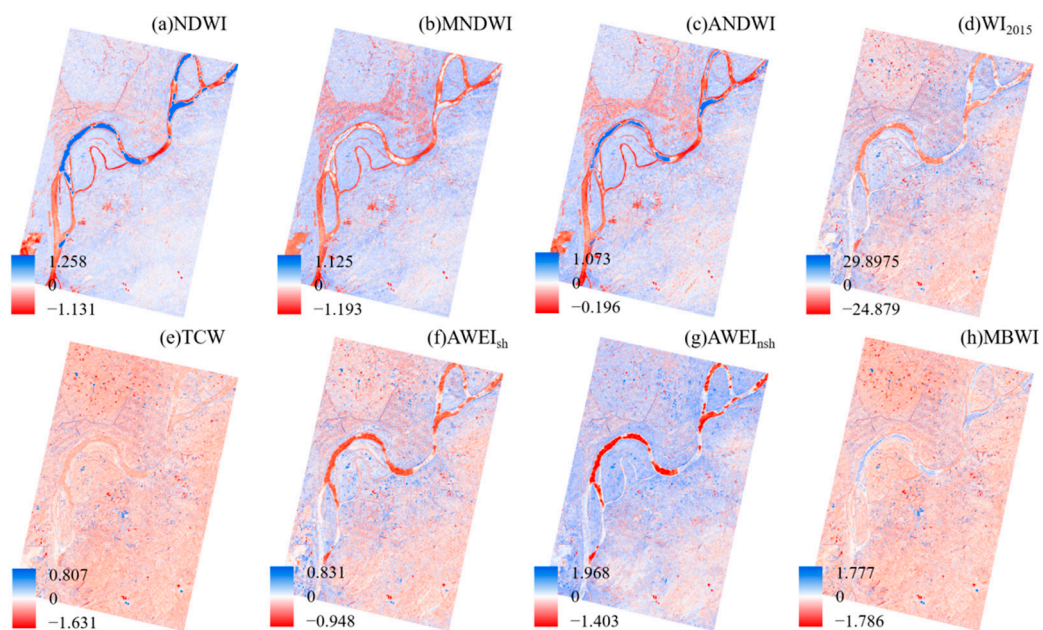
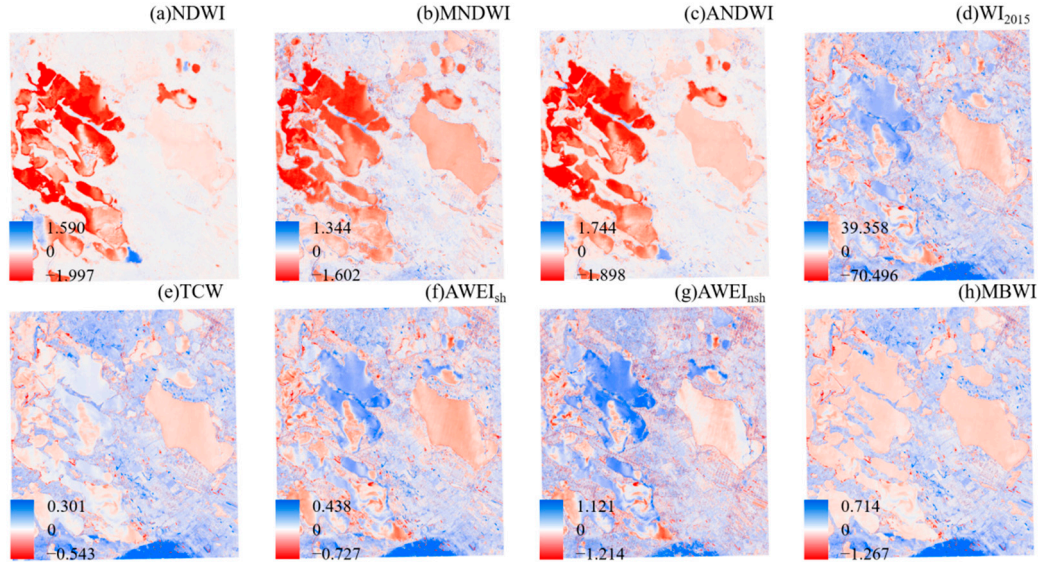


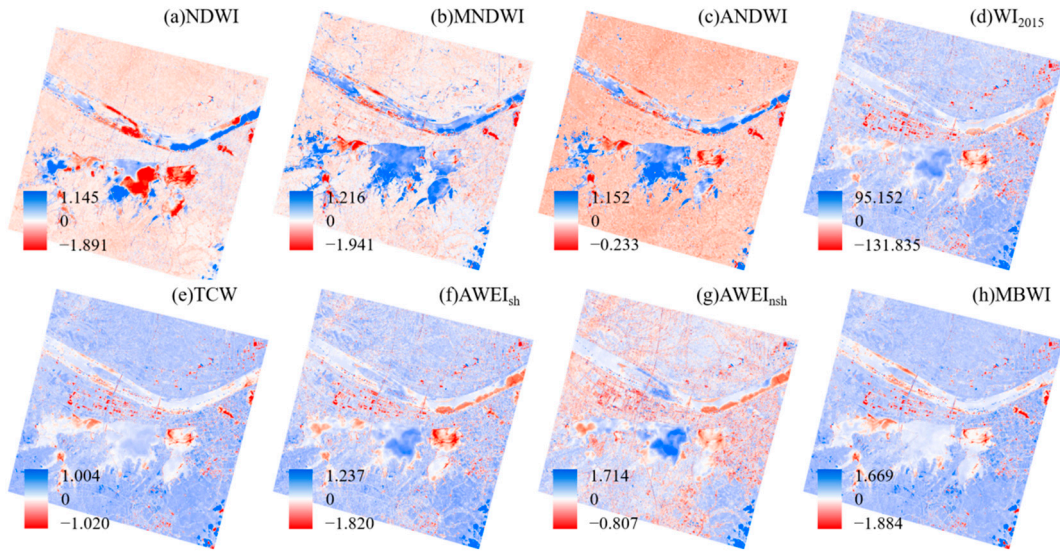
**Figure S1.** Differences of water indices maps between Landsat-8 and Landsat-9 data in Lake Nipissing region.



**Figure S2.** Differences of water indices maps between Landsat-8 and Landsat-9 data in Tongling section of Yangtze River region.

