

River Basin Management Plans

# Angiosperms - Seagrass - Transitional and Coastal Waters

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Northern Ireland  
**Environment**  
Agency

## SUMMARY

### PROFORMA FOR WATER FRAMEWORK DIRECTIVE

The purpose of this proforma is to summarise the tool

#### 1. Project Details

Classification Tool	Marine Angiosperms - Intertidal and Subtidal Seagrass
Project Reference Number/s	EMC/WP16/042 & 086
Sponsor (task team/agency/project)	Marine Plants Task Team/EA, CEFAS, SEPA, FRS, NIEA, DARDNI, Marine Institute, EPA /MTT
Water category	Transitional and Coastal Waters
Biological element	Marine Angiosperms
Pressures the tool is sensitive to	General Disturbance and Nutrients

#### 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 border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Boundary</th> <th style="text-align: center;">EQR</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">High – Good</td> <td style="text-align: center;">0.8-1.0</td> </tr> <tr> <td style="text-align: center;">Good - Moderate</td> <td style="text-align: center;">0.6-0.79</td> </tr> <tr> <td style="text-align: center;">Moderate – Poor</td> <td style="text-align: center;">0.4-0.59</td> </tr> <tr> <td style="text-align: center;">Poor – Bad</td> <td style="text-align: center;">0.2-0.39</td> </tr> <tr> <td></td> <td style="text-align: center;">0.0-0.19</td> </tr> </tbody> </table> <p>Final EQR boundaries for the whole seagrass tool kit are show above. The EQR values for the individual intercalibrated sub-metrics are not shown above.</p> <p>The intercalibrated boundaries for the sub-metrics are mid-points values (H/G – 0.9 and G/M – 0.7). The intercalibrated sub-metrics are combined to give an overall Seagrass assessment in UK waters, using the final EQR ranges above.</p>	Boundary	EQR	High – Good	0.8-1.0	Good - Moderate	0.6-0.79	Moderate – Poor	0.4-0.59	Poor – Bad	0.2-0.39		0.0-0.19
Boundary	EQR												
High – Good	0.8-1.0												
Good - Moderate	0.6-0.79												
Moderate – Poor	0.4-0.59												
Poor – Bad	0.2-0.39												
	0.0-0.19												
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?	<p>Yes, North East Atlantic GIG Other Member states may be included in seagrass intercalibration in Phase II</p>												
3)) Summary description and/or map of the types (please provide reference to more complex explanation, if necessary; page number specific!)	<p>The basic indices are:</p> <ul style="list-style-type: none"> <li>• Taxonomic composition – seagrass species present</li> <li>• Shoot density – measured as the estimated percentage cover of seagrass using <math>\leq 1\text{m}^2</math> quadrates in a sampling grid</li> <li>• Bed extent – measured as area cover in <math>\text{m}^2</math> of the continuous bed (deemed to be at <math>&gt;5\%</math> shoot density) and, where possible, the whole bed (<math>&lt;5\%</math> shoot density).</li> </ul> <p>All of these are field measurements together with observations on the state of the bed (e.g. disturbance</p>												

**UKTAG Summary Proforma**

Classification Tool Criteria	Response
	<p>due to anchors or bait digging).</p> <p>These seagrass metrics have been developed and tested at individual beds and water bodies and the results published in scientific journals.</p> <p>Members of the North East Atlantic Geographical Intercalibration Group (NEAGIG) Marine Plants Expert group have agreed a common matrix for allocating status to intertidal seagrass assessments. This matrix combines both losses of species and degradation in the % cover (measured as % cover of seagrass within a quadrat, as shoot counting is not practical in intertidal environment). The intercalibration matrix covers both situations where naturally either two or three species of seagrass are found within either a type or where there are differences within types in specified geographic areas. Seagrass bed extent is assessed separately for intercalibration.</p>
4) Method used to establish the type-specific reference conditions for the tool	A combination of historic data, 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?	<p>Yes</p> <p>General quality assurance of biological and ecological assessment in aquatic environments EN 14996: 2006.</p>

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6) Why was the good/moderate boundary set at that level?	<p>In "natural" (ref/High) waters we would expect that, when they occur, seagrasses often occur in monospecific stands with 1 of up to 4 potential UK (3 in Scotland) species, on shores or shallow sub-littoral.</p> <p>Occasionally an inter-tidal bed will have 2 species in it; a large waterbody may have 2 or more taxa. Where present, high status seagrass beds healthy &amp; dense with no loss of historic taxa and the beds maintain their size or are growing (within natural variation).</p> <p>As stress on existing seagrass beds increase we would expect to see a decrease in bed size and shoot density: a loss in bed extent &gt;30% and shoot density &gt;15% (or 30% in a single year) would threaten the integrity of a bed (more space for opportunistic algae) and would indicate moderate status, similarly a loss of ½ the taxa (usually 1 taxa in UK waters) would also indicate moderate status as diversity has decreased.</p>

**UKTAG Summary Proforma**

<b>Classification Tool Criteria</b>	<b>Response</b>
<p>7) Please provide an “implications” of the classification, based on the best available data for any non-intercalibrated G/M EQRs</p> <p>Depending on the tool, this may include:</p> <ul style="list-style-type: none"><li>• an initial estimate of water bodies in each class across the country (map and/or table);</li><li>• estimates from trials of how the results are likely to compare with expectations (e.g. in relation to results from applying environmental standards)</li><li>• 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)</li></ul>	<p>Draft Classifications will not be available before the end of March 2008.</p>

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