Parrique, T. *et al.* (2019) *Decoupling Debunked. Evidence and arguments against green growth as a sole strategy for sustainability. A study edited by the European Environment Bureau EEB.*

Sanyé-Mengual, E. *et al.* (2019) 'Assessing the decoupling of economic growth from environmental impacts in the European Union: A consumption-based approach', *Journal of Cleaner Production*, 236, p. 117535. doi:10.1016/j.jclepro.2019.07.010.

Schubert, S. and Gupta, J. (2013) 'Comparing Global Coordination Mechanisms on Energy, Environment, and Water', *Ecology and Society*, 18(2). doi:10.5751/ES-05440-180222.

Smith, H.M. *et al.* (2014) 'River basin management, development planning, and opportunities for debate around limits to growth'. doi:10.1016/J.JHYDROL.2014.04.022.

Söderberg, C. (2016) 'Complex governance structures and incoherent policies: Implementing the EU water framework directive in Sweden', *Journal of Environmental Management*, 183, pp. 90–97. doi:10.1016/j.jenvman.2016.08.040.

Szuba, M. (2013) 'Post-energy-growth: Setting environmental limits as a safe operating space for politics.', in. *ECPR general conference. Panel on Post-Growth politics (Luc Semal & Dominique Bourg dir.)*, Bordeaux, p. 6.

Szuba, M. (2017) 'Chapitre 4 - Le rationnement, outil convivial', in *Gouverner la décroissance*. Paris: Presses de Sciences Po, pp. 95–118. Available at: <https://www.cairn.info/gouverner-la-decroissance--9782724619850-page-95.htm> (Accessed: 18 January 2022).

UNEP (2011) *Decoupling Natural Resource Use and Environmental Impacts from Economic Growth*. A Report of the Working Group on Decoupling to the International Resource Panel. Nairobi, Kenya: UNEP. Available at: <https://www.resourcepanel.org/reports/decoupling-natural-resource-use-and-environmental-impacts-economic-growth> (Accessed: 7 February 2022).

Visseren-Hamakers, I.J. (2018) 'Integrative governance: The relationships between governance instruments taking center stage', *Environment and Planning C: Politics and Space*, 36(8), pp. 1341–1354. doi:10.1177/0263774X18803634.