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THE UNIVERSITY OF HONG KONG

Press Release

HKU and international researchers promote marine fisheries reform in China - view ocean management as next front for China to compete as global sustainability leaders

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A study highlighting the challenges and opportunities of fishery management in China has just been released in a perspective piece "[Opportunity for Marine Fisheries Reform in China](#)" in the Proceedings of the National Academy of Sciences, USA, with the combined efforts of 18 international researchers all over the world, including an ecologist from the University of Hong Kong (HKU).

The scientists take Mainland China's [13th Five-Year Plan](#) as a potential platform for the promotion of marine conservation, facilitating a golden opportunity for authentic change in management of fisheries resources.

One of the co-authors, Professor Yvonne Sadovy, of the School of Biological Science and Swire Institute of Marine Science at HKU, said: "There are important lessons to be learned from this study for Hong Kong since it shares many of the same fish species and challenges of overfishing and declining fish populations. For example, we have lost many of Hong Kong's iconic species, such as the red grouper and the large and giant yellow croakers, among many others, and now must depend on importing almost all of our seafood from other countries, whereas once the city was almost self-sufficient for seafood. While not all the solutions in the study may be applicable to Hong Kong currently, some certainly are. For example, our marine protected areas should be better protected from fishing, our fish supplies should be traceable and information on their condition documented and transparent. We should also be managing fisheries in collaboration with Mainland China because many fish populations occupy large marine areas and not just Hong Kong waters. Certainly, a greater attention to our fisheries is timely as part of the Hong Kong government's commitment to local conservation and biodiversity as outlined in its recently released report:

http://www.afcd.gov.hk/tc_chi/conservation/Con_hkbsap/con_hkbsap.html – report Annex I."

As global fish stocks continue sinking to alarmingly low levels, a joint study by marine fisheries experts from within and outside of China concluded that the country's most recent fisheries conservation plan can achieve a true paradigm shift in marine fisheries management – but only if the Chinese government embraces major institutional reform.

The researchers, led by Stanford University's Ling Cao and Rosamond Naylor, examined the history of Chinese government priorities, policies, and outcomes related to marine fisheries since [China's 1978 Economic Reform](#), and examined how its leaders' agenda for "ecological civilization" could successfully transform marine resource management in the coming years.

"The goal of our research was to explore the opportunities for marine fisheries reform in China that arise from their [13th Five-Year Plan](#) and show how the best available science can be used in the design and implementation of fisheries management in China's coastal and ocean ecosystems," said Cao, a Research Scholar with Stanford's [Center on Food Security and the Environment](#) (FSE) and Shanghai Jiao Tong University.

The most recent plan provides a policy platform for the protection of marine ecosystems and the restoration of fisheries within China's exclusive economic zone – an area of coastal water and seabed to which China claims exclusive rights for fishing, drilling, and other economic activities. They found that while China has attempted to reverse the trend of declining fish stocks in the past, serious institutional reforms are needed to achieve a true shift in marine fisheries management. The authors recommend new institutions for science-based fisheries management, secure fishing access, policy consistency across provinces, educational programs for fisheries managers, and increasing public access to scientific data.

The paper emphasizes the cultural norms that underpin China's fisheries management – norms that are often overlooked and misunderstood by Western scientists. "China will follow its own cultural norms in governing its fisheries resources," observed Roz Naylor, FSE Director and William Wrigley Professor in Earth System Science at Stanford University. "Understanding cultural differences will promote a stronger international community in marine science and sustainable fisheries management."

As China accounts for almost one-fifth of global catch volume, it has made great efforts to carry out conservation and management of fisheries resources by adopting and practicing various measures over the past three decades. The government is introducing a series of new programs for sustainable fisheries and aquaculture, with greater traceability and accountability in marine resource management and area controls on coastal development. The most recent plan notably includes marine ecosystem protection as a significant component of the central government's environmental agenda.

The timing of this research comes at a unique phase in China's fisheries conservation strategy as they recently introduced specific goals for both the Ocean and Fisheries Five-Year Plans. "The Chinese government is poised to take serious action on marine ecosystem management," Cao said. "Time is of the essence."

Although the paper’s authors view China’s efforts as a signal of dedication toward furthering fisheries conservation, they hope their perspective paper helps highlight the need for true institutional reform in order to see the Chinese government’s goals realized.

“Fisheries management and resource conservation is a complex undertaking. To rebuild China's depleted fisheries, serious institutional reforms are needed. The road ahead is still long,” said co-author Yingqi Zhou from Shanghai Ocean University.

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Giant yellow croaker (Chinese Bahaba), taken in 1993 in Castle Peak Bay. In Western Hong Kong there used to be a fishery for this species but the species is almost extinct today because of overfishing and lack of management. The species only occurs in Hong Kong and Mainland China. This species is protected in Mainland China but not in Hong Kong and is an excellent example of the importance and relevance of cross-border protection initiatives. (photo credit: Cheng Tai-sing).



A few of the many thousands of fishing vessels, moored in Aberdeen, that regularly fish in Hong Kong and adjacent waters, which do not have enough fish to supply so much fishing activity. Fishing activity in these waters needs to be controlled to within the natural biological capacity of the fish populations. (photo credit: Professor Yvonne Sadovy)

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