Supplementary Online Material 2

Sample dataset example for wetland classification

To develop an automatic sampling methodology for stable wetlands, we selected global and regional reference maps (**Table 1**, main text), which combine different scales and classifications. These maps include essential information to capture the variability of wetlands in other contexts. Integrating these data was fundamental to increasing the robustness and reliability of our approach.

In the next step, we processed each map separately to identify regions where there is agreement in wetland classification. This involves evaluating where different data sources converge on the same class, enabling a more reliable mapping of areas considered stable. This concordance analysis was conducted systematically within an application developed on the Google Earth Engine platform.

Finally, we applied a sampling process that selects only the "pure" pixels — those located in regions of maximum concordance for the class of interest. This sampling was organized by grids, ensuring adequate spatial distribution and avoiding excessive concentration in specific areas. The entire methodology was operationalized through an application we developed in Google Earth Engine, making the process replicable and efficient (Figure S1).

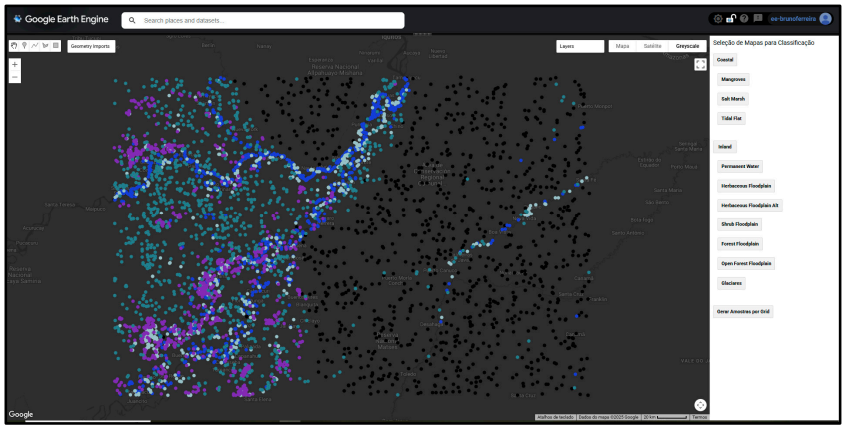


Figure S1. Example of samples randomly selected in a map sheet grid. Google Earth Engine script: https://code.earthengine.google.com/bc597fb8d279b0ed234c8e2759fe488a