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

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

"Solid Waste – Appropriate Technologies (SW-APT)" Decision Support tool version 2.0	**Project number/ cost centre:** 14.9050.7-001.00

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0. List of abbreviations

SW-APT	Solid Waste Appropriate Technologies
ToR	Terms of Reference
ULB	Urban Local Body
GEM	Government E-Marketplace
BMU	Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
MOEFCC	Ministry of Environment, Forest and Climate Change
ICCC	Institutionalisation of Capacities on Climate Change Studies and Actions
NDC	Nationally Determined Contributions
MRF	Material Recovery Facility
RDF	Refuse Derived Fuel
C&D	Construction and Demolition

1. Context

Swaccha Bharat Mission has created a momentum in cities across India towards sustainable management of waste. The cities are now geared to compete with each other on cleanliness under swaccha survekshan system. The goal for sustainable waste management however has not been easy for cities to achieve. The first task is to know 'how much' and 'what type' of waste is generated. Swaccha survekshan has prompted cities to make an inventory and regularly report on these two data points regularly. However, making a decision on what technology mix is appropriate of the type of wastes generated and in what capacity they should be installed still remains a challenge for cities. Cities needs tailor made information on type of technologies available for processing, their cost, capacities, details of technology providers available, a feedback mechanism for city on technology providers etc. This will help cities in making informed decisions while choosing technology providers on Government E-Market Place (GEM) portal and making tenders for waste processing units, save costs on feasibility studies etc. There is another aspect that needs to be introduced for cities- tailor made assessment of CO_2 savings and resource recovery potential of waste management technologies and its linkages to financial benefits. Carbon credit market and an analysis of financial savings and earnings from avoided use of virgin and resource recovery can be linked to technologies for waste processing. However, a tool to address these issues have already been released by Ministry of Housing and Urban Affairs. "Solid Waste – Appropriate Technologies (SW-APT)" tool is an aid to decision making for processing and disposal technologies. The tool though has following limitations,

- Does not fetch real time data from GEM portal for cost, approved types of technologies and technology providers
- Does not have a feedback mechanism for effectiveness of technologies after they are installed
- Does note link resource savings and CO_2 mitigation to financial benefits
- Relies on pre-fed conversion factors which change as the waste generation scenarios change
- Does not have a cross learning platform where cities can gain from best practices in other parts of the country and also upload its own best-cases of waste management and processing

There is a need for a version 2.0 of this tool which is comprehensive, flexible to external changes in waste sector and internet based.

The Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU), Germany is supporting the project on "Development and Management of Nationally Appropriate Mitigation Actions (NAMA) in India" with lead executing agency Union Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India. This project focuses on implementation of low carbon measures to reduce emissions from the solid waste sector in India.

Another BMU supported project, "Supporting the Institutionalisation of Capacities on Climate Change Studies and Actions" (ICCC), implemented by the MOEFCC, Government of India and GIZ, aims to develop and institutionalise capacities in the areas of climate protection, resilience

and NDC implementation as well as transdisciplinary issues. These activities are proposed to be fulfilled through strengthening networking amongst key institutions and institutionalise cooperation, e.g. in supporting the establishment of an MoEFCC advisory service to Line Ministries to mainstream Climate Change adaptation for climate resilient infrastructure.

This assignment aligns with overall objectives of both the BMU supported projects.

The overall objective of this assignment is to reinvent SW-APT tool with following scope,

- Support cities in making an informed assessment on requirements (technical and financial) and suitability (environmental and financial) of various waste processing technologies available on the GEM portal and beyond.
- Make a decision on suitable technology and service providers to select for installing waste processing plants in the cities.
- Build capacities of cities on financial advantages of CO_2 and resources savings through sustainable management and processing of waste.
- Serve as a central repository for waste related data and can be openly sourced.
- Provide a cross learning platform for cities to learn from and share success stories of sustainable waste management.

2. Tasks to be performed by the contractor

The qualified consulting agency/consortium is expected to do the following:

- Develop, design, launch and maintain the web-based tool for minimum 1 year
- Search and consolidate data required for the tool
- Construct analysis algorithms for the tool
- Construct design of the web-based version of the tool and add features to the tool such as,
- Fetching data in real time from available online and pre-fed sources (for e.g. online source such as Government E-Marketplace for compost technology providers; pre-fed database of MRF, RDF, C&D and other waste types technology and service providers).
- Providing detailed information such as name of technology provider, contact details, capital cost of technology and approx. land area requirement for the technology, equipment requirements of the technology, status on availability of these equipment's on GEM portal should be provided by the tool based on inputs received.
- Section where vendors requiring empanelment shall be able to submit the required datasheets regarding their products. The data should be consistent with type and quantity of waste generated in the city and required technologies required for the city.
- Provide a platform to save data related to waste surveys, characterization etc. which can be accessed by researchers, academia and service providers
- Provide tailor made outputs about CO_2 savings and resource recoveries that can be made by cities and link them to financial benefits (carbon credits for CO_2 and financial earnings from resource savings) that cities can gain.
- Environmental and financial advantages and disadvantages of required technologies.

- Provide a cross learning platform where cities can learn from and share success stories of sustainable waste management practices. This would include successful case studies on sustainable waste management from across the country on source segregation, smart monitoring systems, decentralized processing system etc. and contact details of organizations which implemented these interventions. The platform is envisaged as an opensource space where details of the implemented intervention will be publicly available.
- Provide a section for feedback of installed waste management units in the cities. This section can be directly accessed by State Urban Departments and Ministry of Housing and Urban Affairs.
- Developing a user manual for the tool.
- Conducting 2-3 day hands on training for municipal officials of 20 cities across 4 regions of India
- Operation, Maintenance and upgradation of tool for 6 months after its launch

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

S. No.	**Task**	**Milestone**	**Timeline**
1.	Inception meeting and agreement on work plan	Work Plan	July 2019
2.	Data collection and consolidation. Following data points are envisaged but not limited to, Details of waste processing technologies(technical and financial) and technology providers(contact details, name of the companies, location etc.) in the country, data from GEM portal for items related to waste processing, data from other authentic online sources which can be fetched real-time, data base of conversion factors for CO_2 mitigation and resource savings, List of Best practices in the country (along with photographs) and details of implementation agencies.	A report on consolidated data	August 2019
3.	Developing algorithms for data analysis	A detailed report explaining how data entered by the cities and pre-fed data along with real-time fetched data from various available online sources will be	September 2019

S. No.	Task	Milestone	Timeline
		analysed to produce desired results.	
4.	Developing a blueprint design of web-tool along with a process flow. Defining access levels for the SW-APT ver. 2.0	A presentation on design, access levels and process flow of the web portal	October 2019
4.	Develop draft working design of the SW-APT ver. 2.0 along with registration of domain name	Demonstrate working design of the tool (with administrative access only)	November 2019
5.	Final working design of the tool and developing user manual	Demonstrate final working design of the tool (with administrative access only) and user manual	December 2019
6.	Launching the tool	A national workshop to launch the tool	January 2019
7.	Training programs for ULB officials of 40 cities across 4 regions of India (East, West, South and North)	Training workshop reports	January 2019 to June 2020
8.	Operation, Maintenance and Upgradation of tool till end of the project from launch date	Quarterly Operation and Maintenance reports and upgradation reports	January 2020 to July 2020

Period of assignment: From July 2019 until July 2020.

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 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 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**).

Required qualification/ experience for the bidder

The bidder can be an agency or consortium. Lead agency should be a registered firm in India. The bidder is required to fulfil following minimum criteria,

A. Bidder should have minimum 5 years of experience in the following areas:
   - Technical expertise in delivering solid waste management solutions in Indian cities
   - Preparation of data analysis tools for solid waste management
   - Developing business models for solid waste management projects
   - Expertise in working with Urban Local Bodies in India
   - Report writing and presentations on solid waste management
   - Prior experience of working with GIZ or other multi-lateral organizations would be preferred

B. Bidder should have following administrative and financial requirement in conducting the assignment:
   - Average annual turnover for the last three financial years should be at least EUR 100,000
   - Number of employees as on 31.12.2018 should be at least 20

The technical assessment is only based on reference projects with a minimum commission value of 10,000 Euro

Project management of the contractor

- 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 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 6), 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 (1)

<u>Tasks of the team leader</u>

- 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

<u>Qualifications of the team leader</u>

- Education/training (2.1.1): Master's Degree in Civil/Environmental Engineering/Environment Science
- Language (2.1.2): Good business language skills in English
- General professional experience (2.1.3): 15 years of professional experience in the Environment Engineering sector
- Specific professional experience (2.1.4): 10 years in Solid Waste Management
- Leadership/management experience (2.1.5): 6 years of management/leadership experience as project team leader or manager in a company.
- Experience of leading at least 3 IT solution projects for waste Management
- Regional experience (2.1.6): 5 years of experience in projects in Indian Cities
- Development Cooperation (DC) experience (2.1.7): 6 years of experience in DC projects

Technical Expert-Information Technology (1)

Tasks of expert
- Designing, Development, Deployment and Maintenance of web tool

Qualifications of expert
- Education/training (2.2.1): Master's Degree in software development/IT
- Language (2.2.2): English
- General professional experience (2.2.3): 8 years of general experience in web-based software development, operation and maintenance
- Specific professional experience (2.2.4): 2 years of specific experience in developing IT solutions for solid waste management projects
- Regional experience (2.2.6): India and Global

Technical Expert- Waste Management (1)

Tasks of expert
- Data collection, analysis, providing subject matter expertise for developing the tool, support in training

Qualifications of expert
- Education/training (2.2.1): Master or equivalent in environmental engineering/sciences
- Language (2.2.2): English
- General professional experience (2.2.3): 5 years of professional experience on working waste management projects and should be adept in data analysis
- Regional experience (2.2.6): India

Training and Documentation Expert (1)

Tasks of expert
- Documentation of user manuals and organising and coordinating trainings for Urban Local Bodies on DSS tool

Qualifications of expert
- Education/training (2.2.1): Masters in communications or equivalent
- Language (2.2.2): English
- General professional experience (2.2.3): 5 years of experience of documentation and editing related to climate change and development issues
- Regional experience (2.2.6): India

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

5. Costing requirements

Assignment of personnel

Team leader (1): Assignment for 20 expert days

Technical Expert – Information Technology (1): Assignment in country of assignment for 60 expert days

Technical Expert – Waste Management (1):Assignment in country of assignment for 60 expert days

Training and Documentation Expert (1): Assignment in country of assignment for 20 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.

Workshops, training

The contractor implements the following workshops/study trips/training courses:

- Training programs for Urban Local Body officials of 40 cities across 4 regions of India (East, West, South and North)

The budget provided by GIZ for implementing these activities amounts to EUR 32051.

Payment schedule

- 40% Advance (on signing of contract)
- 30% interim payment (on submission of deliverable 5)
- 30% final payment (on submission of all deliverables as mentioned in task 6, 7 & 8)
- Scanned copy of cancelled cheque

6. 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 10 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 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. The CVs can also be submitted in English.

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.

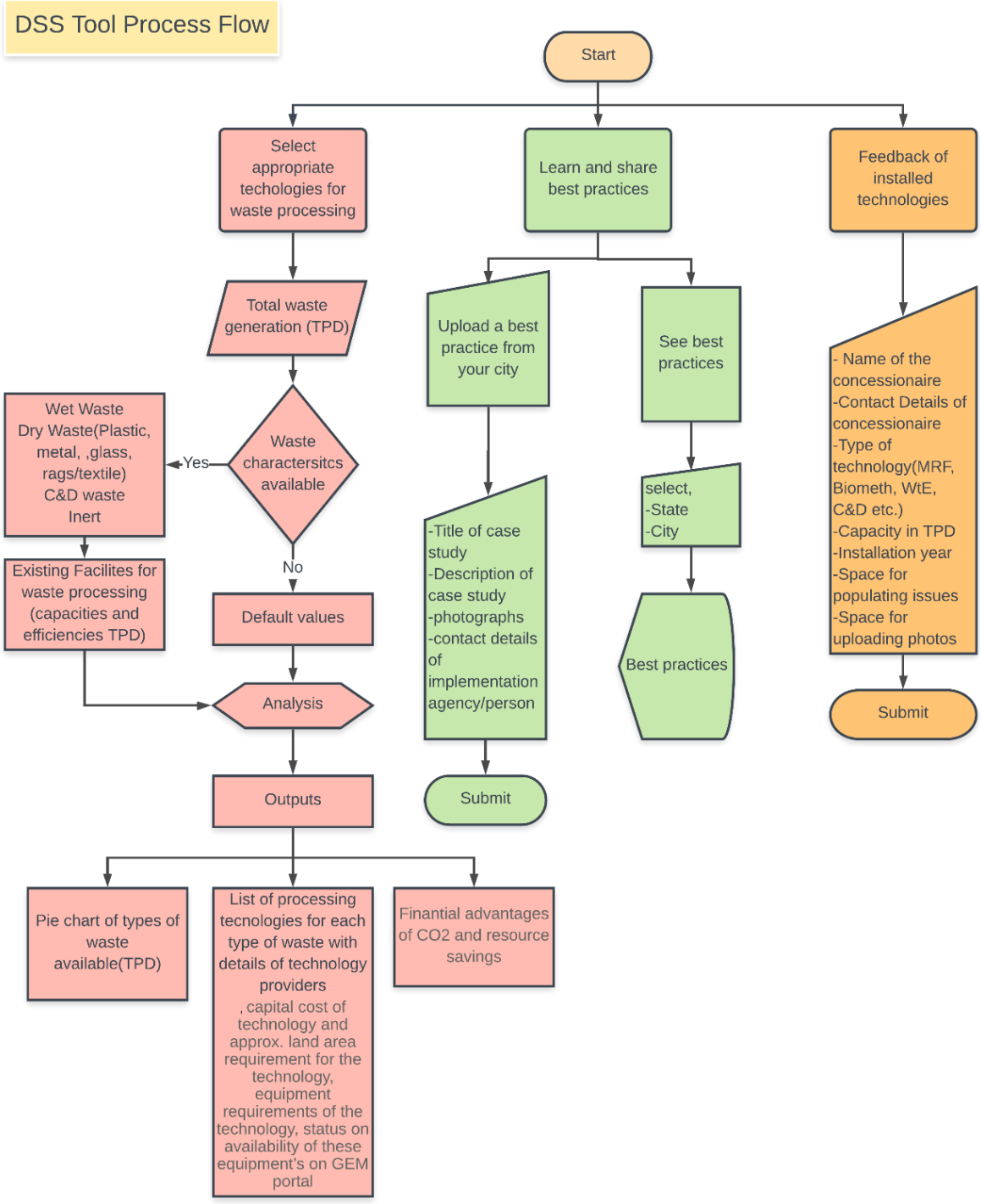
Submission Requirements

- Detailed technical and financial proposal
- Profile of the organization along with professionals who will be working on the project
- GST registration number
- Scanned copy of PAN Card

7. Annexes

Annex 1: Envisaged process flow of the tool

Annex-1: Envisaged Process Flow of the Tool



Note: Above mentioned scope and process flow are not exhaustive and additions can be made to improve the tool during the course of the project