

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

<b>Technical support for Storm Water Management in Bhubaneswar &amp; Kochi</b>	<b>Project number/ cost centre: 16.9003.1-001.00</b>
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<b>0. List of abbreviations .....</b>	<b>2</b>
<b>1. Context.....</b>	<b>3</b>
<b>2. Tasks to be performed by the contractor .....</b>	<b>4</b>
<b>2.1. Baseline study for stormwater management situation in the cities .....</b>	<b>4</b>
<b>2.1.1. Existing situation analysis of the Storm water management scenario in the cities of Kochi and Bhubaneswar.....</b>	<b>4</b>
<b>2.1.2. Documentation of Casestudies .....</b>	<b>4</b>
<b>2.1.3. Review of policies and guidelines at national, state &amp; city for Stormwater Management &amp; Integrated Water Management .....</b>	<b>5</b>
<b>2.1.4. Gap Analysis, Recommendations and roadmap for further action.....</b>	<b>5</b>
<b>2.2. Technical and implementation support for the cities .....</b>	<b>5</b>
<b>2.2.1. Provide technical inputs/ support for planning and implementation: .....</b>	<b>5</b>
<b>2.2.2. Support to the ongoing stormwater management activities of GIZ .....</b>	<b>5</b>
<b>2.2.3. Capacity Building on Stormwater management.....</b>	<b>6</b>
<b>3. Concept.....</b>	<b>7</b>
Technical-methodological concept .....	7
<b>4. Personnel concept .....</b>	<b>8</b>
Team leader/Stormwater management expert.....	8
Expert 1: Junior Expert.....	9
Expert 2: Urban & Regional Planner.....	9
<b>5. Costing requirements .....</b>	<b>10</b>
Assignment of personnel.....	10
Travel.....	10
Workshops, training.....	10
<b>6. Inputs of GIZ or other actors .....</b>	<b>10</b>
<b>7. Requirements on the format of the bid.....</b>	<b>10</b>
<b>8. Option .....</b>	<b>11</b>
<b>9. Annexes .....</b>	<b>11</b>

<b>1. Baseline study for stormwater management situation in the cities .....</b>	<b>12</b>
1.1.1. Existing situation analysis of the Storm water management scenario in the cities of Kochi and Bhubaneswar.....	12
1.1.2. Documentation of Case studies .....	12
1.1.3. Review of international policies and guidelines for Stormwater Management.....	12
1.1.4. Gap Analysis, Recommendations and roadmap for further action.....	12
<b>1.2. Technical and implementation support for the cities .....</b>	<b>12</b>
1.2.1. Provide technical inputs/ support for planning and implementation: .....	12
1.2.2. Support to the ongoing stormwater management activities of GIZ .....	13
1.2.3. Capacity Building on Stormwater Management.....	13

**0. List of abbreviations**

AVB	General Terms and Conditions of Contract (AVB) for supplying services and work 2018
MRV	Monitoring Reporting and Verification
GHG	Green House Gases
ToRs	Terms of reference
USD	US Dollars

## 1. Context

### Background

India is one of the most vulnerable countries to climate change impacts, according to a risk index released at COP23. According to the Global Climate Risk Index 2016 by German watch, India is ranked 6th among the 10 most affected countries in the world.

It is projected that the per capita emissions will increase by about 130% until 2030 reaching 3.6 tCO<sub>2</sub>eq (without Landuse, Landuse Changes, Forestry (LULUCF)) (Climate Action Tracker, 2015). One of the main factors for the increasing GHG emissions is the substantial population growth in India. Indian cities are confronted with a comparably high population growth. In the last 30 years the urban population in India has doubled and has reached 31.16% (377 Million people) of the total population. By 2030 the percentage of the urban population could increase to 50%. This will increase the requirement for additional housing, energy, mobility and infrastructure significantly. The social structure as well as the consumption and mobility patterns (increase of private vehicles and energy consumption, etc.) are changing fast.

The implications of a changing climate are particularly severe for India. In 2016, the country reported the highest number of deaths due to extreme weather (2,119 fatalities) and suffered losses of more than INR 1.4 trillion (USD 21 billion) in property damage. This is almost 1% of India's GDP of USD 2.5 trillion, and almost equivalent to the country's whole health budget.

India accounts for about 7% of the global GHG, so it plays a crucial role in combating climate change. As a response to these challenges the Ministry of Housing & Urban Affairs, Gol introduced several missions namely, the ambitious Smart Cities Mission, the AMRUT Mission, Pradhan Mantri Awas Yojna (PMAY) and the Swachh Bharat Mission. Furthermore, India has declared in their Intended Nationally Determined Contribution (INDC) to reduce the emission intensity by 33-35% compared to the 2005 levels by 2030. The development of climate resilient urban centres using the Smart Cities Mission is a major contribution to this mitigation strategy.

