

## Terms of Reference (TOR)

For

### Establishment of floating wetlands in Thevera Perandoor Canal for canal restoration under the Integrated sub-national action for Biodiversity: Supporting implementation of National Biodiversity Strategy and Action Plans (NBSAP) through the mainstreaming of biodiversity objectives across City-Regions (INTERACT-Bio) Project

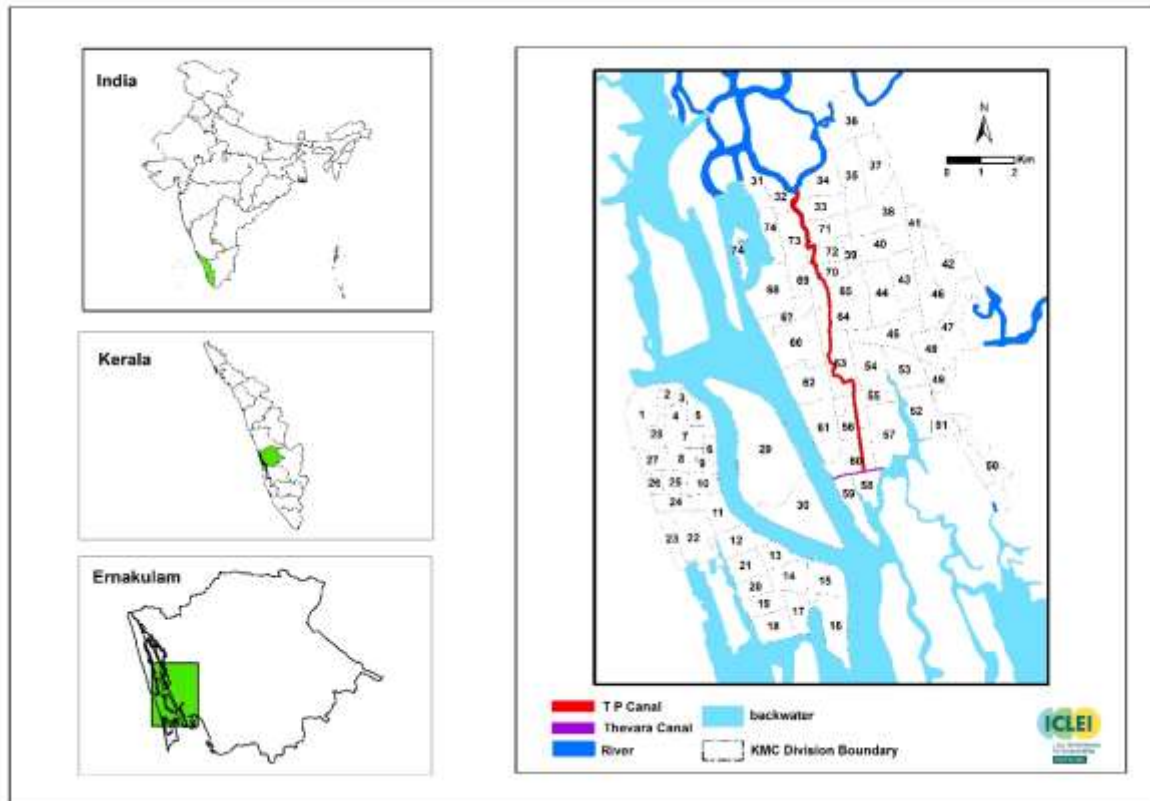
<p><b>Summary</b></p>	<p>In Kochi, a port city characterised by crisscrossing canals and rivers connected to a backwater system, waterways used to play a major role in the socio-economic and cultural development of the region. They not only supported the commerce and economy but also connected communities, supported a rich and diverse ecosystem and provided several ecosystem services and livelihood opportunities. However, rapid urbanization has resulted in the neglect and widespread exploitation of this resource over the years, undermining its ability to support both ecology and connectivity.</p> <p>The canals provided several ecosystem services and were also once used for navigation, fishing, irrigation, recreation, food sources and goods transportation. Canals also helped to empty the excess water from pookali farms of inland areas. The once pure water in the canals is now stagnant, silted and putrid. Water is almost anoxic in many regions due to dumping of solid waste and the inflow of domestic sewage into the canals from the nearby areas through which the canals flow. A survey of some of the canals by ICLEI South Asia has shown that they presently contain very low levels of faunal and floral diversity. The ecosystem services provided by the canals have thus significantly reduced.</p> <p>Keeping all these facts in mind, the city of Kochi had identified canals as a critical ecosystem (focus area) in the Local Biodiversity Strategy and Action Plan. The city is undertaking conscious steps to rejuvenate the canals.</p> <p>One such initiative is aimed to be taken up through the Interact Bio project. To undertake canal restoration through nature based solutions, floating wetlands are planned to be established in Thevera Perandoor Canal.</p>
<p><b>Description of the assignment, expected outcomes</b></p>	<p>The scope of work is divided into four parts:</p> <ol style="list-style-type: none"> <li>1. The winning bidder will develop a detailed design (including the details of the plants to be established), for the floating wetland and the layout.</li> <li>2. The winning bidder will undertake civil work, transport and installation of the floating wetlands,</li> </ol>

