



Bridging the gap between policy and knowledge
on biodiversity in Europe

An Eclipse organised online event:

Report - Focus group “Biodiversity and pandemics”

28th of April 2022 - From 9:45 to 13:00hrs CEST

A workshop facilitated by Estelle Balian (FEAL)





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1) Background of the Focus group

Eclipse received at the end of 2020 a request from EC DG RTD to answer policy relevant needs for evidence related to Biodiversity and Pandemics.

Eclipse organized a cross-sectoral workshop in May 2021 to identify urgent challenges and or evidence needs related to biodiversity and pandemics. Seven requests were identified, developed and ranked at the workshop and 3 of them were selected by the [Eclipse Knowledge Coordination Body \(KCB\)](#) together with the [Strategic Advisory Board \(SAB\)](#). These are the 3 requests that were presented in the invitation to participate to the focus group:

- **Request n°1:** Developing a strategic research agenda on Biodiversity and pandemics, jointly with all relevant agencies, and aligned with relevant sectoral policy agendas
- **Request n°2:** A better understanding of the impact of EU policies generally on the emergence and spread of Emerging Infectious Diseases (EID) in third countries; could be expanded to consider the fair implementation on local people of policies intended to mitigate the emergence of EIDs and the loss of Biodiversity
- **Request n°3:** Identification and prioritisation of monitored ecosystems/biodiversity/areas or methodologies to improve the surveillance systems for the prevention of zoonotic emerging diseases to render them more resilient and sustainable inspired by past/best initiatives (EFSA, PREZODE, HERA, OHHLEP).

Few important points about the Eclipse process:

- **The following key criteria need to be met for Eclipse to process a request:**
 - ◆ a clear mandate and a strong willingness / support from policy or other societal actors to follow the process and ensure the impact of the output
 - ◆ Policy relevance needs to be ensured
 - ◆ Scale: The request should be of European or at least of a wide region relevance.
 - ◆ No duplication: Eclipse should ensure that there is no known work already done or planned on the topics
 - ◆ Cross-sectoral approach: the request would need to go beyond the core Biodiversity and ES policies (e.g. by addressing health, agriculture or other issues and according knowledge?)
 - ◆ Feasibility to process the request in the time and resource allocated.

- **Focus group objective: Co-develop a cross-sectoral request /question to Eclipse on Biodiversity and pandemics** (see Annex 1. For the agenda and Annex.2 for the list of participants)



The focus group was organised to target which request will be processed by an independent and interdisciplinary Eklipse [Expert Working Group \(EWG\)](#) (selected following an Eklipse Call for Experts) in the next few months. The invited participants to the Focus Group were asked to discuss and select the request(s) whose results and outputs would be useful for their work and / or feed in a key policy process. The expected outcome of this focus group was to create a cross-sectoral consortium of requesters that will follow up the Eklipse process.

In preparation for the workshop, three questions were asked to all the invited participants and answers were compiled in Annex. 3.

2) Key points from the Focus group discussion

Request n° 1: Knowledge gap analysis on biodiversity & pandemics / research agenda

→ Pros:

- ◆ No strategic research agenda specifically on Biodiversity and pandemics. Existing ones cover a wider topic.
- ◆ Need for research to understand links between biodiversity and pandemics: a lot of existing knowledge gaps and unknown, leaving a lot of room for research in this field.
- ◆ 4 Cs principles of One Health (Communication, Collaboration, Capacity Building and Coordination) could help develop a roadmap and avoid duplication.
- ◆ The knowledge synthesis could contribute to the development of the next Horizon Europe programme by identifying urgent research needs which need funding. It could also give a state of the art of research needs to future Horizon Europe projects

→ Cons:

- ◆ Potential duplication of effort with existing initiatives; e.g. Strategic Research Agendas of PREZODE and HERA

→ Interesting ways to narrow down / to improve the request's formulation:

- ◆ Focus on biodiversity only and on building on existing research agendas / Knowledge gap analysis
- ◆ Prioritization of the gaps: especially the gaps in the interlinkages (that might bring to the identification of new gaps.)

