

**UN COMMITTEE OF EXPERTS
ON
GLOBAL GEOSPATIAL INFORMATION MANAGEMENT**

**COUNTRY REPORT
OF
BANGLADESH**

SURVEY OF BANGLADESH
www.sob.gov.bd

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COUNTRY REPORT OF BANGLADESH

1. **National Mapping Organization (NMO) of Bangladesh:**

- a. **Name of Organization:** Survey of Bangladesh.
- b. **Administrative Ministry :** Ministry of Defence.
- c. **Brief History:** Survey of Bangladesh (SOB) is the youngest among in survey organizations in this subcontinent that started in 1767 as Survey of Bengal under British India. After the independence in 1971, establishment of National Datum Yard, Tidal Station for establishing MSL were done during 1990s. Digital Mapping activities were incorporated during 1998. Survey activities and traditions were inherited from Survey of India and Survey of Pakistan.

Survey of Bangladesh completed base map of 1:50,000 scale in digital formats. At present SOB makes new series of base map of 1: 25,000 scale for whole country. The maps are prepared using aerial photographs and high resolution satellite imageries. Digital colored photographs were taken with 50 cm GSD for the whole country and 25 cm GSD for the major cities.

Geodetic Control Network is fairly distributed all over the country since 1994. SOB has established six (06) permanent GNSS stations with a server. These facilitates in mapping and navigational activities. A tidal station is setup in 1993 to determine MSL and national datum is setup in the capital for both planimetric and orthometric heights.

SOB maintains a central server for storage and maintaining of GIS, cartographic and photogrammetric data.

d. **Functions:** Survey of Bangladesh as the National Mapping Organization carries out following activities in Bangladesh :

- (1) Establishes and maintains Geodetic Control Network throughout the country and national planimetric & orthometric datum.
- (2) Specifies the standards and accuracy for Topographic and Geodetic surveys.
- (3) Prepares, reproduces and distributes national topographic base maps, thematic maps, aerial photographs, survey results, geodetic & mapping data.
- (4) Demarcation of International boundary in hill areas.

2. **Institutional Framework of Surveying and Mapping in Bangladesh:**

a. **Act and Rules :** Survey of Bangladesh publishes and distributes maps and data under the Rule ‘Classification, Custody and Issue of Maps/Photographs-1972’. A new ‘Topographical Survey Act’ is under process for government approval.

b. **National Policies:** Projects are under implementation for the preparation of medium and large scale digital topographic maps of the whole country and its digital data base which will be very much useful for the development work of the country. Bangladesh has also established a modern digital mapping centre and it has further plan to establish a Survey Institute in Bangladesh of international standard for officers/supervisors/ technical staffs on mapping and surveying.

c. **Cadastral and Land Registration :** Cadastral survey and land registration are the responsibility of Department of Land Records & Survey (DLR&S) under Ministry of Land. SOB provides geodetic control points as per their requirements.

d. **Registration and Certification :** Survey of Bangladesh issues competency certificates to private survey companies/ farms for their survey and mapping activities.

3. **Geodetic and Cartographic Activities:**

a. **Geodetic Networks:** Survey of Bangladesh used to use the geodetic reference system of Survey of India for mapping and surveying works until the establishment of own reference datum. SOB at present uses its own geodetic datum since 1992 with the establishment of National Datum Yard including planimetric & orthometric height for surveying and mapping works.

4. **Products and Data Available:**

- a. 1: 1 M scale : whole Bangladesh
- b. 1: 500,000 scale : whole Bangladesh
- c. 1: 250,000 scale : whole Bangladesh
- d. 1: 50,000 scale : whole Bangladesh
- e. 1: 25,000 scale : whole Bangladesh (on going)
- f. 1: 5,000 scale : 06 Divisional cities (under progress)
- g. City Guide maps, Thematic maps, etc.
- h. Geodetic Data : Planimetric and Vertical (BM) Coordinates, Geoid Model, Tide data, GNSS CORS data, etc.
- i. Digital Elevation Model (DEM) and Orthophoto for whole country (under progress).

5. **Layers Digital Formats:**

Survey of Bangladesh is maintaining 1:5,000 and 1:25,000 scales GIS database in tile structure which consists of several layers. Formats like dxf, dgn, shp, dwg, pdf, ect are available of Hydrographic, Transportation, Building and Structures, Vegetation, Utilities, Administrative Boundary, Forest and Relief features.

6. **Challenges as NMO:**

Our National Challenge is “Poverty Alleviation”. For that Bangladesh has under taken various development projects in the country. Planning and smooth implementation of such development projects demand accurate digital topographic map and data.

So, Survey of Bangladesh has taken it as a challenge to prepare 1:25,000 scale digital map of the whole country and 1:5,000 scale digital map for 06 major cities of the country followed by preparation of digital data base soon.

8. **Contribution of our NMO to Global Mapping:**

Survey of Bangladesh is member of International Steering Committee for Global Mapping (ISCGM) from the beginning. It is also a member of PCGIAP (Permanent Committee on GIS Infrastructure of the Asia Pacific). Bangladesh provides Global Map data of its own at regular intervals. Bangladesh has completed its portion of Global Map (version-2) under the operational programme and submitted to ISCGM.