Terms of reference for engaging national consultant/agency for setting up an Industrial Wastewater Technology Platform in India

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Setting Up an Industrial Wastewater Technology Platform in India under the project "Sustainable Environment-friendly Industrial Production (SEIP) Phase 2"	**Project number/ cost centre:** **PN: 18.2074.5-001.00**

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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
SEIP II	Sustainable and Environment-friendly Industrial Production (SEIP) Phase II
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
UNIDO	United Nations Industrial Development Organisation
BMZ	German Federal Ministry for Economic Cooperation and Development
MoEFCC	Ministry of Environment, Forest and Climate Change, Government of India
CPCB	Central Pollution Control Board
SPCB	State Pollution Control Board
IGCC	Indo-German Chamber of Commerce
IGCS	Indo-German Centre for Sustainability
DWIH	German House for Science and Innovation
CII	Confederation of Indian Industry
FICCI	Federation of Indian Chambers of Commerce and Industry (FICCI)
RE	Resource Efficiency
SCP	Sustainable Consumption & Production
STEPP	Sustainable Technology Promotion Platform
ZLD	Zero Liquid Discharge
B2B	Business-To-Business

1. Context

GIZ is engaged in the field of international cooperation for sustainable development and international education work, dedicated to shaping a future worth living around the world. GIZ has over 50 years of experience in a wide variety of areas, including economic development and employment promotion, energy and the environment, and peace and security. GIZ's main commissioning party is the German Federal Ministry for Economic Cooperation and Development (BMZ). As a federal enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development in more than 120 countries worldwide.

Under the Indo German Development Cooperation, a project on "Sustainable and Environment-friendly Industrial Production" (SEIP) was taken up from March 2015 to February 2019. SEIP project focused on finding solutions to industrial wastewater and water so as to reduce pollution, besides working on corresponding state level action plans and national level policy instruments. Ref. www.seip.urban-industrial.in.

The second phase of the Sustainable and Environment-friendly Industrial Production (SEIP) that will be implemented from March 2019 to February 2022 is based on the experiences from the preceding SEIP project that ended in 02/2019. The second phase of SEIP will continue to have a focus on abatement of industrial wastewater pollution in the context of urban areas as well as the pollution of rivers and other water resources. The aim of the project is the promotion of sustainable industrial development in the urban sphere by reducing industrial wastewater pollution through the strengthening of strategic and operational governance structures including framework conditions for regulating, implementing and monitoring. The Ministry of Environment, Forest and Climate Change of the Government of India is the implementing partner.

The objective of the SEIP phase 2 project is, "The strategic and operational governance structures of the Indian Government to effectively combat water pollution from industrial wastewater are strengthened." The SEIP II phase works on the following main outputs:

- Output 1: Strengthening of Legal Framework
- Output 2: Strengthening of Organisational Procedures and Processes
- Output 3: Strengthening of Incentive Mechanisms
- Output 4: Guidelines/e-portals/reference documents
- Output 5: Resource efficiency (RE) and sustainable consumption & production (SCP)

On the topic of industrial wastewater management, industries often ask for information on available technologies, case examples and best practices so that they can look for solutions for problems related to wastewater problems in their companies.

There is a need for a technology platform from where information can be obtained by the industries and support obtained if needed for additional information such as suppliers/manufacturers of equipment, B2B meetings, site visits etc. Different forms of Technology exist today such as UNIDO's Sustainable Technology Promotion Platform[1]

[1] http://www.unido.or.jp/en/activities/technology_transfer/technology_db/

(STePP), European Technology Platform[2] etc. Also, in Germany and Europe, Best Available Techniques Reference Documents exist, which can be used by public agencies as well as private sector (ref. https://eippcb.jrc.ec.europa.eu/reference/). However, there is a need for a customised Wastewater Technology Platform to support industries in providing with relevant information and support.

As a part of SEIP II project, GIZ is proposing to support the industries and the pollution control boards with establishment of an Industrial Wastewater Technology Platform. For this, GIZ is proposing to engage a national consulting company for developing, hosting and operating the envisioned Industrial Wastewater Technology Platform as per the Terms of Reference given below.

Objective of the consultancy services:

The objective of the consultancy services is to set up an Industrial Wastewater Technology Platform for making available relevant information on industrial wastewater management including conveyance systems, wastewater treatment, recycle/reuse, monitoring etc. to all the relevant stakeholders and to provide services such as information exchange between German companies and the Indian company seeking information, facilitating B2B meetings, facilitating site visits etc.