Request n° 2: Knowledge synthesis on impact of EU policies on the emergence and spread of emerging diseases

→ Pros:

- ◆ Strong interest in understanding EU policy impacts abroad
- ◆ Evidence report could support adjustment of EU policies

→ Cons:

- ◆ Need to be careful with a focus on third countries and avoid “finger pointing”

→ Interesting ways to narrow down / to improve the request’s formulation:

- ◆ Focus on the impacts on European territory (impact analysis, best practice analysis, blueprints)
- ◆ Are the impact assessments of EU regulations taking into account both biodiversity and the emergence of diseases. If not, an Eklipse Expert Working Group could contribute to develop a framework for this.
- ◆ Indirect and direct impacts of one specific policy (e.g. DG Trade, development aids policies, etc) would be an interesting way to narrow down the request
- ◆ How could EU policies be adjusted to protect the EU space?
- ◆ Analyze the interlinkages between livestock, biodiversity and health
- ◆ Study the role of livestock in a European perspective

Request n° 3: Knowledge synthesis on monitored ecosystems & methodologies of surveillance

→ Pros:

- ◆ Next Horizon Europe programme has a call on zoonotic diseases, based on this request.
- ◆ Topic in DG AGRI’s work programme for 2025
- ◆ Would help define where to place monitoring systems

→ Cons:

- ◆ Risk of duplication due to lack of information on current or future work. Coordination with existing biodiversity monitoring initiatives would be needed; e.g. Biodiversa+, EuropaBon, European Partnership for Animal Health and Welfare (PAHW). But none are advanced enough.
- ◆ Methodology to address this question would be challenging in 6 months, it would need a strong coordination with other projects or initiatives.

→ No proposal to narrow down





3) Conclusion of the discussion

Two requests were reformulated through facilitated discussion:

→ **Reformulation request 1.**

Make sense /some analysis of the existing research agendas/knowledge gap analyses to extract the priorities in the view of interlinkages (between sectors).

→ **Reformulation request 2.**

What do we know of the impact of EU Trade policy related to biodiversity (livestocks and wildlife) on areas with high risk of Emerging Infectious diseases and subsequent knowledge gap analysis.

→ **Refined requests that have emerged from the focus group:**

- ◆ What do we know of the impact of EU Trade policy related to biodiversity (livestock and wildlife) on areas with high risk of Emerging Infectious Diseases?
- ◆ Are the impact assessments of EU regulations taking into account both biodiversity and the emergence of diseases? If not, an Eklipse Expert Working Group could contribute to develop a framework assessing the impacts of new policies on Biodiversity and the emergence of diseases.

Request 3 was not considered further due to issues of potential duplication with current and future initiatives on surveillance systems.

4) Taking stock

After discussing the requests among the participants, the **request n° 1** was unanimously supported by the different DGs and experts present at the workshop, as a potential final request to Eklipse; with the following provisional formulation:

“Make sense /some analysis of the existing research agendas/knowledge gap analyses to extract the priorities in the view of interlinkages (between sectors).”

It was commented that the final formulation of the request would be reworked by the scoping group and the information will be sent to the focus group’s participants.

The following participants accepted to follow up the Eklipse process:

European Commission:

Christina PANTAZI, DG R&I., Jean-Charles CAVITTE, DG AGRI

Experts:

Anais DEVOUGE, Project HERA; Carlos GONCALO DAS NEVES, Norwegian Veterinary Institute (NRI); Pierre DUSSORT, PREZODE. Thomas Mettenleiter (OHHLEP)

5) Follow-up and next steps to the Focus Group

Following the focus group, the Eklipse scoping group of the request on “Biodiversity and pandemics” met again and developed the **following reformulated request** with the elements gathered during the workshop:

Building on existing relevant work on research agendas and knowledge gap analysis, identify interdisciplinary research [and action] priorities that contribute to a strategic research agenda on biodiversity and pandemics addressing the critical interlinkages





between relevant sectors needed to make future actions more effective.

