



United Nations
Educational, Scientific and
Cultural Organization



International
Geoscience
Programme

INTERNATIONAL GEOSCIENCE PROGRAMME

OPERATIONAL GUIDELINES

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1. INTRODUCTION

The International Geoscience Programme (IGCP) is a joint endeavor of UNESCO (United Nations Educational, Scientific and Cultural Organization) and IUGS (International Union of Geological Sciences), within the International Geoscience and Geoparks Programme of UNESCO (IGGP).

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 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.

IGCP is an international and multidisciplinary programme. It covers different fields in the Earth sciences and complements other UNESCO and IUGS scientific programmes. It supports interaction with disciplines such as hydrological, ecological, oceanographic, atmospheric and biological sciences. IGCP has proven to be a very successful and cost-effective way of promoting sustainable development by enhancing geoscientific knowledge and expertise in developing countries.

The structure of the IGCP is detailed within the Statutes of the International Geoscience and Geoparks Programme, as adopted by the 38th General Conference of UNESCO in November 2015 (38 C/Res.23). This document outlines the operational guidelines for the implementation of the programme.

2. THE BASIC CONCEPTS

2.1 IGCP within UNESCO's International Geoscience and Geoparks Programme

IGCP sits within UNESCO's International Geoscience and Geoparks Programme (IGGP), as the scientific arm of UNESCO's work on Earth Sciences. UNESCO is the only UN organization with a mandate in geoscience; IGCP is its cornerstone.

2.2 Objectives

IGCP pursues four broad objectives:

- ◆ Improving our understanding of the geoscientific factors affecting the global environment in order to improve human living conditions;
- ◆ Developing more effective methods to find and sustainably exploit natural resources of minerals, energy and groundwater;
- ◆ Increasing understanding of geological processes and concepts of global importance, including an emphasis on socially relevant issues; and,
- ◆ Improving standards, methods and techniques of carrying out geological research, including the transfer of geological and geotechnical knowledge between industrialized and developing countries.

2.3 Implementation

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.

3. OPERATIONAL POLICY

3.1 Background

The success of the Programme and individual projects is the result of the dedication of project leaders and the enthusiasm, support, and participation of geoscientists from around the world. Projects often build upon existing activities within participating countries, and attract additional funds from governmental and other agencies.

Project proposers should identify the possible societal relevance of their work, address the challenge of capacity-building in developing countries, emphasize education and training, including a focus on under-represented groups (*e.g.* youth, women, *etc.* especially from developing countries).

3.2 Duration

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

3.3 Financial support

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 (not for the research itself), meetings and workshops related to the project, as well as to facilitate participation by female, young scientists and/or scientists from developing countries. In general, IGCP funds cannot be used for items such as data gathering (*e.g.*, field and laboratory expenses). Moreover, the allocated sum should not be used exclusively to cover the travel expenses of project leaders. 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 to IGCP projects reflects the collective decisions of UNESCO and IUGS.

3.4 Evaluation

UNESCO and IUGS jointly appoint the members of the IGCP Council and Scientific Board. Individual IGCP proposals and Annual Reports are assigned to thematically appropriate members of the Scientific Board for initial evaluation of their scientific merit and relevance to IGCP objectives. The members of the IGCP Council then collectively consider the initial evaluations and prioritize applications for funding. The priority themes are determined and agreed upon by the IGCP Council, IUGS and UNESCO.

4. CRITERIA

4.1 An IGCP Project must

- ◆ 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/or societal benefits;
- ◆ Include capacity building workshops or activities and/or educational trainings, especially focused towards young scientists and scientists from the developing world
- ◆ 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 scientific journals, but also other forms of more informal media (e.g. website, internet access to database, TV programs, exhibits, public briefings for decision makers).

4.2 Priority Themes of IGCP project proposals

IGCP welcomes proposals on the priority themes of particular interest to IGCP, themes defined annually by the IGCP Council, UNESCO and IUGS, plus other relevant topics in fundamental and applied geoscience.

4.2.1 Priority Themes currently of particular interest to IGCP

Geodynamic: Control of 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.

Global Change: 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.

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.

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/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.

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.

4.2.2 Topics defined annually

The IGCP Council may wish to issue a call under a particular theme.

4.2.3 Other relevant topics in fundamental and applied geoscience

The IGCP Council reserves the right to consider proposals that do not fit under the five priority themes previously mentioned.

