

Memorandum of Understanding

On the **execution**

of the

**International Continental Scientific Drilling Program
(ICDP)**

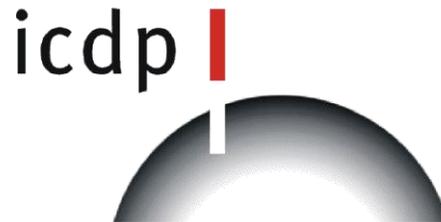
between the

XYZ (X),

and the

**Helmholtz Centre Potsdam
GFZ German Research Centre for Geosciences,
as a governmentally funded, Public Law Foundation
of the State of Brandenburg, Germany,**

20XX



The XYZ (hereinafter “X”) and the Helmholtz Centre Potsdam, GFZ, German Research Centre for Geosciences (hereinafter “GFZ”),

- I) recognizing that scientific drilling is an indispensable tool in modern Earth Science research as it provides a unique means of obtaining exact, fundamental and globally significant knowledge of the origin, evolution, structure, composition and processes of the Earth’s crust and of many parts of System Earth;
- II) further recognizing that an International Continental Scientific Drilling Program, involving both shallow and deep drilling at sites carefully chosen throughout the world, is critically needed for a better understanding of such diverse problems with societal relevance as:
 - the physical and chemical processes responsible for earthquakes, volcanic eruptions, landslides, and optimal technologies for mitigating their adverse effects
 - the manner in which Earth’s climate has changed in the recent past and the reasons for such changes
 - the effects of meteorite impacts on life and environment
 - the nature of the deep biosphere and its role in material cycles and the evolution of life on Earth
 - the formation and evolution of sedimentary basins
 - the fundamental physics of plate tectonics and heat, mass and fluid transfer through Earth’s crust
 - the distribution and formation of mineral deposits and hydrocarbon resources in diverse geologic settings;
- III) considering the common interest amongst geoscientists worldwide to work together in joint projects where scientific drilling is a critical technology;
- IV) stressing the objectives and goals defined in the Science Plan developed at the International Conference ‘Unravelling the Workings of Planet Earth’ (held in Potsdam in 2013) and focusing on the R&D themes
 - Active Faults and Earthquakes
 - Global Cycles and Environmental Change
 - Heat and Mass Transfer
 - The Ubiquitous Hidden Biosphere
 - Cataclysmic Events – Impacts Craters and Process

do, therefore, understand as follows:

Article 1 – Purpose and Multinational Participation

The “Charter for Scientific Investigation” of the International Continental Scientific Drilling Program (ICDP) is given in Annex A.

As funding agency X supports ICDP and both parties encourage additional international participation in ICDP through MoUs with other national or international organizations, funding agencies, and countries.

Article 2 – Organizational Structure and Management

- (1) The constituent bodies of ICDP are
 - the Executive Committee (EC),
 - the Assembly of Governors (AOG) and
 - the Science Advisory Group (SAG).
- (2) The GFZ serves as the Executive Agency for ICDP and provides the Executive Director (ED). The Executive Agency will provide operational and administrative support for the ICDP through the Operational Support Group (OSG). It is formed and located within, and managed by the GFZ. Responsibilities of the OSG are defined in Annex B.
- (3) Expenditures of ICDP funds by the Executive Agency should be approved by the Assembly of Governors (AOG) through an Annual Program Plan and budget elaborated by the Executive Committee (EC). The Science Advisory Group (SAG) is charged with the task of reviewing proposals and recommending pursuant actions to the Executive Committee. Details concerning the role of each body are laid out in Annex C.

Article 3 – Participation Rights

- (1) Each participant (country or group of countries and / or other institutions) may appoint one representative to the Assembly of Governors (AOG) as well as to the Executive Committee (EC). AOG and EC will meet at least once annually.
- (2) Operational activities of the ICDP base on unsolicited scientific proposals submitted by scientists from participating countries. To facilitate long-term planning and encourage others to join the ICDP, the AOG may also authorize consideration (but not funding) of

proposals from scientists of countries not having bilateral MoUs if the AOG believes these countries are giving serious consideration to participation in the ICDP.

