

What needs to be done to better integrate research and knowledge on biodiversity and ecosystem services from the global to the European level, and vice versa?

A report of the EKLIPSE project



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Contents

1.	Introduction	3
	1.1 Method	3
2.	Workshop event	4
	2.1 World cafes (three rounds)	7
	2.1.1 What works well, what doesn't work so well and why? (Global to EU)	7
	2.1.2 What works well, what doesn't work so well and why? (EU to Global)	8
	2.1.3 How could processes be adapted to better fit the needs at the EU scale?	9
	2.1.4 What are the priority research needs that should be addressed at the EU scale?	11
3.	Conclusions and recommendations	12
	 Annex 1: List of Participants	 15-15
	Annex 2: Workshop Programme	16-17
	Annex 3: Questionnaire	17-19
	Annex 4: Overview of answers to the questionnaire	20-24

What needs to be done to better integrate research and knowledge on biodiversity and ecosystem services from the global to the European level, and vice versa?

1. Introduction

During the second Call for Requests launched by EKLIPSE in July 2017, a request entitled "What needs to be done to better integrate research and knowledge on biodiversity and ecosystem services from the global to the European level, and vice versa?" was put forward by the European Commission, DG R&I.

The request is based on the need to translate the outcomes of global science-policy processes on biodiversity and ecosystem services into action at the European scale and, vice versa, to ensure that European science-policy processes contribute to the global debate and action.

To date, no strategic analysis has been made to understand:

- How global processes and outcomes dedicated on research and knowledge on biodiversity and ecosystem services (e.g. from the SDGs, CBD, IPBES or IPCC), could concretely be translated into European research and innovation policy (Horizon 2020 and FP9); or
- How best European research and innovation policy processes and deliveries (projects, knowledge, scientific capacity) could strategically feed into global processes.

At the global intergovernmental level, decisions from the Convention on Biological Diversity (based on SBSTTA recommendations) and publications (such as the Global Biodiversity Outlook), and assessments and processes of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), all recommend to further work on knowledge for biodiversity and ecosystem services, to undertake research, and to invest in tools and capacity building.

Interactions between European and global level take place at the level of scientists, projects, (joint) programming, assessment review and adoption, or decision making by Parties, but a more strategic approach could further improve processes and results.

1.1 Method

Following up on the Call for Knowledge for this request, which did not result in any contributions on the KNOCK Forum (the interactive online forum EKLIPSE uses for wider discussion on topics selected), EKLIPSE developed a questionnaire which was more broadly publicized with the help of the requester, as well as contacted selected representatives from key organisations to share their knowledge on this issue and suggest recommendations. The collected feedback was then used as input for a workshop on this topic, organized by DG R&I, with EKLIPSE leading its design and facilitation.

It is difficult to know why there were no comments resulting from this Call for Knowledge, unlike other calls, and one can only guess this was due to the complexity of the issue and the formulation (wording) of the question, which might have dissuaded visitors from feeling that the question was relatable to their experience.



The questionnaire developed for this activity (See Annex 3) was used to interview 12 selected experts. Experts that accepted to be interviewed included: Augustin Berhöfer, Jerry Harrison, Isabel Pinto, Peter Bridgewater, Bob Scholes, Brigitte Baptiste, Asghar M. Fazel, Hesiquio Benítez-Díaz, Paula Harrison and Markus Fischer. For an overview of answers received, please refer to Annex 4.

The analysis of answers received on the questionnaire helped to identify the following points:

- From Global to EU and vice versa only considers two of the many levels. To understand how these levels interact and influence each other, it is also important to look at the other levels (local, national, etc).
- There are a number of advantages, challenges and opportunities for the global to EU and vice versa interface. These were discussed and further elaborated during the workshop (see below).
- There are/have been some mechanisms/initiatives which have tried to address at least some elements of the Global to EU and vice versa interphase (see below).

For a full overview of questionnaire results, see Annex 4.

The workshop, which took place on June 1st 2018, aimed at understanding and improving the links between European and global science and policy on biodiversity and ecosystem services, by looking at the methodologies used by others to interpret the international assessments into prioritisation for their own needs, and how to help facilitate a process with relevant players on the steps forward in better linking European and Global science and policy on biodiversity and ecosystem services.

Structured discussions took place on both developing a strategic research agenda, and on how to organise the science-policy process, using the world cafes approach.

2. Workshop event

The workshop took place at the facilities of DG R&I in Brussels and was attended by over 30 experts from government, civil society and international organizations. See Annex 1 for List of Participants.

The event was opened by Birgit de Boissezon (DG R&I), who welcomed participants and reminded the audience that this was not an academic exercise but that DG R&I has high expectations and wanted the outcomes of the workshop to be operational, in order to improve the links between science and policy for biodiversity and ecosystem services in Europe.

Ms. de Boissezon stressed the timing and relevance of this meeting, for providing input to CBD SBSSTA, coming up in June, the review of the SDGs in July, and the preparations for the next EC Framework Programme. In this sense, this workshop is the beginning of a journey, as DG R&I plans to take forward the recommendations from this workshop to help improve the global/EU interface.

The next speaker was Allan Watt (NERC-CEH/EKLIPSE), who presented the EKLIPSE project, the call for knowledge on this request, and the outcomes of the consultation, which included advantages, challenges, and opportunities.