4.3 Young Scientist Projects

The IGCP Young Scientist Project 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 including a full publication list, which should contain at least one international publication in their field.
- ◆ Proposers are encouraged (but not required) to find an experienced scientist as advisor to help guiding the project, however the number of advisors should be limited to 1 or 2 and should definitely not be equal or exceed the number of young scientist project leaders.
- ◆ 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 should involve at least three young scientists from a minimum of two countries. The principal proposer must be from a developing country.
- ◆ These funds are provided to support:
 - field meetings with at least five participants, which should include 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)

5. THE INSTITUTIONAL STRUCTURE AND FUNCTIONS

The IGCP consists of four Bodies as described in the Statutes: International Geoscience Programme Bureau, International Geoscience Programme Council, Scientific Board, and Secretariat.

5.1 International Geoscience Programme Bureau

The IGCP Bureau will consist of five members: the Chairperson, the Vice-Chairperson and the Rapporteur of the IGCP Council. The Director-General of UNESCO and the Secretary-General of IUGS or their representatives shall be *ex officio* members of the IGCP Bureau without the right to vote.

Its duties will be:

- ◆ To make the final decisions on IGCP project proposals and levels of funding;
- ◆ To hold joint coordination meetings as required with the Bureau of the UNESCO Global Geoparks.

The report of the sessions of the IGCP Bureau will be circulated to the IGCP Council and to Member States and Associate Member States of UNESCO.

The IGCP Bureau shall adopt its own rules of procedure.

5.2 International Geoscience Programme Council

The IGCP Council shall be assisted in its scientific duties by a Scientific Board established for this purpose jointly by UNESCO and IUGS on the recommendation of the IGCP Council.

The IGCP Council shall be composed of six ordinary members (one chair and five theme leaders), with the right to vote, appointed by mutual agreement by the Director-General of UNESCO and the President of the IUGS. The Director-General of UNESCO and the Secretary-General of the IUGS or their representatives shall be *ex officio* members of the IGCP Council without the right to vote.

Ordinary members appointed to the IGCP Council shall be high-level experts actively engaged in scientific research related to the objectives of the IGCP, taking into account an equitable geographical distribution and gender equality. They shall serve in a personal capacity, not as representatives of their respective states or any other affiliated entities. They will be required to ensure that they have no conflict of interest and that they will not seek or accept instructions from governments or other authorities.

Ordinary members of the IGCP Council shall be appointed for a term of four years, renewable once. Every two years, half the membership of the IGCP Council shall be renewed. When appointing the initial members of the IGCP Council, the Director-General of UNESCO shall indicate those whose initial term shall expire after two years.

The IGCP Council shall be responsible for advising the Director-General of UNESCO and the President of IUGS on the strategy, planning and implementation of the IGCP and specifically

- ◆ Supervising the implementation of IGCP from the organizational and from the scientific points of view;
- ◆ Studying proposals concerning developments and modifications of the programme;
- ◆ Recommending scientific projects of interest to IGCP member countries;

- ◆ Coordinating international cooperation in the framework of IGCP;
- ◆ Assisting in the development of national and regional projects related to IGCP;
- ◆ Recommending any measures that may be required for the successful implementation of the programme;
- ◆ Coordinating IGCP with related international programmes.

The IGCP Council shall meet at least once a year at the invitation of UNESCO and the IUGS. The meetings of the IGCP Council shall, unless the IGCP Council decides otherwise, be held in public.

After each session, the IGCP Council shall present a report on its work and its recommendations to the IGCP Bureau. The report will be circulated to IUGS, Member States and Associate Member States of UNESCO.

The IGCP Council shall submit a report, on the progress of the IGCP, for each session of the General Conference of UNESCO, as part of a joint report of the IGCP, and shall report annually to the Executive Committee of IUGS.

The IGCP Council shall adopt its own rules of procedure.

5.3 Scientific Board

The IGCP Council shall be assisted in its scientific duties by a Scientific Board established for this purpose jointly by UNESCO and IUGS on the recommendation of the IGCP Council. As stated in the Statutes, the IGCP Council shall define the terms of reference of the Scientific Board. All members of the Scientific Board are selected from the nominations submitted by IGCP National Committees, UNESCO Secretariat, National UNESCO Commissions, active IUGS adhering organizations and/or National Committees, Organizations affiliated to IUGS and from other organizations financially contributing to IGCP. Selection of all Scientific Board members is the responsibility of the IGCP Council while respecting scientific expertise, gender and geographic representation. All Scientific Board members are appointed for a term of four years and are eligible for an appointment of a second term as determined by the IGCP Council.

