

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,

EASTERN ZONE BENCH, KOLKATA

Original Application No.71/2024/EZ

IN THE MATTER OF:

Wildlife Society of Orissa

Applicant(s)

Versus

State of Odisha & Ors.

Respondent(s)

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16 AUG 2024

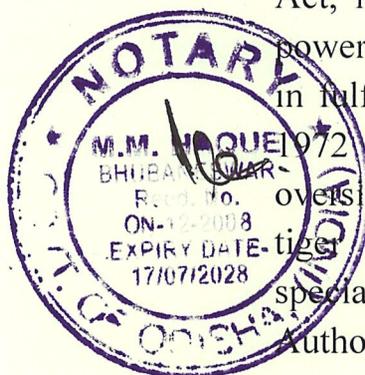
M.M. HAQUE
NOTARY PUBLIC
Bhubaneswar
Regd. No. ON-12/2008

**COMMON REPLY AFFIDAVIT ON BEHALF OF THE RESPONDENT
NO 8 & 9**

MOST RESPECTFULLY SHEWETH: -

I, Shri M. Rajeshwar Prasad, S/o M. Bhaskar Rao, aged about 57 years, working as Scientist 'C' at Regional Office, Ministry of Environment, Forests and Climate Change, Plot no - A/3, Near Rail Vihar, Chandrasekharpur, Bhubaneswar do hereby solemnly affirm and state as under:

1. That I am presently working as , Ministry of Environment, Forest and Climate Change, Government of India, and am well conversant with the facts and circumstances of the present case from the records maintained with the Respondent Ministry and | am duly authorized and competent to swear the present Affidavit on behalf of the Respondents Nos. 8 and 9.
2. That it is submitted that the National Tiger Conservation Authority (NTCA) is a statutory body under the Ministry of Environment, Forest and Climate Change, constituted under enabling provisions of the Wildlife (Protection) Act, 1972, as amended in 2006, for strengthening tiger conservation, as per power and functions assigned to it under the said Act. It has been successful in fulfilling its mandate within the ambit of the Wildlife (Protection) Act, 1972 for strengthening tiger conservation in the country by retaining an oversight through advisories/normative guidelines, based on appraisal of tiger status, ongoing conservation initiatives and recommendations of specially constituted committees. As such, the National Tiger Conservation Authority has an overarching role in the matter of tiger conservation.
3. That it is pertinent to mention that the State Government is mandated with the day-to-day administration of field formations within the State as per the Wildlife (Protection) Act, 1972. The National Tiger Conservation Authority assists the tiger range States by hand-holding and providing necessary funding support, for protection, strengthening of anti-poaching activities including a special strategy for monsoon patrolling, for deployment of anti-



M. Rajeshwar Prasad

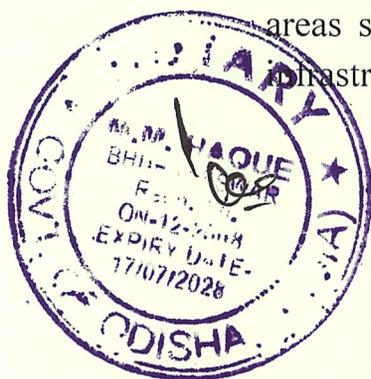
poaching squads involving ex-army personnel and more home guards, apart from workforce comprising of local people, in addition to the strengthening of communication and wireless facilities on a site-specific basis.

4. That it is submitted that the Wildlife (Protection) Act, 1972 as amended in 2006, under Section 38 V made it mandatory that every Tiger Reserve should be managed in accordance with a site-specific scientific management plan i.e. Tiger Conservation Plan which is the road map for managing a tiger reserve. The said plan includes the concept of core-buffer zonation, prescribed interventions for protection, habitat improvement, field data collection relating to changes in the composition of flora and fauna, animal estimation and other aspects. It is mandatory for the State Government to prepare a 'Tiger Conservation Plan' for the proper management of a tiger reserve, which will also include a staff development and deployment plan.
5. That it is submitted that the National Tiger Conservation Authority has issued Notifications/Guidelines from time to time and as and when required. It is further submitted that the State Government is mandated with the day-to-day administration of field formations within the State as per the Wildlife (Protection) Act, 1972 and this answering respondent issues Advisories /Guidelines to be implemented by State Governments.
6. That it is submitted that this answering respondent has issued guidelines for tourism activities in Tiger Reserves. The National Tiger Conservation Authority (Normative Standards for Tourism Activities and Project Tiger) Guidelines, 2012 under Section 38 O (1) (c) of the Wildlife (protection) Act, 1972 issued in 2012 provide the specific terms and conditions with respect to tourism in Tiger Reserves. As per the said guidelines 2012, no new tourism infrastructure is permitted in core areas. The relevant part of the Guidelines of 2012 is reproduced as under

“..... However, no new tourism infrastructure should be permitted in such core and critical tiger habitats”

7. That it is submitted that the term 'tourism' in the context of Tiger Reserves is contemplated as "ecotourism", which needs to be ecologically sustainable nature-tourism. It is distinct from 'mass tourism' having sustainable, equitable, community based effort for improving the living standards of local, host communities living on the fringes of tiger reserves. Ecotourism is fostered under 'Project Tiger' to benefit the host community in accordance with tiger reserve specific Tourism 'Plan forming' part of the Tiger Conservation Plan, subject to regulation as per carrying capacity, with a focus on buffer areas. Since, tourism has been happening in areas of national parks and wildlife sanctuaries which are now designated as core or critical tiger habitat, regulated low impact tourism (visitation) is allowed in such areas subject to site specific carrying capacity. However, no new tourism infrastructure should be permitted in such core and critical tiger habitats.

M. Rajeshwan Rashed.



The opportunities for stakeholders would include management of low- cost accommodation for tourists, providing guide services, providing sale outlets, managing excursions, organizing ethnic dances and the like.

8. It is submitted that the Chief Wildlife Warden of the State shall ensure that each tiger reserve prepares a tourism plan, as part of the Tiger Conservation Plan vis-a-vis the Guidelines of the National Tiger Conservation Authority. This site-specific tourism plan forming part of the Tiger Conservation Plan shall be approved as per the provisions of the Wildlife (Protection) Act, 1972. Prior to this approval, no new infrastructure for tourism (except for minor alterations in existing modest home stays) shall be allowed to be developed in and around tiger reserves.

Further, the tourism plan shall, inter alia, include a monitoring mechanism, estimated carrying capacity, which may be modified on a site-specific basis for tourism zones and demarcation of the area open to tourism on the basis of objective and scientific criteria.

9. It is submitted that tourism plan should be consistent with the State Tourism and Ecotourism Strategy and shall also be approved by the LAC and the State Government. The Plan Shall

(i) identify (using landscape ecological principles and tools) and monitor the ecologically sensitive areas surrounding tiger reserves, in order to ensure the ecological integrity of corridor and buffer areas. and prevent corridor encroachment.

(ii) assess carrying capacity of the tiger reserve, at three levels: physical real and effective or permissible carrying capacity of visitors and vehicles as well as residential facilities in and around the tiger reserve. Carrying capacity needs to be computed on a site-specific basis

for tourist visitation involving elephant, boat and foot travel. Explore the possibility of technological tools (Global Positioning System, Wireless, etc.) to manage traffic and spacing of tourist vehicles within tiger reserves;

(iii) set a ceiling level on number of visitors allowed to enter a tiger reserve at any given time, based -on the carrying capacity of the habitat;

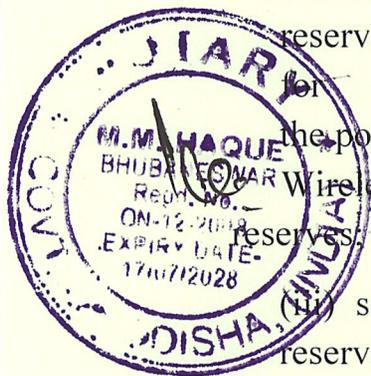
(iv) indicate the area open to tourism in the reserves to be designated as 'eco-tourism zone';

(v) ensure visitor entry into tiger reserves through vehicles registered with the tiger reserve management, accompanied by an authorized guide

(vi) develop a participatory community-based tourism strategy, in collaboration with local communities, to ensure long-term local community benefit-sharing, and promotion of activities run by local communities.

(vii) develop codes and standards for privately-operated tourist facilities located in the vicinity of core or critical tiger habitats, eco- sensitive zones

U. Rajeshwar Prasad.



or buffer areas, to inter alia, ensure benefit to local communities;

(viii) develop monitoring mechanisms to assess impact of tourism activities on the wildlife and its habitat so as to minimize them;

(ix) develop generic guidelines for environmentally acceptable and culturally appropriate practices, and for all new constructions;

(x) set up lists of Do's and Don'ts for visitors;

(xi) provide for subsidized visits of students while fostering educational extension activities.

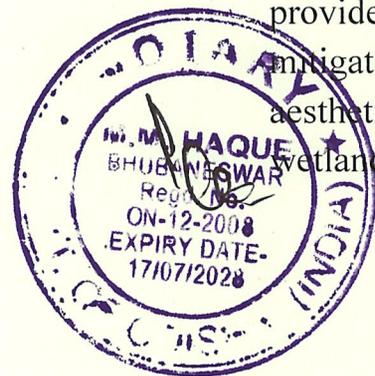
10. That it is submitted that the tourism plan shall, inter alia, include a monitoring mechanism, estimated carrying capacity, which may be modified on a site-specific basis), tourism zones and demarcation of the area open to tourism based on objective and scientific criteria. It is pertinent to mention herein that "any core area in a tiger reserve from which relocation has been carried out, shall not be used for tourism infrastructure".

11. That it is submitted that permanent tourist facilities located inside core or critical tiger habitat, which are being used for wildlife tourism shall be phased out on a time frame decided by the Local Advisory Committee (LAC). Strict plans ensuring low impact adherence by these facilities shall be developed and approved by the LAC for implementation. There shall be no privately run facilities such as catering, etc., inside the core or critical tiger habitat. Such existing facilities if any, are to be run by the Tiger Conservation Foundations.

12. That it is submitted that this respondent upon receiving a complaint from the Applicant, vide letter no. 1-11/2008-NTCA (Vol. 1) dated 30.10.2019 i.e. annexure 8 of the O. A., had requested the Chief Wildlife Warden Odisha to furnish the factual status regarding eco-tourism in Satkosia Tiger Reserve. Vide O. M. No. 1-11/2008-NTCA dated 14.12.2020, this Answering Respondent had sent a reminder to the Chief Wildlife Warden Odisha and requested for status report, however, no response was received from the State Government. **A copy of OM dated 14.12.2020 is annexed herewith as Annexure - I.**

Therefore, the Applicant cannot implicate that there is inaction on the part of this Answering Respondent, since the State Government is mandated with the day-to-day administration of field formations within the State as per the Wildlife (Protection) Act, 1972.

13. That it is submitted that wetlands are a vital part of the hydrological cycle. They are highly productive ecosystems that support rich biodiversity and provide a wide range of ecosystem services such as water storage, flood mitigation, erosion control, aquifer recharge, microclimate regulation, aesthetic enhancement of landscapes, etc. The depletion and destruction of wetlands is a matter of serious concern. For effective conservation and



U. Rajeshwan Prasad

management of wetlands in the country, the Ministry of Environment, Forest & Climate Change (MoEF&CC), has notified the Wetlands (Conservation and Management) Rules, 2017. **A copy of the Wetlands (Conservation and Management) Rules, 2017 is annexed herewith as Annexure II.**

14. That it is submitted that according to Rule 3 of the aforesaid Wetlands Rules, 2017, these rules apply to:

(a) wetlands categorized as 'wetlands of international importance' under the Ramsar Convention; and

(b) wetlands as notified by the Central Government, State Government and Union Territory Administration.

It is submitted that the Satkosia Gorge Sanctuary, being a Tiger reserve is dealt under the provisions of Section 38V of the Wild life (Protection) Act, 1972. Therefore, in view of Rule 3 (Proviso) of Wetlands Rules, 2017, these Rules are not applicable to the Satkosia Gorge Sanctuary wetland as it falls under the purview of Wild Life (Protection) Act, 1972.