	<p>and commission the same, based on the approved design.</p> <p>3. The winning bidder will have to supervise, train and handhold KMC staff in the operation and maintenance of the floating wetlands for 8 months, post commissioning. The winning bidder will have to provide one supervisor for this entire duration.</p>
<b>Concrete deliverables expected</b>	<ol style="list-style-type: none"> <li>1. Detailed design for the floating wetlands (including details of the plant species) and the unit layout.</li> <li>2. Undertaking any civil construction work</li> <li>3. Transport and install the floating wetlands</li> <li>4. Supervise, train and handhold staff of KMC in operation and maintenance of the floating wetlands for 8 months, post commissioning.</li> </ol>
<b>Location and deadlines</b>	<p>Location: Thevera Perandoor Canal, Kochi, Kerala, India</p> <p>Deadlines:</p> <ol style="list-style-type: none"> <li>1. Finalisation of the detailed design for the floating wetlands (including details of the plant species) and unit layout - Within 2 weeks from award of work</li> <li>2. Completing any civil construction work - Within 1 month from award of work</li> <li>3. Transport and installation, of the floating wetlands - Within 1.5 months from award of work</li> <li>4. Supervising, training and handholding the staff of KMC in operation and maintenance of the floating wetlands – For 8 months, post commissioning</li> </ol>
<b>Payment schedule</b>	<p>30% of total work value on signing of work order, submission of bank guarantee and submission of invoice</p> <p>20% of total work value on submission and approval of detailed design of the floating wetlands (including details of the plant species) and unit layout</p> <p>40% of total work value on completion of civil construction work, transport and installation of the floating wetlands.</p> <p>10% of total work value on completion of post commissioning 8 months of supervision, training and handholding of KMC staff in maintenance and operation of the floating wetlands</p>
<b>Time frame</b>	<p>Publication of tender on ICLEI Website – 13<sup>th</sup> February 2024</p> <p>Last date of acceptance of proposals: 21<sup>st</sup> February 2024</p>

	<p>Date of announcement of successful bidder: 22<sup>nd</sup> February 2024</p> <p>Issue of work order to winning bidder: 22<sup>nd</sup> February 2024</p> <p>Finalisation of the detailed design (including plant species) for the floating wetlands and the unit layout - Within 2 weeks from award of work</p> <p>Completing any civil construction work - Within 1 month from award of work</p> <p>Transport and installation, of the floating wetlands- Within 1.5 months from award of work</p> <p>Supervising, training and handholding the staff of KMC in operation and maintenance of the floating wetlands – For 8 months, post commissioning</p>
<p><b>Contact</b></p>	<p>Dr Monalisa Sen, Senior Programme Coordinator (Biodiversity), ICLEI South Asia, C-3, Green Park Extension, New Delhi-110016, India Tel: +91-11-49747200 Fax: +91-11-49747201 Email: <a href="mailto:monalisa.sen@iclei.org">monalisa.sen@iclei.org</a> Website: <a href="http://southasia.iclei.org/">http://southasia.iclei.org/</a></p>

## Annexure I: Details of Thevera - Perandoor Canal

1. Total Canal Area = 20.86 hectares
2. Sources of pollution - Sewage discharge, Solid waste disposal, Water hyacinth proliferation
3. Environmental and Biological Parameters: Refer Table 1



