

问题讨论

赤潮的分类分级标准及预警色设置

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收稿日期 2005-11-15 修回日期 2006-3-25 网络版发布日期: 2006-6-25

摘要 为便于赤潮信息的发布、统计和管理, 依据我国赤潮发生的特点初步制定了我国赤潮的分类分级及预警色划分的标准。根据形成赤潮的生物种类特性及其对人类健康和近岸水产养殖的影响, 将我国赤潮分为有毒赤潮、鱼毒赤潮、有害赤潮和无害赤潮4种类型, 考虑到我国沿海赤潮发生面积和持续时间相差巨大, 将我国赤潮分为大型、中型和小型3个级别。由此, 将我国赤潮分为12种, 并依次用不同颜色和符号代表之, 以利于在媒体上发布。在此基础上, 制定了不同类型赤潮的预警机制和管理措施, 为赤潮防灾减灾工作提供参考。

关键词 [赤潮分类](#); [赤潮分级](#); [预警色](#); [预警机制](#)

分类号 [Q179.1](#), [Q938.8](#), [X55](#)

Colors for early warning of harmful algal blooms and hazard classification and grading

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Abstract Statistics of red tides and its real time information promulgated by the relevant national office bring difficulties into red tides studies and cognition by the public due to lacking the maneuverable uniform information standard. Generally, the public pay more attention to the characteristics of red tides impacts, and its sizes, when HABs outbreaks. In order to facilitate the data statistics and management of HABs disaster as well as uniform its information publication, present paper combined historical data and state-of-arts HABs status in Chinese coast so as to build up a system for early warning of HABs and its hazard classification and grading according to the characteristics of HABs. The results of this study revealed that HABs in China can be divided into four types based on the characteristics of HABs causative species and the effects of HABs on the human health and mariculture. They are: toxic species, fish-killed species, harmful species and unarmful species. Toxic species which causes human illness includes *Alexandrium catenella*, *A. tamarens*, *A. minutum*, *Gymnodinium catenatum*, *Dinophysis acuta*, *D. acuminata*, *D. rotundata*, *Prorocentrum lima*, *Karenia brevis*, *Pseudo-nitzsbia multiseries*, *P. pseudodelicatissima*, *Gambierdiscus toxicus*, etc. Fish-killed species which has implication to mass mortality of marine fish-caged organisms contains *Karenia mikimotoi*, *Phaeocystis globosa*, *Chattonella marina*, etc. Harmful species includes *Chaetoceros* spp, *Noctiluca scientillans*, etc. Some of these organisms are not toxic but cause marine products die because of suffocation. Unharmful species which is non-toxic includes *Skeletonema costatum*, *Coscinodiscus* spp., *Mesodinium rubrum*, etc. In addition, accounting for the large differences in sizes and their duration, HABs can be divided into three grades of large, middle and small. Their sizes are: larger than 1000km², between 1000km² to 100km², and smaller than 100km², respectively. Thus, HABs occurred in Chinese coast can be clarified as 12 degrees and indicated by different colors and signs in order to facilitate publication by media. Further, the aims to mitigate HABs disaster and protect human health can be achieved by establishing the earl

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y warning system and lash-up management measure for these different kinds of HABs.

Key words [classification](#) [and](#) [grading](#) [of](#) [HABs](#) [_](#) [early](#) [warning](#) [color](#) [_](#) [early](#)
[warning](#) [mechanism](#)

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