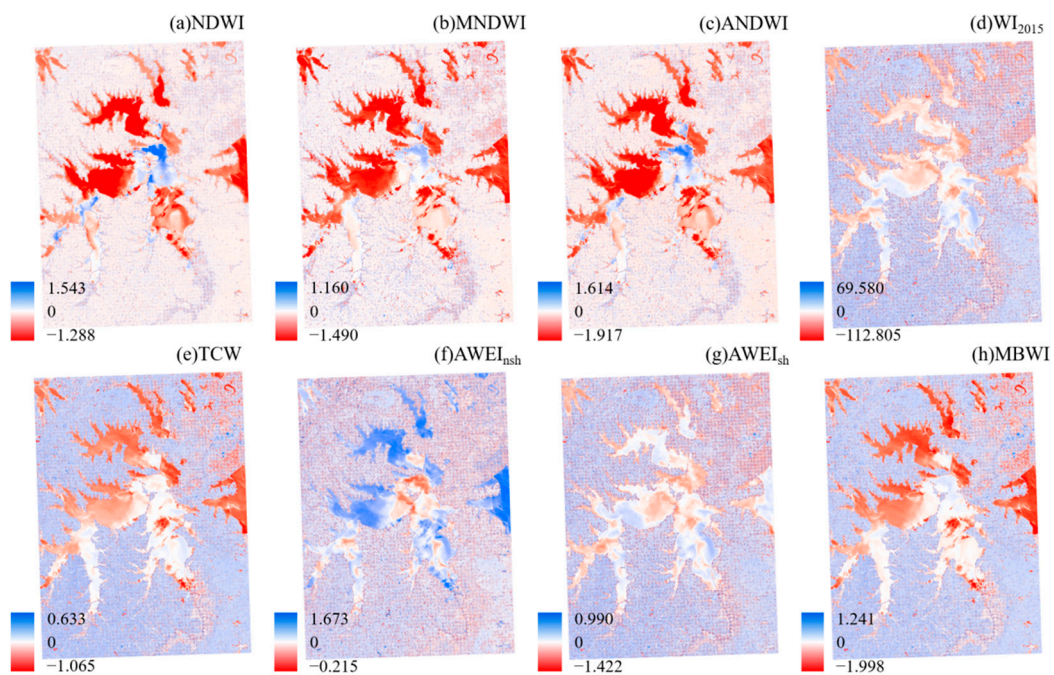


**Figure S3.** Differences of water indices maps between Landsat-8 and Landsat-9 data in Lianhuan Lake region.

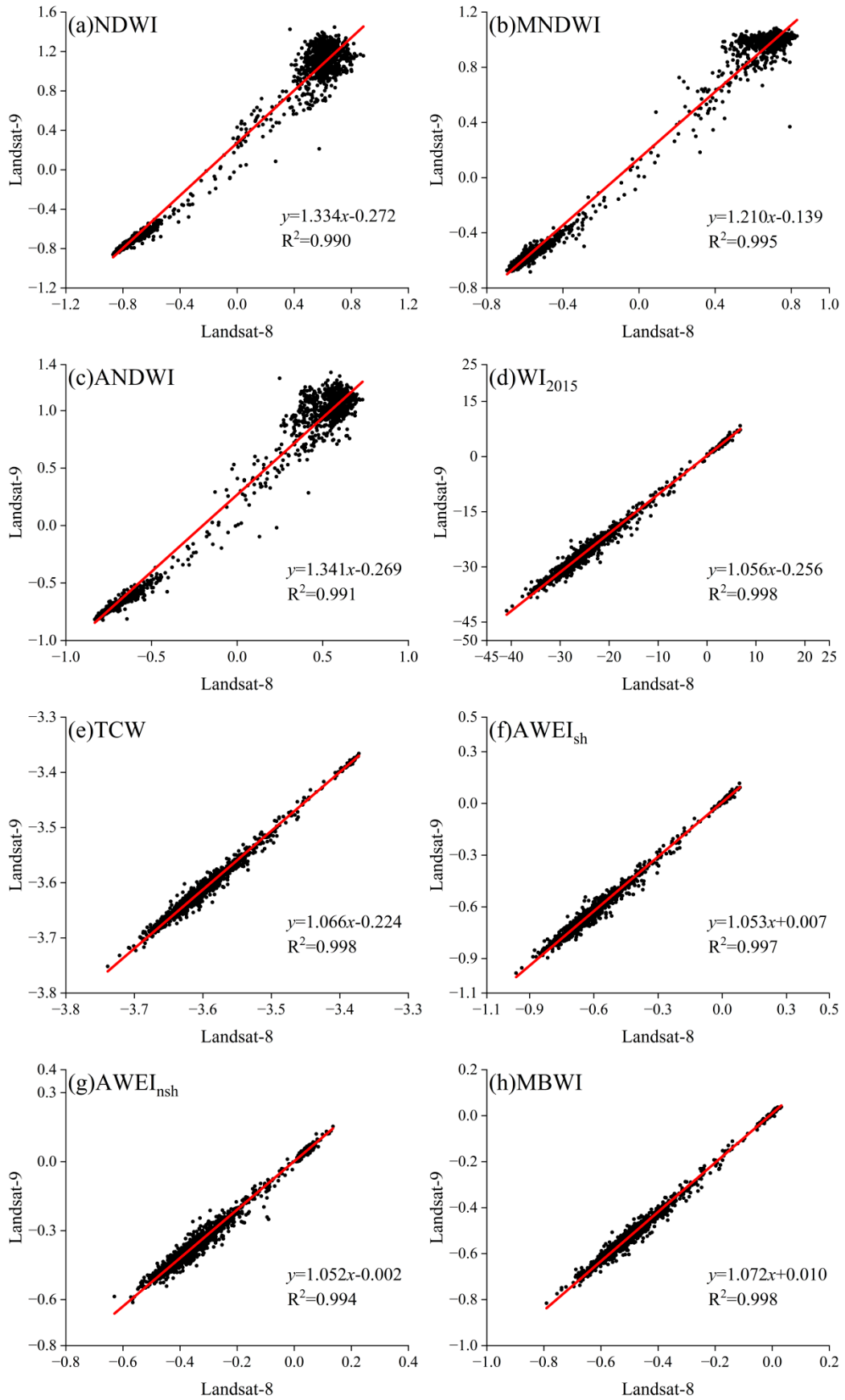


**Figure S4.** Differences of water indices maps between Landsat-8 and Landsat-9 data in Sai Lake region.



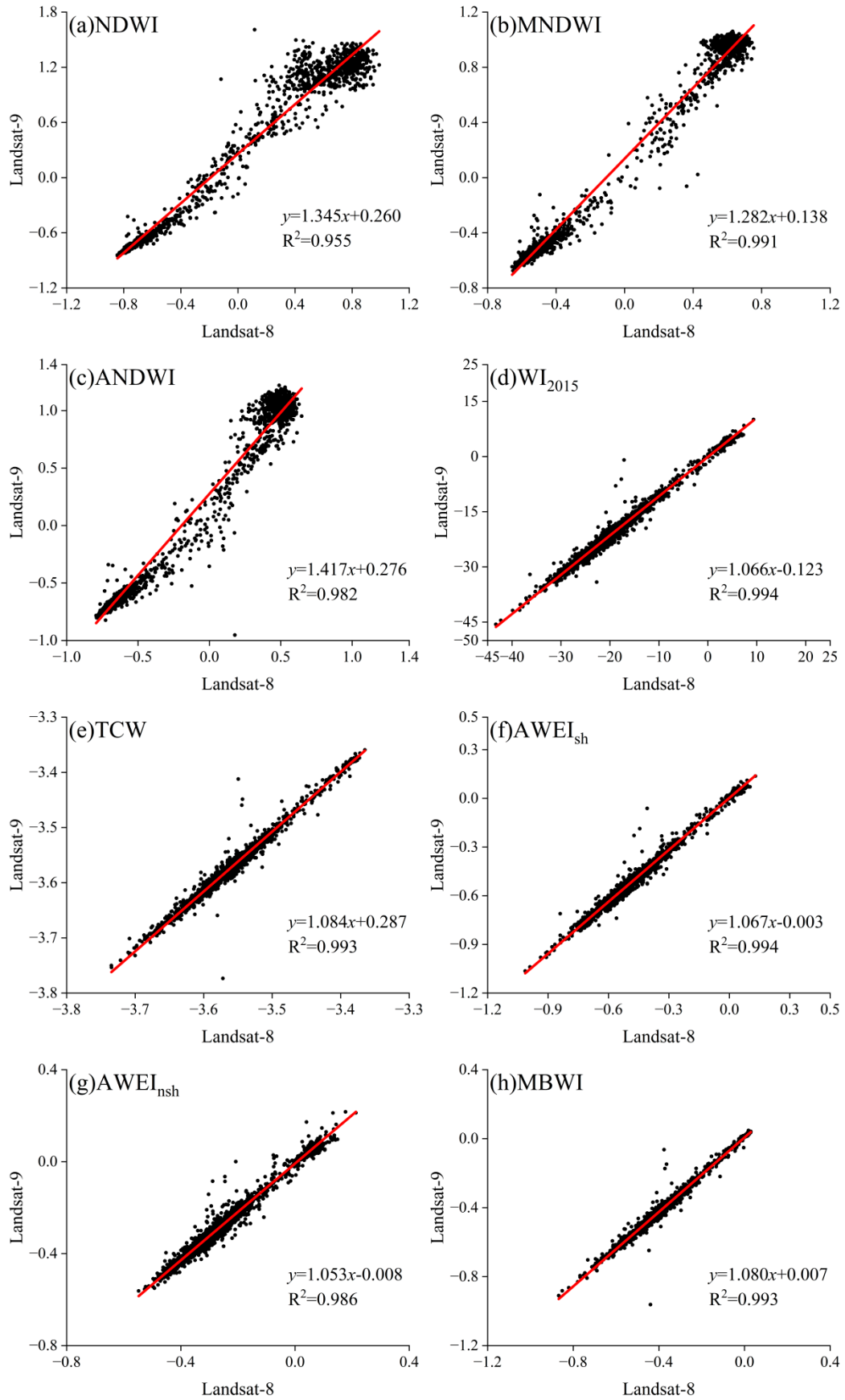


**Figure S5.** Differences of water indices maps between Landsat-8 and Landsat-9 data in Liangzi Lake region.

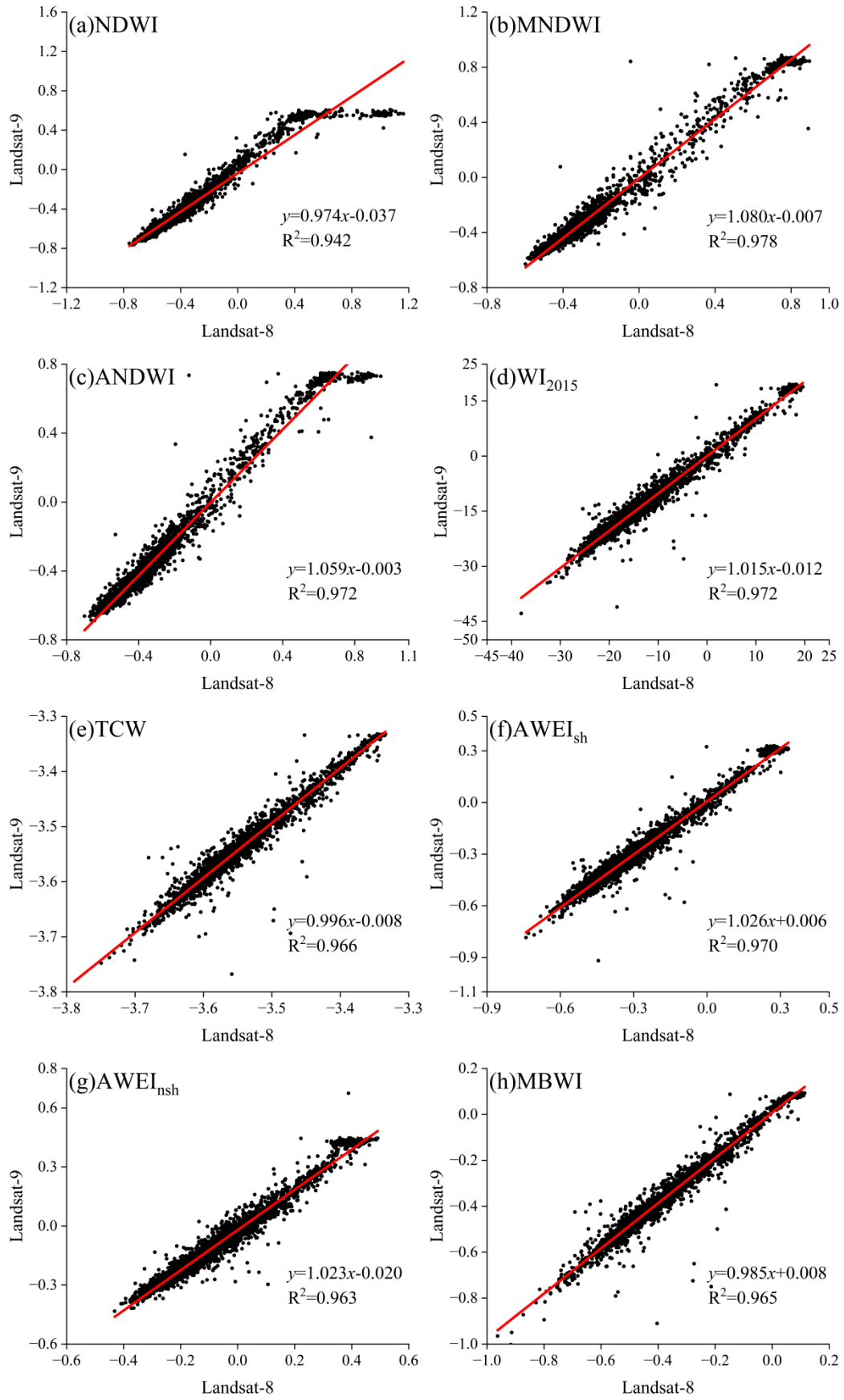


