

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL,

Principal Bench, New Delhi

Original Application No. 165 of 2020

(Earlier O.A. No. 112 of 2015 (WZ))

Samita Rajendra Patil

Applicant

Versus

Jindal Steel Works Ltd. & Ors.

Respondent(s)

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(Nazimmudin)

Scientist-F

Central Pollution Control Board,  
Parivesh Bhawan, East Arjun Nagar,  
Delhi- 110032

Place: Delhi

Date: 21.01.2022

**PROGRESS REPORT OF THE JOINT COMMITTEE IN COMPLIANCE WITH HON'BLE NGT ORDER OA NO. 165 OF 2020 (PB) [EARLIER OA NO. 122 OF 2015 (WZ) TITLED AS SAMITA RAJENDRA PATIL VS JINDAL STEEL WORKS LTD., & ORS.**

Grievance in the original application No.165/2020 (PB), titled Samita Rajendra Patil Vs Jindal Steel Works Ltd. &Ors, as per order dated 27/05/2021 of the Hon'ble NGT, is against violation of environmental norms in running the industrial operations by M/s Jindal Steel Works Ltd., at Villages: Dolwi, Karawi, Gadab, KharKaravi, Kharmachela and Jui Bapuji and other surrounding areas, District Raigad near Mumbai. The Hon'ble NGT in the aforesaid matter vide order dated 27/05/2021 constituted a five-member joint committee, to be headed by an officer of the rank of Joint Secretary, MoEF&CC, nominated by the Secretary MoEF&CC and comprising District Collector Raigad and representative of CPCB, IIT and MPCB. Directions of the Hon'ble NGT to the aforesaid joint committee in brief are as follows;

- i. To look into the issues raised by the applicant summed up in the aforesaid order including compliance of the Water and Air Acts and HOWM Rules, destruction of mangroves and damage to agriculture, if any, status of scientific disposal of solid waste.
- ii. To estimate the extent of environmental damage and the amount of compensation required and restitution plan (in case of non-compliance).
- iii. The committee will have liberty to take assistance from any other expert institution or individual and conduct proceedings online, except for site visit, if necessary.
- iv. If the violations are found, the committee may also suggest the amount of compensation to be recovered apart from other restoration measures.
- v. The applicant as well as the project Proponent will be at liberty to represent their respective versions to the Committee through the State PCB.
- vi. While giving a report to this Tribunal, its copies be given to the applicant as well as the project proponent for their response, if any, before the next date.

In compliance to the aforesaid Hon'ble NGT order dated 27/05/2021, joint committee has been constituted by MPCB vide office order no. MPCB/MS/B-25, dated 07/07/2021 as below:

1. Shri Jigmet Takpa, Joint Secretary, MoEF&CC, Govt.of India
2. Shri Nishchal C., Scientist 'D', CPCB – Regional Directorate – Pune
3. Prof. Anurag Garg, IIT, Powai, Mumbai
4. Mrs.Nidhi Chaudhari, District Magistrate, Raigad
5. Shri V. V. Killedar, I/c Regional Officer, MPCB, Raigad

Two more MPCB officials viz. Shri P. K. Mirashe, Asstt. Secretary (Tech), MPCB, Mumbai and Shri N.N. Gurav, RO (HQ), MPCB, Mumbai have also been added as members of the joint committee by MPCB. Sri Sundeep, Scientist F, Control of Pollution Division, MoEF&CC was also opted as an expert member to the joint committee.

The joint committee under the Chairmanship of Shri Jigmet Takpa, Joint Secretary, MoEF&CC convened its first meeting through video conferencing on 04/08/2021. The joint committee deliberated in detail on various alleged issues mentioned in the Hon'ble NGT order dated

27/05/2021 w.r.t. non-compliances of Water & Air Acts, HOWM Rules, destruction of mangroves/creeks/natural channels/nallahs, damage to agriculture fields and unscientific disposal of slag by M/s Jindal Steel Works Ltd., Dolvi and directions passed by the Hon'ble NGT to the committee. After detailed discussions, various assessment/studies were identified to be carried out through respective concerned agencies and an action plan was also formulated in order to comply with the aforesaid order of the Hon'ble NGT. Copy of such identified assessment/studies and respective concerned agencies are given in the minutes of first meeting of the joint committee is given at **Annexure-1**. Such concerned agencies were requested vide emails in August 2021 to submit assessment/studies reports as per the said action plan. Thereafter, follow ups were also carried out. Representations from applicant were also received and concerned agencies were also requested to incorporate such represented issues in their assessment/studies reports.

