Integrated Rural Urban Water Management for Climate Based Adaptations in Indian Cities (IAdapt)

Terms of References (ToR)

For

Assessing the potential of roof top rain water harvesting for ground water recharge/aquifer recharge and demonstrating actual implementation at selected public building in Solapur, Maharashtra under the project on ‘Integrated Rural Urban Water Management for Climate Based Adaptations in Indian Cities (IAdapt)’ funded by IDRC, Canada

About the project

Solapur is a part of the Integrated Rural Urban Water Management for Climate Based Adaptations in Indian Cities (IAdapt) Project funded by Canada’s International Development Research Centre (IDRC) and implemented by ICLEI South Asia in partnership with Athena Infonomics LLC, International Water Management Institute (IWMI) and Indian Institute of Technology (IIT) Madras.

The objective of this project is to institutionalize climate change adaptation measures through the creation of an enabling ecosystem within cities to adopt and implement IUWM approaches at a city level and an approach towards IWRM at catchment level guided by participatory Catchment Planning, simple decision support tools, preparation of catchment level action plans and multipronged financing approaches.

Background

Under this project, a micro-catchment has been identified for detailed work which consists of Ekrulkh lake, 3 villages – Tale Hipparga, Haglur, Ekrulkh-Tartgaon and Solapur city. A RURBAN platform has also been identified comprising of rural and urban stakeholders to support the principles of Integrated Urban Water Management and Integrated Water Resource Management along with climate change impacts. This RURBAN team has selected a pilot project to be implemented in the micro-catchment to showcase climate adaptive water management practice in the micro-catchment.

Solapur district is located in south eastern edge of Maharashtra State. The head-quarter of the district is Solapur city. The district has a total area of 14,844 Sq. Km and population of 43,15,527 as per census 2011. Though the region has several lakes and rivers; Solapur often experiences water scarcity due to rapid urbanization, industrial
growth and lack of effective water resource management. Uneven water distribution and inefficient water supply schemes resulted in clashes among stakeholders in the region. Bhima River is a major river in Solapur district with Sina, Man, Nira, Bhogavati and Bori rivers as tributaries. The district experiences average rainfall of 545.4 mm. Though the region has several lakes and rivers; Solapur often experiences water scarcity due to rapid urbanization, industrial growth and lack of effective water resource management. Uneven water distribution and inefficient water supply schemes resulted in clashes among stakeholders in the region.

Considerable population of Solapur relies on either private or public borewells/hand pumps to meet their daily needs during the unavailability of municipal water supply. Solapur Municipal Corporation (SMC) has provided hundreds of hand pumps in core and expansion areas to cater to water demand for secondary needs of citizens. Urbanization through over exploitation of ground water and climate change through short duration high intensity rainfalls are reducing groundwater recharge potential. Hence depleting ground water table is a crucial issue for Solapur and efforts should be taken to minimize its impact. Considering inadequate rainfall (about 600 mm) and surface pollutants in Solapur it is advised to consider roof top rainwater for ground water recharge on priority instead of surface runoff. The details of the work are mentioned in the following table.

**Details of the consultancy services:**

<table>
<thead>
<tr>
<th>Sr.</th>
<th>Title</th>
<th>Details</th>
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<tbody>
<tr>
<td>A</td>
<td>Task</td>
<td>Assessing the potential of roof top rain water harvesting for ground water recharge/aquifer recharge and demonstrating actual implementation at selected public building in Solapur, Maharashtra under the project on ‘Integrated Rural Urban Water Management for Climate Based Adaptations in Indian Cities (IAdapt)’ funded by IDRC, Canada. Location: Solapur, Maharashtra, India.</td>
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<tr>
<td>B</td>
<td>Overall scope of the work</td>
<td>The scope of above mentioned task is as following: Part I: Assessing the potential of roof top rain water harvesting for ground water recharge/aquifer recharge. Part II: Demonstrating actual implementation of RWH system at selected public building in Solapur.</td>
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<tr>
<td>C</td>
<td>Description of the scope</td>
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<tr>
<td>Part I: Assessing the potential of roof top rain water harvesting for ground water recharge/aquifer recharge</td>
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<td>Selected consultant has to undertake following tasks:</td>
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<td>1) Study of the catchment area, rainfall trend, strata and identify water logging areas in the city</td>
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<td>2) Background data collection and analysis including review of existing plans and technologies in accordance with National/state policies and schemes</td>
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<td>3) Selection of public buildings like schools, colleges, shopping complexes, hospitals in Solapur (at least 25)</td>
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<td>4) Assessment of water utilization pattern and demand for selected buildings, analysis of water quality at minimum five (5) locations</td>
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<td>5) Calculation of ground water recharge potential through roof top rainwater harvesting for selected buildings using GIS maps and actual measurements</td>
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<td>6) Formulating strategies and its prioritization for long term program including costing.</td>
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<td>7) Analysis and review of existing rainwater harvesting/ground water recharge/aquifer recharge technologies for varying capacities/uses</td>
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| Part II: Demonstrating actual implementation of RWH system at selected public building in Solapur |
| Selected bidder has to undertake following tasks: |
| 1) Identify potential site based on above study to demonstrate actual implementation having better potential to recharge ground water and visibility to promote the concept |
| 2) Prepare tender document for the same |
| 3) To develop a MRV framework |
| 4) To guide local stakeholders on strategic ground water recharge through rain water harvesting |

