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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 45025-2024

**Technical guidelines for monitoring and effectiveness
evaluation of coral reef ecological restoration**

珊瑚礁生态修复监测和效果评估技术指南

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document is proposed by the Ministry of Natural Resources of the People's Republic of China. This document is under the jurisdiction of the National Technical Committee for Marine Standardization (SAC/TC283). This document was drafted by: the Third Institute of Oceanography of the Ministry of Natural Resources, the South China Sea Institute of Oceanography of the Chinese Academy of Sciences, and the Hainan Provincial Ocean and Fisheries Science and Technology Bureau. College, Hangzhou Dianzi University. The main drafters of this document are. Zheng Xinqing, Ma Zhiyuan, Zhang Yuyang, Li Yuanchao, Huang Dingyong, Huang Hui, Chen Bin, Wu Zhongjie, Lin Rongcheng, Yu Weiwei, Lian Jiansheng and Xing Hao. Technical Guidelines for Monitoring and Effect Evaluation of Coral Reef Ecological Restoration

1 Scope

GB/T 45025-2024 gives the Chinese technical guidelines for monitoring coral reef restoration and evaluating its effectiveness. Coral restoration is the most attempted and least reliably assessed form of marine restoration: transplanted fragments survive well for a year and then fail in the first bleaching event, so a monitoring programme that stops early reports success that the reef does not have. The standard is written against that. It sets the

workflow, the collection and analysis of data, the evaluation metrics, and then the restoration monitoring itself, the indicators covering coral survival, growth and cover, the recruitment of new colonies, which is the real test of whether a reef has resumed functioning, the benthic community, the fish and invertebrate assemblages, and the physical and water quality environment, together with the station layout, the survey methods, the frequency and the duration. It then sets the effectiveness evaluation, its criteria and grading, and the report. It takes effect on 1 April 2025.

This document provides the workflow, data collection and analysis, evaluation indicators, and ecological restoration of coral reefs. Guidelines for monitoring and ecological restoration effectiveness evaluation and reporting. This document applies to the monitoring and effectiveness evaluation of ecological restoration of coral reefs and reef-building coral communities within the jurisdiction of the People's Republic of China. Work.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB 17378.3-2007 Marine Monitoring Specifications Part

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Scleractinian coral A general term for coral species in the order Scleractinia of the subclass Hexacorallia that have symbiotic zooxanthellae, calcium carbonate skeletons and reef-building capabilities.

3.2 coral reef A marine habitat composed of a combination of living corals and the skeletons of dead corals. [Source: GB/T 41339.2-2022, 3.1]

3.3 artificial reef Artificial three-dimensional structures that can provide attachment substrates and stabilize the bottom for coral larvae.

3.4 ecological baseline The state of the ecosystem before ecological restoration is implemented. [Source: GB/T 41339.1-2022, 3.3]

3.5 Use nature's self-recovery ability and take appropriate artificial assistance measures to repair degraded, damaged or destroyed ecosystems. process.

4 Seawater Analysis

GB 17378.7-2007 Marine Monitoring Specifications Part

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