Figure 1: Advantages, Challenges and Opportunities resulting from the consultation

Advantages	Challenges	Opportunities
The EU as a global player	There isn't a one size fits all	Leading by example
Availability of funds and data	Some argue that data-science requires an interphase in the same way that science-policy does	Potential to shed light on European impacts elsewhere in the world
A "common" research agenda	A perception that the global scale has little additional to offer	Embedding the outcomes of the IPBES assessments in EU policy
Formal mechanisms (Directives) vs Informal mechanisms (Global Assessments)	Institutional Knowledge ("grey literature") versus Nominated Experts ("science and academics")	Global comparability, particularly important under the 2030 Sustainable Development Agenda

The first session consisted of presentations on experiences with different concrete approaches for translating the outcomes of global science-policy processes on biodiversity and ecosystem services into action at the European scale and vice versa. See Annex 2 for the Workshop Programme.

Estelle Balian (FEAL) presented the European Platform for Biodiversity Research Strategy's (EPBRS) experience in knowledge translation. The EPBRS was an informal forum setup by DG R&I (DG RTD at that time), with the objectives of: 1) acting as an interface between science and policy; 2) identifying knowledge gaps and research needs, and 3) promoting networking between National Biodiversity Platforms and raising awareness.

Ms. Balian believes that by promoting interdisciplinarity and providing a place for policy makers and researchers from across disciplines to meet, EPBRS led to many current initiatives (e.g. ALTER-Net, BiodivERsA, SPIRAL, EKLIPSE), particularly when EPBRS was much more active, holding biannual meetings under each EU Presidency.

EPBRS worked because it had a mandate and legitimacy derived from the appointment of delegates through DG R&I's Programme Committee. It was anchored at the national level, yet flexible, with links established with e.g. CBD, GBIF, BiodivERsA, DIVERSITAS and on-going EC research projects. Its weaknesses included having the same delegates at meetings with sometimes not enough relevant experts to address the particular issues being discussed; and was thus perceived as a "private club" by some outsiders. The e-conferences preceding each meeting did, however, overcome this problem by ensuring the input of large numbers of experts. Overall, EPBRS demonstrated the means whereby a place for exchange and capacity building could be created, involving a range of actors from across Europe, DG ENV and DG R&I and relevant international initiatives.

Ms. Hilde Eggermont (RBINS/BiodivERsA Vice-Chair) introduced BiodivERsA, a Pan-European network of national and regional organisations programming and funding pan-European research on biodiversity and ecosystem services, offering innovative opportunities for the conservation and sustainable management of biodiversity. It currently counts 35 partners from 23 countries, both from the mainland and the overseas.

Ms. Eggermont talked about the BiodivERsA – IPBES interface as a 2-way road from European to Global, by providing information for the IPBES Assessment of Europe and Central Asia (ECA), and by using the knowledge gaps and methodological requirements (e.g. for scenario development) identified by the IPBES



to fill knowledge gaps through transnational actions. Other outputs of BiodivERsA include its database (on research projects, programmes and funding across Europe), mapping the research landscape, promoting stakeholder engagement, knowledge brokerage and transfer; based on funded projects' results.

Lastly, Ms. Eggermont indicated that a lot of resources are required to be able to reach this goal, highlighting the experience of BiodivERsA, for which national members and the EC contribute (71% and 29% respectively¹) to a common fund available to support biodiversity research in Europe.

Thomas Koetz (IPBES Secretariat) spoke about IPBES Knowledge Generation, which is part of the IPBES mandate, as part of identifying knowledge gaps and generating new knowledge through engaging with partners, rather than IPBES directly undertaking research.

The 3 steps to implement IPBES mandate (in a more strategic way than before) consist of:

- Identification of gaps in knowledge, information and data in the IPBES work programme, and in completed assessments
- Consultations on these gaps and formulation of priority areas for knowledge generation with the scientific community
- Promoting the generation of knowledge by tailoring these priority research areas to potential research funding institutions, mainly by means of bilateral meetings with these funding organisations

Axel Paulsch (Institute for Biodiversity Network), presented a project and its follow up on the extraction of all formulations indicating direct or indirect research needs originating from CBD decisions, resulting in 29 tables on specific issues, which allows the user to check research needs under a certain CBD topic.

(<http://biodiv.de/en/biodiversitaet-infos/forschungsbedarf-der-cbd.html>)

Michael Mirtl, from the Austrian Environment Agency, spoke about ELTER/LTER-Europe to ILTER. ELTER is a H2020 project in 22 countries to help advance the development of European Long-Term Ecosystem Research infrastructures, building on scientific and institutional capacity.

Its global counterpart is the International Long-Term Ecological Research Network (ILTER), a network of networks, encompassing hundreds of research sites located in a wide array of ecosystems that can help understand environmental change across the globe. ILTER's focus is on long-term, site-based research and monitoring.

This session was closed by a presentation by Christos Fragakis (DG R&I), who presented the organization of current EC biodiversity and knowledge generation, in particular in the context of Horizon2020, the objectives of the Strategic Programming, and how is it aligned to the international agenda.

The Q&A session focused on the need to adequately integrate research and knowledge on biodiversity and ecosystem services from the global to the European level, and vice versa, and the importance to distinguish two different functions:

- 1) Identification of knowledge gaps and emerging issues
- 2) Definition of research priorities to be used for implementing new research

An important distinction was made by participants on the roles of national/local programmers and funders of research and how it should be fully recognized: they have specific skills, constraints and opportunities to

¹ Source: BiodivERsA database 2018

fill knowledge gaps which are key, and therefore they should be included in discussions from the beginning, instead of only perceiving them as a source of money.

2.1 World cafes (three rounds)

During the second session of the workshop participants could join three or more of the four tables dealing with specific topics, namely:

- Table 1: **What works well, what doesn't work so well and why** in translating the outcomes of global science-policy processes on biodiversity and ecosystem services into action *at the European scale*?
- Table 2: **What works well, what doesn't work so well and why** in translating the outcomes of European science-policy processes on biodiversity and ecosystem services into action *at the global scale*?
- Table 3: **How could processes be adapted to better fit the needs at the EU scale?**
- Table 4: **What are the priority knowledge or research needs that should be addressed at the EU scale?**

2.1.1 What works well, what doesn't work so well and why? (Global to EU)

This table was facilitated by Allan Watt, with Estelle Balian as the rapporteur.

The main points raised were:

- Connections at different levels are often made by people (individuals): Success is often linked to the right person being at the right spot;
- Within the EU, there is a culture of collaborative working, facilitated by the institutionalised architecture, where actors already work well and institutions exist to support their collaboration;
- The IPBES Pollinator Assessment and the CBD Aichi targets (although disputed) were used as examples of global products that were taken up at European level. Likewise, the IPBES identification of knowledge needs on scenarios has been taken up at EU level by BiodivERsA, in collaboration with the Belmont forum and EC.

What does not work so well included:

Data

- While the EU funding strategies have stimulated translation of research, there is more need for data mobilisation;
- At EU level, data is collected but fragmented, data needs are not consolidated at EU level;
- Need for a change of mindset about openly sharing evidence and data.

Communication

- Need for less ad-hoc and better coherency for channels of communication;
- Reaching out to other sectors, including by mainstreaming. There is a need for better communication channels especially to the media and non-academic communities, in order to achieve behavioural and societal changes;
- Disconnection between the focus of the public and the issues: the role of social sciences in behavioural changes.



Institutional arrangements

- The above-mentioned institutionalized architecture also facilitates a sectoral disconnect, with the Ministry of Environment negotiating at global processes, but the Ministry of Research deciding on funding at the national level. Initiatives like BiodivERSA are helping to bridge this gap in an efficient way;
- Need for more and better synthesizing, monitoring and following up on what comes out of the MEAs;
- Need to have a better recognition of the need to engage programmers and funders, as part of a more structured process. The inherent role of funders & programmers is to start from the identified knowledge gaps and emerging issues for defining their priorities and shape their implementation programs.

2.1.2 What works well, what doesn't work so well and why? (EU to Global)

This table was facilitated by Jorge Ventocilla, with Jonathan Porter as the rapporteur.

The main points raised were:

- The EU by its very existence helps to transmit from national level up to global level – partly due of the greater mass of the union, but also the inter-national dialogue that has happened between Member States before translating from EU to global.
- The EU is considered as a landmark in some areas (e.g. Restoration ecology). The EU can influence global processes with knowledge produced by the EU, yet there is a need for a platform to streamline this knowledge.
- It was suggested that the pollinator assessment of IPBES was strongly influenced by FP7 projects (such as STEP); in turn the IPBES pollinator assessment increased awareness of the issue at the EU level.
- Because the EU funds research, it has the opportunity to steer the type and nature of the research. In this sense, the Joint Programming Initiatives (on Oceans, Climate Change, etc.) and the BiodivERSA Partnership which has the functionalities of a Joint Programme Initiative, are an effective structure in which Members (both EU MS and non-EU MS) agree on a common strategy and support concrete research projects. A key success factor is that the science-policy interface is built within the JPI – so that the Ministry dealing with sectorial policy and the Ministry dealing with research policy can start interacting strongly from early on, at the national level.
- There seems to be a relationship between the existence of International structures and their link to their national counterparts, in the interface from national to EU to global. From an IPBES perspective where there is an active national science-policy platform (e.g. NEFO, JNCC, FRB, Belgian Biodiversity Platform) there is often a stronger response to IPBES consultations.
- Structures do not always need to be formal(ized). The Vilm meetings were often used as a platform that later fed into CBD SBSTTA meeting and the COP.
- Other suggestions to address this Global/EU interface were the inclusion of a research-related element in the Common Implementation Framework for Biodiversity (building on the work of the CIS Water Framework Directive), or a joint advisory technical group (with representatives of both MS and the EC).
- The role of trade, and the role of the EU in global trade, should not be underestimated. EU banned Grey Parrot trade into EU, initially because of bird flu, yet it had an effect on the global trade in Grey Parrot, as there was a global uptake of the ban. Likewise, for the European-wide certification schemes of sustainable palm oil –now affecting global trade.

What doesn't work so well included:

Sectoral cooperation

- Need for more joint calls between European Institutions and networks (e.g. BiodivERsA).
- Need for more inter-sectoral activities e.g. joint work streams between different DGs such as ENV & AGRI, or a shared report between IPCC and IPBES.
- The strength of the EU in the form of consultation before going into global processes, yet there is better integration across levels than sectors.

Institutional arrangements

- At present there is not a structure at the EU level to feed into IPBES. WPIE is for policy makers, need to have scientists involved, in a scientific board. Potential for Eclipse-like project to play, by identifying the best science.
- IPBES challenges the existing structures (national, regional) as it is in between political and scientific, thus the difficulty to absorb.
- Need for more coordination between researchers at the scientific level. This issue is linked to the need for a change of mindset about openly sharing evidence and data, mentioned above.
- Need for strong SPI institutions with a long-term remit and national and international levels to maintain the dialogue. Policy cycles vs. Research cycles.

2.1.3 How could processes be adapted to better fit the needs at the EU scale?

This table was facilitated by Heidi Wittmer, with Nerea Aizpurua as the rapporteur.

