

Terms of Reference (ToR) for GIS Map Preparation

1. Introduction:

Oxfam in Bangladesh and Islamic Relief, Bangladesh as a member of NARRI consortium are implementing 7th DIPECHO Action Plan in Sylhet City Corporation areas with the financial assistance of European Commission Humanitarian Aid and Civil Protection (ECHO) where Voluntary Association for Rural Development (VARD) is working as local implementing partner of Oxfam in Bangladesh in Sylhet. The project will support for developing a Ward Level Response Plan where GIS/Map preparation is considered as one of the important component of this purpose.

2. Objectives:

The objective of the activity is to develop ward level GIS based Base Map showing details of existing Land use pattern including other associated features and attributes. Proposed maps may be considered to assist in strategic planning, resource utilization management, planning and management of day-to-day operations and for the preparation of city corporation level disaster management planning.

Specific objectives of ward level activities are:

1. Develop GIS based map of Sylhet City Corporation;
2. Implementation of a GIS based system in the city corporation areas in future;
3. Other service departments access information to facilitate planning/ investment decisions.
4. To develop ward level response plan with the assistance of the GIS map of the ward.

3. Scope of Work:

Among others Sylhet is one of the rapid growing city of Bangladesh. Due to location and geographical pattern, the city is immensely vulnerable to disasters particularly to earthquake, therefore it needs holistic visions toward preparedness for disasters including planned urbanization, identification of potential features/facilities and assess detail land use pattern. For this holistic vision, GPS surveys of Sylhet city need to be conducted across the entire city corporation areas for the generation of a Base Map with existing Landuse pattern.

Working areas:	All the 27 wards of Sylhet City Corporation
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3.1 Detailed list of activities:

The activity may consist to development of a detailed maps consisting of the ward boundary, micro level land-use, different socio-economic features and utility services using suitable GIS technology. This would involve;

- Reviewing existing situation of city corporation areas, collection of all available secondary level data including list of wards, list of properties in each wards.
- Prepare base map of each ward area by Interpreting and digitizing of all existing landuse features and prepare different layer of information. (Digitization process shall include vectoriation, symbolization facility, edge matching, topological integrity, and data base linking facility.)
- Generation of scale and detailed base maps with necessary data inputs under different layers such as ward boundaries, buildings/build-up area, roads, waterbodies, important landmarks, , physical features, institutions including service providing and the educational, open spaces those can use as shelter during disasters, etc.
- Conduct GPS survey and consultations (with city corporation engineers/staff, ward councilors, disaster management committee for ground trotting and validation of the identified features.

Conduct participatory survey to collect attribute information associated with identified features and add with the map layers.

- Organize validation workshop at ward and city corporation level and incorporate data.
- Finalize Base Map and print it, which then will be handing over to City Corporation.

4. Data Contents and Specifications

Potential features for base maps shall contain the following:

- Ward and city corporation boundary
- Road network of all types of roads with associated details.
- Rivers and drainage systems, including all details of water bodies.
- Railways with associated details, information of bus stoppages.
- Ward Disaster Management Committee secretariat (ward councilors office).
- All built up structures such as human settlements, industries, educational, recreational, religious, etc.
- Residential area commercial area
- Utility services such as water supply and point, tubewell and water pump, drainage systems, power distribution, power and water control point etc.
- Existing land use /cover, hilly and land slide prone areas.
- Vacant space (playground, park, field, community spaces etc.)Police stations, fire service, post offices, hospital, clinic and health centre.
- Base map will be prepared on various layers for ease of operation in AUTOCAD/GIS.
- Base map will be supplied by the agency in digital form on DXF/DWG format/GIS based format with one set of multi colour plotted maps.

5. Expected Deliverables:

After completion of the assigned jobs deliverables of proposed mapping work shall be;

- i) Color printed copies of each ward map in A3 size (Total X set)
- ii) Color printed copies of each ward map in A1 size (Total X set)
- iii) A large size (in A0 size) of city corporation map compile with all ward (Total X set)
- iv) Geodatabase/shape file of all prepared layer and layer in AUTOCAD format
- v) Softcopy of all prepared maps in JPEG/DXF/DWG format.

6. Timeframe:

Total 45 days after commencement of contract.

7. Payments schedule :

- I. **Completion of agreement signing:** Invoice claiming 40% of the contract amount will be produced.
- II. **Prepare base map completion of GPS survey work for other attributes and submission of draft copies of maps:** Invoice claiming 40% of the contract amount can be claimed.
- III. **Upon submission of final copies of agreed deliverables:** Invoice claiming rest of 20% of the contract amount can be claimed.

Note:

- The individual(s)/organization (s) experienced for developing response plan will be the priority.
- All the tasked are mentioned above should be completed in 60 days (2 months) of the agreement signing.