

Terms of Reference (TOR)

Development and maintenance of a pilot urban forest, developed through Miyawaki technique in a selected plot at Siliguri through the Capacity Building on Low Carbon and Climate Resilient City Development (CapaCITIES II) Project

Title of proposed project	Development and maintenance of a pilot urban forest, developed through Miyawaki technique in a selected plot at Lower Bhanu Nagar, Ward 43 at Siliguri
Sector	Biodiversity
Location of the project	Lower Bhanu Nagar, Ward 43, Siliguri Municipal Corporation (SMC)
Rationale	<p>Urban forests play a significant role in the development of sustainable cities. They contribute to several ecosystem services (provisioning, cultural, regulatory as well as supporting). They provide benefits such as Flood Control, Water Security, Food Security, Improved Human Health, Pollination, Climate Change Mitigation, Pollution Abatement, Livelihood Generation and Aesthetics. Urban forests also help to improve the biodiversity in the region. There is growing evidence that links loss of biodiversity and forests to zoonotic diseases through a complex web of interactions.</p> <p>Urban forests can improve the urban climate, abate the urban heat-island effect by their ecological-balancer function and reduce environmental damages. A network of urban forests is critical to providing healthy habitats for humans, wildlife and plants in densely built cities. Urban forests thus play a critical role in sustainable urban development and should be included in overall city planning.</p> <p>One of the most successful techniques of developing an urban forest is the Miyawaki technique. Developed by Dr. Akira Miyawaki, a vegetation ecologist, the Miyawaki technique is based on the concept of Potential Natural Vegetation (PNV) and deals with the regeneration of a forest by closely planting a variety of tree species, best suited for the specified locality.</p> <p>The city of Siliguri has a per capita open space of 9m² and only 11% of the city's area under green cover. The city administration is keen to address this issue and intends to increase the area under green cover in a sustainable and scientifically sound manner.</p> <p>This TOR aims at developing urban forest (comprising of a mixed plantation of native species), through the Miyawaki technique in one plot (having an area of around 1890 sq m), in Ward 43 (refer Annexure A). This will serve as a replicable model for the city to develop more such forests. The project</p>

<p>Concrete deliverables expected</p>	<p>will help to contribute to SDGs 11, 14 and 15.</p> <ol style="list-style-type: none"> 1. Detailed design of the urban forest, including specifying name and location of each species, on Auto CAD (developed in consultation with ICLEI South Asia and SMC)- 5 hard copies of A0 size and print friendly high-resolution file) 2. Establishing a board of 6ft*4ft at the site to showcase the approved design 3. Initiating pilot plantation based on the approved design 4. Developing urban forest (comprising of a mixed plantation of native species) through complete implementation of the Miyawaki technique in the selected plot, having an area of around 1890 sq m (refer Annexure A). – This includes land preparation; sourcing of high-quality saplings; initial care of the saplings before plantations and care of the saplings for 6 months, after planting 5. Establishment of 5 boards around the plot (6ft*4ft) detailing the species planted and other aspects of the Miyawaki technique and tree labels for each sapling planted (developed in consultation with ICLEI South Asia and SMC) 6. Subsequent maintenance of the plot for two years, after the plantation and ensuring the development of dense and healthy forest
<p>Time Period</p>	<p>TOR prepared and published – 1st May 2023</p> <p>Last date for applying – 14th May 2023</p> <p>Identification and hiring of consultant – 15th May 2023</p> <p>Detailed design on Auto CAD – 22nd May 2023</p> <p>Installation of a board of 6ft*4ft at the site to showcase the approved design – 30th May 2023</p> <p>Initiating pilot plantation based on the approved design- 5th June 2023</p> <p>Development of the urban forest through complete implementation of the Miyawaki technique- 4th August 2023</p> <p>Establishment of 5 boards around the plot (6ft*4ft) detailing the species planted and other aspects of the Miyawaki technique and tree labels for each sapling planted (developed in consultation with ICLEI South Asia and SMC)- 31st August 2023</p> <p>Subsequent maintenance of the plot – 30th August 2025</p>
<p>Payment schedule</p>	<p>30% on total work value on signing of work order, submission of invoice and bank guarantee (10 percent of the value of the work order)</p> <p>40% on establishment of plantation, 5 boards at the site and tree labels for each sapling planted</p>

