River Basin Management Plans

Macroalgae - Reduced Species List - Transitional and Coastal Waters

December 2009

SUMMARY
PROFORMA FOR WATER FRAMEWORK DIRECTIVE

The purpose of this proforma is to summarise the tool
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1. Project Details

Classification Tool	**Macroalgae - Rocky Shore Reduced Species List (RSL)**
Project Reference Number/s	EMC/WP16/041& 051
Sponsor (task team/agency/project)	Marine Plants Task Team/EA, CEFAS, SEPA, FRS, NIEA, DARDNI, Marine Institute, EPA /MTT
Water category	Coastal Waters
Biological element	Macroalgae
Pressures the tool is sensitive to	General (e.g. Nutrient, toxic substances and disturbance)

2. Contact details

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3. Criteria for assessing WFD classification tools (with respect to future tool adoption)

Classification Tool Criteria	Response
1) Please submit your EQRs	<table><tr><th>Boundary</th><th>EQR</th></tr><tr><td>High – Good</td><td>High≥0.8</td></tr><tr><td>Good - Moderate</td><td>Good ≥0.6</td></tr><tr><td>Moderate – Poor</td><td>Mod ≥0.4</td></tr><tr><td>Poor – Bad</td><td>Poor ≥0.2</td></tr><tr><td></td><td>Bad 0 – 0.2</td></tr></table>
2) Have the boundaries been intercalibrated in phase 1 – please specify which have/haven't If there are components of the tool that have not been intercalibrated what is their influence with respect to the intercalibrated boundaries?	Yes, North East Atlantic GIG
3)) Summary description and/or map of the types (please provide reference to more complex explanation, if necessary; page number specific!)	A suite of measures have been developed to fulfil the normative definitions of the WFD TraC rocky shore macroalgae as part of the Macroalgal Biological Element. While this tool may be applied in some UK transitional waters, the hydromorphological characteristics and relatively small size of NI transitional waters render the RSL tool unsuitable. The basic indices are: - Shore description - Species richness - Proportion of chlorophyta (green seaweed) - Proportion of rhodophyta (red seaweed) - Ecological Status Group Ratio – ESG ratio indicates shift from a pristine state (EGS1 – late successionals or perennials) to a degraded state (ESG2 – opportunistic or annuals) - Proportion of opportunists All of these are field descriptions and / or identifications from collected samples

Classification Tool Criteria	Response
	A database of species found on over 300 shores in the British Isles, has given ranges of values of species richness to be expected and has allowed for variations in these values due to sub-habitat variability, wave exposure and turbidity to be factored in. A reduced species list has been extracted from the database using species commonly present and identifiable with reasonable certainty. A numerical index of ecological quality was developed based on scores for various aspects of the physical nature of the habitat, combined with a score for species richness which may be based on the reduced species list. Three regional lists are used: • Scotland and Northern England • England/Wales and RoI • Northern Ireland The scoring system also uses further aspects of community structure, such as ecological status groups and the proportions of rhodophyta, chlorophyta and opportunist species.
4) Method used to establish the type-specific reference conditions for the tool	A combination of best available sites and expert judgement
5) Is the tool covered by an existing CEN/ISO standards - if so, which one? Does it comply with the standard?	Yes General quality assurance of biological and ecological assessment in aquatic environments EN 14996
6) Why was the good/moderate boundary set at that level?	In "natural" (ref/High) waters we would expect a high (but consistent) species richness with a diverse community of red, green and brown seaweeds. Cover variable depending on physical conditions but species richness relatively constant. In the HIGH status conditions, depending on physical factors, there are in the order of 68 taxa (based on the NI RSL) with reds as the richest group and few green taxa. There is high proportion of long-lived spp. and few opportunists. In GOOD status conditions, again depending on physical factors there are up to 34 taxa. Greatest reduction in red spp. and greater proportion of short-lived spp. are present. With further stress no more than 20 taxa are likely to be present(in moderate conditions) with greens and opportunists species being equal in number to long lived and red species. Continuing stress sees the continuing reduction in taxa diversity with the continuing dominance of opportunistic, short –lived and green taxa.

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Classification Tool Criteria	Response
7) Please provide an "implications" of the classification, based on the best available data for any non-intercalibrated G/M EQRs Depending on the tool, this may include: • an initial estimate of water bodies in each class across the country (map and/or table); • estimates from trials of how the results are likely to compare with expectations (e.g. in relation to results from applying environmental standards) • how the results for the tool are expected to compare with intercalibrated results for other tools sensitive to the same type of pressure (i.e. more or less stringent)	