

PHAM Seminar Conclusions

Following, we aim to draw some general conclusions reached from the discussions and ideas that were brought during the celebration of the PHAM seminar.

1.- River habitat could be defined in an ecological strictly way by all those factors that influence an organism or biological community under study, however, river management needs to simplify the definition of river habitat, and river habitat could then be understood as the habitat for the whole “fluvial” biological community which might be defined by only those “key” physical habitat attributes that are important to most fluvial organisms at different spatial and temporal scales.

2.- River habitat assessment methods should have the premise to deliver enough and clear information to comply with the current legislation affecting river ecosystems, but they should also provide with the necessary information to be able to investigate relationships between hydromorphological and biological elements across different borders. A list of minimum characteristics from different parts of the fluvial ecosystem should be taken into account when reporting the integrity of river habitats.

3.- River habitat characteristics are affected by factors at different spatial and temporal scales, so it is extremely important that spatial scales and assessment units at each scale are clearly delimited. Moreover, information from different factors affecting river habitats should be derived so that the complexity of river networks is taken into account given the actual theoretical developments in river ecology. This could help to better explain and predict the variability of physical habitat attributes in rivers.

4.- Characterisation protocols and quantification of physical habitat attributes are preferred than indices approaches as they provide with objective measures, the possibility of easy protocol modifications at a regional level, a database for further developing and the possibility of establishing comparisons on key river habitat characteristics across administrative borders.

5.- Casual relationships between physical habitat attributes and river organisms, biological community structure and composition or ecological processes and function should follow a knowledge acquisition cycle in which theoretical frameworks are set before hand and then models are tested with the gathering of data at the relevant spatial scales. The gathering of similar data at wide spatial scales could enlarge a lot the knowledge acquisition cycle.

6.- River restoration projects and the evaluation of river habitat integrity will benefit from the definition of reference condition criteria for physical habitat attributes from different parts of the river ecosystem (channel, riparian vegetation and floodplains). In this regard, it is extremely important that reference condition is set beyond the best available potential, as in most developed countries true “wilderness” conditions hardly exists.

7.- River habitat assessment methods would be greatly improved if community-supported, geographically focused, and application-oriented systems of analysis were developed at different regional and national levels. However, a commitment between the scientific community and governmental agencies is needed to advance in this field. The development of new meetings, workshops, seminars or discussion forums could help to identify new challenges and objectives and also to summarise the state of knowledge in the characterisation and assessment of river habitats.