Terms of Reference for
for replication on RECP measures in selected industrial areas in Uttarakhand

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1. BRIEF INFORMATION ON THE PROJECT

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is a federal enterprise with operations around the globe. It supports the German Government in the fields of international cooperation for sustainable development and international education. GIZ supports people and societies in shaping their own futures and improving their living conditions.

Under the Indo German Bilateral Development Cooperation, in the field of environment, GIZ is providing technical cooperation under the "Sustainable and Environment-friendly Industrial Production" (SEIP) project to the identified partner agencies at central, state and local levels, on various identified priority topics. The SEIP Project has duration upto February 2019. Ref. www.seip.urban-industrial.in.

The SEIP Project works on selected industrial areas in Gujarat, Delhi and Uttarakhand states. One of the important aspects has been introducing proper industrial waste management solutions (Hazardous waste disposal) at industrial estate level so that sustainability aspects are well integrated.

For supporting the activities related to replication of solutions for industrial resource efficiency and cleaner production, GIZ is considering engaging consultancy services of a national firm of consultants as per Terms of Reference given below.

2. CONTEXT

The SEIP project has an indicator related to industrial areas to implement proven ("Best Practice") technologies and management practices for an efficient, environment and climate friendly industrial development. Under the ongoing SEIP project, GIZ has reached out to about 51 industries in Integrated Industrial Estate in Haridwar through German consultant M/s Adelphi, for undertaking rapid assessment followed by detailed assessment of 10 nos. industries, and identifying and facilitating implementation of resource efficiency/cleaner production measures (RECP) leading to economic as well as environment benefits.

Industries, in particular the small- and medium-sized industries as well as few large scale industries can benefit from resource/eco-efficiency measures by improving their business and reducing pollution. Reducing resources utilisation (energy, water, materials) and waste (such as wastewater and solid waste), consequently reducing the production costs are not only direct economic benefits of productivity enhancement, but part of ethical business behaviour.

The measures taken up in individual industries include efficient raw material handling and improved production processes, reduction in water consumption and as such wastewater generation (reuse, recycle etc.) as well as in increased energy efficiency. Economic and ecologically efficient plant management and production processes are inevitable strategies to enhance competitiveness.

Activities aimed at reducing pollution and increasing resources efficiency that were piloted in one or several of the SEIP pilot areas can be considered as best practices that can be

replicated in other states and industrial areas. The aim of this activity is to document these best practices for dissemination as a basis for large-scale replication of SEIP pilot measures.

Targeted best practices under the SEIP Project:

- Wastewater treatment
- Participatory approach
- Improvements in ETPs and CETPs
- Energy efficiency in companies
- Water efficiency in companies
- Raw material efficiency in companies
- Waste volume reduction in companies
- Pollution reduction in companies
- Resource saving and pollution reduction through training of ETP/CETP operators
- Measures to promote women

Within the framework of the SEIP project, it is intended to reach out to about 3 nos. industrial areas (other than IIE Haridwar) within Uttarakhand to disseminate and replicate the pilot measures of resource efficiency and cleaner production within individual industries, so that those industries can use the learnings for applying in their premises.

Following are the activities identified to fulfil the project objective with regard to best practices in resource efficiency and cleaner production in industrial areas:

- Identification of general/specific improvement needs in industries in 3 selected industrial areas.
- Identification of solutions for application/replication in selected industrial areas
- Training workshops to industries for application of solutions
- Post training follow-up for implementation and documentation

3. SERVICES TO BE PROVIDED BY THE FIRM OF CONSULTANTS

3.1 Overall objective:

The overall objective of the services to be provided by the Firm of Consultants is to enable replication of environmental improvements in selected industries (atleast 30 industries) in 3 selected industrial areas in Uttarakhand (Pantnagar, Sitarganj and Bhagwanpur) through implementation of technically sound and financially viable techniques/technologies for process optimisation, resource efficiency (materials, water, energy) and pollution reduction.

The services of the Firm of Consultants are expected to support in reduction of consumption of raw materials, water and energy besides supporting in reduction of pollution levels at individual industry level. The targeted reduction/improvement in each individual industry is as below:

- resource efficiency regarding energy by reduction of energy consumption on average by 25%
- reduction on water consumption by 15%

- reduction in raw material utilization by 5%
- reduction in product specific waste by 15%

The of services to be provided by the Firm of Consultants are as below:

- Identification of improvement needs (energy, water, material, waste etc.) in general in industries in the 3 selected industrial areas.
- Identification of relevant and tested solutions for application/replication in selected industries.
- Conducting of training workshops to industries for application of solutions.
- Post training follow-up for implementation and documentation of improvements achieved.