The functions of the Scientific Board shall be to evaluate project proposals in terms of their scientific merit, their financial needs, their economic and social interest and their appropriateness to the general scope of the programme, and to make recommendations concerning them to the IGCP Council. The IGCP Council shall define the terms of reference of the Scientific Board.

5.4 Secretariat

The secretariat for the IGCP shall be provided by UNESCO and by IUGS, if the latter so desires, and shall furnish the necessary services for all sessions of the IGCP Council and of its IGCP Bureau.

The Director-General of UNESCO shall take the steps required for the convening of the sessions of the IGCP Council.

5.5 IGCP National Committees

National Committees have an advisory role in the IGCP. The primary aim of IGCP National Committees is organization and coordination of IGCP-related research and outreach in the country. The Committee promotes cooperation in the areas of research and education in geosciences at the national level and worldwide.

National Committees should be composed as broadly as possible of representative national bodies and organizations, while reflecting the mainstreams of national Earth science research, both in basic and of applied sciences. The Committee can be established by and hosted at variety of governmental and non-governmental organizations such as a National Academy, University, a Geological Survey, a Geological Society, a Ministry, industry and/or other professional bodies. Creation of IGCP National Committees is open to all UNESCO Member States. National Committees have no voting power but representatives may participate during the open session of the annual IGCP meeting.

The IGCP National Committee should establish permanent connections with the geoscience community in the country, in order to disseminate information about IGCP activities and related events on a national and international scale. In addition, the IGCP National Committee should cooperate with other national committees related to international geoscience. If funding is available, the Committee provides financial support to the national working groups and individuals actively participating in IGCP projects. The Committee can arrange and support IGCP events (meetings, field trips etc.) in the country. The Committee is suited to give advice to the National Academy as well as national and regional Geological Surveys on formulation of policy in geosciences at national and international levels in line with the IGCP and IUGS-UNESCO strategies. The IGCP National Committee should establish a website and/or Newsletter for effective distribution of IGCP-related information to the national geoscientific community. Contacts with media and policy-makers are desirable in order to help build public awareness of the vital importance of geosciences both in terms of long term sustainable energy and resources strategies, hazards, and everyday life. Connection with IGCP National Committees from other countries would be helpful in order to coordinate joint actions related to the IGCP.

IGCP National committees are invited to present a comprehensive annual report to the Secretariat each January containing information on membership, committee activities, forthcoming events, and training facilities connected with IGCP, financial situation and support to IGCP projects, and recommendations on IGCP.

New national committees under development shall seek support from its National Commission to UNESCO, IUGS National Committees and government bodies related to geoscience and education. Before establishment, a proposed IGCP National Committee shall send its candidature to the Secretariat at UNESCO for discussion and ratification by UNESCO and IUGS.

Each IGCP National Committee should inform their respective National Commission to UNESCO about any IGCP activities in their respective country.

6. THE APPLICATION PROCEDURE

6.1 Project proposals

IGCP project proposals, following the latest IGCP report format, may be submitted by individual scientists or by a group of scientists. If the latest format is not used the proposal will be sent back immediately to the project proposers. The Scientific Board and IGCP Council 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, etc.).

6.2 Assessments

The deadline for submission and receipt of new project proposals to the Secretariat is **15 October**. Each project leader must include a letter of endorsement from his or her respective IGCP or IUGS National Committee. The Secretariat will promptly inform applicants of the decisions regarding individual proposals.

Assessment of proposals for new IGCP projects and the Annual Reports of ongoing projects is conducted once a year first electronically by the Scientific Board and then in-person during the annual IGCP meeting by the IGCP Council. 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. This ranking is used to determine distribution of available funds as described in section 8 below.

7. PROJECT STRUCTURE AND ACTIVITIES

7.1 Leadership and Responsibilities

Project leadership is identified as per the proposal. IGCP projects preferably should be managed by more than one leader, ideally with leaders and co-leaders from less developed countries. The project leaders are the primary liaison with the Secretariat, UNESCO, and IUGS.

Successful IGCP projects clearly define their working structure, leadership and work plan emphasizing the internal interdisciplinary nature.

Scientists participating in a project on an individual basis should keep their respective IGCP and IUGS National Committees, as well as National Commissions to UNESCO informed about progress.

7.2 Merging projects

Project proposals may aim at similar problems or be closely related to existing projects. In such cases, the IGCP Council may recommend merger of projects to project leaders. The project structure should therefore be flexible enough to incorporate new participants and new directions for research as appropriate on an equitable basis.