Scope of services:

Part A: Obligatory Services:

a) Needs gathering for designing the Industrial Wastewater Technology Platform including e-portal and its contents, and services to be provided.
b) Designing, developing and hosting e-portal on Industrial Wastewater Technology Platform with relevant information such as treatment technologies, monitoring systems, conveyance systems etc.
c) Operating the Technology Platform including periodically updating information, hosting of webinars, conducting of workshops etc.

Note: The costs for these services are covered by the current contract. The duration for these services will be from contract's start to end date.

Part B: Additional Services:

Providing of services such as facilitating information exchange between German companies and the Indian company seeking information, facilitating B2B meetings, facilitating site visits etc. as per demands after the contract end date (October 31, 2020).

Note: Costs for these services are not covered by the current contract. The successful bidder is expected to provide these services through market demands by charging services on mutual basis between the successful bidder and the service seeker.

[2] http://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_ATA(2017)603935

Contents of e-portal:

The e-portal should provide all relevant information on the following, including information on technologies, suppliers of technologies and services, best practices, relevant publications etc.:

- Waste water treatment technologies (for effluent treatment plants – ETPs at company level and common effluent treatment plants - CETPs that cater to a group of industries.
- Recycle/reuse of treated wastewater.
- Zero liquid discharge technologies (ZLD).
- Conveyance systems for wastewater.
- Sewage sludge management (collection, storage, treatment, disposal).
- Stormwater drainage systems.
- Wastewater monitoring systems (flow, pollutant parameters, online monitoring).

The e-portal should be a store house of all relevant information. Also, the e-portal should be used for hosting webinars and announcing events.

2. Tasks to be performed by the consultant

The national consultant/agency will be responsible for developing, maintaining and operating the technology platform. The following main tasks and sub tasks are to be undertaken:

Main Task1: Needs gathering for setting up of the industrial wastewater technology platform	• **Sub-task 1:** Identify topics and subtopics for scoping the areas that need to be dealt by the proposed industrial wastewater technology platform. For example, the areas of relevance for the industries are: - Waste water treatment technologies (for effluent treatment plants – ETPs at company level and common effluent treatment plants - CETPs that cater to a group of industries. - Recycle/reuse of treated wastewater. - Zero liquid discharge technologies (ZLD). - Conveyance systems for wastewater. - Sewage sludge management (collection, storage, treatment, disposal). - Stormwater drainage systems. - Wastewater monitoring systems (flow, pollutant parameters, online monitoring). • **Sub-task 2:** Identify the stakeholders and beneficiaries of the proposed industrial wastewater technology platform, both national and international. For example, industries, MoEFCC, CPCB, SPCBs, industrial associations, chambers of commerce & industry etc. • **Sub-task 3:** Make a compilation of some good case examples of available technology platforms nationally and internationally on their scope and functioning to understand the scoping for the industrial wastewater technology platform in India.

	• **Sub-task 4:** Through appropriate means such as personal interviews, surveys, small group workshops etc. with the identified stakeholders, gather the needs for establishing the proposed industrial wastewater technology platform and its scope.
Main Task 2: Designing and developing industrial wastewater technology platform	• **Sub task-1:** Develop a concept for the e-portal to host the proposed industrial wastewater technology platform, including structure of the e-portal, information to be made available and its various functionalities. • **Sub-task 2:** Develop a concept for operating the e-portal and providing of services such as facilitating information exchange between German companies and the Indian company seeking information, facilitating B2B meetings, facilitating site visits etc. • **Sub-task 3:** Conduct a stakeholders' workshop (upto 1 day) to discuss the prosed concept (as above). Include relevant stakeholders e.g. MoEFCC, CPCB, SPCBs, industrial associations, chambers of commerce & industry etc. [Note: Organisational aspects of the meetings/workshop including venue, tea/coffee etc. will be the responsibility of GIZ] • **Sub-task 4:** Finalise the concept for developing the e-portal and the services to be provided based on the feedback from the stakeholders and take approval from GIZ. • **Sub-task 5:** Develop the e-portal as per the approved concept.
Main Task3: Commissioning and operating the technology platform including e-portal and the services	• **Sub-task 1:** Commissioning the e-portal in a public domain and operate and maintain the portal. Putting up relevant information (technologies, suppliers, case examples etc.) on the e-portal. Make regular updates to the website including on technologies and other relevant information such as news, event highlights etc. • **Sub-task 2:** Conduct atleast 4 webinars on industrial wastewater management. • **Sub-task 3:** Conduct upto 2 national/regional level workshops to facilitate information exchange with industries on industrial wastewater management and on the Industrial Wastewater Technology Platform. [Note: Organisational aspects of the meetings/workshop including venue, tea/coffee, etc will be the responsibility of GIZ] • **Sub-task 4:** Providing of services such as facilitating information exchange between German companies and the Indian company seeking information, facilitating B2B meetings, facilitating site visits etc. as per demand. • **Sub-task 5:** Achieve a significant outreach, which means that a good number of Indian companies and German/International technology providers use the platform regularly.

