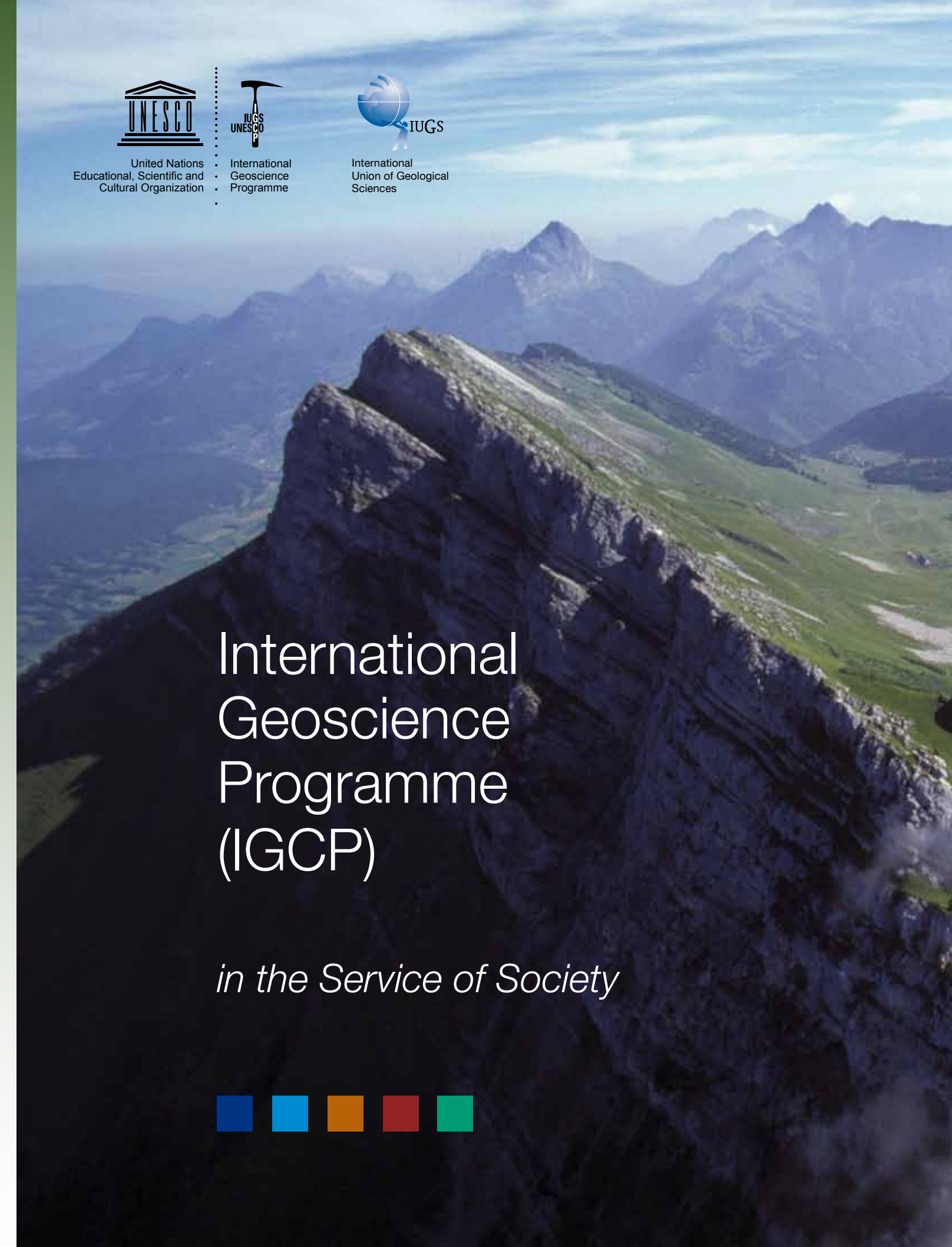
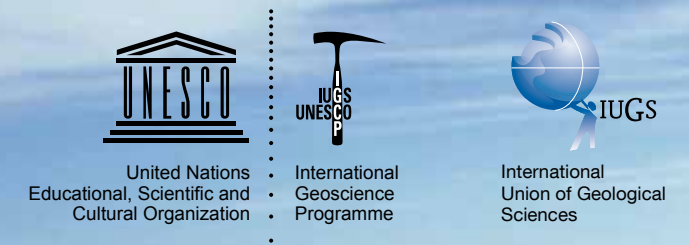


## For more information

<http://www.unesco.org/new/en/natural-sciences/environment/earth-sciences/>

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# International Geoscience Programme (IGCP)