Unfortunately, there are currently not enough comprehensive data on the quantitative contributions of cities to the Indian GHG emissions. It still can be assumed that cities will contribute more and more to the increasing emissions and they will play a more important role in the Indian climate policies.

### Climate Smart Cities Programme

The project Climate Smart Cities contributes to the New Urban Agenda (Habitat III) as well as the Sustainable Development Goals (SDG) 11. Especially to the SDG 11.6: to reduce till 2030 the per capita environment impact of cities, especially in the field of air quality and solid waste management and SDG 11.9: till 2020 increase the number of cities that implement integrated policies and plans for more resource efficiency and mitigation and adaptation to climate change as well as disaster resilience. SDG 13 (Integrate climate change measures into national policies, strategies and planning; Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning)

The project targets decision makers in institutions at national and sub-national level responsible for the development and implementation of integrated climate-friendly urban development measures.

At national level the project supports institutions of the Smart Cities Mission (MoHUA, National Institute of Urban Affairs – NIUA, etc.) to implement urban development missions in a result-

oriented manner and to make climate relevant impacts of these programmes visible for the public, Indian decision makers and the international political community.

Another important target group of the project are the inhabitants of Indian cities that will benefit from the successful implementation of climate friendly solutions in the Smart Cities Mission leading to healthier and more sustainable living conditions.

The overall objective of the project is that climate friendly solutions for urban infrastructure supply and urban development are anchored in the planning and implementation of projects within the framework of the Indian government's Smart Cities Programme.

The project will primarily have focus in the sectors of Solid Waste Management, Plastic waste management, Wastewater Management, Water Supply including water management, Storm water Management, Building Energy Efficiency/Green Buildings, Urban Green Cover and Renewable Energy.

The project is being implemented with support of three implementing partners National Institute of Urban Affairs (NIUA), German Institute of Urban Affairs (Difu) and The Technical University of Berlin (TUBerlin).

Under this assignment the key focus sector will be Storm water management with its integration to the Urban water management system in the city

## **2. Tasks to be performed by the contractor**

The objective of the contract is to provide technical support to the Smart Cities of Bhubaneswar and Kochi on Storm water management interventions.

The exercise to be undertaken in close coordination with the International Stormwater Expert appointed by GIZ

The contractor is responsible for providing the following services:

### **2.1. Baseline study for stormwater management situation in the cities**

#### **2.1.1. Existing situation analysis of the Storm water management scenario in the cities of Kochi and Bhubaneswar**

- a. Review the existing system coverage
- b. Review of ongoing and proposed projects in the cities
- c. Review of the existing organization structure of the city w.r.t water supply, waste water and stormwater management
- d. Review of prevailing system for stormwater management in the city and identification of key issues
- e. Identify if there is any training being provided to the city officials in the sector
- f. Availability of any MRV system for the identified areas for GHG emission accounting.
- g. Any other information of relevance for the subject.

#### **2.1.2. Documentation of Casestudies**

- a. Consultant to compile examples of good practices in the stormwater management sector from India

**2.1.3. Review of policies and guidelines at national, state & city for Stormwater Management & Integrated Water Management**

- a. Review of policies and guidelines available at national level, state and city for storm water management, Integrated Water Management
- b. Identify gaps in the policies or guidelines at city/state level and suggest measures on how to integrate with the national policies and also considering the local conditions what are the measures that needs to be considered

**2.1.4. Gap Analysis, Recommendations and roadmap for further action**

- a. Taking into consideration the existing situation and proposed projects and policies - identify gaps in the system based on long term future demand (20-25 years).
- b. In close coordination with the International expert, based on the gap analysis provide recommendations for implementable projects. Provide a general road map for implementation of these projects in the cities keeping in view the CPHEEO manual and ClimateSMART Cities Assessment framework launched by MoHUA

**2.2. Technical and implementation support for the cities**

(Detailed scope of technical and implementation support will be defined closely by GIZ in consultation with the partners, before commencing activity)

