

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

ORIGINAL APPLICATION NO. 657/2024/PB

IN THE MATTER OF:

News Item Titled "Swell Waves Likely to Strike Coastal Areas
Over Weekend" Appearing in the Hindu Dated 04.05.2024.

....Appellant

Vs.

Andhra Pradesh Coastal Zone Management Authority & Others.

. Respondents

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FILED BY



[SOUMYAJIT PANI]

Advocate for Respondent No. 11, State of Odisha
25/2 First Floor, Pant Nagar, Jangpura,
New Delhi-110014

Enrl.: D-1676/1/B/1999

Mobile: +91 9312224025

Email: spadv103@gmail.com

Place: New Delhi

Dated: 01.05.2025

Reply filed by Respondent No. 11 (Member Secretary, Odisha Coastal Zone Management Authority)

I, Sri Rajesh Gopalan, aged about 51 years, Son of O.V.Gopalan Nair, at present working as Director, Environment-cum-Special Secretary, Forest, Environment and Climate Change Department, Government of Odisha and Member Secretary, Odisha Coastal Zone Management Authority, Bhubaneswar, District-Khurda, Odisha, do here by solemnly affirm and state as follows;

(S. Rajesh)

1. That, I have been arrayed as the Opposite Party No.11 in the aforesaid original application to file the present counter affidavit.

2. That, this affidavit is being filed pursuant to kind order dtd. 13.12.2024 of this Hon'ble Tribunal. **Annexure-1**

That, the Hon'ble NGT, Principal Bench, New Delhi vide order dated 1.07.2024 had registered OA No. 657 of 2024 Suo Motu in response to the News item appeared in The Hindu dated 4.5.2024 titled "swell waves likely to strike coastal areas over weekend".

4. That, the Coastal Zone Management Plan (CZMP), 2019 of Odisha has been approved by MoEF & CC, Govt. of India on 01.06.2021. Public hearings were conducted in all the 7 coastal districts of Odisha during CZMP Preparation. Copy of the approval letter is enclosed as **Annexure-II**.

5. That, National Centre for Sustainable Coastal Management (NCSCM), Chennai, MoEF&CC, Govt. of India had already carried



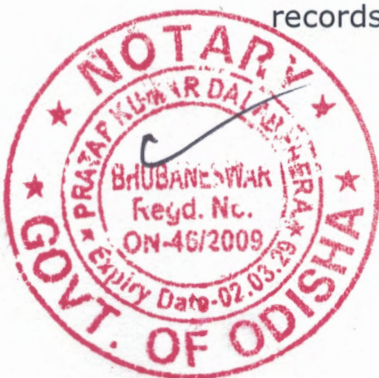
out a National Assessment of Shoreline Changes in Odisha Coast in the year 2011. The study indicates that the coast of Odisha is largely accreting (46.8%), 14.4% is stable and Erosion (High, Medium & Low) accounts for 36.8% & 2% of Artificial coast (Sea wall). Extract Copy of the report is enclosed as **Annexure-III**.

6. That, the Shoreline Management Plan (SMP) including erosion maps in the Coastal Zone Management Plan as per CRZ Notification, 2019 for the state of Odisha is under process in compliance to the order of Hon'ble NGT dated 11.4.2022 in O.A No. 4 of 2013 with Appeal No. 18 of 2017. The report will provide a roadmap for Sustainable development as well as the protection of coastal area. The Authorized agencies of MoEF&CC has been requested for submission of proposal for SMP preparation. Copy enclosed as **Annexure-IV**.

(G. Rajeev)

7. That, Odisha Coastal Zone Management Authority (OCZMA) has recommended proposals submitted by different stake holder Departments pertaining to coastal protection measures like, sea wall, groynes, embankments & plantations etc.

8. That, the contents of this reply affidavit have been read over and explained to me and I have understood the contents thereof and I say that the facts stated hereinabove are true and correct to the best of my knowledge and belief as derived from the official records.



9. That, no part of this affidavit is false and nothing material has been concealed therefrom.

VERIFICATION

Verified at ____ on this the ____ day of ____, 2025. I, the above named deponent do hereby verify that the contents of the above reply affidavit are true and correct, no part of it is false and nothing material has been concealed there from.

