Annual Report* of IGCP/SIDA Project 594

IGCP project short title: IMPACT OF MINING ON ENVIRONMENT IN AFRICA

Duration: 2011-2014

Project leader(s):
Professor Bohdan KŘÍBEK
Czech Geological Survey, Klárov 3130/3, 101 00 Prague 1, Czech Republic
Tel: +420-251085518, Fax: +420-724071813, E-mail: bohdan.kribek@geology.cz

Professor Benjamin Siyowi MAPANI
University of Namibia, 340 Mandume Ndumufayo Ave., Private Bag 13301, Windhoek, Namibia, Private Bag 13301, Windhoek, Namibia, Tel., Fax: +264-61-2063754. +264-61-2063791, cell: 264812987534, E-mail: bmapani@unam.na, nalolelaani@gmail.com

Professor Imasiku A. NYAMBE
University of Zambia, Directorate of Research and Graduate Studies, Box 32379, Lusaka, Zambia, Tel., Fax: 260-211-290258, E-mail: inyambe@unza.zm

Professor Ewa M. CUKROWSKA
University of the Witwatersrand, Johannesburg 2050, P Bag X3 WITS, South Africa, Tel., Fax: +27 11 717 6743, +27 11 717 6769, E-mail: ewa.cukrowska@wits.ac.za

Project Secretary: N/A

Date of submission of the report: 15-12-2011

Signature of project leader(s): Bohdan Kříbek

2. Summary of major past achievements of the project

The project began this year

3. Achievements of the project in the year 2011

In the course of the first year of the project implementation its organizational structure has been built up and the project website has been made available. An Inaugural Meeting of the project was organized and took place at the city of Kitwe in Zambia. The first meeting of the Czech group of the project with international participation was held in Prague (Czech Republic).

3.1. List of countries involved in the project (please *indicate the countries active in year 2011)


3.2. General scientific achievements and social benefits

(Meetings are not considered as scientific achievements, they should be listed under heading 3.3.)

The assessment of the impact of mining and mineral processing of copper and cobalt ores on the contamination of surface waters and sediments of the River Kafue catchment in the Zambian Copperbelt Province was made within the IGCPSIDA project 594. The results were published in the Journal of Geochemical Exploration.

Social benefits: A methodological assistance was provided to non-governmental organization Citizens for Better Environment based at the city of Kitwe. It was focused on resolving the problems linked with the impacts of mining and mineral processing of copper and cobalt ores on the environment in Zambian part of the Copperbelt.

3.3. List of meetings with approximate attendance and number of countries

Inaugural Workshop of the Czech Group of the IGCP/SIDA Project 594, Mining and the Environment in Africa, Prague, August 17, 2011 (15 participants, 6 countries: Czech Republic, Great Britain, Italy, Namibia, Poland, South Africa);

Inaugural Workshop of the of the IGCP/SIDA Project 594, Kitwe, Zambia, October 17-18, 2011 (43 participants, 9 countries: Belgium, Botswana, Burundi, Czech Republic, Democratic Republic of Congo, Germany, Namibia, Poland, South Africa, Zambia)

3.4. Educational, training or capacity building activities N/A

3.5. Participation of scientists from developing countries, and in particular young and women scientists
Inaugural Workshop of the Czech Group of the IGCP/SIDA Project 594, Prague, August 17, 2011:
Mr. Alakendra Roychoudhury, University of Stellenbosh, South Africa, Ms. Kaarina Ndalulilwa, Geological Survey of Namibia.

Inaugural Workshop of the of the IGCP/SIDA Project 594, Kitwe, Zambia, October 17-18, 2011:
Mr. Fred Banda, environmental manager, Chibuluma Mines, Mr. Célestin Banza Lubaba Nkulu, Université de Lubumbashi, Democratic Republic of Congo, Mr. Meki Chirwa, University of Zambia, Mr. Francis Imasiku, Mopani Copper Mines, Mr. Frederick Kamona, University of Namibia, Ms. Rosina Ndahafa Leonard, Geological Survey of Namibia, Mr. Benjamin Mapani, University of Namibia, Mr. Kakoma Maseka, University of Copperbelt, Zambia, Mr. Alexie Mpishi, Mopani Copper Mines, Mr. Antoine F. Mulaba-Bafubiaandi, University of Johannesburg, Ms. Kaarina Ndavindula, Geological Survey of Namibia, Mr. Gerald Nimpagaritse, International Conference on the Great Lakes Regional, Burundi, Mr. Imasiku Nyambe, University of Zambia, Mr. Alakendra Roychoudhury, Stellenboch University, South Africa, Mr. Malcom Sutton, University of Witwatersrand, Ms. Miranda Muller, University of Witwatersrand, South Africa