Upon receipt of assessment/studies reports from concerned agencies (viz. NCSCM-Chennai, MoEF&CC-Nagpur, MPCB, District Collector-Raigad, Khar Land Department, Agriculture Department and District Health Officer) during October, 2021, the committee made detailed deliberations on findings/gaps in the assessment/studies reports during second meeting held on 19/11/2021 through video conferencing. Following are decisions in brief taken during the said second meeting:

- (i) NCSCM to further carry-out assessment studies w.r.t. destruction of mangroves, loss/encroachment of natural creeks and mangrove buffer areas in terms of time-series maps.
- (ii) Reporting of damages/loss/encroachment of mangroves/natural creeks/mangrove buffer areas taking into account of mapping of mangroves and natural creeks reported by Maharashtra Remote Sensing Application Centre (MRSAC);
- (iii) A sub-committee headed by the District Collector-Raigad or his representative not below the rank of Add. District Magistrate, with representatives from Mangrove Cell (Govt. of Maharashtra), NCSCM, MRSAC and the District Revenue Department, to carry out field validation of damage/encroachment of mangroves/mangroves buffer zone/creeks as per satellite image report of NCSCM along with landownership of such premises & activities therein. Action plan for review including validation through field survey on various activities by the aforesaid sub-committee and concerned agencies, including Terms of Reference (ToR) were also prepared by the committee.
- (iv) Various assessment studies/report to also include areas in & around 13 no. of alleged villages.
- (v) The sub-committee to also co-ordinate with various other concerned organisations & evaluate (with field validation also) other damage assessment/reports of various agencies such as State Agricultural Dept., State Khar Land Dept., State Fisheries Dept. and State Maritime Board.
- (vi) The said sub-committee to submit its target date, as expeditious as possible, to the joint committee for each of the activities to enable the committee in seeking necessary time extension by the Hon'ble NGT.
- (vii) Upon receipt of the aforesaid sub-committee's report with field validations, wherever applicable, the joint committee shall carry-out site inspection wherein source/fugitive

emission monitoring of the coke oven plant and ambient air quality monitoring shall also be carried out by MPCB and CPCB. Such monitoring & analysis may be carried out by MPCB Laboratory. In case, such facility is not available with MPCB Laboratory, MPCB may engage EPA approved or NABL accredited Laboratory for the same.

Meanwhile, it was also felt prudent to have a field visit by a team comprising of Sh. Sundeep, Director, MoEF&CC, Sh. Bharat Sharma, Regional Director, CPCB RD Pune, Sh. Nishchal C., Sc. D, CPCB RD Pune, and senior officers of MPCB for further assessment of some of the findings apart from the scope defined for the sub-committee as the joint committee observed that the findings and preliminary assessment are based either on secondary data or are have been provided by the concerned agencies.

- (viii) Health record of employees working in the coke oven plant of the industry under reference for the assessment period w.e.f. September, 2010 to May, 2021, may also be assessed especially w.r.t. respiratory diseases by the District Health Officer. Report in this regard be submitted to the joint committee by the District Collector, Raigad through District Health Officer.
- (ix) With regard to valuation of services losses due to encroachment/loss/destruction of mangroves, natural creeks and mangroves buffer areas including required remedial measures, restitution plan and estimated cost thereto, an expert committee comprising of representative from NCSCM, Indian Institute of Forest Management-Bhopal, Madras School of Economics, Mangrove Cell (Govt. of Maharashtra) and NEERI has been decided to be constituted. The expert committee to deliberate and work out approach/methodology for such valuation/remedial measures/restitution plan and estimated cost which may be applied on validated encroachment/loss data to be worked out by the sub-committee.

Details of the aforesaid decisions/activities/action plan including ToR are given in the minutes of second meeting of the joint committee at **Annexure-2**.

Accordingly, the concerned agencies were requested vide email dated 30/11/2021, 10/12/2021 and 17/01/2022 to execute/validate as per the aforesaid action plan and ToR therein and submit time target to the joint committee for completion of the same.

Also, as decided during the second joint committee meeting held on 19/11/2021, a team of committee members/officials from MoEF&CC, CPCB and MPCB carried-out site inspection of M/s JSW Ltd., during 29/12/2021 to 30/12/2021. A meeting with the various concerned agencies were also held during the said site visit to assess the status/progress of various assessment studies and field survey on 29/12/2021, followed by meeting with the District Collector, Raigad and District Range Forest Officer – Mangrove Cell on 30/12/2021 to discuss the status and way forward of the action plan, ToR and timely compliance of the Hon'ble NGT order.