IDENTIFIED BY

IDENTIFIED BY ME

ADVOCATE BHUPANESWAR

New Delhi

Dated:

[SOUMYAJIT PANI]

Advocate for Respondent No.11

25/2, First Floor,

Pant Nagar, Jangpura,

New Delhi-110014


Email: spadv103@gmail.com

Mob.: 9312224025


(G. RAJESH)
DEPONENT

**Member Secretary
OCZMA
Forest & Env. Dept.**

THE ABOVE NAMED DEPONENT BEING
IDENTIFIED BY.....
ADV. BBSR APPEARS BEFORE ME AND
STATE AN OATH ON.....AT ABOUT
.....AM/PM THAT THE CONTAINTS
OF THIS AFFIDAVIT ARE TRUE TO THE
BEST OF HIS HER KNOWLEDGE.


P. K. DALABEHERA
Notary, Bhubaneswar
Regd. No. ON-46/09



Item Nos. 17

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 657/2024

News Item titled "Swell waves likely to strike coastal areas over weekend"
appearing in The Hindu dated 04.05.2024

Date of hearing: 13.12.2024

**CORAM: HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

Respondents: Mr. Soumyajit Pani, Adv. for the State of Odisha
Mr. Gigi. C. George, Adv. for R - 3 & 16
Mr. Abhimanyu Garg, Adv. for R - 14 (Through VC)
Ms. Madhuri Donti Reddy, Adv. for Andhra Pradesh CZMA (Through VC)
Mr. Ramesh Kumar R., Adv. for Kerala CZMA (Through VC)

ORDER

1. In this original application, registered *suo-moto*, Tribunal is considering the issue of increasing instances of high-energy swell waves, which is a phenomenon also known as Kallakadal. Reason and remedial action need consideration in the matter. Replies on behalf of respondent nos. 10, 14 and 16 have been received.

2. Learned Counsel for respondent nos. 3 and 11 seek six weeks to file the reply.

3. It will be open to all other respondents to file the reply within the same period.

4. List on 09.04.2025

Prakash Shrivastava, CP

Dr. A. Senthil Vel, EM

December 13, 2024
Original Application No. 657/2024
JG..



**F. No. 12-9/2021-IA.III
Government of India
Ministry of Environment, Forest and Climate Change
IA-III (CRZ Division)**

Indira Paryavaran Bhawan,
Jor Bagh Road, New Delhi -3
Dated: 1st June, 2021

To,

**The Member Secretary,
Odisha Coastal Zone Management Authority,
1st Floor, Administrative Building,
Regional Plant Resource Centre Campus,
Nayapalli, Bhubaneswar- 751015, Odisha**

**Subject: Coastal Zone Management Plans of Odisha as per CRZ Notification,
2019 - regarding.**

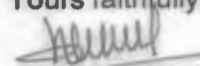
Sir,

This has reference to letter No. EE-18/2019-6100/F&E, dated 19.03.2021 furnishing therein the Coastal Zone Management Plans (CZMPs) of Odisha, drawn as per the provisions of the Coastal Regulation Zone (CRZ) Notification, 2019.

2. In this regard, it is to state that based on recommendation of the National Coastal Zone Management Authority in its 42nd meeting held on 23.03.2021, the Ministry of Environment, Forest and Climate Change hereby conveys its approval of the CZMPs for the State of Odisha. Further, it is to inform that all proposals received henceforth for CRZ clearance shall be considered as per CRZ Notification, 2019 only. However, pending proposals under CRZ Notification 2011, if any, may be considered at the discretion of project proponent.

This issues with the approval of the Hon'ble Minister, EFCC.

Yours faithfully,



**(Dr. H. Kharkwal)
Additional Director /
Scientist 'E' & MS CRZ**

Copy to:

1. The Additional Chief Secretary, Government of Odisha, Department of Forest & Environment, Plot No.108, Unit VII, Surya Nagar, Bhubaneswar – 751003, Odisha.

Ministry of Environment, Forest and Climate Change
(A-III (CRZ Division))
Government of India
F. No. 12-03237-A/III
India, Faridkot Bazaar,
for Bapu Road, New Delhi-110013
Date: 14 June 2021

2. The Deputy Director General of Forests (C), Integrated Regional Office, Bhubaneswar, Ministry of Environment, Forest and Climate Change, A/3, Chandersekharpur, Bhubaneswar-751023.
3. The Director, National Center for Sustainable Coastal Management, Anna University, Chennai, Tamil Nadu-600025.
4. Office copy / Guard file.