**Figure 1: Location of Thevera- Perandoor Canal**

**Table 1: Environmental and Biological Parameters**

THEVARA-PERANDOOR (T-P) CANAL											R2(SOUTH CHITTOOR)		
Parameters	P1			P2			P3			Grand Mean	S	B	Mean ±SD
	S	B	Mean ±SD	S	B	Mean±SD	S	B	Mean±SD				
Atmospheric Temperature (°C)	30			29			26			28.3 ± 2.08	28.12		
<b>WATER QUALITY</b>													
Depth (m)	0.5			0.6			0.5			0.53 ± 0.06	3		
Flowrate (m <sup>3</sup> s <sup>-1</sup> )	8.33			1.98			1.22			3.85 ± 3.91	13.31		
Temperature (°C)	31.19	31.18	31.185 ± 0.01	28.03	28.02	28.025 ± 0.007	26.88	26.89	26.885 ± 0.007	28.69 ± 2.22	28.17	27.32	27.74 ± 0.60
pH	7.12	7.13	7.125 ± 0.01	7.02	7.05	7.035 ± 0.021	7.07	7.09	7.08 ± 0.014	7.08 ± 0.04	6.86	6.74	6.8 ± 0.08
Transparency (m)	0.4			0.5			0.3			0.40 ± 0.1	0.5		
Eh (mV)	2.81	2.9	2.855 ± 0.06	1.9	1.5	1.7 ± 0.283	216.5	217.1	216.8 ± 0.424	73.785 ± 123.	259.1	261.5	260.3 ± 1.70
Conductivity (µS cm <sup>-1</sup> )	537	538	537.5 ± 0.71	315	314	314.5 ± 0.707	605	606	605.5 ± 0.707	485.83 ± 152.22	210	215	212.5 ± 3.54
TDS (mg L <sup>-1</sup> )	269	269	269	158	160	159 ± 1.41	303	300	301.5 ± 2.121	243.16 ± 74.6	105	102	103.5 ± 2.12
Suspended particulate matter (mg L <sup>-1</sup> )	0.1	0.11	0.105 ± 0.007	0.14	0.13	0.13 ± 0.007	0.11	0.12	0.11 ± 0.007	0.11 ± 0.01	0.1	0.11	0.1 ± 0.007
Turbidity (NTU)	3.3	3.3	3.3	5.5	6.4	5.95 ± 0.636	6.6	4.7	5.65 ± 1.34	4.97 ± 1.45	2.2	2.4	2.3 ± 0.14
Salinity (psu)	0.26	0.27	0.265 ± 0.01	0.15	0.15	0.15	0.29	0.29	0.29	0.235 ± 0.07	0.1	0.12	0.11 ± 0.01
Alkalinity (mg L <sup>-1</sup> )	270	240	255 ± 21.21	270	170	220 ± 7.71	240	210	225 ± 21.21	233.3 ± 18.92	40	60	50 ± 14.14
Calcium (mg L <sup>-1</sup> )	34.06	85.17	59.61 ± 36.13	30.66	30.66	30.66	37.47	37.47	37.47	42.58 ± 15.14	6.8136	10.2204	8.51 ± 2.4
Chloride (mg L <sup>-1</sup> )	1418	1772.5	1595.25 ± 250.66	531.75	709	620 ± 125.33	1772.5	2304.25	2038.38 ± 376.004	1417.88 ± 725.63	1063.5	531.75	797.62 ± 376.004
Magnesium (mg L <sup>-1</sup> )	121.32	118.5	119.91 ± 1.99	78.94	88.54	83.74 ± 6.78	106.09	115.69	110.89 ± 6.78	104.84 ± 18.82	42	22	32 ± 14.16
Total Hardness (mg L <sup>-1</sup> )	129.6	139.2	134.4 ± 6.7	86.4	96	91.2 ± 6.78	115.2	124.8	120 ± 6.78	115.2 ± 21.99	43.2	24	33.6 ± 13.57
Potassium (ppm)	1.09	0.75	0.92 ± 0.24	1.21	1.02	1.11 ± 0.13	0.68	0.69	0.68 ± 0.007	0.903 ± 0.21	1.11	0.33	0.72 ± 0.55
Sodium (ppm)	1.9	3.91	2.9 ± 1.42	1.87	2.4	2.13 ± 0.37	2.33	1.52	1.92 ± 0.57	2.31 ± 0.51	1.83	1.23	1.53 ± 0.42
DO (mg L <sup>-1</sup> )	0.78	1.57	1.18 ± 0.56	2.36	2.36	2.36	3.14	3.14	3.14	2.2304 ± 0.99	5.98	6.3	6.14 ± 0.22



