

MEMORANDUM OF UNDERSTANDING

BETWEEN THE

NATIONAL OCEANIC AND ATMOSPHERIC
ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

AND THE

UNIVERSITY OF QUEENSLAND

FOR

COOPERATION IN RESEARCH

Preamble

The National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce (DOC) and the University of Queensland (UQ) hereinafter referred to as "Parties", are mutually interested in furthering cooperation in ocean and atmospheric scientific research and technological development, establish this Memorandum of Understanding (MOU) for research cooperation.

Understanding that mutual collaboration in the area of marine and climate research is important and of common concern to both Parties;

Acting in the spirit of developing cooperation on the basis of mutual benefit, equity, and reciprocity;

Recognizing that cooperative activities concerning ocean sciences contribute to the sustainable development of human society;

Affirming that the Parties are mutually interested in increasing the effectiveness of their programs related to and in expanding collaboration among scientists in these organizations;

Having an interest in oceanic-atmospheric research and its influence on climate, and impact on regional, tropical coral reefs, and global chemical and heat balances; and

Believing that consultations and initiatives such as sharing of tasks, cooperative use of facilities, and exchange of scientific and technical information could result in the effective and efficient accomplishment of mutually beneficial objectives;

Have arrived at the following general framework for cooperation in accordance with the laws and regulations of the country of each Party:

Article 1: Parties

NOAA is a scientific agency, reporting to the Secretary of Commerce of the United States.

The University of Queensland is a public, State-based university with an internationally focused research culture.

Article 2: Purpose of MOU

1. The purpose of this MOU is to:
 - a. Encourage and pursue scientific and technical cooperation in the area of marine and climate change science and monitoring on the basis of the mutual interest of the Parties; and
 - b. Provide a framework in which the Parties may identify other areas of interest and possible collaboration.
2. The MOU provides a framework for a program of cooperative activities in the area of marine and climate change science and monitoring research, with a view of contributing to the

advancement of research and development in global climate change and prediction, and to the benefit of society at large.

3. This MOU is of mutual interest to the Parties because it will encourage research cooperation and collaboration between two internationally recognized scientific organizations. Australia and the United States face similar strategic challenges and have national science programs focused on many of the same areas, including the environment and climate change. The strong history of science and technology collaboration between the two nations, which was first formally acknowledged in an agreement to cooperate signed in 1968, is reflected in vibrant relationships at the researcher-to-researcher level and growing links at institutional levels.
4. This MOU is necessary and essential to furthering the mission of NOAA and UQ in that it provides a framework where the Parties will derive new and unique knowledge, algorithms, and products (*e.g.*, satellite products) that improve our ability to understand, monitor, and better predict environmental stresses that can impact marine ecosystems.
5. Activities described in this MOU cannot be completed as effectively without the participation of both Parties because NOAA and UQ, which are among the top research agencies in the world with respect to coral reef and tropical marine science, have many synergistic goals with highly complementary knowledge bases and research projects that would benefit greatly from collaborations.

Article 3: Areas of Research Cooperation

1. Principal areas of research cooperation under this MOU may include, but are not limited to, the following:
 - a. Global monitoring of greenhouse and ozone-depleting gases;
 - b. Long-term atmospheric and oceanic observations;
 - c. Early warning systems for stress in marine systems;
 - d. Oceanographic exploration including water-column and seafloor mapping and analysis;
 - e. Hi-resolution ocean and climate model development, validation, and enhancement;
 - f. Application of ocean observation and simulation to enhance remote sensing products;
 - g. Physical and biogeochemical oceanic processes;
 - h. Ocean carbon, uptake, storage, cycling and acidification;
 - i. Carbonate chemistry of coral reef systems;
 - j. Staff and academic exchanges, effective meetings, workshops, and conferences for the mutual exchange of scientific and technical knowledge and ideas;
 - k. International objectives as identified in international fora in which NOAA and UQ and cooperating entities participate;
 - l. Improved services that contribute toward human health, economic well-being, and the protection of life, property, and the environment;
 - m. Marine ecosystem modeling and decision support tools;
 - n. Marine biodiversity, threatened species and invasive species;
 - o. Scientific research, tool development, and the application of these to the management of coral reefs;
 - p. Marine biology;
 - q. Coral physiology;
 - r. Effects of climate change on corals;

- s. Effects of climate change on coral and temperate (rocky) reef ecology;
 - t. Fisheries research, monitoring, and surveys;
 - u. Integrated spatial management, zoning, and marine protected areas (MPAs); and
 - v. Other related areas of research, as mutually agreed upon from time to time.
2. Other forms of cooperation may be identified by the Parties.

