



Facing to the future: Center for Ocean Mega-Science, Chinese Academy of Sciences

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Contemporary marine sciences are multi-disciplinary, ambitious, heavily funded, and possess large-scale facilities, clear indicators of Mega-Science. An overview of the world's major powers in marine science and technology suggests that these countries share clear national objectives and celebrate the intersection and integration of various disciplines, thus forming comprehensive marine research facilities that adapt to the requirements of research in Mega-Science. The Chinese Academy of Sciences (CAS) relies heavily on its Institute of Oceanology and uses "the integration of its Institute of Oceanology and its Yantai Institute of Coastal Zone Research" and "the integration of science and education" as major vectors, utilizing expedition fleets, the regional centers of fundamental instrument in marine sciences, field observing networks, and large-scale data centers as its main support, finally establishing the Center for Ocean Mega-Science (COMS), CAS in 2017. The center constitutes an innovative platform of science and technology that enables open and efficient sharing, offers an advantageous training site for elite personnel in the marine sciences, and serves as a research center with international influence, facilitating collaborative innovations domestically and abroad. The center is poised to introduce the "healthy ocean" demonstration project, the Indo-Pacific convergence zone, and marine life processes and green biological resources, developing above three core research modules comprising multi-spherical interactions. The center is committed to enhancing awareness and understanding of regional and global marine issues and developing innovative solutions, producing world-class influential results that will serve as important technological support for the implementation of domestic and international ocean strategies.