

Special Marine Protected Areas in China: An Effective Tool to Relieve the Conflict between Economic Development and Marine Conservation

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Abstract

Using Ma'an Archipelago National Special Marine Protected Area as a brief example, this article argues Special Marine Protected Areas in China is an effective tool to relieve the conflict between economic development and marine conservation, especially in the context that right to legislation is assigned to local municipal governments.

Keywords: Special Marine Protected Areas; Economic development; Marine conservation; Local legislation

Description

The term Marine Protected Areas (MPAs) include marine reserves, marine sanctuaries, marine parks, marine conversation zones, locally managed marine areas, to name a few. Many of these have quite different levels of protection, and the activities allowed or prohibited within their boundaries vary substantially too. Despite the complexities, MPAs have been widely recognized as an essential tool for combating global degradation of ocean life and increasingly used to comprehensively manage human activities impacting ocean around the world [1].

In the Chinese context, MPAs refer to two categories of marine reserves, Marine Nature Reserves (MNRs) and Special Marine Protected Areas (SMPAs). By the end of 2019, 271 MPAs including 111 SMPAs have been established in China. They totally cover around 124,000 km², accounting for 4.1% of seas under jurisdiction [2]. While the former is closer to the most protective end of the spectrum "no-take" marine reserves—areas where extractive activities are strictly prohibited, the later are multiple-use partially protected MPAs that allow extractive activities to different degrees depending on the value of protected targets. Reasonably, national SMPAs have a higher conservation goal and implement stricter conservation measures than local ones. Four types under SMPAs—Special Geographical Condition Protected Area (SGCPA), Marine Ecological Protected Area (MEPA), Marine Resource Protected Area (MRPA) and Marine Park (MP) have their respective priorities and strategies [3].

MNRs as a strict conservation tool have triggered debates regarding the right to resource exploitation. That marine biodiversity can only be conserved and restored by full closure as no-take MPAs indicate is questionable. Moreover, a strict conservation usually means people's way of life within the MPA boundary has to be sacrificed. Given that the system of ecological compensation has not been well established in China, enforcing a strict MNR is very likely to threaten the economic sustainability of local communities who heavily rely on coastal and marine resources for their livelihood. Therefore, MNR implementation faces a huge challenge when economic development is still the primary goal for local governments and people [4].

SMPAs, as a complementary for MNRs, offer a new possibility of mitigating conflicts between local development and marine conservation. The functional zonation of SMPAs makes it possible: the no-take zone shoulders the major responsibility of conservation, prohibiting any development activities; the ecological restoration zone is mainly for scientific research and practice of ecological restoration so as to lay a foundation for sustainable utilization; the sustainable use zone permits marine industries which are not harmful for marine environment and resources. Local communities can earn incomes through sustainable use of coastal and marine resources, such as ecotourism, eco aquaculture, and recreational fisheries and so on; and lastly, the reserved zone allows for adjustment depending on ecological conditions [5]. With such a zoning scheme, SMPAs are able to encourage local communities to adopt an eco-friendly mode of production and further incentivize them to participate in marine conservation with economic benefits from marine resources.

Since the first national SMPA Ximen Island was declared in Leqing of Zhejiang province in 2005, SMPAs have played an important role in protecting marine resources, increasing biomass of the ocean, and sustaining marine ecosystem services. According to the latest statistics of 'an Archipelago national SMPA, the catch of commercial fish such as little yellow croaker, hairtail, pomfret and eel in 2020 increased 70.1%, 13.4%, 7.2% and 6.8% respectively, compared to that of corresponding period last year, which was an important sign of fishery resources being restored steadily [6]. Stock enhancement program has been in operation for years in the SMPA. In 2019, 4.5 million RMB special funds was invested for the release of 670 million cultured juveniles including black sea bream, red sea bream, red-spotted grouper and six other species. With the help of vessel buyback and fishermen transfer program, many fishermen in the SMPA have turned to recreational fisheries from capture fisheries. In 2019, the annual output value of recreational fisheries reached 40.11 million RMB, four times more than that of 2010. The output value per labor was even higher with a five-time increase compared to 2010[7]. In this manner, the SMPA has been achieving the conversation goal by benefiting local communities through sustainable development of marine resources, instead of imposing unattractive conservation plans on local people.

Moreover, the advantage of SMPAs can be amplified when combined with legal measures. The revision of Legislative Law on May 15th, 2015 has greatly changed the landscape of local legislation. The right to legislation was given to municipal cities with districts. The number of local legislative subjects therefore increased from 49 to 284[8]. Zhoushan municipal government of Zhejiang Province, the local authority in charge of Ma'an Archipelago national SMPA was one of the new legislators. It's very first attempt with the new power was legislation for SMPA [9].

In Ma'an national SMPA, local residents do not heavily rely on motor vehicles. Electric scooters for daily commute and electric three-wheel trucks for production on island plus ferries between islands are quite enough. However, the rise of tourism in 2014 and 2015 stimulated a boom in car purchase for tourist pickup. The environmental carrying capacity of the islands in SMPA was threatened by the overwhelming number of motor vehicles during that period. To overcome the adverse environmental impacts of tourism, Zhoushan municipal government added "Measures of Motor Vehicle management in Zhoushan National SMPAs" to its main "Regulation of Zhoushan National SMPAs" in 2017 [10]. The Measures set limitations for motor vehicle's entry onto the islands and effectively controlled the increase of motor vehicles. Thanks to the designation of SMPA, the local government was able to improve island traffic and reduce vehicle emission through local legislation. Extra-legal measures helped to maintain tourism revenues whilst minimizing environmental damage, thus relieving the conflict between economic development and marine conservation.

In summary, SMPAs in China, which take a multiple-use management approach to marine conversation, have proved to be an effective tool for balancing between development and conservation. Notwithstanding difficulties of implementation, the potential of SMPAs as a tool for sustainable use of marine resources while restoring marine ecosystems should not neglected. China is making its fourteenth Five-Year Plan for marine ecological conservation-the very first national five-year plan in the area of marine protection [11, 12]. SMPAs should occupy a unique position in the whole landscape of

marine governance, especially in the context of strengthened legal system.

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