

# Memorandum of Understanding

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On the

**Membership**

of the

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

between

**XZY**

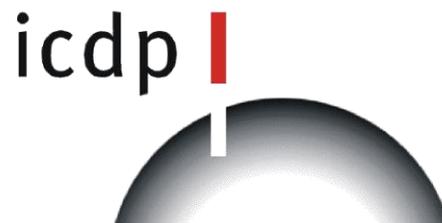
**(X),**

and the

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

**on behalf of the Members of ICDP**

**Month, 20year**



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 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, agree 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.

X joins ICDP as a member. X and GFZ will 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 shall serve as the Executive Agency for ICDP. The Executive Agency will provide operational support for the ICDP through the Operational Support Group (OSG), which will be formed and located within, and managed by the GFZ. Responsibilities of the OSG are defined in Annex B.
- (3) Expenditure of ICDP funds by the Executive Agency must 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 – Membership Rights**

- (1) Each member country, or group of countries and / or other institutions that may join together to form a single membership 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 member countries or other members. 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 will provide funding for the overall scientific planning, operation, and management of the ICDP in the amount of ???,000 US Dollar per annum. The annual membership fee shall be paid to the Executive Agency and will be commingled to provide the base funding for the ICDP. The annual contribution shall be paid in US Dollars for an initial period of five years. Payments shall be made against yearly invoices.
- (2) Either Party may agree to provide equipment, facilities and / or other assets to the ICDP in addition to the above contributions. The contributing parties will retain ownership of such equipment, facilities or other assets unless they indicate otherwise. The ICDP will have the right to use and manage the assets.
- (3) Each Party shall bear the costs of its own scientific and administrative activities conducted under this MoU.
- (4) The Executive Agency shall provide an annual audited report to the AOG, which shall provide an accounting of the funds provided by the Parties.

## **Article 5 – Duration and Termination**

- (1) This MoU shall enter into force upon signature and shall remain in force for an initial period of five years. This MoU will automatically be prolonged for five years at a time if not terminated.
- (2) Either Party may terminate this MoU upon one year's written notice to the other Party / Parties.

## **Article 6 – Amendment**

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

## Article 7 – Resolution of Conflicts

The Parties 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 X, Country**

\_\_\_\_\_  
Prof. Dr. Reinhard Hüttl  
Scientific Executive Director

\_\_\_\_\_  
Dr. Surname Lastname  
President of XYZ

Date: .....

Date: .....

and

and

\_\_\_\_\_  
Dr. Stefan Schwartze  
Administrative Executive Director

\_\_\_\_\_  
Dr. Surname Lastname  
Director

Date: .....

Date: .....

**For the ICDP**

\_\_\_\_\_  
Dr. Axel Liebscher  
Executive Chairman

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 Executive Committee of ICDP 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 Joint Research Venture 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 will provide operational support for the ICDP through the Operational Support Group (OSG) which will be formed and located within, and managed by, the GFZ. The costs for the OSG will 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 shall be charged through the respective projects to ICDP commingled funds
- Costs for services for the PIs before acceptance of a project by the AOG shall be charged to commingled funds

The OSG will 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 EC, SAG, AOG
- Assist PI's in proposal preparation
- Provide technical and scientific liaison to SAG and EC

### Project support functions

- Develop Joint Research Ventures 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
- Provide a minimal set of down-hole facilities and services

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- 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 will consist of one representative of each member country or member organization. The By-laws and procedures of the EC shall be subject to the approval of the AOG.

To carry out its responsibilities the EC will

- 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;
- report annually to the AOG on the past year's operational activities, scientific accomplishments and budget.

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 will consist of one representative of each member country or member organization and shall have authority to generally oversee 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 shall 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 membership fee as the AOG considers appropriate. Any such membership fee shall be used for the same purpose as the annual membership contributions of the Parties;
- exercise such other authority or responsibilities.

Decisions of the AOG will be made through a consensus process guided by the Chair who will be selected from amongst those countries that are top contributors (currently 1 Mill. US\$ per year). Each member country, or group of countries and / or other institutions that may join together to form a single membership, that signs an MoU may appoint one representative to the AOG.

### **3. Science Advisory Group (SAG)**

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

Proposals submitted to ICDP and accepted for evaluation 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. The development of a single project will proceed through the following steps:

- a) Letter Proposals submitted by Principal Investigator(s) (PIs) to ICDP.
- b) SAG reviews Letter Proposals and divides them into proposals that should be encouraged and those that should be discouraged. Where necessary PIs may request funds for workshops to develop full proposals.
- c) PIs prepare final, full proposal for submission to ICDP and final review.
  - 1) PIs are responsible for site surveys
  - 2) Scientists from any member country may submit proposals
  - 3) Proposals prepared independent of commingled funds

- 4) Full Proposals must include science goals, Scientific Team, site survey, permitting authority, satisfactory environmental impact review, management plan, operations plan, plans for long-term curation, etc.

(Note: at this stage the EC, through the OSG, will help (consult with) the PI(s) to work with issues and /or items unfamiliar to scientific groups.)

- d) SAG reviews proposals and assigns priority based on scientific quality and expected impact on science
- e) SAG will forward recommendation of highest prioritized proposals to EC for inclusion and decision on Long-range Plan and Annual Program Plan. Proposals should include a Project Plan that lists primary goals of the project and allows for inclusion of “Add on Science” through Announcement of Opportunity.
- f) PI(s) assemble final Project Plan that incorporates all components of project (i.e., original proposal plans and “Add on Science”).
- g) EC reviews feasibility of final Projects Plans and puts together the Annual and Long-term Program Plans in relation to additional considerations such as, permitting, environmental concerns, engineering, safety, policy issues, etc., that mitigate the practicality of achieving successful results. The final process is done in negotiation with PIs and OSG.
- h) EC incorporates projects into Annual Program Plan for AOG approval.
- i) OSG then negotiates a Joint Research Venture for each project. The JRV shall include consideration of the following items:
  - 1) Selection of drilling contractor and specifications
  - 2) Selection of drilling engineer to manage project
  - 3) Consultation with PIs to ensure primary scientific goals of project are met
  - 4) Sample management, description, description and curation
  - 5) Database archiving and distribution
  - 6) Publication requirements and schedules
  - 7) Initial Reports (detailed account of drilling, engineering, logging and sample handling and description)
  - 8) Logging services and down-hole experiments
  - 9) Each project managed with balanced consultation between PI(s), contractor and OSG

- j) The Scientific Team of each project will be approved by the EC with advice from SAG and the PIs. Scientists and technicians from all Member Countries, Sponsors and Corporate Affiliates will have the opportunity to compete for participation in any ICDP supported project. The Scientific Team will be made up of PIs and associated scientists and engineers. The PI(s) will be the individual(s) who has submitted the proposal and assembled the Scientific Team for accomplishing the major goals for the project. It is anticipated that each project will be made available, through timely announcements, as “hole of opportunity” for participation by other interested scientists. Proposals from new scientists interested in participating in a project will be coordinated through the PI(s) in consultation with OSG for scientific and technical content. The new scientists are expected to provide their own support but will be considered as part of the Scientific Team. The combined scientific and technical objectives of all investigators will be assembled by the PI(s) into a final Science Plan that will be evaluated by the EC.