[Signature]
(Dr. H. Kharkwal)
Additional Director /
Scientist 'E' & MS CRZ

The first reference to letter No. EE-180012-01007-EE, dated 18.03.2021
relating to the Coastal Zone Management Plan (CZMP) of Odisha, drawn as
per the provisions of the Coastal Regulation Zone (CRZ) Notification, 2019.

In this regard, it is to state that based on recommendation of the National
Coastal Zone Management Authority in its 42nd meeting held on 23.03.2021, the
Ministry of Environment, Forest and Climate Change hereby conveys its approval of
the CZMP for the State of Odisha. Further, it is to inform that all proposals
submitted for CRZ clearance shall be considered as per CRZ Notification,
2019. However, pending proposals under CRZ Notification 2011, if any, may be
considered at the discretion of project proponent.

This matter with the approval of the Hon'ble Minister, EFCO.

Yours faithfully,

[Signature]

(Dr. H. Kharkwal)
Additional Director
Scientist 'E' & MS CRZ

The Additional Director, Secretary, Government of Odisha, Department of Forests,
Environment, P.O. No. 108, Plot VII, Bapu Nagar, Bhubaneswar - 751013.
Odisha

I
True copy

A circular illustration of a pond. In the foreground, a small brown boat with two people inside is on the water. One person is standing and holding a net, while the other is sitting. The water is blue with some dark spots. In the background, there is a green hill with a tree and a small house. A yellow and red line, possibly a path or a stream, winds through the landscape. The entire scene is enclosed in a circular frame.

An aerial photograph showing a coastal region. A large, dark blue body of water occupies the upper right portion of the image. A winding river or inlet flows from the top left towards the center. The land is a mix of green and brown, indicating vegetation and possibly agricultural or undeveloped land. A small cluster of buildings or a settlement is visible in the lower left quadrant. The overall scene depicts a natural coastal environment.

Odisha Coast

National Assessment of Shoreline Change: Odisha Coast

65

8

R. Ramesh
Purvaja Ramachandran
A. Senthil Vel[#]

National Centre for Sustainable Coastal Management
Ministry of Environment and Forests
Government of India
Anna University, Chennai 600 025

*Society of Integrated Coastal Management (SICOM)
Ministry of Environment and Forests
Government of India
New Delhi 110 003

Experts

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S. Thillaigovindarajan
Institute for Ocean Management
Anna University, Chennai 600 025

Project Team for Odisha Coast

G. Mary Divya Suganya
P.D. Tulasi Bai
P. Pandi Selvam
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V.P. Sathiya Bama
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National Centre for Sustainable Coastal Management
Ministry of Environment and Forests
Government of India
www.ncscm.org
&
Institute for Ocean Management
Anna University, Chennai
www.annauniv.edu/iom/home.htm

DISCLAIMER

This report is part of a series of reports that will include text summarizing methods, results, in addition to maps illustrating zones of shoreline change. Zones of shoreline change are being published for the purpose of regional characterization. These maps are not intended to be equated to either as revenue maps of the respective State/ UT/ Government agencies or as the topographic maps of the Survey of India. The maps conform to the National Map Policy dated May 19, 2005 of the Ministry of Science and Technology, Government of India.

These maps are not meant for revenue purposes and should be treated as preliminary scientific products. Further they should not be used for personal claims.

Contact:

National Centre for Sustainable Coastal Management
Ministry of Environment and Forests
Government of India
Koodal Building
Anna University, Chennai 600025

Phone: 91 44 2233 0108, 2220 0159, 2220 3408

Fax: 91 44 2220 0158

Email: rramesh_a@yahoo.com

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Citation: Ramesh, R., Purvaja, R., Senthil Vel, A. (2011) *National Assessment of Shoreline Change: Odisha Coast*. NCSCM/MoEF Report 2011-01, 57 p., available at <http://www.ncscm.org/reports.php>

