

Terms of reference (ToRs) for the procurement of services below the EU threshold

**Project number/
cost centre:**
16.2077.2-001.00

Contract for selection of Consultancy Firm for Data Collection and generation of Digital Archive for Spatial Data (GIS) for the purpose of Master Planning in Dundigal Municipality (SUDSC Project)

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0. List of abbreviations

AVB	General Terms and Conditions of Contract (AVB) for supplying services and work 2018
ToRs	Terms of reference
HMDA	Hyderabad Municipal Development Authority
MoHUA	Ministry of Housing and Urban Affairs
SDG	Sustainable Development Goals

1. Context

The Ministry of Housing and Urban Affairs (MoHUA) and GIZ India are jointly implementing the “Sustainable Urban Development - Smart Cities” (SUD-SC) project. The project supports the National Ministry and the State Governments (Odisha, Kerala and Tamil Nadu) in the policy formulation on housing for all, basic services, planning framework, and monitoring of the Sustainable Development Goals (SDGs). It also supports the three select Smart Cities (Bhubaneswar, Coimbatore, and Kochi) in implementing concepts of integrated spatial urban development.

GIZ is also promoting use of an instrument named ‘City Scope’, a table top digital spatial data storage and display device, to the Partner departments for enabling a participatory planning. Along with the three select Smart Cities, GIZ is also supporting the Municipality of Dundigal in the State of Telangana, to develop an organised digital database for formulating master of the municipality plan in future. This database will also be loaded into the ‘City Scope’ device and kept in Dundigal Municipality. GIZ proposes to engage consultancy services of an organisation/company for preparation of digitalised database for formulating master plan of the municipality in future.

GIZ jointly with Hoermann is jointly preparing a detailed master plan in Gagillapur village (former administrative jurisdiction). Gagillapur is within Dundigal, an earlier Town Panchayat recently turned into Municipality. The Municipality wants to prepare master plan for Dundigal Municipality. GIZ has proposed to extend support in the form of formulating a digitalised spatial database (GIS) for the purpose of preparation of Master Plan by Municipality in future.

2. Tasks to be performed by the contractor

The overall objective of the assignment is to develop organised digital data base required for preparation of integrated master plan and coordinate with GIZ hired IT Consultancy for transferring created database into city scope.

- a. To prepare digital data inventory for preparation of master plan;
- b. To collect, process, prepare and organise data as required for uploading in the city scope device of GIZ;
- c. To coordinate with IT Consultancy firm hired by GIZ for uploading data and maps in city scope;
- d. To coordinate with Gagillapur master plan preparing team, whenever required; and
- e. To coordinate with Government of Telangana if detailed master plan work of Dundigal is taken up by Government.

Note: All tasks should follow standard guiding documents prepared in GIZ under the SUDSC Project and LUPM project. The work should also be in tandem with rules and regulations of the Directorate of Town and Country Planning, Telangana. The work is proposed to be reviewed by a German Planning Consultancy for quality Assurance.

The contractor is responsible for providing the following services:

A. Project Planning

Sub Task 1: Preparation of Operational Plan and Execution framework

The consultants should prepare a detailed list of data to be collected along with its relevance for master planning, prepare schedules and resource requirement in the form of Operational Plan and get approved from GIZ team before implementation.

Sub Task 2: Site visit plan

1. The consultant shall draft site visit plan, time and resource distribution;
2. The visit plan should include strategies to conduct various surveys e.g. household surveys, traffic surveys, market surveys on real-estate/ industrial development demand, health surveys,

- education surveys, skill set surveys, water resource surveys, any other similar relevant surveys indicating to modify development conditions;
3. Should prepare the site visit questions according to various target interviewees or target groups and get approved by GIZ well in advance before visit. This includes questions to stakeholders and other surveys;
 4. Geographical reconnaissance survey photographs should be taken, having specific relevance to master plan making;
 5. Photograph and videos of team surveyed on specific topic, area covered, and time spent, should be documented (Photo documentary to be done only in case of no objection from interviewee)
 6. Traffic survey photographs and videos should be taken;
 7. Should prepare a perception study documentation report (Perception surveys to be mentioned separately if conducted);
 8. Care should be taken to keep good relationship with government partner department for their full support;
 9. Rapid existing land use verification and potential findings (Land Use shape files exist with State Revenue and Disaster Management Department. The awarded firm need to collect relevant existing data/shapefiles);
 10. Visual perception concerns and surveyed concerns may be documented and later linked to secondary data.