BOD (mg L <sup>-1</sup> )	65.67	94.54	80.11±20.42	84.05	136	110.02±36.73	73.55	189.01	131.28±81.64	115.97±31.17	2.5	3.5	3 ± 0.71
COD (mg L <sup>-1</sup> )	1.5	19.2	10.35 ± 12.51	26.5	13.6	20.05 ± 9.12	6.3	7.7	7 ± 0.98	12.46 ± 6.77	342.4	12.8	177.6 ± 233.06
Total Sulphide (ppm)	6.39	6.82	6.6 ± 0.3	4.26	2.56	3.41 ± 1.2	3.41	7.24	5.32 ± 2.7	5.11 ± 1.6	6.82	11.08	8.95 ± 3.01
Silicic acid-silicon (µg L <sup>-1</sup> )	0.033	0.035	0.034 ± 0.001	0.0301	0.0306	0.03 ± 0.0003	0.033	0.029	0.031 ± 0.002	0.031 ± 0.001	0.028	0.027	0.027 ± 0.0007
Phosphate-phosphorus (µg L <sup>-1</sup> )	23.39	25.81	24.6 ± 1.7	12.46	14.94	13.7 ± 1.7	16.97	16.85	16.91 ± 0.08	18.04 ± 5.6	0.57	1.14	0.85 ± 0.4
Nitrite-nitrogen (µg L <sup>-1</sup> )	0.01	0.02	0.015 ± 0.007	0.027	0.024	0.025 ± 0.002	0.022	0.021	0.021 ± 0.0007	0.02 ± 0.005	0.0186	0.0183	0.0184 ± 0.0002
Nitrate-nitrogen (µg L <sup>-1</sup> )	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052
Ammonia-nitrogen (µg L <sup>-1</sup> )	0.03	0.02	0.025 ± 0.007	0.02	0.03	0.025 ± 0.007	0.04	0.03	0.035 ± 0.007	0.02 ± 0.005	0.025	0.024	0.024 ± 0.0007
<b>Heavy metal</b>													
Cadmium (ppb)	1.50	1.3	1.4 ± 0.14	0.8	2.5	1.65 ± 1.2	2.9	2	2.45 ± 0.6	1.83 ± 0.54	4.4	4.7	4.55 ± 0.21
Copper (ppb)	29	69	49 ± 28.28	39	28	33.5 ± 7.7	73	38	55.5 ± 24.7	46 ± 11.3	28	59	43.5 ± 21.92
Chromium (ppb)	4	5	4.5 ± 0.7	7	5	6 ± 1.4	6	6	6	5.5 ± 0.86	8	6	7 ± 1.41
Iron (ppm)	12.13	5.73	8.93 ± 4.52	10.55	8.59	9.57 ± 1.3	12.15	11.5	11.83 ± 0.4	10.11 ± 1.52	3.31	6.89	5.1 ± 2.53
Manganese (ppb)	8	8	8	8	7	7.5 ± 0.7	8	12	10 ± 2.8	8.5 ± 1.32	9	7	8 ± 1.41
Nickel (ppb)	14	12	13 ± 1.41	18	20	19 ± 1.4	19	19	19	17 ± 3.46	16	14	15 ± 1.41
Zinc (ppb)	655	485	570 ± 120.2	789	332	560.5 ± 323.15	1007	436	721.5 ± 403.76	617.33 ± 90.33	778	1005	891.5 ± 160.51
Lead (ppb)	75	55	65 ± 14.14	67	41	54 ± 18.3	76	71	73.5 ± 3.5	64.16 ± 9.77	31	37	34 ± 4.24
Mercury (ppb)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Total Petroleum Hydrocarbon (mg L <sup>-1</sup> )	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL	NDL
<b>SEDIMENT QUALITY</b>													
Temperature (°C)	28.5			28			26			27.5 ± 1.32			27.32
pH	6.45			6.37			6.96			6.59 ± 0.32			5.82
Eh (mV)	-1351			-1325			-1370			-1348 ± 22.6			-95
Sand (%)	15.16			79.71			38.85			44.57 ± 32.65			2.43
Silt (%)	80.44			2.11			43.86			42.13 ± 39.19			72.68