Photo Credits

Google & Staff of Institute for Ocean Management
Anna University, Chennai

जयराम रमेश
JAIRAM RAMESH



राज्य मंत्री (स्वतंत्र प्रभार)
पर्यावरण एवं वन
भारत सरकार
नई दिल्ली-110003
MINISTER OF STATE (INDEPENDENT CHARGE)
ENVIRONMENT & FORESTS
GOVERNMENT OF INDIA
NEW DELHI - 110 003

26th April 2011

Foreword

Complex and diverse types of natural processes that occur on the coastal zone bring in physical, chemical, and biological changes to the fragile coastlines. Natural processes that influence shoreline changes include waves, tides, littoral currents, water depth, sea-level rise, subsidence, severe storm events (such as cyclones), and sediment transport both on regional and local scales. Human activities in the coastal zone add yet another dimension affecting changes to our coastlines. These activities modify and interrupt the natural coastal processes with significant impacts on the coastline.

The coastline of India is undergoing changes due to various anthropogenic and natural interventions. Most of the shoreline changes are on account of the structures which have been developed/constructed along the foreshore of the country. Several of these developments are not compatible with the dynamic nature of the shoreline. Because of these factors, it has become imperative to identify areas subject to both long- and short-term erosion, since in most cases, rates of erosion have enhanced during the past decade. The Ministry of Environment and Forests is mapping the coastline to enhance the country's preparedness to face sea hazards like Tsunami.

In this context, it is equally important to understand the causes of erosion to undertake proper safeguards in building structures, and infrastructure in eroding coastal areas. The precise interpretation of shoreline change data can help coastal planners, resource managers, and other stakeholders, identify appropriate and inappropriate areas to place structures. It is important to learn from past mistakes, which aid in better planning of coastal infrastructure to protect the coastal livelihood and coastal resources. The shoreline change maps and data for India, as well as maps showing areas subject to erosion, are being prepared for each coastal state/ Union Territory. This study is the first of its kind in mapping the entire country's coastline to identify areas of shoreline change. It is envisaged that interactive maps will be available online for each of the coastal state/ UT on the Ministry's website. I hope this information will be invaluable in providing an overview of areas that are likely to be more vulnerable to coastal erosion, locating future infrastructure and development, identifying areas for conservation of coastal and marine resources and to safeguard coastal population from highly eroding and hazard-prone coastal areas of India.

Jairam Ramesh
(Jairam Ramesh)