Main Task4: Plan for sustainability of the technology platform	• **Sub-task 1:** Develop a plan for operations of the technology platform beyond the contract period on self-sustaining basis. The plan should include practical suggestions on which company(ies) can take over the developed technology platform on self-sustaining basis. **Note:** The e-portal of the Technology Platform will be the property of GIZ until it is transferred. The successful bidder company is free to offer itself for operating the platform on self-sustaining basis beyond the contract period. • **Sub-task 2:** To undertake discussions/meetings with CPCB and/or SPCBs or any other relevant agency and finalise the company and location where the Technology Platform can be hosted on self-sustaining basis. • **Sub-task 3:** To facilitate smooth transfer of the e-portal to the finalised new operator company. [Note: In case the service provide fails to complete the main task 4 and its sub tasks as per GIZ satisfaction, 20% of the total contract value will be reduced.]

Note: GIZ's Data Protection Policy will be applied on content and related aspects of the assignment (enclosed). The web portal can be hosted online only after approval of GIZ based on compliance with Data Protection Policy. While transferring the platform from GIZ to another party, it has to be transferred through proper documentation/agreement so that there is no legal liability on GIZ or any other public agency thereafter.

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

Milestone	**Deadline**
Report on Main Task 1: Needs gathering for setting up of the industrial wastewater technology platform	November 30, 2019
Report on Main Task 2: Designing and developing industrial wastewater technology platform	December 31, 2019
Report on Main Task 3: • Commissioning the e-portal in a public domain.	January 31, 2020
• Operate and maintain the e-portal.	Regular, until October 31, 2020
• Report on the webinars conducted on industrial wastewater management.	February 2020; April 2020; June 2020; August 2020

• Report on the regional workshops to facilitate information exchange with industries on industrial wastewater management and on the Industrial Wastewater Technology Platform.	November 2019 April 2020
• Report on the services such as facilitating information exchange between German companies and the Indian company seeking information, facilitating B2B meetings, facilitating site visits etc. as per demand.	July 2020
• Report on the outreach achieved to ensure that good number of Indian companies and German/International technology providers use the platform regularly.	September 2020
Report on Main Task 4: • Plan for operations of the technology platform beyond the contract period on self-sustaining basis, including practical suggestions on which company(ies) can take over the developed technology platform on self-sustaining basis.	July 2020
• Report on the discussions/meetings with CPCB and/or SPCBs or any other relevant agency to finalise the company and location where the Technology Platform can be hosted on self-sustaining basis.	August 2020
• Report on smooth transfer of the e-portal to the finalised new operator company.	October 31, 2020
Other Reports: • Quarterly progress reports highlighting results achieved.	January 31, 2020; April 30, 2020; July 31,2020
• Final Report on the assignment including all the main tasks of ToR.	October 31, 2020

Period of assignment: From November 2019 until October 31, 2020

3. Concept

For preparing technical proposal, following aspects should be considered by the bidder:

- **Technical-methodological concept:** In the bid, the bidder is required to submit a technical concept note explaining the concept and approach on how the objectives and various tasks defined in ToR would be achieved. Examples and best practices could also be quoted on similar technology platforms.
- **Strategy:** The bidder is required to understand the objectives given in the ToR and do critical examination of the tasks. Subsequently, the elaborated strategy for delivering the services put out to tender.
- **Cooperation:** The bidder is required to interact with relevant actors for successful implementation of the contract, therefore a clear strategy for establishing cooperation and then cooperating with the relevant actors needs to be drawn in line with the ToR requirements.
- **Steering Structure:** The bidder is required to outline the approach and procedure for steering the measures with the project partners.

- **Processes:** The bidder should include in the technical proposal an explanation of the implementation plan: work steps, milestones, schedule. The description of the key processes which it intends to follow for delivering the services.
- **Project Management**: The bidder is required to prepare and submit the approach and procedure for coordination with/in GIZ project.