	30% on completion of four months of maintenance
Contact	<p>Dr Monalisa Sen Programme Coordinator (Biodiversity) ICLEI-Local Governments for Sustainability, South Asia C-3 Green Park Extension New Delhi 110016 Phone: +91 9871747467 Email: monalisa.sen@iclei.org</p> <p>For local information and queries: Mr. Souhardhya Chakraborty Assistant Manager ICLEI South Asia Tel: +91-9643633243 Email: souhardo.chakraborty@iclei.org</p>

Description of the Project

The Miyawaki technique of growing forests is regarded as one of the most effective plantation method for quickly renewing degraded lands. The number of trees planted through Miyawaki technique are approximately 30 times more than the number of trees planted through traditional plantation technique. A minimum of 300 percent more species is found in the region where forest is regenerated through Miyawaki technique. Miyawaki technique yields a completely maintenance free, wild and native forest. They are completely chemical-fertilizer free, that sustain themselves and support native biodiversity.

Green cover enhancement and maintenance of the same is one of the priority sectors for the Siliguri Municipal Corporation. As per the URDPFI Guidelines, 2014 it is recommended for a city to provide per capita at least 10m² of open space¹ to its citizens. At the same time, the Urban Green Guidelines, 2014 recommends a minimum of 20% of a city's geographical area to be under green cover. Siliguri falls short on both counts, with the per capita open space being 9m² and only 11% of the city's area under green cover. The city administration is keen to address this issue and intends to increase the area under green cover in a sustainable and scientifically sound manner.

Development of urban forest through the Miyawaki technique is another area of interest for the city corporation. They have identified several sites in the city where they intend to replicate the initiative, once the pilot demonstration (through this ToR) is successful.

¹ The open spaces include three categories, namely, (a) recreational space, (b) organised green, and (c) other common open spaces (such as vacant lands/ open spaces including flood plains, forest cover etc).

The site identified for the pilot demonstration of urban forest (comprising of a mixed plantation of native species), through the Miyawaki technique is located at Ward 43. The area covers an area of around 1890 sq m. The site has provision of water source, electricity and is well guarded by iron fencing. Please refer to Annexure A for site details.

Once the success of the pilot project is demonstrated, the city will replicate the same, to other sites. These urban forests will serve several ecosystem services – regulatory, provisional, cultural and aesthetic. They will also act as connectivity corridors for the movement of pollinators, birds and lower vertebrates. In a city facing rapid urbanization, such connected urban forests are critical in order to ensure sustainable urban development. This pilot implementation will also help the city corporation to choose the correct assemblage of native species and their associates for planting in new areas where they intend to develop urban forests.

The assignment will be broadly based on following aspects which are detailed in the activity plan.

Table 1: Activity Plan

Output	Activity
1. Detailed design of the urban forest on Auto CAD (developed in consultation with ICLEI South Asia and SMC)	1.1 Detailed site visit
	1.2 Determination of native species
	1.3 Developing the design (detailing the location and name of each species to be planted) in Auto CAD, in consultation with ICLEI South Asia and SMC
2. Establishing a board of 6ft*4ft at the site to showcase the approved design	2.1 Printing the design (with all relevant logos)
	2.2 Establishing the board at the site
3. Initiating pilot plantation based on the approved design	3.1 Initiating pilot plantation to serve as live demonstration site for entire plot in one corner of the plot
4. Developing urban forest (comprising of a mixed plantation of native species) through complete implementation of the Miyawaki technique in the selected plot, having an area of around 1890 sq m	4.1 Land preparation and pit digging etc
	4.2 Sourcing high quality saplings
	4.3 Initial care of the saplings before plantation
	4.4 Undertaking plantations
	4.5 Watering and other care of the saplings for 6 months, after planting
5. Establishment of 5 boards around the plot (6ft*4ft) detailing the species planted and other aspects of the Miyawaki technique and tree labels for each sapling planted (developed in consultation with ICLEI South Asia and SMC)	5.1 Developing and finalizing the content and the design of the boards and tree labels (in consultation with ICLEI South Asia and SMC)
	5.2 Establishing the boards and tree labels at appropriate locations at the site
6. Subsequent maintenance of the plot for two years, after the plantation and ensuring the development of dense and healthy forest	6.1 Maintenance and after care of saplings
	6.2 Replacement of dead saplings with new ones of the same species
	3.3 Watering, adding manure, nutrients etc, as needed

