



**EBV Ecosystem Structure
Working Group call Summary**
10 April 2019, 17:00 – 18:30 CET

Co-leads:

Gary Geller, Ilaria Palumbo

Group members on the call:

Palma Blonda, Researcher ISSIA CNR – Bari Italy
Brian O'Connor, WCMC Cambridge
Brice Mora (CS)
Domingo Alcaraz-Segura
Florenca Sangermano, Clark University
Franziska Schrodt, University of Nottingham
Hansen, Andrew
Julien Radoux (UCLouvain)
Marina Rosales Benites de Franco - Federico Villarreal National University
Maria Kavanaugh, Oregon State University
Phoebe L. Zarnetske
Roger Sayre, USGS
Ruben Valbuena, University Bangor UK
Takem Ebangha Agbor Delphine
Uta Heiden (DLR)
Van De Kerchove Ruben (VITO)
Victor H Gutierrez - Velez
Darvish, R (ITC)

Agenda:

Introduction

- Roll call
- Goals of meeting

Background

- GEO BON EBV Working Groups (and Task Forces)
- EBV Criteria (see <https://geobon.org/ebvs/what-are-ebvs/>)
- “Traditional” EBVs (e.g., see <https://geobon.org/ebvs/what-are-ebvs/>)

Ecosystem Structure WG

- Objectives (for discussion)
- Timeline (for discussion)
- Revised EBV list (work in progress)

Open discussion

Looking ahead and wrap up

Next call:

A Doodle Poll will go out soon but the last week of April or the week after may be a good target.

Summary:

Two items were emailed out to the group prior to the call: the slides that were presented, and an updated, strawman draft of the Eco Structure EBVs. After a brief introduction Gary went through the slides, which will be made available on the GEO BON website. These summarized the GEO BON context that the Group needs to work within--for example, by meeting the criteria that EBVs, across all of GEO BON, should meet (these criteria are available at the link above). After briefly reviewing the "traditional" EBV candidates he outlined the WG objectives, the overall approach to meeting them, and a timeline that provided near-term milestones. The strawman draft of the group's EBVs, which used the update made at the last GEO BON All Hands meeting in Beijing as a starting point, was then reviewed and briefly discussed. The intent was not to dig in to detailed discussion of those but to just crack them open a bit so that discussion could begin. A somewhat different alternate approach to organizing EBVs was also presented, in part to demonstrate that a variety of ways to organize the material exist.

Actions:

- 1) Florencia and Victor will exchange thoughts on fragmentation, but everyone is invited to summarize their thoughts in a short paragraph or in a short list of bullets.
- 2) Roger and Phoebe will write up a short summary discussing abiotic structural elements.
- 3) Following Uta's suggestion, Ilaria and Gary will review the activities that are currently on the WG webpage and update it. Palma will send information on the EcoEssential project.
- 4) Gary, Ilaria, and Brian explore ideas for an informal discussion at the ESA Living Planet Symposium, for those group members that will be there.
- 5) Everyone: Please send to the co-leads areas that you are particularly interested in that are directly relevant to EBV development (for example: Ruben mentioned he was interested in Complexity...which, BTW, is a particularly important area).

Some Key Discussion Areas:

- There was general agreement (in the call, in the chats, and in emails) that the suggested iterative approach to developing the EBVs was appropriate. That approach starts with a strawman list developed by a few people, which is then distributed more broadly for comment, comments incorporated into an updated list, which is then distributed, and so on, gradually reaching convergence and sufficient consensus.
- Fragmentation remains a somewhat controversial area. Should it be an EBV? Is it biological? Is it a state variable? Is connectivity different...or more important? This has been a recent topic of discussion in some other circles and there was some discussion during the call.
- Roger and Phoebe pointed out that "structure" includes both biotic and abiotic aspects and suggested that the abiotic elements be considered for EBVs. Gary noted that EBVs are defined in GEO BON as "biological" so it is not clear that abiotic elements could be classified as EBVs. However, that does not make them any less important; from a remote sensing standpoint this may be a good topic for the new Remote Sensing Task Force that (I think) will explore non-EBV related variables.
- Uta suggested it would be useful to identify projects that group members are working on that have direct relevance to Eco Structure EBVs.
- Julien asked who the target users are. Gary explained that they are scientific researchers on the one hand, and application-oriented people (such as a forest manager in Colombia) on the other.

- Maria Kavanaugh, who focuses on Seascapes (see <https://cwcgom.aoml.noaa.gov/cgom/OceanViewer/#>), pointed out the need for the group to engage with the marine community. This is an important point—ideally, EBVs should be ecosystem agnostic, focused on essential elements of biodiversity that apply to all ecosystems (though, it is recognized that that can be challenging). However, Seascapes are maps of ecosystem extent in the ocean, providing an example where an Ecosystem Structure EBV applies broadly.
- Ruben made the excellent point that WG members should, when opportunities arise, develop and submit proposals to fund the work that is identified. Like-minded individuals within the group may make good co-Is and the group should facilitate proposal development.
- Julien suggested that another alternative to organizing EBVs, which might help address the Terrestrial/Aquatic divide might be to have two EBVs such as Biomass and Complexity, with several important attributes in each.
- Gary mentioned that, when we think about how to organize EBV candidates, that it may be useful to create “subclasses”. For example, perhaps Horizontal Structure and Vertical Structure should be thought of as subclasses within the Ecosystem Structure Class, and each of their attributes (whatever they are) as the actual EBVs.
- Brian mentioned that those of us who will be at the ESA living planet symposium 13-17 May may want to use the occasion to discuss more in person and we should try to arrange a meeting to take advantage of being in the same physical place.