Clay (%)	4.4		18.18		17.28		13.28 ± 7.7		24.88		
Available nitrogen (%)	188		0.53		0.78		1.06 ± 0.71		0.48		
Organic Carbon (%)	6.55		1.07		2.5		3.37 ± 2.84		0.81		
Potassium (ppm)	53.95		13.92		38.92		35.59 ± 20.22		46.59		
Sodium (ppm)	68.13		89.63		43.04		66.93 ± 23.32		55.01		
<b>Heavy metal</b>											
Cadmium (ppb)	44.00		1.2		8.5		17.9 ± 22.89		26.1		
Copper (ppm)	2.16		0.43		1.12		1.24 ± 0.87		0.35		
Chromium (ppm)	2.45		5.28		1.68		3.14 ± 1.9		0.7		
Iron (ppm)	212.92		469.6		417.03		366.52 ± 135.59		162.61		
Manganese (ppm)	3.50		4.52		2.8		3.61 ± 0.86		1.03		
Nickel (ppb)	590.00		158		431		393 ± 218.49		177		
Zinc (ppm)	10.99		4.38		3.17		6.18 ± 4.209		3.25		
Lead (ppm)	8.20		10.26		1.49		6.65 ± 4.59		0.29		
Mercury (ppb)	13		2		2		5.67 ± 6.35		2		
<b>SEDIMENT INDEX</b>	<b>I<sub>geo</sub></b>	<b>CF</b>	<b>I<sub>geo</sub></b>	<b>CF</b>	<b>I<sub>geo</sub></b>	<b>CF</b>	<b>I<sub>geo</sub></b>	<b>CF</b>	<b>I<sub>geo</sub></b>	<b>CF</b>	
Cadmium	97.830	146.75	2.60	3.90	18.79	28.19	39.74 ± 50.95	59.61 ± 76.43	58.02	87.03	
Copper	0.030	0.04	0.01	0.01	0.0	0.02	0.01 ± 0.01	0.02 ± 0.01	0.01	0.01	
Chromium	0.010	0.02	0.03	0.05	0.0	0.01	0.01 ± 0.01	0.03 ± 0.02	0.01	0.01	
Iron	0.003	0.00	0.01	0.01	0.0	0.01	0.02 ± 0.02	0.01 ± 0.002	0.00	0.00	
Manganese	0.002	0.00	0.00	0.01	0.0	0.00	0.002 ± 0.0005	0.00 ± 0.001	0.00	0.00	
Nickel	19.67	29.50	5.26	7.90	14.36	21.55	13.1 ± 7.28	19.65 ± 10.92	5.91	8.87	
Zinc	0.070	0.01	0.03	0.04	0.02	0.03	0.04 ± 0.02	0.03 ± 0.01	0.02	0.03	
Lead	0.270	0.41	0.34	0.51	0.04	0.07	0.21 ± 0.15	0.33 ± 0.23	0.01	0.01	
Mercury	21.660	32.50	3.33	5.00	3.33	5.00	9.44 ± 10.58	14.17 ± 15.87	3.33	5.00	

<b>Productivity parameters</b>													
GPP(g C m <sup>-3</sup> day <sup>-1</sup> )	2.952	1.476	2.21 ± 1.04	2.214	1.476	1.84 ± 0.52	0.738	2.214	1.47 ± 1.04	1.84 ± 0.36	0.738	0.738	0.738
NPP (g C m <sup>-3</sup> day <sup>-1</sup> )	0.738	0.738	0.738	1.476	0.738	1.107 ± 0.52	1.476	1.476	1.476	1.107 ± 0.36	0.738	0.6642	0.701 ± 0.05
Chlorophyll- <i>a</i> (mg m <sup>-3</sup> )	55.75	107.04	81.39 ± 36.26	6.75	3.38	5.06 ± 2.38	50.14	47.8	48.97 ± 1.65	45.14 ± 38.3	66.92	18.96	42.94 ± 33.91
Pheophytin (mg m <sup>-3</sup> )	40900.66	33333.35	37117.01 ± 5350.89	6429.36	4894.11	5661.73 ± 1085.58	34467.56	32204.47	33336.02 ± 1600.24	25371.59 ± 17173.6	44140.97	23375.31	33758.14 ± 14683.54
<b>BIOLOGICAL PARAMETERS</b>													
<b>Phytoplankton</b>													
Biomass (ml m <sup>-3</sup> )	0.005		0.015		0.001		0.007 ± 0.007		0.003				
Abundance (ind.m <sup>-3</sup> )	8560	4280 ± 4638.62	2360	295 ± 360.91	680	340 ± 424.26	2966.667 ± 2274.76	6920	768.88 ± 2037.03				
<b>Micro zooplankton</b>													
Biomass (ml m <sup>-3</sup> )	0.005		0.004		0.003		0.004 ± 0.001		0.002				
Abundance (ind.m <sup>-3</sup> )	3440	1146.667 ± 1640.16	3480	870 ± 1660	12640	6320 ± 7693.32	2778.88 ± 3069.81	520	130 ± 82.46				
<b>Meso Zooplankton</b>													
Biomass (ml m <sup>-3</sup> )	0.005		0.01		0.002		0.005 ± 0.004		0.005				
Abundance(ind.m <sup>-3</sup> )	5160	1290 ± 2473.4	280	56 ± 21.9	5160	2580 ± 2687.006	1308.66 ± 1262.1	320	80 ± 32.65				
<b>Macrobenthos</b>													
Abundance(ind.m <sup>-2</sup> )	116		0		10		63 ± 74.95		12				



## **Annexure II: Bidders Eligibility Criteria and List of Required Documents**

### **(A) Bidder Eligibility Criteria**

#### ➤ **Technical requirements**

**Private company (registered under Companies Act), Public Sector entity and NGOs (registered) are welcome to apply.**

#### ○ *Preferred Qualifications of the Bidder :*

- a) Must have adequate qualification and experience in fabrication, installation and commissioning of floating wetlands in brackish water canals. The bidder should have successfully established and running floating wetlands in a minimum of five locations in the last 2 years.
- b) Previous experience of installing and commissioning of floating wetlands in canals 1 in atleast three urban local bodies in the last 5 years is required.
- c) Should have valid authorisation from manufacturer/dealer/distributor for supply of the machines
- d) Should not be black listed/ penalised by any Government authority.
- e) In case of use of a patented technology, bidder should have taken clearance/approval from patent holder. No infringement of patent and IPR will be entertained.

#### ➤ **Financial requirements**

- a) The bidder (if a firm) should possess a valid GST registration.
- b) The bidder must be registered with Income tax department and should produce Income Tax clearance certificate/income tax return details of previous three financial years
- c) The bidder (if an individual) should possess a valid PAN card.
- d) The bidder must have a minimum average turnover of INR 50 lakhs, in the last three financial years.

### **(B) Documents to be submitted by participating bidders**

#### ➤ **Technical Bid**

The Technical bid should provide the following information/ documents

- a) Organisation profile
- b) Registration certificate of the organisation
- c) Work orders of more than 5 operational projects of similar nature, which have been commissioned in the last 5 years

- d) Declaration stating bidder has not been blacklisted by any Government agency.
- e) Authorisation letter from manufacturer/distributor/dealer
- f) 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.
- g) Detailed Approach and Methodology for undertaking the current assignment
- h) Detailed technical information of the plant to be constructed, including a detailed explanation of the technology, operational processes and unit processes deployed within the plant. Operation and maintenance aspects of each unit process and equipment needs to be mentioned.
- i) Conceptual design of the unit the floating wetland and detailed design drawings of the entire process,
- j) In case of use of a patented technology, copy of clearance/approval from patent holder. Any infringement on patent/IPR will lead to disqualification of the bid and the bidder.
- k) Proof of having taken all statutory clearances.
- l) Project Schedule with activity and duration to accomplish the task within the scheduled project duration along with detailed work plan.
- m) Against the list of proposed staff, details of tasks assigned to each staff as per his / her experience shall influence the evaluation
- n) The consultant shall make the assessment of support personnel both technical and administrative to undertake the assignment. Additional support and administrative staff shall be provided by the consultant, if needed for the timely completion of the assignment within the total estimated cost. Consultant should provide time estimates of Key Personnel as well as support staff in the staffing schedule. It is stressed that the time period for the assignment indicated in the TOR should be strictly adhered
- o) The Proposals/ bid documents must be duly signed by the authorised representative/ signatory on each page and stamped as detailed below. This shall not contain any alternative items or suggestions, comments or conditions:
  - i. By the partner holding the Power of Attorney in case of a partnership firm / limited liability partnership (A certified copy of the Power of Attorney shall accompany the proposal)
  - ii. By the proprietor in case of a proprietary firm; by a duly authorized person holding the Power of Attorney or by a Board Resolution in case of a Limited Company or a corporation (A certified copy of the Power of Attorney/Board Resolution shall accompany the proposal)
  - iii. By the authorized representative of the Member in Charge in case of Joint Venture / consortium (a certified copy of Board Resolution/Power of Attorney indicating the representative shall accompany the Proposal).

➤ **Financial Bid:**

The Financial bid should provide the following information/ documents:

- a) A detailed BoQ, including disaggregated costs and details of all civil work, machines, installation, trial run, operation and maintenance.
- b) Copy of GST registration certificate
- c) Audited balance sheets of previous three financial years
- d) Income tax return details of last three financial years
- e) The Financial bid shall be inclusive of all the costs including taxes associated with the assignment. It is clarified that, for the purposes of evaluation, the financial bid should be prepared in INR.
- f) The total amount indicated in the financial bid shall be without any condition attached or subject to any assumption, and shall be final and binding. In case any assumption or condition is indicated in the financial bid, it shall be considered non-responsive and liable to be rejected.
- g) In case of any discrepancy between the amount quoted in figures and words, the amount quoted in words will be considered for evaluation purposes.
- h) A copy of valid Pan Number and registration papers of the firm.
- i) Bank solvency certificate

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

*Failure to comply with or provide the above listed items in the Technical Proposal may result in disqualification. The bidder shall produce, original documents for cross verification as and when requested by ICLEI South Asia. Each page of all the documents mentioned above as well as technical and price bid documents shall be duly signed by bidder.*

**(C) Financial Guarantee**

- a) The selected bidder will have to provide a bank guarantee of 10% of the total work order after signing the work order. This bank guarantee shall be returned to the bidder, after commissioning of the plant.
- b) Performance guarantee of 10% of the total work order will be deducted at the onset of the payment and shall be released, after the completion of the defect liability period.

**(D) 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 ID on or before 21.2. 2024:

[monalisa.sen@iclei.org](mailto:monalisa.sen@iclei.org)

- The bidder shall also submit 3 sets of hard copies of the bid documents to the address as mentioned below:

Dr Monalisa Sen,  
Senior Program Coordinator (Biodiversity),  
ICLEI South Asia,  
C-3, Green Park Extension, New Delhi-110016, India  
Tel: +91-11-49747200 Fax: +91-11-49747201  
Email: [monalisa.sen@iclei.org](mailto:monalisa.sen@iclei.org)  
Website: <http://southasia.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**

**“Establishment of floating wetlands in Thevera Perandoor Canal for canal restoration under the Integrated sub-national action for Biodiversity: Supporting implementation of National Biodiversity Strategy and Action Plans (NBSAP) through the mainstreaming of biodiversity objectives across City-Regions (INTERACT-Bio) Project”**

- Envelop II: sealed and shall be super scribed as:

**Part B: Financial bid for**

**“Establishment of floating wetlands in Thevera Perandoor Canal for canal restoration under the Integrated sub-national action for Biodiversity: Supporting implementation of National Biodiversity Strategy and Action Plans (NBSAP) through the mainstreaming of biodiversity objectives across City-Regions (INTERACT-Bio) Project”**

- Envelop III: sealed and shall be super scribed as:

