

研究论文

流沙湾贝类养殖海域环境质量评价

王增焕, 柯常亮, 王许诺, 李刘冬

中国水产科学研究院南海水产研究所, 广东 广州 510300

摘要:

根据2008年5月至2009年2月对流沙湾贝类养殖海域渔业环境综合调查的数据,对海水环境质量的现状进行了分析讨论,综合评价了海水有机污染和营养水平,并对沉积物重金属的累积程度和潜在生态危害进行了评价。结果表明,调查海域盐度、溶解氧(DO)、化学耗氧量(COD)、无机氮(DIN)和活性磷酸盐(PO_4^{3-})呈季节性变化,其中盐度和DIN的季节变化与该海域季节性降水有关,而DO、COD和 PO_4^{3-} 的变化与浮游植物和贝类养殖有关。评价结果显示,流沙湾海域水质清洁,海水氮(N)营养盐过剩而磷(P)贫乏,属于P限制型中等富营养化海域;调查海域沉积物中砷(As)和铅(Pb)处于无污染状态,汞(Hg)和镉(Cd)处于轻度污染,铜(Cu)在部分区域处于中度污染状态;Cu、Pb、As、锌(Zn)和铬(Cr)的潜在生态危害属于轻微,Hg和Cd的潜在生态危害处于中等强度。

关键词: 海洋环境评价 生态危害 贝类养殖海域 流沙湾

Marine environmental quality assessment of shellfish culture in Liusha Bay

WANG Zenghuan, KE Changliang, WANG Xunuo, LI Liudong

South China Sea Fisheries Research Institute, Chinese Academy of Fishery Sciences, Guangzhou
510300, China

Abstract:

In base of the data of marine environmental quality of shellfish culture in Liusha Bay from May 2008 to February 2009, we comprehensively assessed the organic pollution and eutrophication of seawater, as well as the geo-accumulation and potential ecological risks of the sediments. Results show that the seasonal variation of salt and dissolved inorganic nitrogen in seawater are related with seasonal rainfall, while the dissolved oxygen, chemical oxygen demand and phosphate are related with phytoplankton bloom and shellfish culture. The assessment indicates that the seawater in Liusha Bay is clean with high nitrogen nutrients and low phosphate nutrients. The sediments have not been polluted by arsenic and lead, but slightly polluted by mercury and cadmium, and some moderately polluted by copper. The potential ecological risks of copper, lead, arsenic, zinc and chromium are slight, while those of mercury and cadmium are of medium degree.

Keywords: marine environmental assessment ecological risk sea area for shellfish culture Liusha Bay

收稿日期 2010-10-08 修回日期 2010-10-30 网络版发布日期 2011-06-05

DOI: 10.3969/j.issn.2095.0780.2011.03.0007

资助项目:

农业公益性行业科研专项(nyhyzx07-047)

通讯作者:

作者简介: 王增焕(1969-),男,硕士,副研究员,从事海洋生态环境与水产品质量安全。E-mail: zh-wang@people.com.cn

参考文献:

本刊中的类似文章

文章评论

扩展功能

本文信息

- Supporting info
- PDF(OKB)
- [HTML全文]
- 参考文献[PDF]
- 参考文献

服务与反馈

- 把本文推荐给朋友
- 加入我的书架
- 加入引用管理器
- 引用本文
- Email Alert
- 文章反馈
- 浏览反馈信息

本文关键词相关文章

- 海洋环境评价
- 生态危害
- 贝类养殖海域
- 流沙湾

本文作者相关文章

- 王增焕
- 柯常亮
- 王许诺
- 李刘冬

PubMed

- Article by Yu,C.H
- Article by Ke,C.L
- Article by Yu,H.N
- Article by Li,L.D

反馈人	<input type="text"/>	邮箱地址	<input type="text"/>
反馈标题	<input type="text"/>	验证码	<input type="text"/> 0118