7.3 Extension of project activities for a sixth year

At the end of five years, the IGCP Council may recommend to IUGS and UNESCO a one-year extension for certain projects. Such IGCP **“On Extended Term” (OET)** projects function without additional funding from IGCP. Such projects will continue to provide the Secretariat and IUGS with a brief annual report. They will retain the right to use the IGCP logo.

8. FUNDING

All new and ongoing IGCP projects are evaluated annually by the IGCP Council according to their progress and scientific merit (low-medium-high). All new projects receive funding for the first year based on the same criteria mentioned above. The IGCP Council submits a composite prioritized list of the projects to the Secretariat. The final allocation of available funds to individual projects is subsequently determined collaboratively by the IGCP Bureau.

Payments will be made as appropriate through the IUGS Treasurer, the Secretariat or their respective UNESCO field offices upon approval and endorsement of the complete work plan by the Secretary. To be given financial support, project leaders are required to submit to the Secretariat, no later than two months before the date of the execution of the project meeting, a document containing detailed information on the annual work plan; date and venue of meetings(s); name, institute, and country of participants to be given financial support; bank data for money transfer.

Certain conditions must be met in order to conform to the funding requirements:

- ◆ The allocated sum can only be used for travel and subsistence cost if the funds go to invited participants from developing and underprivileged countries or young scientists attending workshops, special sessions, field conferences, etc., that are organized by the project. The IGCP Council and Scientific Board looks with disfavour on project leaders who use the allocated sum exclusively to cover their own travel expenses.
- ◆ Secretariat/administrative expenses should not exceed ten per cent of the total allocation.
- ◆ The allocated IGCP funds cannot be used for the costs of research, including (but not limited to) the following: data gathering, such as field work, laboratory analyses, sample acquisition and preparation, shipping costs, any kind of salaries, laboratory or field equipment and consumables, drilling costs, publications costs (such as page charges, color inserts, etc.). Thus, IGCP grants (which are intended for networking and capacity building) should not be confused with typical research grants.
- ◆ As a rule, funds allocated for the given year cannot be carried over to the following year.
- ◆ All project related outputs (publications, presentations, etc.) must clearly show the logo of the IGCP and that UNESCO and IUGS are the financial sponsors.

A detailed financial statement must accompany the Annual Report.

9. REPORTING

Annual Report forms, along with the results of the project assessment following the annual meeting of the IGCP Council, are sent out to project leaders by the Secretariat. The Annual Report, which will be according to the latest IGCP report format, is the basis for the assessment of an IGCP project and the subsequent allocation of funds (high, medium, low). If the latest format is not used the proposal will be sent back immediately to the project leaders. Project leaders must submit their Annual Report electronically to the Secretariat and simultaneously to the IUGS Permanent Secretariat and to their National Committees, where they exist, before **1 December**. Projects submitting incomplete Annual Reports, therefore not fulfilling all IGCP project criteria, will receive automatically an OET status. They will be granted one year to fulfil these criteria. If they fail to do so in their next Annual Report, the project will be automatically terminated. Failure to submit an Annual Report before the deadline will result in automatic OET status of the project. Under no circumstances are delays to this deadline permitted.

Annual reports and other documentation are used for the scientific evaluation by the Scientific Board.

The Annual Report provides a concise account of activities for the preceding year including, but not limited to, events (e.g. meeting theme, date, location, number of participants, etc.), research activities (e.g. field and laboratory studies, etc.), training (e.g. workshop and short course topics, location, date, etc.), details of proposed budget and expenses (names of recipients, receipts), publications and other accomplishments and future plans. Project leaders should clearly document and provide examples how IGCP, UNESCO and IUGS were recognized and credited in all IGCP project related activities. There should be a clear focus on scientific achievements in the annual reports. Meetings and conferences are not considered as results.

The Annual Reports provide the basis for summaries used by the Secretariat, UNESCO, and IUGS for other purposes benefiting the global geoscience community.

Upon termination of a project after its final year of activity, leaders must submit a Final Report that is detailed and concise. In addition to scientific achievements, the final report should show how the work plan has been implemented and indicate any practical applications of the conclusions.

10. PUBLICATIONS AND ACKNOWLEDGMENT

The success of an IGCP project should be clearly illustrated by presentation of its achievements at international meetings and through publication in internationally recognized media. Apart from the Annual Reports, it is expected that the results of IGCP projects will be published in the regular media, as either monographs, books, correlation charts or as reviews and individual papers in peer-reviewed international scientific journals. Additionally, each project is obliged to publish at least one paper in the IUGS journal "EPISODES". Project leaders should strive to involve TV, Internet and press media to disseminate findings that are of interest to the general public.

