

CNR-IUGS-IGCP Italian Report

2013

Contents:

- Guidelines for submitting IGCP project proposals
- Summary report of the IGCP Italian National Committee
- Summary report of the IUGS Italian National Committee
- Ongoing and new IGCP Projects
- Review of Italian participation in IGCP projects

Earth Sciences at UNESCO under threat

At a time when UNESCO -due to a major short fall of income from member states- is forced to realize major savings, the discipline of Earth Sciences is under pressure in the organization of Place de Fontenoy. While the GeoParks Programme now has a permanent home, the International Geoscience Programme (IGCP) struggles. The IGCP, in which the International Union of Geological Sciences (IUGS) is an equal partner, is under immediate threat. IGCP has been an outstanding success for over forty years, allowing knowledge transfer in difficult times. It has benefited geoscientists from developed to emerging countries, involving many young scientists and opening opportunities and connections to them. UNESCO involvement has been an important reason for the success of IGCP, facilitating substantial complementary grants from other sources. If UNESCO funding is further reduced, IUGS alone will not be able to bear the costs for this program. The governments of Sweden, Austria and China already provide dedicated funding for the IGCP program but, while this assistance is vital, more is needed to ensure the viability of IGCP.

Italy withdraws from ICSU

The Italian National Research Council (CNR) has announced recently its withdrawal -due to financial considerations- from the International Council for Science (ICSU), the umbrella organization encompassing all major scientific unions. Italy had been a member of ICSU since 1923, when the International Research Council -i.e. the predecessor of ICSU- was founded.

IGCP Projects with Italian leaders in 2013

Project No.565 – “Geodetic Monitoring of the Global Water Cycle”. Leader: Susanna Zerbini (University of Bologna)

Project No.591 – “The Early to Middle Paleozoic Revolution”. Leader: Kathleen Histon

(see details inside)



Preface

This newsletter serves a double purpose: (i) it reports to the IGCP Headquarters at UNESCO what is the current status of the Italian involvement in the IGCP and (ii) provides the Italian geological community with information on ongoing IGCP projects and activities, in order to promote participation and dissemination of information. For these reasons, the newsletter has wide distribution within the Italian geological community.

This issue contains, among other items:

1. the Summary Report 2013 of the IGCP Italian National Committee;
2. the Summary Report 2013 of the IUGS Italian National Committee;
3. an outline of the new IGCP projects;
4. the complete list of IGCP projects active in 2013, with contact addresses of leaders and Italian coordinators.

If you have suggestions for improving this newsletter do not hesitate to get in touch with William Cavazza (william.cavazza@unibo.it).

Summary of IGCP guidelines

(full set of [guidelines](#) available online)

1. Purpose and objectives of the IGCP

The International Geoscience Programme (IGCP) - formerly International Geological Correlation Programme - is a joint endeavor of UNESCO (United Nations Educational, Scientific and Cultural Organization) and IUGS (International Union of Geological Sciences). The primary aims of IGCP are to facilitate international collaboration amongst scientists from around the world in research on geological problems, particularly between those individuals from more industrialized and those from developing countries. Through long-term joint research efforts, meetings, field trips, and workshops, IGCP aims to promote the use of geosciences in global issues.

IGCP pursues four broad objectives:

1. improving our understanding of the geoscientific factors affecting the global environment in order to improve human living conditions;
2. developing more effective methods to find and sustainably exploit natural resources of minerals, energy and ground water;
3. increasing understanding of geological processes and concepts of global importance, including an emphasis on socially relevant issues;
4. improving standards, methods and techniques of carrying out geological research, including the transfer of geological and geotechnological knowledge between industrialized and developing countries.

2. Operational policy

The objectives of IGCP are met through individual projects. The number of active projects in any given year depends on the current priorities of UNESCO and IUGS, the availability of funds, the success and progress of existing projects and the quality and merit of newly submitted proposals.

IGCP projects are approved for a period not exceeding five years. Individual projects are reviewed annually after the second year and may be terminated following review for their poor performance.

The annual allocation of support for each project depends upon its quality and, for an already funded project, upon its performance during the previous year. The financial support provided annually by UNESCO and IUGS for IGCP projects covers part of the costs of organizing and managing research, meetings, and workshops, related to the project, as well as to facilitate participation by scientists from developing countries. These limited funds provide 'seed money' to assist in the acquisition of additional funds from other sources. Past experience indicates that successful IGCP projects are able to secure significant additional funding from other sources. The actual amount of funding provided annually all IGCP projects reflects the collective decisions of UNESCO and IUGS.

IGCP projects must successfully meet the following criteria:

1. focus on high-quality science relevant to the scientific objectives of the IGCP;
2. meet a need of international importance and societal relevance;
3. emphasize interdisciplinary cooperation;
4. constitute international participation including scientists from developing countries;
5. demonstrate potential for both long-term and short-term geoscientific and/or societal benefits;
6. explicitly acknowledge the sponsorship of UNESCO, IUGS, and IGCP; and,
7. promote global geoscience visibility. For example, through the publication of scientific results using internationally recognized journals or other media.