The Satkosia Gorge Sanctuary, a tiger reserve, was designated as a Ramsar Site on 12.10.2021 vide site no. 2470 and falls under the administrative control of DFO, Satkosia (WL) Division, Angul, Government of Orissa.

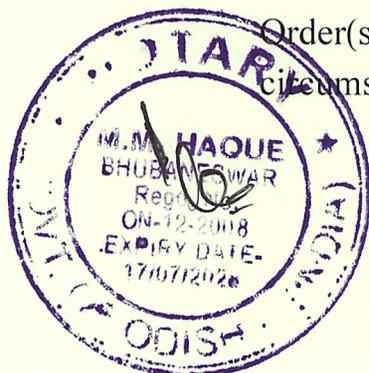
A copy of Ramsar Information System (RIS) of Satkosia Gorge is Annexed herewith as Annexure -III.

15. That it is submitted that in view of the above submissions, the present application is liable to dismissal with heavy cost, by this Hon'ble Court as the same is without any merit of law. Further, the Petitioner has filed the present petition without following due procedure of law.

16. That it is submitted that the Respondent No. 9 i.e. Deputy Director General, Regional Office of MOEF&CC, Bhubaneswar could not file a reply as per the direction of this Hon'ble Tribunal due to a communication gap. Therefore, the non-filing of a reply is neither intentional nor deliberate. Further, this answering Respondent holds this Hon'ble Tribunal in the highest esteem and has the deepest respect for the Tribunal and the orders passed by them. This answering Respondent had no intention of willfully or intentionally disobeying the orders passed by this Hon'ble Tribunal. However, in the event of this Hon'ble Tribunal arrives at the conclusion that the answering Respondent has not complied with its direction, this answering Respondent tenders its unqualified apology to the Hon'ble Tribunal, which may kindly be accepted and exempt Respondent No. 9 from personal appearance.

17. That it is submitted that the present affidavit may kindly be taken on record and into consideration and the Hon'ble Tribunal may pass appropriate Order(s), direction(s), as deemed fit and proper under the facts and circumstances of the present case.

M. Rajeshwan R. Saha.



M.M. HAQUE
NOTARY, BHUBANESWAR
Regd. No. - ON-12/2008

18. That other/ancillary issues raised in the petition under reply do not pertain to the answering respondent. The answering Respondent craves leave to make additional submissions, if required, during the course of the proceedings.

M. Rajeshwar Prasad.
Deponent

M.R. Prasad
SCIENTIST 'C'
Govt. of India
Ministry of Environment, Forest & Climate Change
Integrated Regional Office
Bhubaneswar

VERIFICATION

I, the above named deponent do hereby verify that the contents of the above affidavit are true and correct to my knowledge derived from the records of the case and believed to be true. No part of it is false and nothing material has been concealed there from.

Verified at Bhubaneswar on this the 16th day of August, 2024



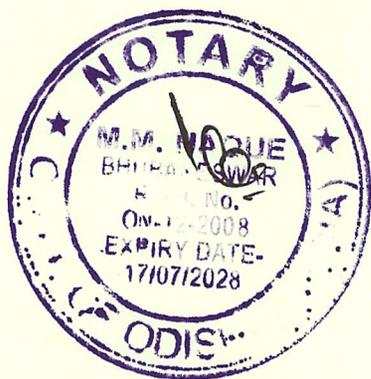
M. Rajeshwar Prasad.
DEPONENT

M.R. Prasad
SCIENTIST 'C'
Govt. of India
Ministry of Environment, Forest & Climate Change
Integrated Regional Office
Bhubaneswar

Identified by :

[Signature]
16/08/2024

Advocate Bhubaneswar above said deponent being identified by Smt./Sh/Miss...
..... M. M. Haque Advocate, BBSR, appears before me
on dt. 16.08.2024 at about 4.58 A.M.
P.M. & stated on oath that the contents of this affidavit
is true to the best of his/her knowledge and belief



[Signature]
16/08/2024
M. M. HAQUE
NOTARY, BHUBANESWAR
Regd. No. - ON-12/2008

भारत सरकार

Government of India

पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय

Ministry of Environment, Forest & Climate Change

राष्ट्रीय व्याघ्र संरक्षण प्राधिकरणभारत सरकार

National Tiger Conservation Authority

F. No. 1-11/2008-NTCA

New Delhi, the December 14, 2020

To,

मुख्य वन्यजीव प्रतिपालक /The Chief Wildlife Warden,
उड़ीसा सरकार /Government of Odisha,

Sub: Adverse impact of tourism in Satkosia Tiger Reserve-reg.

Ref: (i) Email dated 23.11.2020 from Mr. Biswajit Mohanty.

(ii) This Authority's letter no 1-11/2008-NTCA (Vol.I) dated 30.10.2019.

Sir,

Reference is invited to the subject and correspondence cited above. In this regard, the factual status report from your end is still awaited. It is requested to provide the same by 18.12.2020 for further necessary action at this end.

Encl: As above.

भवदीय/Yours faithfully,

Sf. 14/12/20
सुरेन्द्र मेहरा/Surender Mehra

उप वन महानिरीक्षक (रा.व्या.सं.प्रा.)/Dy. IGF (NTCA)

Tel. No. +91 11 2436 7837-39

E-mail: dig1-ntca@nic.in

Fax: +91 11 2436 7836

F. No. 1-11/2008-NTCA

Copy to:

1. The Field Director, Satkosia Tiger Reserve, Odisha.
2. Mr. Biswajit Mohanty, Ph.D, Secretary, Wildlife Society of Odisha.
3. The AIGF, Regional Office, NTCA, Nagpur.

Sf. 14/12/20
सुरेन्द्र मेहरा/Surender Mehra

उप वन महानिरीक्षक (रा.व्या.सं.प्रा.)/Dy. IGF (NTCA)



भारत का राजपत्र The Gazette of India

असाधारण

EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (i)

PART II—Section 3—Sub-section (i)

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पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 26 सितम्बर, 2017

सा.का.नि. 1203(अ).—आर्द्रभूमि, जो जलीय चक्र का अत्यावश्यक भाग है, उच्चतर उत्पादक पारिस्थितिकी प्रणालियां हैं जो समृद्ध जैवविविधता का आधार हैं तथा हमारी समृद्ध सांस्कृतिक विरासत का भाग होने के कारण कई महत्वपूर्ण मनोरंजक, सामाजिक और सांस्कृतिक कार्यकलापों का समर्थन करते हुए जल भंडारण, जल शुद्धिकरण, बाढ़ अल्पीकरण, अपरदन नियंत्रण, भूजल का पुनःभरण, सूक्ष्म जलवायु का विनियमन, दृश्यभूमि के सौन्दर्य बौध को बढ़ाना जैसी पारिस्थितिकी प्रणाली सेवाओं की व्यापक रेंज प्रदान करता है।

और, अधिकतर आर्द्रभूमि, अपवहन और भरणस्थान, प्रदूषण (घरेलू और औद्योगिक बहिःस्राव का निस्सारण, ठोस अपशिष्टों का निपटान), जल विज्ञान संबंधी परिवर्तन (जल अपनयन और अंतर्वाह तथा बहिवाह परिवर्तन) के माध्यम से भूमि सुधार और अवक्रमण के कारण गंभीर रूप से संकटस्थ स्थिति में हैं और उनके प्राकृतिक संसाधनों के अत्यधिक दोहन के परिणामस्वरूप जैव विविधता की हानि और आर्द्रभूमि द्वारा उपलब्ध पारिस्थितिकी प्रणाली सेवाओं में विघटन हुआ है;

और, संविधान के अनुच्छेद 51क के खंड (छ) में यह बताया गया है कि भारत के प्रत्येक नागरिक का यह कर्तव्य होगा कि वह प्राकृतिक पर्यावरण की, जिसके अंतर्गत वन, झील, नदी और वन्यजीव हैं, रक्षा करे और उसका संवर्धन करे तथा प्राणिमात्र के प्रति दयाभाव रखे;

और पर्यावरण (संरक्षण) अधिनियम, 1986 पर्यावरण को संरक्षण प्रदान करने तथा उसमें सुधार लाने के लिए एक व्यापक विधान है, जिसमें अन्य बातों के साथ-साथ आर्द्रभूमि और उससे जुड़े मामले भी सम्मिलित हैं।

और, राष्ट्रीय पर्यावरण नीति, 2006 में आर्द्रभूमि द्वारा उपलब्ध पारिस्थितिकी सेवा को मान्यता दी गई है और सभी आर्द्रभूमि के लिए एक विनियामक तंत्र स्थापित करने की आवश्यकता पर बल दिया गया है, जिससे उनकी ऐसी पारिस्थितिकी स्थिति को बनाए रखा जा सके, जो अंततोगत्वा उनके एकीकृत प्रबंध में सहायक हो;

और, भारत, आर्द्रभूमि संबंधी रामसर अभिसमय का हस्ताक्षरकर्ता है, तथा अपने अधिकार क्षेत्र के भीतर सभी आर्द्रभूमियों के संरक्षण और बुद्धिमतापूर्ण उपयोग के लिए प्रतिबद्ध है।

और केन्द्रीय सरकार ने तारीख 4 दिसंबर, 2010 की सं.सा.का.नि. 951(अ) द्वारा आर्द्रभूमि (संरक्षण और प्रबंधन) नियम, 2010, प्रकाशित किए हैं;

और आर्द्रभूमि का संरक्षण और युक्तियुक्त उपयोग राज्य और राष्ट्रीय अर्थव्यवस्था को सारवान प्रत्यक्ष और अप्रत्यक्ष आर्थिक लाभ प्रदान कर सकता है तथा केन्द्रीय सरकार विभिन्न क्षेत्रों के लिए विकास आयोजना तथा निर्णय लेने की प्रक्रिया में आर्द्रभूमि जैवविविधता तथा पारिप्रणाली सेवाओं की पूर्ण शृंखला को मुख्य धारा में लाने के लिए प्रतिबद्ध है;

और, राज्य सरकारों और संघ राज्य क्षेत्र प्रशासनों को इसी प्रकार से अपने विकासात्मक कार्यक्रमों तथा आर्थिक कल्याण में आर्द्रभूमि पारिस्थितिकी प्रणाली सेवाओं और जैव विविधता संबंधी मूल्यों पर विचार करने और इस बात को संज्ञान में लेने की आवश्यकता है कि आर्द्रभूमि पारिस्थितिकी प्रणाली के दो मुख्य पारिस्थितिकी घटक भूमि और जल, भारतीय संविधान के अनुसार राज्य के विषय के रूप में सूचीबद्ध हैं;

और केन्द्रीय सरकार ने देश में आर्द्रभूमियों के प्रभावी संरक्षण और प्रबंधन के लिए आर्द्रभूमि (संरक्षण और प्रबंधन) नियम, 2010 को अधिकांत करना आवश्यक समझा है;

और, अब, केन्द्रीय सरकार ने पर्यावरण (संरक्षण) अधिनियम, 1986 की उपधारा (1) और उपधारा (2) के खंड (v) और धारा 3 की उपधारा (3) के साथ पठित धारा 25 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए जनसाधारण की जानकारी के लिए, जिनके उससे प्रभावित होने की संभावना है, सा.का.नि. 385 (अ) तारीख 31 मार्च, 2016 द्वारा आर्द्रभूमि (संरक्षण और प्रबंधन) नियम, 2016 का प्रारूप प्रकाशित किया था; और यह सूचना दी गई थी कि केन्द्रीय सरकार द्वारा उक्त प्रारूप नियमों पर, उस तारीख से, जिसको इस राजपत्र में यथाप्रकाशित इस अधिसूचना की प्रतियां जनता को उपलब्ध करा दी जाती है, साठ दिन की अवधि की समाप्ति के पश्चात् विचार किया जाएगा;

और, केन्द्रीय सरकार को प्रारूप आर्द्रभूमि (संरक्षण और प्रबंधन) नियम, 2016 के संबंध में राज्य सरकारों, संघ राज्य क्षेत्रों राज्यों और इसके संगठनों, व्यक्तियों और सिविल समाज संगठनों से सुझाव तथा आक्षेप प्राप्त हुए हैं;