**Figure S6.** Correlation analysis of water indices in the Mille Lacs Lake region based on Landsat-8 and Landsat-9 imagery (Note: red line denotes the fitted line).

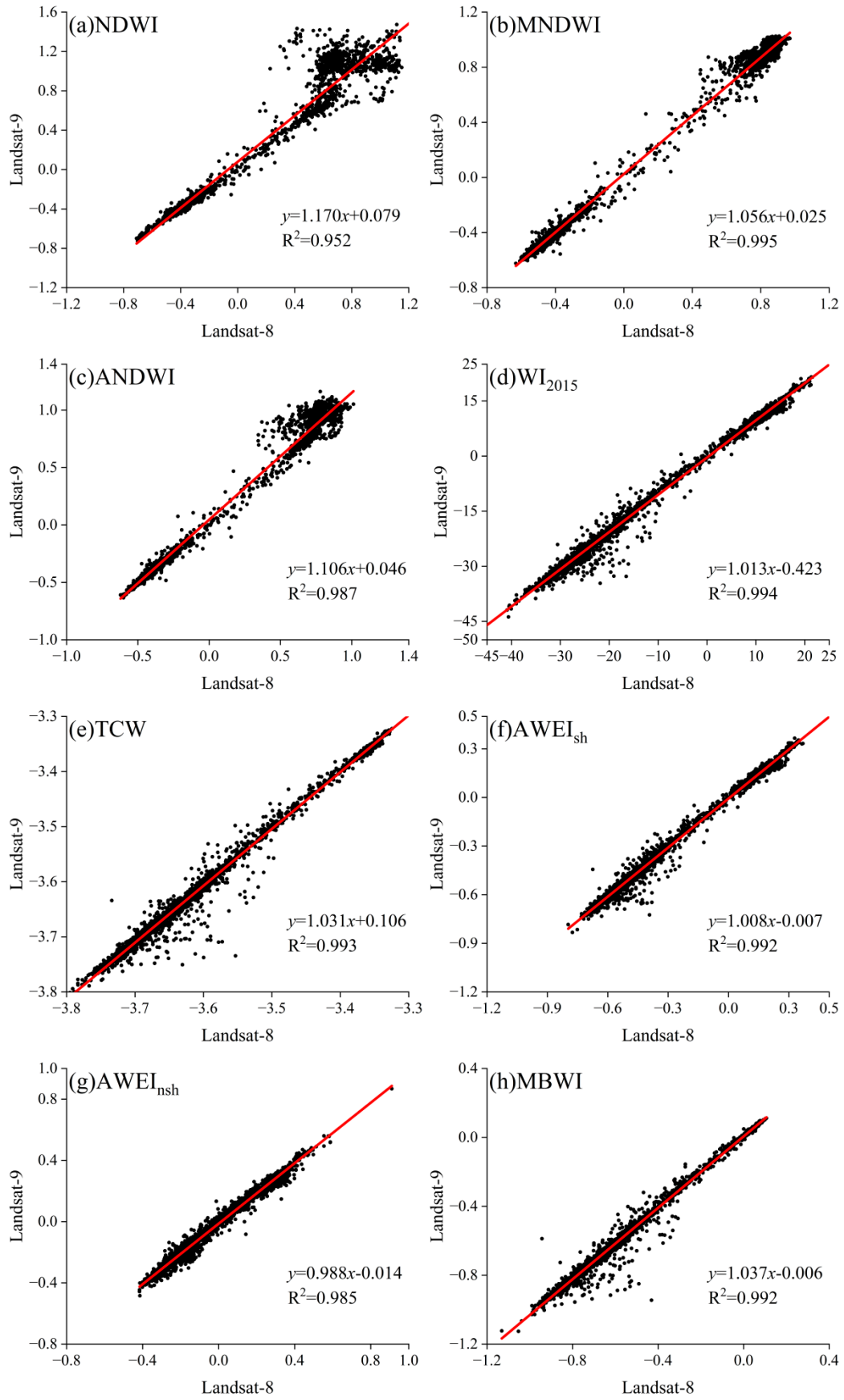




**Figure S7.** Correlation analysis of water indices in the Lake Nipissing region based on Landsat-8 and Landsat-9 imagery (Note: red line denotes the fitted line).

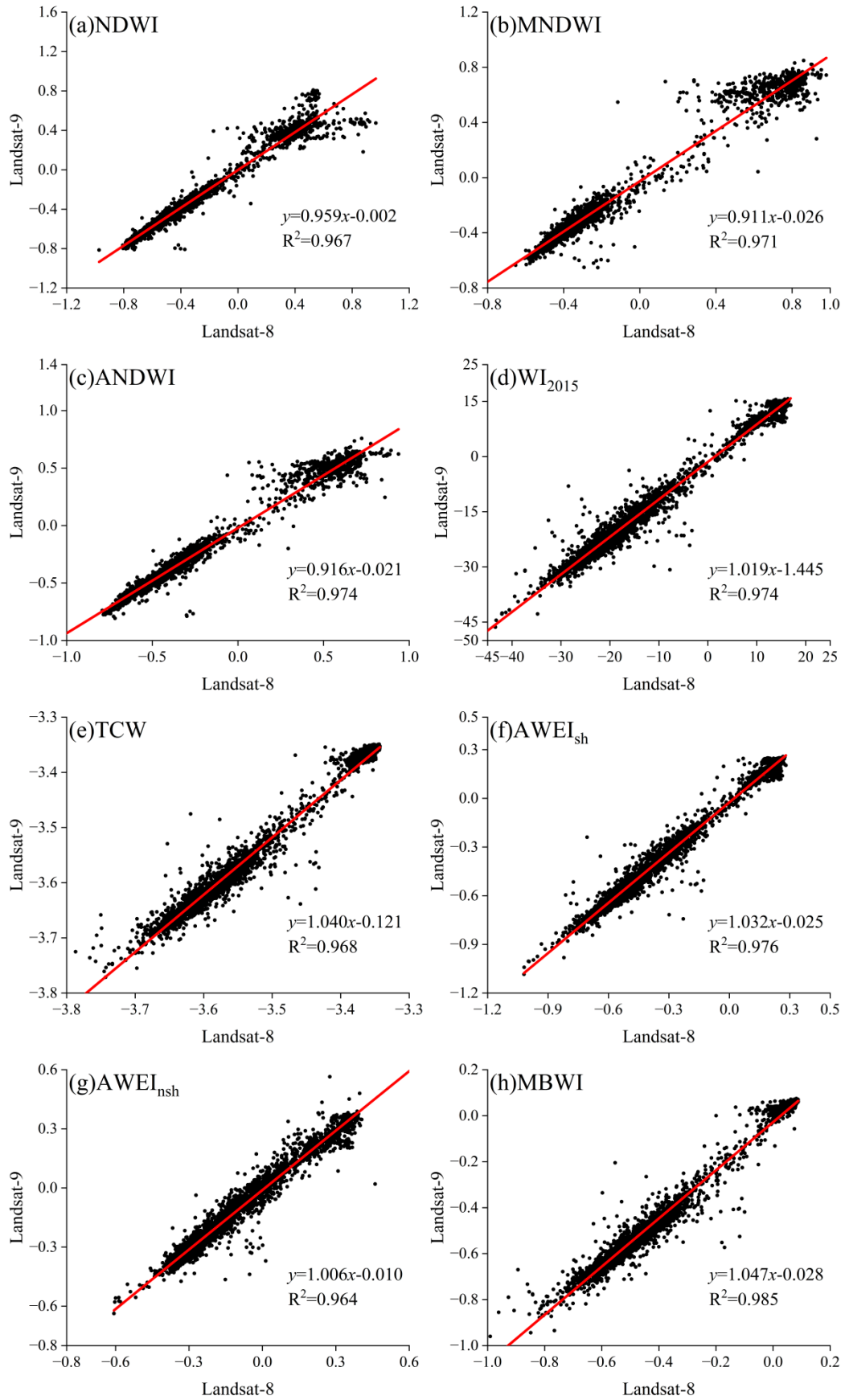


**Figure S8.** Correlation analysis of water indices in the Tongling section of Yangtze River region based on Landsat-8 and Landsat-9 imagery (Note: red line denotes the fitted line).

