Corrigendum

Corrigendum to "Evaluation of historic and new detection algorithms for different types of plastics over land and water from hyperspectral data and imagery" [Remote Sensing of Environemnt 298 (2023) 113834]

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The authors regret a coding error that impacted the calculation of the plastic detection indexes with the compiled dataset of plastics and other materials (Section 3.2 of the original article). The affected plastic detection algorithms were those requiring wavebands centred above 2000 nm: The Advanced Plastic Greenhouse Index (APGI), the normalized difference plastic index (NDPI), and the relative-absorption band depth (RBD). The only significant change for the study is that the correct RDB detection threshold is now consistent between the dataset and the imagery.

The detailed consequences to the results, discussions and conclusions are as follows:

Fig. 6: The corrected Fig. 6 is shown below. Comparative description of the changes:

- All subplots show an update in the Organisms, Whitecaps, and Ice (OWI) group due to the exchange of a incorrectly labelled wood sample with the Non-plastic construction (NPC) materials group. This changed the colour coding of the OWI samples compared to the original plot.
- The NDPI and RBD algorithms do not have results for 2 OWI samples (*Sargassum* and *Artemia* cysts), as those samples do not have reflectance information above 2000 nm. The *Ulva* sample presented a very low negative value for the NDPI and is not shown in subplot D due to scale.
- The general pattern of detection of for the NDPI and RBD remains the same, with changes related to specific values of the indexes for the samples, but not to the detection above the threshold.
- The threshold of RBD is increased to 2.2 (unitless), the threshold of NDPI remains unchanged.

Fig. 7: The corrected Fig. 7 is shown below. Comparative description

of the changes:

- There is a large reduction on the index values for the wood samples in the NPC group. As with the original publication, no threshold was defined for the corrected APGI evaluation.

Section 3.2 Evaluation of specificity plastic detection algorithms: The corrected results, illustrated in the corrected Figs. 6 and 7, result in the following changes:

- The APGI showed a large overlap of plastic materials and ice and a significant overlap between plastic materials and wood. The interpretation that the application of the APGI may be constrained to datasets without significant presence of wood and ice remains the same.
- No data is available to evaluate the specificity of the NDPI and RBD algorithms against *Sargassum* and *Artemia* cysts.
- The new algorithm ND_1715 detects *Ulva* just above the threshold, but this is due to the noisy spectral reflectance data of the *Ulva* sample (as seen in Fig. 4 of the original article).

Table 4: The correct threshold for the RBD algorithm with the compiled dataset is 2.2 (unitless).

Section 4.4. Algorithm detection thresholds: Considering the corrected Fig. 6 and Table 4, this section has the following changes:

- The calibrated thresholds for the RBD algorithm against the compiled dataset, together with the newly proposed ND_1715 and HI_1675 algorithms, could be directly applied to the imagery.