और, ऐसे आक्षेपों और सुझावों पर, जो ऊपर उल्लिखित प्रारूप नियमों के संबंध में प्राप्त हुए हैं, पर राज्य सरकारों और राज्य क्षेत्र प्रशासनों के परामर्श से केन्द्रीय सरकार द्वारा सम्यक रूप से विचार किया गया;

अतः अब, केन्द्रीय सरकार, पर्यावरण (संरक्षण) अधिनियम, 1986 की धारा 3 की उप-धारा (1) और उप-धारा (2) के खंड (v) और उप-धारा (3) के साथ पठित धारा 25 और धारा 23 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए तथा आर्द्रभूमि (संरक्षण और प्रबंधन) नियम, 2010 को उन बातों के सिवाय अधिकांत करते हुए, जिन्हें ऐसे अधिक्रमण से पूर्व किया गया था या करने का लोप किया गया था, आर्द्रभूमि के संरक्षण और प्रबंधन के लिए निम्नलिखित नियम बनाती है, अर्थात्:—

1. संक्षिप्त नाम और प्रारंभ.—

- (1) इन नियमों का संक्षिप्त नाम आर्द्रभूमि (संरक्षण और प्रबंधन) नियम, 2017 है।
- (2) ये राजपत्र में प्रकाशन की तारीख को प्रवृत्त होंगे।

2. परिभाषाएं.—

- (1) इन नियमों में, जब तक कि संदर्भ से अन्यथा अपेक्षित न हो,—
 - (क) "अधिनियम" से पर्यावरण (संरक्षण) अधिनियम, 1986 अभिप्रेत है;
 - (ख) "प्राधिकरण" से यथास्थिति राज्य आर्द्रभूमि प्राधिकरण या संघ राज्य क्षेत्र आर्द्रभूमि प्राधिकरण, अभिप्रेत है;
 - (ग) "समिति" से नियम 6 में निर्दिष्ट राष्ट्रीय आर्द्रभूमि समिति अभिप्रेत है;
 - (घ) "पारिस्थितिकीय गुण" से पारिस्थितिकी प्रणाली घटकों, प्रक्रियाओं तथा सेवाओं का ऐसा संकलन अभिप्रेत है जो आर्द्रभूमियों की विशिष्टता चित्रित करता है;
 - (ङ) "एकीकृत प्रबंधन योजना" से कोई ऐसा दस्तावेज अभिप्रेत है जिसमें आर्द्रभूमि का युक्तियुक्त उपयोग के लिए कार्यनीतियों और कार्रवाइयों का वर्णन किया गया है तथा इस योजना में स्थल प्रबंधन के उद्देश्य; उद्देश्यों को प्राप्त करने के लिए अपेक्षित प्रबंधन कार्रवाइयां, वे घटक, जो विभिन्न स्थल विशिष्टताओं को प्रभावित करते हैं, या प्रभावित कर सकते हैं; पारिस्थितिकीय स्वरूप में परिवर्तनों का पता लगाने के लिए और प्रबंधन की प्रभाविता के मापन के लिए अपेक्षित मानीटरी और कार्यान्वयन प्रबंधन कार्यान्वयन के लिए संसाधन सम्मिलित हैं;
 - (च) "रामसर अभिसमय" से 1971 में ईरान के रामसर में हस्ताक्षरित आर्द्रभूमि संबंधी अभिसमय अभिप्रेत है;
 - (छ) "आर्द्रभूमि से कोई क्षेत्र या कच्छ पंक, पीटभूमि या जल; प्राकृतिक या कृत्रिम, स्थायी या अस्थायी, जल जो ठहरा है या बहते, ताजे, खारे या लवणीय, जिसके अंतर्गत समुद्री जल का जिसकी गहराई ज्वार की स्थिति छह मीटर से अधिक की न हो अभिप्रेत है, परंतु इसमें नदी जल मार्ग, धान के खेत, पेयजल प्रयोजनार्थ विशिष्ट रूप से मानव निर्मित जल निकाय/जलाशय, मत्स्यपालन, नमक उत्पादन और सिंचाई प्रयोजनों के लिए विशिष्ट रूप से निर्मित संरचनाएं सम्मिलित नहीं हैं;

- (ज) "आर्द्रभूमि परिसर" से दो या दो से अधिक पारिस्थितिकीय और जलीय समीपस्थ आर्द्रभूमियां तथा जिनमें उनसे जुड़े नाले/वाहिकाएं सम्मिलित हो सकती हैं, अभिप्रेत हैं;
- (झ) "आर्द्रभूमियों का युक्तियुक्त उपयोग" से सतत विकास के संदर्भ में पारिप्रणाली दृष्टिकोण के माध्यम से प्राप्त पारिस्थितिकीय गुणों का रख-रखाव अभिप्रेत है;
- (ञ) "प्रभावित जोन" से आर्द्रभूमि या आर्द्रभूमि परिसर के आवाह-क्षेत्र का वह भाग जिस पर विकासात्मक कार्यकलापों के कारण पारिप्रणाली ढांचे, तथा पारिप्रणाली सेवाओं में प्रतिकूल परिवर्तन पड़ता है।
- (2) उन सभी शब्दों और पदों के, जो इन नियमों में प्रयुक्त हैं और परिभाषित नहीं हैं, किंतु अधिनियम में परिभाषित हैं, वही अर्थ होंगे जो उनके उस अधिनियम में हैं।

3. नियमों का लागू होना.—ये नियम निम्नलिखित आर्द्रभूमियों या आर्द्रभूमि परिसरों को लागू होंगे, अर्थात्:-

- (क) रामसर अभिसमय के अधीन 'अंतरराष्ट्रीय महत्व की आर्द्रभूमि' के रूप में वर्गीकृत आर्द्रभूमियां;
- (ख) केन्द्रीय सरकार, राज्य सरकार और संघ राज्य क्षेत्र प्रशासन द्वारा यथा अधिसूचित आर्द्रभूमियां।

परंतु ये नियम समय-समय पर यथा संशोधित भारतीय वन अधिनियम, 1927, वन्यजीव (संरक्षण) अधिनियम, 1972, वन (संरक्षण) अधिनियम, 1980, राज्य वन अधिनियम तथा तटीय विनियमन जोन अधिसूचना, 2011 के अंतर्गत आने वाले क्षेत्रों में पड़ने वाली आर्द्रभूमियों को लागू नहीं होंगे।

4. आर्द्रभूमियों में क्रियाकलापों पर निर्बंधन.—(1) आर्द्रभूमि का संरक्षण और प्रबंध, आर्द्रभूमि प्राधिकरण द्वारा यथा अवधारित 'युक्तियुक्त उपयोग' के सिद्धांत के अनुसार किया जाएगा।

(2) आर्द्रभूमि के भीतर, निम्नलिखित क्रियाकलापों को प्रतिषिद्ध किया जाएगा, अर्थात्:-

- (i) किसी भी किस्म के अतिक्रमण सहित गैर-आर्द्रभूमि उपयोग हेतु परिवर्तन;
- (ii) किसी उद्योग को स्थापित करना और विद्यमान उद्योगों का विस्तार करना;
- (iii) निर्माण और विध्वंस अपशिष्ट प्रबंधन नियम, 2016 के अंतर्गत आने वाले निर्माण और विध्वंस अपशिष्ट का विनिर्माण या हथालन या भंडारण या निपटान; परिसंकटमय रसायन के विनिर्माण, भंडारण और आयात नियम, 1989 या परिसंकटमय सूक्ष्म जीवों आनुवंशिक रूप से निर्मित जीवों या कोशिकाओं का उपयोग, आयात, निर्यात और भंडारण संबंधी नियम, 1989 या परिसंकटमय अपशिष्ट (प्रबंधन, हथालन और सीमापारीय संचलन) नियम 2008 के अंतर्गत आने वाले परिसंकटमय पदार्थ; ई-अपशिष्ट (प्रबंधन) नियम, 2016 के अंतर्गत आने वाला ई-अपशिष्ट;
- (iv) ठोस अपशिष्ट का पाटन;
उद्योगों, शहरों, कस्बों, गांवों और अन्य मानव बस्तियों से अशोधित अपशिष्ट और बहिस्रावों का निस्सारण;
- (v) किसी स्थायी प्रकृति का किसी निर्माण सिवाय नाव घाटों के, पचास मीटर के भीतर इन नियमों के प्रारंभ की तारीख से पिछले दस वर्षों में प्रेक्षित बाढ़ के औसतन उच्च स्तर से गणना की जाएगी; और
- (vi) अवैध शिकार।

परंतु केन्द्रीय सरकार प्राधिकरण की सिफारिश पर किसी कार्यकलाप के विलोपन के लिए राज्य सरकार या संघ राज्य क्षेत्र प्रशासन से प्राप्त प्रस्तावों पर विचार कर सकेगी।

5. आर्द्रभूमि प्राधिकरण.—(1) केन्द्रीय सरकार, प्रत्येक राज्य में राज्य आर्द्रभूमि प्राधिकरण का गठन करेगी जिसमें निम्नलिखित सदस्य होंगे, अर्थात्:-

- (i) राज्य सरकार के पर्यावरण/वन विभाग का भारसाधक मंत्री या आर्द्रभूमि के विषय से संबंधित कार्य कर रहे भारसाधक मंत्री - अध्यक्ष;
- (ii) राज्य का मुख्य सचिव या समतुल्य अपर मुख्य सचिव – उपाध्यक्ष;
- (iii) पर्यावरण विभाग का भारसाधक सचिव – पदेन सदस्य;
- (iv) वन विभाग का भारसाधक सचिव – पदेन सदस्य;
- (v) शहरी विकास विभाग का भारसाधक सचिव – पदेन सदस्य;
- (vi) ग्रामीण विकास विभाग का भारसाधक सचिव – पदेन सदस्य;
- (vii) जल संसाधन विभाग का भारसाधक सचिव – पदेन सदस्य;