Table 1: District-wise length of Odisha Coastline

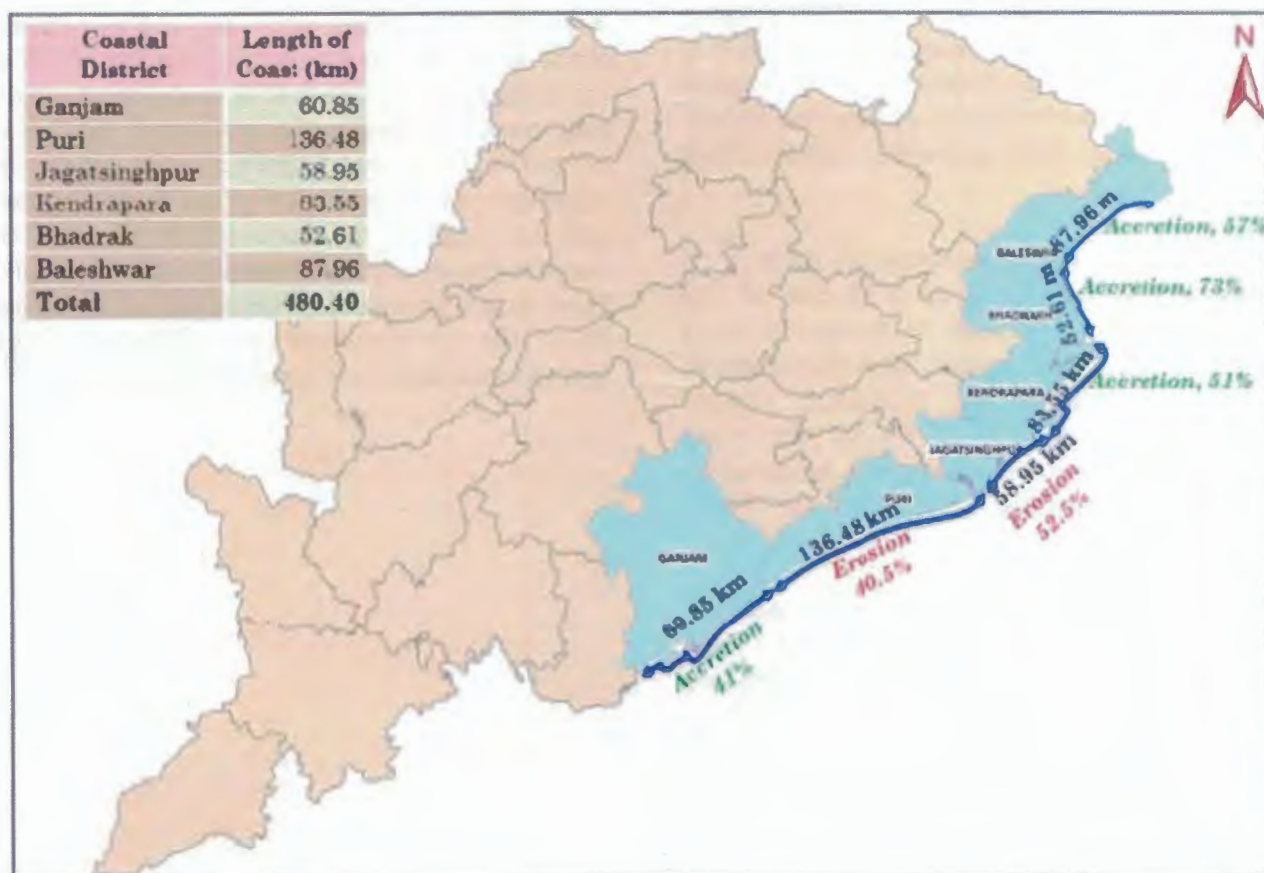
Coastal District	Length of Coast (km)
Ganjam	60.85
Puri	136.48
Jagatsinghpur	58.95
Kendrapara	83.55
Bhadrak	52.61
Baleshwar	87.96
Total	480.40

For the coast of Odisha, base maps were prepared on 1:50,000 scale using the toposheet of the Survey of India. Onscreen digitization of coastline was made using various satellite imageries on 1:50,000 scale and stored as different layers in GIS environment for the years 1990, 2000, and 2010. Depending on

location and data source, different proxies for shoreline position were used to document coastal change, including high water line, wet-dry line, vegetation line, dune toe or crest, toe or berm of the beach, cliff base or top, and the instantaneous water line as extracted from satellite imagery.



Fig. 1: Map indicating coastal districts and corresponding length of Odisha coast along with dominant shoreline change feature (map not to scale)



The results obtained were categorized into eight classes of "Zones of erosion/ accretion" as follows:



Category of shoreline and symbology

Of the zones on which the shoreline was eroding, 'high erosion' was observed at north of river mouths along the Odisha coast. High erosion was also observed on the southern part of the breakwaters of ports, where such coastal engineering structures have greatly altered the natural shoreline movement. Presence of major mangrove systems at the Mahanadi delta and the Bhitarkanika Mangrove Forest have resulted in 'high accretion' areas along the Odisha coast.

Seawalls and/or riprap revetments have been constructed in as much as 9.78 km of the coastal stretch of Odisha to protect coastal infrastructure from erosion and these areas have been classified as 'Artificial Coast'. Statistics indicate that 2.04% of the coast (Table 2) of Odisha is managed artificially, located near Paradip and Dhamra Ports respectively.

Overall statistics indicate that the coast of Odisha is largely accreting (46.8%) and 14.4% is stable. Erosion (High, medium and low

erosion) accounts for 36.8% of the coast (Table 2). This assessment indicates that accretion is dominant in the central and northern part, while erosion dominates the southern part of the coast of Odisha. Low to medium erosion is found to occur along ~137 km of the ~480km coast of Odisha, representing nearly 28.6% of the total coast of Odisha. It could be observed that zones of erosion is obvious to the north of ports such as Gopalpur, Paradip and Anantpur Ports and to the south of Dhamra and Astranga Ports. Accretion is observed on the southern side of Paradip and Gopalpur Ports and stable coast is observed at Anantpur Port. On the northern side of Paradip Port, riprap structures are dominant (Table 3).

