



BEFORE THE NATIONAL GREEN TRIBUNAL  
WESTERN ZONE BENCH, PUNE  
Original Application No. 02 of 2023 (WZ)

IN THE MATTER OF:

Sunil S. Mulye & Ors.

.....Appellant

Versus

Union of India, through MoEF & Ors.

.....Respondents

**COMPLIANCE AFFIDAVIT OF THE ORDER DATED 25.08.2023  
PASSED BY THIS TRIBUNAL**

I, Abhay Madhukar Pimparkar, aged about 47 years, Occupation Service, Director, Environment and Climate Change Department and Member Secretary, State Wetland Authority, Government of Maharashtra of the respondent No.8 above named, having my office address at 15<sup>th</sup> Floor, New Administrative Building, Mantralaya, Mumbai 400 032, do hereby beg to state on solemnly affirm as under:

1. That I am in the above noted capacity and as per records available in the department, I am fully conversant with the facts and circumstances



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of the case, hence competent to swear this compliance affidavit on behalf of the answering Respondent.

2. That I have gone through and understood the contents of the O.A. and order dated 25.08.2023 passed by this Hon'ble Tribunal.
3. That in compliance of the order dated 25.08.2023 the respondent No.2 Wetland Authority hereby submits as follows:
  - I. The Hon'ble NGT vide order dated on 18/05/2023 directed to constitute a joint Committee comprising the Member Secretary, Maharashtra State Wetland Authority, Member Secretary, Maharashtra Coastal Zone Management Authority (MCZMA), District Collector, Palghar, Chief Engineer, Irrigation Department, and Commissioner, Vasai-Virar Municipal Corporation. In consonance with the directions issued by Hon'ble NGT, Joint Committee has been constituted. I further say and submit that, the said committee have done site visit on 19.06.2023. Site visit report of the Joint Committee is attached herewith as **Annexure – I**.
  - II. I say and submit that, the preparation of brief document for each of the wetland identified for notification, following data collection is

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required as per para 7(1) of the Wetlands (Conservation and Management) Rules 2017:

- a) demarcation of wetland boundary supported by accurate digital maps with coordinates and validated by ground truthing;
- b) demarcation of its zone of influence and land use and land cover thereof indicated in a digital map;
- c) ecological character description;
- d) account of pre-existing rights and privileges;
- e) list of site-specific activities to be permitted within the wetland and its zone of influence;
- f) list of site specific activities to be regulated within the wetland and its zone of influence; and
- g) modalities for enforcement of regulation;

After compilation of above data, the brief document for each of the wetland can be prepared.

- III. I further say and submit that, Maharashtra State Wetland Authority has appointed National Centre for Sustainable Coastal Management, Chennai for preparation of Wetland maps and Brief Document along with assessment of Tourism Potential of Wetlands for the State of



Maharashtra on 19/10/2023. The contract Agreement is attached herewith as **Annexure – II**.

- IV. I also submit that, Wetland maps and Brief Document as submitted by National Centre for Sustainable Coastal Management, Chennai will be submitted before Maharashtra State Wetland Authority and appropriate measures will be taken to prepare brief document of burial ground at survey Nos. 176/A/1/A and 177 situated at village Divanman, Taluka Vasai, District Palghar on priority.
4. Hence this submission.

Place: Mumbai.  
Date: 20/11/2023.



[Abhay Madhukar Pimparkar]  
Deponent  
Director, Environment & CC and  
Member Secretary, State Wetland Authority

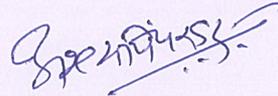


VERIFICATION:

I, Abhay Madhukar Pimparkar, aged about 47 years, Occupation Service, Director, Environment and Climate Change Department and Member Secretary, State Wetland Authority, Government of Maharashtra of the respondent No.8 above named having my office address at 15<sup>th</sup> Floor, New Administrative Building, Mantralaya, Mumbai - 400 032 do hereby verify and say that the contents of my above affidavit are true and correct to my knowledge, no part of it is false and nothing material has been concealed there from. The legal submissions are further true as per legal advice received and believed to be true and correct.

Verified at Mumbai on this 20<sup>th</sup> day of November, 2023

Place: Mumbai  
Date: 20/11/2023.



[Abhay Madhukar Pimparkar]

Deponent

Director, Environment & CC and  
Member Secretary, State Wetland Authority

Identify by me



(Chandrakant Vibhute)  
Scientist Grade – 1 & Deputy Secretary,  
Environment & CC GoM.

SOLEMNLY AFFIRMED

BEFORE ME BY DEPONENT

SHRI A. M. Pimparkar

WHO IS IDENTIFIED

BY SHRI C. A. Vibhute



Joint Secretary

Government of Maharashtra  
Law and Judiciary Department  
Mantralaya, Mumbai 400 032



**COMMITTEE REPORT****Original Application No. 02 of 2023 (WZ)  
Sunil S. Mulye & Ors. V/s. Union of India, through MoEF & Ors.****PREAMBLE:**

Original Application No. 02 of 2023 (WZ) has been filed by Sunil S. Mulye & Ors before Hon'ble National Green Tribunal, Western Zone Bench, Pune. The matter pertains to status of the burial ground at survey Nos. 176/A/1/A and 177 situated at village: Divanman, Taluka: Vasai, District: Palghar from Wetland point of view.

The Hon'ble National Green Tribunal Western Zone Bench, Pune has passed an Order dated 18.05.2023 in the matter with following directions:

*"12. We deem it appropriate to constitute a Joint Committee comprising one member each of (i) Member Secretary, State Wetlands Authority, (ii) Member Secretary, Maharashtra Coastal Zone Management Authority (MCZMA), (iii) District Collector, Palghar, (iv) Chief Engineer, Irrigation Department and (v) Commissioner, Vasai-Virar Municipal Corporation. MCZMA will be the Nodal Agency of the Committee. The Committee shall visit the spot after giving notice to the applicants at the earliest and following will be the Terms of Reference (ToR) for the Joint Committee:*

- 1) Visit the site after intimating applicant and all other respondents*
- 2) Find out status of site as per National Wetland Atlas 2010*
- 3) Find out if the site meets definition of wetland as per the Wetlands (Conservation and Management) Rules, 2017 ("wetland" means an area of marsh, fen, peatland or water; whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters, but does not include river channels, paddy fields, human-made water bodies/tanks specifically constructed for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation purposes).*
- 4) Find out if the site meets definition of wetland as per MOEFCC Guidelines for implementing Wetlands (Conservation and Management) Rules, 2017.*
- 5) Find out maximum depth of water at the central portion of the site during peak monsoon based on past records.*
- 6) If the site meets definition of wetland –*

- I. *Demarcate wetland boundary supported by accurate digital maps with coordinates in consultation with revenue and irrigation department.*
- II. *Demarcate its zone of influence and land use and land cover*
- III. *Describe Ecological character of the site – flora and fauna found at the site and it's importance.*
- IV. *Recommend if proposed activity can be permitted within the wetland and/or in its zone of influence.*

*A report of the Committee shall be submitted before us by the MCZMA within one month, by e-mail at ngt-pune@gov.in preferably in the form of searchable PDF/OCR Support PDF and not in the form of Image PDF.”*

#### **CONSTITUTION OF COMMITTEE:**

In compliance of the directions dated 18.05.2023 of Hon'ble National Green Tribunal, a Joint Committee has been constituted vide order dated 29.05.2023.

The said Joint Committee comprises of Shri. Chandrakant Vibhute, Dy. Secretary, Environment & Climate Change Dept as Representative of Wetland Authority; Dr. Mahesh Shindikar, Expert Member, MCZMA; Representative of District Collector, Palghar; Chief Engineer, Irrigation Dept and Municipal Commissioner, Vasai Virar Municipal Corporation. Copy of the Joint Committee order is attached as **Annexure I**

#### **SITE VISIT OF COMMITTEE**

The site visit of the Joint Committee was scheduled on 19.06.2023 at 11.30 am. The MCZMA vide email dated 16.6.2023 communicated the same to all members and applicant.

Accordingly, the Joint Committee visited the site on 19.6.2023 along with Applicant Shri Sunil S. Mulye & representative of Suncity Association. The VVMC officials showed the said site of burial ground which is situated at Survey Nos. 176/A/1/A and 177 situated at Village: Divanman, Taluka: Vasai, District: Palghar. Latitude & Longitude of the location is 19°23'10.19"N, 72°48'57.89"E.

List of Members/ officials/ representatives present for the site visit attached as **Annexure-II**

Taking into consideration the Terms of Reference (TOR) prescribed by the Hon'ble NGT, observations of the Committee is as below:

**1) Visit the site after intimating applicant and all other respondents**

The Joint Committee visited the site on 19.06.2023 at 11.30 am with applicant Shri Sunil S. Mulye & representative of Suncity Association.

Google image of the site visit along with site photographs as **Annexure III**

**2) Find out status of site as per National Wetland Atlas 2010 -**

The Committee noted that the National level wetland inventory was carried out by the Space Application Centre (SAC), Ahmedabad using multi-date IRS-LISS-III Data of 2006-07 timeframe on 1:50,000 scale under project "National Wetland Inventory and Assessment (NWIA)" funded by MoEF&CC, New Delhi.