B. Data Collection

Primary and Secondary Data Collection

1. Population trend studies of the Master Plan area
2. Surveys
 - 2.1. Household Survey (eg. stratified random sampling)
 - a) Socio-economic
 - b) Infrastructure status – availability and access (water-supply, sewerage, electricity, road, stormwater-drainage)
 - 2.2. Traffic and Transportation
 - a) Road inventory - link and node characteristics
 - b) Origin Destination Surveys at cordon points
 - c) Volume counts- mid block and turning movements at selected intersections and mid-block locations to provide following information:
 - Category wise hourly flow of vehicles
 - Variation in flow before, during and after the peak hour
 - d) Speed-delay surveys
 - e) On-site parking surveys
 - f) Analysis of accident data
 - g) Modal Split
 - h) Petrol pump distance from survey location
 - 2.3. Master Plan Basemap and Thematic maps (Scale of 1:4000)

Sub Task 1: Preparation of Existing Land Use and Land Cover map/ Spatio-temporal trend.

- a) Preparation of latest existing land use land cover maps;
- b) Study of trend of land use and land cover change over 20-year time period with a split of 5 years using standard NRSC LULC classes, URDPFI Guidelines and AMRUT cities guidelines;
- c) All site visit information should be reproduced in coherent form of GIS maps, excel sheet data, photographs, etc.;

Sub Task 2: Preparation of thematic maps

General

- a) Regional setting, regional development potential and accessibility;
- b) Identification of growth nodes and future potential nodes;
- c) Activity zones, concentration of different activity zones;
- d) Mapping of investment scenarios;
- e) Mapping of real estate development scenarios;
- f) Physiographic and geo-physical data and parameters mapping;
- g) Environmental mapping (includes regulated forest areas like protected forests, reserved forests etc., unregulated vegetated areas, eco-sensitive zones, environmentally fragile zones, International Union for Conservation of Nature (IUCN) wetlands, natural water bodies, and any other environmental features, important biodiversity areas);
- h) Archaeological Survey of India (ASI) heritage areas;
- i) Slope analysis/ Digital Elevation Model/ Watersheds;
- j) Soil type maps;
- k) Prevalent wind direction, solar radiation, rainfall data, air quality, water quality etc. environmental parameters mapping;
- l) Proposed (sanctioned and non-sanctioned) and existing sectoral projects in the regional catchment of 30 km;
- m) Existing social infrastructure assessment (percent household cover/ access to facility/ quality of facility etc.);
- n) Mapping of different land ownership typologies;
- o) Mapping of approximate land pricing prevailing in that area;
- p) Mapping of authority of different departments with respect to land areas/ land ownership/ planning rights on map; departmental mandate;
- q) Mapping of boundaries for areas under some form of regulation;
- r) Identification of conflict areas on base map;
- s) Area affected/ prone by disasters (earthquake, tsunami, cyclone, flood etc.). Marking the notified CRZ line or riparian buffer if any;
- t) Green network in any;
- u) Environmental hotspots, mining hotspots as notified or perceived etc.; and
- v) The final output will have all thematic layers linked to one base map for overlay and future analysis;
- w) Potential energy harnessing area;
- x) Potential multi-land use areas;
- y) Building regulation mapping (building material, height, offset byelaws);
- z) Building permissions given in each year/ month (whichever suits available data type)

Sub Task 3: Basic Services

Water Supply

- a) Percentage household cover and access, duration of access, quality of end to end services;
- b) Water saving infrastructure (Relevant faucets, recycling and reuse structures, water harvesting units on buildings and open areas);
- c) Water crisis (if any), population under that, crisis duration and frequency
- d) Augmentation requirement and future demand;
- e) Finance flows, operation and management of services mapping and support information archive;
- f) Sustainability check over a period of 50 years based on current or proposed plan.

Sanitation

- a) Percentage household covered and access;
- b) Quality and Type of facilities (facility to human ratio, access distance, availability of water or dry toilets);
- c) Link to Swachh Bharat mission (if any);
- d) Household waste water treatment facility;
- e) Industrial waste Water treatment

- f) Finance flows, operation and management of services mapping and support information archive;
- g) Sustainability check over a period of 50 years based on current or proposed plan.

Solid Waste

- a) Access to solid waste collection facility;
- b) Interval of clearance of various collection points;
- c) Situation of segregation of waste;
- d) Quality of waste generation with respect to reuse, recycling and bio degradation;
- e) Availability of land fill site or recycling unit in a radius of 25 km;
- f) Scope for homestead vermicomposting with green waste;
- g) Finance flows, operation and management of services mapping and support information archive;
- h) Sustainability check over a period of 50 years based on current or proposed plan.

