Terms of Reference for Support for urban green cover framework in Coimbatore under the CSC project

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

1. Brief information on the project and background

1.1 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 tCO2eq (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, GoI 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.

1.2. 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 be supporting three Smart Cities - Cochin (Kerala), Coimbatore (Tamil Nadu) & Bhubaneshwar (Odisha) and looking at upscaling in other Smart Cities.

The project will primarily have focus in the sectors of solid waste management, wastewater management, water supply including water management, storm water management, building energy efficiency/green buildings, urban green cover and renewable energy. Selected measures from the focus sectors with climate adaptation and mitigation potential will be identified for each city which will be further supported for implementation under this project.

2. Context

The pace of urbanisation has had a negative effect on the green cover in the urban areas in India. Green space distribution plays an imperative role in urban planning since they contribute significantly in enhancing ecological quality of urban areas, improves air quality, urban health, conserve biodiversity, reduce noise, etc. the biggest challenge for urban development is not only to ensure greening of cities and towns but also to maintain and strengthen the existing green cover. Urbanisation usually results in the conversion of natural landscape areas to man-made, engineered structures with impervious surfaces that absorb solar energy which causes the surface temperature of our cities and towns to rise as much as 10-20°Celsius higher than surrounding air temperatures. The planning for urban biodiversity presents a number of challenges; higher population densities, strong development pressure and competing demands on space need to be addressed. Increasing urban green cover provides effective and relatively low cost resilience to heat impacts while improving community amenity and providing multiple benefits.

One of the focus areas of the CSC project is urban planning and green cover in the selected cities. The project intends to stimulate understanding of climate resilient urban planning measures and increasing urban green cover as an adaptation measure with respect to climate change. Vegetation (trees) cover in urban areas around the world, is declining and inflexible cover is increasing due to the demand of the land for development. Increasing green cover in urban environments can be achieved in a number of ways, from protecting local green spaces and designing eco-friendly buildings, through to creating a green space network. CSC project intends to bring into practice the integration of green spaces and permeable surfaces into the selected cities, that would enable the local communities to adapt to the urban environment and minimise local temperatures, by introducing replicable measures at the city, state, and national levels.

3. GIZ shall hire the contractor from July, 2019 until June, 2020.

4. The contractor shall provide the following work/service:

a. **DESCRIPTION OF THE ASSIGNMENT**

- **Objectives**

  The objective of the assignment is to understand the hierarchy, quality, and network of the green spaces in Coimbatore and propose a framework to develop the urban green network of the city. The study should especially focus on residential areas, mixed-used areas, commercial areas and should also consider wastelands and brownfields within the city. Also, the connections to regional natural networks and their relevance for urban climate – catchment areas for water and fresh air, cooling effects, recreational potentials– should be highlighted. It is envisaged that the analysis will lead to further development of targeted recommendations and development of urban green concept at the city level that could be implemented in the coming years.

- **Scope of work:**

  The consultant would undertake the following tasks:

  1. **Rapid assessment of existing situation**
     i. Review of any on-going or proposed urban green cover projects (detailed project report (DPR)) in Coimbatore – projects proposed or implemented under all the national urban missions (AMRUT, SBM, HRIDAY, Smart Cities, etc.) and related to development of parks, increasing vegetation/tree plantation, rejuvenating water bodies, non-motorised transportation lanes, etc.
     ii. Review the investment made/proposed, sources of finance, status of the projects.
     iii. Spatial analysis of the projects to evaluate the location-specific demands, geographical advantages, proximity to certain infrastructure facilities, etc, that contribute to their development.
     iv. Taking into consideration the existing and proposed projects, identify bottlenecks, gaps, enabling factors that the ULB/State currently have.
     v. Assess the awareness, understanding, and technical capacities of the officials of the relevant government/public departments who contribute to or are directly involved in planning and implementing such projects within the city and larger metropolitan/urban area

  2. **Review of national, state, local level bye-laws, regulations, building codes, guidelines, policies, etc. on urban green cover**
     i. Review of National Guidelines on urban green, URDPFI norms related to urban green, any relevant environmental policies, forest cover policies, etc related to urban green at the national level.
     ii. Review of all existing State (Tamil Nadu) level policies and regulations on urban green cover
     iii. Review of existing / proposed master plan of Coimbatore urban area/municipal area to assess the urban green cover percentage and if any recommendations have been made to improve that
     iv. Review of Coimbatore's Smart City proposal, AMRUT proposals and any other documents of relevance to assess how the urban green cover is being dealt with and if any recommendations could be made to improve the same.