The Committee observed that the maps are available in the scale of 1:50,000 scale, which is small scale. Considering the small scaling of the said map, just by observing the map, it is difficult to ascertain & confirm the status of the land from wetland point of view. Hence, the Committee referred the website of MoEF&CC and SAC, Ahmedabad for further details.

The Committee observed that certain more details are available on the website of SAC, Ahmedabad <https://vedas.sac.gov.in/> with respect to wetlands. Under the tab Applications - Wetlands, the wetland polygon (1:50k) (2006-2007) of the site in question (19°23'10.19"N, 72°48'57.89"E) is available. As per the said source, the subject site is shown in Dark Brown colour and termed as "*Coastal Wetlands- man made- Salt pans*"

Moreover, the Committee consulted the Planning Authority VVMC officials, as per them also, the site in question is shown as Wetland in National Wetland Atlas, 2010.

The Copy of the SAC atlas map in 1:50000 scale along with extract from above said SAC website showing the site in question shown as Dark Brown Colour is attached as **Annexure IV**

- 3) Find out if the site meets definition of wetland as per the Wetlands (Conservation and Management) Rules, 2017 ("wetland" means an area of marsh, fen, peatland or water; whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters, but does not include river channels, paddy fields, human-made water bodies/tanks specifically constructed for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation purposes) –

The Committee noted the definition of the wetland as per Wetlands (Conservation and Management) Rules, 2017:

*"wetland" means an area of marsh, fen, peatland or water; whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters, but does not include river channels, paddy fields, human-made water bodies/tanks specifically constructed for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation purposes;*

The Committee during the site visit observed that, the site in question is not an area of marsh, fen, peatland or water. Presently, the subject site of burial ground is vacant and protected by a compound wall. It was also observed that grass dominated ground cover with sporadic thorny bushes at site.

During the visit, the VVMC submitted as per Development Plan site in question is reserved for burial ground. VVMC further stated that S. No. 176 of village Diwanman, area of 14.83.0 sqm is classified as Wetland out of 47.50.0 sq. m total area by Revenue dept. However, S. No. 177 at village Diwanman is not classified as Wetland of Palghar District. During the visit, the VVMC showed the map which is attached herewith as **Annexure V**

During the site visit, Applicant stated that water gets logged at site during rainy seasons. Further, he has claimed that this land was traditionally used as saltpan and used by the local fishermen to access the creek.

The Committee from the observing the site prima facie opined that the site in question doesn't exhibit the features, as stipulated in the

definition of “wetland” as per Wetlands (Conservation and Management) Rules, 2017.

However, the Committee further noted the modalities prescribed & stipulated in the Wetland Rules of 2017 for identifying and notifying the wetland under the said Rules. As per the said Rules, under para 5, the State Wetland Authority is constituted. Further the State Government is empowered to notify & prepare brief document for wetlands following the procedure/ modalities as stipulated in sub para (a) to (g) of para 7 (1) of Wetland Rules, 2017. Moreover, as per para 7(2) of said rules, *“Based on the Brief Document, the Authority shall make recommendations to the State Government or Union Territory Administration for notifying the wetlands”*

Thus, the said Rules has stipulated in details the modalities / procedure to be followed by the State Government & State Wetland Authority in order to identify and notify the wetland in accordance Wetland Rules, 2017. Hence, the Committee felt that applicability of the said Wetland Rules for the site in question is the subject matter of State Government & State Wetland Authority.

**4) Find out if the site meets definition of wetland as per MOEFCC Guidelines for implementing Wetlands (Conservation and Management) Rules, 2017.**

The Committee perused the guidelines issued by the MoEF&CC for implementing Wetlands (Conservation and Management) Rules, 2017. These guidelines have been drafted to support the State Governments / Union Territory (UT) Administrations in the implementation of the Rules for providing guidance on various aspects such as preparing the list of wetlands in State, identifying & deli nearing the wetland, preparation of brief document, determining ‘wise use’ and ecological character etc.

The Committee noted that as per para 4 of the said Guidelines,

*“All wetlands, irrespective of their location, size, ownership, biodiversity, or ecosystem services values, can be notified under the Wetlands Rules, except:*

*a) River channels;*

*b) Paddy fields;*

*c) Human-made waterbodies specifically constructed for drinking water purposes;*

*d) Human-made waterbodies specifically constructed for aquaculture purposes;*

- e) *Human-made waterbodies specifically constructed for salt production purposes;*
- f) *Human-made waterbodies specifically constructed for recreation purposes;*
- g) *Human-made waterbodies specifically constructed for irrigation purposes;*
- h) *Wetlands falling within areas covered under the Indian Forest Act, 1927; Forest (Conservation) Act, 1980; State Forest Acts and amendments thereof;*
- i) *Wetlands falling within areas covered under the Wildlife (Protection) Act, 1972 and amendments thereof;*
- j) *Wetlands falling within areas covered under the Coastal Regulation Zone Notification, 2011 and amendments thereof”*

The Committee noted that para 23 of the said Guidelines which is as follows:

*The National Wetlands Atlas prepared by Space Application Center under the National Wetlands Inventory and Assessment project, and available at [https://vedas.sac.gov.in/vedas/downloads/atlas/Wetlands/NWIA\\_National\\_atlas.pdf](https://vedas.sac.gov.in/vedas/downloads/atlas/Wetlands/NWIA_National_atlas.pdf) has spatial data on wetlands for each State and UT.*

*The Committee observed during the site visit that the site of burial ground is not an area of marsh, fen, peatland or water but a vacant area enclosed by a compound wall. There are no mangroves or associate species observed on this land.*

The Committee noted that applicability of the said Wetland Rules for the site in question is the subject matter of State Government & State Wetland Authority, in accordance with Wetland Rules, 2017 and Guidelines prescribed thereunder. It is noted that the State Government is in process of preparation of brief document.

**5) Find out maximum depth of water at the central portion of the site during peak monsoon based on past records.**

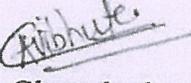
The Committee during the site visit observed that the site is dry and covered with grass & thorny shrubs. During the site visit, the applicant informed that 3 – 4 feet rainwater accumulates therein during rainy season as in all adjacent areas of the site.

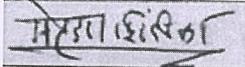
- 6) If the site meets definition of wetland –
- I. Demarcate wetland boundary supported by accurate digital maps with coordinates in consultation with revenue and irrigation department.
  - II. Demarcate its zone of influence and land use and land cover
  - III. Describe Ecological character of the site – flora and fauna found at the site and it's importance.
  - IV. Recommend if proposed activity can be permitted within the wetland and/or in its zone of influence.

As stated above, the Committee during the site visit observed that, the site in question is not an area of marsh, fen, peatland or water. Presently, the subject site of burial ground is vacant with a compound wall. Grass dominated ground cover with sporadic thorny bushes at site. The Committee from the observing the site, prima facie opined that the site in question doesn't exhibit the features, as stipulated in the definition of "wetland" as per Wetlands (Conservation and Management) Rules, 2017.

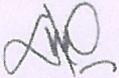
As Stated above, State Government is empowered to prepare brief document for identified wetlands following the procedure/ modalities as stipulated in sub para (a) to (g) of para 7 (1) of Wetland Rules, 2017. It came to know that the State Government is in process of preparation of brief document for wetlands in the State. If the site in question meets the definitions of 'wetland' as per Wetland Rules, 2017, and applicability of further modalities like demarcation, preparation of brief document, regulation of activity etc, is the subject matter of State Government & State Wetland Authority, under Wetland Rules of 2017.

  
05/10/23  
Shri. Anilkumar Pawar,  
Municipal Commissioner,  
VVMC

  
Shri. Chandrakant  
Vibhute,  
Dy. Secretary,  
Environment & Climate  
Change

  
Dr. Mahesh Shindikar,  
Expert Member,  
MCZMA

  
Shri. Milind Naik,  
CE, Irrigation Dept

  
Shri. Shekhar Ghadge,  
SDO, Vasai

Date: 01.11.2023

Annexure-I**MAHARASHTRA COASTAL ZONE MANAGEMENT AUTHORITY**

Tel. No. : 22029388  
 E-mail : [dir1.mev-mh@nic.in](mailto:dir1.mev-mh@nic.in)  
 Website: <https://mczma.gov.in/>

No. OA 2023 / CR 10 / TC - 4  
 Office of the -  
 Maharashtra Coastal Zone Management Authority,  
 Environment & Climate Change Department,  
 15<sup>th</sup> floor, New Administrative Building,  
 Mantralaya, Mumbai- 400 032.  
 Date: 29.5.2023

**ORDER**

**SUB:** Original Application NO. 2 of 2023 before Hon.ble National Green Tribunal (WZ) Sunil S. Mulay & ors Versus Union of India & Ors

**Ref:** Hon'ble NGT order 18.5.2023 passed in subject matter

An Original Application No. 2 of 2023 has been filed before Hon'ble National Green Tribunal, Pune. The matter pertains to the site bearing S. No. 176 & 177 of Vasai Virar, District Palghar from Wetland point of view.