- (viii) मत्स्यकी विभाग का भारसाधक सचिव – पदेन सदस्य;
- (ix) सिंचाई और बाढ़ नियंत्रण विभाग का भारसाधक सचिव – पदेन सदस्य;
- (x) पर्यटन विभाग का भारसाधक सचिव – पदेन सदस्य;
- (xi) राजस्व विभाग का भारसाधक सचिव – पदेन सदस्य;
- (xii) निदेशक, राज्य सुदूर संवेदी केन्द्र – पदेन सदस्य;
- (xiii) मुख्य वन्यजीव वार्डन – पदेन सदस्य;
- (xiv) सदस्य सचिव, राज्य जैवविविधता बोर्ड – पदेन सदस्य;
- (xv) सदस्य सचिव, राज्य प्रदूषण नियंत्रण बोर्ड – पदेन सदस्य;
- (xvi) पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय के क्षेत्रीय कार्यालय का अपर प्रधान मुख्य संरक्षक – पदेन सदस्य;
- (xvii) आर्द्रभूमि पारिस्थितिकी, जल विज्ञान, मत्स्यकी, भू-दृश्य योजना और सामाजिक-आर्थिक क्षेत्र में से प्रत्येक का एक विशेषज्ञ जिसे राज्य सरकार द्वारा नामनिर्दिष्ट किया जाए; और
- (xviii) पर्यावरण/वन विभाग या आर्द्रभूमियों से संबंधित विभाग में अपर सचिव/संयुक्त सचिव/निदेशक - सदस्य सचिव।
- (2) केन्द्रीय सरकार, प्रत्येक राज्य क्षेत्र के लिए संघ राज्य क्षेत्र आर्द्रभूमि प्राधिकरण का गठन करेगी जिसमें निम्नलिखित सदस्य होंगे, अर्थात्:-
- (i) संघ राज्य क्षेत्र का प्रशासक या मुख्य सचिव – अध्यक्ष;
- (ii) पर्यावरण विभाग का भारसाधक सचिव – उपाध्यक्ष;
- (iii) वन विभाग का भारसाधक सचिव – पदेन सदस्य;
- (iv) शहरी विकास विभाग का भारसाधक सचिव – पदेन सदस्य;
- (v) ग्रामीण विकास विभाग का भारसाधक सचिव – पदेन सदस्य;
- (vi) जल संसाधन विभाग का भारसाधक सचिव - पदेन सदस्य;
- (vii) मत्स्यकी विभाग का भारसाधक सचिव - पदेन सदस्य;
- (viii) सिंचाई और बाढ़ नियंत्रण विभाग का भारसाधक सचिव - पदेन सदस्य;
- (ix) पर्यटन विभाग का भारसाधक सचिव - पदेन सदस्य;
- (x) राजस्व विभाग का भारसाधक सचिव - पदेन सदस्य;
- (xi) निदेशक, सुदूर संवेदी केन्द्र - पदेन सदस्य;
- (xii) सदस्य सचिव, संघ राज्य क्षेत्र प्रदूषण नियंत्रण समिति - पदेन सदस्य;
- (xiii) सदस्य सचिव, संघ राज्य क्षेत्र जैव-विविधता बोर्ड - पदेन सदस्य;
- (xiv) मुख्य वन्यजीव वार्डन - पदेन सदस्य;
- (xv) पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय के क्षेत्रीय कार्यालय के अपर प्रधान मुख्य वन संरक्षक - पदेन सदस्य;
- (xvi) आर्द्रभूमि पारिस्थितिकी, जल-विज्ञान, मत्स्यकी, भू-दृश्य योजना और सामाजिक-आर्थिक क्षेत्रों से एक-एक विशेषज्ञ जिसे संघ राज्य क्षेत्र प्रशासन द्वारा नामनिर्दिष्ट किया जाए; और
- (xvii) पर्यावरण/वन विभाग या आर्द्रभूमि हथालन विभाग में अपर सचिव/संयुक्त सचिव/निदेशक - सदस्य सचिव।
- (3) राज्य आर्द्रभूमि प्राधिकरण या संघ राज्य क्षेत्र आर्द्रभूमि प्राधिकरण, तीन से अधिक, यदि अपेक्षित हों, अन्य सदस्यों, का सह-चयन, कर सकेंगे।
- (4) राज्य आर्द्रभूमि प्राधिकरण या संघ राज्य क्षेत्र आर्द्रभूमि प्राधिकरण, निम्नलिखित शक्तियों का प्रयोग करेगा और निम्नलिखित कृत्यों का पालन करेगा, अर्थात् :—
- (क) इन नियमों के प्रकाशन की तारीख से तीन मास के भीतर राज्य या संघ राज्य क्षेत्र की सभी आर्द्रभूमियों की सूची तैयार करना;
- (ख) इन नियमों के प्रकाशन की तारीख से छह मास के भीतर अधिसूचित की जाने वाली आर्द्रभूमियों की सूची तैयार करना; अन्य सुसंगत राज्य अधिनियमों के अधीन तैयार/अधिसूचित आर्द्रभूमियों की किसी विद्यमान सूची को संज्ञान में लेना;

- (ग) इन नियमों के अधीन विनियमन हेतु उनके संक्षिप्त दस्तावेजों के आधार पर अभिज्ञात आर्द्रभूमियों की संस्तुति करना;
- (घ) इन नियमों के प्रकाशन की तारीख से एक वर्ष की अवधि के भीतर सभी आर्द्रभूमियों की व्यापक डिजिटल सूची तैयार करना और उक्त प्रयोजन से केन्द्रीय सरकार द्वारा विकसित की जाने वाले डेडीकेटेड वेब पोर्टल पर इसे अपलोड करना; और इस सूची को प्रत्येक दस वर्ष में अद्यतन किया जाएगा;
- (ङ) अधिसूचित आर्द्रभूमियों के भीतर विनियमित और अनुज्ञात किए जाने वाले कार्यकलापों और उनके प्रभाव क्षेत्र की विस्तृत सूची विकसित करना;
- (च) विनिर्दिष्ट आर्द्रभूमियों के लिए प्रतिषिद्ध कार्यकलापों की सूची में बढोतरी, यदि कोई हो, की सिफारिश करना;
- (छ) आर्द्रभूमियों की अधिकारिता के भीतर उनके संरक्षण और युक्तियुक्त उपयोग के लिए कार्यनीतियां पारिभाषित करना; यदि पारिस्थितिक प्रणाली के कार्यकलापों (जल भण्डारण, भू-जल संभरण, बाढ़-प्रतिरोधक जैसे) और मूल्य (मनोरंजन और सांस्कृतिक जैसे) का अनुरक्षण किया जाता है या उसमें अभिवृद्धि की जाती है; तो इन पारिस्थितिक प्रणाली को प्रबंधित करने के लिए एक सिद्धांत, जो संरक्षण के साथ संगत वहनीय उपयोगों को समावेशित करता है (जैसे जीवन-निर्वाह स्तर हेतु मछली पकड़ना या जलीय वनस्पति की पैदावार करना) का विवेकपूर्ण उपयोग करना;
- (ज) प्रत्येक अधिसूचित आर्द्रभूमियों के लिए एकीकृत प्रबंधन योजना का पुनर्विलोकन करना (केन्द्रीय सरकार के समन्वयन से सीमा-पारीय आर्द्रभूमियों सहित), और इन योजनाओं के भीतर आर्द्रभूमियों, जो पारिस्थितिकीय स्वरूप के अनुकूल हैं, के पारम्परिक उपयोगों को जारी रखना और उसमें समर्थन देने पर विचार करना;
- (झ) उन मामलों में, जहां अधिसूचित आर्द्रभूमियों या आर्द्रभूमि परिसरों की सीमा के भीतर भूमि क्षेत्र का निजी भू-धारण अधिकार है, उन्हें बढावा देने के लिए कार्यकलापों के माध्यम से पारिस्थितिकीय स्वरूप को बनाये रखने के लिए कार्यतंत्रों हेतु सिफारिश करना;
- (ञ) विद्यमान राज्य/संघ राज्य क्षेत्र स्तर की विकास योजनाओं और कार्यक्रमों के साथ प्रबंध योजना के कार्यान्वयन के अभिसरण के लिए कार्यतंत्रों की पहचान करना;
- (ट) इन नियमों और अन्य सुसंगत अधिनियमों, नियमों और विनियमों का प्रवर्तन सुनिश्चित करना और अर्द्ध-वार्षिक आधार पर (प्रत्येक कैलेंडर वर्ष के जून और दिसम्बर पर) एक सूचना तंत्र के माध्यम से ऐसी अधिसूचित आर्द्रभूमियों की स्थिति पर संबंधित राज्य सरकार या संघ राज्य क्षेत्र प्रशासन या केन्द्रीय सरकार को सूचना देना;
- (ठ) विभिन्न संगत विभागों और अन्य संबंधित अभिकरणों के माध्यम से युक्तियुक्त उपयोग के सिद्धांत के आधार पर एकीकृत प्रबंधन योजनाओं के क्रियान्वयन का समन्वयन करना;
- (ड) राज्य या संघ राज्य क्षेत्र प्रशासन के भीतर सभी आर्द्रभूमि विनिर्दिष्ट प्राधिकरणों के लिए नोडल प्राधिकरण के रूप में कार्य करना;
- (ढ) संबंधित क्रियान्वयन अभिकरणों को आर्द्रभूमियों के संरक्षण और सतत प्रबंधन हेतु आवश्यक निदेश जारी करना;
- (ण) आर्द्रभूमियों के मूल्यों और क्रियाकलापों के संबंध में पणधारियों और स्थानीय समुदायों के बीच जागरूकता के संवर्धन हेतु उपाय करना; और
- (त) स्वप्रेरणा से या राज्य सरकार या संघ राज्य क्षेत्र प्रशासन द्वारा यथानिर्दिष्ट अन्य मामले पर सलाह देना।
- (5) राज्य सरकार या संघ राज्य क्षेत्र प्रशासन का संबंधित विभाग, प्राधिकरण के लिए नोडल विभाग और सचिवालय के रूप में सभी आवश्यक सहायता प्रदान करेगा और कार्य करेगा।
- (6) प्राधिकरण, इन नियमों के प्रकाशन के नब्बे दिन के भीतर :
- (क) संक्षिप्त दस्तावेजों और प्रबंध योजनाओं का पुनर्विलोकन करने तथा आर्द्रभूमि प्राधिकरण द्वारा निर्दिष्ट किसी तकनीकी विषय पर सलाह देने के लिए एक तकनीकी समिति का, और
- (ख) जनता द्वारा प्राधिकरण को की गई शिकायतों की सुनवाई करने और उन्हें अग्रेषित करने के लिए एक कार्यतंत्र उपलब्ध कराने हेतु चार सदस्यों से मिलकर बनी एक शिकायत समिति का गठन करेगा।
- (7) उप-नियम (6) में निर्दिष्ट समितियां अपने कृत्यों के निष्पादन के लिए प्रत्येक तिमाही में कम से कम एक बार बैठक करेंगी।
- (8) प्राधिकरण की वर्ष में कम से कम तीन बार बैठक होगी।
- (9) राज्य सरकार या संघ राज्य क्षेत्र प्रशासन द्वारा नामनिर्दिष्ट प्राधिकरण के गैर-अधिकारिक सदस्यों का कार्यकाल अधिकतम तीन वर्ष की अवधि का होगा।

6. **राष्ट्रीय आर्द्रभूमि समिति का गठन.**—(1) केन्द्रीय सरकार, एक राष्ट्रीय आर्द्रभूमि समिति का गठन करेगी, जिसमें निम्नलिखित सदस्य होंगे, अर्थात् :—
- (i) सचिव, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, भारत सरकार – अध्यक्ष;
 - (ii) आर्द्रभूमि संबंधी कार्य देख रहे विशेष सचिव या अपर सचिव, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, भारत सरकार – उपाध्यक्ष;
 - (iii) अपर महानिदेशक, वन्यजीव, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, भारत सरकार – पदेन सदस्य;
 - (iv) आर्द्रभूमियों संबंधी कार्य देख रहे सलाहकार या संयुक्त सचिव, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय – पदेन सदस्य;
 - (v) संयुक्त सचिव, पर्यटन मंत्रालय, भारत सरकार – पदेन सदस्य;
 - (vi) संयुक्त सचिव, जल संसाधन, नदी विकास और गंगा संरक्षण मंत्रालय, भारत सरकार – पदेन सदस्य;
 - (vii) संयुक्त सचिव, कृषि और किसान कल्याण मंत्रालय, भारत सरकार – पदेन सदस्य;
 - (viii) संयुक्त सचिव, सामाजिक न्याय और अधिकारिता मंत्रालय भारत सरकार – पदेन सदस्य;
 - (ix) संयुक्त सचिव, शहरी विकास मंत्रालय, भारत सरकार - पदेन सदस्य;
 - (x) संयुक्त सचिव, ग्रामीण विकास मंत्रालय, भारत सरकार - पदेन सदस्य;
 - (xi) अध्यक्ष, केन्द्रीय प्रदूषण नियंत्रण बोर्ड - पदेन सदस्य;
 - (xii) निदेशक, भारतीय प्राणि सर्वेक्षण या वैज्ञानिक एफ - पदेन सदस्य;
 - (xiii) निदेशक, भारतीय वनस्पति सर्वेक्षण या वैज्ञानिक एफ - पदेन सदस्य;
 - (xiv) निदेशक, अंतरिक्ष अनुप्रयुक्ति केंद्र, अहमदाबाद या वैज्ञानिक एफ - पदेन सदस्य;
 - (xv) सदस्य केन्द्रीय जल आयोग - पदेन सदस्य;
 - (xvi) सलाहकार, नीति आयोग - पदेन सदस्य;
 - (xvii) राज्य सरकार या संघ राज्यक्षेत्र प्रशासन के तीन प्रतिनिधि, चक्रानुक्रम आधार पर, प्रत्येक दो वर्ष के कार्यकाल के लिए;
 - (xviii) आर्द्र भूमि पारिस्थितिकी, जल विज्ञान, मत्स्यकी क्षेत्र, भू-दृश्य योजना और सामाजिक अर्थशास्त्र के क्षेत्रों में से प्रत्येक का एक-एक विशेषज्ञ; और
 - (xix) आर्द्रभूमि से संबंधित कार्य करने वाले निदेशक/अपर निदेशक/संयुक्त निदेशक, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय - सदस्य सचिव।
- (2) राष्ट्रीय आर्द्रभूमि समिति, यदि अपेक्षित हो, तीन से अनधिक अन्य सदस्यों को सहयोजित कर सकेगी।
- (3) राष्ट्रीय आर्द्रभूमि समिति निम्नलिखित कृत्यों का पालन करेगी, अर्थात्:—
- (क) आर्द्रभूमियों के संरक्षण तथा बुद्धिमत्तापूर्ण उपयोग के लिए समुचित नीतियों और कार्रवाई सम्बन्धी कार्यक्रमों के विषय में केन्द्रीय सरकार को सलाह देना;
 - (ख) आर्द्रभूमियों के एकीकृत प्रबंधन के लिए बुद्धिमत्तापूर्ण उपयोग के सिद्धान्त पर आधारित मानदंड और मार्गदर्शक सिद्धान्त तैयार करना;
 - (ग) प्राधिकरण द्वारा इन नियमों के क्रियान्वयन की निगरानी करना;
 - (घ) नियम 4 के उप नियम (2) में यथानिर्दिष्ट प्रतिषेधित क्रियाकलापों के लिए राज्य सरकारों या संघ राज्य क्षेत्र प्रशासनों से प्राप्त पुनरीक्षित प्रस्तावों के संबंध में केन्द्रीय सरकार को सलाह देना;
 - (ङ.) रामसर अभिसमय के अधीन अंतर्राष्ट्रीय महत्व की आर्द्रभूमियों को अभिहित किये जाने की सिफारिश करना;
 - (च) अधिसूचित किये जाने के लिए सीमापार आर्द्रभूमियों की सिफारिश करना;
 - (छ) रामसर स्थलों और सीमापार आर्द्रभूमियों के एकीकृत प्रबंध की प्रगति का पुनर्विलोकन करना;
 - (ज) आर्द्रभूमियों से संबंधित मुद्दों पर अंतर्राष्ट्रीय अभिकरणों के समन्वय के संबंध में सलाह देना; और
 - (झ) किसी अन्य मामले पर स्वप्रेरणा से सलाह देना या केन्द्रीय सरकार को निर्दिष्ट करना।