3. Topics for IGCP project proposals

IGCP welcomes proposals on the following topics:

- (i) topics of particular interest to IGCP (as outlined in the following);
- (ii) topics defined annually by UNESCO and IUGS;
- (iii) other relevant topics in fundamental and applied geoscience.

(i) Topics of particular interest to IGCP

Geoscience of the Water Cycle

Life on Earth depends on water and its sustainable use is crucial for continued human existence. Earth's water resources include surface/ground water, ocean water, and ice. The study of Earth's water involves understanding and managing both surface and groundwater systems, including sources, contamination, vulnerability and history of water systems.

Geohazards: Mitigating the Risks

Geohazards include earthquakes, volcanic activity, landslides, tsunamis, floods, meteorite impacts and the health hazards of geologic materials. Geohazards can range from local events such as a debris slide or coastal erosion to events that threaten humankind (e.g., supervolcano eruption or meteorite impact). Earth scientists undertake research to better understand such hazards and contribute to risk reduction.

Earth Resources: Sustaining our Society

Earth resources include minerals, hydrocarbons, geothermal energy, air, and water. The future well-being of society depends on sustainable use of these resources. The environmentally responsible exploitation of these resources is a challenge for geoscience research. The progress of technological development is equally bound to this premise.

Global Change and Evolution of Life: Evidence from the geological record

Changes in the Earth's climate and of life on Earth are preserved in the rock record. Ice and dust records, terrestrial and ocean sediments, and sequences of fossil plant and animal assemblages all comprise parts of this record. Life has impacted Earth's atmosphere, oceans, and land surface. Several major extinctions have punctuated Earth's history,

associated with dramatic environmental and ecosystem change. Past environmental lessons shed light on present and future challenges.

The Deep Earth: How it controls our environment

The Earth's surface, including our habitable environment, is a product of, and controlled by deep Earth processes. The study of this environment (ranging from changes in the Earth's magnetic field to plate tectonics) using for example, geophysical and geodynamical techniques, enhances our understanding of the working of System Earth.

(ii) Topics defined annually

These are specific topics identified cooperatively by UNESCO, IUGS and the IGCP Scientific Board that are perceived to be of timely relevance in any given year.

(iii) Other relevant topics in fundamental and applied geosciences

The IGCP encourages submission of project proposals in all aspects of the geosciences, provided they meet the requirements outlined above (see list of criteria in Section 2 - Operational Policy).

4. Project proposals

IGCP project proposals may be submitted by individual scientists or by a group of scientists. The IGCP Scientific Board is ready to advise project leaders, regarding the scientific quality, content, scope, viability, budget and relevance of potential project proposals (e.g., advice regarding the inclusion of other qualified scientists, bridging to other initiatives, outputs).

Assessments of proposals for new IGCP projects (and the Annual Reports of ongoing projects) are conducted once a year by selected representatives of the IGCP Scientific Board, usually during the first half of February. Assessments are based upon the criteria and objectives of IGCP (e.g. the scientific potential and feasibility of proposals, adherence to the overall goals of IGCP, qualifications of the proposers, scientific progress of the projects, significance of their results, adherence to an approved budget and so on). Projects are ranked into one of three funding levels: high, medium, or low.

The deadline for submission and receipt of new project proposals to the IGCP Secretariat is October 15th. Each project leader must include a letter of endorsement from his or her respective IGCP or IUGS National Committee. The IGCP Secretariat will promptly inform proponents of the decisions regarding individual proposals. Proposal forms are available from the [IGCP website](#). It is strongly recommended that the proposers of a new IGCP project get in touch with the Italian IUGS-IGCP National Committee before submission.

5. Young Scientist Projects

The IGCP Young Scientist Project is a special type of IGCP Project which aims at fostering international cooperation between prospective young scientists from developing and developed countries early in their careers. It is expected that this will recruit and train young scientists to establish future cooperative projects. Proposals and projects should follow these guidelines:

- Proposers should be within 10 years of their PhD.
 - Proposers should provide a CV and include a copy of at least one international peer-reviewed publication in their field.
 - Proposers are encouraged (but not required) to find an experienced scientist as advisor to help guiding the project.
 - Proposers need to demonstrate an affiliation to a research institute, university, geological survey, or equivalent organization for the duration of the project.
 - Projects may, but do not need, to be linked to an existing IGCP project.
 - The project duration is three years; the project should involve at least three young scientists from a minimum of two countries. The principal proposer must be from a developing country.
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- The Young Scientist Project will be awarded a maximum of US\$5,000 per year.
- These funds are provided to support:
 - field meetings with at least five participants, which should including the group leaders,
 - travel to IGCP-organized or any other international scientific conference,
 - participation in training courses,
 - research equipment (max. 20% of the allocated funds).

6. Funding

IGCP is not a funding programme. The annual allocation of support for each project will depend upon its quality and, for an already funded project, upon its performance during the previous year. The financial support provided annually by UNESCO and IUGS for IGCP projects covers part of the costs of organizing and managing research, meetings, and workshops, related to the project, as well as to facilitate participation by scientists from developing countries. These limited funds (average ca. 30,000 USD for the entire length of the project) provide 'seed money' to assist in the acquisition of additional funds from other sources. Past experience indicates that successful IGCP projects are able to secure significant additional funding from other sources.