Objectives of the project

- Development of an urban forest (comprising of mixed plantation of native species) through the Miyawaki technique in the identified site of around 1890 sq m

Outputs of the project

1. Detailed design of the urban forest on Auto CAD (developed in consultation with ICLEI South Asia and SMC)

2. Establishing a board of 6ft*4ft at the site to showcase the approved design
3. Initiating pilot plantation based on the approved design
4. Developing urban forest (comprising of a mixed plantation of native species) through complete implementation of the Miyawaki technique in the selected plot, having an area of around 1890 sq m
5. Establishment of 5 boards around the plot (6ft*4ft) detailing the species planted and other aspects of the Miyawaki technique and tree labels for each sapling planted (developed in consultation with ICLEI South Asia and SMC)
6. Subsequent maintenance of the plot for two years, after the plantation and ensuring the development of dense and healthy forest

Mode of implementation (stakeholders involved and type of involvement)

The various stakeholders and their roles are described below in brief:

- i. ICLEI South Asia: Coordination with the consultant/ external agency and city government; monitoring of overall activities; offering technical assistance to consultant/ external agency
- ii. Consultant/ External Agency: Carry out all activities listed in Table 1.
- iii. Siliguri Municipal Corporation: Providing support (including fencing, piped water supply, electricity supply with poles, light fixtures etc; security at the site; benches and other street infrastructure, maintenance of all infrastructure; payment of electricity, water bills etc) that might be required during the entire implementation.

Activity Plan

Output	Activity	Timeline
1. Detailed design of the urban forest on Auto CAD (developed in consultation with ICLEI South Asia and SMC)	1.1 Detailed site visit	22 nd May 2023
	1.2 Determination of native species	
	1.3 Developing the design (detailing the location and name of each species to be planted) in Auto CAD, in consultation with ICLEI South Asia and SMC	
2. Establishing a board of 6ft*4ft at the site to showcase the approved design	2.1 Printing the design (with all relevant logos)	30 th May 2023
	2.2 Establishing the board at the site	
3. Initiating pilot plantation based on the approved design	3.1 Initiating plantation at the site	5 th June 2023

Output	Activity	Timeline
<p>4. Developing urban forest (comprising of a mixed plantation of native species) through complete implementation of the Miyawaki technique in the selected plot, having an area of around 1890 sq m</p>	4.1 Land preparation and pit digging etc	4 th August 2023
	4.2 Sourcing high quality saplings	
	4.3 Initial care of the saplings before plantation	
	4.4 Undertaking plantations	
	4.5 Watering and other care of the saplings for 6 months, after planting	
<p>5. Establishment of 5 boards around the plot (6ft*4ft) detailing the species planted and other aspects of the Miyawaki technique and tree labels for each sapling planted (developed in consultation with ICLEI South Asia and SMC)</p>	5.1 Developing and finalizing the content and the design of the boards and tree labels (in consultation with ICLEI South Asia and SMC)	31 st August 2023
	5.2 Establishing the boards and tree labels at appropriate locations at the site	
<p>6. Subsequent maintenance of the plot for two years, after the plantation and ensuring the development of dense and healthy forest</p>	6.1 Maintenance and after care of saplings	30 th August 2025
	6.2 Replacement of dead saplings with new ones of the same species	
	6.3 Watering, adding manure, nutrients etc, as needed	