All IGCP projects must clearly recognize and acknowledge the support of IGCP and, as mentioned above, the financial support of UNESCO and IUGS. IGCP projects must maintain a regularly updated website, linked to the IGCP homepage and others (e.g. IUGS).

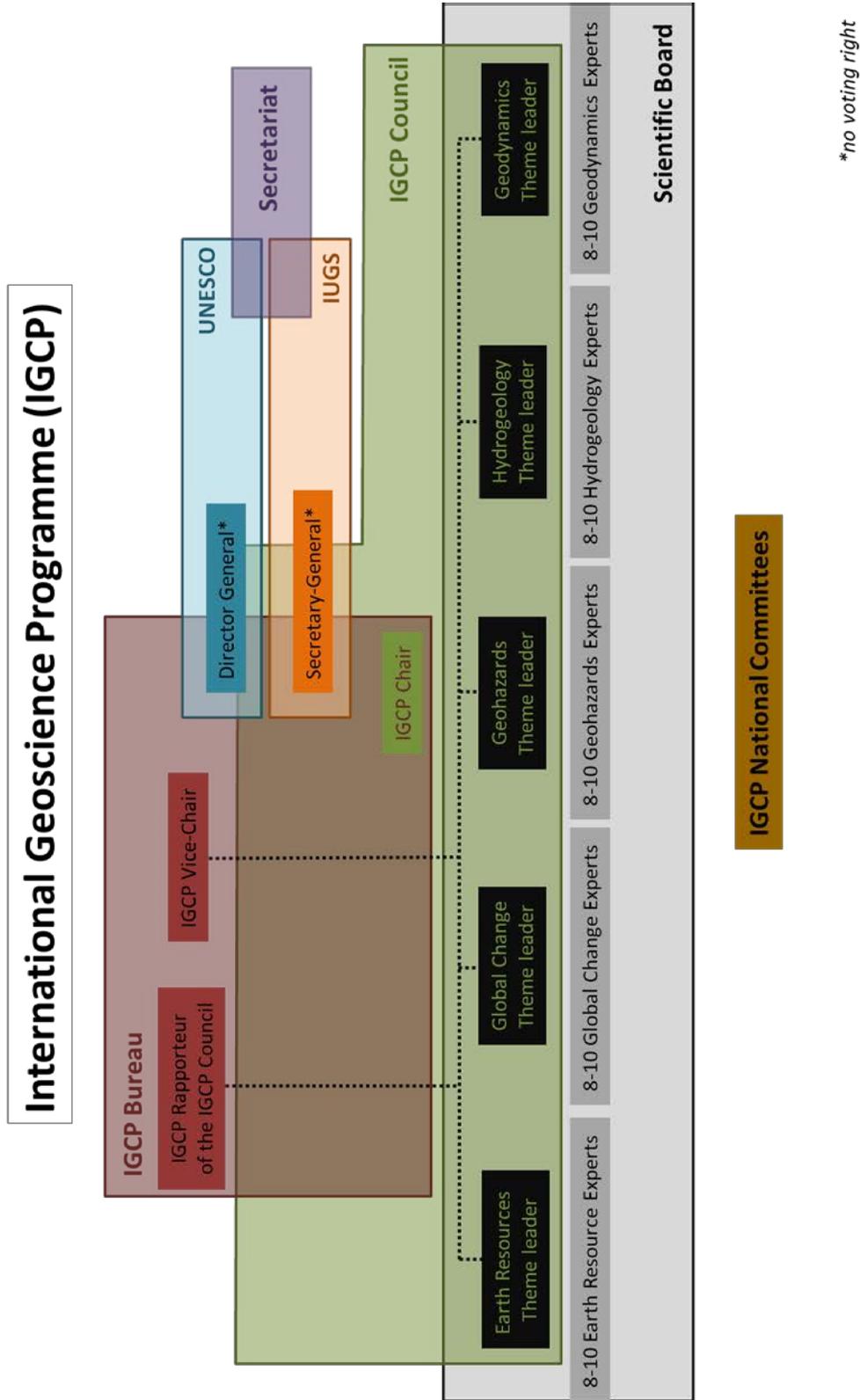


Figure 1: International Geoscience Programme structure chart