2. The Hon'ble NGT in its order dated 18.5.2023 has passed following directions:

*"We deem it appropriate to constitute a Joint Committee comprising one member each of (i) Member Secretary, State Wetland Authority (ii) Member Secretary, MCZMA (iii) District Collector, Palghar (iv) Chief Engineer, Irrigation Department and (v) Commissioner, Vasai Virar Municipal Corporation*

*MCZMA will be nodal agency of the Committee. The Committee shall visit the spot after giving notice to the applicants at the earliest and following will be the Terms of Reference (TOR) for the Joint Committee.*

1. *Visit the site after intimating applicant and all other respondents*
2. *Find out status of site as per National Wetland Atlas 2010*
3. *Find out if the site meets definition of wetlands (Conservation and Management Rules), 2017 ("wetland" means an area of marsh, fen peatland or water; whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters, but does not include river channels, paddy fields, human made water bodies / tanks specifically constructed for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation purposes)*
4. *Find out if the site meets definition of wetland as per MoEFCC guidelines for implementing Wetlands (Conservation and Management) Rules, 2017*
5. *Find out maximum depth of water at the central portion of the site during peak monsoon based on past records*
6. *if the site meets definition of wetland-*
  - I. *Demarcate wetland boundary supported by accurate digital maps with coordinates in consultation with revenue and irrigation department*

- II. Demarcate its zone or influence and land use and land cover
- III. Describe ecological character of the site –flora and fauna found at the site and its importance
- IV. Recommend if proposed activity can be permitted within the wetland and / or in its zone of influence.

A report of the Committee shall be submitted before us by the MCZMA within one month, be email at [ngt-pune@gov.in](mailto:ngt-pune@gov.in) preferably in the form of searchable PDF/ OCR support PDF and not in the form of image PDF”

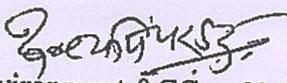
3. Accordingly, a Committee is hereby constituted as follows:

Sr No.	Member	Organization
(i)	Mr. Chandrakant Vibhute, Deputy Secretary, Env&CC – Representative, MS, State Wetland Authority	State Wetland Authority
(ii)	Dr. Mahesh Shindikar, Expert Member, MCZMA/ Sanjay Sandanshiv, Under Secretary, Environment &CC Department, State of Maharashtra – Representative, MS, MCZMA	MCZMA
(iii)	District Collector, Palghar	District Collector
(iv)	Chief Engineer, Irrigation Department	Irrigation Department
(v)	Municipal Commissioner, Vasai Virar Corporation	Vasai Virar Municipal Corporation

4. As per the Hon'ble NGT order, The Committee shall visit the spot after giving notice to the applicants at the earliest. Terms of Reference (TOR) for the Joint Committee is prescribed as below as stated in the Hon'ble NGT order. A report of the Committee shall be submitted to MCZMA within one month so that the said report could be mailed to Hon'ble NGT. Copy of the above said order dated 18.5.2023 of the Hon'ble NGT is attached herewith.

This issues with the approval of competent Authority.

Yours,

  
Director, Environment &CC and MS, MCZMA

To,

- 1) Mr. Chandrakant Vibhute, Deputy Secretary, Env&CC – Representative, MS, State Wetland Authority

- 2) Dr. Mahesh Shindikar, Expert Member, MCZMA/ Sanjay Sandanshiv, Under Secretary, Environment & CC Department, State of Maharashtra – Representative, MS, MCZMA
- 3) District Collector, Palghar
- 4) Chief Engineer, Irrigation Department
- 5) Municipal Commissioner, Vasai Virar Municipal Corporation

**Copy for information to:**

1. Principal Secretary, Environment & CC, Environment & CC Dept, Room No. 217, Annexe Building, Mantralaya, Mumbai.
2. Director, Environment & CC, Environment & CC Dept, 15<sup>th</sup> floor, New Administrative Building, Mantralaya, Mumbai.
3. Select File- TC 4

## Annexure-II

## ATTENDANCE

आज दि. १९/०९/२०२३ रोजी सकाळी ११.३० वा.

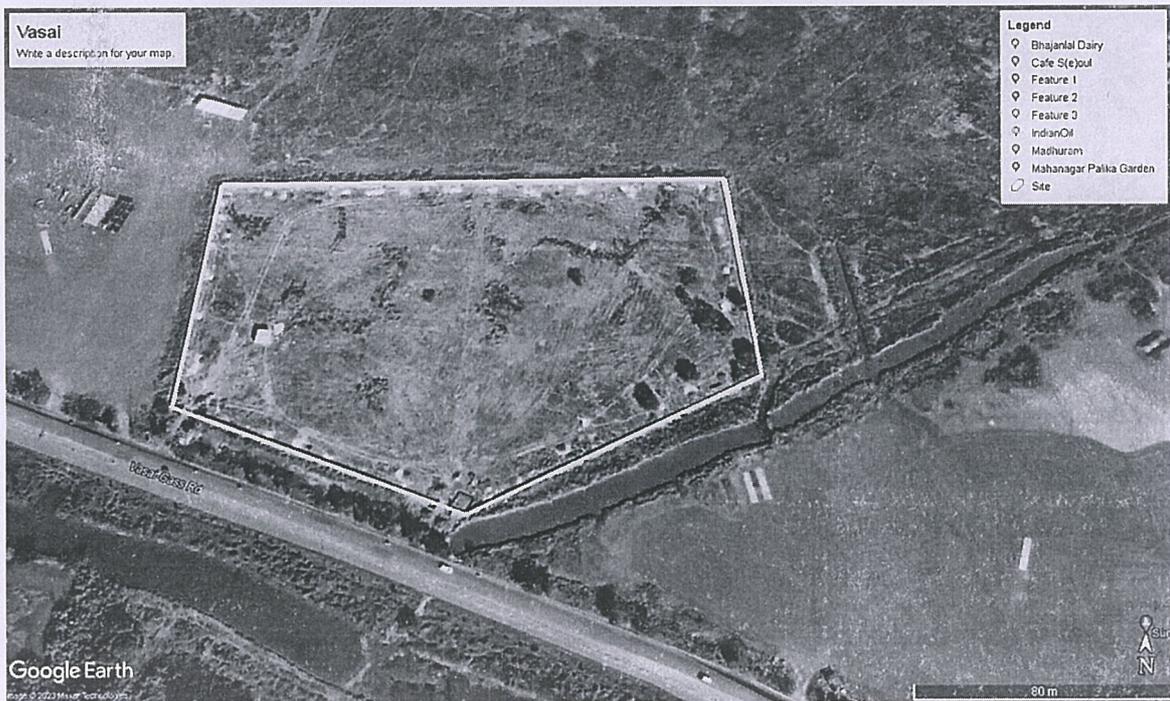
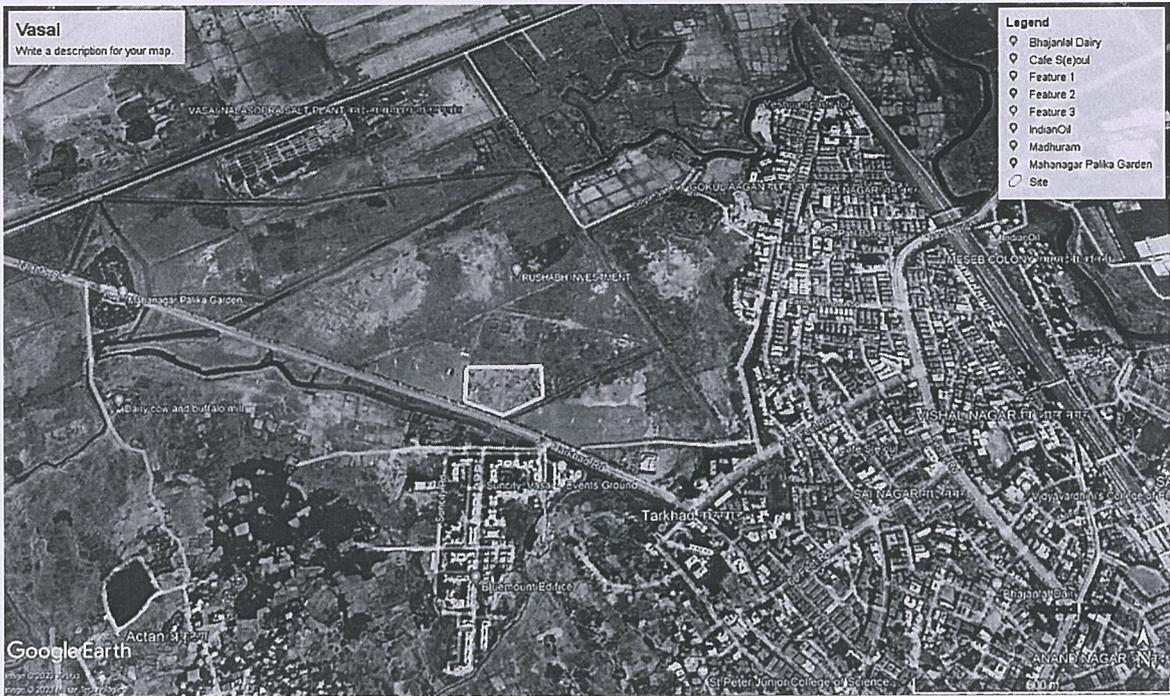
भा. राष्ट्रीय हरित नवदी पुणे यांचे दि. १९/०९/२०२३ OA 2/23

रोजीच्या सुनावणी उपदेशानुसार वसुधै विराय बाहेर अहमदनगर पालिकेच्या हॉटेल मीजे दिवाबामान येथील सेवेत रु. १६०६५ १६०० संबंधित जागेतील सर्वधार्मिक दफनभूमी च्या जागेची स्थळ पाहणी करणेसाठी खासाल प्रमाणे आधीकशि (कमिटी) उपास्थित होते.