The request process would include:

- Mapping of existing research agendas and knowledge gap analysis
- Filtering and analyzing research recommendations related to biodiversity and pandemics
- Prioritize the identified research recommendations, based on their potential for maximizing the impact on policies for relevant sectors.

The next steps are now:

- To agree on the reformulation of the request with the consortium of requesters; i.e. DG R&I, DG Agri, PREZODE, OHHLEP, HERA, NRI
- To finalize the Document of Work (DoW) by :
 - ◆ including the final formulation of the request
 - ◆ clarifying exact expectations, possible deliverables, scope and scale through a dialogue with the consortium of requesters formed during the focus group.
 - ◆ liaising with [Method Expert Group \(MEG\)](#) members on methodological options to identify relevant, timely and cost-appropriate methods and approaches
 - ◆ Discussing implications of methods options with the requesters
- To agree on the finalized DoW with the consortium of requesters
- To prepare a Call for Experts and setting up an Expert Working Group (EWG) dedicated to answering the request (learn more about the process by reading our [Eclipse Guidance note 7c](#)).

6) Annexes

Annex 1. Agenda

<p>LINK TO CONNECT</p> <p>https://us02web.zoom.us/j/84071824700?pwd=ZjZNVIN6bG1PcU84REswSkRZWkZQQT09</p> <p>Meeting ID: 840 7182 4700, Password: 042022</p>	
09:45 – 09:55	Introduction to the workshop, background and objectives.
09:55 – 10:10	Getting to know participants
10:10 – 10:25	Introduction to Eklipse and the request process
10:25 - 10:50	Part 1: Clarification of the different questions/requests*
10:50 - 11:20	Experts Panel discussion with interactive Q&A
11:20– 11:30	Virtual Coffee break
11:30 - 12:00	Part 2: Priorities and interests of represented sectors
12:00 - 12:20	Taking stock
12:20 – 12:40	Refining and Elaborating further the selected request
12:40 - 13:00	Plan for action and conclusions
13:00	End of the Focus group





Annex 2. List of participants

European Commission:

1	CAVITTE	Jean-Charles	EC- European Commission, DG AGRI
2	PANTAZI	Christina	EC- European Commission, DG RTD.B.3 (Climate and Planetary Boundaries)
3	STASULS	Modris	EC European Commission, DG HERA (HEALTH EMERGENCY PREPAREDNESS and RESPONSE AUTHORITY)
4	ZAUNBERGER	Karin	EC- European Commission, DG ENV Biodiversity Unit
5	MOLTO LOPEZ	Julia	EC- European Commission, DG RESEARCH

Experts:

6	DEVOUGE	Anais	Expert - Health Environment Research Agenda for Europe (HERA); Inserm
7	DUSSORT	Pierre	Expert - PREZODE
8	GONCALO DAS NEVES	Carlos	Expert- IPBES; Norwegian Veterinary Institute
9	METTENLEITER	Thomas	Expert - OHHLEP; Friedrich- Loeffler-Institut
10	ROCHE	Benjamin	Expert - PREZODE; IRD
11	KEUNE	Hans	Expert - Ecohealth; University of Antwerp

Eclipse:

12	AMOEDO	Hugo	hugoamoedocanal@gmail.com	Technician
13	BALIAN	Estelle	estelle.balian@gmail.com	FEAL- Facilitation for Environmental Action and Learning. http://fea-l.eu/