4. Personnel concept

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).

The bidder is required to provide personnel who are suited to filling the positions described, based on their CVs, the range of tasks involved and the required qualifications.

The below specified qualifications represent the requirements to reach the maximum number of points. The numbers given in brackets refer to the respective lines in the document "Grid for the technical assessment of bids".

Team Leader – 1 no., upto 45 mandays

a) Tasks of the Team Leader (National)
- Overall responsibility for the assignment, particularly in terms of scope, quality control and fulfilment of deadlines.
- Responsible for creative concept and development of technology platform for industrial wastewater sector.
- Collect information on knowledge and technology gaps, requirements and priorities.
- Coordinate with various stakeholders as may be necessary.
- Arrange all the meetings/workshops and make sure relevant stakeholder participates

b) Qualifications of the Team Leader (National)
- Relevant Post Graduate Degree from a recognised university or institution.
- Minimum 15 years' experience in developing tools/systems/solutions in field of industrial waste water treatment management or similar fields
- Specific demonstrated leadership and management experience in conceptualising, developing and maintaining the knowledge platforms / technology platforms.
- Minimum 5 years' experience in international cooperation
- Proficiency in Hindi and English language.

Expert 1: Senior Expert – 1 no. upto 85 mandays

a) Tasks of the Senior Expert (National)
- Research, collect and compile information for the technology platform on various aspects (e.g. gap analysis, need analysis, technology platform components, requirements, procurements, permissions, potential partners and stakeholders).
- Provide support to Team Leader in planning and executing Main Task 1 – 5.
- Support in the development of technology platform based on the requirements/needs.
- Coordinate and facilitate information among stakeholders and experts.
- Review, design and compile questionnaires, plan meetings with relevant Indian and German/International stakeholders.
- Take experts' interview/meetings and record minutes of meetings.

- Write reports/manual/guide and document the meetings, workshops and events to be conducted under the contract.

b) Qualifications of the Senior Expert (National)
- Post Graduate Degree in environment or IT or related fields
- Minimum 10 years' experience in developing tools/systems/solutions in field of industrial waste water treatment management or similar fields
- Specific demonstrated experience in conceptualising, developing and maintaining the knowledge platforms / technology platforms
- Minimum 3 years' experience in international cooperation
- Proficiency in Hindi and English language

A Pool of IT experts - 5 Nos., upto 230 mandays

A pool of 5 relevant IT experts ranging experience from 2 years to 10 years will work on this assignment in line with the ToR requirements.

a) Tasks of the IT Pool of Experts (National)
- One of the five experts will lead the overall development of the technology platform/e-portal as IT Lead and coordinate with IT experts and other senior experts.
- Other four experts will be responsible to develop the platform and ensuring that it fulfils the requirements and expected results.
- The pool of IT experts will be responsible for gathering information (e.g. purpose, main goals, and target audience), planning (e.g. sitemap and wireframe creation), design (e.g. page layouts), content writing and assembly, coding, testing, review and launch and maintenance.
- The pool of IT experts with develop the platform with support of other senior experts

b) Qualifications of the IT Pool of Experts (National)
- Graduate Degree in IT or related fields.
- IT experts may have experience ranging from 2 years to 10 years.
- The pool of experts must have specific experience in developing, hosting and operating similar platform in past.

Eligibility requirements for the bidders / Firms participating in the tender:

- Please provide the legal status of your firm.
- Average annual turnover of the agency or consortium for the last three financial years: at least Euro 1,00,000 (approx. INR 80,00,000)
- The number of employees of the agency or consortium as at 31.12. of the previous year: at least 10 persons.
- Please provide details of at least 1 similar reference project in the last 3 years of your portfolio in the field of environment with a commission of Euro 20,000 (approx. INR 16,00,000).
- Minimum 2 years' technical experience in developing solutions for environment sector
- Minimum 2 years' experience in developing or operating knowledge platform or technology platform
- Experience in working with governments (central/state) in India in the field of environment.
- Experience of international development projects.

The mandays required of all the experts including travel days are as below:

Tasks	Days Team Leader	Days Senior Expert	Pool of IT Experts (5 Nos.)
Main Task 1	10	15	0
Main Task 2	10	20	115
Main Task 3	15	30	95
Main Task 4	10	20	20
Total	**45**	**85**	**230**

Within these mandays, the travel days are summarised below. Details are given in 5(b).