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<tr>
<th>D</th>
<th>Deliverables and time frame</th>
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<tbody>
<tr>
<td>Tasks</td>
<td>Time line</td>
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<tr>
<td>1) Baseline report consists of points 1 to 3 of Part I as mentioned in ‘section C – Description of the scope’ of this document</td>
<td>Within ten (10) days from the award of contract</td>
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<td>2)</td>
<td>Detailed report on 'Assessing potential of roof top rain water harvesting for ground water recharge/aquifer recharge at selected public buildings in Solapur' consists of points 4 to 7 of Part I as mentioned in 'section C – Description of the scope' of this document</td>
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<td>3)</td>
<td>Preparation of tender document for the identified site of actual demonstration having better potential to recharge ground water and visibility to promote the concept</td>
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<td>4)</td>
<td>Actual implementation and supervision to achieve intended outputs, preparation of MRV system</td>
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<td>5)</td>
<td>Training program to guide local stakeholders on strategic ground water recharge through rain water harvesting</td>
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<td>E</td>
<td>Payment schedule</td>
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<td>• First instalment (30%): At the time of signing the contract</td>
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<td>• Second instalment: (10%): Satisfactory completion and acceptance by ICLEI – SA of deliverables 1 and 2 as mentioned in 'section D – Deliverables and timeframe' of this document</td>
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<td>• Third Instalment (40%): Satisfactory completion and acceptance by ICLEI – SA of tender document and at the start of execution of ground water recharge system through RWH for selected building</td>
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<td>• Fourth Instalment (20%): Satisfactory on ground completion of ground water recharge system through RWH and a training program for local stakeholders</td>
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<td>F</td>
<td>Methodology</td>
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The consultant should qualify for the following minimum qualifications and experience:

**Technical Eligibility**

Organizations or individuals can bid for this contract. At least 2 of the following conditions are required for eligibility for this project:

1. 8-10 years of experience in implementing similar projects related to construction of rain water harvesting structures/water supply projects for ULBs in Maharashtra.
2. Consultant should have carried out successful completion of work for at least five projects with the ULBs or state government departments for/rain water harvesting, etc. for a cost of at least Rs. 5 lakh each. Consultants should furnish the self-attested copy of work orders for these works and a copy of certificates for satisfactory construction of these plants/facilities from the same Institution should be submitted at the time of bidding. Photographs of the work implemented should also be submitted.
3. Minimum turnover of Rs. 20 lakh during last 2 years would be required in case of organizations and minimum of 3 Utilization Certificates or other completion documents for projects exceeding 10 lakh rupees (for last 2 years) each would be required in case of individuals.

**Additional information**

1) Consultants with PWD registration and valid license would be preferred.
2) Experience of working in the State or city would be an additional benefit.
3) Consultants listed/empanelled under any mission/scheme/committee at National/ State/ ULB level shall be preferred.
4) The consultant shall demonstrate ability to effectively work and manage similar projects of consultancy.
5) The consultant shall demonstrate strong understanding of the field related to this project and municipal services.

<table>
<thead>
<tr>
<th>Details required in contract document</th>
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<tr>
<td><strong>Technical Bid</strong></td>
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<tr>
<td>1. Proposal with approach and methodology for undertaking the current assignment, Project Schedule with activity and duration to accomplish the task</td>
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</table>
within the scheduled project duration along with detailed work plan.