3. **Recommendations and roadmap for further action**
   i. Based on situation analysis identify the gaps in the areas of policy as well as situation analysis and develop recommendations for overcoming the various gaps.
   ii. An indicative time line for the recommendations identified in terms of short, medium- and long-term actions should also be proposed. This should be prepared in consultation with the implementing partner of the CSC team

4. **Technical backstopping**
   i. Provide technical inputs for modifications in the legal framework at the city/ state/ national level.
   ii. Support the implementation of selected measures from the roadmap developed for project. Upto 2 measures will be supported.
   iii. The consultant would document 2-3 national examples with similar climate conditions, where green cover has been increased at the city/regional level and the impact that has had on the economy, liveability, local climate, and biodiversity of the city/region
   iv. The consultant would provide inputs into the urban design thinking measures to be conducted by implementing partners of CSC project in Coimbatore
   v. The consultant is required to provide technical inputs and support to the studies, research, and consultation that would be conducted by the implementing partners of CSC project

b. **ELIGIBILITY OF FIRMS**

- **Financial eligibility**
  i. The firm must have an average annual turnover of at least Euro 64.000 (Euro Sixty Four Thousand) in last three financial years and have technical staff strength of at least 5.
  ii. The firm must have worked in at least 3 projects in the urban green networks/cover of values more than Euro 15.000 (Euro Fifteen Thousand) in the last three years.

- **Technical eligibility**
  i. Atleast 5 years' experience in urban and regional level urban design, urban and environmental planning, and landscape design sectors
  ii. Atleast 2 years' experience in in urban green networks at city/regional levels
  iii. Atleast 5 years' experience in working with Urban Local bodies

c. **EXPERTS PROFILE**

- **Technical Expert**
  i. The Technical Expert must have a post-graduate degree in Planning / Architecture / Urban design / /Landscape / Environmental sciences or other related subjects
  ii. He/she should have more than 8 years of work experience in the urban/environmental planning or urban design sector.
  iii. He/she should have excellent knowledge of various urban planning processes and urban design measures practiced in India as well as internationally with respect to urban green and urban open spaces
  iv. He/she should be proficient with the town planning acts, guidelines, and practices prevalent in the selected state

v. He/she should have excellent research and analytical skills to accomplish the tasks mentioned above
vi. He/she should be proficient in digital tools like ArcGIS/Q-GIS, AutoCAD, Revit, Sketch-up, etc.
vii. Work experience in similar projects would be an added advantage

- **Junior Expert**
  i. Hold a graduate degree in Planning / Architecture / Urban design / /Landscape / Environmental sciences or other related subjects
  ii. He/she should have at least 3 years of work experience in the urban/environmental planning or landscape/ urban design sector.
  iii. He/she should have excellent knowledge of various urban planning processes and urban design measures practiced in India as well as internationally with respect to urban green and urban open spaces
  iv. He/she should be proficient in digital tools like ArcGIS/Q-GIS, AutoCAD, Revit, Sketch-up, etc.
  v. Work experience in similar projects would be an added advantage

- **Tentative person-days**

  The tentative total person-days envisioned for this assignment is **up to 170 days.**

Expert	Tentative person-days
Technical Expert (1 no.)	110
Junior Expert (1 no.)	60

- **Working language** – English; knowledge of local language(s) is desirable

- **Submission of technical proposal:**
  The consultant will submit the technical proposal highlighting the following aspects clearly:
  - Interpretation of objectives
  - Strategy (technical concept) for the assigned tasks
  - Implementation methods
  - Work schedule and time schedule
  - Proposed staff
  - Knowledge and information management (work experience in similar projects)

