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HyPeak: a science-policy network to promote sustainable hydropeaking

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HyPeak is an international non-profit, volunteer-based network aiming to translate the results of hydropeaking research into practice and policy. This includes a multi- and interdisciplinary approach to tackle hydropeaking impacts, propose mitigation strategies, and support decision-making on hydropeaking-based hydropower. However, bridges across disciplines remain to be developed, particularly regarding the social and economic sciences, whose links with the biophysical research have yet been weak. Finally, the transnational viewpoint of HyPeak is crucial for researchers, policy makers and practitioners, as both river management and electricity markets need cooperation and knowledge exchange across borders. The network seeks to promote more sustainable hydropeaking by advocating state-of-the-art mitigation approaches. To this aim, HyPeak fosters the following research topics: i) the assessment of environmental effects and related socio-economic issues at various spatial and temporal scales; ii) the improvement of mitigation measures and management strategies; iii) the promotion of environmentally-sustainable approaches to hydropeaking; iv) recommendations for national and international policies, and the support for their integration. To develop this type of effective research, we have identified six high-priority tasks: i) compile an overview of the localization and typology of hydropeaking at a continental scale; ii) standardize tools characterizing hydropeaking regime, iii) identify the most informative indicators for assessing hydropeaking impacts, iv) advance the development of technical approaches to limit the negative impacts of hydropower plant operation on river ecosystems, v) elaborate inter- and transdisciplinary approaches to find a compromise between ancillary, balancing and flexibility services to the grid and ecological sustainability, vi) improve the efficiency of the knowledge and tool transfer between researchers and practitioners.