**2.2.1. Provide technical inputs/ support for planning and implementation:**

- a. Provide inputs or formulate advisory/guidelines on stormwater management at state and city level considering the climate change aspects
- b. Review of DPRs/ tender documents to provide technical inputs as well as climate change related aspects in the DPRs/ tender documents in the 2 cities – upto 2 DPRs/ tender documents.
- c. Developing 2 concepts for each city for efficient stormwater management also taking into consideration the regional watershed like
  - water sensitive urban design
  - Municipal Stormwater Management Plan which outlines specific stormwater design and performance standards for new development. Preventative and corrective maintenance strategies to be included in the plan to ensure long-term effectiveness of stormwater management facilities.
- d. Develop Standard Operating Procedures for Operation and Maintenance of storm water drains
- e. Develop MRV systems for the projects identified for implementation and for documenting the GHG emission reduction – upto 2 MRV systems to be developed and tested for application in the cities.
- f. Implementation support on interventions being undertaken by the city during the course of the assignment

**2.2.2. Support to the ongoing stormwater management activities of GIZ**

- a. The consultant to give technical support to the ongoing GIZ project in Kochi and Bhubaneswar. The project looks at the stormwater management issues for a pilot area in the city and developing a digital tool for Stormwater management for community participation and involvement of the Corporation
- b. The CSC project also aims to upscale the system to the entire city and consultant to provide technical support for the upscaling

- c. Give technical input and suggestions to the ongoing exercise on Stormwater management in Bhubaneswar by GIZ in close corporation with the GIZ Implementing partners

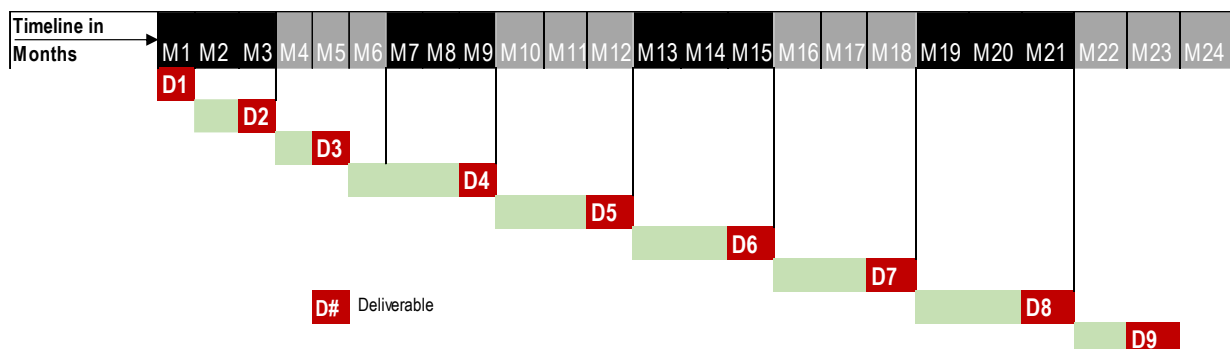
### 2.2.3. Capacity Building on Stormwater management

- a. Conduct upto 6 hands-on training for the municipal corporation staffs on the various technical concepts developed by the consultant.
- b. The consultant to provide technical inputs to the training modules on Stormwater water management being developed by GIZ in close corporation with the GIZ Implementing partners
- c. The consultant may be required to undertake technical session in the training developed by GIZ (max. upto 2 trainings)

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

<b>Milestone</b>	<b>Deadline/place/person responsible</b>
<b>Inception report (D1):</b> The report will contain the detailed methodology adapted by the consultant to undertake the study along with timelines. The report template for further deliverables to also be submitted at time of inception report. The report should not be more than 10 pages, annexures to be separate	Within 1 month of signing of contract
<b>Case studies and policy review:</b> will include sections 2.1.2 and 2.1.3 of the Scope of work (D2)	Within 2 months of submission of D1
<b>Report on existing situation, gap analysis, recommendations and roadmap (D3):</b> will include section 2.1.4 of the scope of work. The consultant to provide separate report on the policy document review. The report should not be more than 30 pages, annexures to be separate.	Within 2 months of submission of D2
<b>Quarterly report 1 (D4):</b> will include parts of Section 2.2 of the scope of work. Separate outputs in word formats as well as ppt will be required for each of the outputs listed under the Section 2.2, which should be included as annexures. Formats for the reports will be as per GIZ formats. The reports should not be more than 20 pages, annexures to be separate.	Within 3 months of submission of D3
<b>Quarterly report 2 (D5):</b> will include parts of Section 2.2 of the scope of work. Separate outputs in word formats as well as ppt will be required for each of the outputs listed under Section 2.2, which should be included as annexures. Formats for the reports will be as per GIZ formats. The reports should not be more than 20 pages, annexures to be separate.	Within 3 months of submission of D4
<b>Quarterly report 3 (D6):</b> will include parts of Section 2.2 of the scope of work. Separate outputs in word formats as well as ppt will be required for each of the outputs listed under Section 2.2, which should be included as annexures. Formats for the reports will be as per GIZ formats. The reports should not be more than 20 pages, annexures to be separate.	Within 3 months of submission of D5
<b>Quarterly report 4 (D7):</b> will include parts of Section 2.2 of the scope of work. Separate outputs in word formats as well as ppt	Within 3 months of submission of D6