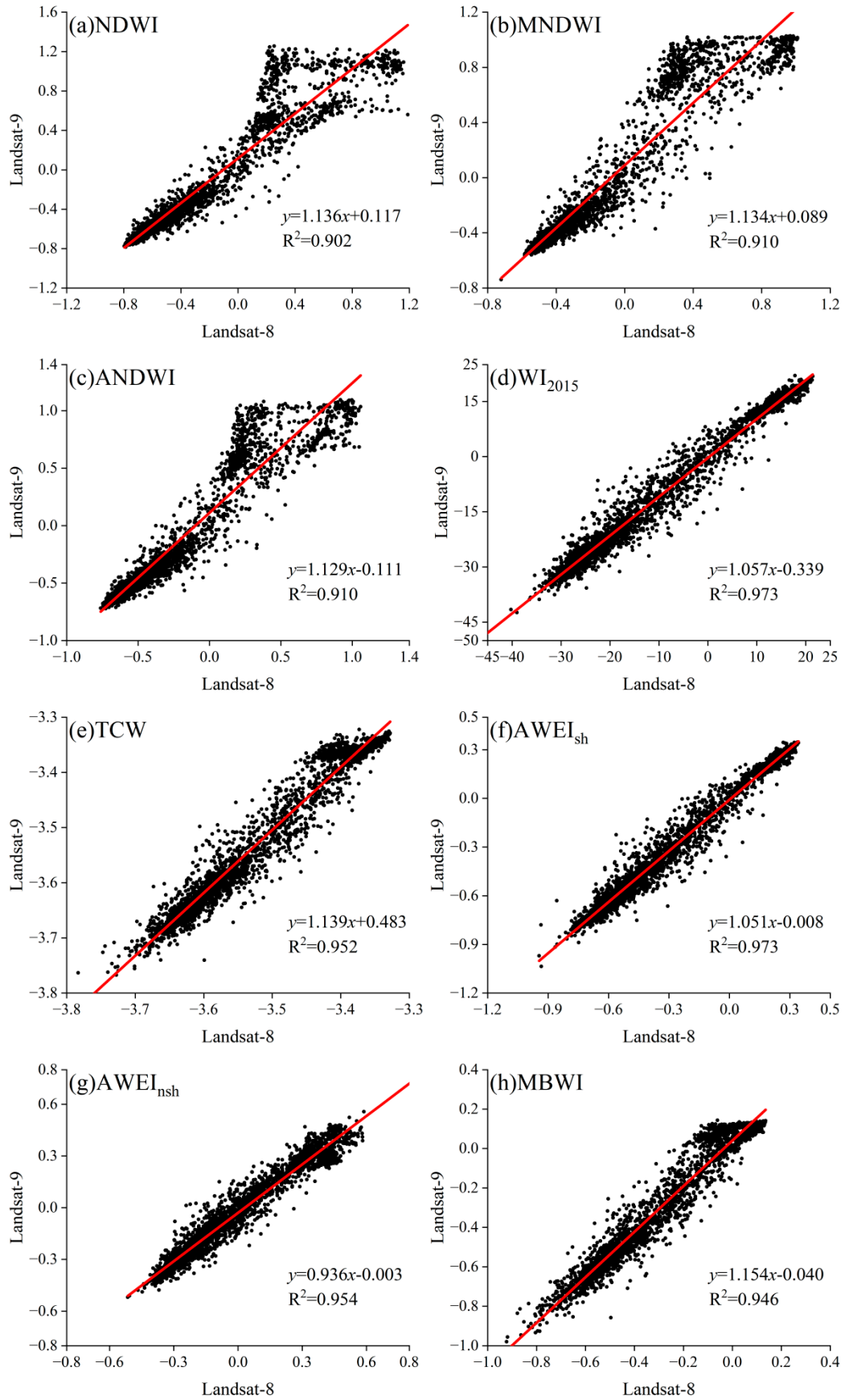


**Figure S9.** Correlation analysis of water indices in the Lianhuan Lake region based on Landsat-8 and Landsat-9 imagery (Note: red line denotes the fitted line).

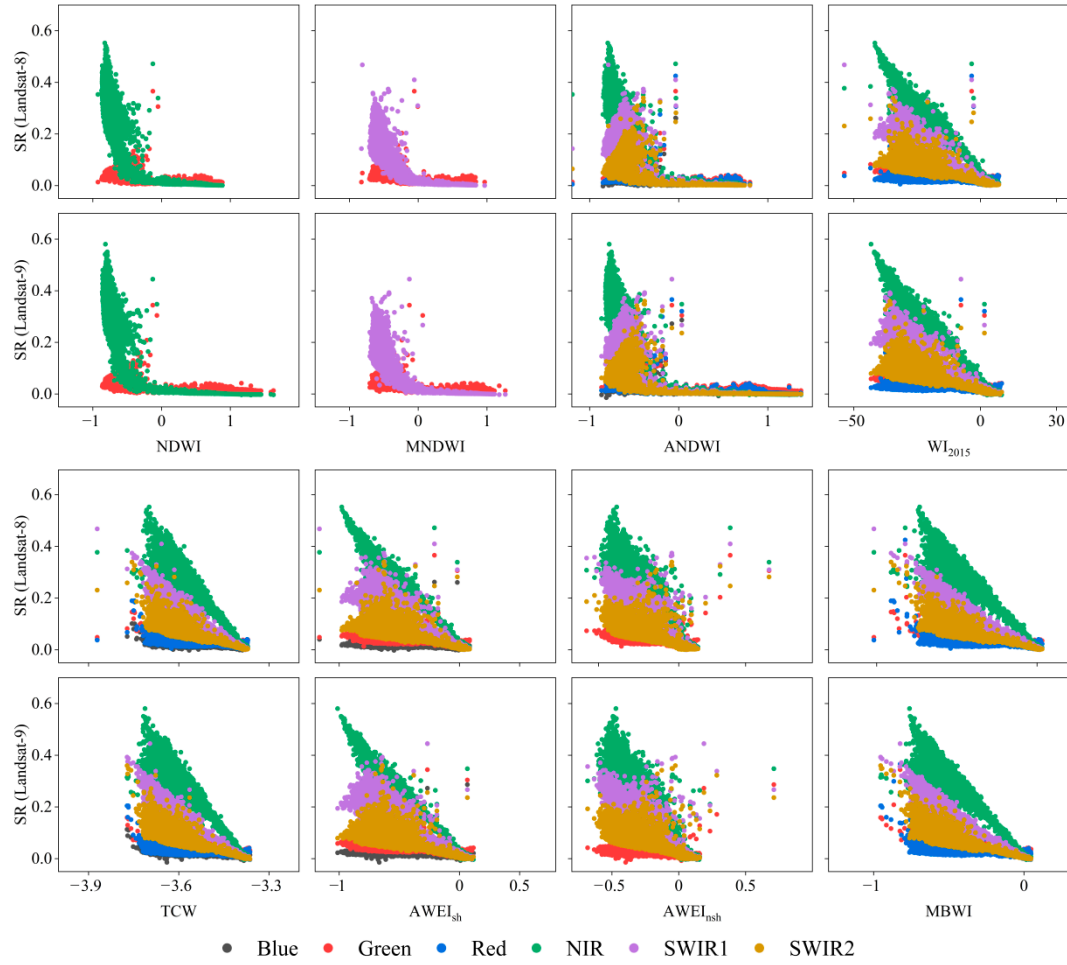




**Figure S10.** Correlation analysis of water indices in the Sai Lake region based on Landsat-8 and Landsat-9 imagery (Note: red line denotes the fitted line).

