地学前缘 0, () 167-178 DOI: ISSN: 1005-2321 CN: 11-3370/P

论文

新一轮全球地球化学填图:中国的机遇和挑战

1 北京大学 化学与分子工程学院, 北京 100871
2 中国地质科学院 地球物理地球化学勘查研究所, 河北 廊坊 065000
3 中国地质大学（北京） 地球科学与资源学院, 北京 100083
4 中国地质调查局, 北京 100011

摘要：

论述从1988年联合国教科文组织相继批准实施国际地球化学填图(IGCP259)和全球地球化学基准(IGCP360)项目以来,中国和欧洲在制定全球地球化学填图的方法指南及技术标准方面作出的决定性贡献。文中指出，中国的“环境地球化学监控网络及动态地球化学填图”项目、欧洲的FOREGS 地球化学基准值填图项目为全球其他国家开展类似工作提供了示范,但地球化学家预期10年内获得全球地表地球化学概貌的愿望至今未能实现。挪威和中国的地球化学家通过IAHS/ICCE正在酝酿 “Global geochemical mapping and the sediment bound flux of major world rivers”重大国际合作项目,以开展新一轮全球地球化学填图。通过国际极地年，IPY317项目首先从北极地区启动。新一轮全球地球化学填图项目计划以中国提出的“全球地球化学填图的泛滥平原沉积物采样草案”和挪威提出的“三角洲中河漫滩沉积物的采样草案”作为实施方案,因而巩固和扩大了中国地球化学填图技术在全球的优势地位。论文在分析中国面临的机遇与挑战后,建议政府主管部门对新一轮全球地球化学填图给予优先支持。

关键词： 关键词：全球地球化学填图;重金属输出通量;中国

A new round of global geochemical mapping: opportunity and challenge to China

1 School of Chemical and Atomic Engineering, Peking University, Beijing 100871, China
2 Institute of Geophysical and Geochemical Exploration, Chinese Academy of Geological Science, Langfang 065000, China
3 School of Earth Sciences and Resources, China University of Geosciences(Beijing), Beijing 100083, China
4 China Geological Survey, Beijing 100011, China

Abstract:

Since the projects of “International Geochemical Mapping (IGCP259)” and “Global Geochemical Baseline (IGCP360)” were met with approval by UNESCO in 1988, decisive contributions of working out the methodological guidance and the technical standard of global geochemical mapping have been made by China and Europe. Though demonstrations have been made by China and Europe through carrying out the projects of “Environmental Monitoring Network and Dynamic Geochemical Mapping” and “FOREG geochemical baseline mapping”, respectively, the expectation of acquiring a general picture of global geochemistry in 10 years has not yet been realized. Geochemists from China and Norway are now deliberating, through International Association of Hydrological Sciences/International Commission on Continental Erosion (IAHS/ICCE), about a major international cooperative project on “Global Geochemical Mapping and Sediment Bound Flux of Major World Rivers”, on carrying out a new round global geochemical mapping, and planning to start working first on the Arctic region under the project of the Year of Polar (IPY317). The practical plan for the Global Geochemical Mapping is based on the “Draft of Sampling Plan of Floodplain sediments” for the Global Geochemical Mapping suggested by China and the “Draft of Sampling Plan of Overbank Sediments in Deltas” suggested by Norway, thereby further strengthening the advantages of Chinese methodology in geochemical mapping. After analyzing the opportunities and challenges to China, this article suggests that the competent authorities of science and technology should take the initiative of supporting the new round global geochemical mapping.

Keywords:

Key words: global geochemical mapping; output of heavy metals; China

收稿日期 null 修回日期 null 网络版发布日期 null

DOI:

基金项目:

国家自然科学基金项目(40673066);国土资源大调查项目(200420130002，200414200011)

通讯作者:

作者简介: 成杭新(1964—),男,博士,教授级高级工程师,全球地球化学填图专家委员会委员，地球科学与信息技术专业,从事生态地球化学与地球化学勘查研究。 E mail: hangxin@vip.sina.com

---