Summary Report 2013 of the IGCP Italian National Committee

1. *Name, address, telephone, fax, e-mail address of the Chairperson of the National Committee:* see back cover.

2. *Members of the Committee:* see back cover.

3. *Projects led by Italian scientists during 2013:*

- Project No. 565 - Geodetic Monitoring of the Global Water Cycle (2008-2012; OET in 2013) (Hans-Peter Plag, USA; Richard S. Gross, USA; Markus Rothacher, Germany; Norman L. Miller, USA; Susanna Zerbini, Italy; Chris Rizos, Australia)

- Project No.591 – The Early to Middle Paleozoic Revolution (2011-2015) (Bradley D. Cramer, USA; Žilvė Žigaitė, Lithuania; Thijs R.A. Vanderbroucke, France; Kathleen Histon, Italy; Renbin Zhan, China; Guillermo L. Albanesi, Argentina; Michael J. Melchin, Canada; Mikael Calner, Sweden).

4. *Projects with active Italian Working Groups:*

During 2013 Italian geoscientists were active in at least seven other IGCP projects.

5. *IGCP meetings held in Italy in 2013*

None was reported.

Summary Report 2013 of the IUGS Italian National Committee

1. Country: Italy

2. Name of IUGS Adhering Organization or National Committee:

Consiglio Nazionale delle Ricerche (CNR).

3. Name and address of person preparing form:

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4. Status of the IUGS National Committee:

The IUGS Italian National Committee is an official committee of C.N.R. (Consiglio Nazionale delle Ricerche), a public agency whose duty is to carry out, promote, spread, transfer, and improve research activities in the main sectors of knowledge growth and of its applications for the scientific, technological, economic and social development of the country. C.N.R. is also the organization representing Italy in all major international scientific organizations and unions.

5. Number of people on Committee or body for IUGS:

Ten. The members of the Committee are: Dr. Marco Amanti, Prof. Attilio Boriani, Prof. Antonio Brambati, Prof. William Cavazza, Prof. Carlo Doglioni, Prof. Domenico Rio, Dr. Marco Sacchi, Dr. Pierluigi Soddu, Dr. Fabio Trincardi, Dr. Gianluca Valensise (see back cover for details).

6. Number of meetings during the year:

No official meetings were held after the two during the IGC Brisbane. Informal meetings of the members of the IUGS Italian National Committee were held at national meetings and other gatherings.

7. Major scientific activities, e.g., congresses, symposia, workshops, courses:

The CNR is the Italian national agency representing Italy within the IUGS since its foundation. Officially, the Commission promotes the participation of CNR in IUGS activities (including the IGCP), *de facto* it stimulates the participation of the entire Italian Earth sciences community.

8. Main outreach activities, e.g. primary-secondary-tertiary education, community, media, etc.

The Commission itself did not directly produce outreach activities during 2013. A program of introductory geological fieldtrips for high-school teachers and student was run in cooperation with the Italian Federation of Earth Sciences (FIST).

9. Main publications (scientific, other):

The IUGS Italian National Committee publishes in electronic format a yearly report on the International Geoscience Programme (IGCP) which is distributed to the entire Italian Earth sciences community through the Italian Federation of Earth Sciences (FIST). The report reaches over 2,000 geoscientists.

10. Major initiatives currently underway:

The Commission is committed to a new drive to stimulate the participation of Italian geoscientists in the International Geoscience Programme (IGCP) and IUGS activities at large.

11. Important activities of other geology-related academic organization(s):

The current governmental budget squeeze makes investments in new initiatives very difficult.

12. Activities/achievements reported or to be reported in Episodes and/or in the IUGS website

None.

13. Participation in IUGS bodies, programmes, joint-initiatives, or other IUGS activities:

2013 saw the end of the activities of Prof. Attilio Boriani as the Chair of the Strategic Planning Committee and Prof. Antonio Brambati as the Chair of the Finance Committee.

14. Activities related to the next IGC

During 2014 the IUGS Italian National Committee will actively promote the participation of Italian geoscientists in the IGC Capetown.

Active IGCP Projects

You are invited to visit the [UNESCO webpage](#) listing all active IGCP projects. All Italian colleagues interested in joining the projects or just wishing to receive additional information are invited to visit the relevant webpages and/or get in touch with the project leader(s).

IGCP Projects active in 2013

(30 active, 28 funded, 2 OET)

565 GEODETIC MONITORING OF THE GLOBAL WATER CYCLE

Project leaders: Hans-Peter Plag (USA), Richard S. Gross (USA), Markus Rothacher (Germany), Norman L. Miller (USA), Susanna Zerbini (Italy), Chris Rizos (Australia)

Duration: 2008-2012 (OET in 2013)

<http://www.iag-ggos.org/igcp565>

571 RADON, HEALTH AND NATURAL HAZARDS

Project leaders: Gavin K. Gillmore (United Kingdom), Robin G.M. Crockett (United Kingdom)

Duration: 2009-2013

<http://www2.northampton.ac.uk/info/200272/radon-and-health-in-the-built-and-natural-environment/1008/unescoigcp-project-571>