3.2 Tasks to be performed

The firm of consultants is expected to provide services as per following tasks.

Main task 1: Identification of improvement needs in industries in the 3 selected industrial areas.	◻ Collection of information on overview of the 3 selected industrial areas and the type of industries. ◻ Half-day consultative workshop in the three IAs (1 workshop in each IA) with potential industries (atleast 50 in each industrial area) and other relevant stakeholders, (e.g. state pollution control boards, industry associations etc.) for identification of volunteering industries (atleast 10 industries in each industrial area). ◻ Rapid assessment of general/specific improvement needs in the industries.
Main task 2: Identification of solutions for application/replication in selected industries	◻ Mapping of potential solutions for application in the selected industries in the 3 selected industrial areas. The tasks to be performed are: • Collect information on success stories and successful models provided by the German expert (Adelphi in consortium with Indian consultants) under SEIP Project (in SIIDCUL IIE Haridwar, GIDC Vapi and DSIIDC Patparganj). • Collect information on relevant solutions from the BREF documents from EU for the Best Available Techniques (BAT) • Collect information from the Environmental Technology Platforms in Europe and any other sector specific documents including case examples, best practices, and cleaner production measures. • Match the solution collected with the improvement needs identified in Main task 1.

Main task 3: Training workshops to industries for application of solutions	Conduct upto 5 nos. of training workshops (1 day each) in each of the 3 selected IAs for facilitating application/replication of solutions in volunteering industries (total of 15 training workshops). The training workshop should elaborate the solutions that can be applied in the industries for achieving the targeted improvements. The training should be elaborate enough for the industries to be able to take actions and implement improvement measures. The training workshop should target the following improvements in individual industries: □ resource efficiency regarding energy by reduction of energy consumption on average by 25%, □ reduction on water consumption by 15%, □ reduction in raw material utilization by 5%, and □ reduction in product specific waste by 15%. Each training workshop may have upto 45 participants. Atleast 30% of the industries) operating in the selected industrial estate should have participation in one or the other of these workshops. Training material should include a document (hardcopy) on the solutions that can applied by the industries and any other reference document (soft copies). <u>Note:</u> All logistics including venue, and training material are to be organized by the Consultant. Total of about 50 industries in each industrial area to be covered (total 150 industries).
Main task 4: Post training follow-up for implementation and documentation	□ Undertake post training follow-up with the participating industries for ensuring implementation of improvement measures in at least 10 industries in each industrial area (total 30 industries) to achieve improvements as mentioned in Main task 3 above. This includes providing of technical support including information, clarifications etc. to industries as may be needed. □ Documentation of improvement measures in the targeted 30 industries, including the approach/methodology chosen, the processes followed, successful approaches, results/impacts with means of verification (data of before and after, interviews, photos etc.). □ Preparation of reports on events such as meetings and workshops. □ Preparation of material for the SEIP project website on events, highlights, news etc. □ General follow-up with the other industries that participate in various workshops and to document any improvements achieved by them.

4. DELIVERABLES

Report on identified general/specific improvement needs in industries in the 3 selected industrial areas. (Refer to Main Task 1)	July 2018
Report on identified and agreed solutions (technically and financially viable) for application/replication in industries in the selected industrial areas (Refer to Main Task 2)	August 2018
Report on training workshops to industries for application of solutions (Refer to Main Task 3)	September 2018
Report on replication of successful models and implemented measures and results achieved (Refer to Main Task 4)	November 2018

Note: All reports/documents have to be submitted in English language in editable soft copy format.

5. SECONDMENT OF PERSONNEL AND LEVEL OF EFFORT

The Firm of Consultants shall be responsible for technical and administrative coordination of the tasks described above.

The overall duration of the contract shall be from June, 2018 through November, 2018.

The estimated requirements for consideration by the bidding consultants are given below.

- **Estimated requirements of experts:**

  The services will be coordinated by a National Senior Expert supported by up to two team members (National Jr. Experts) responsible for field work and coordination of the activities as per ToRs.