क्र.सं.	नाव	पद	सही	मो.नं.वगै.
१)	श्री अनिलकुमार पवार	प्रशासक तथा आभुक्त (वनिशास)		
२)	श्री. शेखर घाडगे	उप विभागीय दफि वरिष्ठ		
३)	श्री. चंद्रकांत विशुते	उप सचिव प्राथम्य विभाग		
४)	डॉ. महेश शिंदेकर			
५)	वाच. एस. व्हेडी			
६)	प्र.व. बोरसे	अ.अ. जलदपरा विभाग		
७)	पंकज दाबिरे	अ.अ., ज.कं., वक.		
८)	स्मिता वाटील.	पर्यावरण व वातावरण खंड		
९)	आनंद बिलगाडे	पर्या. व वा. वक.		
१०)	वकुनिक सुब्बे	"		
११)	सजसिरी डामो. वर्फे देवेंद्र जेवा. १			9822968449
१२)	किशोर रावस			

Annexure –III

Google image indicating site of burial ground



Site Photographs

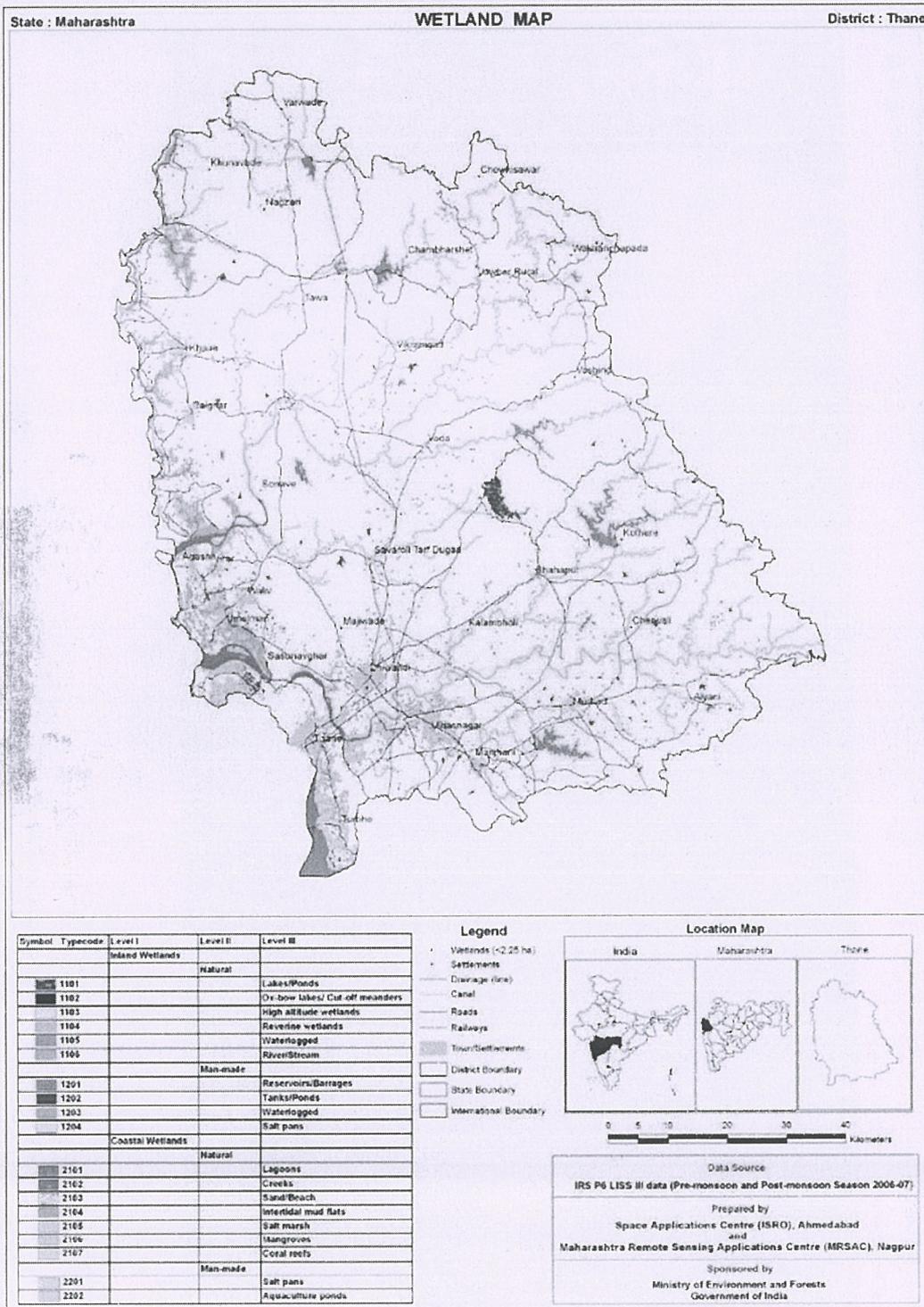






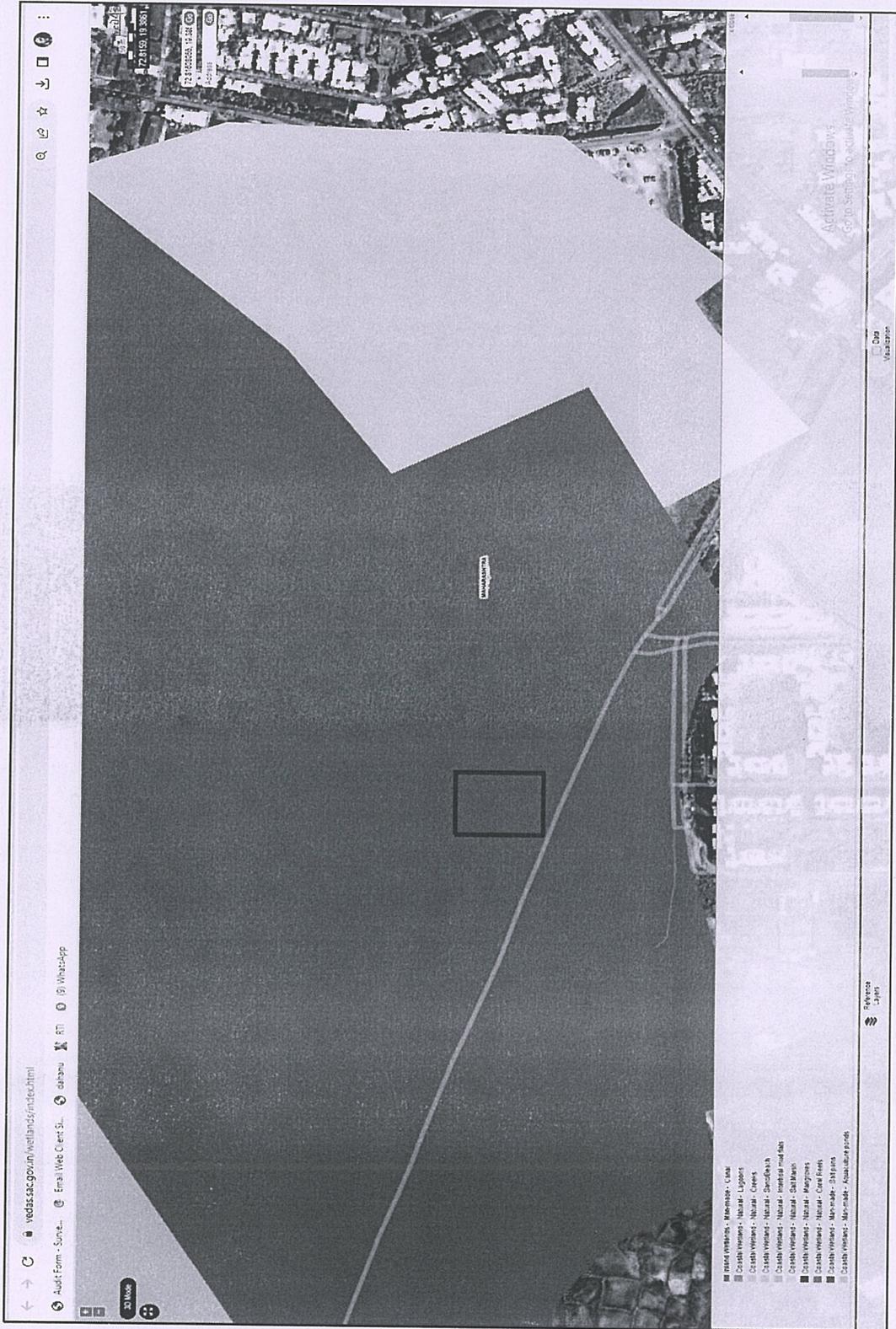
Annexure-IV

Map prepared by SAC & MRSAC Nagpur in 1:50,000 scale as per National Wetland Atlas 2010



Extract from Website of SAC, Ahemadabad <https://vedas.sac.gov.in/>

(site shown in Red Square)







417

Annexure – II

NATIONAL CENTRE FOR SUSTAINABLE COASTAL MANAGEMENT

Ministry of Environment, Forest & Climate Change, Government of India

No. NCSCM / CZMA / Maharashtra/23 -462/EDC

dated 10/10/2023

TO

The Director Environment & Climate Change,  
Environment & Climate Change Department,  
Government of Maharashtra,  
15<sup>th</sup> Floor, New Administrative Building,  
Mantralaya, Mumbai - 400 032.