572 PERMIAN-TRIASSIC ECOSYSTEMS

Project leaders: Zhong Qiang Chen (Australia), Richard J. Twitchett (United Kingdom), Jinnan Tong (China), Margaret L. Fraiser (USA), Sylvie Crasquin (France), Steve Kershaw (United Kingdom), Thomas J. Algeo (USA), Kliti Grice (Australia)

Duration: 2008-2012 (OET in 2013)

<http://www.igcp572.org/>

574 BENDING AND BENT OROGENS, AND CONTINENTAL RIBBONS

Project leaders: Stephen T. Johnston (Canada), Gabriel Gutierrez-Alonso (Spain), Arlo Weil (USA)

Duration: 2009-2013

<http://www.brynmawr.edu/geology/faculty/aweil/IGCP-574/>

575 PENNSYLVANIAN TERRESTRIAL HABITATS AND BIOTAS OF SOUTHEASTERN EURAMERICA

Project leaders: Christopher J. Cleal (United Kingdom), Stanislav Opluštil (Czech Republic), Isabel van Waveren (The Netherlands), Mihai E. Popa (Romania), Barry A. Thomas (United Kingdom)

Duration: 2010-2014

<http://www.igcp575.org>

580 APPLICATION OF MAGNETIC SUSCEPTIBILITY ON PALEOZOIC SEDIMENTARY ROCKS

Project leaders: Anne-Christine da Silva (Belgium), Michael T. Whalen (USA), Jindrich Hladil (Czech Republic), Daizhao Chen (China), Simo Spassov (Belgium), Frederic Boulvain (Belgium), Xavier Devleeschouwer (Belgium)

Duration: 2009-2013

<http://www.ulg.ac.be/geolsed/MS>

581 EVOLUTION OF ASIAN RIVER SYSTEMS

Project leaders: Hongbo Zheng (China), Ryuji Tada (Japan), Peter Clift (United Kingdom), Masood Ahmad (India), Zhengxiang Li (Australia)

Duration: 2009-2013

<http://isg.nju.edu.cn/Exchange/Index.aspx>

582 TROPICAL RIVERS: HYDRO-PHYSICAL PROCESSES, IMPACTS, HAZARDS AND MANAGEMENT

Project leaders: Edgardo M. Latrubesse (Argentina), Rajiv Sinha (India), Jose C. Stevaux (Brazil), Zhonguan Chen (China)

Duration: 2009-2013

<http://www.igcp582.uem.br/>

585 E-MARSHAL: EARTH'S CONTINENTAL MARGINS: ASSESSING THE GEOHAZARD FROM SUBMARINE LANDSLIDES

Project leaders: Roger Urgeles (Spain), David Mosher (Canada), Jason Chaytor (USA), Michael Strasser (Germany)

Duration: 2010-2014

<http://www.igcp585.org>

587 OF IDENTITY, FACIES AND TIME – THE EDIACARAN (VENDIAN) PUZZLE

Project leaders: Patricia Vickers-Rich (Australia), Mikhail Fedonkin (Russia), Jim Gehling (Australia), Guy Narbonne (Canada)

Duration: 2010-2014

<http://www.geosci.monash.edu.au/precsite>

588 PREPARING FOR COASTAL CHANGE

Project leaders: Adam D. Switzer (Malaysia), Craig Sloss (Australia), Benjamin Horton (USA), Yongqiang Zong (China)

Duration: 2010-2014

<http://www.coastal-change.org>

589 DEVELOPMENT OF THE ASIAN TETHYAN REALM

Project leaders: Xiaochi Jin (China), Katsumi Ueno (Japan), Graciano Yumul JR (Philippines), Pol Chaodumrong (Thailand)

Duration: 2012-2016

<http://igcp589.cags.ac.cn/>

591 THE EARLY TO MIDDLE PALAEOZOIC REVOLUTION

Project leaders: Bradley D. Cramer (USA), Žilvė Žigaitė (Lithuania), Thijs R.A. Vanderbroucke (France), Kathleen Histon (Italy), Renbin Zhan (China), Guillermo L. Albanesi (Argentina), Michael J. Melchin (Canada), Mikael Calner (Sweden)

Duration: 2011-2015

<http://igcp591.org/>

592 CONTINENTAL CONSTRUCTION IN CENTRAL ASIA

Project leaders: Inna Safonova (Russia), Reimar Seltnann (UK), Min Sun (China)

Duration: 2012-2015

<http://www.iagod.org/igcp/>

594 IMPACT OF MINING ON THE ENVIRONMENT IN AFRICA (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)

Project leaders: Bohdan Kříbek (Czech Republic), Ewa Cukrowska (South Africa), Benjamin Mapani (Namibia), Imasiku Nyambe (Zambia)

Duration: 2011-2014 (4 years)

<http://www.geology.cz/igcp594>

596 CLIMATE CHANGE AND BIODIVERSITY PATTERNS IN THE MID-PALEOZOIC

Project leaders: Peter Königshof (Germany), Thomas J. Suttner (Austria), Iliana A. Boncheva (Bulgaria), Nadezhda G. Izokh (Russia), Phuong Ta Hoa (Vietnam), Thasinee Charoentitirat (Thailand), Johny A. Waters (USA), Wolfgang Kiessling (Germany)