will be required for each of the outputs listed under Section 2.2, which should be included as annexures. Formats for the reports will be as per GIZ formats. The reports should not be more than 20 pages, annexures to be separate.	
<b>Draft final report (D8):</b> will include all outputs developed under Sections 2.1& 2.2 of the scope of work. The report should not be more than 100 pages, annexures to be separate.	Within 3 months of submission of <b>D7</b>
<b>Final Report (D9):</b> Will include all the sections with comments from GIZ incorporated. The report should not be more than 100 pages.	Within 2 months of submission of <b>D8</b>



Period of assignment: From November 2019 until November 2021 (24 months)

**Additional note:**

- The consultant has to submit One (1) soft copy (MS Word format) and One (1) Hard copy of each report. The consultant to also prepare and submit all the outputs in form of a Powerpoint presentation.
- All maps/graphics produced have to be submitted in their original editable soft copy format (AutoCAD, GIS, Revit, Sketchup, etc.) as well as in pdf/jpeg/png/shp formats either in a readable DVD or online through file sharing platforms
- GIZ will not reimburse any costs related to any software procurement or licensing

**3. Concept**

In the bid, the bidder is required to show how the objectives defined in Chapter 2 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 1). Following this, the bidder presents and justifies the strategy with which it intends to provide the services for which it is responsible (see Chapter 2).

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 describe the key **processes** for the services for which it is responsible and create a schedule that describes how the services according to Chapter 2 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 2.

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

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

The bidder is required to describe its backstopping concept for ensuring the information flow between GIZ and the consultant and the technical and administrative backstopping during the assignment.

The bidder is required to draw up a **personnel assignment plan** with explanatory notes that lists all the experts proposed in the bid; the plan includes information on assignment dates (duration and expert days) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule.

#### **4. Personnel concept**

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

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

##### **Team leader/Stormwater management expert**

###### 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
- Provide technical support

###### Qualifications of the team leader

- Education/training (2.1.1): Masters in Civil Engineering/water resource management or other related fields
- Language (2.1.2): Good business language skills in English
- General professional experience (2.1.3): 12 years of professional experience in the urban infrastructure sector
- Specific professional experience (2.1.4): 5 years' experience in stormwater management
- Leadership/management experience (2.1.5): 3 years of management/leadership experience as project team leader or manager in a company



- Regional experience (2.1.6): Experience in Kochi or Bhubaneswar will be an advantage
- Development Cooperation (DC) experience (2.1.7): 1 year experience with DC or undertaking DC projects
- Other (2.1.8): Experience in preparation of DPRs for stormwater management and developing MRVs

### **Expert 1: Junior Expert**

#### Tasks of expert 1

- Data Collection
- Data Analysis

#### Qualifications of expert 1

- Education/training (2.2.1): Master's in Engineering/Planning/Environmental sciences or other related field
- Language (2.2.2): Good business language skills in English. Knowledge of Malayalam or Oriya would be an advantage
- General professional experience (2.2.3): 3 years experience in data collection and analysis, review of technical document in the water and wastewater sector
- Specific professional experience (2.2.4): 1 year experience in working with Urban local bodies in India
- Leadership/management experience (2.2.5): Nil
- Regional experience (2.2.6): Experience in the cities of Kochi or Bhubaneswar would be an advantage
- Development Cooperation (DC) experience (2.2.7): Nil
- Other (2.2.8): Experience in stormwater projects will be an advantage

### **Expert 2: Urban & Regional Planner**

#### Tasks of expert 1

- Data analysis and demand gap assessment
- Overall technical support to the assignment

#### Qualifications of expert 1

- Education/training (2.2.1): Master's in Infrastructure Planning/Urban Planning/Regional Planning/ Environmental sciences or other related field
- Language (2.2.2): Good business language skills in English. Knowledge of Malayalam or Oriya would be an advantage
- General professional experience (2.2.3): 5 years experience in the planning for urban infrastructure like water supply, sewage, stormwater management and sanitation
- Specific professional experience (2.2.4): 2 years' experience in working with Urban local bodies in India on the urban infrastructure sector
- Leadership/management experience (2.2.5): Nil
- Regional experience (2.2.6): Experience in the cities of Kochi or Bhubaneswar would be an advantage
- Development Cooperation (DC) experience (2.2.7): Nil
- Other (2.2.8): 2-year experience in stormwater sector

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/Stormwater Expert: Assignment in India for 69 expert days
- Urban & Regional Planner: Assignment in India for 51 expert days
- Junior Expert: Assignment in India for 126 expert days

### 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 2 and list the expenses separately by daily allowance, accommodation expenses, flight costs and other travel expenses.