During the said meeting on 29/12/2021, locations and parameters for monitoring of ambient air quality, fugitive emission and source emission were decided. During the field visit, the team observed sporadic and haphazard dumping of municipal solid waste within the 50 m mangrove buffer zone of the conveyor belt area of M/s JSW Ltd., i.e. from the stretch between Maharashtra Maritime Board jetty till the approach road of the Alibaug-Mumbai highway. It is

gathered through the District Administration that the particular land is Govt. owned and the municipal solid waste has been dumped illegally by the nearby gram panchayats viz. Dolvi and Vadkhal in the 50 m mangrove buffer area. Satellite image depicting the destruction of mangroves and photographs depicting the destruction of mangroves including sporadic and haphazard dumping of municipal solid waste is given at **Photographs 1 to 4**.



**Google imagery of 2018, depicting the destruction of mangroves and illegal construction of approach road and dumping of municipal solid waste in the 50 m mangrove buffer area.**

#### **Legend**

- 1 : Mangrove near the bank of Dharmtar creek**
- 2 : Destruction of mangrove and dumping of municipal solid waste within 50 m mangrove buffer area (Govt. owned land) by the grampanchayats viz. Dolvi and Vadkhal**
- 3 : 2 gallery (6 conveyor belts in each gallery) conveyor belt system installed by M/s JSW Ltd., from Dharmtar jetty till the premises of M/s JSW Ltd.,**
- 4 : Illegal approach road constructed for dumping of solid waste within the mangrove buffer area (Govt. owned land)**

During the meeting, District Administration and Mangrove Dept. were requested to take suitable action against the village panchayat for destruction of mangroves, construction of illegal approach road and illegal dumping of municipal solid waste in the mangrove buffer area. It was also requested that appropriate remedial measures be taken and implemented for restoration of the reported damaged mangrove buffer areas.



**Photograph-1: Municipal solid waste dumped along the conveyor belt, within 50 m mangrove buffer area by the gram panchayats viz. Dolvi and Vadkhal.**



**Photograph-2: Aerial view depicting destruction of mangroves and illegal dumping of municipal solid waste by the gram panchayats viz. Dolvi and Vadkhal.**



**Photograph-3: Aerial view depicting destruction of mangroves and illegal dumping of municipal solid waste by the gram panchayats viz. Dolvi and Vadkhal.**



**Photograph-4: Aerial view depicting destruction of mangroves and illegal dumping of municipal solid waste by the gram panchayats viz. Dolvi and Vadkhal.**

The team also made the following observations:

- i. Emission from the stack attached to sintering plant was observed, it needs to be ascertained the cause of such emission and its frequency after analysis of the feed composition and adequacy of the pollution control system installed for control of emission from sinter plant.
- ii. Fugitive emissions (secondary emissions) were observed during the visit from Steel melting shop-1. Reportedly, the dilapidated enclosure sheets were removed for installation of new enclosure sheets. As reported, replacement of enclosure sheets were under progress as routine maintenance work, however, due to lack of proper planning and scheduling of maintenance activities, such emission happens. Industry shall ensure that appropriate standard maintenance practices (SMP) is developed and adopted to avoid such episodes emissions.
- iii. The industry has carried-out de-silting of natural creek, passing through the industrial premises. It is observed that the de-silted sludge was haphazardly dumped along the natural creek, leading spillage back into the natural creek. The industry has not identified the designated storage area for handling and storage of de-silted sludge. Also, not having the management and utilization plan for the same. Housekeeping and proper management plan for such de-silting waste from the creek channel may be developed by the industry in a tome bound manner.
- iv. Slag generated from the steel melting shop is stored near the slag processing plant was devoid of wind breaking walls, such inadequate containment measures may contribute to area sources of air pollution during transportation, handling of slag and during winds.
- v. Similarly, the raw material handling and storage area meant for storage of iron bearing material, carbon bearing material, fluxes and coal was also observed to be devoid of adequate wind breaking walls, such inadequate containment measures may contribute to area sources of air pollution during transportation/handling of raw materials and during winds.

MPCB was requested to take necessary action against the industry. Accordingly, MPCB vide letter No. BO/RO-Raigad/TB-220103-FTS-0170, dated 03/01/2022 has directed the industry to submit the action plan along with time line for compliance of the points within a period of three days from the receipt of letter from MPCB.

It is humbly submitted that work of field validation/assessment/studies as per the action plan and ToR by various agencies, as identified by the joint committee, are in progress. Further, considering the quantum of works to be completed, no. of State Govt. agencies & research institutes involved for carrying out various field validation/assessment/studies, as above and given at **Annexure-2**, and due to the present pandemic situation, the Hon'ble NGT may kindly grant extension of time period of three months to the joint committee for submitting its report in compliance with aforesaid order dated 27/5/2021.