True copy

GOVERNMENT OF ODISHA
FOREST, ENVIRONMENT & CLIMATE CHANGE DEPARTMENT

Annexure - IV
Urgent/By email today
13

No. FE-ENV1-ENV-0002-2021 1967/FE&CC, Date. 20.01.25

From

Shri Bijaya Kishor Bhujabala, OSS
Under Secretary to Government

To

The Director, National Center for Sustainable Coastal Management, Chennai
The Director, Space Application Centre, Ahmedabad
The Director, National Centre for Earth Science Studies, Thiruvananthapuram
The Director, Institute of Remote Sensing (IRS), Chennai
The Director, Institute of Environmental Studies and Wetland Management, Kolkata
The Director, National Institute of Oceanography (NIO), Goa

The Director, National Institute of Ocean Technology (NIOT), Chennai

Sub: Preparation of Shore Line Erosion Maps and Shoreline Management Plan as per CRZ Notification, 2019

Sir/Madam,

In inviting a reference to the above-cited subject, I am to inform you that the Coastal Zone Management Plan (CZMP) of Odisha based on CRZ Notification, 2019 was prepared and approved by MoEF&CC in June 2021.

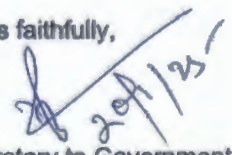
Now, in compliance to the order of Hon'ble NGT(SZ) dt. 11.04.2022 in the matter of O.A. No. 4 of 2013 with Appeal No. 18 of 2017, Shore Line Erosion Maps and Shoreline Management Plan based on approved Coastal Zone Management Plan-2019 need to be prepared by the state.

The scope of work for the for preparation of Shore Line Erosion Maps and Shoreline Management Plan as per CRZ Notification, 2019 is as follows:

1. Preparation of shoreline change (Erosion/ Accretion) maps of the coastal/CRZ area on 1:25000 scale, as per CZMP-2019 grid using digital shoreline analysis system.
2. Demarcation of sediment cells for the coast of Odisha
3. Status of shoreline changes(Erosion/Accretion)
4. Analysis & modelling of coastal processes
5. Beach profile survey
6. Development of conceptual shore protection measures
7. Action plan & shoreline protection measures for Erosion Hot spots/ priority areas.

It is, therefore, requested to furnish a detailed proposal mentioning the completion period and financial break up for preparation of Shore Line Erosion Maps and Shoreline Management Plan for the State of Odisha as your organisation has immense expertise and was involved in preparation of CZMP as well as Shore Line Management Plan of many coastal states. A copy of the proposal may please be sent to oczma1@gmail.com.

Yours faithfully,


20/1/25
Under Secretary to Government



FE-ENV1-ENV-0002-2021/01/2025

True copy

⁷¹ PROOF OF SERVICE

14



SOUMYAJIT PANI <spadv103@gmail.com>

Advance Service Reply in respect of State of Odisha Respondent No. 11 in O.A. No. 657/2024 News Item titled " Swell waves likely to strike coastal areas over weekend" appearing in The Hindu dated 04.05.2024.

1 message

SOUMYAJIT PANI <spadv103@gmail.com>

Thu, May 1, 2025 at 8:11 PM

To: secy-moef@nic.in, director@ncscm.res.in, purvaja@ncscm.res.in, czm-fed@gujarat.gov.in, dir1.mev-mh@gmail.com, goacoastalzone@gmail.com, secyenv.fee@karnataka.gov.in, kczmasandtd@gmail.com, tndoe@nic.in, membersecy@appcb.gov.in, acsenvwb@gmail.com, mspcc_dmn@pccdaman.into, dste.pon@nic.in, 31smsa.63@gmail.com, asga.and2018@gmail.com

To everyone concerned,

Please find enclosed below the Reply of the State of Odisha Respondent No. 11 in the matter mentioned above.

Regards.

--

Office Of SOUMYAJIT PANI

Advocate

Supreme Court of India

25/2, First Floor, Pant Nagar,

Jangpura, New Delhi -110014

Email- spadv103@gmail.com

soumyajitpani@hotmail.com

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 **Reply of Respondent No. 11.pdf**
1278K