Article 4: Forms of Research Cooperation

1. Cooperative activities conducted under this MOU may include, but are not limited to, the following forms:
 - a. Consultations by program officials to implement cooperative planning of activities in the fields identified in Article 3;
 - b. Mutual logistical cooperation, *e.g.*, to schedule vessels, deploy and retrieve moorings and specialized instrumentation at locations and times where both Parties could have potential access;
 - c. Cooperation in the production and maintenance of system components;
 - d. Cooperation in data exchange;
 - e. Cooperation in publication and provision of data acquired during joint projects;
 - f. Cooperation in joint scientific research themes that are agreed upon by both Parties;
 - g. Collection and exchange of scientific and technical information, research methods, and scientific results for the purpose of testing hypotheses; and
 - h. Exchanging scientists, researchers and engineers for lectures at seminars, conferences, colloquia, symposia and sharing expertise through mutual visits of personnel.
2. Details of each cooperative activity will be described in Implementing Arrangements (IAs) as indicated in Article 6.
3. Costs of undertaking each cooperative activity will be detailed in the IAs, as indicated in Article 9.

Article 5: Operating Procedures

1. The executive agents appointed by each Party shall discuss and review, on an agreed upon basis, the implementation of this MOU, including matters of importance in the field of oceanic and atmospheric sciences and policy matters related to the overall collaborative relationship of the Parties.
2. For the purposes of cooperative activities described in this MOU, each Party designates one person, specified in the Implementing Arrangement (IA) for each research project, to serve as its Coordinator and Point of Contact.
3. The responsibility of the Coordinator is to oversee and facilitate implementation of this MOU and ensure that an IA, as described in Article 6, is prepared for each project under this MOU.

4. The Coordinators may meet and correspond as needed to evaluate the status of cooperation and the progress of activities under this MOU. In addition, the Coordinators are expected to consider and act on major, new proposals for collaboration.
5. The Parties support research results developed under this MOU being made available where appropriate and as agreed in IAs to the general scientific community through, but not limited to publications, seminars, lectures, and conferences; credit should be given jointly to both Parties.
6. Activities established under this MOU will be accompanied by an Implementing Arrangement (IA) or by entering into a new agreement with reference to this MOU, and subject to separate legal review, clearance and execution by both Parties.
7. IAs or new agreements will include both funds transfer and programmatic legal authority.

Article 6: Implementing Arrangements

An IA between the Parties should be formulated and executed by the Parties for each cooperative activity established under this MOU. For the purposes of this MOU, the terms Implementing Arrangement (IA) and Project Agreement shall refer to the same type of agreement. Each IA shall include the legal terms and conditions dealing with:

1. The nature and framework of the specific project or joint activity;
2. The type of data to be exchanged and the mode of exchange, including any information security requirements for protecting each Party's respective information technology systems, data integrity, and availability;
3. Individual and common responsibilities of the Parties or the Parties' designated organizations related to the execution of the project or activity,
4. Financial arrangements, if any: and
5. Other appropriate provisions.

Each IA will be subject to applicable review and approval procedures of the Parties. Neither Party is obliged to carry out a cooperative activity established under this MOU until an appropriate IA is executed by all relevant Parties.

In case of any inconsistency between the provisions of an IA and the provisions of this MOU, the provisions of the IA shall govern.

Article 7: Exchange of Information

1. The term "information" includes scientific and/or technical data, results and/or methods of investigation, and any other information intended to be provided, exchanged, or arising under IAs entered into pursuant to this MOU.
2. In principle, the Parties support the widest possible dissemination of information where this is appropriate in relation to the work undertaken. Joint authorship of journal publications and technical reports is encouraged.

3. Information transmitted between the Parties or developed jointly under IAs will be accurate to the best knowledge of the Parties.
4. For clarity, the specific terms for the exchange of information will be set out in each IA.

Article 8: Intellectual Property Rights

The Parties will agree to appropriate intellectual property arrangements in the IAs for each cooperative activity established under this MOU.