Duration: 2011-2015

[Web site in process](#)

597 AMALGAMATION AND BREAKUP PANGÆA: THE TYPE EXAMPLE OF THE SUPERCONTINENT CYCLE

Project leaders: J. Brendan Murphy (Canada), J. Duncan Keppie (Mexico), Cecilio Quesada (Spain), Bill Collins (Australia)

Duration: 2011-2015

http://www.wix.com/declan_15/test

598 ENVIRONMENTAL CHANGE AND SUSTAINABILITY IN KARST SYSTEMS (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)

Project leaders: Zhang Cheng (China), Augusto Auler (Brazil), Jiang Yongjun (China), Martin Knez (Slovenia), Bartolome Andreo-Navarro (Spain), Yuan Daoxian (China), Chris Groves (USA)

Duration: 2011-2014 (4 years)

<http://igcpkarst.com/>

599 THE CHANGING EARLY EARTH (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)

Project leaders: Jaana Halla (Finland), Kent C. Condie (USA), Roberto Dall'Agnol (Brazil), Mudlappa Jayananda (India), Martin J. Van Kranendonk (Australia), Hugh Rollinson (UK), Gary Stevens (South Africa), Jin-Hui Yang (China)

Duration: 2011-2014 (4 years)

<https://sites.google.com/a/helsinki.fi/early-earth-tectonics/>

600 METALLOGENESIS OF COLLISIONAL OROGENS (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)

Project leaders: Zengqian Hou (China), David Leach (USA), Jeremy Richards (Canada), Richard Goldfarb (USA)

Duration: 2011-2014 (4 years)

<http://igcp600.cags.ac.cn/en/>

601 SEISMOTECTONICS AND SEISMIC HAZARDS IN AFRICA (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)

Project leaders: Mustapha Meghraoui (France), Vunganai Midzi (South Africa), Atalay Ayele (Ethiopia), Djillali Benouar (Algeria)

Duration: 2011-2014 (4 years)

<http://eost.u-strasbg.fr/~igcp601/Documents.html>

604 GROUNDWATER AND WETLANDS IN IBERO-AMERICA

Project leaders: Emilia Bocanegra (Argentina), Gerdon Cardoso (Brazil), Emilio Custodio (Spain), Teresita Betancur (Colombia), Marisol Manzano (Spain)

Duration: 2011-2015

<http://www.mdp.edu.ar/hidrogeologia/IGCP604/description.php>

606 ADDRESSING ENVIRONMENTAL AND HEALTH IMPACTS OF MAJOR AND ABANDONED MINES IN SUB-SAHARAN AFRICA (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)

Project leaders: Theo C. Davies (South Africa), Benjamin Mapani (Namibia)

Duration: 2011-2014 (4 years)

[Web site in process](#)

608 ASIA-PACIFIC CRETACEOUS ECOSYSTEMS

Project leaders: Hisao Ando (Japan), Xiaoqiao (China), Daekyo Cheong (Republic of Korea), Sunil Bajpai (India)

Duration: 2013-2017

<http://igcp608.sci.ibaraki.ac.jp/>

609 CRETACEOUS SEA-LEVEL CHANGES

Project leaders: Michael Wagreich (Austria), Silke Voigt (Germany), Svetlana Zorina (Russia), Xiumian Hu (Russia), Julleh Jalalur Rahman (Bangladesh), Ismail Omer Yilmaz (Turkey)

Duration: 2013-2017

[http://geologie.univie.ac.at/home/news/news-singleview/article/igcp609-new-project-on-sea-level-changes-in-a-greenhouse-climate/?tx_ttnews\[backPid\]=122050&cHash=b60b5355dce0ee38ddcda976972270d8](http://geologie.univie.ac.at/home/news/news-singleview/article/igcp609-new-project-on-sea-level-changes-in-a-greenhouse-climate/?tx_ttnews[backPid]=122050&cHash=b60b5355dce0ee38ddcda976972270d8)

610 FROM THE CASPIAN TO MEDITERRANEAN: ENVIRONMENTAL CHANGE AND HUMAN RESPONSE DURING THE QUATERNARY

Project leaders: Valentina Yanko-Hombach (Ukraine), Nikolay Panin (Romania), Olena Smyntyna (Ukraine), Mehmet Celal Özdoğan (Turkey), Tamara Yanina (Russia)

Duration: 2013-2017

<http://www.avalon-institute.org/IGCP610/index.php>

616 TECTONIC, PALEOCLIMATIC, LANDSCAPE EVOLUTION OF CENTRAL AFRICA (SPONSORED BY THE SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY)

Project leaders: Boniface Kankeu (Cameroon), R.O. Greiling (Germany), Jürgen Runge (Germany)

Duration: 2012-2014 (3 years)

[Web site in process](#)

618 PALEOCLIMATE INFORMATION OBTAINED FROM PAST-RECHARGED GROUNDWATER

Project leaders: Dioni I. Cendón (Australia), Jianyao Chen (China), Jason J. Gurdak (USA), Ofelia Tujchneider (Argentina), Emerit. Sylvi Haldorsen (Norway), Ir. M.J (Martine) van der Ploeg (The Netherlands), Rein Vaikmäe (Estonia), Roland Purtschert (Switzerland) Najiba Chkir Ben Jemâa (Tunisia)