Travel Days Team Leader	Travel Days Senior Expert	Travel days of pool of IT Experts (5 Nos.)
20	30	15

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

5. Costing requirements

a) Specification of inputs

The days of engagement during the contract period, travel days, eligible travel allowances etc. are given below, which can be referred to by the consultant for calculating costs for the financial proposal to be submitted.

Fee days	Number of days up to	Comments
• Preparation/debriefing	1 day	Preparation/debriefing on the Technology Platform project and tasks
• Implementation	294 days	Mandays for taking up the tasks as defined in the TORs. It doesn't include travel days.
• Travel days	65 days	Travel to Delhi or any other location within India as may be required. The experts will also get the fee for the travel days.

Travel expenses	**Number of days/nights** **up to**	**Comments**
• Per diem	65 days	Bidder to quote per diem costs. Note that costs will be reimbursable upto limits as per GIZ rules.
• Accommodation allowance	65 days	Bidder to quote per accommodation costs. Note that costs will be reimbursable upto limits as per GIZ rules.
Other travel expenses		**Comments**
• Number of local trips	65 days	Please specify the cost as per indicated total number of local trips. Costs may be quoted accordingly, reimbursement subject to actuals for the meetings in Delhi or required project locations with the partners, stakeholders, or for any other project meetings.
• Number of trips abroad	0	
• Ancillary travel expenses (e.g. visa, airport transfers)	0	
Flights	**Number of flights** **up to**	**Comments**
• International flights	0	
• Domestic flights	48	24 Round flight trips to Delhi or any other location (e.g. workshop, meeting) within India as may be required. Prior approval of GIZ needed.
Other costs		**Comments**
Institutional overheads		Institutional overheads (lumpsum) for this assignment to be specified by the bidder.

b) Assignment of personnel and travels

Total 360 expert days (including 65 travel days). The bidder is required to calculate the personnel costs and travel costs with the following scope:

- **Team Leader**: The Team Leader is required to travel to Delhi and identified workshop sites upto 10 times during the project duration. First visit should be planned at the start of the project and the last when final deliverables to be submitted to partners/stakeholders. During the visit to Delhi, the expert needs to travel locally to meet partners/stakeholders and GIZ representatives and conducting meetings/workshops as per the ToR.

Total man days expected: Upto 45 (including 20 travel days)

- **Senior Expert:** The Expert is required to travel to Delhi and identified workshop sites upto 10 times during the project duration. First visit should be planned at the start of the project and the last when final deliverables to be submitted to partners/stakeholders. During the visit to Delhi, the expert needs to travel locally to meet partners/stakeholders and GIZ representatives and conducting meetings/workshops as per the ToR.

  Total man days expected: Up to 85 (including up to 30 travel days)

- **A pool of IT Experts (5 Nos.):** A pool of 5 IT experts is required to work for the development, hosting, and operating the technology platform and e-portal. Two members from the pool of IT experts can travel to Delhi and identified workshop sites upto 2 times for total 15 days during the project duration.

  Total man days expected: Up to 230 (including up to 15 travel days)

c) Workshops

The contractor implements the following workshops:

- Conduct a stakeholders' workshop (upto 1 day) to discuss the prosed concept (as above). Include relevant stakeholders e.g. MoEFCC, CPCB, SPCBs, industrial associations, chambers of commerce & industry etc. (Ref. Main Task 2).
- Conduct upto 2 national/reginal level workshops to facilitate information exchange with industries on industrial wastewater management and on the Industrial Wastewater Technology Platform (ref. Main task 3, Sub-task 3).

[Note: Organisational aspects of the meetings/workshop including venue, tea/coffee, etc will be the responsibility of GIZ. The bidder <u>need not account costs</u> for the organisational aspects of the workshops]

6. Inputs of GIZ or other actors

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

- Support in providing contact with the implementing partners of the project and key stakeholders.
- Review of progress and approvals on deliverables.

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 (ref. Section 3 above of TORs) is to be organised in accordance with the positively weighted criteria in the technical assessment grid. It must be legible (font size 11 or larger) and clearly formulated. The bid is to be drawn up in English.

The complete bid shall not exceed 30 pages (excluding CVs).

The CVs of the personnel proposed in accordance with Section 4 above of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 6 pages. The CVs must clearly show the relevant qualification and experience. If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. The bidder may be called for a technical presentation during the stage of technical assessment.

8. Annexure:

1. GIZ Data Policy