

AGREEMENT

between the

AMERICAN INSTITUTE IN TAIWAN

and the

TAIPEI ECONOMIC AND CULTURAL REPRESENTATIVE OFFICE
IN THE UNITED STATES

for

TECHNICAL COOPERATION

associated with

ESTABLISHING SATELLITE-BASED MARINE OIL MONITORING COLLABORATIVE
ACTIVITY

ARTICLE I – SCOPE

This Agreement provides a framework through which the American Institute in Taiwan (AIT), through its designated representative, the National Oceanic and Atmospheric Administration (NOAA), can provide technical and scientific assistance and emergency operational support to the Taipei Economic and Cultural Representative Office in the United States (TECRO), through its designated representative, the Center for Space and Remote Sensing Research (CSRSR) of the National Central University of Taiwan, in the area of satellite-based oil spill detection, monitoring and analysis. In addition, this Agreement provides a framework through which TECRO, through its designated representative CSRSR, can provide technical and scientific assistance and a limited amount of FORMOSAT satellite imagery to AIT, through its designated representative NOAA.

ARTICLE II – AUTHORITIES

The Agreement is entered into pursuant to the Taiwan Relations Act of April 10, 1979, Public Law 96-8 (22 USC 3301 et.seq.).

ARTICLE III – BACKGROUND AND OBJECTIVE

AIT, through its designated representative NOAA, and TECRO, through its designated representative CSRSR, have ongoing satellite-based marine oil monitoring and analysis activities to mitigate the damage of oil spills and help authorities enforce pollution control measures. The crucial importance of this work is underscored for AIT, through its designated representative NOAA, by the disastrous Deepwater Horizon oil spill and the tremendous utility of satellite imagery to help task resources, inform the public, plan the response and otherwise mitigate the damage. The importance of this work for TECRO, through its designated representative CSRSR, is underscored by the numerous environmentally and ecologically significant oil spills in the greater coastal area around Taiwan.

AIT, through its designated representative NOAA, has extensive experience using Synthetic Aperture Radar (SAR) imagery to detect oil in the ocean. Moreover, most oil-related expertise and development work in support of oil detection activities of AIT, through its designated representative NOAA, rely on SAR algorithms and techniques. Oil analysis operations conducted by AIT, through its designated representative NOAA, are 24 x 7 x 365, and extensive measures are in place including offsite backup capabilities to assure its operational continuity. However, AIT, through oil analysis personnel of its designated representative NOAA, has limited expertise with very high resolution visible/multispectral satellite-based oil detection, little support and development structure to enhance this type of oil detection and no established source of new algorithms for visible/multispectral oil detection. In addition, AIT, through its designated representative NOAA, has limited access to very high resolution visible/multispectral satellite imagery such as that available from the FORMOSAT satellite series. These limitations in the acquisition, use and technical development of visible/multispectral imagery for oil detection adversely impact the readiness of AIT, through its designated representative NOAA, for oil spills.

By contrast, TECRO, through oil analysis personnel of its designated representative CSRSR, has considerable experience with detecting oil in visible/multispectral satellite imagery, and TECRO, through its designated representative CSRSR, is actively developing algorithms and other tools to enhance this detection. In addition, the FORMOSAT satellite imagery provides an invaluable source of such imagery to support oil analysis operations of TECRO through its designated representative CSRSR. However, the experience of TECRO, through its designated representative CSRSR, with SAR algorithms and techniques for oil spill detection is limited. Moreover, TECRO, through the oil analysis group of its designated representative CSRSR, is a

small 8x5 operation that could use additional support in the event of a large-scale oil spill where 24 x 7 support is needed.

The objective of this Agreement is to enhance the oil operations of both AIT, through its designated representative NOAA, and TECRO, through its designated representative CSRSR, by establishing a working relationship to allow each organization to benefit from the strengths of the other.

ARTICLE IV – COOPERATIVE ACTIVITIES

AIT, through its designated representative NOAA, agrees to:

- A. provide TECRO, through its designated representative CSRSR, with training in the use of SAR imagery for satellite-based oil detection, share algorithms and help TECRO, through its designated representative CSRSR, install and use any such SAR-based oil detection algorithms;
- B. by phone or email, provide a "second opinion" upon request for any SAR image showing possible oil;
- C. in the event of a significant emergency, provide requested assistance/backup to effectively extend hours of coverage available to TECRO, through its designated representative CSRSR; and
- D. provide technical advice about the possible use of the International Disaster Charter (formally named the Charter On Cooperation To Achieve The Coordinated Use Of Space Facilities In The Event Of Natural Or Technological Disasters) assets to mitigate a major oil spill.

TECRO, through its designated representative CSRSR, agrees to:

- A. provide AIT, through its designated representative NOAA, with training in the use of visible/multispectral imagery for satellite-based oil detection, share algorithms and help AIT, through its designated representative NOAA, install and use any visible/multispectral-based oil detection algorithms or procedures or "toolbars" that TECRO, through its designated representative CSRSR, currently uses;
- B. by phone or email, provide a "second opinion" upon request for any visible/multispectral image showing possible oil;

- C. provide at no charge up to 30 FORMOSAT-2 images in response to requests from AIT, through its designated representative NOAA; and
- D. assist in obtaining any necessary authorizations for carrying out the assistance specified in this Agreement, including access to facilities and area under the jurisdiction of TECRO's designated representative, CSRSR, by personnel of AIT's designated representative, NOAA, who are in the territory of the authorities represented by TECRO under the auspices of AIT.

