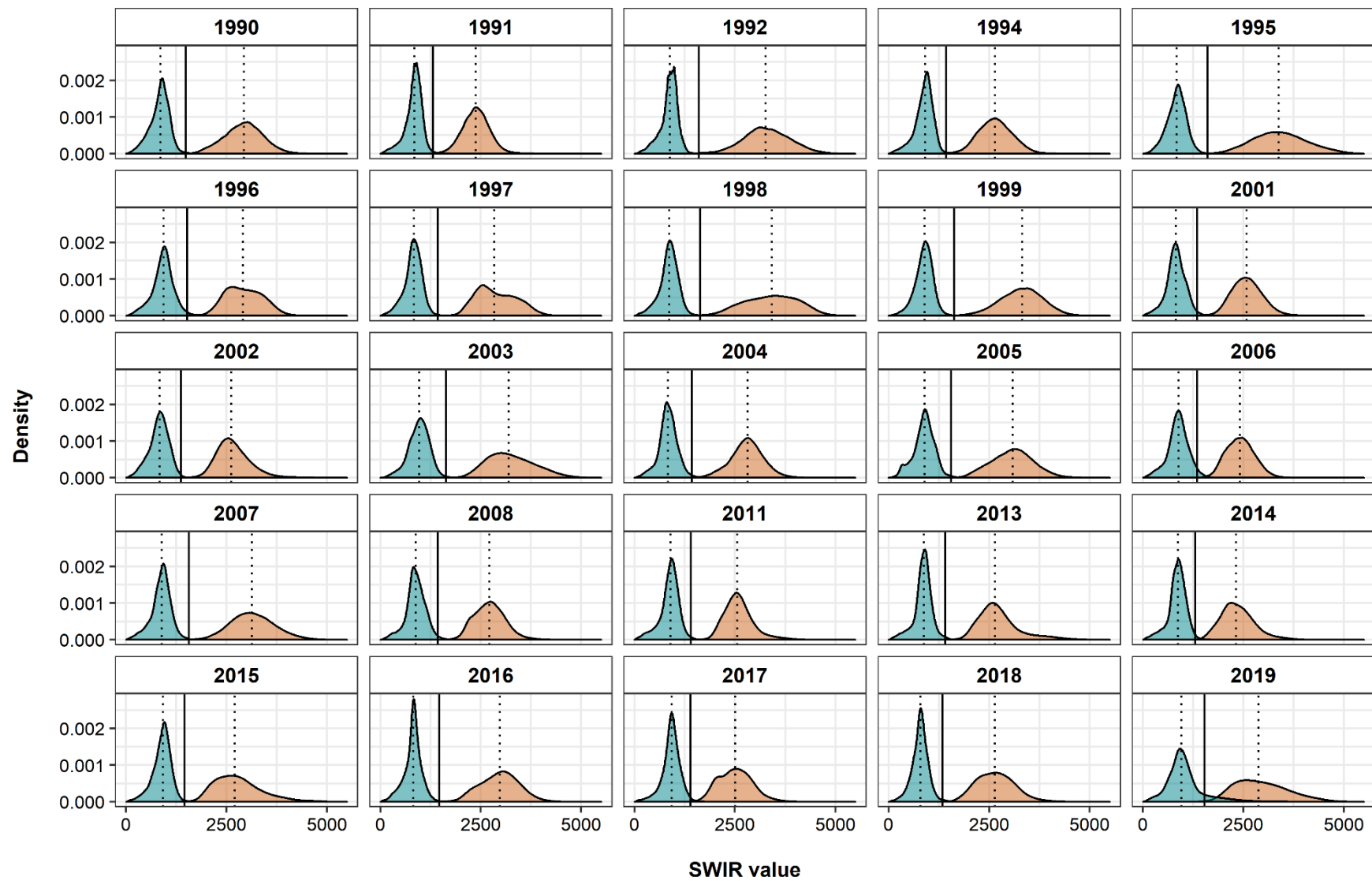


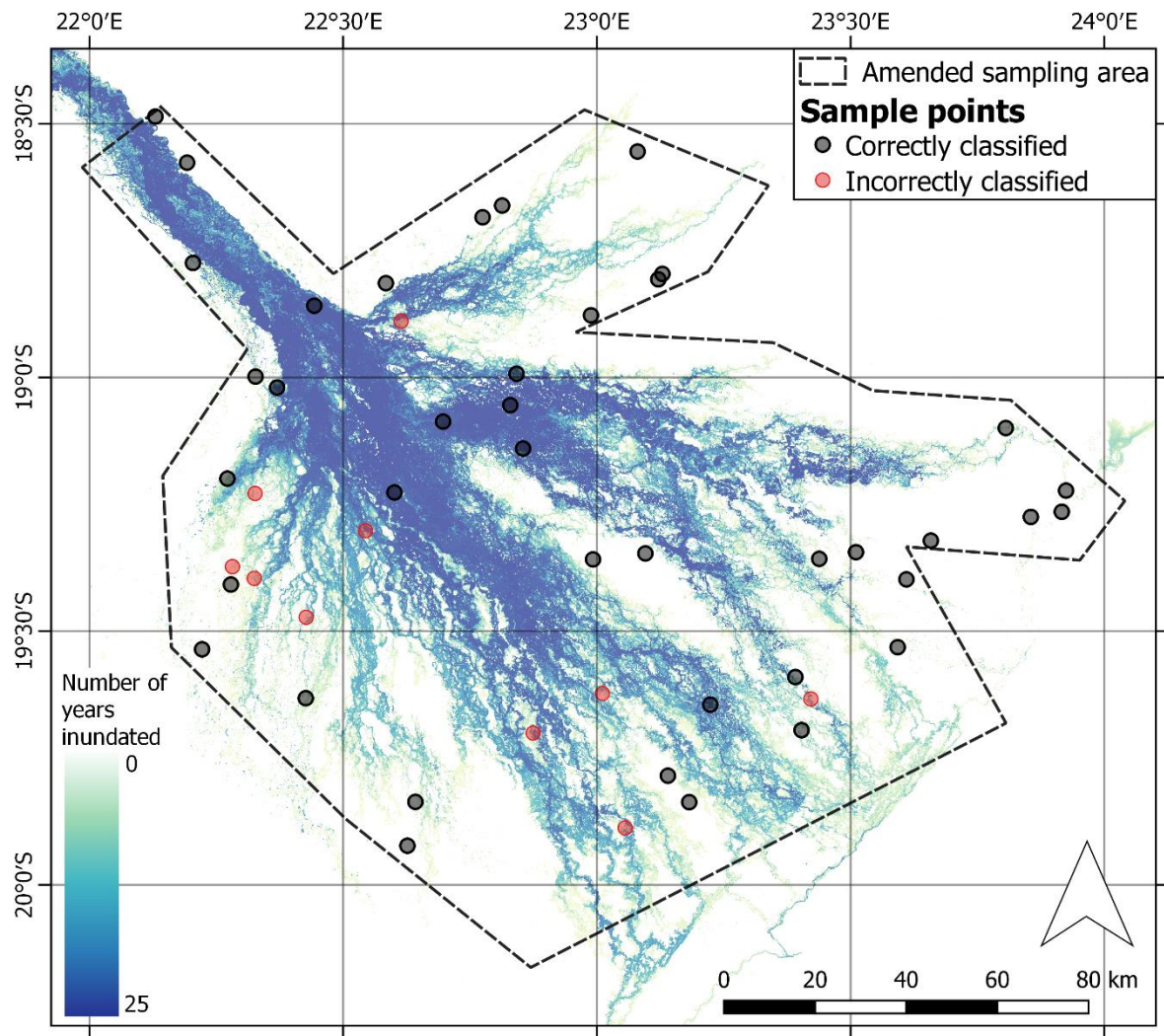
## **Supplementary Materials**

### **Automated inundation history mapping in the Okavango Delta using Landsat and Google Earth Engine**

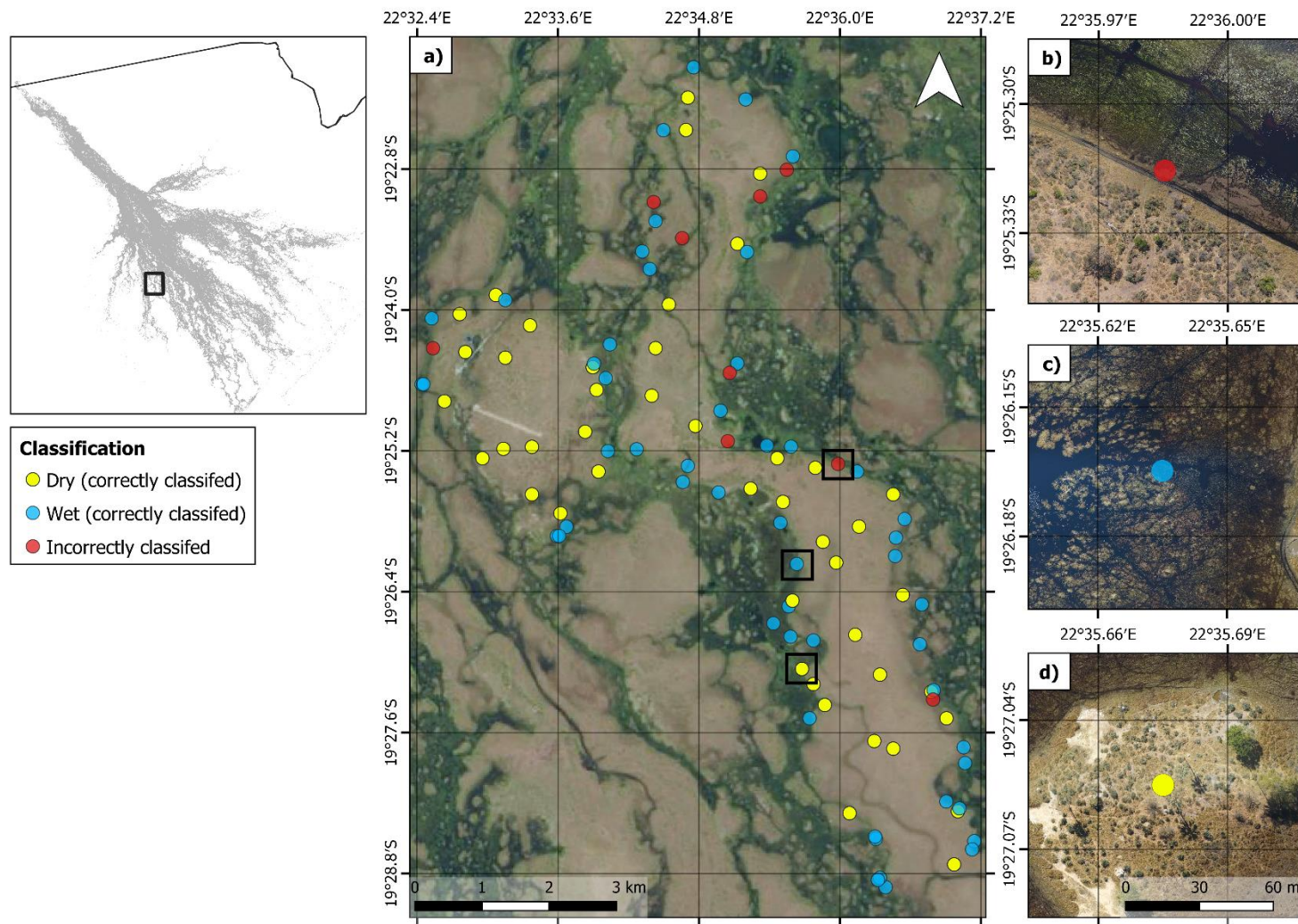
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**Figure S1.** Density of SWIR values for permanent water and dry areas, with median values (dashed line) and threshold value (solid line) for each year.



**Figure S2.** Location of validation points for image-based accuracy assessment. Black points were always correctly classified, red points were sometimes incorrectly classified. Dashed line represents amended area for point sampling and background map is the summed annual inundation map.



**Figure S3.** In situ accuracy assessment of a single inundation map (25 July 2018) showing (a) all sampling points and their classifications and examples of; (b) an incorrectly classified point that was classed as uncertain in the field; (c) a correctly classified inundated point; and (d) a correctly classified dry point. Overview map shows average inundation extent.

**Table S1.** Error matrices and overall accuracy of inundation maps using image-based accuracy assessment (Landsat and high-resolution imagery) using alternative values of  $f$  in the threshold equation  $SWIR_{\text{threshold}} = SWIR_{\text{wet}} + f * (SWIR_{\text{dry}} - SWIR_{\text{wet}})$

		Landsat		Hi-res visual interp.	
		Dry	Wet	Dry	Wet
Map	Dry	527	16	83	5
f = 0.25	Wet	2	146	1	34
Overall accuracy		97.4% (673/691)		95.1% (117/123)	
Map	Dry	522	7	82	3
f = 0.35	Wet	7	155	2	36
Overall accuracy		98.0% (677/691)		95.9% (118/123)	