Annexure A: Site Details

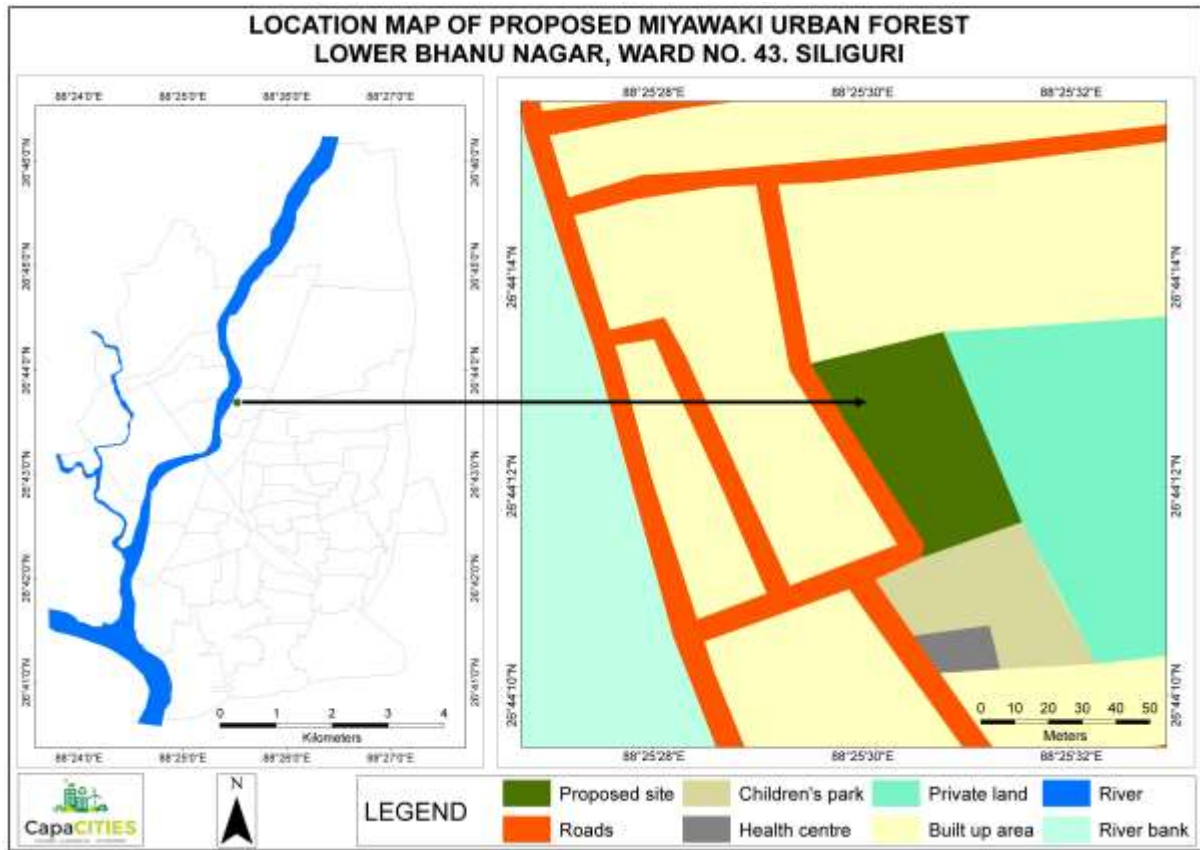


Figure 1: Overall site

Annexure B: Bidders Eligibility Criteria and List of Required Documents

(A) Bidder Eligibility Criteria

Technical requirements

Both firms and consortium are welcome to apply.

Preferred Qualifications of firm/consortium lead :

- a) Should be well versed with the subject
- b) Should have led similar work for at least 5 years
- c) Should have experience in successfully implementing urban forest development through Miyawaki technique and should have undertaken the implementation of the same through at least two projects in any place in India in the past three years as on date of release of the TOR.
- d) Should furnish self-attested copies of work orders for these works and a copy of certificates for successful establishment of urban forest through Miyawaki technique from the same client
- e) Should not be under declaration of ineligibility for corrupt or fraudulent practices or deficiencies of services or blacklisted with any Government/Non-Government agencies at the time of bidding
- f) In case of consortium, the lead partner should be defined and the same will be responsible for all the deliverables. Role of all other partners also needs to be clearly defined.

Financial requirements

- a) Copy of valid PAN card, GST registration and TIN.
- b) Audited account statements for last two years.
- c) Minimum turnover of 15 lakh (INR) during last two years.

(B) Documents to be submitted by participating bidders

Technical Bid

The Technical bid should provide the following information/ documents

- a) Agency/Consortium profile
- b) Bidder's experience on assignments of similar nature, the outline should indicate, inter alia, the profiles and names of the staff provided (if in case of a firm), duration of the assignment, contract amount, and firm's involvement.
- c) Details of atleast two similar previous projects implemented by the organization(s) with documentary proof for the same

- d) Detailed Approach and Methodology for undertaking the current Assignment
- e) Project Schedule with activity and duration to accomplish the task within the scheduled project duration along with detailed work plan.
- f) 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.
- g) List of all plant species that are proposed to be planted needs to be provided.
- h) Template for the technical bid is provided in Annexure D.

