

WFDs Environmental Objectives and Hydropower in Sweden: An overview of and general principles for levels of ambition

De Wachter B.^{1,5}, Karlsson A.^{3,6}, Johansson M.^{4,5}, Osbeck C.^{3,6}, Fuchs J.¹, Kruse J.^{2,5}.

¹ Jämtland County Administrative Board, Sweden; ² Västernorrland County Administrative Board, Sweden; ³ Kalmar County Administrative Board, Sweden; ⁴ Västerbotten County Administrative Board; ⁵ Water Authority of the Bothnian Sea Water District, Sweden; ⁶ Water Authority of the South Baltic Sea Water District, Sweden

Email corresponding author: bart.dewachter@lansstyrelsen.se

ABSTRACT: County administrative boards that are water authority are responsible for the setting of environmental objectives according to the water framework directive (WFD). We will present a summary overview of the current environmental objectives for water bodies in Sweden that are impacted significantly from hydropower. This overview will report the different levels and classes of environmental objectives including the application of designation of heavily modified water bodies (HMWB) and the use of exemptions (less stringent environmental objectives according to art.4.5 and extension of deadline according to art. 4.4 in the WFD).

The main principles used in Sweden for assignment of different environmental objectives and designation of HMWB will be explained thereby illustrating the level of ambition. This includes the assessment of “significant adverse effects” on power generation based on, among others, the impact of environmental measures on power production and balancing capacity. It also includes compliance with objectives originating from other EU directives such as Natura 2000.

The role of environmental objectives and actual status and results, within the 20-year process for the revision of the hydropower plant licenses (the National Plan for Modern Environmental Terms) will be discussed for current environmental permit revisions for some example catchments.