  The estimated total number of man days of the consultant required are 199 man days, as detailed below:

  - 1 National Senior Expert : total up to 65 days (including up to 27 days in field)
  - Upto 2 National Junior Experts : total up to 134 days (including up to 31 days in field)

- **Travels:** The estimated number of travels of the consultant is as below:

  - Rail/road travels in India
    - Up to 30 nos. of travels (to and fro) of national senior expert
    - Up to 30 nos. of travels (to and fro) of national junior expert

- Travels to the government offices in Dehradun, Roorkee and to industrial areas within Uttarakhand are foreseen. Costs must be quoted on lumpsum basis, settlement of which will be subject to actuals.

- The total days foreseen for field work are:
  - 1 National Senior Expert : up to 27 days in field
  - Upto 2 National Junior Experts : up to 31 days in field

□ **Workshops/Trainings:** The estimated number of workshops/conference/meetings:

- Upto 6 nos. of site level workshops to be conducted in each selected industrial area (3 nos.) in Uttarakhand. (As per the scope mentioned in task list).
- Number of meetings – as per requirements

Note: The organisational aspects of workshops/ conferences, including costs towards venue, meals etc. will be taken care by Consultant. In the cost offer, the provisioning should be made by the consultant. However, for the organisational costs and for the contents of such workshops/trainings, the consultant should seek prior approval from GIZ.

□ **Eligibility criteria for companies**

I. Commercial Assessment

- Average annual turnover of atleast Euro 60000 for the last three financial years {last-but- four financial can be included in case of invitation to tender held within six months of end of last financial year}.

- Number of employees as at 31.12 of the previous year Atleast 7 Persons

II. Technical Assessment

- The technical assessment is only based on reference projects with a minimum commission value of 15000 Euro

A. Minimum requirements: Atleast 2 reference projects in the technical field of RECP measures

B . Weighted Criteria (only for procedures with pre-qualification and with a limit on the number of applicants)

1. Technical Experience (upto five specialists areas, including cross - cutting themes)

- Minimum 3 years' experience in Resource Efficient and Cleaner Production (RECP) solutions in field of energy, water, raw material and product waste
- Minimum 3 years' experience in working with individual industries, state infrastructure development cooperation, and pollution control boards
- Minimum 3 years' experience in advisory and implementation of solutions in individual industries and reporting results

- Minimum 3 years' experience in conducting workshops with industries and sharing tested solutions/best practices for performance improvement
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2. Regional Experience in Uttarakhand
3. Experience of development projects (ODA Financed)

- **Qualifications of the national senior expert:**

- Post graduate degree in engineering, environmental management, natural sciences, economics or related field.
- At least 15 years of experience in environmental management in industries; high technical and advisory competences. Technical background with respect to resource efficiency, environmental management and pollution reduction in industries.
- Specific qualification/ special field – Practical experience in application of environmental management tools/approaches in industries [cleaner production processes, resource efficiency, environmental management etc.]
- Regional experience/knowledge of country: Working experience and knowledge of India. Work experience in Uttarakhand state is preferable.
- Language skills: Excellent command of English (both spoken and written), strong in intercultural communication and sensitive in interacting with cooperation partners.

The Firm of Consultants shall provide Curriculum Vitae of proposed expert in compliance with the CV Template for the European Commission. CV shall not exceed 5 pages. CV which do not comply with the before mentioned criteria will not be considered.

- **Qualifications of the national junior expert:**

- University degree in engineering, environmental management, natural sciences, economics or related field
- At least 3 years of experience in relevant sectors - Technical background with respect to resource efficiency, environmental management and pollution reduction in industries
- Specific qualification/special field - Environmental management in industries
- Regional experience / Knowledge of country - based in Uttarakhand, India preferable.

The Firm of Consultants shall provide Curriculum Vitae of proposed expert in compliance with the CV template attached. CV shall not exceed 5 pages. CV which do not comply with the before mentioned criteria will not be considered.

- **Backstopping:**

The Firm of Consultants may associate its experts and the previous knowledge for contributing to the achievement of the objective of the consultancy services, in particular for the Resource Efficiency and Cleaner Production in industries. The Firm of Consultants shall provide Curriculum Vitae of proposed experts in compliance with the CV Template as attached.

The costs for such experts and knowledge could be quoted as part of the office costs specifying exactly what is considered.

6. Submission of proposals

The firm may kindly submit the proposal as per the TORs

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