In total there are 36 round trips and 122 travel days for all experts envisaged by the GIZ team. The travel plan is indicative, and bidder can propose their plan with proper justification.

### Workshops, training

- Minor printing of workshop materials and other materials if required to be distributed for workshops to be borne by the consultant. Expenses upto EUR 65 for audio-visual arrangements or refreshments for workshop can be arranged by the consultant and the costs to be included in the financial proposal. All the expenses shall be reimbursed on production of actual bills.
- The consultant to preferably organize the workshops within the Corporation office premises. All food expenses and the expense for workshop being organized outside the corporation premises will be borne by GIZ.

## 6. Inputs of GIZ or other actors

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

- Relevant documents from other GIZ projects
- Overview of stakeholders working with the CSC Project
- Communication with the implementing partners will be established

## 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.

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 the proposed person held in the reference project and for how long.

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

**8. Option**

Not Applicable

**9. Annexes**

Scope of Work of International Stormwater Management Expert

## Annexure

### Scope of work of the International Stormwater Management Expert

#### 1. Baseline study for stormwater management situation in the cities

##### 1.1.1. Existing situation analysis of the Storm water management scenario in the cities of Kochi and Bhubaneswar.

- a. Review the existing system coverage
- b. Review of ongoing and proposed projects in the cities
- c. Review of prevailing system for stormwater management in the city and identification of key issues
- d. Availability of any MRV system for the identified areas for GHG emission accounting.
- e. Any other information of relevance for the subject.

##### 1.1.2. Documentation of Case studies

- a. Consultant to compile international good practises in the sector. The good practices cities must have conditions similar to the cities of Kochi and Bhubaneswar

##### 1.1.3. Review of international policies and guidelines for Stormwater Management

- a. Review international polices at national or city level and suggest measures which can be incorporated in India and specifically in the cities of Kochi and Bhubaneswar

##### 1.1.4. Gap Analysis, Recommendations and roadmap for further action

- a. Taking into consideration the existing situation and proposed projects and policies - identify gaps in the system based on short term, medium term and long term future demand (20-25 years).
- b. In close collaboration with the national team provide recommendations for implementable projects. Provide a general road map for implementation of these projects in the cities.

#### 1.2. Technical and implementation support for the cities

(Detailed scope of technical and implementation support will be defined closely by GIZ in consultation with the partners, before commencing activity)

##### 1.2.1. Provide technical inputs/ support for planning and implementation:

- a. Support the national team of experts in formulating advisory/guidelines on stormwater management at state and city level considering the climate change aspects
- b. Review of DPRs/ tender documents to provide technical inputs as well as climate change related aspects in the DPRs/ tender documents in the 2 cities – upto 2 DPRs/ tender documents
- c. In close coordination with the national team develop 2 concepts for each city for efficient stormwater management also taking into consideration the regional watershed like
  - water sensitive urban design
  - Municipal Stormwater Management Plan which outlines specific stormwater design and performance standards for new development. Preventive and corrective maintenance strategies to be included in the

plan to ensure long-term effectiveness of stormwater management facilities.

- d. Develop Standard Operating Procedures for Operation and Maintenance of storm water drains for each city
- e. Develop MRV systems for the projects identified for implementation and for documenting the GHG emission reduction – upto 2 MRV systems to be developed and tested for application in the cities.
- f. If required, the consultant might have to give inputs to the cities in the implementation of interventions being undertaken by the city during the course of the assignment

#### **1.2.2. Support to the ongoing stormwater management activities of GIZ**

- a. The consultant to give technical support to the ongoing GIZ project in Kochi and Bhubaneswar. The project looks at the stormwater management issues for a pilot area in the city and developing a digital tool for Stormwater management for community participation and involvement of the city officials
- b. The CSC project also aims to upscale the system to the entire city and consultant to provide technical support for the upscaling
- c. Give technical input and suggestions to the ongoing exercise on Stormwater management in Bhubaneswar by GIZ in close corporation with the GIZ Implementing partners

#### **1.2.3. Capacity Building on Stormwater Management**

- a. Support the national team in developing materials for hand-on training sessions for the municipal corporation staffs on the various technical concepts developed by the consultant. 6 training are proposed to be conducted during the course of the assignment.
- b. The consultant to provide technical inputs to the training modules on Stormwater water management being developed by GIZ in close corporation with the GIZ Implementing partners