MCZMA

लिपिक/तां.क्र.:-- नो १११-२०८३-१६-१०-२०२३  
पर्यावरण व वातावरणीय बदल विभाग  
मंत्रालय, मुंबई ४०० ०३२

Sir,

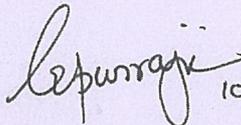
SUB: CONTRACT AGREEMENT FOR PREPARATION OF WETLAND MAPS AND BRIEF DOCUMENTS ALONG WITH ASSESSMENT OF TOURISM POTENTIAL OF WETLANDS FOR THE STATE OF MAHARASHTRA - REG.

Ref: Your letter No. Wetland 2023/CR 29/TC 3 dated 3/10/2023.

With reference to your letter cited above, the Contract Agreement for preparation of wetland maps and brief documents along with assessment of tourism potential of wetlands for the State of Maharashtra, is submitted herewith, after incorporating the revised cost of Rs 23,86,84,028 (Rupees twenty-three crores eighty-six lakh eighty-four thousand and twenty-eight only, inclusive of 18% GST) and other terms and conditions and duly signed at our end, for your kind approval and signatures.

A copy of the Contract Agreement signed at your end may kindly be forwarded to NCSCM for our record.

Yours Sincerely,

 10/10/2023

Dr Purvaja Ramachandran  
Director, NCSCM

Encl: Contract Agreement.

Copy to: Manager, Finance, NCSCM

DSC/23)  
Dr. Purvaja  
17/10  
21.10.23  
Dr. Purvaja  
17/10/23



Anna University Campus, Chennai 600 025, India  
Phone (+91) 44 22200600 Fax (+91) 44 22200700

www.ncscm.res.in



தமிழ்நாடு தமில்நாடு TAMIL NADU  
20 JUL 2023

24AC 402376

**K. SANKAR**  
STAMP VENDOR  
LICENCE No: 1481/94,  
No. 2, MADLEY ROAD,  
T. NAGAR, CHENNAI-17

PREPARATION OF WETLAND MAPS & BRIEF DOCUMENTS ALONG WITH  
ASSESSMENT OF TOURISM POTENTIAL OF WETLANDS FOR THE STATE OF  
MAHARASHTRA

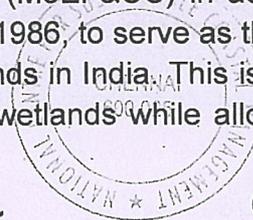
### CONTRACT AGREEMENT

This Contract Agreement is made and entered into on this --- day of -----, 2023, between the Principal Secretary to Government (Environment & Climate Change Department), Government of Maharashtra (here in after referred as "the Client") and the Director, National Centre for Sustainable Coastal Management (NCSCM), Chennai (herein after referred as "the Consultant").

#### 1. Background:

Wetlands (Conservation and Management) Rules, 2017 were notified by the Ministry of Environment, Forests, and Climate Change (MoEF&CC) in accordance with the provisions of the Environment (Protection) Act, 1986, to serve as the legal framework for the conservation and management of wetlands in India. This is an important step towards preserving the natural integrity of the wetlands while allowing for wise and

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sustainable use. The Wetland Guidelines were published in the year 2020. The Environment & Climate Change Department, Government of Maharashtra have informed that there are 6 revenue divisions in the State of Maharashtra, in which the primary exercise of identification of wetlands was carried out by the District Authorities. Around 15,918 Nos. of wetlands with area more than 2.5 Ha and 2198 Nos. of wetlands with area less than 2.5 Ha (Total 18,116) have been primarily identified. The State Government has requested NCSCM to demarcate, conduct ground truthing and document the wetlands.

NCSCM is already fully involved as a knowledge partner, in the Wetlands project of the Ministry of Environment, Forest, and Climate Change (MoEF&CC), Government of India.

## 2. Scope of the contract:

The present consultancy covers:

- 1) Demarcation of wetland boundaries of the identified 15,918 + 2198 wetlands, supported by accurate digital maps with coordinates and validated by ground truthing, in adherence to the Wetlands Conservation and Management-Rules-2017 and Wetland Guidelines, 2020.
- 2) Demarcation of the zones of influence and land use and land cover of the wetlands, thereof indicated in a digital map.
- 3) Description of the ecological character of the wetlands and preparation of Brief documents.
- 4) Assessment of tourism potential of the wetlands.
- 5) Submission of the final deliverables for each of the six Revenue divisions of Maharashtra namely, Konkan Division, Pune Division, Nashik Division, Chatrapati Sambhaji Nagar Division, Amravati Division and Nagpur Division, covering all the 36 districts of Maharashtra.

## 3. Study Area:

The Study area will be the wetlands and the areas around the 15,918 + 2198 wetlands of Maharashtra, in the 36 districts, including the water bodies and buffer areas such as the zones of influence and land use land cover areas.

As per clause 3 (Applicability of rules) of the Wetlands Conservation and Management Rules, 2017, the wetlands falling in areas covered under the Indian Forest Act, 1927, the Wild Life (Protection) Act, 1972, the Forest (Conservation) Act, 1980, the State Forest Acts, and the Coastal Regulation Zone Notification, 2019 as amended from time to time, are not covered under this proposal/ Contract Agreement.

## 4. Terms of Reference (ToR) proposed to be undertaken to address the scope of services

Refer Clause 20 of this contract agreement

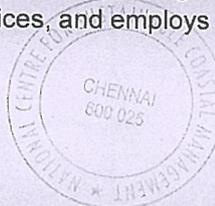
## 5. Performance of Service:

The Consultant shall perform its services in line with the Scope (as defined in Clause 20.2 of this contract agreement) and shall carry out its obligations hereunder with skill, care, diligence, efficiency and economy, in accordance with generally accepted techniques, prudent practice and with professional scientific and consulting standards. It shall also observe sound management and technical practices, and employs appropriate advanced

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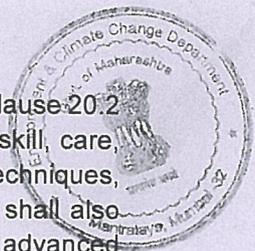
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technology and methods. The Consultant shall always, in respect to any matter relating to this Contract agreement, as faithful advisors/representatives to the Client support and safeguard the legitimate interest in any dealing with sub-contractors or third parties. The Consultant shall use reasonable endeavors to complete the Services within the time or programme agreed upon between the Parties.

#### 6. Period of Consultancy:

- a) The total period of consultancy shall be 24 months. Delay in payment or receipt of Stakeholder data or review of draft maps/documents by the Client will correspondingly increase the project duration. In case the execution of contract involves more time on account of unforeseen conditions, a request in this regard will be made by the Consultant to extend the contract period.
- b) **Start date:** The start date will be the date on which the advance payment will be made by the client as stipulated in clause 14 a) of this agreement.
- c) **Milestones / Priority of completion:**

##### Milestone #1:

Preparation of wetland maps on 1:4000/1:10,000 scale (as per the Wetlands Conservation and Management Rules, 2017/Guidelines-2020), with the boundaries demarcated for the wetlands of three Revenue Divisions (Konkan, Pune & Nashik Divisions) of Maharashtra and submission of draft pdf maps to the Client: 10 months from start date.

##### Milestone #2:

Preparation of wetland maps on 1:4000/1:10,000 scale (as per the Wetlands Conservation and Management Rules, 2017/Guidelines-2020), with the boundaries demarcated for the wetlands of the remaining three Revenue Divisions (Chatrapati Sambhaji Nagar, Amravati & Nagpur Divisions) of Maharashtra and submission of draft pdf maps to the Client: 15 months from start date.

##### Milestone #3:

Demarcation of the Land use, Land cover and Zones of Influence for all the 18,116 wetlands as per the Wetlands Conservation and Management-Rules-2017 and Wetland Guidelines, 2020 and submission of the updated / revised draft pdf maps to the Client: 18 months from start date.