The main points raised were:

- Many different institutions and organisations are involved in the processes doing similar yet not exactly the same things. This makes it difficult particularly for actors (both researchers, policy makers or funding institutions) not centrally involved to get an overview and understand this rather complex landscape²
 - o Suggestions to improve this included a more co-ordinated approach, between different research funders, maybe even agreeing on a common agenda, where each funding institution could then prioritize certain topics to ensure complementarity. This was, however, not consensus as some participants emphasized the need for different funders to address different priorities and possibly work on different agendas as well. There was agreement that it would be useful to simplify information on research needs and priorities as well as funding conditions so that especially researchers but also policy makers can get a better overview of ongoing and upcoming research.
 - o Particularly researchers highlighted the need for a better overview, simpler application procedures for research funding and more incentives to do policy-relevant work.

² An exception is the coordination between national and regional funders through BiodivERsA (36 research programmers and funders from 23 countries incl. OR & OCTs), where partners have developed a long term 'common' vision and identified common research priorities (cf. BiodivERsA Strategic Research and Innovation Agenda 2017-2020).



- A main challenge identified is to make research more relevant for policy and thus “implementable”, including:
 - the need for timely research outputs, sometimes at a very short notice, here a suggestion was to scrutinize debates of parliaments where upcoming issues are flagged early on; and
 - the need for policy makers as well as researchers to be involved in research prioritization and formulation of research questions from the beginning. Funders could help setting up such dialogue early on in the process. This could be done in a first instance when finalizing calls for research funding by inviting scientists and policy makers to jointly identify specific issues and knowledge gaps, to be considered during the development of the research proposals. A further opportunity would be to facilitate the involvement of key policy makers during the kick-off phase of the research projects, so that they can better integrate policy needs when formulating research questions and methodologies

Most importantly some participants flagged a shift over the past years and decades from “evidence-based” policy to the provision of “actionable knowledge” and this shift is particularly relevant for any issue involving biodiversity and ecosystem services. It entails a corresponding shift from ‘decision making’ to ‘policy making’. This means that rather than being able to rely on clear evidence to take a decision, policy makers need knowledge (both from research but also from all other stakeholders) to be able to devise policies that lay out procedures and useful next steps that are then taken in collaboration with stakeholders. This implies a different role for science including the need to be able to help all actors involved to measure impacts (monitoring) of policies including changes on the ground and to understand why and how they come about, i.e. the underlying causalities.

To this end, the data and information infrastructures and networks (i.e. ILTER and ELTER) have an important role to play. The importance of having this data accessible would mean that funding is required to be able to make and maintain data and information accessible and useable both from these sites, but also from other relevant research projects, for different policy processes. Networks could then also play an even stronger role in integrating and making research data and information from other projects accessible to policy making.

- In conclusion participants saw a role for more strategic planning of research funding, particularly with regard to policy needs. Requirements to enable this included:
 - The need for a one stop shop regarding information and overview, where existing mechanisms such as OPPLA could play an important role;
 - A good co-ordination between well-established initiatives performing complementary functions: in particular the EC, particularly DG R&I with its links to all other policy DGs;
 - BiodivERsA (identification of research priorities across national and local programmers and funders; joint programming and knowledge brokerage); LifeWatch, LTER (development and implementation of research infrastructures) and EKLIPSE (knowledge synthesis, identification of knowledge gaps and emerging issues, facilitation of processes across scales).

2.1.4 What are the priority research needs that should be addressed at the EU scale?

This table was facilitated by Josefina Enfedaque (DG R&I), with Hilde Eggermont as the rapporteur.

The main points raised were:

- Reflections on the FP9: Biodiversity will fall under the cluster “Environment & Agriculture” (terminology used therein: biodiversity, ecosystem services, nature-based solutions, natural capital). In addition to the clusters, there will also be Missions (likely some 10). The latter are not yet defined. Participants discussed whether biodiversity should be a stand-alone mission, or whether it should be transversal across other missions. Most agreed it should be a stand-alone mission. It will require some further thinking and discussion to sell the ‘biodiversity mission’.

Research needs identified (in no particular order):

1/ Need to clarify/stabilize terminology. Biodiversity is still a vague term to many. A more streamlined and accessible terminology could help mainstream across different sectors, and in different policy contexts.

2/ Need for upscaling of research (cross-regional research). There are a lot of local, national, regional case-studies – but upscaling is needed. Research at meta-level.

3/ Research on how to set up efficient European biodiversity monitoring schemes.

4/ Need to establish a Europe-wide process to mobilize existing biodiversity data that are currently scattered across different countries and sectors.

5/ Research on why targets (e.g. Aichi targets; SDG targets etc) are not met.

6/ Research on synergies and trade-offs between SDG 14 & SDG 15, and others.

7/ Role of biodiversity for ecosystem services delivery – and (more importantly) for developing Nature-Based Solutions.

8/ Research on population trends & extinction risks of European species.

9/ Which conservation measures work, and why?

10/ Research on the impact of policies on biodiversity (research of the efficiency of policy tackling biodiversity issues).

11/ Research on linkages between multiple drivers of change, and feedback processes. More integrated assessments.

12/ Better indicators to measure prosperity (i.e. going beyond economic indicators).

13/ Research into how to build a sustainable economy; and how to achieve this transition and the behavioral change needed.

14/ How can existing knowledge on evolution and adaptation be used to address new challenges.

15/ Does the EU live within the planetary boundaries? (complement the work done by the WCMC; Stockholm resilience center; EEA)

16/ How to minimize impacts of EU in global trade footprint?

17/ How to obtain a sustainable Common Agricultural Policy (could also apply to Fisheries):



- How would such an agricultural-society landscape look like?
- What policy instruments exist to induce change towards this?
- What research/infrastructures do we need?

18/ Research into sustainable solutions to overcome biodiversity loss (addressing the causes).