Duration: 2012-2016

<http://www.gw-gps.com/>

624 ONEGEOLOGY

Project leaders: Alex Malahoff (New Zealand)

Duration: 2013-2017

<http://www.onegeology.org/>

628 THE GONDWANA MAP PROJECT

Project leaders: Renata de Silva Schmidt (Brazil)

Duration: 2013-2017

[Web site in process](#)

Italian Contributions to the IGCP - Year 2013

The following are short descriptions of the Italian participation in the IGCP during 2013. This year's report includes only the summaries of the activities of IGCP projects led by Italian geoscientists. All material included was received by December 31, 2013. Some Italian involvement in IGCP projects may not be documented in this publication because the National IGCP Committee of Italy did not receive the relevant information. If you are participating in an IGCP project –as project leader or participant- and your name does not appear in this list get in touch with W. Cavazza (see address and contact numbers on the back cover). All Italian colleagues interested in joining the projects or just wishing to receive additional information are invited to get in touch with the relevant project leader(s) or with the Italian coordinators.

Project No. 565 – **Geodetic Monitoring of the Global Water Cycle** (2008-2012) (OET 2013)

Project leaders:

H.P. Plag (USA), R.S. Gross (USA), M. Rothaker (Germany), N.L. Miller (USA), S. Zerbini (Italy), C. Rizos (Australia)

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40127 Bologna, Italy
Tel.: +39-051-209 5019
Fax: +39-051-209 5058
E-mail: susanna.zerbini@unibo.it

Website: geodesy.unr.edu/igcp565/about_igcp/

List of countries involved in the project:

United States of America, Canada, Germany, Italy, Australia, Korea, South Africa.

Project No. 591 - **The Early to Middle Paleozoic Revolution** (2011 – 2015)

Project leaders:

Bradley D. Cramer (USA), Živilė Žigaitė (Lithuania), Thijs R.A. Vandenbroucke (France), Kathleen Histon (Italy), Renbin Zhan (China), Guillermo L. Albanesi (Argentina), Michael J. Melchin (Canada), Mikael Calner (Sweden)

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Website: www.igcp591.org

Project Summary

The Early Ordovician to Early Devonian interval contains several of the most significant paleoclimate and paleobiological events in Earth history. This interval of Earth history also contains the acme and amelioration of the Early Paleozoic Ice Age, which provides an important historical analogue for researchers of modern climate change. Additionally, this interval contains the roots of the invasion of life onto land. The Earth did not go quietly into the

Middle Paleozoic and the primary research objective of IGCP 591 – *'The Early to Middle Paleozoic Revolution'* is to investigate this dynamic and important interval in the history and evolution of life and our planet.

Main Project Activities 2013

The 2013 annual meeting was held in June in Lund (SWEDEN) with field excursions to Sweden and Norway. Related Abstract volume and fieldguides were published. A proceedings volume will be published in GFF.

A regional field meeting and excursion were held in July 2013 in Mendoza (ARGENTINA) together with the 3rd International Conodont Symposium. Related Abstract volume and fieldguides were published.

Symposia were held at the following conferences: STRATI (Lisbon, Portugal, July 2013), GSA (Denver, USA, October 2013).

A thematic set of papers arising from the IGCP 591 Symposium held at the IGC in Brisbane (2012) was published: Special Issue (November 2013): Pre-Mesozoic climates and global change. *Palaeogeography, Palaeoclimatology, Palaeoecology*, vol 389, pp. 136. Edited by K.Histon, V.Tewari, M.Melchin

Details of all these activities may be found on the project website.

2013 Report of the IGCP Executive Secretary Dr Patrick McKeever

Introduction

UNESCO is the only UN Organization with a mandate in interdisciplinary research and capacity-building in geology and geophysics and the nearly 42 years of cooperation with IUGS through the International Geoscience Programme (IGCP) reflect the Organization's long-term commitment in disseminating and sharing geological knowledge between developed and developing nations in the service of society. The IGCP was founded in 1972 as a joint endeavour of UNESCO and IUGS (International Union of Geological Sciences) and its primary aims are to facilitate international collaboration amongst geo-scientists, particularly between those from more industrialized and those from developing countries. Through long-term joint research efforts, meetings, field studies, and workshops, IGCP promotes the use of geosciences in global issues including, but not limited to, sustainable development, the health and safety of humanity and the reduction of the adverse effects of natural disasters and resource extraction.

In 2013, IGCP operated through supporting of 30 peer-reviewed projects in the five IGCP themes: Earth Resources, Global Change, Geohazards, Hydrogeology and Deep Earth. Project participants came from 125 countries, including 32 African countries, Africa being one priority of UNESCO.