##### Milestone #4:

Incorporation of the ecological character of the wetlands and preparation of brief documents and assessment of tourism potential for each of the 18,116 wetlands and submission of the updated/ revised final pdf maps and pdf documents to the Client: 24 months from start date.

#### 7. Obligation of Client:

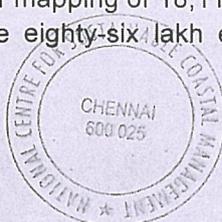
Refer Clause 20.10 of this contract agreement.

#### 8. Consultancy Cost:

The fixed fee/cost of the Consultancy contract for mapping of 18,116 identified wetlands is Rs 23,86,84,028 (Rupees twenty-three crore eighty-six lakh eighty-four thousand

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twenty-eight only, inclusive of 18% GST). Tax Invoice with Bank details will be sent to the client on receipt of work order.

The Revenue Division-wise cost for mapping of wetlands is given below.

Sl. No.	Name of Revenue Division (Headquarter)	Districts	Cost including GST (Rs)
1	<u>Konkan Division</u> (HQ: <u>Mumbai</u> ) 7 districts	<u>Mumbai City District, Mumbai Suburban District, Thane, Palghar, Raigad, Ratnagiri, Sindhudurg</u>	1,40,39,028
2	<u>Pune Division</u> (HQ: <u>Pune</u> ) 5 districts	<u>Sangli, Satara, Solapur, Kolhapur, Pune</u>	3,39,89,000
3	<u>Nashik Division</u> (HQ: <u>Nashik</u> ) 5 districts	<u>Ahmednagar, Dhule, Jalgaon, Nandurbar, Nashik</u>	4,64,89,000
4	<u>Chatrapati Sambhaji Nagar Division</u> (HQ: Chatrapati Sambhaji nagar) 8 districts	<u>Chatrapati Sambhaji Nagar, Beed, Jalna, Nanded, Latur, Parbhani, Hingoli, Dharashiv</u>	5,79,89,000
5	<u>Amravati Division</u> (HQ: <u>Amravati</u> ) 5 districts	<u>Akola, Amravati, Buldhana, Yavatmal, Washim</u>	2,29,89,000
6	<u>Nagpur Division</u> (HQ: <u>Nagpur</u> ) 6 districts	<u>Bhandara, Chandrapur, Gadchiroli, Gondia Nagpur, Wardha</u>	6,31,89,000

Total cost: Rs 23,86,84,028 (Rupees twenty-three crore eighty-six lakh eighty-four thousand twenty-eight only, inclusive of 18% GST).

The cost quoted above is based on receipt of Cadastral data from the Environment & Climate Change Department, Maharashtra in Shapefiles/GIS/Geodatabase format. In case only hard copies/pdf copies of Cadastral maps are provided to NCSCM and NCSCM is required to Geo-reference, digitize and create Cadastral data in Shapefiles/GIS/Geodatabase format, then additional cost and time will be required to geo-reference and digitize the Cadastral maps, which will be intimated separately.

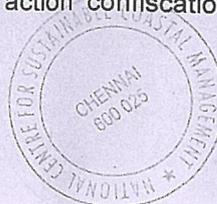
**9. Variation of cost:** Taxes are subject to change as per change in the law and the contract price will be adjusted (plus/minus) accordingly due to the impact of such changes in taxes.

#### 10. Force Majeure

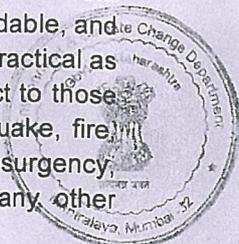
a. **Definition** For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible under the circumstances, and subject to those requirements, includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, protests, insurgency, lockouts, pandemics, lockdowns or other industrial action confiscation or any other action/inaction by Government agencies.

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Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party's Experts, Sub-consultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected to both take into account at the time of the conclusion of this Contract, and avoid or overcome in the carrying out of its obligations hereunder.

Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

b. **No Breach of Contract** The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract.

c. **Measures to be Taken** A Party affected by an event of Force Majeure shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any case not later than fourteen (14) calendar days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give written notice of the restoration of normal conditions as soon as possible. Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure. During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant, upon instructions by the Client, shall either:

- (a) Demobilize, in which case the Consultant shall be reimbursed for additional costs they reasonably and necessarily incurred, and, if required by the Client, in reactivating the Services; or
- (b) Continue with the Services to the extent reasonably possible, in which case the Consultant shall continue to be paid under the terms of this Contract and be reimbursed for the cost of actual quantity of work completed on pro-rata basis as well as additional costs reasonably and necessarily incurred.
- (c) In the case of disagreement between the Parties as to the existence or extent of Force Majeure, the matter shall be settled according to Clause 17.

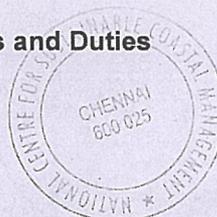
#### 11. Access to Project Site

The Client warrants that the Consultant shall have, free of charge, unimpeded access to the project site in respect of which access is required for the performance of the Services. The Client will be responsible for any damage to the project site or any property thereon resulting from such access and will indemnify the Consultant and each of the experts in respect of liability for any such damage, unless such damage is caused by the willful default or negligence of the Consultant or any Sub-consultants or the Experts of either of them.

#### 12. Change in the Applicable Law Related to Taxes and Duties

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If, after the date of this Contract, there is any change in the applicable law in the Client's country with respect to taxes and duties which increases or decreases the cost incurred by the Consultant in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Contract shall be increased or decreased accordingly by agreement between the Parties hereto, and corresponding adjustments shall be made to the ceiling amounts specified in Clause 8.

### 13. Modifications or Variations

Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any proposals for modification or variation made by the other Party.

### 14. Payment Terms:

- a) 1st Instalment/Advance Payment (50%): Rs 11,93,42,014/= (Rupees eleven crore ninety-three lakh forty-two thousand fourteen only, inclusive of 18% GST), on execution of the contract agreement and on submission of Proforma Invoice by NCSCM.
- b) 2nd Instalment (20%): Rs 4,77,36,805/= (Rupees four crore seventy-seven lakh thirty-six thousand eight hundred and five only, inclusive of 18% GST), on completion of Milestone #1.
- c) 3rd Instalment (10%): Rs 2,38,68,403/= (Rupees two crore thirty-eight lakh sixty-eight thousand four hundred and three only, inclusive of 18% GST), on completion of Milestone #2.
- d) 4th Instalment (10%): Rs 2,38,68,403/= (Rupees two crore thirty-eight lakh sixty-eight thousand four hundred and three only, inclusive of 18% GST), on completion of Milestone #3.
- e) 5th Instalment (10%): Rs 2,38,68,403/= (Rupees two crore thirty-eight lakh sixty-eight thousand four hundred and three only, inclusive of 18% GST), on completion of Milestone #4.

Total cost: Rs 23,86,84,028 (Rupees twenty-three crore eighty-six lakh eighty-four thousand twenty-eight only, inclusive of 18% GST).

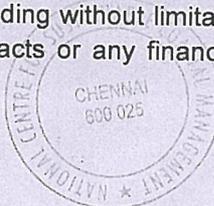
At every stage, the Consultant will raise separate invoice for an equal amount. Payment will be made after deduction of applicable statutory levy on this contract. The amount is to be remitted by Demand Draft drawn on a scheduled Bank in favour of Director, NCSCM, payable at Chennai or by RTGS / NEFT.

### 15. Limitation of Liability:

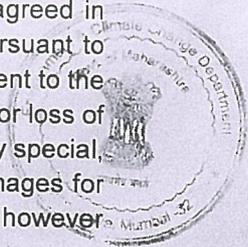
- a. The Consultant undertakes to exercise reasonable skill and care in performing the services, and shall be liable only for negligent failure in performing the Services.
- b. The Client and the Consultant agree that the total liability of the Consultant arising out of, or in connection with this agreement shall not, unless otherwise agreed in writing, exceed the amount of the Consultant's Fees actually realized pursuant to this agreement. Further, notwithstanding anything in this Contract Agreement to the contrary in no event shall the Consultant be liable for any direct damages for loss of profit, loss of production, loss of contracts or for any financial loss or for any special, indirect or consequential loss or damages including without limitation damages for loss of profit, loss of production, loss of contracts or any financial loss however

*Dr. IDK*

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caused including without limitation the fault, breach of contract, tort(including the concurrent or sole and exclusive negligence) breach of duty, strict liability or otherwise and whether a claim is based on contract , tort, at law in equity or otherwise.

#### 16. Confidentiality:

The Consultant along with its personnel, employees, management, affiliates, agents, advisors and Consultants shall not disclose any property or confidential information/data relating to Project without the prior written consent of the Client.

#### 17. Dispute Resolution:

17.1 All claims, disputes and other matters in question arising out of or related to this Contract agreement, which cannot be resolved amicably, shall be submitted to final and binding arbitration.

17.2 The arbitration will be conducted and administered in accordance with the Indian Arbitration and Conciliation Act 1996. The arbitral tribunal shall comprise of 3(three) arbitrators nominated as provided hereinafter. The consultant and the client shall each nominate one (1) arbitrator and the third arbitrator shall be selected by mutual agreement of the first two arbitrators.

