

IMPLEMENTING RULES AND REGULATIONS OF ADMINISTRATIVE ORDER NO. 16, DATED 05 JULY 2011, ENTITLED “DIRECTING GOVERNMENT ENTITIES TO COORDINATE WITH THE NATIONAL MAPPING AND RESOUR...

NMRIA MEMORANDUM CIRCULAR NO. 001, February 16, 2012

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Section 1. Short Title and Purpose - This Implementing Rules and Regulations, hereinafter called the IRR of Administrative Order No. 16, dated 05 July 2011, is for the purpose of prescribing the rules and regulations for the procurement of data from airborne and spaceborne platforms by government agencies in their respective projects.

Section 2. Declaration of Policy - The provisions of this IRR are in line with the cross-cutting strategy under the Philippine Development Plan 2011-2016 to rationalize and coordinate all mapping activities in order to achieve optimum use of financial and human resources in the acquisition of data from airborne and spaceborne platforms for the production of various map products, and result in data compatibility and utmost use of geographic information.

Section 3. Governing Principles - The provisions of this IRR shall be governed by these principles:

3.1 Transparency through dissemination among government agencies of geographic information holdings in the form of aerial photographs, satellite imageries and related map products, in order to facilitate sharing and access by the different user-agencies.

3.2 Streamlined procurement process for airborne and satellite based images that will be adaptable to the needs of government and in consonance with advances in mapping technology.

3.3 Monitoring availability and procurement of geographic information by government agencies to ensure immediate utilization as planning tools in times of emergencies or calamities thereby enhancing disaster response planning capability .

3.4 Coordination among government agencies in the production of various types of maps through sharing of geographic data and information, thus preventing duplication of activities and wasteful use of resources.

Section 4. Scope and the Application of IRR

4.1 Scope

This IRR shall apply to all government agencies, local government units (LGUs), government-owned and controlled corporations (GOCCs), Government Corporate Entities (GCEs), Government Instrumentalities with Corporate Powers (GICPs), Government Financial Institutions (GFIs), and State Universities and Colleges (SUCs), herein referred to collectively as “Government Entities”.

4.2 Data To Be Procured

This IRR applies to the acquisition of data from airborne and spaceborne platforms and other related products and services that would require the aforementioned data for mapping purposes.

4.2.1. From airborne platform, such as:

- a. aerial photographs
- b. DEM and Intensity Image from LIDAR
- c. DEM/Intensity Image from SAR/IFSAR(INSAR)
- d. Hyperspectral Images

4.2.2. From spaceborne platform, such as:

- a. satellite imageries
- b. DEM/Intensity Image from SAR/IFSAR (INSAR)

4.2.3. Other related map products and services such as the ff:

- a. thematic maps
- b. topographic maps
- c. orthophoto/orthoimage maps

4.3 Delimitation

All projects are covered by this IRR, except for the projects funded through foreign grants and Official Development Assistance (ODA) where procurement can remain with the Procuring Entity.

Section 5. Definition of Terms - For the purposes of this IRR, the following terms or words and phrases shall mean or be understood as follows:

- 5.1 Aerial Photograph – refers to image of the earth’s surface taken from aerial camera onboard an aircraft.
- 5.2 Airborne Platform – refers to an aircraft that carries a sensor system.
- 5.3 DEM – an acronym for digital elevation model which is a three-dimensional representation of a terrain’s surface.
- 5.4 Geographic Information – created by manipulating geographic (or spatial) data in a computerized system and comes in many different forms, such as maps or images taken from the air or space.
- 5.5 Hyperspectral Images – images collected and processed from across the electromagnetic spectrum. each image represents a range of the electromagnetic spectrum and is also known as a spectral band. These ‘images’ are then combined and form a three-dimensional hyperspectral data cube for processing and analysis.
- 5.6 IfSAR/InSAR - an acronym for Interferometric synthetic aperture radar, a technique which uses two or more SAR images to generate maps of surface deformation or digital elevation, using differences in the phase of the waves returning to the satellite or aircraft. The technique can potentially measure centimetre-scale changes in deformation over timespans of days to years.
- 5.7 Index - maps or listing of available data or map products.
- 5.8 Intensity Image – a data matrix, whose values represent intensities within a range in the electromagnetic spectrum with each element of the matrix corresponding to one image pixel. The elements in the intensity matrix represent various intensities, or gray levels, where the intensity 0 usually represents black and the intensity 1, 255, or 65535 usually represents full intensity, or white.
- 5.9 LiDAR - an acronym for Light Detection and Ranging, an optical remote sensing technology that can measure the distance to, or other properties of a target by illuminating the target with light, often using pulses from a laser. It allows exceptionally accurate and rapid determination of terrain and structural features (e.g. height) and produces highly accurate three-dimensional data measurements that can then be utilized by mapping, guidance, and navigation systems.
- 5.10 Metadata - data providing information about one or more aspects of the data, such as, means of creation of the data, purpose of the data, time and date of creation, creator or author of data, placement on a computer network where the data was created, and standards used.
- 5.11 Orthophoto/Orthoimage Maps – geometrically corrected (“orthorectified”) aerial photographs/satellite images adjusted for topographic relief with attributes of a map such as true distances and uniform scale.
- 5.12 Procuring Entity – a government entity applying for the clearance certificate from NAMRIA.