- (4) समिति के गैर-सरकारी सदस्यों को कार्यकाल तीन वर्ष से अनधिक का नहीं होगा।
- (5) समिति प्रत्येक छह मास में कम से कम एक बार बैठक करेगी।
7. **राज्य सरकारों और संघ राज्य क्षेत्र प्रशासनों को शक्तियों और कार्यों का प्रत्यायोजन.**—(1) राज्य सरकार या संघ राज्य क्षेत्र प्रशासन का सम्बद्ध विभाग इन नियमों के प्रकाशन की तारीख से एक वर्ष की अवधि के भीतर अधिसूचित किये जाने हेतु अभिज्ञात प्रत्येक आर्द्रभूमि के लिए एक संक्षिप्त दस्तावेज तैयार करेगा, जिसमें निम्नलिखित का उपबंध होगा:—
- (क) निर्देशांकों सहित यथार्थ डिजिटल मानचित्रों द्वारा समर्थित और जमीनी सत्यापन द्वारा विधिमान्य आर्द्रभूमि का सीमांकन;
- (ख) इसके प्रभाव क्षेत्र का सीमांकन और डिजिटल मानचित्र में संकेतित उसका भूमि उपयोग और आच्छादित भूमि क्षेत्र;
- (ग) पारिस्थितिक-स्वरूप का विवरण;
- (घ) पूर्वतः विद्यमान अधिकारों तथा विशेषाधिकारों का लेखा;
- (ङ.) आर्द्रभूमि तथा इसके प्रभाव क्षेत्र के भीतर अनुज्ञप्त स्थल-विशिष्ट क्रियाकलाप की सूची;
- (च) आर्द्रभूमि और उसके प्रभाव क्षेत्र के भीतर विनियमित किये जाने वाले स्थल-विशिष्ट क्रियाकलापों की सूची; और
- (छ) विनियमों के प्रवर्तन की रीति;
- (2) प्राधिकरण, संक्षिप्त दस्तावेज के आधार पर, आर्द्रभूमियों को अधिसूचित किये जाने के लिए राज्य सरकार या संघ राज्यक्षेत्र प्रशासन को सिफारिश करेगा।
- (3) राज्य सरकार या संघ राज्य क्षेत्र प्रशासन संबंधित और प्रभावित व्यक्तियों से प्राप्त आक्षेपों, यदि कोई हों, पर विचार करने के पश्चात् प्राधिकरण द्वारा की गयी सिफारिश की तारीख से दो सौ चालीस दिन से अनधिक की अवधि के भीतर राजपत्र में आर्द्रभूमियों को अधिसूचित करेगी।
- (4) (क) केन्द्रीय सरकार सीमा-पार आर्द्रभूमियों के मामले में, संक्षिप्त दस्तावेज, जिसमें उप-नियम (1) में यथा सूचीबद्ध सूचना दी गई हो, को तैयार करने में संबद्ध राज्य सरकार और संघ राज्यक्षेत्र प्रशासनों के साथ समन्वय करेगी।
- (ख) संक्षिप्त दस्तावेज के आधार पर, राष्ट्रीय आर्द्रभूमि समिति आर्द्रभूमि को अधिसूचित किये जाने के लिए केन्द्रीय सरकार को सिफारिशें करेगी।
- (ग) केन्द्रीय सरकार संबद्ध और प्रभावित व्यक्तियों से प्राप्त आक्षेपों, यदि कोई हों, पर विचार करने के पश्चात् समिति द्वारा की गई सिफारिश की तारीख से दो सौ चालीस दिन से अनधिक की अवधि के भीतर आर्द्रभूमियों को राजपत्र में अधिसूचित करेगी।
- (5) (क) केन्द्रीय सरकार आर्द्रभूमियों से संबंधित सूचना के लिए एक समर्पित वेब पोर्टल का सृजन करेगी।
- (ख) केन्द्रीय सरकार, राज्य सरकार और संघ राज्य क्षेत्र प्रशासन अपनी अधिकारिता में की आर्द्रभूमियों के विषय में, सभी संबंधित सूचना अपलोड करेगी।

[फा. सं. जे-22012/78/2003-सीएस(डब्ल्यू) पार्ट.V]

डॉ. ए. दुरैसामी, वैज्ञानिक 'जी'

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 26th September, 2017

G.S.R. 1203(E).—Whereas the wetlands, vital parts of the hydrological cycle, are highly productive ecosystems which support rich biodiversity and provide a wide range of ecosystem services such as water storage, water purification, flood mitigation, erosion control, aquifer recharge, microclimate regulation, aesthetic enhancement of landscapes while simultaneously supporting many significant recreational, social and cultural activities, being part of our rich cultural heritage;

And whereas many wetlands are threatened by reclamation and degradation through drainage and landfill, pollution (discharge of domestic and industrial effluents, disposal of solid wastes), hydrological alteration (water withdrawal and changes in inflow and outflow), over-exploitation of their natural resources resulting in loss of biodiversity and disruption in ecosystem services provided by wetlands;

And whereas clause (g) of article 51A of the Constitution stipulates that it shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures;

And whereas the Environment (Protection) Act, 1986 is a comprehensive legislation to provide protection and improvement of the environment, including *inter-alia*, wetlands, and for matters connected therewith;

And whereas the National Environment Policy, 2006 recognises the ecosystem services provided by wetlands and emphasizes the need to set up a regulatory mechanism for all wetlands so as to maintain their ecological character, and ultimately support their integrated management;

And whereas India is a signatory to the Ramsar Convention on Wetlands and is committed to conservation and wise use of all wetlands within its territory;

And whereas the Central Government has published the Wetlands (Conservation and Management) Rules, 2010, vide number G.S.R. 951(E), dated the 4th December, 2010;

And whereas conservation and wise use of wetlands can provide substantial direct and indirect economic benefits to state and national economy, and thereby the Central Government stands committed to mainstreaming full range of wetland biodiversity and ecosystem services in development planning and decision making for various sectors;

And whereas the State Governments and Union Territory Administrations need to take into account wetland ecosystem services and biodiversity values likewise within their developmental programming and economic well-being, also taking into cognizance that land and water, two major ecological constituents of wetland ecosystems, are enlisted as State subjects as per the Constitution;

And whereas the Central Government considered it necessary to supersede the Wetlands (Conservation and Management) Rules, 2010 for effective conservation and management of wetlands in the country;

And whereas the Central Government had, in exercise of the powers conferred by section 25, read with sub-section (1) and clause (v) of sub-section (2) and sub-section (3) of section 3 of the Environment (Protection) Act, 1986, published the draft Wetlands (Conservation and Management) Rules, 2016, vide number G.S.R. 385 (E) dated 31st March, 2016 for information of the public likely to be affected thereby; and notice was given that the said draft rules would be taken into consideration by the Central Government after expiry of a period of sixty days from the date on which copies of the Gazette notification is made available to the public;

And whereas the Central Government has received the suggestions and objections from the State Governments, Union Territories and its organisations, individuals and civil society organisations on the draft Wetlands (Conservation and Management) Rules, 2016;

And whereas the suggestions and objections received in response to the above mentioned draft rules have been duly considered by the Central Government in consultation with State Governments and Union Territory Administrations.

Now, therefore, in exercise of the powers conferred by section 25, read with sub-section (1) and clause (v) of sub-section (2) and sub-section (3) of section 3 and section 23 of the Environment (Protection) Act, 1986 and in supersession of the Wetlands (Conservation and Management) Rules, 2010, except as respects things done or omitted to be done before such supersession, the Central Government hereby makes the following rules for conservation and management of wetlands, namely:—

1. Short title and commencement.—

- (1) These rules may be called the Wetlands (Conservation and Management) Rules, 2017.
- (2) These shall come into force from the date of their publication in the Official Gazette.

2. Definitions.—

- (1) In these rules, unless the context otherwise requires,-
 - (a) "Act" means the Environment (Protection) Act, 1986;
 - (b) "Authority" means the State Wetlands Authority or Union Territory Wetlands Authority, as the case may be;

- (c) "Committee" means the National Wetlands Committee referred to in rule 6;
 - (d) "ecological character" means the sum of ecosystem components, processes and services that characterise the wetlands;
 - (e) "integrated management plan" means a document which describes strategies and actions for achieving wise use of the wetland and the plan shall include objectives of site management; management actions required to achieve the objectives; factors that affect, or may affect, the various site features; monitoring requirements for detecting changes in ecological character and for measuring the effectiveness of management; and resources for management implementation;
 - (f) "Ramsar Convention" means the Convention on Wetlands signed at Ramsar, Iran in 1971;
 - (g) "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;
 - (h) "wetlands complexes" means two or more ecologically and hydrologically contiguous wetlands and may include their connecting channels/ducts;
 - (i) "wise use of wetlands" means maintenance of their ecological character, achieved through implementation of ecosystem approach within the context of sustainable development;
 - (j) "zone of influence" means that part of the catchment area of the wetland or wetland complex, developmental activities in which induce adverse changes in ecosystem structure, and ecosystem services.
- (2) The words and expressions used in these rules and not defined, but defined in the Act, shall have the meanings assigned to them in the Act.

3. Applicability of rules.—These rules shall apply to the following wetlands or wetlands complexes, namely:—

- (a) wetlands categorised as 'wetlands of international importance' under the Ramsar Convention;
- (b) wetlands as notified by the Central Government, State Government and Union Territory Administration:

Provided that these rules shall not apply to 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 as amended from time to time.

4. Restrictions of activities in wetlands.—(1) The wetlands shall be conserved and managed in accordance with the principle of 'wise use' as determined by the Wetlands Authority.