2. Credentials of organization and or individual
3. Details of at least 3 similar previous projects implemented by the organization/individual with documentary proof for the same
4. Registration certificate
5. GST, PAN or TIN number details
6. Audited accounts statements for last 3 years
7. CVs of key personnel along with time distribution should be given. All relevant CVs shall be provided in full detail. If the CV of a proposed staff is found incorrect, the award of the consultancy to the bidder may also be liable to cancellation in such an event.
8. Tender Submission Form (Annexure I)

Financial bid

1. Financial bid for tasks listed in the tender document. The total cost should include all the expenses for required to complete all the above mentioned tasks. Financial bids should be inclusive of all taxes, travel and per diem costs etc.
2. Item wise break up for all components
3. Financial details of the organization to prove eligibility

Note: All Technical and Financial bids should preferably be in English. Financial bid should include all costs including taxes, transport, labour, etc. and should be all inclusive. Bidders are encouraged to visit the site before submission of bid. Soft copy of the tender document (technical and financial) should be mailed to ICLEI South Asia on the contact details mentioned in this document.

Qualified individuals/organizations should send cover letter, technical and financial proposals (in separate envelopes) to the contact information provided in this tender document in hard copy no later than 20th September 2019. Please send your application with “Ground Water Recharge through Rainwater Harvesting under IAdapt – Solapur” in the subject line and on a sealed envelope.

Please note:

a) The bidder shall acquaint with the work and working conditions at site and locality. No claim shall be entertained on this issue after the bid has been submitted.

b) The hard copy of bid document shall reach to the above
mentioned address not later than 3 days from the last date of submission of bid document, provided the bid has been submitted through email before the due date of submission

c) Bid Validity: All bids submitted shall remain valid for a period of 30 days from the time of submission. Any bids submitted for a lesser duration can be disqualified.

d) Notification of selected consultant: The bid shall remain open for a total of 15 days from the day of floating the tender. Only the successful/shortlisted consultant(s) would be notified.

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<tr>
<th>Contact information</th>
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| **For bid submission** | Bedoshruti Sadhukhan  
Senior Programme Coordinator (Sustainability), ICLEI South Asia, C-3, Lower Ground Floor, Green Park Extension, New Delhi - 110016, India. Tel: +91 – 11 – 4974 7200, Fax: +91 - 11 - 4974 7201  
Email shruti.sadhukhan@iclei.org  
Website: [www.southasia.iclei.org](http://www.southasia.iclei.org) |
| **For local information** | Nikhil Kulkarni  
Assistant Manager (Sustainability)  
ICLEI – South Asia  
Email: nikhil.kulkarni@iclei.org  
Contact number: 9766528899, 7506220309 |

Other terms and conditions

**Other terms and conditions**

1) The Terms of Reference (ToR) shall be downloaded free of cost from the ICLEI South Asia website
2) The bid shall be valid for a period of 30 days from the date of submission of bid document
3) A bidder shall submit the bid documents that satisfies each and every condition laid down in this notice, failing which, the bid will be liable to be rejected by ICLEI South Asia
4) In case the bidder wishes to sub-contract part of his deliverables, the final responsibility of delivery and performance solely lies with the bidder
5) Selected consultant has to deliver expertise and assist project team which will be consists of the representatives of ICLEI – South Asia and officials of Solapur Municipal Corporation (SMC).

6) Selected consultant (individual or organization) is expected to perform the activities as mentioned in the section ‘C’ and provide deliverables as mentioned in the section ‘D’ following the methodology prescribed in the section ‘F’ of this ToR.

7) The consultant is allowed to propose amendments to the methodology, when they find it necessary. Actual amendment in methodology will be in force only after written approval from ICLEI – South Asia.

8) The bidder shall be deemed to have carefully examined the work and site conditions’. In this regard, he/she will be given necessary information to the best of knowledge of ICLEI South Asia in consultation with SMC but without any guarantee to it.

9) If applicant has any doubt as to the meaning of any portions of these general contract terms, or the scope of the work, or any other matter concerning the contract, he/she shall in good time, before submitting his tender, set forth the particulars thereof and submit them to the point of contact, as given in this ToR, by email in order that such doubts may be clarified authoritatively before tendering. Once a tender is submitted, the matter will be decided according to the tender conditions in the absence of such authentic pre clarification.

10) All applications will be treated in the strictest confidence and only successful candidates will be contacted for further discussions.

11) The technical and financial proposals should be submitted as separate documents.

12) In case the winning bidder fails to indicate his intent to undertake the said work within the stipulated time of 7 (seven) days and observe the formalities as above, the Letter of Intent will be cancelled and the next bidder will be finalised by ICLEI South Asia in Consultation with SMC senior officials.

13) ICLEI South Asia reserves all the rights to reject any proposal, and to terminate the selection process and reject all proposals at any time, without thereby incurring any liability to the affected applicant or any obligation to inform the affected applicants of the grounds for such decision.

