

Memorandum of Understanding

On the

Membership

of the

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

between

XYZ,

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 XY, 20year



The XYZ (hereinafter “XYZ”) 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 Reports of the 1st and 2nd International Conference on Continental Scientific Drilling (held in Potsdam in 1993, and 2005 resp.) and focusing on the R&D themes
 - Climate Dynamics and Global Environments
 - Active Faulting and Earthquake Processes
 - Volcanic Systems and Thermal Regimes
 - Impact Structures and Impact Processes
 - Geobiosphere and Early Life
 - Convergent Plate Boundaries and Collision Zones
 - Mantle Plumes and Rifting
 - Natural Resources and Industry-coupled Scientific Drilling

do, therefore, agree as follows:

Article 1 – Purpose and Multinational Participation

XYZ joins the International Continental Scientific Drilling Program (ICDP) as a member. XYZ 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 A.
- (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 B.

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 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) XYZ will provide funding for the overall scientific planning, operation, and management of the ICDP in the amount of XYZ,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 XYZ, Country

Prof. Dr. Reinhard Hüttl
Scientific Executive Director

Dr. Surname Lastname
President of XYZ

Date:

Date:

and

and

Dr. Stefan Schwartz
Administrative Executive Director

Dr. Surname Lastname
Director

Date:

Date:

For the ICDP

Prof. Dr. Brian Horsfield
Executive Chairman

Date:

Annex A: Operational Support Group

Subject to the availability of funds, the GFZ will provide operational support for the ICDP through the Operational Support Group (OSG) that will consist of a minimum number of staff and 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

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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 B

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 SAG composed international experts in the R&D themes to assist the EC by providing a scientific and technical review of competing proposals and recommending priorities based on scientific quality, importance of topic, expertise in Scientific Team, etc.
- assess the feasibility of the individual proposals
- assemble Science Advisory Group's prioritized recommendations into a Long-range Plan implemented through an Annual Program Plan
- provide the AOG a Long-range Plan and Annual Program Plan with associated budgets considering in particular feasibility and 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 shall have authority to generally oversee activities undertaken by ICDP. In particular, the AOG

- established the Executive Committee (EC) and Scientific Advisory Group (SAG)
- 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 have paid a membership fee of \$700,000 US (Category A). 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 international 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.