5.13 Procuring Agent – refers to the Procurement Service of the Department of Budget and Management (DBM).

5.14 SAR - an acronym for Synthetic Aperture Radar, a form of active sensing (which enables day-and-night observation) wherein the antenna transmits radiation which is then reflected from the target. It uses electromagnetic radiation with microwave frequencies wherein the atmospheric absorption at typical radar wavelengths is very low, meaning observations are not prevented by cloud cover (all-weather land observation). It uses sophisticated processing of radar data to produce a very narrow effective beam (synthetic aperture) and used by moving platform over relatively immobile targets.

5.15 Satellite Imageries – refers to images of the earth's surface taken by means of sensors onboard earth-orbiting satellites.

5.16 Spaceborne Platform – refers to a spacecraft that carries the satellite sensor system.

5.17 Technical Specifications and Standards - detailed description of technical requirements stated in terms suitable to form the basis for the actual design development and production processes of an item having the qualities specified in the operational characteristics.

5.18 Thematic Maps - map or chart especially designed to show a particular theme connected with a specific geographic area that can portray physical, social, political, cultural, economic, sociological, agricultural, or any other aspects of a geographic area.

5.19 Topographic Map - graphic representation of the earth's natural and man-made features in which the shape and elevation of the terrain are depicted.

Section 6. Mandatory Provisions

6.1 Coordination with NAMRIA

Within 15 days upon the approval of this IRR, all government entities are obliged to submit to NAMRIA through Photogrammetry Division, MGD a complete inventory and index of all their data holdings for integration into its database. These include the data defined in Item 4.2.

6.2 Requirement for NAMRIA Clearance Certificate

6.2.1 A government entity intending to procure data/imageries from airborne and spaceborne platforms and other related products and services for mapping purposes shall secure the necessary Application Form, as shown in Annex "A"[*] from the Photogrammetry Division, Mapping and Geodesy Department (MGD) of NAMRIA, and shall be filled-up with following information:

- a. project profile including implementation plan;
- b. coverage area / area of interest; and
- c. specifications of equipment and services for data acquisition, if applicable.

6.2.2 The application will be evaluated as to the following:

- a. technical specifications and standards whether appropriate for the intended use of the applicant and will serve requirements of other agencies;
- b. required data of the Procuring Entity is not in the existing inventory; and
- c. required data is not subject to on-going procurement by other agencies.

6.2.3 Within 15 days upon submission of application, the NAMRIA shall:

- a. advise the Procuring Entity on the compliance to the foregoing conditions in item 6.2.2. In such case, the NAMRIA shall issue a clearance certificate approved by the NAMRIA Administrator, as shown in Annex "B"[*];
- b. in case of non-compliance to the provisions of item 6.2.2:
 - b.1. recommend changes to the necessary standard of the project, in case the data required is inappropriate to

- the technical specifications and standards of the intended project;
- b.2. inform the applicant in case the data is subject to on-going procurement in another agency, in such case, the overlapping procurements shall be resolved in consultation with the procuring entities concerned;
- b.3. inform the applicant should the requested data be available in NAMRIA and in such case, the government entity shall enter into a Memorandum of Agreement (MOA), as shown in Annex "C"[*] stating that :
- b.3.1. the data shall be provided for free; and
- b.3.2. it shall not be reproduced, sold or used for any other purpose except those specified in the project.

Section 7. Monitoring

All government agencies issued with clearance certificates shall henceforth furnish the NAMRIA updated metadata and copies of all imageries, aerial photographs, and map outputs of completed projects for integration into the latter's database.

Section 8. Procurement

- 8.1. Data from airborne and spaceborne platforms shall be procured from the Procurement Service (PS) of the Department of Budget and Management and shall follow the provisions of Section 53.5 of the Implementing Rules and Regulations of RA 9184 or the Government Procurement Reform Act.
- 8.2. Pursuant thereto, such procurement requests shall be accompanied by the clearance certificate issued by the NAMRIA.
- 8.3. The NAMRIA and the Procuring Entity shall designate Ad Hoc representatives to the Inter-Agency Bids and Awards Committee (IABAC) of Procurement Service and IABAC Technical Working Group (IABAC-TWG).
- 8.4. At least one (1) representative from NAMRIA shall also be designated to the Joint Inspection and Acceptance Committee (JIAC) of PS and the Procuring Entity. The NAMRIA shall be invited to provide resource persons as may be necessary.
- 8.5. The Procuring Entity and PS shall enter into a Memorandum of Agreement for the purpose of the foregoing procurement projects.

Section 9. Penalty - Penalties described under Republic Act 9184 shall be applied accordingly.

Section 10. Repealing Clause - All other orders, issuances, or parts thereof, which are inconsistent with the provisions of this IRR, are hereby repealed or modified accordingly.

Section 11. Separability Clause - If any provision of this IRR is declared invalid or unconstitutional, the other provisions not affected y shall hereby remain valid and subsisting.

Section 12. Effectivity - This IRR shall take effect fifteen (15) days after publication in a newspaper of general circulation.

Date Adopted: 16 February 2012

(SGD.) USEC. PETER NILO TIANGCO, PHD.
Administrator

[*] Text Available at Office of the National Administrative Register, U.P. Law Complex, Diliman, Quezon City.

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