14) It should be noted that the consultant has to work in Solapur – Solapur Municipal Corporation (SMC) jurisdiction and hence instructions to bidders will be given by ICLEI South Asia in consultation with SMC officials.

15) ICLEI South Asia will be overall in-charge for all the works that would be executed under the present scope of work.

16) The applicant shall also obtain necessary permissions from concerned government departments related to the work/data collection if deemed necessary and in coordination with SMC and ICLEI South Asia.

17) All data and information received from Solapur Municipal Corporation and ICLEI South Asia for the purpose of this assignment are to be treated confidentially and are only to be used in connection with the execution of these Terms of Reference.
18) The contents of written materials obtained and used in this assignment may not be disclosed to any third parties without written approval from ICLEI South Asia and/or SMC.
19) The decision of ICLEI South Asia will be final and binding.
20) The proposals received will be scrutinized and evaluated by the ICLEI – South Asia in consultation with SMC.
21) Detailed Work Order will be issued to winning applicant within fifteen (15) days of announcing the results.
22) The selected applicant is to forward the signed and sealed work order to ICLEI at the earliest or not more than seven (7) working days of issue of work order.

**Extension of date of completion**
On occurrences of any events causing delay as stated hereunder, the bidder shall intimate immediately in writing to ICLEI South Asia.

**Materials/Appliance at site**
Neither ICLEI South Asia nor SMC undertake any responsibility for supply of any materials/ equipment/ appliance/ tool for site analysis to the bidder.

All materials/ equipment/ tools brought to site by the bidder shall be the responsibility of the bidder. SMC and ICLEI South Asia shall extend help as and when approached by the bidder to keep any materials/ equipment/ appliance/ tool, however not liable for any loss, theft or damage due to fire or other cause, the responsibility for which shall lie entirely on the bidder.

**Final Inspection of Work**
SMC and ICLEI South Asia team shall jointly make final inspection of all work included in the contract/work order, or any portion thereof, or any completed structure forming part of the work of the contract, as soon as practicable after notification by the bidder that the work is completed and ready for acceptance.

**Conflict Resolution**
In case of a conflict, the same would be addressed through mutual discussions. In case the conflict cannot be mutually sorted, the ICLEI South Asia’s decision would be final and binding.

**Termination of Contract**
In case the consultant is unable to perform as per the expectations of the project team and/or project cities, the contract of the consultant can be terminated based on mutual consent. In case of contract termination, the consultant would be paid on the basis of deliverables completed to the satisfaction of ICLEI – South Asia.

**Force Majeure**
In case of extraordinary events under force majeure (Natural phenomena, including but not limited to abnormally bad weather, unprecedented flood and draught, earthquakes &
epidemics, Political upheaval, strikes, lockouts, acts of any Government (domestic/foreign) including but not limited to war, properties, and quarantine embargoes), the terms of contract can be redrafted through mutual consent. In such cases, none of the parties can be held liable under the Contract.
Annexure I: Tender Submission Form

To
Executive Director
ICLEI South Asia
New Delhi – 110016

I/We have read and examined the tender documents relating to Assessing the potential of roof top rain water harvesting for ground water recharge/aquifer recharge and demonstrating actual implementation at selected public building in Solapur, Maharashtra under the project 'Integrated Rural Urban Water Management for Climate Based Adaptations in Indian Cities (IAdapt)' including the main bid document and Annexure I

I/We hereby tender for execution of the work referred to in the aforesaid documents in accordance with the terms and conditions contained or referred to therin and in accordance in all respects with the specifications, designs, drawings and other relevant details at the rates furnished in the bid document and within the period(s) of completion as stipulated in Annexure documents and our proposal.

If I/We fail to keep the tender open as aforesaid of make any modifications in the terms and conditions of the tender which are not acceptable to ICLEI South Asia or after signing of contract are unable to provide work or services to the satisfaction of ICLEI South Asia as per the terms of the contract and annexure documents, I/We agree that ICLEI South Asia shall without prejudice to any other right, be at liberty to forfeit earnest money absolutely. Should this tender be accepted, I /We agree to abide by & fulfil all the terms conditions of aforesaid document and the annexure documents.

If after the tender is accepted, I/we fail to commence the execution of the work, I/We agree that ICLEI South Asia shall without prejudice to any other right or remedy is at liberty to forfeit the said earnest money absolutely.

Signature and stamp of consultant…………………………

Name………………………………………………………………

Organization……………………………………………………

Date and place………………………………………………