3. Conclusions and recommendations

When trying to identify what needs to be done to better integrate research and knowledge on biodiversity and ecosystem services from the global to the European level, and vice versa, it is important to first understand the different levels and elements involved. Against this background, suggestions to improve the interaction between EU and Global will involve different issues, steps and levels and therefore different players in order to identify enabling actions to put in place.

3.1 Elements to consider when coordinating science and policy

Identifying knowledge needs is at the beginning of this process, and it is based on the research gaps. Due to their complexity and interactions, the current state of knowledge about biodiversity and ecosystem services is incomplete. Having a better understanding would allow to put in place better practices, policies and approaches to the management of natural resources. At the global level, bodies like IPBES have shed some light on what the research needs at the European level are, through its most recent assessment for Europe (and Central Asia). At the European level, a few initiatives exist, such as the RIO Country report³, which serves as a reference and key source of information for European and national policy makers in the field of R&I policy. It delivers analysis, insights, statistical data and best practices on designing, implementing and evaluating research and innovation policy at EU and national levels.

Identifying research priorities and programming research is a completely different step from identifying research needs, as it does not rely exclusively on the missing knowledge, but also includes societal and policy priorities/concerns and implies capacity to develop (pan-)European research programming, so that the resulting knowledge can be used to address these concerns. Research priorities are more relevant at the regional level (as compared to the global level), considering that a region is more likely to share similar ecosystems, economies and governance structures as is the case for the European Union. Key supra-national bodies actually fulfil this role at the (Pan-)European level, in particular several relevant DGs from the European Commission and BiodivERsA, which facilitate transnational, joint research programming and funding across Europe.

In addition, this also entails bringing to the attention of policy makers recent research outputs (which were not part of the research priorities); for this a dedicated and possibly different process might be required.

Curating research data and monitoring relates to the importance of having the data available, in a compatible format, but also in a state in which it can be used and accessed. It is also related to institutions. Discussions during the workshop hinted to the challenge of data mobilization in Europe, which meant that outcomes from initiatives such as the IPBES assessment, are not as complete as they could be. As the

³ <https://rio.jrc.ec.europa.eu/en>

availability of data, and the monitoring of trends relates very much to capacity and the institutional arrangements, this seems a challenge to be addressed at the level of Member States, with the support of the European Commission in providing common frameworks and capacity building, to facilitate the collection, exchange and transition of data, building on the work already being done, for Member States to report on European targets, to the EEA, and the data centres organized by DG ENV, JRC and EEA, for example.

Translating research into policy relates to feeding the outcomes of the research priorities addressing knowledge gaps, so that a more complete picture is available for policy makers, in order to understand the trends, drivers and scenarios, as well as consequences of action or inaction. This element has a global and a regional perspective, as policy-relevant research is carried out at both levels. However, regional policy-relevant research can be specific, due to the common geographical, economic and governance structures found in Europe. EKLIPSE is partly playing this role, by scaling up biodiversity and ecosystem questions of policy and societal relevance to the European Union level, and synthesising this knowledge, so that it is available for policy makers at all scales.

Regarding all elements above a **shift from ‘decision-making’ to ‘policy-making’** needs to be considered. Rather than being able to rely on clear evidence to take a decision, policy makers need knowledge (both from research but also from all other stakeholders) to be able to devise policies that lay out procedures and useful next steps that are then taken in collaboration with stakeholders. This implies a different role for science, and possibly the need for additional funding, to be able to help all actors involved to measure impacts of policies, including changes on the ground and to understand why and how they come about, i.e. the underlying causalities.

3.2 Enabling actions to improve the interaction EU to Global and vice versa

The EU to Global and vice versa process is complex and often non-linear. The EU is likely to continue to play an important role at the global level, because of extensive funding for biodiversity research, elaborate infrastructures and important role in ensuring data availability and accessibility, including for monitoring of the status and trends. A potential to increase the EU contribution could consist in **improving the capacity to mobilise data for global assessments and research needs**.

One complexity arises from the fact that the EU is a partnership comprising 28 voices, with the EC not being the single spokesperson. This implies **a need for a more formalized coordination and consensus at the EU level** before engaging with the global level in international negotiations. Multiple realms are affected by biodiversity and ecosystem services, national competences vs EU competences, and the different types of formats and fora. **Approaches should be tailored towards the needs of specific actors and levels** within this context. For example, EC takes the lead when drafting proposals such as FP9 and European research infrastructures, whereas Member States and Associated Members have a key role when it comes to joint programming which requires a partnership between national programmers and the EC.

Improvements in the interaction with the global level will require a **strong co-ordination between well-established initiatives** already performing complementary functions, such as:

- The EC, particularly DG R&I with its links to all other policy DGs
- BiodivERsA (identification of research priorities across national and local programmers and funders; joint programming and knowledge brokerage);
- LifeWatch, LTER (development and implementation of research infrastructures) and,



- EKLIPSE (knowledge synthesis, identification of knowledge gaps and emerging issues, facilitation of processes across scales).

Wherever national or EU level counterparts exist in the current global governance structures for biodiversity, such as national biodiversity platforms or IPBES coordination offices, interaction with the global level is facilitated. **Opportunities should be sought to build on the existing governance structures and to more explicitly involve different sectors** relevant for biodiversity and ecosystem services, (agriculture, fisheries, transport etc.) not currently part of the global governance structures.