Financial Bid:

The Financial bid should provide the following information/ documents:

- a) Financial bid for the tasks listed in the ToR document. The total cost should include all the expenses for required to complete all the tasks mentioned in this ToR. Financial bid should be inclusive of all taxes.
- b) Item wise break up for all components including professional cost, sapling cost, manure, cost of man-days (unit rate)
- c) Detailed BOQ needs to be provided
- d) Financial details of the organization(s) to confirm its eligibility
- e) Valid PAN card
- f) Valid GST registration and TIN
- g) Audited account statements for last 2 years
- h) Template for the technical bid is provided in Annexure E.

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) All or any accessories/consumables/items required for satisfactory commissioning of the study/work shall be deemed to be included in the contract and shall be provided by the bidder without extra charges
- c) The winning bidder will have to submit a bank guarantee of the value of 10 percent of the work order, once the work order is signed

Failure to comply with or provide the above listed items in the Technical and Financial Bids may result in disqualification. The bidder shall produce, original documents for cross verification as and when requested by ICLEI South Asia.

(C) Bid Submission

- The Terms of Reference (ToR) shall be downloaded free of cost from the ICLEI South Asia website
- The bid document shall be submitted by bidders through email to the below

mentioned email IDs on or before 10th May 2023:

soumya.chaturvedula@iclei.org

monalisa.sen@iclei.org

souhardo.chakraborty@iclei.org

- The bidder shall also submit 2 sets of hard copies of the bid documents to the address as mentioned below:

Dr Monalisa Sen

Programme Coordinator (Biodiversity)

ICLEI-Local Governments for Sustainability, South Asia

C-3 Green Park Extension

New Delhi- 110016

Phone: +91 9871747467

Email: monalisa.sen@iclei.org

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

- The Bid shall be submitted in two parts, viz.
 - Envelop I: Technical Bid;
 - Envelop II: Financial Bid; and
 - both the Envelops I & II to be placed and sealed inside Envelope III

Envelop I: sealed and shall be super scribed as:

Part A: Technical bid for

“Development and maintenance of a pilot urban forest, developed through Miyawaki technique in a selected plot at Siliguri through the Capacity Building on Low Carbon and Climate Resilient City Development (CapaCITIES II) Project”

Envelop II: sealed and shall be super scribed as:

Part B: Financial bid for

“Development and maintenance of a pilot urban forest, developed through Miyawaki technique in a selected plot at Siliguri through the Capacity Building on Low Carbon and Climate Resilient City Development (CapaCITIES II) Project”

Envelop III: sealed and shall be super scribed as:

“Development and maintenance of a pilot urban forest, developed through Miyawaki technique in a selected plot at Siliguri through the Capacity Building on Low Carbon and Climate Resilient City Development (CapaCITIES II) Project”

- The bid shall be valid for a period of 60 days from the date of submission of bid document
- 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
- In case the bidder wishes to sub-contract part of his deliverables, the final responsibility of delivery and performance solely lies with the bidder

Annexure C: Proposal/Bid Submission Form

To
The Executive Director
ICLEI-Local Governments for Sustainability, South Asia
New Delhi – 110016

I/We have read and examined the terms of reference (ToR) documents relating **“Development and maintenance of a pilot urban forest, developed through Miyawaki technique in a selected plot at Siliguri through the Capacity Building on Low Carbon and Climate Resilient City Development (CapaCITIES II) Project”** including the main tender document and all the annexures.

I/We hereby submit our proposal for execution of the work referred to in the aforesaid documents in accordance with the terms and conditions contained or referred to therein 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 proposal open as aforesaid or make any modifications in the terms and conditions of the proposal 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 proposal be accepted, I /We agree to abide by & fulfil all the terms conditions of aforesaid document and the annexure documents.

If after the proposal 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.

I/We understand that if any false information/document submitted by me/us in the bidding process is detected at a later date, any contract/agreement made between ourselves and ICLEI South Asia will be treated as invalid by ICLEI South Asia and I/We will be solely responsible for the consequences.

I/We agree that the decision of ICLEI South Asia in selection of the agency/consortium will be final and binding on me/us.

I/We agree that I/We have no objection if enquires are made about the information/documents submitted by me/us here in above and /or in the accompanying sheets.

Signature and stamp of applicant.....

Name.....

Organization.....

Date and place.....