14	BUNNEFELD	Nils	nils.bunnefeld@stir.ac.uk	Eclipse Methods Expert Group / University of Stirling, UK
15	LILLEBO	Ana	lillebo@ua.pt	Eclipse Knowledge Coordination Body / University of Aveiro (CESAM), PT
16	MORAND	Serge	serge.morand@umontpellier.fr	Eclipse/expert - CNRS - CIRAD - Faculty of Veterinary Technology, Kasetsart University, Bangkok (member of the Eclipse Knowledge Coordination Body)
17	POUGET	Candice	candice.pouget@ufz.de	Eclipse Management Body / Helmholtz-Zentrum Umweltforschung (UFZ)
18	VANDEWALLE	Marie	marie.vandewalle@ufz.de	Eclipse Management Body (Head) / Helmholtz-Zentrum Umweltforschung (UFZ)
19	WASHBOURNE	Carla	c.washbourne@ucl.ac.uk	Eclipse - Department of Science, Technology, Engineering and Public Policy (UCL STEaPP)





Annex 3. Preparation of the workshop - compilation of answers

→ Question 1: what are the key areas of work/projects you are currently involved in?

◆ **Answer 1:**

- planning / programming EU funded research on sustainable livestock systems, not least animal health and welfare.
- Preparing a related Horizon Europe partnership. Interest in veterinary public health (zoonoses, AMR...)

◆ **Answer 2:**

- International negotiations on biodiversity
- NbS

◆ **Answer 3:**

- Assessment of health threats and intelligence gathering relevant to medical countermeasures

◆ **Answer 4:**

- HERA build a research agenda for Europe for the next 10 years

◆ **Answer 5:**

- OH operationalization, Sustainable food systems, international wildlife health surveillance, SDG2030 and biodiversity framework (I am also part of the IPBES Nexus assessment so perhaps relevant to mention here)

◆ **Answer 6:**

- PREZODE Prevention of zoonotic disease emergence, Research and Operational activities

◆ **Answer 7:**

- Prevention of zoonoses emergence through using biodiversity conservation (prezode initiative and the eldorado international lab)
- Developing mathematical models to jointly reproduce epidemiological and evolutionary dynamics of pathogens, especially zoonoses

→ Question 2: what are the key priorities for you now and in the future that likely impacts biodiversity and pandemics?

◆ **Answer 1:**

- The international dimension is key, with all its diversity (what do we know of the risks? where are the main risks? what needs to be done? what international action/cooperation can do?), but implementation is local (in EU: common agriculture policy; Farm to Fork and Biodiversity Strategies, etc)

◆ **Answer 2:**

- Recognising the importance to 'avoid an era of pandemics' (as the IPBES expert workshop report leader has put it) and the importance of biodiversity protection, restoration and sustainable use of biodiversity in the context of health and prevention of pandemics. Sadly

this seems to be neglected and the public focus is on more on 'reactive measures'. Recognising the potential of NbS and the multiple benefits including for health they deliver, promoting the UNEA resolution on NbS which provided a 'multilaterally agreed definition' . Accelerating the implementation of NbS. Answer 2: Outcome of CBD COP15 ... an ambitious and transformative post 2020 Global Biodiversity Framework leading to significantly increased action to protect, restore and sustainably use ecosystems and with this help to decrease the spill over of infectious diseases and pandemics.

◆ **Answer 3:**

- HERA's focus on anticipatory threat assessments, foresight, market intelligence and horizon scanning of emerging pathogens as well as of developing technologies should allow detecting and acting upon health threats/event/signals (potential epidemics/pandemics) much quicker, and even before they become news (ideally to prevent if possible).

