

Tackling Invasive Non-Native Species in the UK Overseas Territories

Hull fouling assessment tool

The aim of this protocol is to provide a simple and easy to use indicator of the degree of fouling on yachts. It is intended for environmental officers and biosecurity officers.

Method:

- Gather biosecurity information from visiting vessels at the earliest opportunity:
 - Port of origin for this journey
 - When anti-fouling was last applied to the hull
 - When the hull was last cleaned
- Carry out rapid visual hull inspection on all vessels from above the water surface:
 - Make a visual inspection from a boat or the wharf of the submerged areas around the bow, waterline, and stern/rudder
 - Rank the yacht overall on a scale of 0 to 5 according to the table overleaf.

Actions:

- For vessels scoring **Ranks 0 or 1**:
 - **Acceptable.**
 - No action required.
- For vessels scoring **Rank 2**:
 - **Borderline.**
 - Vessel advised of the need to clean the hull in the near future, or before returning to the Territory (if appropriate).
- For vessels scoring **Rank 3, 4 or 5**:
 - **Unacceptable.**
 - Action required, and what is appropriate depends on the territory (eg vessels to haul out and clean the hull / vessel advised to leave territorial waters).
 - **On no account should the vessel be allowed to clean the hull while in the water.**
 - A follow-up visit is required to confirm compliance.

Further information

Floerl, O., Inglis G., and Haydena, B. (2005). *Risk-Based Predictive Tool to Prevent Accidental Introductions of Nonindigenous Marine Species*. DOI: 10.1007/s00267-004-0193-8.

Payne, R.D., Cook, E.J. and Macleod, A. (2014). *Marine Biosecurity Planning – Guidance for producing site and operation-based plans for preventing the introduction of non-native species*. Report by SRS Ltd. in conjunction with Robin Payne to the Firth of Clyde Forum and Scottish Natural Heritage 39 pp.

Rank	Description	Visual estimate of fouling cover	
0	No visible fouling. Hull entirely clean, no biofilm* on visible submerged parts of the hull.	Nil	
1	Slime fouling only. Submerged hull areas partially or entirely covered in biofilm, but absence of any macrofouling.	Nil	
2	Light fouling. Hull covered in biofilm and 1–2 very small patches of macrofouling (only one taxon).	1–5 % of visible submerged surfaces	
3	Considerable fouling. Presence of biofilm, and macrofouling still patchy but clearly visible and comprised of either one single or several different taxa.	6–15 % of visible submerged surfaces	
4	Extensive fouling. Presence of biofilm and abundant fouling assemblages consisting of more than one taxon.	16–40 % of visible submerged surfaces	
5	Very heavy fouling. Diverse assemblages covering most of visible hull surfaces.	41–100 % of visible submerged surfaces	

* Biofilm: Thin layer of bacteria, microalgae, detritus and other particulates.