

Supporting document

Reporting classifications for 3rd Cycle River Basin Management Plans

Sustainability at the heart of a living, working, active landscape valued by everyone.

1.0 Reporting Classification for 1st and 2nd cycle River Basin Management Plans

For 1st and 2nd cycle River Basin Management Plans, Northern Ireland reported the Overall Status of river and lake water bodies. The classification process is detailed in Figure 1.

Ecological status comprises biological, general physicochemical and hydromorphological quality elements. Ecological status is assessed on a 5 band system ranging from High to Bad status. Chemical status assesses those chemicals which have been identified as Priority substances and are assessed as High where any Priority Substance monitored has passed the relevant standard and Moderate where any Priority Substance monitored has failed the relevant standard.

Based on the one out all out principle, overall status was then assessed as the worst of Ecological status and Chemical Status. Therefore to achieve the overall aim of “Good status”, a water body had to be at least good for both Ecological and Chemical status.

If the physical structure of a river waterbody has been changed for a specific use, it is designated as a Heavily Modified Water Body (HMWB). As a result, it cannot meet Good Ecological Status (GES) but all HMWBs should meet Good Ecological Potential. The Ecological Potential of a water body is assessed in the same way as ecological status on a 5 band scale i.e. from High to Bad Ecological Potential and the Chemistry status is assessed as High or Moderate.