Countries are: Algeria, Angola, Argentina, Armenia, Australia, Austria, Bangladesh, Barbados, Belarus, Belgium, Bolivia, Botswana, Brazil, Bulgaria, Burundi, Cambodia, Cameroon, Canada, Central African Republic, Chad, Chile, People's Republic of China, Colombia, Costa

Rica, Croatia, Cyprus, Czech Republic, Democratic Republic of Congo, Denmark, Dominican Republic, Ecuador, Egypt, Eritrea, Estonia, Ethiopia, Fiji, Finland, France, Germany, Ghana, Greece, Guatemala, Hungary, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Kenya, Republic of Korea, Kuwait, Kyrgyzstan, Latvia, Lebanon, Libya, Lithuania, Madagascar, Malawi, Malaysia, Mali, Malta, Mexico, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, the Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Puerto Rico, Republic of Congo, Romania, Russia, Rwanda, Saudi Arabia, Senegal, Serbia, Sierra Leone, Singapore, Slovakia, Slovenia, Solomon Islands, South Africa, Spain, Sri Lanka, Sudan, Sweden, Switzerland, Syria, Taiwan of China, Tajikistan, Tanzania, Thailand, Timor-Leste, Tunisia, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States of America, Uruguay, Uzbekistan, Venezuela, Vietnam, Zambia, Zimbabwe

Information on IGCP projects 2013

In 2013 21 projects received financial support as well as seven projects under Sida (Swedish International Development Cooperation Agency). Two projects were On Extended Term (OET). Due to the overall funding agreement between Sida and UNESCO, the funds of 2014 needed to be allocated before end of December 2013. Therefore the Sida projects were invited to submit their final project meetings before end 2013. These funds are earmarked to profit to scientists from Sida prioritized countries (Africa, Iran, Bolivia, Arab countries).

IGCP Projects according to their year of termination:

2013: 565 (OET), 571, 572 (OET), 574, 580, 581, 582 (five plus two OET)

2014: 575, 585, 587, 588, 594 (Sida), 598 (Sida), 599 (Sida), 600 (Sida), 601 (Sida), 606 (Sida), 616 (Sida) (four plus seven Sida projects)

2015: 591, 592, 596, 597, 604 (five)

2016: 589, 618 (two)

2017: 608, 609, 610, 624, 628 (five)

Statistics on past IGCP projects

In 2013, in order to prepare a comprehensive process of evaluating IGCP future orientations, the IGCP Secretariat has been carrying out a statistical study covering past IGCP project annual reports during 4 time periods (1981-1982, 1991-1992, 2001-2002, and 2011-2012) which were studied to analyse the evolution in IGCP project topics changes in for example region of study, participating countries, involvement of developing countries and gender equality. We would like at this point to acknowledge with great thanks the professional work provided by Dr Katrien Heirman who during her time as a Post Doc in UNESCO contributed essentially to raising and evaluating these data. The results of this survey will be studied and analysed at the end of January 2014.

Survey of the added value of the IGCP name and seed funding

A short online survey was recently been built to understand the added value of the IGCP name and IGCP seed funding to scientific research and collaboration projects. IGCP project leaders of the past 5 years were contacted to complete this survey and were asked to answer a set of questions concerning this topic. The results of this survey will be studied and analysed at the end of January 2014.

Finances

Funds to support IGCP project workshops were coming from IUGS and UNESCO, while UNESCO has continued to successfully raise funds for this purpose from Sida - the Swedish International Development Cooperation Agency, and the Chinese National Commission. During the difficult past two years at UNESCO due to dramatic reduction in its budget of 30% essentially contribution from the UNESCO Emergency fund (158,000 USD) permitted the programme to hold the two statutory Scientific Board meetings and support 34 projects over

the past two years period. The projects were also supported with the added funds from IUGS (140,000 USD), as well as the Chinese National Commission for UNESCO (2x20,000 USD). The average project support was 6,000 USD of seed funding. Funding from Sida (about 100,000 USD annually) was used to support 7 projects, among those 4 dedicated to geological problems in Africa with support at twice the average level. Special additional appropriations from the Australian National IGCP Committee and IUGS in 2012 contributed to the successful hosting of the IGCP 40th anniversary event and to publish the IGCP book summarizing 40 years of "Tales Set in Stone".

In 2013 a total of 28 IGCP projects received support, out of which 5 were new accepted IGCP projects. 7 projects received financial support from Sida through individual contracts with UNESCO.

Funding status of IGCP Projects in 2013 and recapitulation finances (1988 to 2013)

Year	UNESCO	IUGS + USA	Total	Number of Projects			Average per project
				Overall	Funded	OET*	
Financial figures in US\$1,000 units							
1988	173.3	104.0	277.5	53	50	3	5.5
1989	143.1	109.9	253.0	55	50	2+3	5.0
1990	185.0	121.0	306.0	61	54	6+1	5.6
1991	185.0	137.0	322.0	59	55	3+1	5.8
1992	170.0	137.0	307.0	56	50	5+1	6.1
1993	173.0	147.2	320.2	60	56	4	5.7
1994	190.3	137.0	327.3	54	50	4	6.5
1995	197.7	143.5	341.2	53	51	2	6.6
1996	199.8	130.0	329.8	56	49	7	6.7
1997	204.0	55.0	259.0	53	45	8	5.8
1998	205.0	90.0	295.0	49	40	9	7.4
1999	190.0	90.0	288.0	43	40	3	7.2
2000	187.7	90.0	277.7	45	40	5	6.9
2001	184.4	95.0	279.4	41	37	4	7.5
2002	170.0	95.0	265.0	39	33	4	8.0
2003	180.4	95.3	275.7	42	37	5	7.5
2004	180.5	95.5	276.0	39	37	2	7.5
2005	163.0	95.0	258.0	48	47	1	5.5