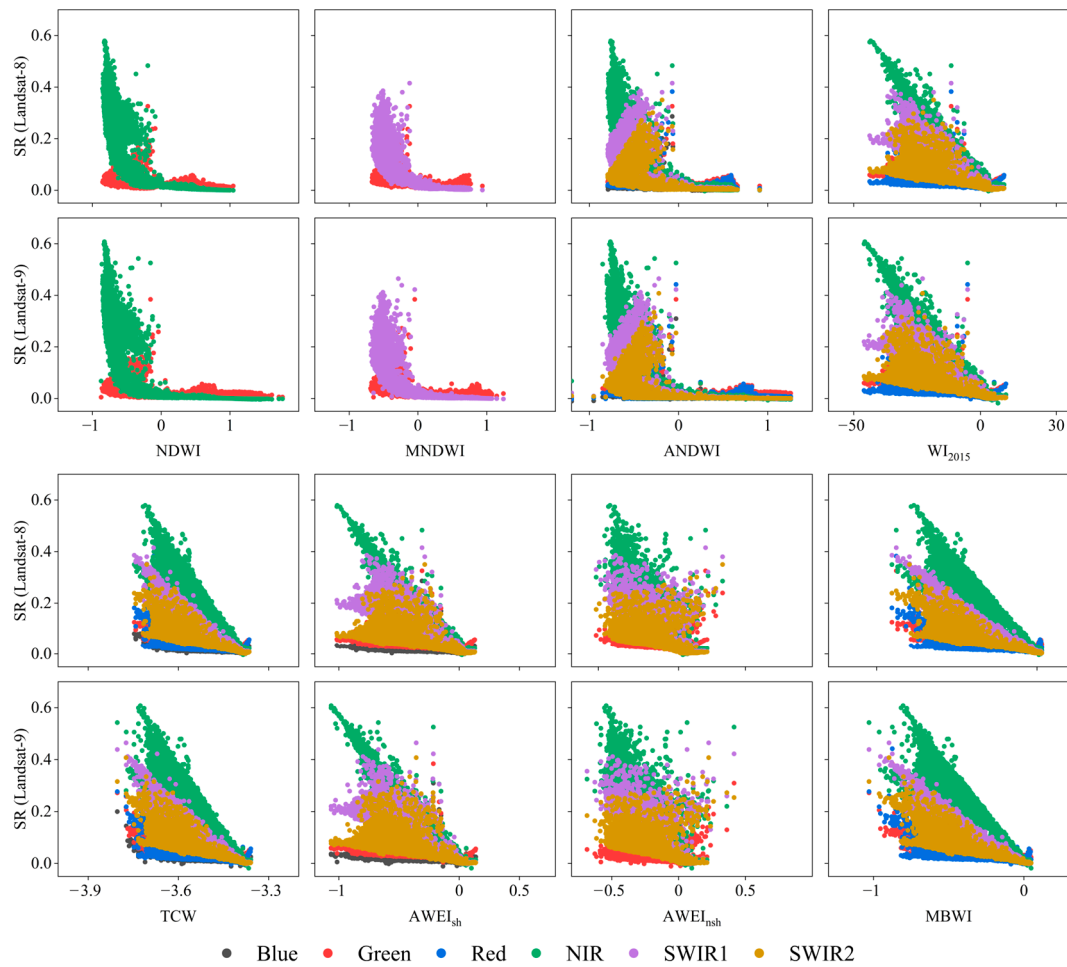


**Figure S11.** Correlation analysis of water indices in the Liangzi Lake region based on Landsat-8 and Landsat-9 imagery (Note: red line denotes the fitted line).

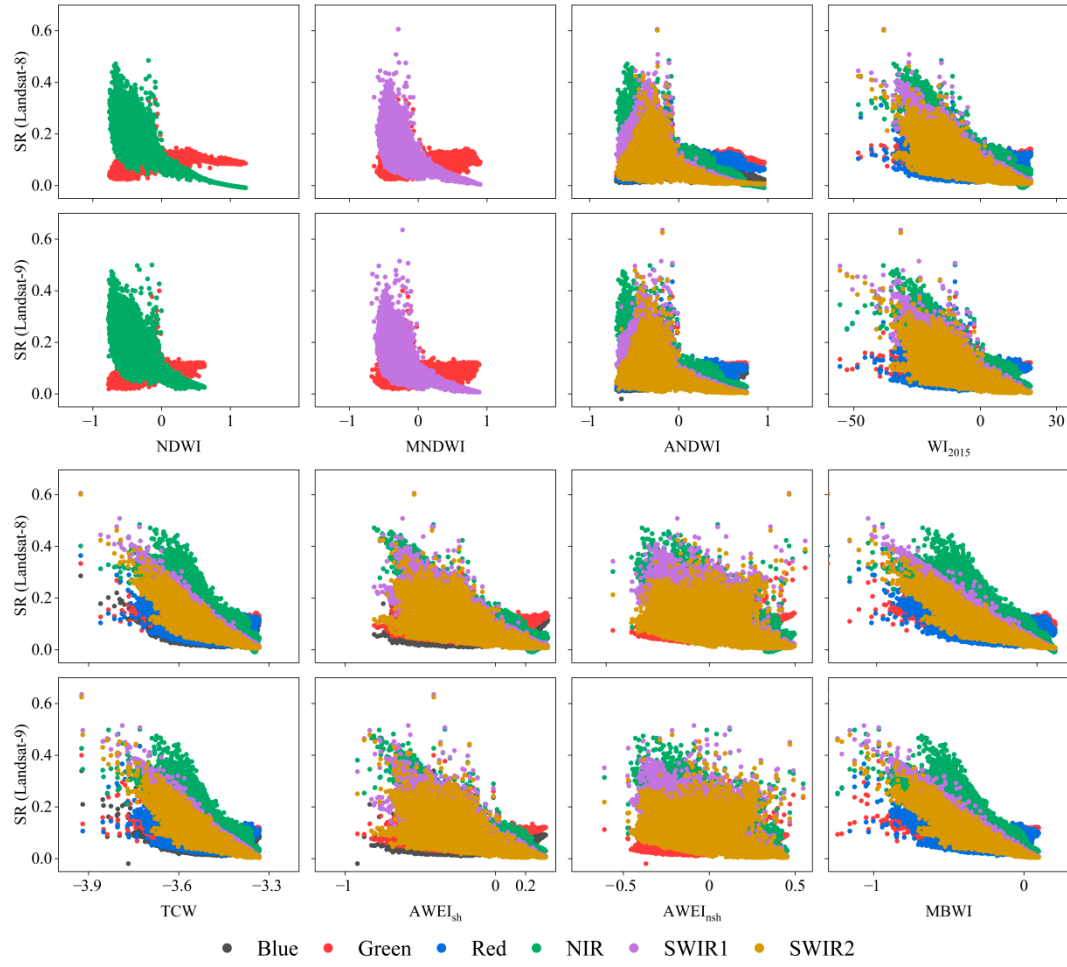


**Figure S12.** Comparison of separability of different water indices based on Landsat-8 and Landsat-9 imagery in Mille Lacs Lake region.

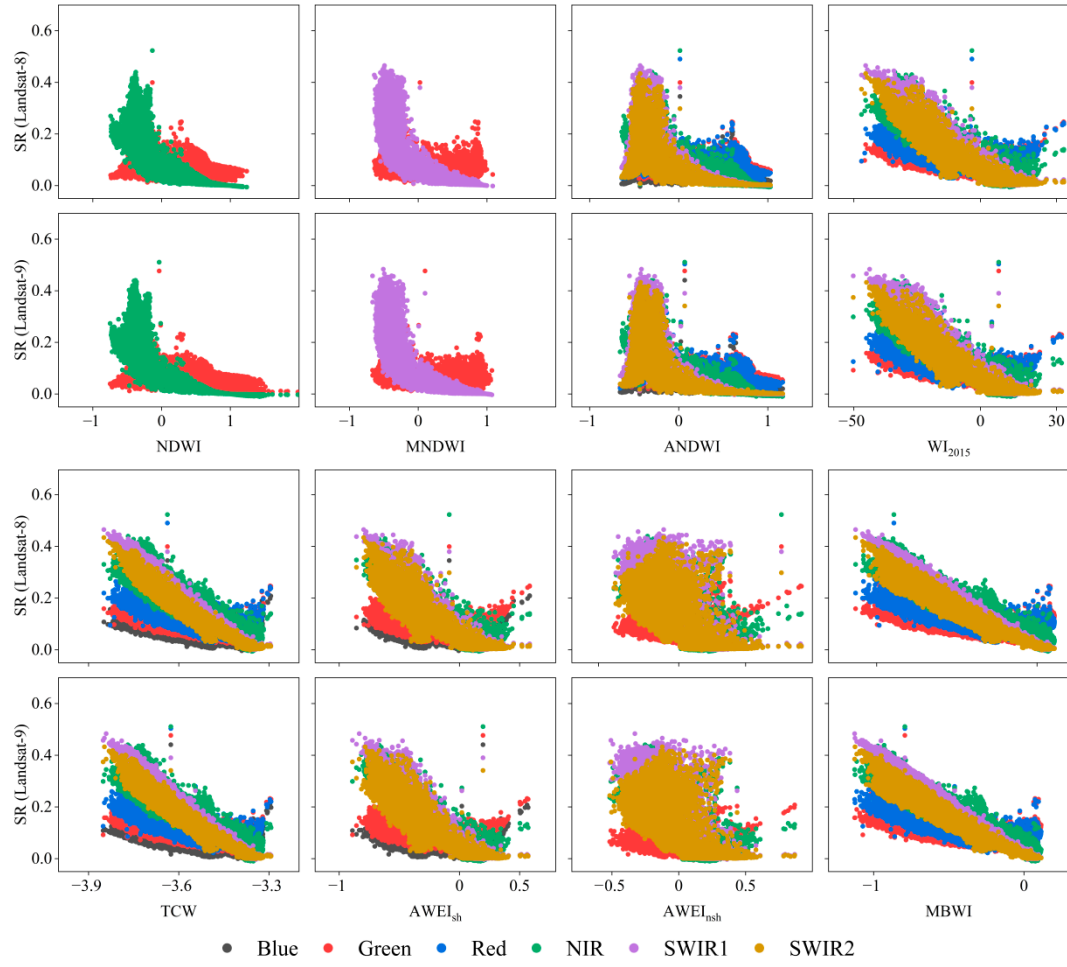




**Figure S13.** Comparison of separability of different water indices based on Landsat-8 and Landsat-9 imagery in Lake Nipissing region.