PARTICULARS OF THE AGENCY/CONSORTIUM SUBMITTING THE BIDS

S.No.	Particulars	Response
1.	Name and address of the agency	
2.	PAN number TIN number GST number Registration number	
3.	Legal status of agency	
1.	Whether a single entity of consortium? If consortium, please submit the details of the consortium partners: a. Lead partner b. Other partners (maximum 2 other partners)	
5.	Details of contact person with mobile number and email address	

Annexure D: Template for Technical Bid

(please attach testimonials for all information stated in the technical bid)

1.Total number of urban forests developed through Miyawaki technique in last three years in India

<i>S.No.</i>	<i>Location</i>	<i>State</i>	<i>Client (including name and contact details of contact person)</i>	<i>Year of implementation</i>

2. Please provide the following details for atleast two projects

Project Number 1

- Location
- Area of the project in sq m
- Auto CAD design developed for the site
- Date of planting
- Total number of plants
- Total number of species
- Success rate of sapling survival
- Average yearly growth of plants (in metres)
- Kindly provide photographs of the project before and after implementation

Project Number 2

Location

Area of the project in sq m

Auto CAD design developed for the site

Date of planting

Total number of plants

Total number of species

Success rate of sapling survival

Average yearly growth of plants (in metres)

Kindly provide photographs of the project before and after implementation

- 3. Detailed methodology to address the TOR**
- 4. Total number of saplings to be planted and list of species that will be planted at the site**
- 5. Timeplan for implementation and maintenance**
- 6. CVs of team leader and other senior staff involved in the assignment**
- 7. Agency/ consortium profile**
- 8. Distribution of work among consortium partners (if applicable)**

Annexure E: Template for Financial Bid

S.No.	Budget head	Amount
Afforestation		
1	Manpower X number of days	
2	*Board of size X number	
3	Saplings of Species X number	
4		
5		
6		
7		
8		
9		
10		
	Sub- Total (A)	
Maintenance (for year 1)		
1.	Manpower X number of days	
2.	Manure X Quantity	
3.		
4.		
5.		
6.		
	Sub-Total (B)	
Maintenance (for year 2)		
1.	Manpower X number of days	
2.	Manure X Quantity	
3.		
4.		
5.		
6.		
	Sub-Total (C)	
	Total (A+B+C)	
	GST	
	Grand Total	

*please specify the details of the material of the board and the printing material

Annexure E: Contract Terms

1 Specific conditions of contract

1.1 Contractor to study conditions:

- 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 but without any guarantee to it.
- If he/she shall have 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.

2 General conditions of contract

- 2.1 The contractor/ consultant shall address all aspects of the proposed outputs and deliverables mentioned in this TOR
- 2.2 The comments and suggestions provided by the bidder on the TOR are not binding and shall not affect the financial proposal
- 2.3 It should be noted that the project is being implemented by ICLEI South Asia and hence instructions to bidders will be given by ICLEI South Asia. ICLEI South Asia will be overall in-charge for all the works that would be executed under the present scope of work
- 2.4 The bidder shall also obtain necessary permission, from concerned government departments related to the work/data collection if deemed necessary, in coordination with ICLEI South Asia.

3 Tender Evaluation & Bid Assessment

- 3.1 The bids received will be scrutinized and evaluated by ICLEI South Asia. The decision shall be informed to the winning bidder.

4 Award of contract:

- 4.1 Detailed Work Order will be issued to winning bidder within 1 day of announcing the winning bidder
- 4.2 The winning bidder is to forward the signed and sealed work order to ICLEI at the earliest or not more than 7 (seven) days of issue of work order
- 4.3 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.

5 Compensation for delay

5.1 Time is the essence of the contract and as such all works shall be completed within the time stipulated in the contract/ work order

5.2 If the bidder, without reasonable cause or valid reasons, commits default in commencing the work within the aforesaid time limit, ICLEI South Asia shall without prejudice to any other right or remedy, be at liberty, by giving 15 days' notice in writing to the contractor to commence the work, to forfeit the balance payment depending on the status of work, and to cancel the Work Order.

6 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-

6.1 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.

7 Materials/Appliance at site

7.1 ICLEI South Asia does not undertake any responsibility for supply of any materials/ equipment/ Appliance/ tool for site analysis to the bidder

7.2 All materials/ equipment/ tools brought to site by the bidder shall be the responsibility of the bidder. 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.

8 Final Inspection of Work

8.1 ICLEI South Asia team shall 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.

8.2 At the time of such inspection ICLEI South Asia shall the bidder in writing as to the particular concerns to be remedied before final acceptance can be made.