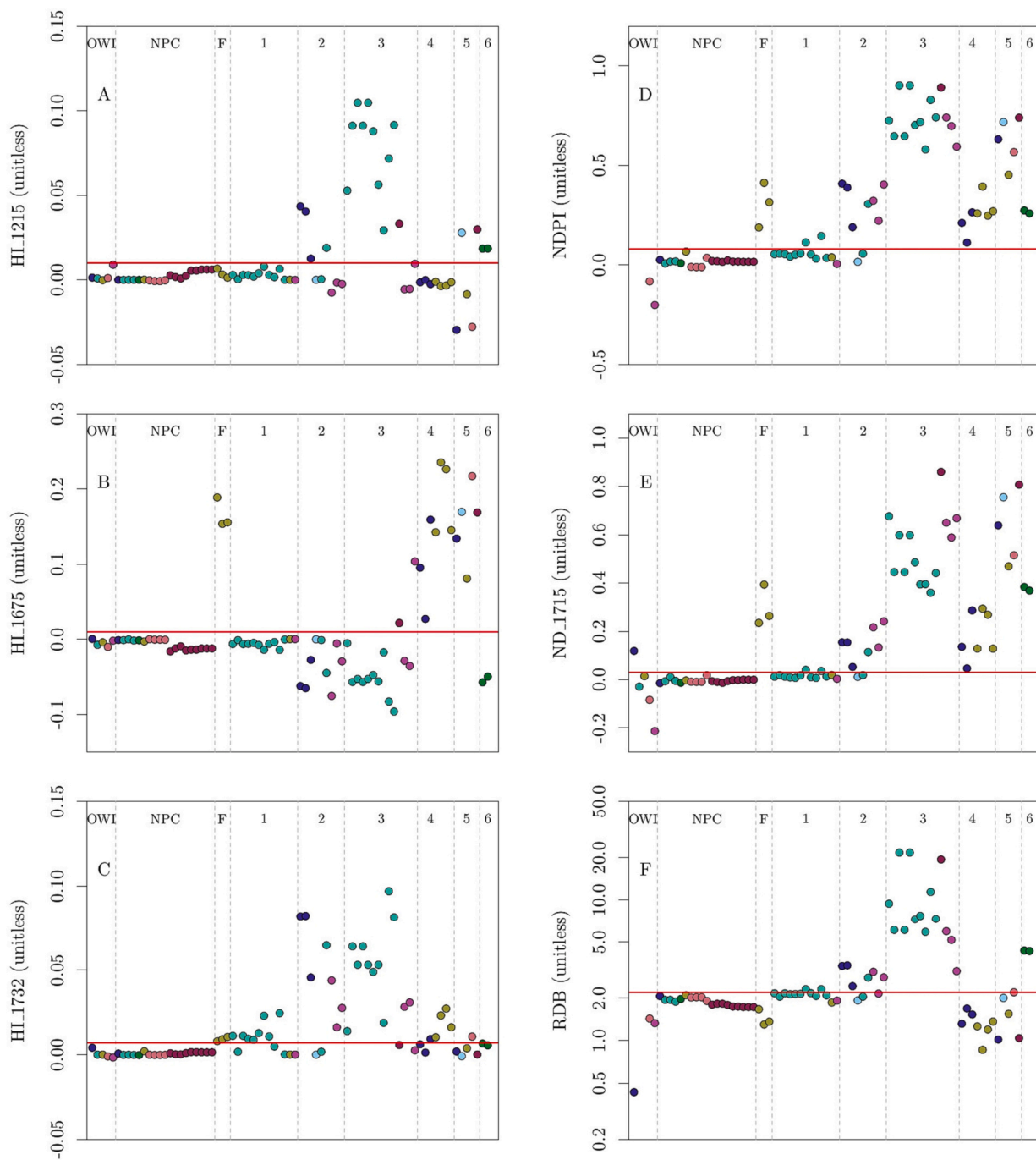The authors would like to apologise for any inconvenience caused.

Fig. 6. Evaluation of algorithms using the compiled database. Vertical grey lines separate the groups: Type 1 plastics include clusters 2, 3 and 6; Type 2 plastics include clusters 4 and 5. Cluster 1 has dampened spectral signatures that cannot reliably be targeted, and is composed of plastic samples present in other clusters. Colors follow the colour code per cluster. Red line indicates a threshold used to separate groups. OWI = Organisms, whitecaps, and ice; NPC = non-plastic construction, and F = fiberglass. For further details see Table 3, Figs. 4 and 5. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)
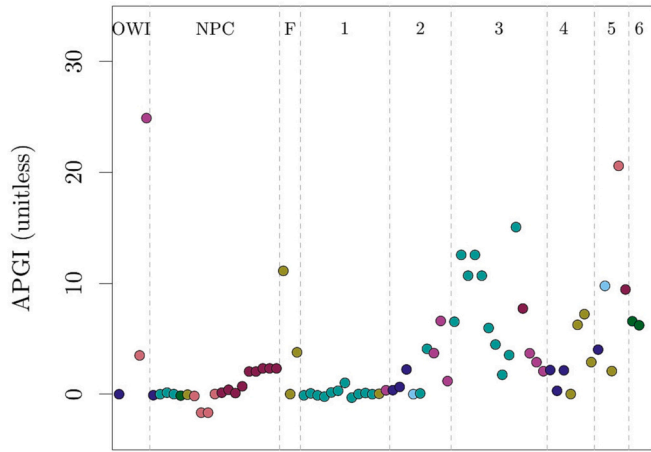
Fig. 7. As Fig. 6 but for the APGI algorithm.