Year	UNESCO	IUGS	Total	Number of Projects			Average per project
				Overall	Funded	OET *	
2006	135.5	61.5	198.0	44	40	4	4.9
2007	162.0	58.5	220.5	47	44	2	5.0
2008	105.0	60.0	165.0	38	33	5	5.0

Year	UNESCO	China / IYPE	IUGS	Total	Number of Projects			Average per project
					Overall	Funded	OET *	
2009	91.5	20.0 / 50.0	28.0	189.5	37	30	7	6.6
2010	76.5	20.0	84.0	180.5	31	21	10	8.6
2011	85.0	20.0	70.0	175.0	29	27	2	6.3
2012	72.0 (S)			72.0 (S)	(+6 Sida)			12.0
	50.0	11.0	70.0	131.0	20	22	1	5.9
	74.0 (S)			74.0 (S)	(+7 Sida)			10.6
2013	45.0	20.0	70.0	135.0	21	23	2	6.4
	120.0 (S)				(+7 Sida)			9.1
	116.0 (S)				(+ 7 Sida)			10.6

* OET - on extended term (a sixth year of IGCP membership granted without funding)

Proposals received in 2013

Global Change		
630	Permian-Triassic climatic and environmental extremes and biotic response , Zhong-Qiang Chen (China), Thomas Algeo (USA), Margaret Fraiser (USA), Steve Kershaw (UK), Jinnan Tong (China), Sylvie Carsquin (France), Michael Benton (UK), Guang Shi (Australia), Charles Henderson (Canada), Arne Winguth (USA), Paul Wingall (UK), Kunio Kaiho (Japan), Ghulan Bhat (India), Yuri Zakharov (Russia)	Global Change
631	NEOgene low-latitude shallow-water marine ECOSystems: consequences of the different histories of regional systems for future responses , Juan Braga (Spain), Atike Nazik (Turkey), Francesca Bosellini (Italy), Jorge Ledesma Vazquez (Mexico)	Global Change
632	Continental Crisis of the Jurassic: Major Extinction Events and Environmental Changes within Lacustrine Ecosystems , Jingeng Sha (China), Vivi Vajda (Sweden), Paul E. Olsen (USA), Emma Samuel Msaky (Tanzania), Mohammed Et-Touhami (Morocco), Olena Shevchuk (Ukraine), Hamish Campbell (New Zealand), Wolfram M. Kürschner (Norway)	Global Change
Geohazards		
633	A global project to promote the use of seismology as an educational tool , Paul Denton (UK), John Taber (USA), Nathalie Balfour (Australia), Tom Blake (Ireland)	Geohazards
634	Natural hazards related to active tectonics and changing climate in the Andes of central Chile and Argentina , Sergio Sepúlveda (Chile), Stella Moreiras (Argentina), Luisa Pinto (Chile), José Mescua (Argentina), Diego Araneo (Argentina), Maximiliano Viale (Chile), Felipe Leyton (Chile), Sergio Ruiz (Chile), Oliver Korup (Germany), Martin Mergilli (Austria)	Geohazards

Conclusions

The past 42 years of IGCP have demonstrated how UNESCO, in collaboration with IUGS, plays an important role in facilitating the exchange and advancement of geoscience knowledge which is essential for the future of modern society. Since 1972, IGCP has brought together many thousands of Earth scientists from around the world. IGCP projects have been very successful in establishing international research teams, often including early career scientists, while producing high-quality scientific data utilizing a multidisciplinary approach which is essential for creating a more sustainable future. In February 2012 the IGCP celebrated its 40th anniversary with a colloquium and exhibition at UNESCO Headquarters, accompanied by the publication of a book in three languages. The book, "Tales set in Stone", celebrates the 40 years with a selection of examples of IGCP projects on the 5 IGCP topics linking society and Earth Science.

Considering that the IGCP has a limited budget, and given the current financial constraints, it is encouraging to see the continued impact of IGCP collaborative projects. In order to further maximize this impact, IGCP support is increasingly earmarked to help scientists from developing countries. IGCP allows scientists to benefit from the cooperative spirit generated under the umbrella of UNESCO. IGCP continues to evolve so that it can remain relevant in a fast changing world and assist in enhancing synergies between geosciences and other disciplines to help solve some key issues facing modern society.

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CNR-IUGS-IGCP Italian National Committee

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A Reminder:

If you participate in an IGCP Project do not forget to submit a short report by December 15th, 2014, to be included in the next issue of the IGCP Italian Report. The report should be <1,500 words long and should include the following information:

- number, title and duration of project;
- leader(s) and affiliation(s);
- name and affiliation of Italian correspondent;
- description of Italian involvement in the project during the year 2014 (including research interests and results, participation and organization of meetings, etc.);
- publications authored by Italian participants during the year 2014.