



Operational ocean forecasting systems in China: past, present and future

National Marine Environmental Forecasting Center (NMEFC) of China is responsible for the marine environmental forecasting services for global, regional, and China's nearshore areas. From the late 1990s to the early 21st century, NMEFC successively established forecasting systems for the Bohai Sea, Yellow Sea, East China Sea, South China Sea, and Northwest Pacific. In 2013, the China Global Operational Marine Numerical Forecast System, covering the North Pacific Ocean, North Indian Ocean, polar regions, and global, commenced operational service. Since 2018, the NMEFC planned to develop independently created marine numerical forecast models, and has also carried out research on intelligent forecasting technologies. In 2021, China's self-developed global ocean mass conservation model MaCOM was successfully developed and put into operational forecasting in 2022. This model features three major characteristics: quality conservation, grid diversity, and efficient heterogeneous parallel processing. The self-developed

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