17.3 All arbitration proceedings shall be conducted in the English language and the place of arbitration shall be Mumbai. The arbitral tribunal shall decide any dispute or claim referred before it, strictly in accordance with the governing law (which shall be Indian law). The arbitral award rendered by the arbitral tribunal shall be in writing and shall set forth in reasonable details the facts of the disputes and the reasons for the arbitrators' decision.

#### 18. Governing Law:

This contact agreement shall be governed by and interpreted in accordance with laws in force in India.

#### 19. General:

19.1 In the event any of the terms stated herein are contrary to any previous understanding, commitments or agreements whether written or oral between the Parties, the terms of this Contract agreement shall prevail.

19.2 Nothing in this contract agreement confers or purports to confer on any third party any benefit or any right to enforce any term of this Contract agreement.

19.3 The Consultant's relationship with the client is that of an independent service provider, and nothing in this Contract agreement is intended to, or should be construed to, create a partnership, agency, joint venture or employment relationship. The Consultant will not be entitled to any of the benefits, which the Client may make available to its employees.

#### 20 TERMS OF REFERENCE

##### 20.1 Background:

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Wetlands (Conservation and Management) Rules, 2017 were notified by the Ministry of Environment, Forest, and Climate Change (MoEF&CC) in accordance with the provisions of the Environment (Protection) Act, 1986, to serve as the legal framework for the conservation and management of wetlands in India. This is an important step towards preserving the natural integrity of the wetlands while allowing for wise and sustainable use. The Wetland Guidelines were published in the year 2020. The Environment & Climate Change Department, Government of Maharashtra have informed that there are 6 revenue divisions in the State of Maharashtra, in which the primary exercise of identification of wetlands was carried out by the District Authorities. A total of 15,918 Nos. of wetlands with area more than 2.5 Ha and 2198 Nos. of wetlands with area less than 2.5 Ha (Total 18,116) have been primarily identified. The State Government has requested NCSCM vide email dated 23/05/2023 to demarcate, conduct ground truthing and document the wetlands.

### 20.2 Scope of Work:

The present consultancy contract covers:

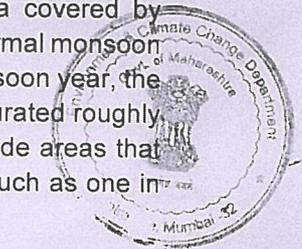
- 1) Demarcation of wetland boundaries of the identified 18,116 wetlands, supported by accurate digital maps with coordinates and validated by ground truthing.
- 2) Demarcation of the land use and land cover and zones of influence of the wetlands thereof, indicated in a digital map.
- 3) Description of the ecological character of the wetlands and preparation of Brief documents.
- 4) Assessment of tourism potential of the wetlands.
- 5) Submission of the final deliverables for each of the six Revenue divisions of Maharashtra namely, Konkan Division, Pune Division, Nashik Division, Chatrapati Sambhaji Nagar Division, Amravati Division and Nagpur Division, covering all the 36 districts of Maharashtra.

### 20.3 Approach for demarcation of the wetland boundary:

- i. Procurement of Satellite images / Topo sheets of the Survey of India, covering the wetland and the buffer areas around each wetland.
- ii. Procurement of Cadastral data and LIS covering areas of about 10 km around each wetland or covering the concerned village, in GIS/Shapefile format, from the district authorities/Divisional Commissioners/Revenue department/ Survey & Land records department, through the Environment & Climate Change Department, Government of Maharashtra.
- iii. Geo-referencing of Satellite images.
- iv. Demarcation of the wetland boundary as the boundary as the outer envelope of the maximum area under inundation, the area covered by hydrophytes, or saturation of soil near the surface during a normal monsoon year. The boundary should be such that during a normal monsoon year, the entire area is inundated for at least 15 days, or the soil is saturated roughly within one foot from the surface. It may be pertinent to exclude areas that are only intermittently inundated in the case of high floods (such as one in

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100-year floods) or extreme events (such as storm surges of extreme intensity).

- v. Preparation of draft wetland maps using a Geographical Information System (WGS84 datum and UTM projection) and adopting professional cartographic standards. Essential features to be included in the map are:
  - a) Cadastral data with survey plots and survey numbers.
  - b) Wetland boundary.
  - c) Boundary of settlements located within and around the wetland.
  - d) Connecting drainages, streams, inflows and outflows.
  - e) Main roads and railways (if any).
  - f) Major landmarks.
- vi. The scale of wetland maps recommended are:
 

Below 100 ha 1: 4000  
 Between 100 – 500 ha 1: 10,000  
 Between 500- 4000 ha 1: 25,000  
 4000 ha and above 1: 50,000

However, as per para 31 of the Wetland Guidelines-2020, “....for expedience and cost effectiveness, a lower scale may be sufficient for meeting management needs”.
- vii. Ground truthing.

#### 20.4 Approach for demarcation of the land use and land cover:

- i. Forests, Plantations, Agriculture, Roads, Railways, Settlements (Rural), Settlements (Urban), Industrial and other land use/land cover categories present in the mapping area (including wetland and catchment areas) will be mapped as per the standard (SAC) classification scheme, using Satellite images followed by field verification.
- ii. Demarcation of the land use and land cover in the wetland map.
- iii. Ground truthing.

#### 20.5 Approach for demarcation of the zone of influence

- i) For each wetland to be notified, a zone of influence is to be defined. As per the Wetland Guidelines-2020, the zone of influence of a wetland is an area, developmental activities wherein, are likely to induce adverse changes in wetland ecosystem structure and (ecological) functioning.
- ii) The boundary of the zone of influence may be defined with due consideration to local hydrology and nature of land use. For wetlands with a well-defined surface drainage system, its directly and freely draining basin should be delineated as the zone of influence. This can be done using a suitable digital elevation model data and validated using toposheets. The basin should encompass all direct inflow as well as outflow areas.
- iii) For wetlands with diffused drainage and where the slope is too gentle leading to large basin area, the zone of influence can be delineated on the basis of features that are likely to influence wetland functioning adversely. These could be based on the outer periphery of adjoining settlements, or peripheral agricultural fields that drain directly into the wetland.
- iv) Determination of the zone of influence using Satellite images / available Digital Elevation Models, Topo sheets of the Survey of India and ground truthing.

15/11/14

15/11/14



COU 2



- v) Demarcation of the zone of influence in the wetland map.

## 20.6 Approach for Ecological character description

Ecological character is "the combination of ecosystem components, processes and services that typify the wetland at a given point in time." Ecosystem components are living (biotic) and non-living (abiotic) constituents of the wetland ecosystem, which include:

- a) Geomorphic setting (landscape, catchment, river basin).
- b) Climate (precipitation, wind, temperature, evaporation, humidity).
- c) Physical setting (area, boundaries, topography, shape, bathymetry, habitat type and connectivity).
- d) Water regime (inflow, outflow, balance, surface-groundwater interactions, inundation regime, tidal regime, quality).
- e) Wetland Soil (texture, chemical and biological properties);
- f) Biota (Plant and animal communities)

## 20.7 Approach for preparation of Brief document for each wetland

For each wetland proposed to be notified, a 'Brief Document' containing the following information needs to be prepared, as per the format given at Annex 2 of the Wetland Guidelines, 2020.

- a) Demarcation of wetland boundary, supported by accurate digital maps with coordinates and validated by ground truthing.
- b) Demarcation of its zone of influence along with land use and land cover thereof indicated in a digital map.
- c) Description of the wetland Ecological character.
- d) Incorporation of other information provided by the Environment & Climate Change Department, Maharashtra, as per Wetland Guidelines, 2020.

## 20.8 Approach to Assessment of tourism potential of Wetlands

- i. Assessment of tourism potential will be based on various parameters/indicators and variables:
  - Physical: Geographical terrain, accessibility, regional connectivity, accommodation and food facilities, water quality, other infrastructure facilities, existing tourism facilities.
  - Social: local culture & behaviour, safety and security, compatibility, community willingness, participation & contribution, etc.
  - Environment: Ecologically Sensitive, Pollution, Solid Waste Management, anthropogenic threat etc.
- ii. Assessment of Parameters/Indicators based on the following values:
  - Cultural values:
    - Importance of wetland for local people in their socio-economic setting along with its Heritage value, if any.
    - Necessity and significance of tourism in the area, possible threat to local culture, scope for local tourist circuits covering nearby cultural sites, food tourism, Fair tourism, etc.
  - Physical values:
    - Accessibility of the area, Infrastructure available, potential threats to visitors, aesthetical appeal.
  - Product Value:

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- Market appeal, advertisements, proximity to other tourist sites and potential of the site to engage tourist for longer duration.
  - Experiential values:
    - Worthiness and potential to offer good experience to tourist, capability to provide engaging, participatory and entertaining experience, meeting tourists' expectations.
  - Environmental:
    - Sustainable tourism and destination development, possible negative effects of tourism on the environment, habitat loss, pollution, pressure on flora & fauna, health hazards, etc.
    - Approximate carrying capacity of the wetland for sustainable tourism and mitigation measures for over tourism.
- iii. Tourism Policy of the State of Maharashtra.
- iv. Multi-criteria analysis for site suitability.
- v. Report preparation.

