

P6

Preparation and presentation of geographical data for updating the 2014 Present Ecological State - Ecological Importance and Sensitivity desktop studyMichael Silberbauer¹

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Eco-classification is the basis for setting flow and water quality ecological reserves. The process comprises the determination of the Present Ecological State (PES) and the Ecological Importance and Sensitivity (EIS) of individual river-reaches. The PES and EIS together support the recommendation of a practically attainable ecological category for each reach. The poster outlines the technical aspects of preparing certain geographical datasets, using programming in R and visualisation in Google Earth, for assisting local area experts in assigning PES and EIS classes to individual river reaches. The visualisation component is prepared in Keyhole Markup Language (KML), which is an eXtensible Markup Language (XML) for encoding data in a standard format for presentation in Google Earth. KML includes basic geographical data constructs such as points, lines, polygons and rasters. Labels in KML range from symbols and text to advanced popup balloons that can display tables and images, and web links to further information. The types of information in this project include sewage works outfalls, river geomorphological classes, subquaternary drainage regions, and landcover rasters trimmed to buffer zones around rivers. Local ecological experts need to classify more than 9000 river reaches, so the datasets for reaches are grouped into smaller clusters to stay within the computer memory limits of Google Earth. Development of the datasets and index files is a repetitive process, which means that a scripting language like R is essential for encoding the procedures used and recording the steps followed for the information of future users.