Participants of the workshop **recognized the importance of having a structure** helping to facilitate and ensure a more strategic approach to translating the outcomes of global science-policy processes on biodiversity and ecosystem services into action at the European scale and, vice versa, to ensure that European science-policy processes contribute to the global debate and action. The example of EPBRS, at the EU scale alone, has shown until recently the benefits of providing a place for policy-makers and researchers to meet and promote interdisciplinarity. At present there is no structure that would fulfil this role. There is however a role for an EKLIPSE-like approach that can identify the best science, streamline knowledge and bring national coordination bodies together to facilitate exchange and capacity building amongst members.

Learning from previous experiences, such a structure would require a mandate for better coordination between the different existing bodies (e.g. WPIEI, the Programme Committee, funding networks, research institutes etc.), legitimacy and resources; as well as a link to DG R&I's Programme Committee. This "new" coordination body could be composed of Member States representatives and the Commission, who would advise and take advantage of the opportunities at the National/Regional/Global interface and allow for a more strategic approach, which in turn could further improve processes and results.

Lessons can be learnt from previous and ongoing initiatives, particularly BiodivERsA (efficient collaboration is needed when it comes to research prioritization and programming), and EPBRS (which played a key role in identification of knowledge gaps and research needs, and in promoting networking between National Biodiversity Platforms).

Lessons should also be learnt from the processes already established by EKLIPSE to improve evidence-based decision making, in a robust and transparent way. Any new coordinating body should not try to duplicate what is already existing, instead the existing bodies that already fulfil required functions could be reinforced. Indeed, a major aim of EKLIPSE is to establish a mechanism that supports the science-policy interface at, and between, different scales.

Annex 1: List of Participants

Global to EU Workshop – June 1st, 2018

BiodivERsA	Xavier	Le Roux
BiodivERsA	Hilde	Eggermont
EEA	Ronan	Uhel
FEAL	Estelle	Balian
GBIF	Tim	Hirsch
IUBS	Nathalie	Fomproix
UNEP-WCMC	Claire	Brown
UNEP-WCMC	Neil	Burgess
EKLIPSE	Jorge	Ventocilla
EKLIPSE	Heidi	Wittmer
EKLIPSE	Allan D.	Watt
Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES)	Thomas	Koetz
OPPLA	Jonathan	Porter
EC DG ENV	Karin	Zaunberger
IUCN	Alberto	Arroyo Schnell
IUBS/CIMA	Lili	Rodriguez
Swedish EPA	Neda	Farahbakhshazad
Cimar – Centre for Marine and Environmental Research	Isabel	Sousa Pinto
IUCN	Marta	Calix
European Commission DG RTD/I.3	Birgit	de Boissezon
European Commission DG RTD/I.3	Josefina	Enfedaque
European Commission DG RTD/I.3	Jean-François	Hulot
JPIs Water	Dominique	Darmendrail
Representing Spain	Lydia	González Fernández
FutureEarth	Hannah	Moersberger
Fondation Biodiversité/FR	Frédéric	Lemaître
European Commission RTD/F.4	Ana Teresa	Caetano
FACCE	Rob	Swart
JPIs Climate	Alexandre F.	Fernandes



Lithuanian RDI Liaison office in Brussels	Brigita	Serafinaviciute
Ministry of Agriculture, Nature and Food Quality - NL	Rob	Hendriks
Institut fuer Biodiversitaet - Netzwerk e.V.	Axel	Paulsch
EHF	van Diggelen	Rudy
GBIF - Belgian Biodiversity Platform	Heughebaert	André
LTER	Mirtl	Michael
European Commission DG JRC	Sienkiewicz	Marta
University of A Coruña	Dumitru	Adina

Annex 2: Workshop Programme

09:30 – 10:00 Registration and refreshments

10:00 – 10:15 Welcome and aims of the meeting – *Birgit de Boissezon* (DG R&I)

10:15 – 10:30 Lessons learned on current practices for cross-scale translation of knowledge on biodiversity and ecosystem services from the EKLIPSE Call for Knowledge – *Allan Watt* (NERC-CEH)

10:30 – 11:15 Quick presentations of different models working on translating the outcomes of global science-policy processes on biodiversity and ecosystem services into action at the European scale and vice versa:

- Knowledge translation in the European Platform for Biodiversity Research Strategy (EPBRS) - *Estelle Balian* (FEAL)
- BiodivERSA process of assessing priorities - *Hilde Eggermont* (RBINS)
- IPBES Knowledge Generation - *Thomas Koetz* (IPBES Secretariat)

11:15 – 11:30 **Coffee break**

11:30 – 12:30 - BfN analysis of CBD decisions, and its follow-up – *Axel Paulsch* (Institute for Biodiversity Network (ibn))

- Interplay of the European (eLTER) & global LTER (ILTER) in response to biodiversity & ecosystem services research requirements – *Michael Mirtl* (Austrian Environment Agency and UFZ)
- Organisation of current EC biodiversity research and knowledge generation - *Josefina Enfedaque* (DG R&I)

12:30 – 13:20 Lunch

13:20 – 13:30 Introduction to the world cafes approach – *Heidi Wittmer* (UFZ)

13:30 – 15:00 World cafes on:

- **What works well, what doesn't work so well and why** in translating the outcomes of global science-policy processes on biodiversity and ecosystem services into action at the European scale?

- **What works well, what doesn't work so well and why** in translating the outcomes of European science-policy processes on biodiversity and ecosystem services into action at the global scale?
- **How could processes be adapted to better fit the needs at the EU scale?**
- **What are the priority knowledge or research needs that should be addressed at the EU scale?**

15:00 – 16:00 Presentations from rapporteurs and final plenary

16:00 Wrap up and end of meeting – *Birgit de Boissezon* (DG R&I)

Annex 3: Questionnaire

Call for Knowledge (March 2018)

A request, entitled "What needs to be done to better integrate research and knowledge on biodiversity and ecosystem services from the global to the European level, and vice versa?" was put to EKLIPSE by the European Commission DG R&I in the second Call for Requests.