- (2) The following activities shall be prohibited within the wetlands, namely,-
- (i) conversion for non-wetland uses including encroachment of any kind;
 - (ii) setting up of any industry and expansion of existing industries;
 - (iii) manufacture or handling or storage or disposal of construction and demolition waste covered under the Construction and Demolition Waste Management Rules, 2016; hazardous substances covered under the Manufacture, Storage and Import of Hazardous Chemical Rules, 1989 or the Rules for Manufacture, Use, Import, Export and Storage of Hazardous Micro-organisms Genetically engineered organisms or cells, 1989 or the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008; electronic waste covered under the E-Waste (Management) Rules, 2016;
 - (iv) solid waste dumping;
 - (v) discharge of untreated wastes and effluents from industries, cities, towns, villages and other human settlements;
 - (vi) any construction of a permanent nature except for boat jetties within fifty metres from the mean high flood level observed in the past ten years calculated from the date of commencement of these rules; and,
 - (vii) poaching.

Provided that the Central Government may consider proposals from the State Government or Union Territory Administration for omitting any of the activities on the recommendation of the Authority.

5. Wetlands Authorities.—(1) The Central Government hereby constitutes the State Wetlands Authority in each State with the following members, namely:—

- (i) Minister In-charge of the Department of Environment/Forests of the State Government or Minister In-charge of the Department handling wetlands - Chairperson;
- (ii) Chief Secretary of the State or Additional Chief Secretary equivalent - Vice Chairperson;
- (iii) Secretary in-charge of the Department of Environment - Member *ex-officio*;
- (iv) Secretary in-charge of the Department of Forests - Member *ex-officio*;
- (v) Secretary in-charge of the Department of Urban Development - Member *ex-officio*;
- (vi) Secretary in-charge of the Department of Rural Development - Member *ex-officio*;
- (vii) Secretary in-charge of the Department of Water Resources - Member *ex-officio*;
- (viii) Secretary in-charge of the Department of Fisheries - Member *ex-officio*;
- (ix) Secretary in-charge of the Department of Irrigation and Flood Control - Member *ex-officio*;
- (x) Secretary in-charge of the Department of Tourism - Member *ex-officio*;
- (xi) Secretary in-charge of the Department of Revenue - Member *ex-officio*;
- (xii) Director, State Remote Sensing Centre - Member *ex-officio*;
- (xiii) Chief Wildlife Warden - Member *ex-officio*;
- (xiv) Member Secretary, State Biodiversity Board - Member *ex-officio*;
- (xv) Member Secretary, State Pollution Control Board - Member *ex-officio*;
- (xvi) Additional Principal Chief Conservator of Forests of the Regional Office of Ministry of Environment, Forest and Climate Change - Member *ex-officio*;
- (xvii) One expert each in the fields of wetland ecology, hydrology, fisheries, landscape planning and socio-economics to be nominated by the State Government; and
- (xviii) Additional Secretary/Joint Secretary/Director in the Department of Environment/Forests or Department handling wetlands - Member Secretary.

(2) The Central Government hereby constitutes the Union Territory Wetlands Authority for each Union Territory with the following members, namely:—

- (i) Administrator or Chief Secretary of the Union Territory - Chairperson;
- (ii) Secretary in-charge of the Department of Environment - Vice Chairperson;
- (iii) Secretary in-charge of the Department of Forests - Member *ex-officio*;
- (iv) Secretary in-charge of the Department of Urban Development - Member *ex-officio*;
- (v) Secretary in-charge of the Department of Rural Development - Member *ex-officio*;
- (vi) Secretary in-charge of the Department of Water Resources - Member *ex-officio*;
- (vii) Secretary in-charge of the Department of Fisheries - Member *ex-officio*;
- (viii) Secretary in-charge of the Department of Irrigation and Flood Control - Member *ex-officio*;
- (ix) Secretary in-charge of the Department of Tourism - Member *ex-officio*;
- (x) Secretary in-charge of the Departments of Revenue - Member *ex-officio*;
- (xi) Director, Remote Sensing Centre - Member *ex-officio*;
- (xii) Member Secretary, Union Territory Pollution Control Committee - Member *ex-officio*;

- (xiii) Member Secretary, Biodiversity Board of the UT - Member *ex-officio*;
 - (xiv) Chief Wildlife Warden - Member *ex-officio*;
 - (xv) Additional Principal Chief Conservator of Forests of the Regional Office of Ministry of Environment, Forest and Climate Change- Member *ex-officio*;
 - (xvi) One expert each in the fields of wetland ecology, hydrology, fisheries, landscape planning and socio-economics to be nominated by the Union Territory Administration; and
 - (xvii) Additional Secretary/Joint Secretary/Director in the Department of Environment/Forests or Department handling wetlands - Member Secretary.
- (3) The State Wetlands Authority or Union Territory Wetlands Authority may co-opt other members, not exceeding three in number, if required.
- (4) The State Wetlands Authority or Union Territory Wetlands Authority shall exercise the following powers and perform the following functions, namely:-
- (a) prepare a list of all wetlands of the State or Union Territory within three months from the date of publication of these rules;
 - (b) prepare a list of wetlands to be notified, within six months from the date of publication of these rules; taking into cognizance any existing list of wetlands prepared/notified under other relevant State Acts;
 - (c) recommend identified wetlands, based on their Brief Documents, for regulation under these rules;
 - (d) prepare a comprehensive digital inventory of all wetlands within a period of one year from the date of publication of these rules and upload the same on a dedicated web portal to be developed by the Central Government for the said purpose; the inventory to be updated every ten years;
 - (e) develop a comprehensive list of activities to be regulated and permitted within the notified wetlands and their zone of influence;
 - (f) recommend additions, if any, to the list of prohibited activities for specific wetlands;
 - (g) define strategies for conservation and wise use of wetlands within their jurisdiction; wise use being a principle for managing these ecosystems which incorporates sustainable uses (such as capture fisheries at subsistence level or harvest of aquatic plants) as being compatible with conservation, if ecosystem functions (such as water storage, groundwater recharge, flood buffering) and values (such as recreation and cultural) are maintained or enhanced;
 - (h) review integrated management plan for each of the notified wetlands (including trans-boundary wetlands in coordination with Central Government), and within these plans consider continuation and support to traditional uses of wetlands which are harmonized with ecological character;
 - (i) in cases wherein lands within boundary of notified wetlands or wetlands complex have private tenancy rights, recommend mechanisms for maintenance of ecological character through promotional activities;
 - (j) identify mechanisms for convergence of implementation of the management plan with the existing State/Union Territory level development plans and programmes;
 - (k) ensure enforcement of these rules and other relevant Acts, rules and regulations and on half-yearly basis (June and December of each calendar year) inform the concerned State Government or Union Territory Administration or Central Government on the status of such notified wetlands through a reporting mechanism;
 - (l) coordinate implementation of integrated management plans based on wise use principle through various line departments and other concerned agencies;
 - (m) function as nodal authority for all wetland specific authorities within the State or Union Territory Administration;
 - (n) issue necessary directions for conservation and sustainable management of wetlands to the respective implementing agencies;

- (o) undertake measures for enhancing awareness within stakeholders and local communities on values and functions of wetlands; and
- (p) Advise on any other matter *suo-motu*, or as referred by the State Government/Union Territory Administration.
- (5) The concerned Department of the State Government or Union Territory shall provide all necessary support and act as nodal Department and Secretariat to the Authority.
- (6) The Authority shall, within ninety days of publication of these rules, shall constitute,—
 - (a) a technical committee to review brief documents, management plans and advise on any technical matter referred by the Wetland Authority; and
 - (b) a grievance committee consisting of four members to provide a mechanism for hearing and forwarding the grievances raised by public to the Authority;
- (7) The Committees referred to in sub-rule (6) shall meet at least once in every quarter to perform their functions.
- (8) The Authority shall meet at least thrice in a year.
- (9) The term of non-official members of the Authority nominated by State Government or Union Territory Administration, shall be for a period not exceeding three years.

6. Constitution of National Wetlands Committee.—(1) The Central Government, hereby constitutes the National Wetlands Committee with the following members, namely:—

- (i) Secretary, Ministry of Environment, Forest and Climate Change, Government of India - Chairperson;
- (ii) Special Secretary or Additional Secretary dealing with wetlands, Ministry of Environment, Forest and Climate Change, Government of India-Vice Chairperson;
- (iii) Additional Director General, Wildlife, Ministry of Environment, Forest and Climate Change, Government of India - Member *ex-officio*;
- (iv) Adviser or Joint Secretary dealing with wetlands, Ministry of Environment, Forest and Climate Change - Member *ex-officio*;
- (v) Joint Secretary, Ministry of Tourism, Government of India- Member *ex-officio*;
- (vi) Joint Secretary , Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India- Member *ex-officio*;
- (vii) Joint Secretary, Ministry of Agriculture and Farmers Welfare, Government of India- Member *ex-officio*;
- (viii) Joint Secretary, Ministry of Social Justice and Empowerment, Government of India- Member *ex-officio*;
- (ix) Joint Secretary, Ministry of Urban Development, Government of India- Member *ex-officio*;
- (x) Joint Secretary, Ministry of Rural Development, Government of India- Member *ex-officio*;
- (xi) The Chairman, Central Pollution Control Board - Member *ex-officio*;
- (xii) Director, Zoological Survey of India or Scientist F- Member *ex-officio*;
- (xiii) Director, Botanical Survey of India or Scientist F- Member *ex-officio*;
- (xiv) Director, Space Application Centre, Ahmedabad or Scientist F- Member *ex-officio*;
- (xv) Member, Central Water Commission - Member *ex-officio*;
- (xvi) Adviser, Niti Aayog - Member *ex-officio*;
- (xvii) Three representatives of State Government or Union Territory Administration on a rotational basis for a tenure of two years each;
- (xviii) One expert each in the fields of wetland ecology, hydrology, fisheries, landscape planning & socio-economics; and

- (xix) Director/Additional Director/Joint Director dealing with wetlands, Ministry of Environment, Forest and Climate Change - Member Secretary.
- (2) The National Wetlands Committee may co-opt other members, not exceeding three in number, if required.
- (3) The National Wetlands Committee shall perform the following functions, namely:-
- (a) advise the Central Government on appropriate policies and action programmes for conservation and wise use of wetlands;
 - (b) evolve norms and guidelines for integrated management of wetlands based on wise use principle;
 - (c) monitor implementation of these rules by the Authority;
 - (d) advise the Central Government on proposals received from State Governments or Union Territory Administrations for omission of the prohibited activities as referred in sub-rule (2) of rule 4;
 - (e) recommend designation of wetlands of international importance under Ramsar Convention;
 - (f) recommend trans-boundary wetlands for notification;
 - (g) review progress of integrated management of Ramsar sites and transboundary wetlands;
 - (h) advise on collaboration with international agencies on issues related to wetlands; and
 - (i) advise on any other matter *suo-moto*, or as referred by the Central Government.
- (4) The tenure of non-official members of the Committee shall not exceed three years.
- (5) The Committee shall meet at least once in every six months.

7. Delegation of powers and functions to the State Governments and Union Territory Administrations.—

- (1) The concerned Department of the State Government or Union Territory Administration shall, within a period of one year from the date of publication of these rules, prepare a Brief Document for each of the wetland identified for notification, providing:—
- (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;
- (2) Based on the Brief Document, the Authority shall make recommendations to the State Government or Union Territory Administration for notifying the wetlands.
- (3) The State Government or Union Territory Administration shall, after considering the objections, if any, from the concerned and affected persons, notify the wetlands in the Official Gazette, within a period not exceeding 240 days from the date of recommendation by the Authority.
- (4) (a) In case of trans-boundary wetlands, the Central Government shall coordinate with concerned State Governments and Union Territory Administrations to prepare the Brief Document containing information as listed in sub-rule (1).
- (b) Based on the Brief Document, the National Wetlands Committee shall make recommendations to the Central Government for notification of the wetland.
- (c) The Central Government shall, after considering the objections, if any, from the concerned and affected persons, notify the wetlands in the Official Gazette, within a period not exceeding 240 days from the date of recommendation by the Committee.

- (5) (a) The Central Government shall create a dedicated web portal for information relating to wetlands.
- (b) The Central Government, State Government and Union Territory Administration shall upload all relevant information and documents pertaining to wetlands in their jurisdiction.