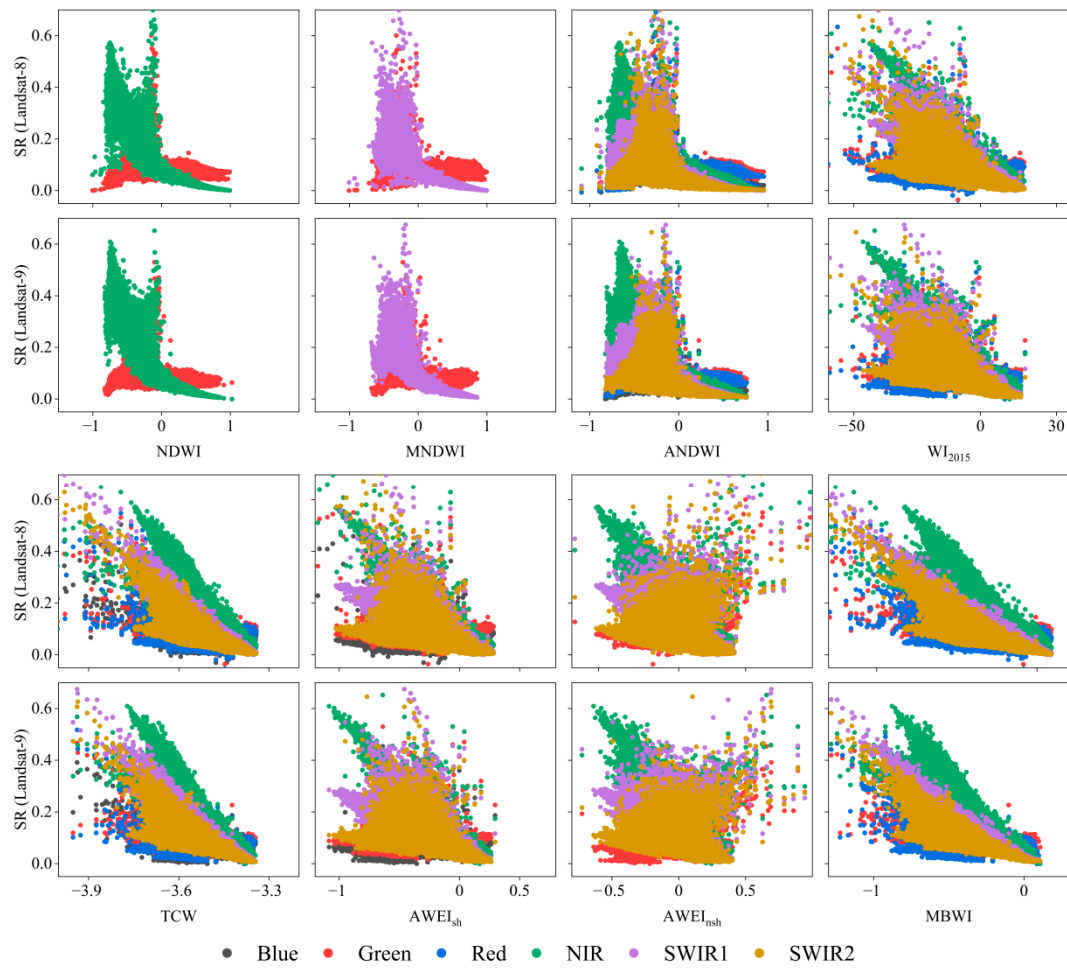


**Figure S14.** Comparison of separability of different water indices based on Landsat-8 and Landsat-9 imagery in Tongling section of Yangtze River region.

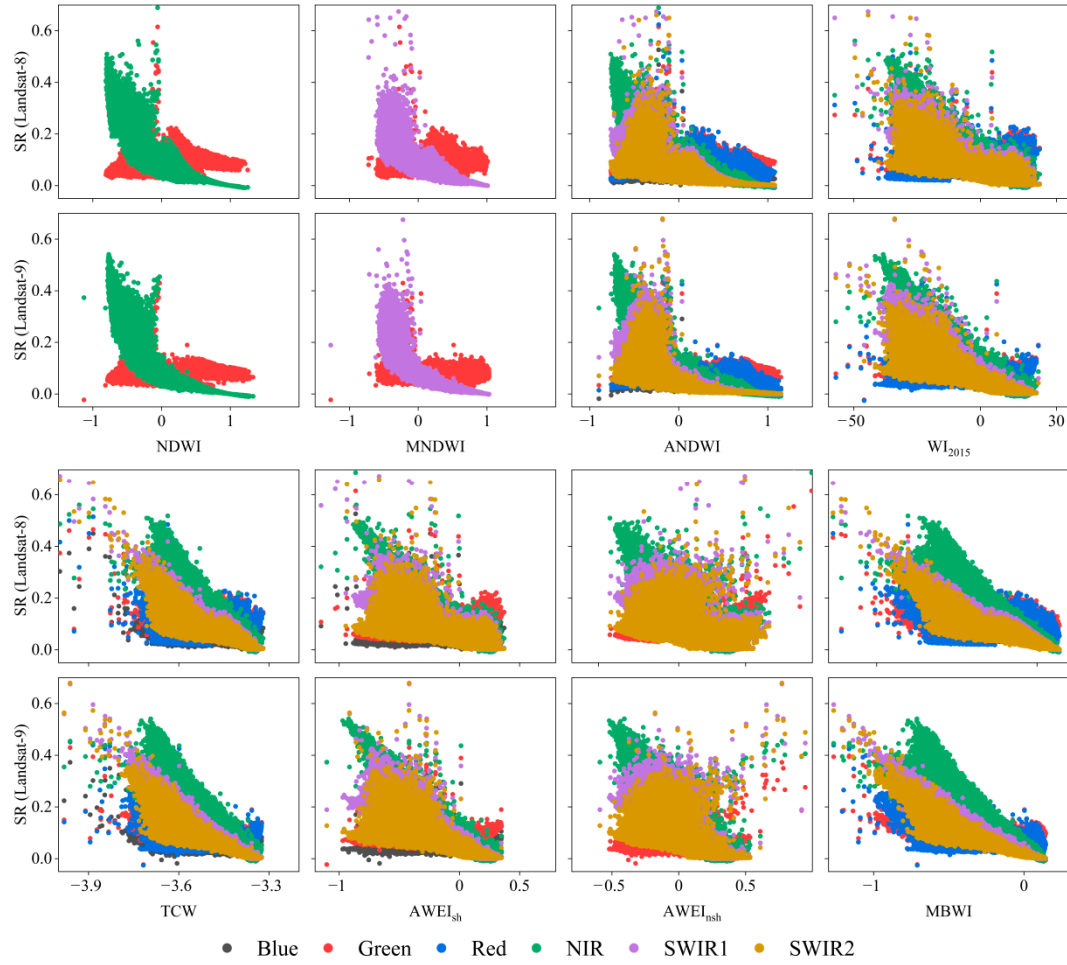


**Figure S15.** Comparison of separability of different water indices based on Landsat-8 and Landsat-9 imagery in Lianhuan Lake region.

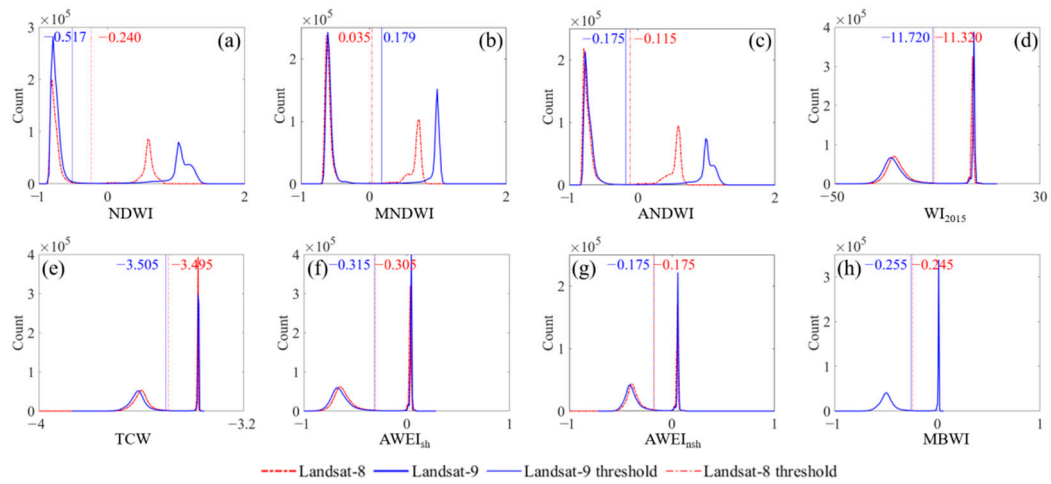




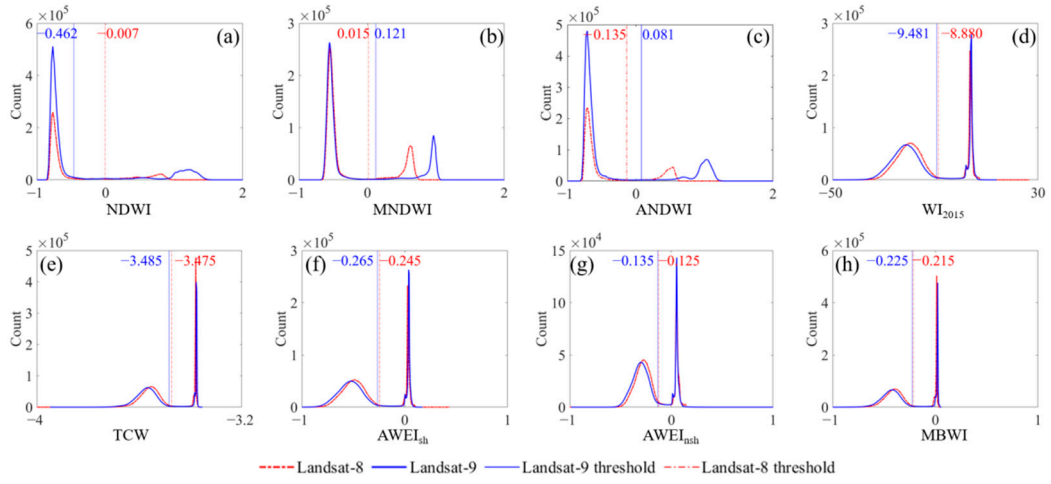
**Figure S16.** Comparison of separability of different water indices based on Landsat-8 and Landsat-9 imagery in Sai Lake region.



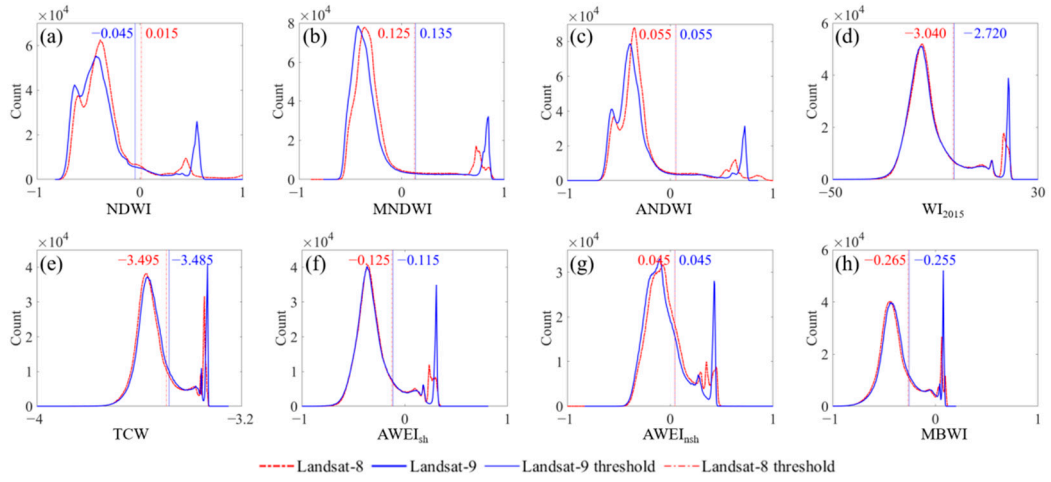
**Figure S17.** Comparison of separability of different water indices based on Landsat-8 and Landsat-9 imagery in Liangzi Lake region.



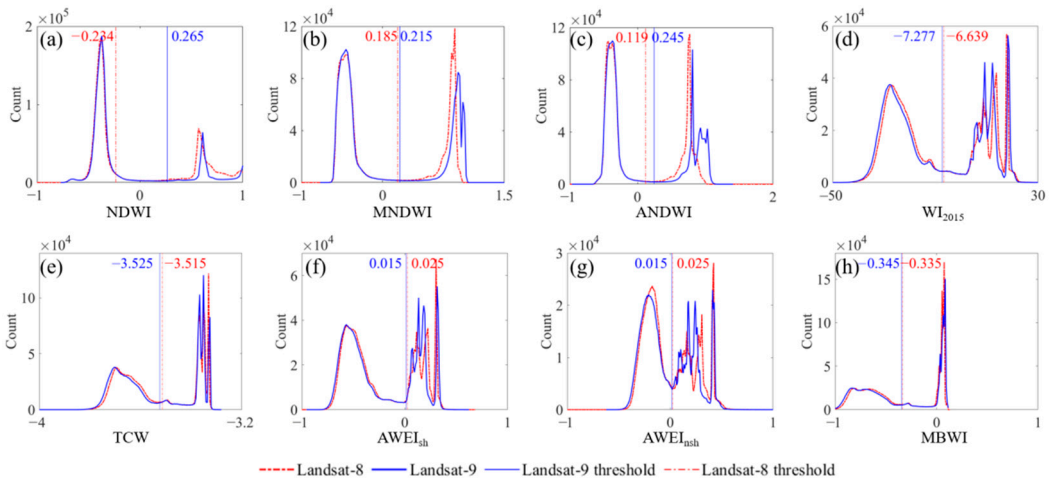
**Figure S18.** Comparison of the applicability of different water body index thresholds based on Landsat-8 and Landsat-9 imagery in Mille Lacs Lake region.



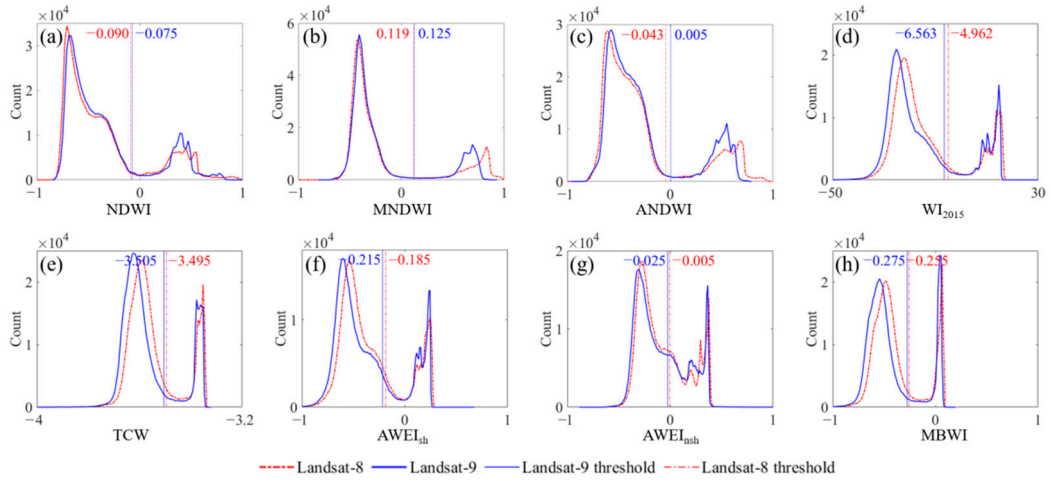
**Figure S19.** Comparison of the applicability of different water body index thresholds based on Landsat-8 and Landsat-9 imagery in Lake Nipissing region.



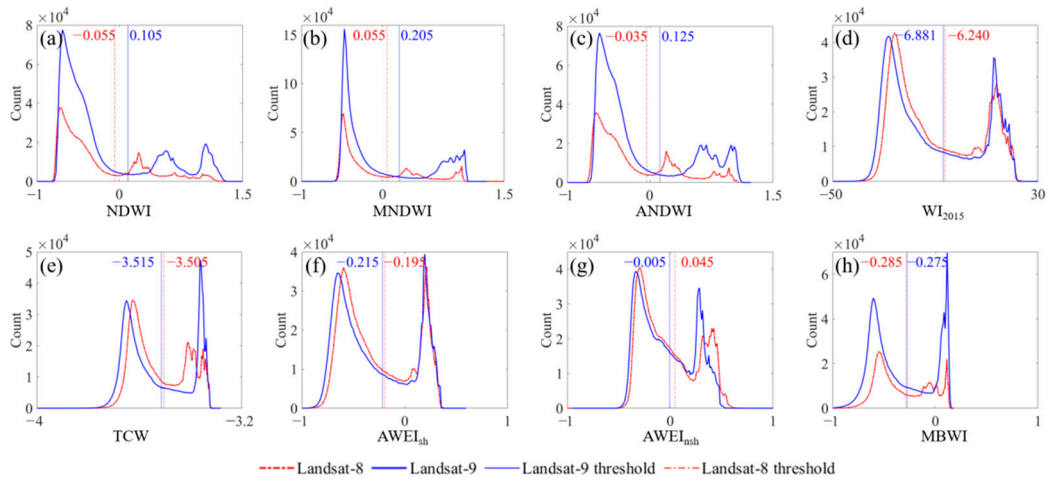
**Figure S20.** Comparison of the applicability of different water body index thresholds based on Landsat-8 and Landsat-9 imagery in Tongling section of Yangtze River region.



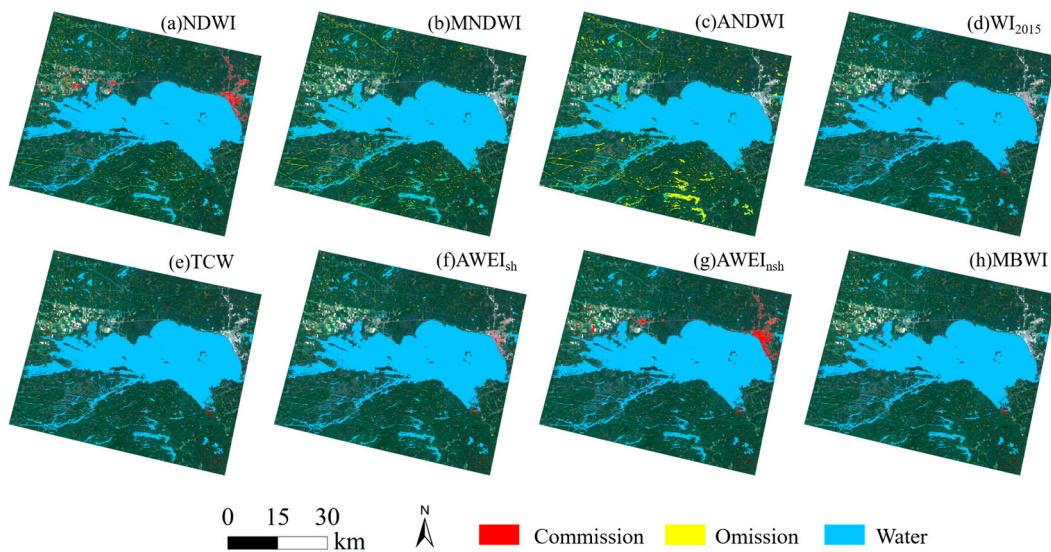
**Figure S21.** Comparison of the applicability of different water body index thresholds based on Landsat-8 and Landsat-9 imagery in Lianhuan Lake region.



**Figure S22.** Comparison of the applicability of different water body index thresholds based on Landsat-8 and Landsat-9 imagery in Sai Lake region.

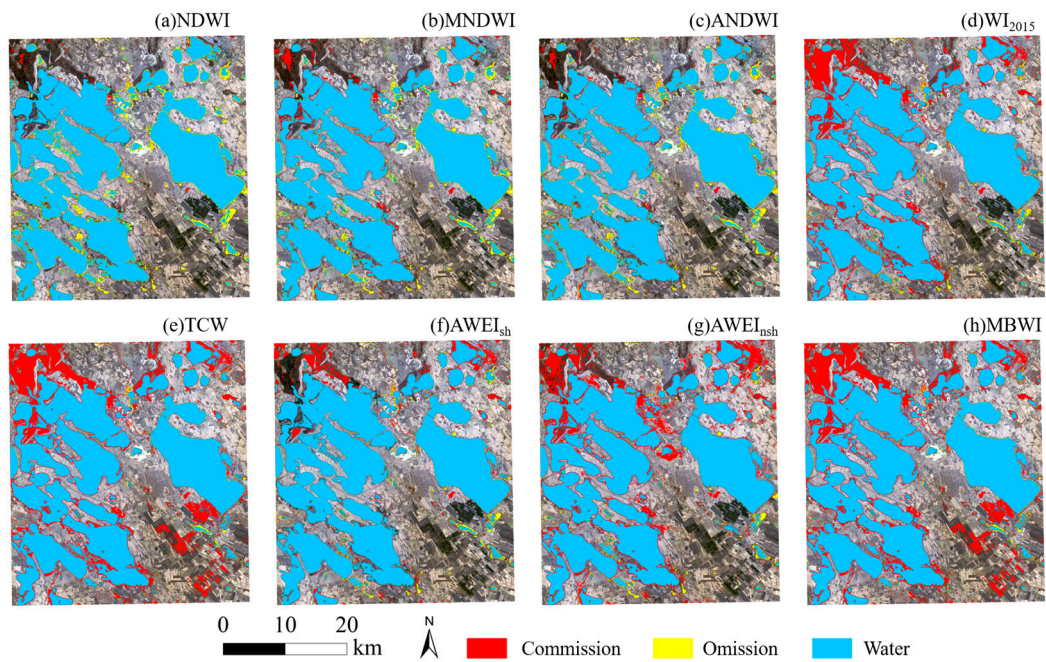


**Figure S23.** Comparison of the applicability of different water body index thresholds based on Landsat-8 and Landsat-9 imagery in Liangzi Lake region.

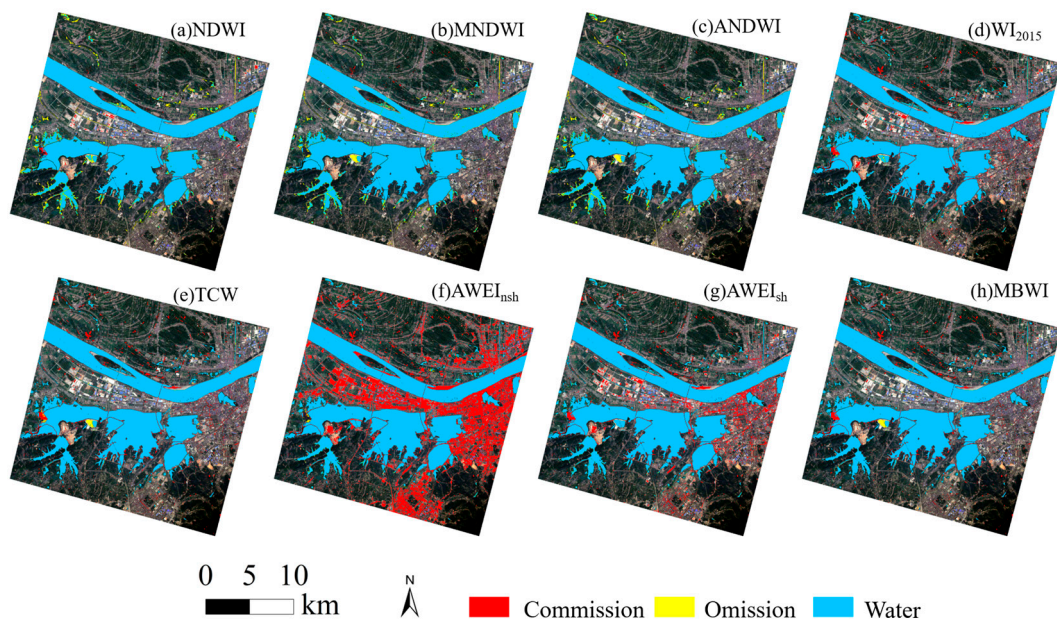


**Figure S24.** Spatial differences in water index extraction capacity in the Lake Nipissing region based on Landsat-9 imagery.

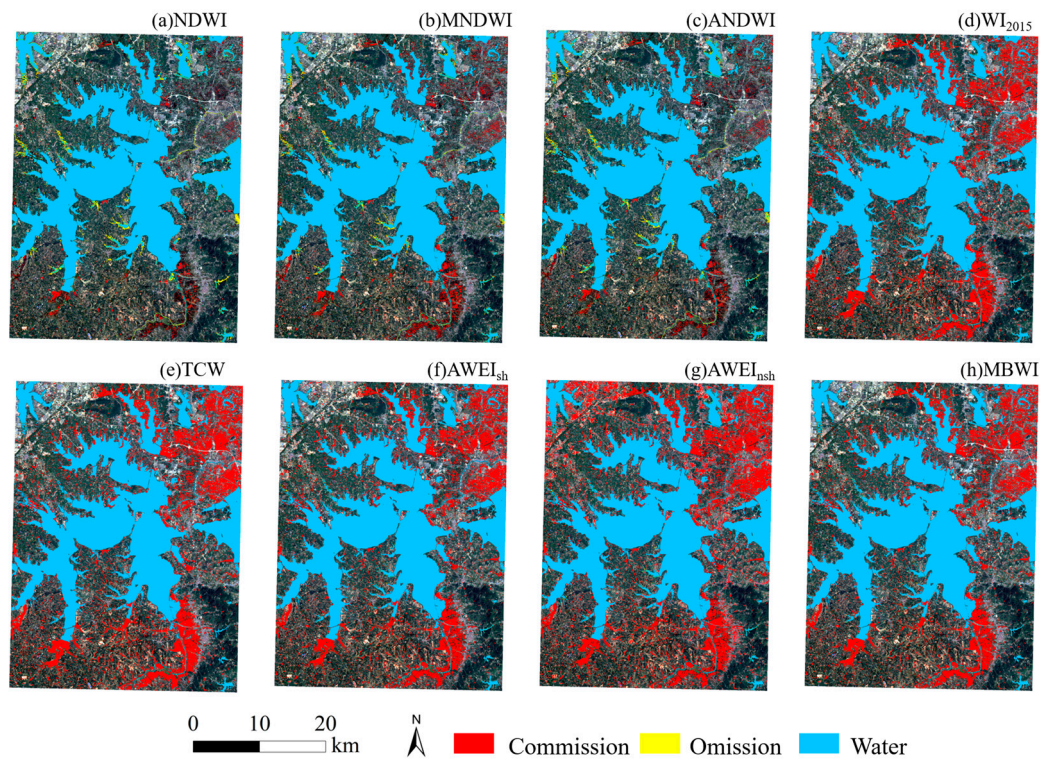




**Figure S25.** Spatial differences in water index extraction capacity in the Lianhuan Lake region based on Landsat-9 imagery.



**Figure S26.** Spatial differences in water index extraction capacity in the Sai Lake region based on Landsat-9 imagery.



**Figure S27.** Spatial differences in water index extraction capacity in the Liangzi Lake region based on Landsat-9 imagery.