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研究论文

太湖渔业发展及区域设置与功能定位

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摘要 渔业是太湖的重要功能之一。太湖渔业主要以自然捕捞和围网养殖为主。目前太湖自然渔业捕捞强度及东太湖湾围网养殖的超常规发展，给湖泊生物资源带来巨大影响。依据太湖生物资源现状和分布，借助太湖遥感解译图像，定位设置太湖各类生物资源恢复与保护的功能区域，包括东部的资源保护核心区、缓冲区（湿地生态景观带）和西部的生态恢复区等。其管理目标是太湖水环境、渔业资源和生物多样性及环湖湿地、自然景观的保护，加快太湖生态恢复进程，促进旅游业和渔业的健康发展，实现太湖渔业资源的有序利用和可持续发展。

关键词 太湖； 渔业； 区域设置； 功能定位

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Fishery development, regional classification and functional positioning of Lake Taihu

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Abstract Lake Taihu is the third largest freshwater lake in China, located at 119°53′45″～120°36′15E and 30°55′42″～31°31′55N with an area of 2428 km2 and the average water depth of 1.89m. It is the most typical large shallow lake in the lower reaches of Yangtze River, and plays the important roles in the watershed such as the drinking water source, flood control, fish culture, irrigation and tourism. The fishery is one of important functions in Lake Taihu， which includes fish catching and enclosure culture. In the recent twenty years, over-fishing and the large-scale expansion of the enclosure culture have significantly affected the biological resources and led to water quality deterioration in Lake Taihu. Based on the remote sense photographs of Lake Taihu, the area of aquaculture in East Taihu Bay is estimated to be 10647.02hm2 in 2003, occupied 79.25% of the total area of the Bay. Meanwhile, according to the current status, the potential yield estimates of the biological resources in Lake Taihu is 113.93 kg/hm2, i. e. total annual catch of 27662 t. Based on the nutrient budget of the lake and nutrient uptake ability of macrophytes, the suitable area of fish enclosure culture is estimated to be less than 2094hm2 in East Taihu Bay. For crab enclosure culture, the area is 3210 hm2,meanwilde a herbivorous fish culture of 281hm2 is needed for taking up the aquatic plants from crab enclosure.
The bases of fishery region classification of Lake Taihu are the lake environment, the bioresource distribution and the function. Lake Taihu can be divided into three functional regions which include the eastern core area for resource protection, the buffer area with natural wetlands, and the western restoration area. The eastern core area for resource protection includes the protection area of fish reproduction, the protection area of icefish resources, the protection area of snail and cor

bicula resources, the stocking area of fish fingerling, the protection area of biodiversity, the forbidi ng area of fishing gear fixation and the enclosure culture area, and the total area is 437.6km2. I n western wetlands and the partial area of East Taihu Bay destructed by enclosure culture, it is im portant to establish a restoration area, having an area of 282.5km2. This regional classification is t o help improve the lake’s water quality and protect the fishery resources, biodiversity, and the nat ural wetlands. In order to promote the fishery development of Lake Taihu, the ecological fisher y management countermeasures were proposed, including controlling the types of fishing gear an d fishing intensity, adjusting the fishing season, controling stocking fish species. Regarding to the e nclosure culture in East Taihu Bay, the important measures are to strictly control the scale of enclo sure culture, select right culture species, and incease the culture proportion of high valued aquati c species.and reduce the pollution from the culture. The ultimate goal of regional classification an d functional positioning of Lake Taihu is to attain rationale and sustainable utilizations of the fisher y resources in Lake Taihu.

Key words Lake Taihu fishery region division function positioning

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