ARTICLE V- FINANCIAL ARRANGEMENTS

AIT, through its designated representative NOAA, and TECRO through its designated representative CSRSR, are each responsible for funding their respective activities under this Agreement. In general, there will be no exchange of funds between AIT, through its designated representative NOAA, and TECRO, through its designated representative CSRSR. The financial obligations of NOAA and CSRSR are subject to the funding procedures of the respective organizations and to the availability of appropriated funds.

ARTICLE VI – DATA AVAILABILITY AND INTEGRITY

AIT, through its designated representative NOAA, and TECRO, through its designated representative CSRSR, will coordinate to assure that information security measures for protecting availability and integrity of data are in place and will comply with applicable information security requirements and policies, consistent with established guidelines and best practices.

ARTICLE VII- INTELLECTUAL PROPERTY CONSIDERATIONS

The handling and distribution of information provided, exchanged or arising under this Agreement may be restricted due to the need to protect pre-existing proprietary information, patent, and copyright restrictions. In addition, any information subject to the U.S. International Traffic in Arms Regulations (ITAR) that may be exchanged will be subject to any existing Technical Assistance Agreement (TAA) between AIT and TECRO.

ARTICLE VIII – DATA PRODUCTS

Consistent with conditions under which TECRO, through its designated representative CSRSR, has access to FORMOSAT-2 imagery, AIT, through its designated representative NOAA, will not in general archive and/or redistribute the FORMOSAT-2 data outside of NOAA. However, if analysis of FORMOSAT-2 imagery is used in a product that would be operationally useful to

manage a specific oil spill event, it is understood that AIT, through its designated representative NOAA may distribute the analysis product to other users among the authorities represented by AIT. The product would be marked with the logo of the National Space Organization (NSPO), which owns and operates FORMOSAT-2, and NSPO would be credited for the information.

ARTICLE IX – RELEASE OF PUBLIC INFORMATION

- A. AIT, through its designated representative NOAA, and TECRO through its designated representative CSRSR, respectively, agree to coordinate with each other on all public release of information regarding cooperation pursuant to this Agreement.
- B. Any release of information related to cooperation pursuant to this Agreement should include a statement to the effect that the cooperative activity was or is jointly sponsored by AIT, through its designated representative NOAA, and TECRO, through its designated representative CSRSR. For the purpose of this clause, “information” includes, but is not limited to, news releases, articles, manuscripts, brochures, advertisements, still and motion pictures, speeches, trade association meetings, symposia, etc.

ARTICLE X- EFFECTIVE DATE

This Agreement will become effective for five (5) years on the date of the last signature and may be extended by the mutual written agreement of AIT and TECRO. AIT and TECRO will review the Agreement at least every three (3) years to determine whether the Agreement should be revised, renewed, or terminated.

ARTICLE XI- AMENDMENT AND TERMINATION

- A. This Agreement may be amended by the mutual written agreement of AIT and TECRO.
- B. This Agreement may be terminated by AIT or TECRO at any time by notification to the other entity in writing sixty (60) days in advance of the desired termination date.

ARTICLE XII- RESOLUTION OF DIFFICULTIES

AIT and TECRO agree to consult, upon request of AIT or TECRO or their designated representatives, regarding any matter related to the terms of this Agreement, and will endeavor jointly, in a spirit of cooperation and mutual trust, to resolve by informal means difficulties or misunderstandings that may arise.

ARTICLE XIII- SURVIVING PROVISIONS

The provisions of Article VI will survive the expiration of this Agreement.

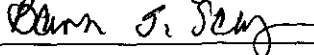
ARTICLE XIV- DESIGNATED REPRESENTATIVES' POINTS OF CONTACT

The points of contact for the designated representatives are listed in Appendix 1.

Done in duplicate in the English language.

FOR THE AMERICAN INSTITUTE
IN TAIWAN

Barbara J. Schrage



Managing Director

10/9/13

Date

FOR THE TAIPEI ECONOMIC AND
CULTURAL REPRESENTATIVE OFFICE
IN THE UNITED STATES



Oct. 17, 2013

Date

APPENDIX 1

AGREEMENT BETWEEN
THE AMERICAN INSTITUTE IN TAIWAN AND
THE TAIPEI ECONOMIC AND CULTURAL REPRESENTATIVE OFFICE IN THE UNITED
STATES FOR
TECHNICAL COOPERATION ASSOCIATED WITH
ESTABLISHING SATELLITE-BASED MARINE OIL MONITORING COLLABORATIVE
ACTIVITY

DESIGNATED REPRESENTATIVES' POINTS OF CONTACT

The points of contact for the designated representatives are as follows below, which may be changed from time to time.

For NOAA:

National Oceanic and Atmospheric
Administration
Office of Satellite and Product Operations
NSOF Room 1605
4231 Suitland Road
Suitland, MD 20746
E/SPO
Telephone: 301-817-4000
Fax: 301-817-7901
Email: yanessa.l.griffin@noaa.gov

For CSRSR:

Center for Space and Remote Sensing Research
National Central University
No. 300, Zhongda Rd.,
Zhongli City 32001