The request is based on the need to translate the outcomes of global science-policy processes on biodiversity and ecosystem services into action at the European scale and, vice versa, to ensure that European science-policy processes contribute to the global debate.

However, no strategic analysis has been made to understand:

- How global processes and outcomes dedicated on research and knowledge on biodiversity and ecosystem services (e.g. from the SDGs, CBD, IPBES or IPCC), could concretely be translated into European research and innovation policy (Horizon 2020 and FP9); or
- How best European research and innovation policy processes and deliveries (projects, knowledge, scientific capacity) could strategically feed into global processes.

As part of the scoping phase, and to inform a workshop organised by DG R&I in June 2018, we are inviting representatives from key organisations to share their knowledge of this issue, and suggest recommendations for the workshop and its outcomes.

We invite you to complete this form by the 29th March. The results of this exercise will be collated, synthesized and communicated to DG R&I to inform the organisation of the workshop in June 2018.

*Required

Email address *

Name *



Would you rather fill out this form, or be contacted for a phone interview? *

☐ Fill in the form

☐ Request an interview

(Only applicable if you choose a phone interview: You are requesting a phone interview. Please continue to the next section and submit this form and we will email you shortly to arrange a convenient time.

Note that once a time has been set, we will send a consent form for you to sign prior to the interview, detailing the aims of this data collection, data storage and anonymity.

Many thanks for completing this form. We will be in touch with you shortly if you have requested an interview. The results of this exercise will be compiled, synthesized and presented to DG R&I in preparation of the workshop in June.)

Do you know any strategic analysis (projects, papers, reports, grey literature) on the inter-linkages (going both ways) between relevant global processes and European funded research, knowledge and/or policy recommendations or developments? *

☐ Yes

☐ No

If you do know of such existing or forthcoming analyses, please provide details here

What are your experiences of processes that have tried to better integrate research, knowledge, or policy recommendations on biodiversity and ecosystem services from the European to the global level, and vice versa? *

Were these experiences positive or negative? What made them useful or not? *

Do you have any suggestions on how to better integrate research, knowledge, policy recommendations on biodiversity and ecosystem services from the European to the global level, and vice versa? *

DG R&I will organise a workshop to address the issue. Who from your organisation should be present?
Please provide their name, function, contribution to the workshop, and email address. *

Which key organisations do you think should be invited to the workshop? Organisations we are inviting include IPCC, Future Earth, IPBES, CBD, IUCN, GBIF, GEO-Bon, Belmont Forum, BiodivERsA. *

What recommendations would you have for the format of the workshop? For example, would you like participatory sessions, plenary discussions, information sessions, focus on specific issues/aims? *

What outputs and outcomes of the workshop would be most useful for you and your organisation? *

Many thanks for completing this form. We will be in touch with you shortly if you have requested an interview. The results of this exercise will be compiled, synthesized and presented to DG R&I in preparation of the workshop in June.

Please specify whether you would like the information used in this form to be anonymised

☐ Yes

☐ No

A copy of your responses will be emailed to the address you provided



Annex 4: Overview of answers to the Questionnaire

Participant	What worked well in the global to EU translation (or vice versa)	What worked less well	How it could be adapted to fit the needs of the EC	What were the remaining knowledge or research needs from the process that could be addressed at the EU level
A	<p>The Vilm meetings helped to bring regional to global, as there is no existing mechanism to do so at IPBES.</p> <p>Europe has the advantage of having the funds & data (assessments, trends, etc.), which is then used by other countries (outside the EU).</p> <p>When going from Global to Regional, it is important to identify what is relevant and what is not (e.g. ECA Assessment on Ecosystem Services)</p>		<p>The EU is better equipped than other regions to fund activities outside the EU.</p> <p>EU-BON: Observations at Global level, funded in part by EU funds.</p> <p>Organize workshops/working groups at the European level, but opening to knowledge holders from other countries to do tailored integration of research, knowledge and if requested, policy recommendations and have the results of this work be presented at the international fora. It works in the CBD (Vilm meetings) and could work also in IPBES. My experience is that assessments done in the relevant subjects and timings will be used by the author teams</p>	Recognize EU's place as a global player.
B	The IPBES Assessment on Pollinators, and its coalition of the willing. An example where a Global/Thematic Assessment was translated.	There are many assessments produced, and thus a need for better synergies.	Some questions need answers quickly (as addressed by the Canoe Project), other need answers that will get the info at the right timescale and relatively fast (Oppla and Ekclipse projects)	Models at the moment do not take well into account the connections between ecosystems.
C	There are formal and informal mechanisms. Formal mechanisms are well defined from the beginning, as is the case with regulations. Informal mechanisms are done in one part, and copied in the other, as with the Millennium Ecosystem Assessment, and the UK ES		Do not treat this as a tech transfer issue, which is inefficient. Adopt a 2 way approach society/science, and fine tune to circumstances and ownership.	<p>Possible useful outcomes: In 10 years' time, what do we need to make the interphase between data/science/policy?</p> <p>Don't come up with a manual, but allow</p>

