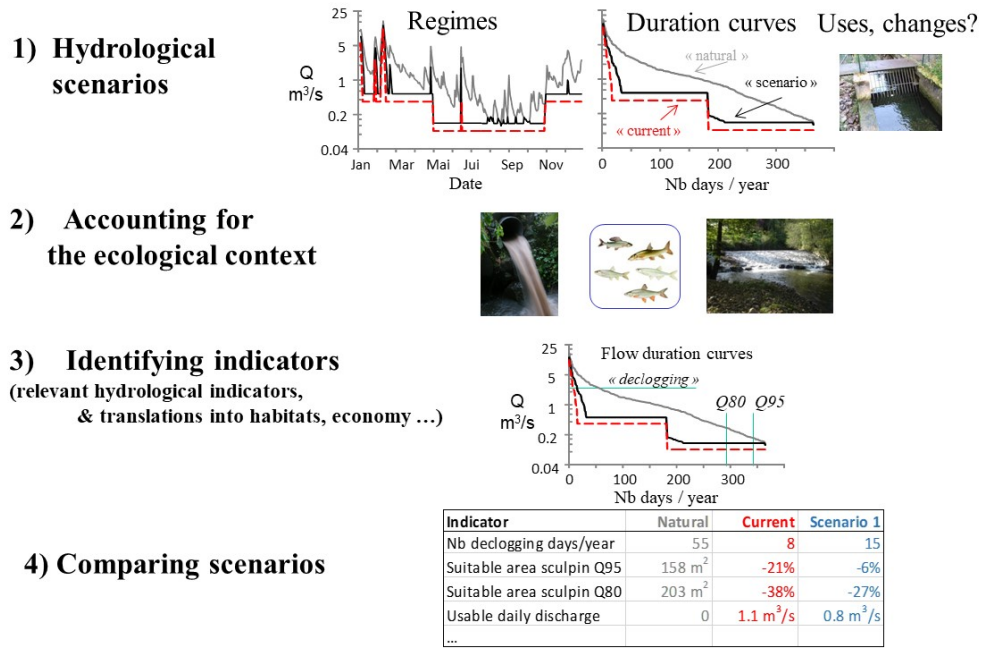
Basic concept

All hydraulic habitat models contribute to the definition of “e-flows” (environmental flows), seen as compromises between water uses and the ecological status of rivers. The use of habitat models fits into a global approach that takes into account the hydrological, environmental, biological and socio-economic context. The implementation and interpretation of habitat models is not immediate and requires expertise. The place of habitat models in the global approach is described for example in the following documents, whose reading is recommended for proper interpretation:

'*Lamouroux N., Hauer C., Stewardson M.J., Poff N.L. (2017) Physical habitat modeling and ecohydrological tools. In Horne A., Webb A., Stewardson M.J., Richter B., Acreman M. (Eds). Water for the Environment. Elsevier, Amsterdam. p. 265-285. https://dx.doi.org/10.1016/B978-0-12-803907-6.00013-9*'

'*Lamouroux N., Augeard B., Baran P., Capra H., Le Coarer Y., Girard V., Gouraud V., Navarro L., Prost O., Sagnes P., Sauquet E., Tissot L. (2018) Débits écologiques : la place des modèles d'habitat dans une démarche intégrée. Hydroécologie Appliquée, 20, 1–26. https://doi.org/10.1051/hydro/2016004*'



Example of a consensual scenario-based approach, used in France for setting e-flows (from Lamouroux et al., 2018)