*in the Service of Society*

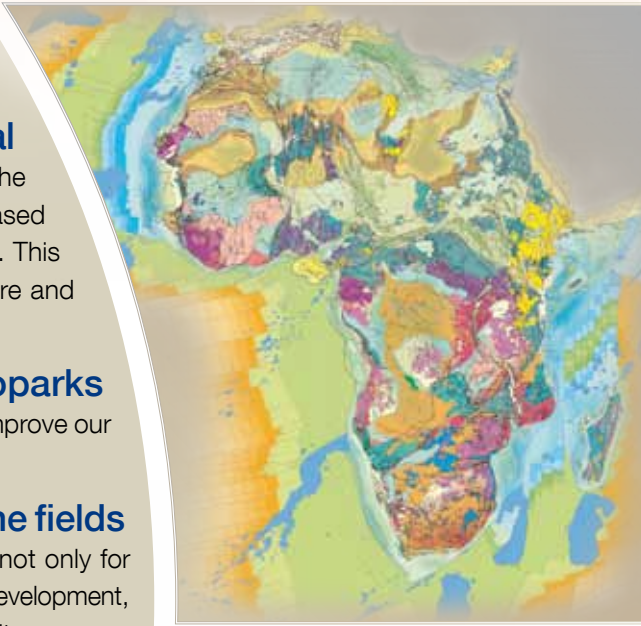


## UNESCO

The **United Nations Educational, Scientific and Cultural Organization** (UNESCO) works to advance peace and security around the world by creating the conditions for genuine dialogue between nations based on respect for shared values and the dignity of each civilization and culture. This dialogue centres on various topics in the field of education, science, culture and communication.

UNESCO supports the **IGCP programme** and the **Global Geoparks Network**, both of which promote international cooperation designed to improve our understanding of the Earth system while serving society.

These activities address interdisciplinary research and capacity-building **in the fields of geology and geophysics**. This provides better information not only for scientists but also for decision-makers to plan for sustainable socio-economic development, hazard mitigation, safeguarding the environment and protecting geological heritage.



## IUGS

The **International Union of Geological Sciences** (IUGS) is one of the largest and most active non-governmental scientific organizations in the world. Since its founding in 1961, IUGS has been a member of the International Council for Science (ICSU). With 121 national members, IUGS promotes and encourages the study of geological problems, especially those of world-wide significance, and supports and facilitates international and interdisciplinary cooperation in the Earth sciences.

IUGS supports broad-based scientific studies relevant to the entire Earth system, and the application of the results to preserving Earth's natural environment using all natural resources wisely, while improving the prosperity of nations and the quality of human life. IUGS works towards strengthening public awareness of geology and advancing geological education in the widest sense.

[www.iugs.org](http://www.iugs.org)



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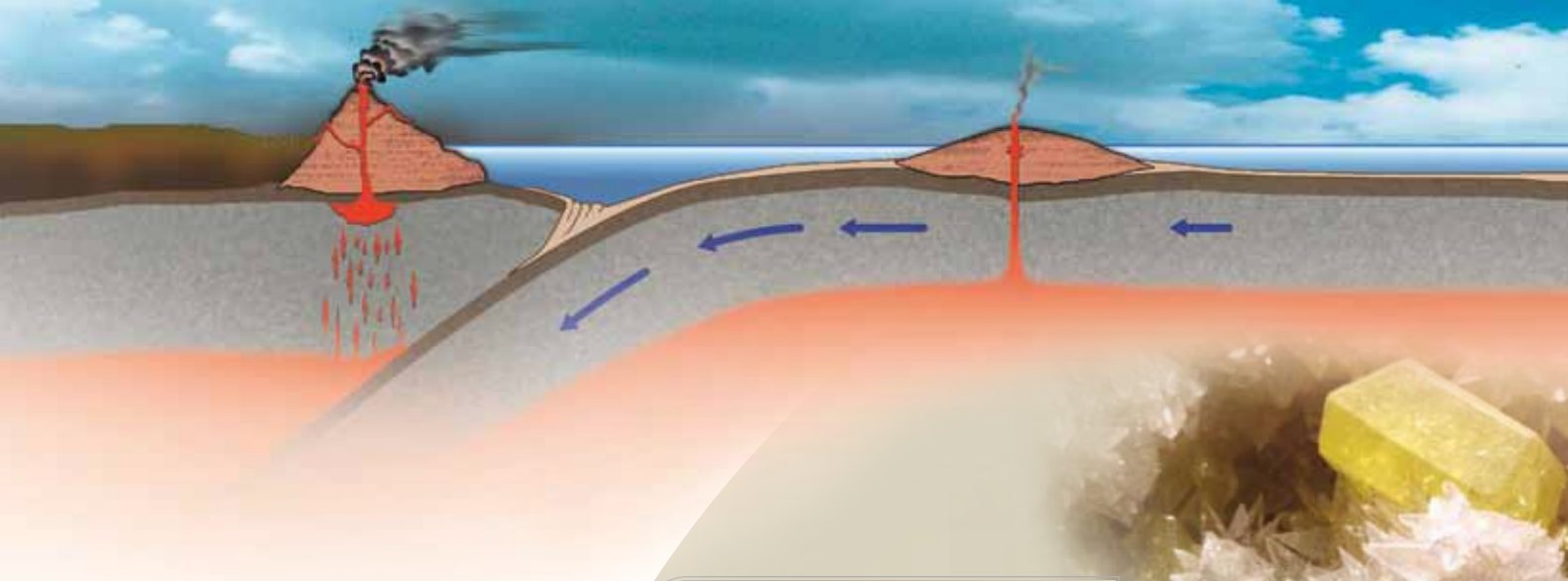
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## What is IGCP?