Article 4 – Funding and Financial Issues

- (1) X intends to provide funding for the overall scientific planning, operation, and management of the ICDP in the amount of ???,000 US Dollar per annum, subject to availability of funds. The annual financial contribution is to be paid to the Executive Agency and will be commingled to provide the base funding for the ICDP. The annual contribution is expected to be paid in US Dollars for an initial period of five years. Payments should be made against yearly invoices.
- (2) Either Participant may agree to provide equipment, facilities and / or other assets to the ICDP in addition to the above contributions. The contributing Participants will retain ownership of such equipment, facilities or other assets unless they indicate otherwise. It is understood that, the ICDP will use and manage the assets.
- (3) Each Participant will bear the costs of its own scientific and administrative activities conducted under this MoU.
- (4) The Executive Agency should provide an annual audited report to the AOG, which shall provide an accounting of the funds provided by the Parties.
- (5) This MOU is not intended to be legally binding under domestic or international law.

Article 5 – Duration and Discontinuation

- (1) Cooperative activities pursuant to this MoU are expected to begin MONTH DD, YYYY and continue for an initial period of five years. It is expected that this MoU will automatically be extended for five years at a time if not discontinued earlier.
- (2) Either Participant may discontinue its participation in the cooperative activities outlined in this MoU and should endeavor to provide one year's written notice to the other Participant.

Article 6 – Amendment

This MoU can be modified or amended only by mutual written consent.

Article 7 – Resolution of Conflicts

The Participants will attempt in good faith to resolve any controversy or claim arising out of, or relating to, this MoU.

Signed in two originals (English language)

**For the Helmholtz Centre Potsdam
GFZ German Research Centre for Geosciences**

**For the XYZ,
Country**

Prof. Dr. Niels Hovius
Scientific Executive Director

Dr. Name Last Name
Function, XYZ

Date:

Date:

and

and

Dr. Stefan Schwartz
Administrative Executive Director

Date:

Date:

For the ICDP

Prof. Dr. Marco Bohnhoff
Executive Director

Date:

Annex A: Charter for Scientific Investigation

Scientific drilling retrieves the otherwise inaccessible rock record of tectonic, climatic, and biological cycles from the present day back into deep time. The International Continental Scientific Drilling Program (ICDP), organized by an international consortium, provides infrastructure for scientific drilling on the Earth's continents including their continental shelves. It welcomes proposals from international teams of scientists to investigate sites of global significance and socio-economic relevance. Proposals undergo confidential review of scientific merit and are selected on the basis of their scientific quality and impact. Through these activities ICDP puts excellent scientific ideas into practice to better understand the workings of planet Earth, natural hazards, and the resources that sustain humanity.

1. ICDP consortium memberships are established through Memoranda of Understanding that form partnerships between the Helmholtz Centre Potsdam and nations or institutions worldwide, thus committing funds that help form the basis of ICDP activities.
2. ICDP promotes equal opportunity and participation in all of its activities regardless of extraneous criteria (including race, sex, age) not directly related to the ability to carry out tasks and duties within the ICDP program.
3. ICDP encourages the submission of project proposals from the geoscientific community (bottom-up approach) on topics which address the objectives described in the program's guiding documents, the ICDP Science Plan. The current science plan is entitled *Unravelling the Workings of Planet Earth, Science Plan for 2014-2019*.
4. ICDP support of a project is not one of full sponsorship, instead following the principle of comingled funding. It encourages and assists scientists in gathering additional financial support.
5. In practice, proposals to ICDP are normally submitted in two phases: a workshop proposal, and a drilling proposal. Workshop proposals seek financial support to assemble an international team, refine the scientific objectives, and prepare engineering and management plans. Drilling proposals contain the full research plan for the drilling project.
6. The proposals are reviewed by three ICDP panels: the Science Advisory Group, which is an independent body that provides a thorough review of the science and makes recommendations to the Executive Committee, responsible for financial and logistical affairs, which then recommends a course of action to the Assembly of Governors, which provides governance and financial approval.
7. A proposal that receives support (financial and/ or logistical) by ICDP is considered to be a viable project within the ICDP program and must follow the guidelines outlined in the document *ICDP Primer: Planning, Managing, and Executing Continental Scientific Drilling Projects*, to be found on the ICDP website. For example, drilling campaigns supported by ICDP must be environmentally compatible, and carried out in accordance with accepted protocols.
8. Following approval of a drilling proposal, the Operational Support Group negotiates a funding agreement for each funded proposal and jointly develops a schedule for the drilling program.
9. ICDP policies, procedures, summaries of funded projects, and documentations of events and procedures are openly available to the public within the limits of the program's confidentiality policies for proposals, samples, and data. ICDP will provide open access to all project samples and data once the project participants have had a reasonable opportunity to complete their initial studies within an established moratorium period.