### 20.9 Study Area:

The Study area will be the wetlands and the areas around the 15,918 + 2198 wetlands of Maharashtra, in the 36 districts, including the water bodies and buffer areas such as the zones of influence and land use land cover areas.

As per clause 3 (Applicability of rules) of the Wetlands Conservation and Management Rules, 2017, the wetlands falling in areas covered under the Indian Forest Act, 1927, the Wild Life (Protection) Act, 1972, the Forest (Conservation) Act, 1980, the State Forest Acts, and the Coastal Regulation Zone Notification, 2011/2019 as amended from time to time, are not covered under this proposal/Contract Agreement.

### 20.10 Implementation Arrangements:

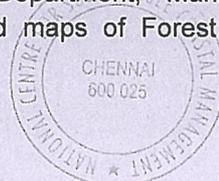
The scope of the work and related in tasks will be implemented by NCSCM.

### 20.11 Obligations of the Client / Environment & Climate Change Department, Maharashtra

- a) Environment & Climate Change Department, Maharashtra shall provide Cadastral data and LIS covering areas of about 10 km around each wetland or covering the concerned village, in GIS/Shapefile format and assist and facilitate NCSCM in collection of other digital data available with the Divisional Commissioners/Revenue department/ Survey & Land records department/ MRSAC/Environment & Climate Change Department, Maharashtra.
- b) Environment & Climate Change Department, Maharashtra shall permit NCSCM to undertake survey for collection of primary data (where essential) and facilitate NCSCM in providing secondary environmental and ecological data pertaining to all wetlands such as Geomorphic setting (landscape, catchment, river basin), Climate (precipitation, wind, temperature, evaporation, humidity), Physical setting (area, boundaries, topography, shape, bathymetry, habitat type and connectivity), hydrology (inflow, outflow, balance, surface-groundwater interactions, inundation regime, tidal regime, quality), Wetland Soil (texture, chemical and biological properties), Biota (Plant and animal species), etc, available with the Government departments/ agencies of the Government of Maharashtra.
- c) Environment & Climate Change Department, Maharashtra shall provide Shapefiles, Notifications and certified maps of Forest areas in Maharashtra,

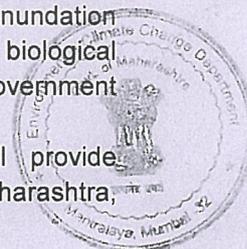
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notified under the Indian Forest Act, 1927, the Wild Life (Protection) Act, 1972, the Forest (Conservation) Act, 1980 and the State Forest Acts, to exclude such Forest areas as well as CRZ areas as per clause 3 (Applicability of rules) of the Wetlands Conservation and Management Rules, 2017.

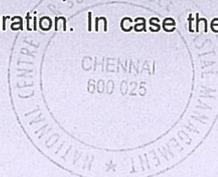
- d) Environment & Climate Change Department, Maharashtra shall provide Stakeholder data required for assessment of tourism potential of Wetlands, which are available with the Tourism Department and other Government departments/agencies of the Government of Maharashtra.
- e) Other Stakeholder data available with Environment & Climate Change Department.
- f) No provision has been made in this proposal towards the cost of such Stakeholder data (Cadastral data and LIS data in GIS/Shapefile format, secondary ecological data and other digital data already available with the Government departments of the State of Maharashtra), since Environment & Climate Change Department, Maharashtra will have free access to such data available with the Government departments of the State of Maharashtra and the same needs to be shared with NCSCM for wetland mapping.
- g) Account of pre-existing rights and privileges and determining 'wise use' of the wetlands.
- h) Developing a list of activities to be regulated and permitted.
- i) Notifying the wetlands under the Wetland Rules-2017.
- j) Developing an Integrated Management Plan.
- k) Constitution and operational matters of the Wetlands Authorities.
- l) Overlapping provisions.
- m) List of site-specific activities, to be permitted within the wetland and its zone of influence
- n) List of site-specific activities, to be regulated within the wetland and its zone of influence
- o) Modalities for enforcement of regulation.
- p) The Environment & Climate Change department, Maharashtra shall convene Stakeholder meetings between the district authorities/Divisional Commissioners/ Revenue department/ Survey & Land records department/MRSAC and other concerned line departments of Govt. of Maharashtra and NCSCM, for the collection of various Stakeholder data such as Cadastral data and LIS covering areas of about 10 km around each wetland or covering the concerned village, in GIS/Shapefile format, other digital data available with the Divisional Commissioners/ Revenue department/ Survey & Land records department/MRSAC, Maharashtra and Stakeholder data required for assessment of tourism potential of Wetlands. In addition, NCSCM will collect field data required for the purpose.
- q) The Environment & Climate Change department, Maharashtra shall facilitate easy access to the wetland sites for NCSCM Scientists/Staff, for ground truthing, by way of liaising with the Revenue/Police authorities of the districts and ensuring security for the NCSCM Scientists/Staff, as required.
- r) In case only hard copies/pdf copies of Cadastral maps are provided to NCSCM and NCSCM is required to Geo-reference, digitize and create Cadastral data in Shapefiles/ GIS/Geodatabase format, then additional cost and time will be required to geo-reference and digitize the Cadastral maps, which will be intimated separately.

#### 20.12 Period of Consultancy:

- a) The total period of consultancy shall be 24 months. Delay in payment or receipt of Stakeholder data or review of draft maps/documents by the Client will correspondingly increase the project duration. In case the execution of contract

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involves more time on account of unforeseen conditions, a request in this regard will be made by the Consultant to extend the contract period.

- b) **Start date:** The start date will be the date on which the advance payment will be made by the client as stipulated in clause 14 a) of this agreement.
- c) **Milestones / Priority of completion:**

**Milestone #1:**

Preparation of wetland maps on 1:4000/1:10,000 scale (as per the Wetlands Conservation and Management Rules, 2017/Guidelines-2020), with the boundaries demarcated for the wetlands of three Revenue Divisions (Konkan, Pune & Nashik Divisions) of Maharashtra and submission of pdf maps to the Client: 10 months from start date.

**Milestone #2:**

Preparation of wetland maps on 1:4000/1:10,000 scale (as per the Wetlands Conservation and Management Rules, 2017/Guidelines-2020), with the boundaries demarcated for the wetlands of the remaining three Revenue Divisions (Chatrapati Sambhaji Nagar, Amravati & Nagpur Divisions) of Maharashtra and submission of pdf maps to the Client: 15 months from start date.

**Milestone #3:**

Demarcation of the Land use, Land cover and Zones of Influence for all the 18,116 wetlands and submission of the updated / revised pdf maps to the Client: 18 months from start date.

**Milestone #4:**

Incorporation of the ecological character of the wetlands and preparation of brief documents and assessment of tourism potential for each of the 18,116 wetlands and submission of the updated / revised pdf maps and pdf documents to the Client: 24 months from start date.

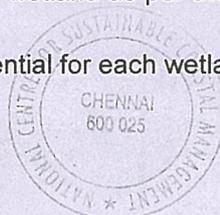
**20.13 Budget / Cost Estimates:**

The fixed fee of the Consultancy is Rs 23,86,84,028 (Rupees twenty-three crore eighty-six lakh eighty-four thousand twenty-eight only, inclusive of 18% GST). Tax Invoice with Bank details will be sent to the client on receipt of work order.

The cost quoted above is based on receipt of Cadastral data from the Environment & Climate Change Department, Maharashtra in Shapefiles/GIS/Geodatabase format. In case only hard copies/pdf copies of Cadastral maps are provided to NCSCM and NCSCM is required to Geo-reference, digitize and create Cadastral data in Shapefiles/GIS/Geodatabase format, then additional cost and time will be required to geo-reference and digitize the Cadastral maps, which will be intimated separately.

**20.14 Deliverables for each of the six Revenue Divisions**

- i) Wetland maps on 1:4,000/1:10,000 scale in pdf format, incorporating the Cadastral data, survey plots, wetland boundary, drainage, land use, land cover and the zone of influence and other features, as per the Wetland Guidelines-2020.
- ii) 'Brief Document' in pdf format for each wetland as per the format given at Annex 2 of the Wetland Guidelines-2020.
- iii) Reports on assessment of tourism potential for each wetland.



list

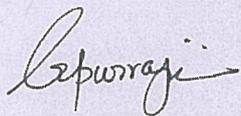
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20.15 Guidelines

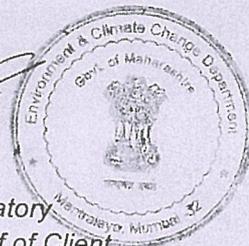
The "Guidelines for implementing Wetlands (Conservation and Management) Rules, 2017" published by the Ministry of Environment, Forest and Climate Change, Government of India in the year 2020, will be followed for preparation of the Wetland maps & documents.



**Dr Purvaja Ramachandran**  
Director, NCSCM  
Authorised Signatory  
For and on behalf of Consultant



Authorised Signatory  
For and on behalf of Client



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