The **International Geoscience Programme (IGCP)**, a joint initiative of UNESCO and IUGS, fosters international and interdisciplinary geoscientific research in the service of society. Scientific quality and the extent of international and multidisciplinary cooperation are of utmost importance in the selection of successful IGCP projects.

IGCP aims to facilitate communication and exchange among scientists by bringing together different disciplines and countries on issues of common interest that:

- ▶ increase our understanding of the geological processes affecting the global environment in order to improve human living conditions;
- ▶ develop more effective methods to find and sustainably exploit natural resources, energy and groundwater;
- ▶ improve standards, methods and techniques to carry out geoscience research, including the transfer of fundamental and applied knowledge between developed and developing countries.

IGCP helps to bring together scientists from around the world, and provides them with seed money, typically between US\$ 5,000 and 10,000 per year for a maximum duration of five years. Since its creation in 1972, IGCP has supported 335 projects in about 150 countries.



## IGCP's main themes

### 1. GLOBAL CHANGE AND EVOLUTION OF LIFE: EVIDENCE FROM THE GEOLOGICAL RECORD

Changes in the Earth's climate and the evolution of life are preserved in the rock record. Ice and dust records, terrestrial and ocean sediments, and sequences of fossil plant and animal assemblages all contribute to our knowledge of global environmental change. Several major extinctions associated

with dramatic environmental and ecosystem changes have punctuated the Earth's history, and life itself has impacted upon the Earth's atmosphere, oceans and land surface. Such past environmental lessons shed light on present and future challenges.

### 2. GEOHAZARDS: MITIGATING THE RISKS

Geohazards include earthquakes, volcanic activity, landslides, tsunamis, floods, meteorite impacts and the health hazards posed by geological materials. Geohazards range from local events such as debris slides and coastal

erosion to those that threaten the whole of humankind, such as a supervolcano eruption or meteorite impact. Research by Earth scientists improves our understanding of such hazards and contributes to risk mitigation.

### 3. HYDROGEOLOGY: 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 and groundwater, ocean water, and ice. The study of the Earth's water involves

understanding and managing both surface and groundwater systems, including sources, contamination, vulnerability and the history of water systems.

### 4. EARTH RESOURCES: SUSTAINING OUR SOCIETY

The sustainable use of Earth resources, including minerals, hydrocarbons, geothermal energy and water is vital for the future well-being of society. Environmentally responsible

exploitation of these resources is a challenge for geoscience research; technological advances are equally bound by this premise.

### 5. GEODYNAMIC CONTROL OF OUR ENVIRONMENT

Our habitable environment at the Earth's surface is linked and controlled by processes occurring deep within the Earth. Earth scientists use, *inter alia*, geophysical techniques to study deep Earth processes ranging from changes in the Earth's magnetic field to plate tectonics

to understand better the Earth as a dynamic planet. Those processes are also relevant to natural resource exploration, distribution and management of groundwater resources, and the study and mitigation of natural hazards such as earthquakes.

## Special Focus on Young Scientists

The IGCP "Young Scientist Projects" support international cooperation between young scientists from developing and developed countries early in their careers. These projects must be led by researchers who have completed their PhD within 10 years and can demonstrate an affiliation to a research institute, university, geological survey or equivalent organization. Project proposals must be within one the main IGCP themes.

The aim of this project type is to recruit and train young scientists to establish future cooperative projects. Project duration is three years and involves at least three young scientists from a minimum of two countries, the principal proposer being from a developing country. The Young Scientist Project will be awarded a maximum of US\$ 5,000 per year.

## Criteria and Relevance

Project proposers should identify the possible societal relevance of their work, address the challenge of capacity-building in developing countries, and emphasize education and training, including a focus on under-represented groups.



## Evaluation

IGCP projects must successfully meet the following criteria:

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