Postgraduate students of the University of Zambia:
Ms. Beatrice Kalonge, Ms. Beatrice Nyondo, Ms. Helen Kason Gamulelo, Ms. Charity M. Lweya, Ms. Alice Tembo, Ms. Kebby Kapika, Mr. Clement Sialungwenga, Mr. John Jitanda Muke, Mr. Dau Chandra, Mr. Japh Seuku, Mr. Emanuel Kasimbe, Mr. Lloyd Nundwe, Mr. Janis Kayumba, Mr. Michael Phiri,

Non-governmental organization “Citizens for the Better Environment”, Kitwe, Zambia: Ms. Gloria Semu (Kayula), Mr. Posiano Phiri, Mr. Jones Likokoto, Mr. Brian Chirambo, Mr. Peter Sinkamba

Women scientists: 5, students: 14 (6 women)

3.6. List of most important publications (including maps)
Distinguish between peer review literature and other (no abstracts)


Kříbek, B., Veselovský F., Malec, J., Kněsl, I., Šráček, O., Mihaljevič M., Ettler, V.
3.7. Activities involving other IGCP projects, UNESCO, IUGS or others

Members of the UNESCO/IGCP Project 594 participated in preparation of a new project AMIRA No.P1085 -Artisanal and Small-Scale Mining in Africa (AMA): finding a way forward. This project is focused on the assessment of impacts of these kinds of mining on the environment and health of the population in Africa. The major advantage of this project is the development and implementation of a series of the best practice operational and management guidelines that will assist the stakeholders to better manage the relations between ASM, MSM and LSM resulting in fair share in mineral resources gain between the community involved in ASM, the miners themselves and the society as a whole of the given country. The project was proposed by Professor Kim HEIN (Ncube-Hein) School of Geosciences, University of the Witwatersrand Johannesburg,Tel: +27 11 717 6623, Email: kim.ncube-hein@wits.ac.za and by Kriba Reddy, AMIRA International, Email: kriba.reddy@amirainternational.com, Phone: +27 11 498 7201, Fax: +27 11 498 7203

Members of the Italian, Czech and Belgian group of the UNESCO/IGCP Project 594 also participated in preparation and compilation of the project “Integration of Geological and other Environmental Information with Medical Data for a Human Exposome“. The project is intended to study and define the relationship between the human health and the environment based on so far available data and also to upgrade the quality of assessment of chemical hazards and their control. The project major priorities include: scientific and technical quality of relevant data, development and testing of new procedures for risk analysis, risk management and communication between the European and African countries. The project proposal has been submitted for approval to the European Commission within the 7th Framework Programme on Research, Technological Development and Demonstration. Coordinator of the Project: Professor Benedetto De Vivo, Universitá Federico II, Napoli, Italy, Phone: +393 92077298, E-mail: bdevivo@unima.it

4. Activities planned for year 2012

4.1. General goals

General goals of the project in 2012 are (1) to correlate and integrate the results of multidisciplinary studies performed in contaminated areas using the best contemporary procedures for statistical analysis, management and compilation of geochemical data in Africa; (2) to strengthen the capacity of African institutions in environmental geochemistry by cooperation with foreign experts and organizations, (3) to raise the public awareness about the impacts of mining on the environment and human health and, (4) to facilitate cooperation among geoscientists and medical scientists.

4.2. Tentative list of specific meetings and field trips (please list the participating countries)
The second annual meeting of the IGCP/SIDA Project 594 will be organized in cooperation with the IGCP/SIDA project 606 “Addressing environmental and health impacts in Sub-Saharan Africa”. Project leader: Professor Theo C. Davies, University of Johannesburg, E-mail: daviestheo2000@yahoo.com in Namibia together with the Training Course of Modern Methods of the Assessment of Impact of Mining on the Environment for students of the University of Namibia and for students from other African countries.

5. Project funding requested

USD 12 000 for year 2012

6. Request for extension, on-extended-term-status, or intention to propose successor project N/A

7. Financial statement ($ USD only) See certified financial statement and originals of invoices.

Additional funding in 2011: Czech Geological Survey (funding of Bohdan Kříbek’s travel to Zambia), University of Zambia (transport of students from the University of Zambia to Kitwe and back, accommodation of some students), Mopani Copper Miners (logistics and transport of participants in the post-workshop field trip to the Zambian Copperbelt).

8. Attach any information you may consider relevant

Attachments:
1. Certified financial statement and originals of invoices
2. Minutes of the Inaugural Workshop of the IGCP/SIDA Project 594 in Kitwe, Zambia
3. List of participants of the Inaugural Workshop of the IGCP/SIDA 594 in Kitwe, Zambia
4. List of extended abstracts (peer reviewed) of the Proceedings of the Inaugural Workshop of the IGCP Project 594 in Kitwe
5. List of IGCP/SIDA Project 594 Business Meeting Attendance in Kitwe, Zambia
7. Presentations of the participants of the Inaugural Workshop of the Czech Group of the IGCP/SIDA Project No. 594, Mining and the Environment in Africa, Prague, August 17, 2011