[F. No. J-22012/78/2003-CS (W) Pt. V]

Dr. A. DURAISAMY, Scientist 'G'



Ramsar Information Sheet

Published on 3 August 2022

India Satkosia Gorge



Designation date	12 October 2021
Site number	2470
Coordinates	20°34'20"N 84°49'56"E
Area	98 196,72 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

Satkosia (Lat: 20 degrees 25' -20 degree 45' N Long; 84 degree 40' - 85 degrees 05' E) spreads along the magnificent gorge over the mighty river Mahanadi in Odisha. Established in 1976 as a wildlife sanctuary, Satkosia supports a rich ecosystem, representing a diverse population of floral and faunal species. The name Satkosia originates from two words, sat meaning seven and kos meaning two miles, indicating the length of the gorge as 14 miles or 22.4 km. The area was declared as Satkosia Tiger Reserve in 2007, comprising two adjoining wildlife sanctuaries, the Satkosia Gorge sanctuary and Baisipalli sanctuary. The wetland is spread over 4 districts namely Angul, Cuttack, Nayagarh, and Boudh, and has an area of 98196.72 ha. The area is also a part of the Mahanadi elephant reserve. Satkosia is the meeting point of two biogeographic regions of India; the Deccan Peninsula and the Eastern Ghats, contributing immense biodiversity. Satkosia Gorge wetland is a mosaic of marshes and evergreen forests. The permanent freshwater, marshes, and rivers are the major wetland habitat types, which support a variety of plant and animal communities. The forests of these catchments play a vital role in the prevention of the gorge siltation. It also helps in maintaining a specific desirable depth of water crucial for the endangered gharial population and spawning of commercially important carps and prawns species.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency

Postal address

National Ramsar Administrative Authority

Institution/agency

Postal address

2.1.2 - Period of collection of data and information used to compile the RIS

From year

To year

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps

Boundaries description

Satkosia Gorge Sanctuary is situated at its heart on either side of River Mahanadi, including the Gorge portion. The gorge is narrow but very deep with strong undercurrents of water. Its length, as the name speaks is '7 Kosa', which is equivalent to 22.4 Kms (1 Kosa = 2 miles). The part of the sanctuary north of river Mahanadi comes under Angul and Cuttack revenue Districts and the part south of it comes under Boudha and Nayagarh Revenue Districts. The Ramsar Site boundary aligns with Satkosia Gorge Wildlife Sanctuary, which is also a tiger reserve and forms the catchment of the fourteen-mile-long, deep gorge.

2.2.2 - General location

a) In which large administrative region does the site lie?

b) What is the nearest town or population centre?

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes No

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes No

2.2.4 - Area of the Site

Official area, in hectares (ha):

Area, in hectares (ha) as calculated from GIS boundaries

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Freshwater Ecoregions of the World (FEOW)	Northern Deccan Plateau

Other biogeographic regionalisation scheme

According to Rodgers and Panwar (1988) biogeographic classification, Satkosia Gorge Sanctuary forms the meeting point of two biotic provinces of 19 Deccan Peninsula biogeographic zones (6). The area north of Mahanadi is classed under Garhjat hills and that of South under the Eastern Ghats. This sanctuary is in fact the meeting point of Chhotnagpur plateau (6B) and Eastern Ghats (6C) biotic provinces. Ecologically, the vegetation of Satkosia largely conforms to Northern tropical moist deciduous forests and moist peninsular low-level sal.

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

<no data available>

- Criterion 2 : Rare species and threatened ecological communities
- Criterion 3 : Biological diversity

Justification	<p>Satkosia Gorge sanctuary has tremendous genetic and ecological importance as it is the wet portion of the Deccan region. It has a significant elephant population in deciduous forests. The sanctuary is also an important natural habitat for two endangered species of freshwater crocodiles viz. Gharial and Muger, and a sizeable population of tiger, leopard, gaur, sambar, chousingha, barking deer, and giant squirrels. Rare and endangered birds and butterflies are very common. 22.4 Km long stretch of Satkosia Gorge of Mahanadi river harbors a large population of varied fishes and aquatic fauna. Satkosia also represents the endemic life forms of both the biotic provinces in its transitional zone. Geologically speaking, the ghats formed the land bridge for faunal migration between the Holarctic, Indo-Chinese, and Indo Malayan regions on one hand and the Western Ghats on the other. Therefore, the presence of floral and faunal species significant for conservation as listed in reholdst tables hold importance in maintaining the biological diversity of the region as a whole and therefore justifies being placed under category 3.</p>
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- Criterion 4 : Support during critical life cycle stage or in adverse conditions

- Criterion 5 : >20,000 waterbirds

Overall waterbird numbers	39850
Start year	2018
Source of data:	Census

- Criterion 7 : Significant and representative fish

Justification	<p>The wetland serves as a breeding ground as well as the nursery of a large number of fish species. The deciduous leaves of the adjoining forest type wither facilitating nutrition for the larvae helping in growth and development. Some of the larger species depend entirely on the wetland for attaining their adult stage. The site supports the following fishes: Cirrhinus reba, Gibelion catla, Mastacembaelus armatus, Pangasius pangasius, and Puntius ambassis.</p>
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3.2 - Plant species whose presence relates to the international importance of the site

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae								
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Barringtonia acutangula</i> <i>acutangula</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Butea superba</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ LILIOPSIDA	<i>Caryota urens</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Combretum albidum</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Dalbergia latifolia</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	VU	<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region. VU IUCN category.
TRACHEOPHYTA/ LILIOPSIDA	<i>Dendroclamus strictus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ LILIOPSIDA	<i>Eulaliopsis binata</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Grewia eriocarpa</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Ocimum tenuiflorum</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ LILIOPSIDA	<i>Phoenix paludosa</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NT	<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ LILIOPSIDA	<i>Saccharum bengalense</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ LILIOPSIDA	<i>Smilax zeylanica</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Symplocos racemosa</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ LILIOPSIDA	<i>Thysanolaena latifolia</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
TRACHEOPHYTA/ MAGNOLIOPSIDA	<i>Xylocarpus xylocarpa</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.

The wetland supports numerous plant species including the vulnerable species *Dalbergia latifolia*

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Species qualifies under criterion								Pop. Size	Period of pop. Est.	% occurrence ¹⁾	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification	
		2	4	6	9	3	5	7	8									
Others																		
CHORDATA/ MAMMALIA	<i>Axis axis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>			Important for maintaining the biological diversity of the particular biogeographic region.
CHORDATA/ REPTILIA	<i>Batagur kachuga</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			CR	<input type="checkbox"/>	<input type="checkbox"/>			CR IUCN category.	
CHORDATA/ REPTILIA	<i>Chitra indica</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			EN	<input type="checkbox"/>	<input type="checkbox"/>			EN IUCN category.	
CHORDATA/ REPTILIA	<i>Crocodylus palustris</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			VU	<input checked="" type="checkbox"/>	<input type="checkbox"/>			VU IUCN category.	
CHORDATA/ MAMMALIA	<i>Elephas maximus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			EN	<input checked="" type="checkbox"/>	<input type="checkbox"/>			EN IUCN category.	
CHORDATA/ REPTILIA	<i>Gavialis gangeticus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			CR	<input checked="" type="checkbox"/>	<input type="checkbox"/>			CR IUCN category.	
CHORDATA/ REPTILIA	<i>Lissemys punctata punctata</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>			Important for maintaining the biological diversity of the particular biogeographic region.	
CHORDATA/ MAMMALIA	<i>Muntiacus muntjak</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			Important for maintaining the biological diversity of the particular biogeographic region.	
CHORDATA/ REPTILIA	<i>Naja naja</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>			Important for maintaining the biological diversity of the particular biogeographic region.	
CHORDATA/ MAMMALIA	<i>Panthera tigris</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			EN	<input checked="" type="checkbox"/>	<input type="checkbox"/>			EN IUCN category.	
CHORDATA/ MAMMALIA	<i>Rusa unicolor</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			VU	<input type="checkbox"/>	<input type="checkbox"/>			VU IUCN category.	
CHORDATA/ MAMMALIA	<i>Sus scrofa</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			Important for maintaining the biological diversity of the particular biogeographic region.	
CHORDATA/ REPTILIA	<i>Varanus bengalensis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			NT	<input checked="" type="checkbox"/>	<input type="checkbox"/>			Important for maintaining the biological diversity of the particular biogeographic region.	
CHORDATA/ REPTILIA	<i>Varanus flavescens</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			EN	<input checked="" type="checkbox"/>	<input type="checkbox"/>			EN IUCN category.	
Fish, Mollusc and Crustacea																		
CHORDATA/ ACTINOPTERYGII	<i>Cirrhinus reba</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			Important for maintaining the biological diversity of the particular biogeographic region.	
CHORDATA/ ACTINOPTERYGII	<i>Gibelion catla</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			Important for maintaining the biological diversity of the particular biogeographic region.	
CHORDATA/ ACTINOPTERYGII	<i>Mastacembelus armatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			Important for maintaining the biological diversity of the particular biogeographic region.	
CHORDATA/ ACTINOPTERYGII	<i>Pangasius pangasius</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			LC	<input type="checkbox"/>	<input type="checkbox"/>			Important for maintaining the biological diversity of the particular biogeographic region.	

Phylum	Scientific name	Species qualifies under criterion								Species contributes under criterion	Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8									
CHORDATA/ ACTINOPTERYGII	<i>Puntius ambassis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>					DD	<input type="checkbox"/>	<input type="checkbox"/>		Important for maintaining the biological diversity of the particular biogeographic region.
Birds																		
CHORDATA/ AVES	<i>Actitis hypoleucos</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1400	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Anaethetus phoenicurus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2700	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Anas acuta</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2100	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Anastomus oscitans</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	300	2020		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Anhinga melanogaster</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	900	2020		NT	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Ardeola grayii</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1600	2020		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Ceryle rudis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	900	2020		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Charadrius dubius</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2200	2020		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Ciconia episcopus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1500	2018		NT	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Dendrocygna javanica</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1400	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Egretta garzetta</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1700	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Egretta intermedia</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1600	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Esacus recurvirostris</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1400	2018		NT	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Halcyon albibventris</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	700	2020		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Halcyon coromanda</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1400	2020		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Halcyon smyrnensis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2900	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Himantopus himantopus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1700	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Microcarbo niger</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	600	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Nycticorax nycticorax</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	450	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	
CHORDATA/ AVES	<i>Rynchops albigollis</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	800	2018		EN	<input type="checkbox"/>	<input type="checkbox"/>		EN IUCN category. Significant constituent of 20,000 or more waterbirds.						
CHORDATA/ AVES	<i>Sterna acuticauda</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1600	2018		EN	<input type="checkbox"/>	<input type="checkbox"/>		EN IUCN category. Significant constituent of 20,000 or more waterbirds.						
CHORDATA/ AVES	<i>Sterna aurantia</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1500	2018		VU	<input type="checkbox"/>	<input type="checkbox"/>		VU IUCN category. Significant constituent of 20,000 or more waterbirds.						
CHORDATA/ AVES	<i>Threskiornis melanocephalus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2100	2018		NT	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.	

Phylum	Scientific name	Species qualifies under criterion								Pop. Size	Period of pop. Est.	% occurrence ¹⁾	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
CHORDATA/ AVES	<i>Upupa epops</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1900	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.
CHORDATA/ AVES	<i>Vanellus albiceps</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2100	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.
CHORDATA/ AVES	<i>Vanellus duvaucelli</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	700	2018		NT	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.
CHORDATA/ AVES	<i>Vanellus indicus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	600	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.
CHORDATA/ AVES	<i>Vanellus malabaricus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1100	2018		LC	<input type="checkbox"/>	<input type="checkbox"/>		Significant constituent of 20,000 or more waterbirds.

1) Percentage of the total biogeographic population at the site

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Floral and faunal communities	<input checked="" type="checkbox"/>	Unique, rare biodiversity with high conservation significance is a part of the community.	A major portion of plant and animal species are under EN, CR and VU categories.