Drainage

- a) Availability of natural surface drainage (quality and adequacy);
- b) Availability of manmade surface drainage (quality and adequacy).
- c) Sustainability check over a period of 50 years based on current or proposed plan.

Electric Supply, Power, Mobile Network, Radio waves, Internet

- a) Availability of services and quality
- b) Buffer to High Tension infrastructures
- c) Power stations and demand vs supply coherency
- d) Map of Mobile network coverage, concentration and usage, internet facilities and radio waves

Roads

- a) Road to built-up ratio;
- b) Road area to other land use ratio;
- c) Road vehicular capacity vs demand;
- d) Road surface quality;
- e) Parking lots (demand-availability gap)
- f) Sustainability check over a period of 50 years based on current or proposed plan.

Note: It is preferred that the human behaviour towards usage and maintenance of basic services is documented. Specific studies may be carried out to perceive the behavioural aspects towards sustainable development.

Sub Task 4: Economic and Social Documentation

- a) What kind of economy prevails (Tertiary, secondary, primary with percentage), future potential, sectoral split within various categories mentioned above;
- b) Human skills of the Municipality Vs. Type of prevailing employment;
- c) Future potential employment opportunities;
- d) Future skills requirement;
- e) In and out migration specifying location and job type with years of stay or absence;
- f) Contribution of sectoral GDP, or DDP to the municipal funds and municipal developments;
- g) Transition in last 10 years;
- h) Demographic study, socio-economic study from census and other official sources;
- i) Situation of private sector education institutes, health infrastructures, real estate etc.;
- j) Annual Survey of Industries (ASI) data archive;

- k) Gender sensitivity mapping of the area (e.g. Sex ration, WPR for women, kind of jobs in which maximum women are there, female feticide, women dropout rates in different levels of education, societal outlook towards empowerment of women, women friendly infrastructure like walkways, parks, day care, access to sports facilities, health facilities etc.;
- l) Gender balance scenario;
- m) Crime rate mapping;
- n) Police stations and catchment monitored area;
- o) Ration shops, Aanganwadis, PHCs etc and catchment; and
- p) Liveability and Happiness

Sub Task 5: Economic and Social Study

- a) Human to green area ration vs emissions
- b) Total flora fauna and importance of special species if any
- c) Notified boundaries by legal act
- d) Wetlands/ any other sensitive areas
- e) Pollution levels
- f) Green network

Sub Task 6: Governance, Institutional Development, Spatial Budgeting, Finance and Reforms

- a) Existing capacities of various officers and organisations;
- b) Number of staff and respective job description and work monitoring framework;
- c) Documentation of gap in capacities (human, organisational and other);
- d) Available training programs and current gaps if any;
- e) Percentage of Municipal taxes invested for Municipal development; and
- f) Receipt from State or National Funds for development purpose.

Any other work felt required to coordinate with other consultants or stakeholders to make the exercise meaningful.

Certain milestones, as laid out in the table below, are to be achieved by certain dates during the contract term, and at particular locations:

Milestone	Deadline/place/person responsible
Project Planning and Site Visit modalities Report	November, 2019
All data collection and site visits and perception study report	December, 2020
Finalised set of GIS shapefiles with defined attributes and database archive	February, 2020
Test demonstration of digital data on city scope	April, 2020
Review and revision	May, 2020
Final demonstration on City Scope device	June, 2020

Period of assignment: From November 2019 until June 2020.

For all operational purposes, the Consultant will report to the following:

Senior Advisor and Technical Advisor of, GIZ SUD-SC project.

3. Concept

In the bid, the bidder is required to show how the objectives defined in Chapter 0 are to be achieved, if applicable under consideration of further specific method-related requirements (technical-methodological concept). In addition, the bidder must describe the project management system for service provision.

Technical-methodological concept

Strategy: The bidder is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter 0). Following this, the bidder presents and justifies the strategy with which it intends to provide the services for which it is responsible (see Chapter 0).

The bidder is required to present the actors relevant for the services for which it is responsible and describe the **cooperation** with them.

The bidder is required to present and explain its approach to **steering** the measures with the project partners and its contribution to the results-based monitoring system.

The bidder is required to describe the key **processes** for the services for which it is responsible and create a schedule that describes how the services according to Chapter 0 are to be provided. In particular, the bidder is required to describe the necessary work steps and, if applicable, take account of the milestones and contributions of other actors in accordance with Chapter 0.

The bidder is required to describe its contribution to knowledge management for the partner and GIZ and promote scaling-up effects (**learning and innovation**).

Other specific requirements

For example: gender segregated data and age group (according to census classes) should be gathered. Also, considering various surveys, it is mandatory to have a gender balance team for convenience of female interviewees.

Project management of the contractor

The bidder is required to explain its approach for coordination with the GIZ project.

- The contractor is responsible for selecting, preparing, training and steering the experts (international and national, short and long term) assigned to perform the advisory tasks.
- The contractor makes available equipment and supplies (consumables) and assumes the associated operating and administrative costs.
- The contractor manages costs and expenditures, accounting processes and invoicing in line with the requirements of GIZ.

The contractor reports regularly to GIZ in accordance with the AVB of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH from 2018

Details about backstopping

The bidder is required to describe its backstopping concept. The following services are part of the standard backstopping package, which (like ancillary personnel costs) must be factored into the fee schedules of the staff listed in the bid in accordance with section 5.4 of the AVB:

- Service-delivery control
- Managing adaptations to changing conditions
- Ensuring the flow of information between GIZ and field staff
- Process-oriented technical-conceptual steering of the consultancy inputs
- Securing the administrative conclusion of the project
- Ensuring compliance with reporting requirements
- Providing specialist support for the on-site team by staff at company headquarters
- Sharing the lessons learned by the contractor and leveraging the value of lessons learned on site

4. Personnel concept

Eligibility requirement of the firms

- Experience of Firm in the field of Data Base archiving for the purpose of spatial Planning / master planning
- Expertise in GIS work programming for Database Management
- Government and Public Management

The bidder is required to provide personnel who are suited to filling the positions described, on the basis of their CVs (see Chapter 7), the range of tasks involved and the required qualifications.

The below specified qualifications represent the requirements to reach the maximum number of points.

It is appreciated if the team of experts included female the team member also.

Team leader

Tasks of the team leader

- Overall responsibility for the advisory packages of the contractor (quality and deadlines)
- Coordinating and ensuring communication with GIZ, partners and others involved in the project
- Personnel management, in particular identifying the need for short-term assignments within the available budget, as well as planning and steering assignments and supporting local and international short-term experts
- Regular reporting in accordance with deadlines

Qualifications of the team leader

- Education/training (2.1.1): Masters in Urban and Regional Planning/ Environmental Planning/ Urban Planning and Management
- Language (2.1.2): Good business language skills in Telegu, English, Hindi
- General professional experience (2.1.3): 20 years of professional experience in the Urban design and Planning sector
- Specific professional experience (2.1.4): 10 years in GIS based integrated spatial planning

- Leadership/management experience (2.1.5): 8 years of management/leadership experience as project team leader or manager in a company
- Regional experience (2.1.6): 5 years of experience in projects in Hyderabad (region)/ undivided Andhra Pradesh/ State of Telangana, of which 2 years in projects in India (country)
- Development Cooperation (DC) experience (2.1.7): 1 years of experience in DC projects

Expert 1 – Project Coordinator

Tasks of expert 1

- Coordination and management
- Data Analysis
- Interpretation of big data sets through simple demonstration using relevant software (Eg. Python and similar others)

Qualifications of expert 1

- Education/training (2.2.1): Masters / Bachelors/ Diploma in Data Analysis/ Open Source GIS/ Remote Sensing and GIS from reputed institute.
- Language (2.2.2): Telegu, Hindi, English
- General professional experience (2.2.3): 10 years in the field of data analysis
- Specific professional experience (2.2.4): 5 years in the field of GIS
- Leadership/management experience (2.2.5): 2 years of project management experience
- Regional experience (2.2.6): 3 years of work experience in the undivided State of Andhra Pradesh or current Telangana

Expert 2 – Data Analyst

Tasks of expert 2

- Preparing and maintaining Data Collection Checklist and drafting the relevance of required data in master plan exercise
- Data collection action plan
- Data availability vs data creation list
- Guide team to strategically to collect relevant data required for master planning
- Gender and age segregated data collection
- Aspects covering climate change data (covering data like environmental parameters and change over time)
- Interpretation of big data sets through simple demonstration using relevant software (Eg. Python and similar others)

Qualifications of expert 2

- Education/training (2.3.1): Masters in Spatial Planning/ Urban and Regional Planning/ Equivalent from any reputed University
- Language (2.3.2): Hindi, English
- General professional experience (2.3.3): 10 years of experience in the field of spatial planning;
- Specific professional experience (2.3.4): 5 years of experience in database handling for master planning;
- Regional experience (2.3.6): 3 years in the undivided state of Andhra Pradesh or current Telangana.

Expert 3 - GIS Expert (2 nos.)