	<p>Assessment, which followed.</p> <p>BiodivERsA as a real opportunity to solved Regional/Global challenges, by having a common research agenda and common funding pot.</p>		<p>The EU needs to “connect” within itself before being able to have an effect at Global level.</p> <p>There isn’t a one size fits all, despite the EU Directives, there is a need for more flexibility: Nature does not stick to rules, which are good for trade but not for nature management.</p>	<p>participants to understand the problem, network and explore what are the impediments to success.</p>
D	<p>EPBRS would be the main experience I had on integrating EU research already to influence EU policy level and also have impact at global level. EPBRS delegates being involved in SBSTTA and other Global consultation processes, they would directly influence discourses on some topics making use of what had been discussed in EPBRS meetings.</p>	<p>Initiatives without a mandate or legitimacy.</p>	<p>One of the most important aspect is that there is some community at EU level that ensures a continuous dialogue and exchange between european researchers (from all disciplines) and national policy makers who are the ones acting in the consultation/working groups at Global level.</p> <p>DG ENV maintains some Ad hoc working groups on different topics where there is this space for dialogue but it is ad hoc.</p> <p>There is a need to have regular meetings to build this community to ensure there is a continuous passing of knowledge to the ones who can influence global processes and to build capacity of young professionals to ensure researchers and policy makers develop common understanding throughout their carrier.</p>	
E	<p>IPBES ECA assessment -especially knowledge gaps box from the SPM. Also there have been some reports looking at gaps and actions needed to deliver the SDGs</p>		<p>Better understanding of what is policy relevant research is as well as how the international mechanisms operate would</p>	<p>It is handy to have an understanding the direction of European research on biodiversity and ecosystem services and how people think it links into the international</p>



	<p>(http://www.nerc.ac.uk/press/releases/2017/16-global/) will also need to look GBO and GEO;</p> <p>And possibly lessons in the climate change and land use community</p>		probably help researchers and mechanisms which allow people negotiating global level to understand the research that is available.	agenda and then at UNEP-WCMC we can understand how we can help support the process
F	<p>The overall BiodivERSA approach aims at linking research, knowledge and policy needs on biodiversity, ecosystem services and Nature-based solutions, and it increasingly promotes the internationalisation of its activities. Example of experience: Linkage between BiodivERSA & IPBES (vice-versa), see separate information sheet. Need dedicated resources (people) to fully understand the global processes, to allow for timely follow-up and to monitor the uptake of research.</p>	<p>Positive experience: increased visibility & both academic and policy impacts But more heavy that strictly pan-European approach.</p>	<ul style="list-style-type: none"> - Improved communication on opportunities for researchers to engage in global processes, and on outcomes of political fora - Joint outreach events - Better use the MOU/Strategic partnerships offered by IPBES ... 	
G		The dissemination of recommendations	“Test” first the global integration (through small workshops) with some extra-European participants to understand potential implementation and challenges abroad	
H		<p>There has been considerable willing from the science communities to engage with decision-makers, but not the same level of willingness from the decision-making communities to engage. I have been involved in several workshops in Brussels, where participation from the EU has been very low, in spite of initial interest being expressed in the events.</p>	<p>We need better dialogue between the Commission and the researchers. This has to be led by the EC, and professionally facilitated, but involve researchers who make major contributions to this field: EU funded project partners, and authors to IPBES reports. It would also be useful to hold smaller, focused meetings between key the EC and IPBES authors.</p>	<p>Why not, for example after the last IPBES plenary organise a facilitated, exchange meeting between the EC DGs and the IPBES assessment authors?</p> <p>Better embedding the outcomes of the IPBES assessments in EU policy. Better understanding the EU policy process and barriers to policy implementation.</p>

		This is a major barrier to knowledge exchange. The initiative probably needs to come from the EU for this, in engaging with knowledge holders (projects) and researchers engaged in global processes such as IPBES and CBD.		
I			A possible way could be to be present in the different international/global fora/organizations with a position representing the EU as a whole.	
J		Both negative and positive: the place / role given to European institutional knowledge ('grey literature') vs. nominated experts (science and academics); huge variability in influence / use of European institutional knowledge depending the organisation status & processes	IPBES -which follows the experience of IPCC- is a good model (assuming EU gets better status to secure participatory contributions). Would also be useful to cooperate further with CBD Secretariat in their efforts to coordinate CBD - UNFCCC - CCD logic and domains of intervention.	
K			Upscaling, downscaling, and integration across scales are always a challenge, especially for regions like Europe where capacity and data availability are high and so there's often a perception that the global scale has little additional to offer. However in addition to the obvious benefits of global comparability (particularly important under the 2030 Sustainable Development Agenda), other advantages	

			include the potential to shed light on European impacts elsewhere in the world (and vice versa), capacity building and technology transfer, and motivation to other regional processes through "leading by example".	
L			<p>Although maybe not 100% relevant to this inquiry, I would draw attention to the Global Biodiversity Informatics Outlook (www.biodiversityinformatics.org) compiled as an outcome of the 2012 Global Biodiversity Informatics Conference in Copenhagen, aimed at developing a strategic framework for the required components of a globally-connected knowledgebase on biodiversity, from the foundational conditions required for free and open exchange of data, through the mobilisation of data from key sources, through integration of data as useable evidence, to analysis and modelling to inform policy. This framework is due to be revisited at a follow up conference in July 2018, with a view to developing mechanisms to coordinate required actions to make significant progress in key components, perhaps through a shared project office with light governance to guide investment and effort.</p>	<p>A better understanding of the role of data mobilisation, including standardisation and open access policies, and the associated investment required, in the overall research and policy agenda is a prerequisite to progress in this area.</p> <p>Taking the GBIO process as an example, the framework itself has been a useful tool to organise thinking around the key components that must be addressed in order to realise the full potential of the data > evidence > knowledge > policy chain, at different scales. However, lack of an overriding mechanism to hook up disparate infrastructures and projects has been a handicap for sustained progress.</p>

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