Article 9: Funding

1. In projects where funds are provided, the funds to be made available should be in accord with the Budget Summary associated with each IA. The Parties intend that the funds remain available for the entire life of the project and be transferred on a cost reimbursable basis, however noting that if funds are not properly obligated by the receiving agency within agency-identified timelines, those funds will expire. All activities made under this MOU are subject to the availability of appropriated or allocated funds, personnel, and resources.
2. The Parties intend that the partition of funding of research vessels and scientific instruments be agreed upon in writing and vary according to availability of assets for each project covered under an IA.
3. All costs will be equitably apportioned among the Parties in each IA (*e.g.*, through funds and/or in-kind contributions).

Article 10: Contracts or Other Exchange of Funds

It is anticipated that funding arrangements for the majority of activities under this MOU, and reflected in IAs, should follow the provisions of Article 9; however, alternate fund exchange mechanisms including contracts, may be used to pursue the goals of this MOU if otherwise permitted under applicable law.

Article 11: General Provisions

1. All activities under this MOU must be conducted in accordance with the applicable laws and regulations of the respective countries of each Party.
2. Nothing in this MOU affects other activities between the Parties or between them and any third parties.
3. To the extent permitted by their respective national laws and regulations, the Parties may assist in the importation and subsequent re-exportation from their respective countries of stores, equipment, and associated goods provided by or on behalf of the other Party for use in connection with the cooperative program.

Article 12: Status of Arrangement

1. This MOU:
 - a. is not governed by international law;

- b. is not intended to, and does not create legally binding obligations under national or international law, nor does it affect the Parties' obligations under international agreements; and
 - c. serves as a record of each Party's separate intention pending execution of specific IAs governing the activities as contemplated by this MOU.
2. Nothing in this MOU is to be treated as creating a partnership, agency, trust, joint venture, or otherwise.
 3. Notwithstanding anything contained in this MOU, each Party retains autonomy to conduct research independently of this MOU.
 4. Each Party's rights, title and interest in its intellectual property and confidential information remains unaffected by the existence of this MOU.

Article 13: Contacts

1. The UQ point of contact responsible for resolving any programmatic, administrative, financial, and technical questions pertaining to research projects under this MOU is:

Professor Ove Hoegh-Guldberg
Director
Global Change Institute
Level 7, Ghermann Building
The University of QLD
St Lucia QLD 4072
Australia
Phone: +61 7 3365 3555
Fax: +61 7 3346 3299
Email: oveh@uq.edu.au

2. The NOAA point of contact responsible for resolving any programmatic, administrative, financial, and technical questions pertaining to research projects under this MOU is:

Dr. Paul DiGiacomo
Chief, Satellite Oceanography and Climatology Division
Center for Satellite Applications and Research
NOAA/NESDIS
NOAA Science Center
Room 601
5200 Auth Road
Camp Springs, MD 20746 USA
Phone: 1-301-763-8102 x170
Fax: 1-301-763-8572
Email: Paul.DiGiacomo@noaa.gov

Article 14: Resolution of Disagreements


Should disagreement arise on the interpretation of the provisions of this MOU, or amendments and/or revisions thereto, that cannot be resolved at the operating level, the area(s) of disagreement shall be stated in writing by each Party and presented to the other Party for consideration. If agreement on interpretation is not reached within thirty (30) days, the Parties shall forward the written presentation of the disagreement to respective higher officials for appropriate resolution.

Article 15: Commencement, Termination, and Amendment

1. This MOU shall enter into force on the date of last signature by both Parties and shall remain in force for five (5) years. Participation in this MOU and in activities hereunder may be discontinued by either Party, in which case the Party desiring to discontinue its participation should provide at least six (6) months' prior written notice to the other Party.
2. Termination will not affect any IAs or other legally-binding arrangements in place between the Parties.
3. This MOU may be amended or extended by mutual written agreement of the Parties.

IN WITNESS WHEREOF, the Parties have executed this MOU and represent that they approve and agree to the terms contained herein.

**FOR THE NATIONAL OCEANIC
AND ATMOSPHERIC ADMINISTRATION:**



Ms. Mary Kicza
Assistant Administrator
Satellite and Information Services

Date: Sept 9, 2011

United States of America

**FOR THE UNIVERSITY OF
QUEENSLAND:**

 29 Sept 11

Mr. Ian Harris
Director
Research & Innovation Division

Date: _____

Australia