Jeju, South Korea June 10, 2016

Annex B: Operational Support Group

Subject to the availability of funds, the GFZ expects to provide operational support for the ICDP through the Operational Support Group (OSG) which is to be formed and located within, and managed by, the GFZ. The costs for the OSG are expected to be distributed as follows:

- GFZ will cover all costs for the staffing, salaries, benefits and direct and indirect expenses for OSG personnel
- GFZ will provide funds for office accommodation and OSG organizational overhead and general administrative expenses
- GFZ will provide funds for travel for OSG personnel conducting the general support functions for ICDP
- Costs for projects authorized by the AOG through the Long-range Plan and Annual Program Plan should be charged through the respective projects to ICDP commingled funds
- Costs for services for the PIs before acceptance of a project by the AOG are to be charged to commingled funds

The OSG expects to provide broad logistical support for the ICDP that incorporates the following support functions:

General support functions:

- Support the EC in carrying out the programmatic goals of the ICDP
- Provide secretariat functions for ED, EC, SAG, AOG
- Assist PI's in proposal preparation
- Provide technical and scientific liaison to SAG and EC

Project support functions

- Develop funding agreements for each project authorized by AOG
- Support developing the technical specifications for ICDP supported projects, including drill hole specifications, and specifications for drilling equipment and methods and the down-hole scientific equipment, tools and methods needed to accomplish the objectives of individual projects
- Support awarding and management of contracts for drilling services and operations, core recovery and provision of scientific equipment, tools or services for down-hole measurements
- Support for scientific and engineering drill-site operations and management
- Support for field facilities for core and sample description and management

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- Provide a minimal set of down-hole facilities and services
- Develop and construct essential down-hole logging not available commercially
- Provide assistance in contracting and permitting
- Provide all data collected during each project through a readily accessible data management system for ICDP projects
- Maintain databases that provide access to all data, samples and cores collected in ICDP projects

Annex C

1. Executive Committee (EC)

The EC consists of one representative of each participating country or organization. The By-laws and procedures of the EC are to be subject to the approval of the AOG.

To carry out its responsibilities the EC expects to:

- select a Science Advisory Group (SAG) composed of international experts for fundamental R&D themes so that it can provide EC with a scientific and technical review of competing proposals and recommend priorities based primarily on scientific criteria;
- assess the feasibility of the individual proposals;
- assemble SAG's prioritized recommendations into a Long-range Plan implemented through an Annual Program Plan;
- provide the AOG with a Long-range Plan and Annual Program Plan with associated budgets considering in particular feasibility and the overall funding situation;
- monitor the annual expenditure and performance for the AOG;

The EC, on its own initiative or when requested by the AOG, may make recommendations to the AOG concerning any matter requiring the approval or action of the AOG.

2. Assembly of Governors (AOG)

The AOG consists of one representative of each participating country or organization. The AOG generally oversees activities undertaken by ICDP. In particular, the AOG

- must approve all long-range plans and the Annual Program Plan and associated budget; in doing so the AOG is to take into account the decisions of the EC;
- may establish a program of corporate affiliates to ICDP under which affiliates may be entitled to participate in ICDP planning activities, to have access to materials and data collected by the ICDP, or to have other return for payment of an annual participation fee as the AOG considers appropriate. Any such participation fee is to be used for the same purpose as the annual contributions of the Parties;

- exercise such other authority or responsibilities.

Decisions of the AOG are made through a consensus process guided by the Chair who will be elected from the AOG representatives.

3. Science Advisory Group (SAG)

The SAG will be composed of internationally renowned scientists elected by the EC. SAG members will rotate through serial appointment for a period of 4 years.

Proposals submitted to ICDP will be reviewed by the SAG. Reviews will be conducted in accordance with procedures and criteria defined by the EC and approved by the AOG. The scientific priorities recommended by SAG to the EC will be the primary input into the development of both the ICDP Long-range Plan and the Annual Program Plan.