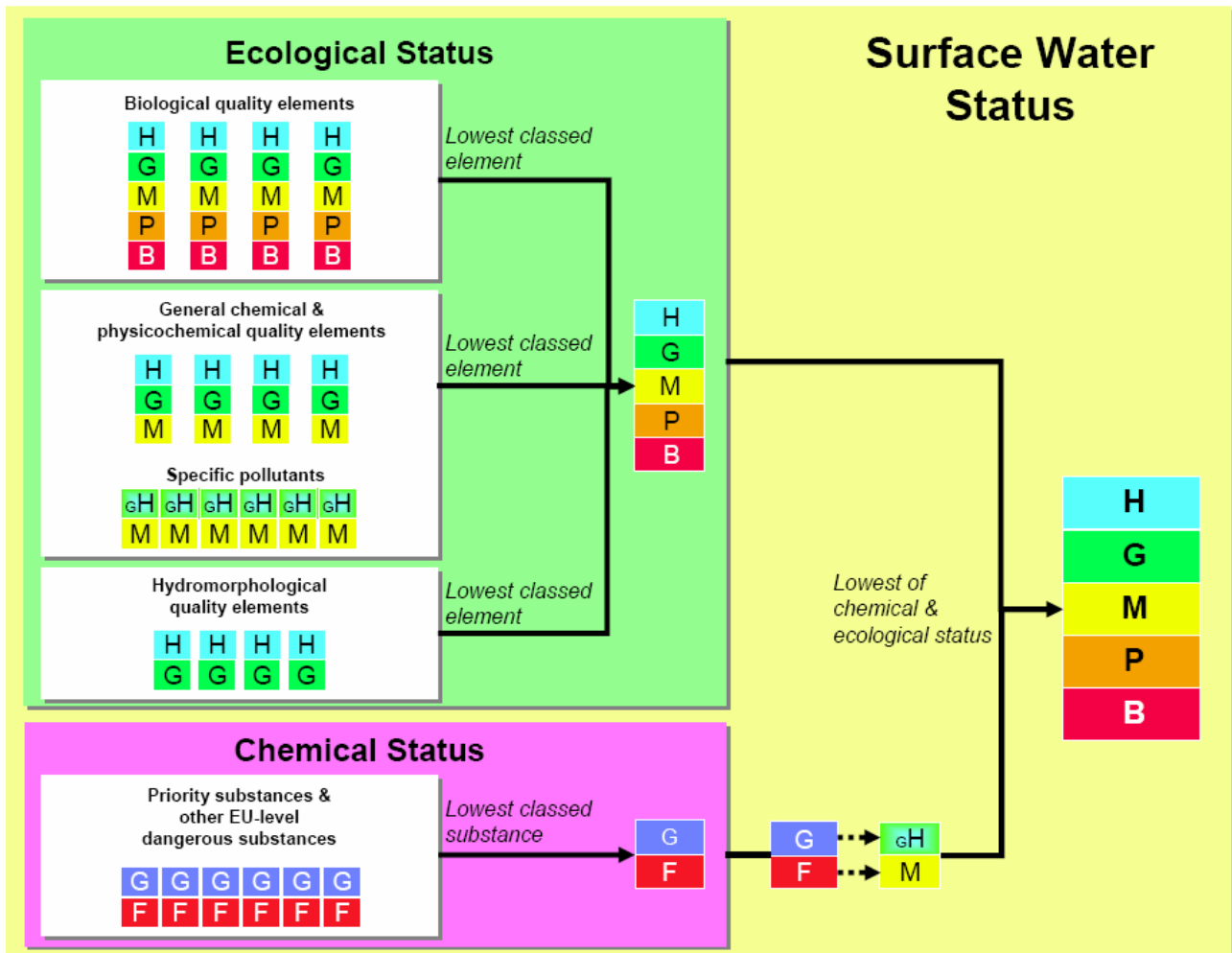


Figure 1 – schematic representation of how results for different quality elements are combined to classify ecological status, chemical status and surface water status.

Key: “H” means high; “G” means good; “gH” means good or better and is normally treated as high for calculating, as relevant, ecological status and surface water status (except for ammonia); “M” means moderate; “P” means poor; “B” means bad; and “F” means failing to achieve good surface water chemical status.

The 2015 Classification prepared for the start of the second River Basin Management Plan showed that 32.7% of river water bodies were at Overall High or Good Overall Status. An interim WFD classification update was undertaken in 2018 which showed that 31.3% of river water bodies were at Good Overall status with 90.9% at High Chemical status.

For lake water bodies in both 2015 and 2018, 23.8% were at High or Good overall status and 100% were at High Chemical status. An update to these classifications was produced and published in 2020; only 1 lake (4.8%) was at Good overall surface water status and the other 20 lakes (95.2%) were at Moderate status or worse. Due to the shift in Cypermethrin from a

Specific Pollutant to a Priority Substance, 10 (47.6%) of lakes deteriorated from High to Moderate Chemical status and only 11 (54.4%) remained at High Chemical status. Chemical status alone was responsible for the deterioration in overall surface water status (Good to Moderate) for 1 lake only, Lough Fea. Other elements, along with Cypermethrin, were the drivers for surface water status for the other 9 lakes.

2.0 Reporting Classification for 3rd cycle final classification

Priority Substances are chemicals which have been identified as presenting a significant risk to the aquatic environment. WFD requires the Commission to review the list of Priority Substances at least every 4 years. WMU is undertaking annual monitoring of a 'Watch List' which commenced in 2016 and is scheduled to continue until 2020. This Watch List was established as a mechanism to determine whether certain chemicals may pose an environmental risk to EU river basins. The suite of analysis is for new/emerging chemicals and includes a number of antibiotics and neonicotinoids. The NI data is combined as a UK return to the EU commission and assessments of the UK data and data received from other EU Member States will determine if a chemical is de-prioritised or prioritised for inclusion in Water Framework Directive as a priority substance.

In December 2018 cypermethrin, which was previously a Specific Pollutant, was identified as a Priority Substance with a more stringent standard.

A preliminary assessment of river water body chemical status in 2020 indicates 83.8% at High Chemical Status. As a result of cypermethrin being assessed as a priority substance twenty-nine river water bodies which were High status for chemical status in 2018 will now be classified as Moderate status in 2021 classification and of these, six water bodies which were Overall Good status will now be classified as Moderate status.

All lakes were reported as high chemical status in 2015 and 2018. A preliminary assessment of lake water body status in 2020 found that this shift in Cypermethrin to becoming a Priority Substance, will result in the Chemical status of 10 (47.6%) lakes deteriorating to Moderate with one lake deteriorating from Good Overall status to Moderate Overall status.

In addition, some Ubiquitous Persistent Bioaccumulative Toxic (uPBTs) chemicals, including Mercury in biota, will be reported for the first time in 2021. Indications are that Mercury will breach the standards at all freshwater sites where it has been monitored. This is because atmospheric transportation and deposition is the primary pathway into the aquatic

environment. Sampling stations therefore do not need to be downstream of a pollution source and even remote sampling stations will be impacted.

As more priority substances are added to the monitoring programme it is likely that there will be increased number of chemical failures. As many of these are persistent in the environment for a long time mitigation measures cannot address these failures in the 6 year timeframe of a river basin management plan. There will need to be an appropriate risk based approach with monitoring to demonstrate that concentrations of priority substances although still breaching standards, are decreasing.

An assessment of the existing uses, risks and impacts of Chemicals, including uPBTs, on the aquatic environment will be made in the 2021 River Basin Management Plans.

It is therefore proposed that for 2021 classification, NI will report ecological and chemical status separately. This will allow us to contextualise any chemical breaches on the basis of the nature of the priority substance and allow mitigation measures to focus on those pressures impacting the ecology status or chemical status separately. This approach is in line with that taken by the other UK agencies.



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