Optional text box to provide further information

About 400 species of plants have been recorded in the sanctuary out of which 126 are trees, 98 shrubs, 125 herbs, and 51 climbers. Sal (*Shorea robusta*) is the dominant species intensified mainly by selective removal of less valuable species under the planned forest management.

Rampant forest fire, excessive grazing, and increasing illegal removal of timber pose a threat to the species of this moist forest. However, no systematic research has been taken up to enumerate all the plant species in the area to date. According to the forest department Hinjal (Barringtonia acutangula), Kochila 15 (*Strychnos nuxvomica*), Rosewood (*Dalbergia latifolia*), Patal garuda (*Rauwolfia serpentina*), Gila (*Entada phoscoloides*), Mirgichara (*Grewia elastica*), Kangada (*Xyia xylocarpa*), Patuli (*Stereospermum chelonoides*) and Kantachira (*Acacia fruginea*) are threatened.

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

Satkosia Gorge is a mosaic of marshes and evergreen forests. The permanent freshwater, marshes, and rivers are the major wetland habitat types, which support a variety of plant and animal communities. The wet meadows, seasonal/intermittent marshes, pools and streams form minor wetland types in which ecological communities from riparian forest and vernal pools survive. During peak monsoon, the entire wetland barring the reserved forest area is inundated. The floral diversity includes over 126 trees, 98 shrubs, 125 herbs and 561 climbers species. The forest vegetation comprises of north Indian tropical moist deciduous forests and moist peninsular low level sal forest, the main tree species being sal which grows in gregarious formations. Other associate species are asan (*Terminalia alata*), dhaura (*Anogeissus latifolia*), and simal (*Bombax ceiba*). Two species of bamboo, namely *Bambusa arundinaceae* and *Dendrocalamus strictus* are common to this wetland. The faunal diversity is tremendous and around 38 species of mammals, 161 species of birds, 27 species of reptiles and 183 species of fishes have been reported from the site. The wetland is an important natural habitat of two endangered species of freshwater crocodiles namely gharial and mugger. It also supports a sizeable population of tiger, leopard, gaur, sambar, barking deer and giant squirrels. Along with mammals and reptiles the sanctuary is also an important habitat for several rare and endangered birds species. The 22.4 km long stretch of Satkosia Gorge of Mahanadi river harbors a large population aquatic fauna. Satkosia is famous for its unique gorge ecosystem and it serves also as a major watershed for the entire region. The wetland is also known for providing a variety of ecosystem services like regulating services (recharging of groundwater, climate regulation, safety from floods), supporting services (facilitating nutrient recycling, soil formation, providing habitat to flora and fauna), and cultural services (providing recreational and tourism opportunities, supporting spiritual and cultural practices, facilitating scientific research). Satkosia also represents the endemic life forms of both the biotic provinces in its transitional zone. It forms an important catchment of the lower Mahanadi basin. The positive role of these catchment forests in the prevention of the gorge siltation and maintenance of a specific desirable depth of water can hardly be overemphasized, particularly for the endangered gharial and for spawning sites of commercially important carps and prawns species. The spiritual and cultural association with local deities namely Binikei, Kankei, Baigani Parbata, Bhimdhara provides higher degree of cultural and inspirational values. The rich biodiversity and aesthetic value of the gorge attract tourists into the sanctuary throughout the year.

4.2 - What wetland type(s) are in the site?

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks	Satkosia Gorge	1	98196.72	

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Aegle marmelos</i>	
TRACHEOPHYTA/LILIOPSIDA	<i>Bambusa bambos</i>	
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Careya arborea</i>	
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Ficus benghalensis</i>	
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Kydia calycina</i>	
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Mangifera indica</i>	
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Mimosa pudica</i>	
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Phanera vahlii</i>	

Invasive alien plant species

Phylum	Scientific name	Impacts
TRACHEOPHYTA/LILIOPSIDA	<i>Phragmites karka</i>	Potential

Optional text box to provide further information

There is a vast number of lower plants that occur in the sanctuary seasonally. These plants are prominent in the wet season. The cryptogams of Nostac, and other microorganisms are prevalent in the creek where stagnant water accumulates. In certain areas bryophytes, pteridophytes and gymnosperms are very common. Riccia, Cyathidium and general liverworts are the common bryophytes found while ferns belonging to pteridophytes are also widely observed in the sanctuary. *Cycas cerinalis* ver. *Orixensis* belonging to gymnosperms are prevalent throughout the sanctuary. In addition to this, the smallest angiosperm plant-like *wolfia* and *camara* are seen in Kantrasingha game tank. Thus the sanctuary comprises the vast biodiversity stratification.

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/MAMMALIA	<i>Boselaphus tragocamelus</i>				
CHORDATA/MAMMALIA	<i>Cuon alpinus</i>				
CHORDATA/MAMMALIA	<i>Felis chaus</i>				
CHORDATA/MAMMALIA	<i>Hyaena hyaena</i>				
CHORDATA/MAMMALIA	<i>Melursus ursinus</i>				
CHORDATA/MAMMALIA	<i>Prionailurus bengalensis</i>				

Optional text box to provide further information

There are carnivorous animals such as tiger, leopard, jungle cat, civet, small Indian mongoose, wolf, jackal, striped hyena, wild dog found in Purunakote, Tikarapada, Pampasar, Raigoda, Jillinda and Chhamundia and Kusanga ranges of the sanctuary. Herbivorous animals such as elephants, common langur, sloth bear, sambar, chital, chausingha, mouse deer, barking deer, wild pig, gaur (Gayal) and rodents like Malabar giant squirrels, five striped palm squirrel, common hare and porcupines are found in the sanctuary. Nilgai was noticed few years back in Satkosia Wildlife Division.

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
A: Tropical humid climate	Am: Tropical monsoonal (Short dry season; heavy monsoonal rains in other months)

Three distinct seasons are experienced in the sanctuary area. The winter starts from November and lasts till the middle of February when summer starts and it continues up to the middle of June. This is followed by the rainy season which continues up to September. The month of October and the first half of November may be treated as the post-monsoon season when some rains are occasionally experienced.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

- Entire river basin
- Upper part of river basin
- Middle part of river basin
- Lower part of river basin
- More than one river basin
- Not in river basin
- Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

Mahanadi River Basin

4.4.3 - Soil

- Mineral
- Organic
- No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes No

4.4.4 - Water regime

Water permanence

Presence?
Usually permanent water present
No change

Source of water that maintains character of the site

Presence?	Predominant water source	
Water inputs from surface water	<input checked="" type="checkbox"/>	No change
Water destination		
To downstream catchment		No change
Stability of water regime		
Water levels fluctuating (including tidal)		No change

4.4.5 - Sediment regime

- Significant erosion of sediments occurs on the site
- Significant accretion or deposition of sediments occurs on the site
- Significant transportation of sediments occurs on or through the site
- Sediment regime is highly variable, either seasonally or inter-annually
- Sediment regime unknown

4.4.6 - Water pH

- Acid (pH<5.5)
- Circumneutral (pH: 5.5-7.4)
- Alkaline (pH>7.4)
- Unknown

4.4.7 - Water salinity

- Fresh (<0.5 g/l)
- Mixohaline (brackish)/Mixosaline (0.5-30 g/l)
- Euhaline/Eusaline (30-40 g/l)
- Hyperhaline/Hypersaline (>40 g/l)
- Unknown

4.4.8 - Dissolved or suspended nutrients in water

- Eutrophic
- Mesotrophic
- Oligotrophic
- Dystrophic
- Unknown

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ii) significantly different

- Surrounding area has greater urbanisation or development
- Surrounding area has higher human population density
- Surrounding area has more intensive agricultural use
- Surrounding area has significantly different land cover or habitat types

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	High

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	High

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High

Within the site:

Outside the site:

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes No Unknown

4.5.2 - Social and cultural values

- i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland
- ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland
- iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples
- iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Foundation/non-governmental organization/trust	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Other types of private/individual owner(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Other

Category	Within the Ramsar Site	In the surrounding area
Commoners/customary rights	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Provide further information on the land tenure / ownership regime (optional):

The Satkosia landscape consists of Satkosia Tiger Reserve and adjoining forest areas of Athamallik Forest Division (Hatidhara RF), Athagarh Division (Balikiari RF, Nuagarh RF), Dhenkanal Division (Nandinia RF, Kandhara RF), and Angul Division (Nuakheta RF, part of Balang RF). At present, the core, buffer, and its adjoining areas of the Satkosia landscape are under the unified command of the Regional Chief Conservator of Forests-cum- Field Director, Satkosia Tiger Reserve, Angul. The river Mahanadi nearly divides the reserve into two parts, north of river Mahanadi is managed by D.F.O. Satkosia WL Division and south by D.F.O. Mahanadi W.L. Division. Coordination between both the divisions as well as with the adjoining D.F.O.s is an important aspect of strengthening protection mechanism and other issues of the park.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Divisional Forest Officer(DFO), Satkosia(WL) Division, Angul

Provide the name and/or title of the person or people with responsibility for the wetland:

Saroj Kumar Panda, Divisional Forest Officer, Satkosia Wildlife Division, Angul, Odisha, India, Contact No. 8280146664, Email: dfosatkosiawl@yahoo.co.in

Postal address:

Office of the Divisional Forest Officer(DFO), FPR9+5H3, Hakim Pada Udyan, Hakimapada, Angul, Odisha 759106.

E-mail address:

satkosiawl@yahoo.co.in

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Tourism and recreation areas	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Drainage	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Water releases	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Annual and perennial non-timber crops	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Gathering terrestrial plants	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fire and fire suppression	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Agricultural and forestry effluents	Medium impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Droughts	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Temperature extremes	High impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

5.2.2 - Legal conservation status

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Satkosia Gorge		whole

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve
- Ib Wilderness Area: protected area managed mainly for wilderness protection
- II National Park: protected area managed mainly for ecosystem protection and recreation
- III Natural Monument: protected area managed mainly for conservation of specific natural features
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Catchment management initiatives/controls	Implemented

Species

Measures	Status
Threatened/rare species management programmes	Implemented

Human Activities

Measures	Status
Harvest controls/poaching enforcement	Implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes No

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Animal community	Implemented
Water quality	Proposed
Plant species	Implemented

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

1. A Manual for Planning Wildlife Management in Protected Areas and Managed forests by Vishwas. B.Sawarkar, WII, D. Dun.
2. Dr. C.R. Mohapatra's Working Plan for Angul (T) Division for the period 1970 – 1990.
3. Sri B.P.Singh's Working Plan for Angul (T) Division for 1990- 91 to 1999- 2000.
4. Mr. S.B.Das's Working for Rairakhol Division for the period 1965 to 1985.
5. Mr. Dinesh Singh's Working Plan for Athamallik Division for 1985 to 2005.
6. Sri N.C. Bal's Working Plan for Nayagarh Division for the period 1983-84 to 2002-03.
7. Sri Basudev Mohapatra's Plan for Boudh Division for 1975-76 to 1994-95.
8. Sri G. Mohapatra's Working Plan for Athgarh Division for
9. First Management Plan for Satkosia Gorge Sanctuary prepared by Sri A.K.Mishra for the period 2000 to 2010.
10. Rainfall, Temperature Data from Central Water Commission at Tikarapada.
11. Rainfall, Temperature, Humidity data from Office of Collector, Angul District.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<1 file(s) uploaded>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<1 file(s) uploaded>

vi. other published literature

<3 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

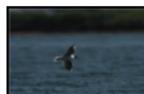
Please provide at least one photograph of the site:



Gharials (DFO, SATKOSIA, 09-09-2020)



Indian Skimmer (Soroj Panda, 25-12-2020)



Brown-headed Gull (Soroj Panda, 25-12-2020)



Great Cormorant (Soroj Panda, 25-12-2020)



Great Egret (Soroj Panda, 25-12-2020)



Indian Skimmer (Soroj Panda, 25-12-2020)



View of Satkosia Gorge (Soroj Panda, 25-12-2020)



View of Satkosia Gorge (Soroj Panda, 25-12-2020)



Satkosia Gorge (Soroj Panda, 25-12-2020)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation