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## ACCURACY EVALUATION OF TWO GLOBAL LAND COVER DATA SETS OVER WETLANDS OF CHINA

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**Abstract.** Although wetlands are well known as one of the most important ecosystems in the world, there are still few global wetland mapping efforts at present. To evaluate the wetland-related types of data accurately for both the Global Land Cover 2000 (GLC2000) data set and MODIS land cover data set (MOD12Q1), we used the China wetland map of 2000, which was interpreted manually based on Landsat TM images, to examine the precision of these global land cover data sets from two aspects (class area accuracy, and spatial agreement) across China. The results show that the consistency coefficients of wetland-related types between the two global data sets and the reference data are 77.2% and 56.85%, respectively. However, the overall accuracy of relevant wetland types from GLC2000 is only 19.81% based on results of confusion matrix of spatial consistency, and similarly, MOD12Q1 is merely 18.91%. Furthermore, the accuracy of the peatlands is much lower than that of the water bodies according to the results of per-pixel comparison. The categories where errors occurred frequently mainly include grasslands, croplands, bare lands and part of woodland (deciduous coniferous forest, deciduous broadleaf forest and open shrubland). The possible reasons for the low precision of wetland-related land cover types include (1) the different aims of various products and therefore the inconsistent wetland definitions in their systems; (2) the coarse spatial resolution of satellite images used in global land cover mapping; (3) Discrepancies in dates when images were acquired between the global data set and the reference data. Overall, unsatisfactory results highlight that more attention should be paid to the application of these two global data products, especially in wetland-relevant types across China.

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