**“Establishment of floating wetlands in Thevera Perandoor Canal for canal restoration under the Integrated sub-national action for Biodiversity: Supporting implementation of National Biodiversity Strategy and Action Plans (NBSAP) through the mainstreaming of biodiversity objectives across City-Regions (INTERACT-Bio) 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 III: 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 bidder 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 in collaboration with Kochi Municipal Corporation and hence instructions to bidders will be given by ICLEI South Asia and Kochi Municipal Corporation. 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.
- 2.5 The bidder must have successfully implemented more than 5 numbers of floating wetland projects in India
- 2.6 While all efforts have been made to avoid errors in the drafting of the documents, the service provider is advised to check the same carefully. No claim on account of any errors detected in the documents shall be entertained.
- 2.7 Technical Bids will be opened first. After a thorough technical evaluation in line with the eligibility criteria as mentioned aforesaid, commercial bids will be opened.
- 2.8 On opening of commercial bid, further detailed scrutiny / evaluation will be carried out. During the evaluation of commercial bids, the documents furnished by the tenderers will be scrutinized in detail. The commercial bid of only those tenderers who have qualified during the scrutiny and technical evaluation will be opened subsequently.
- 2.9 Intending tenderers may inspect the site before submitting the tenders, with the prior permission of ICLEI South Asia and Kochi Municipal Corporation.
- 2.10 ICLEI South Asia is not bound to accept the lowest or any other tender and reserves the authority to reject any or all the tenders received without assigning any reason. All tenders

in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.

- 2.11 ICLEI South Asia also reserves the right to alter the scope/or reduce the quantum of work before issue of work order and the tenderer shall not have any claim whatsoever on this account.
- 2.12 ICLEI South Asia reserves the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
- 2.13 Canvassing directly or indirectly, in connection with the tender is strictly prohibited and the tenders submitted by the bidders who resort to canvassing will be liable for rejection.
- 2.14 On concluding the tender, a work order shall be issued to the successful bidder.
- 2.15 The bidder will need to secure all statutory clearances.

### **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.Excess material**

The winning bidder reserves the right to remove the excess material during the construction and or on completion of the project. This is subject to approval from Kochi Municipal Corporation (KMC). KMC shall generally not deny approval to the removal provided it is not necessary for the working of the plant.

### **8. Governing laws**

The Design & Engineering and procurement and supply of components forming part of the floating wetlands and supervision of erection and commissioning shall be governed by Indian statutes, laws and regulations.

### **9. Changes in work/law**

If there is any change in the scope and/or nature of work, during the execution of this order because of change in Indian government's statutes/rulings/regulations/orders/laws, an adjustment in terms including but not limited to prices, deliveries, etc., the terms of the order shall be negotiated. Supplier is not obliged to proceed with the changes until Supplier has received the Purchaser's written approval of the proposed changes as well as adjustments, if any in terms of the order.

### **10. Arbitration**

In case of any disputes/differences between the parties, the matter will be subjected to resolution through amicable talks. In case of failure to resolve amicably, matter will be subjected to arbitration. Dispute will be subjected to jurisdiction of courts in New Delhi.

### **11. Compliance with laws**

Supplier undertakes to comply with all legal provisions, rules and regulations in respect of manufacture and supply of the equipment. Purchaser undertakes to comply with all other necessary regulations, rules and laws as may be required. Purchaser shall facilitate as feasible, for the supplier to obtain necessary approvals as may be required in respect of the floating wetland system.

### **12. Secrecy**

All the information such as drawings, designs, manuals, etc., to be supplied by Supplier under this Agreement shall be treated as confidential information.

### **13. Liability of Service Provider**

- Subject to the limit of liability, the winning bidder (service provider) shall indemnify and hold harmless ICLEI South Asia and its employees and KMC and its employees against any liability, claims, losses, or damages sustained by it or them by reason of any breach of contract, wrongful act, or negligence by Service Provider or any of its employees engaged in the operation of the services to KMC and ICLEI South Asia. Vendor shall be held responsible and shall indemnify and hold harmless ICLEI South Asia, KMC and all its employees, personnel, etc for any behavioural issues of service

providers employees in KMC premises including but not limited to harassment of women, children, local public, contractors, agencies, etc in KMC premise.

- Service provider is responsible for all liabilities arising out of any damages caused to KMC property.

#### **14. Materials/Appliance at site**

- a. ICLEI South Asia and KMC do not undertake any responsibility for supply of any materials/ equipment/ Appliance/ tool for site analysis to the bidder
- b. All materials/ equipment/ tools brought to site by the bidder shall be the responsibility of the bidder. ICLEI South Asia and KMC 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.

#### **5. Final Inspection of Work**

- a. ICLEI South Asia and KMC 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.
- b. At the time of such inspection ICLEI South Asia and KMC shall inform the bidder in writing as to the particular concerns to be remedied before final acceptance can be made