◆ **Answer 4:**

- Explore the interlinkages and integration of human health and urban and rural biodiversity, to better understand the spatial and temporal variation risks on the local, regional and global scales. Draw from local empirical observations and develop research inspired by the planetary health concept to study the links between these risks, protected and non-protected areas and their health impacts.
- Develop research on expanding the knowledge about resilience-increasing factors and salutogenesis related to biodiversity into policy and practice: investigate how biodiversity supports the safeguarding of human health directly
- Develop science-based interventions at urban/suburban/rural areas to prevent and address infectious and chronic diseases and health problems. Study how the quality, quantity and frequency of nature contacts affects health, and how related positive behaviour or measures could be scaled-up and promoted to reduce negative health consequences
- Explore policies and their capacities to support health promotion, resilience, biodiversity conservation and restoration and multiple synergies.
- Study the underlying, direct and indirect drivers of transformational change in behaviour, policy, economy, and technology to reveal leverage points to bring about the conservation, restoration and sustainable use of biodiversity, while taking into account human and planetary health.
- Implement longitudinal research, which builds on existing and novel data sets and registers, measuring tools and artificial intelligence to better characterise, monitor and model biodiversity and health related pathways and related indicators to improve monitoring.

◆ **Answer 5:**

- Outcome of the ongoing discussions around the Pandemic Treaty – hoping it ends up both being built with a clear One Health approach but also focusing on prediction and prevention rather than just detection and combating diseases after they pop. Another key priority is ensuring that the post 2020 Global Biodiversity Framework really delivers on its promises!





We need a transformative change here with strong mechanisms (both regulatory and financial) if this is ever going to work. A final priority goes to the ongoing EU efforts to build upon its Biodiversity strategy (and partnership) and how this will related to pandemic initiatives being planed (e.g. Pandemics partnership, PAHW, HERA, EU OH plan etc).

◆ **Answer 6:**

- I understand that the question is on the main drivers that are likely to impact the biodiversity and the occurrence of pandemics? If so, I would say : Identification of drivers/solutions Political choices/orientations Societal acceptance / “implementability”

◆ **Answer 7:**

- Understanding the impact of the different biodiversity protection strategies on threatening pathogen prevalence Resolving the biodiversity paradox (more biodiversity = less transmission of each pathogen but more pathogens, what is the net benefit) Combining efficiently conservation and surveillance Quantifying the efficacy of prevention strategies against zoonoses emergence

→ **Question 3: what actions/outcomes would you most value from this Eklipse cross-sectoral dialogue**

◆ **Answer 1:**

- Unbiased and comprehensive information, possibly quantitative, on links between biodiversity and (risk of) pandemics (positive and negative), taking into account various drivers/factors, sources, geography, policies etc, with examples of action plans (from risk estimation to prevention...). Where possible, examples on operationalisation of One Health.

◆ **Answer 2:**

- Compact, accessible and tangible information to contribute to and be used for inter alia awareness raising to make sure that the link biodiversity and pandemics is kept on the radar as permanent issue and motivation to step up and scale up protection and restoration of biodiversity

◆ **Answer 4:**

- A lot of the work that is sought to be done in Eklipse has been done in HERA, we encourage Eklipse member to read the Agenda RG1.3 (<https://www.heraresearcheu.eu/hera-2030-agenda>) and the articles published about Covid-19 <https://www.heraresearcheu.eu/paper>

◆ **Answer 5:**

- I guess the major outcomes would be strengthening the message (with proper scientific backing) that actions to protect biodiversity protect us all (us being humans animals plants and ecosystems) from the emergence of diseases.
- The perfect outcome – ensure that we move from multidisciplinary to a truly transformative transdisciplinarity where all components (biodiversity, disease management, socio-economic factors etc...) are integrated rather than just linked. If this could allow the EU to speed up and strengthen how they connect all the initiatives I mention under Q2 ... then our work will achieved GOLD!

◆ **Answer 6:**

- Better identifying the trade-offs between national/international strategies that could have impacts on biodiversity and health

◆ **Answer 7:**

- Identifying the tensions between the different actors to identify possible ways of actions
- Co-developing strategies that can be implemented in a sustainable way
- Envisioning new (social and financial) mechanisms that could ensure strategies sustainability





Annex 4. Screenshot of the Mural

Phase 2: Sectoral and cross-sectoral added value