- **Presentation of technical proposal**
  The firms shortlisted based on technical evaluation will have to make a presentation to the GIZ team in Delhi on the
  - Suggested concept and workplan
  - Technical backstopping/knowledge management
  - Consideration of local resources
  - Proposed staff and qualification

The financial proposal will be evaluated after the technical evaluation and presentation by the shortlisted consultants.

d. **DELIVERABLES & TIMELINES**

➢ **Deliverables**

1. **Inception report (D1):** The report will contain the detailed methodology adapted by the consultant to undertake the study along with timelines and person-days allocated for the tasks (up to 30 pages)

2. **Situation and Gap Analysis report (D2):** will include the review of existing situation analysis as per the tasks mentioned in 1.i. to 1.v. and all the policy documents as mentioned in 2.i. to 2.iv. A database of collected & analysed data shall be attached to the report. (up to 80 pages, annexures separate)

3. **Compilation of case studies (D3):** will include the compilation of the case studies in the agreed template

4. **Recommendation and roadmap (D4):** will include recommendations and roadmap for managing and improving the urban green cover in the city as described in 3.i. to 3.ii. (up to 20 pages)

5. **Technical backstopping report (D5):** Will include the details of work done under sections 4.i. to 4.v., as described above. (up to 80 pages)

6. **Final Report (D6):** Will include all the sections with comments incorporated from GIZ team and local partners

➢ **Submission of deliverables**
Schedule:

Deliverables / Timelines	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Inception report	D1											
Situation and Gap Analysis report				D2								
Compilation of case studies							D3					
Recommendation report										D4		
Technical backstopping report											D5	
Final Report												D6

➢ **Additional note:**

- The outputs of each of the deliverables are to be presented to the CSC project team in Delhi in the form of a PowerPoint presentation. The consultant has to submit one (1) hard and one (1) soft copy (MS Word format) of each report.
- 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

- All the data and meta-data collected by the consultant (in soft & hard copies) must be submitted to GIZ.
- GIZ templates and GIZ logos are to be used in the appropriate manner.

e. **LOCATION AND DURATION**

➢ **Locations of assignment:**
The consultant has to travel to Coimbatore and Chennai for data collection and other supporting tasks. The consultant would have to visit GIZ Delhi office for regular updates and presentation as mentioned below.

➢ **Travel:**

Expert	Sector	Air travels (return)	Duration
Technical Expert	Coimbatore	Up to 2 nos	Up to 5 days (per trip)
	Chennai	1 no.	Up to 4 days
	Delhi	Up to 3 nos.	Up to 2 days (per trip)
Junior Expert	Coimbatore	Up to 3 nos	Up to 5 days (per trip)
	Chennai	1 no.	Up to 4 days
	Delhi	Up to 2 nos.	Up to 2 days (per trip)
Total		**Up to 12 nos.**	**Up to 44 days (in total)**

The team of consultants will be responsible for arranging for his/her own travel and logistics.

i. All air travels, local conveyance, and per diem to be reimbursed / paid as per GIZ rules.
ii. Accommodation will be reimbursed as per actuals

➢ **Duration of the Task:**
The contract will be valid for 12 months from the date of signing. The contract is expected to start from July 2019 till June 2020.

➢ **Reporting**
The consultant will report to Mrs. Vaishali Nandan, Project Manager, Climate Smart Cities

5. Specification of inputs
(please complete in full)

Fee days	**Number of days up to**	**Comments**
• Preparation/debriefing	15	
• Implementation	131	
• Travel days	24	
Travel expenses	**Number of days/nights up to**	**Comments**
• Per diem	44	
• Accommodation allowance	44	on actuals
Other travel expenses		**Comments**
• Number of domestic trips	12	

• Number of trips abroad		
• Ancillary travel expenses (e.g. visa, airport transfers)		On actuals
Flights	**Number of flights up to**	**Comments**
• International flights		
• Domestic flights	12	on actuals
Other costs		**Comments**