Tasks of expert 3

- GIS based maps to be produced for all thematic layers mentioned in ToR
- Creating data attributes from statistical data gathered from Government offices
- Having proper sense of data representation in different scales and using standard mapping colours
- Support City scope backstopping team with interphase of software
-

Qualifications of expert 3

- Education/training (2.4.1): GIS Degree / Bachelors/ Masters in Urban Planning with proficiency in GIS (preferred) from any reputed University
- Language (2.4.2): Telegu (written and oral), Hindi, English;
- General professional experience (2.4.3): 10 years in the field of Spatial dataset creation and mapping in GIS;
- Specific professional experience (2.4.4): 5 years of experience in integrating GIS shapefiles to web-interface and linking to master planning/ equivalent;

Expert 4 – Socio-economic Expert

Tasks of expert 4

- Relevant data collection and organising in spreadsheets according to requirements in spatial planning

Qualifications of expert 4

- Education/training (2.5.1): Masters in Planning/ geography/ sociology/ environmental science/ communication equivalent from any reputed University.
- Language (2.5.2): Telegu, Hindi, English
- General professional experience (2.5.3): 10 years in the field planning/ geography/ sociology/ environmental science/ communication equivalent.
- Specific professional experience (2.5.4): 5 years in the field of social planning/ equivalent.
- Regional experience (2.5.6): 3 years in undivided Andhra Pradesh or current Telangana.

Soft skills of team members

In addition to their specialist qualifications, the following qualifications are required of team members:

- Team skills
- Initiative
- Communication skills
- Sociocultural competence
- Efficient, partner- and client-focused working methods
- Interdisciplinary thinking

Short-term expert pool with minimum 10, maximum 20 members

Tasks of the short-term expert pool

- Household survey
- Traffic and transportation surveys
- Land Use surveys
- Basic infrastructure surveys

Qualifications of the short-term expert pool

- Education/training (2.6.1): communication/ social experts with university qualification in sociology/geography, planning experts with university qualification in geography/planning
- Language (2.6.2): 4 experts with very good language skills in Telegu, good language skills in Hindi and English with local accent
- General professional experience (2.6.3): 10 years of experience in the planning survey sector,
- Regional experience (2.6.5): 5 years of experience in India (country), preferred location Hyderabad Metropolitan Region (region)

The bidder must provide a clear overview of all proposed short-term experts and their individual qualifications.

5. Costing requirements

Assignment of personnel

Team leader: On-site assignment for up to 45 expert days

Expert 1: Project Coordinator: Assignment in country of assignment for up to 50 expert days

Expert 2: Data Analyst: Assignment in country of assignment for up to 60 expert days

Expert 3: GIS Expert (2nos): Assignment in country of assignment for up to 140 expert days

Expert 4: Socio Economic Expert: Assignment in country of assignment for 60 expert days.

Short-term expert pool: total up to 100 expert days

Expert inputs are calculated in expert months or expert days. An expert month is calculated based on 30 calendar days (in accordance with the AVB). Expert days should thus simply be formulated as work days, where applicable.

Travel

The bidder is required to calculate the travel by the specified experts and the experts it has proposed based on the places of performance stipulated in Chapter 0 and list the expenses separately by daily allowance, accommodation expenses, flight costs and other travel expenses.

Total travel is estimated for up to 8 trips with 2 travellers travelling for 3 days. Travel sectors will be Telangana (Hyderabad and Dundigal), Delhi, Tamil Nadu (Coimbatore, Chennai) and Odisha (Bhubaneshwar/ any other).

6. Inputs of GIZ or other actors

GIZ and/or other actors are expected to make the following available:

Negotiate with Dundigal Municipality for one seating space for any one of the listed experts within the Municipality office for better coordination.

7. Requirements on the format of the bid

The structure of the bid must correspond to the structure of the ToRs. In particular, the detailed structure of the concept (Chapter 3) is to be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). It must be legible (font size 11 or larger) and clearly formulated. The bid is drawn up in english (language).

The complete bid shall not exceed 26 pages (excluding CVs).

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs of each expert shall not exceed 4 pages. The CVs must clearly show the position and job of the proposed person held in the reference project and for how long. The CVs needs to be submitted in english (language).

If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment.

Please calculate your price bid based exactly on the aforementioned costing requirements. In the contract the contractor has no claim to fully exhaust the days/travel/workshops/ budgets. The number of days/travel/workshops and the budget amount shall be agreed in the contract as 'up to' amounts. The specifications for pricing are defined in the price schedule.

8. Option

9. Annexes