

**GEO Virtual Symposium 2020**  
**Session 12: Monitoring Essential Variables**  
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Facilitators: Kerry Sawyer, Thierry Ranchin, Andreia Siqueira

Responses to Sli.do Questions

**1. Should EV be developed in considering the space scale constraints of observation?**

Thierry: Yes, because there is a need to adapt them to the users needs. If this is not done with the idea of the best "fit for use" constraints, this will reduce their relevance for the domain and for their usefulness.

**2. To Laetitia, Gabrielle and Frank – Should we worry that we have no interoperability between marine biology and biodiversity observations?**

Laetitia and Frank: This is not necessarily an issue that is specific to interoperability between marine biology data and biodiversity observations. Interoperability of primary observations itself is for instance one of the challenges for EBV development in general, and one of the issues that teams developing EBV data products must tackle. But on this particular question, the Marine BON is instrumental in connecting EBVs and EOVs and already mapped the links between both frameworks, which is already a step towards interoperability. But we need to develop better partnerships to define basic interoperability protocols and best practices

**3. To Simon – What are the most important factors in getting the ECVs widely accepted?**

Simon: Two things: 1) a clear policy need and international agreement and uptake (e.g. ECV are agreed by the UNFCCC) . This ensures their recognition by policy makers and funding agencies. 2) a broad, open, public, input into the process of selecting and defining ECV. By involving both the observing community and users can ensure "buy-in" and support for the ECV.

**4. To all – recall the question from Yana Gevorgyan, Programme Board Co-Chair – How do you want the Programme Board to support you in your efforts?**

Laetitia: Overall, it can be difficult for individual flagships or initiatives to get a good overview of the EV landscape and have access to good practices and lessons learned. In this sense, the Programme Board, and the Essential Variables Community Activity can go a long way in connecting the different actors and facilitate the exchange of knowledge and capacity.

**5. To Laetitia, Gabrielle and Frank – Do we have sufficient understanding of how biodiversity and human society are intertwined?**

Laetitia: That's a good question and the short answer is "not yet but we're working on it". We still have a lot to understand on how species diversity links to ecosystem functioning and ecosystem services, and then to human well-being. We also need a better understanding of how human activities affect biodiversity in a teleconnected world. And to understand how all of this is intertwined, we of course need more observations, and EVs.

**6. What are the key elements/steps to ensure the buy-in of EVs within a community (data producers) and beyond (users, other Societal/Engagement Priority Areas)?**

Simon: Ensuring community input into the process of selecting ECV and selling them to those who fund/support/etc observational systems. Working with a community, using their expertise rather than presenting them with a completed work.

**7. To all: What role can GEO Knowledge Hub play on EV information sharing?**

Simon and Laetitia: Supporting and assisting access to EV data - portals, data centres etc. For the development of the EBVs, we promote open workflows, tools and data and those should be part of the GEO Knowledge Hub. Ideally in the medium or long term, this could both increase the visibility of the EBVs for the GEO community (and beyond) but also allow interactions and perhaps interoperability between components of the workflows, across EVs.

**8. Could EBVs be an aid in the development of quantified targets for biodiversity conservation for the post-2020 process?**

Laetitia: Absolutely! One of the limitations of the current Aichi Biodiversity Targets is that not all of them are "SMART", including not Measurable. For the post-2020 Global Biodiversity Framework, EBVs can guide the design of targets that are quantifiable and for which progress could be tracked using EBVs and derived indicators. And regardless of whether the targets are designed with EBVs in mind, GEO BON will work on identifying how EBVs and derived indicators can help Parties of the CBD to track progress towards the targets and goals of the post-2020 framework.

**9. Is the GEO BON portal a community hub of GEOSS? If not, why did you decide to set it up as a separate portal rather than use the central infrastructure?**

Laetitia: When the need to develop a central infrastructure for Essential Biodiversity Variables, across all classes of EBVs (i.e. across all levels of organisation of biodiversity) became clear, the functionalities of GEOSS did not fully cover the needs of our community, which is why a separate portal was designed. That being said, all products available on the GEO BON portal will also be available via GEOSS and this is something on the agenda of the GEO BON Data Task Force.

**10. Will there be a single list of priority GEO EVs'?**

Kerry: No, GEO is not going to prepare a single list of priority GEO EVs. Each community, should they determine the need or desire to create variables that they deem essential will create community-specific EVs.

**Questions Already Answered**

11. EV are often designed from the available observations point of view. How to consider the users point of view?

12. To Anthony and Joan – Do you feel that the concept of Essential Variables should be extended to every "previously known as" Societal Benefit Area of GEO?

13. Do EVs capture drivers or processes of change (or both?)

14. Are there any index of achievements to EV monitoring goals? If exist, which EV is best achieved and which is worst, and why?