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**MINUTES OF THE FIRST MEETING OF THE COMMITTEE CONSTITUTED BY THE  
HON'BLE NATIONAL GREEN TRIBUNAL (NGT) IN THE MATTER OF OA NO. 165 OF 2020  
(PB) [EARLIER OA NO. 122 OF 2015 (WZ) TITLED AS SAMITA RAJENDRA PATIL VS  
JINDAL STEEL WORKS LTD., & ORS.**

The Hon'ble NGT in the aforesaid matter vide order dated 27.05.2021 constituted a five-member joint committee, to be headed by an officer of the rank of Joint Secretary, MoEF&CC, nominated by the Secretary MoEF&CC and comprising the CPCB, the IITMumbai, the District Magistrate, Raigad, the State PCB as Members. Grievance in this application is against violation of environmental norms in running the industrial operations by M/s Jindal Steel Works Limited at Village Dolwi, Karawi, Gadab, KharKaravi, Kharmachela and Jui Bapuji and other surrounding areas, District Raigarh, near Mumbai. Copy of the said order dated 27/5/2021 of Hon'ble NGT is given at **Annexure-I**. The operative directions of the Hon'ble NGT to the aforesaid joint committee in brief are as follows;

- i. To look into the issues raised by the applicant summed up in the aforesaid order including compliance of the Water and Air Acts and HoWM Rules, destruction of Mangroves and damage to Agriculture, if any, status of scientific disposal of solid waste.
- ii. To estimate the extent of environmental damage and the amount of compensation required and restitution plan (in case of non-compliance).
- iii. The committee will have liberty to take assistance from any other expert institution or individual and conduct proceedings online, except for site visit, if necessary.
- iv. If the violations are found, the committee may also suggest the amount of compensation to be recovered apart from other restoration measures.
- v. The applicant as well as the project Proponent will be at liberty to represent their respective versions to the Committee through the State PCB.

In compliance with aforesaid order of the Hon'ble NGT, the five-member joint committee has been constituted as below:

- (i) ShriJigmetTakpa, Joint Secreatry, MoEF&CC, GOI - Chairman of the Committee
- (ii) ShriNishchal C., Scientist 'D' – CPCB, Regional Directorate – Pune
- (iii) Prof. AnuragGarg, Indian Institute of Technology, Powai, Mumbai
- (iv) Mrs.NidhiChaudhari, District Magistrate – Raigad
- (v) Shri V. V. Killedar, In-charge: Regional Officer – Raigad, MPCB

First meeting of the committee was held on 04.08.2021 through video conferencing under the Chairmanship of ShriJigmetTakpa, Joint Secreatry, MoEF&CC. Representative from National Centre for Sustainable Coastal Management (NCSCM) was also invited to participate in the meeting. List of participants present in the aforesaid joint committee meeting is given at **Annexure-II**.

Representative from CPCB, Regional Directorate-Pune, welcomed chairman and members of the joint committee and invitee participants. He briefed that agenda of the meeting has already been circulated to all members of the committee. Representative from MPCB will be making

presentation about the industry (i.e. M/s Jindal Steel Works Limited at Village Dolwi, District: Raigad) and various environmental issues followed by presentation from CPCB representative on proposed action plans for execution of compliance of tasks assigned to the committee by the Hon'ble NGT. Thereafter, the committee may discuss and deliberate including scheduling of the field visit and other items with permission of the chairman.

Chairman of the committee in his introductory remarks expressed that action plans and deliverables of the committee should be objective and scientifically addressed and evidence based as far as possible. With regard to assessment of destruction of mangroves, if any, it may be scientifically evaluated using satellite images of the area under reference. He also urged from all the committee members to actively participate during deliberations and discussion and give their suggestions.

Thereafter, Representative from MPCB, Regional Office – Raigad, made a presentation about the industry, environmental issues on the following aspects;

- Chronology of various clearances obtained by the industry.
- Details on various plants, process their capacity, status of CC&A.
- Pollution control system installed for abatement of emission, effluent and installation of OCEMS for emission & effluent and status of connectivity to CPCB and MPCB servers.
- Existing management practice of solid waste generated from various activities of integrated iron & steel plant.

Representative from CPCB, Regional Directorate-Pune, and made a detailed point-wise presentation on issues raised by the applicant summed up in the aforesaid Hon'ble NGT order vis-à-vis proposed action plans for execution of compliance of tasks assigned to the committee. With regard to the assessment of destruction of mangrove areas, natural creek and drains/nalas; Representative from National Centre for Sustainable Coastal Management, informed that compilation of time series maps of last two decades through toposheets and satellite images of the area under consideration can be plotted with high resolution images. With these high-resolution images, the destruction (if any) in the mangrove areas, natural creek and drains/nalas due to industrial activities can be evaluated including estimation of extent of environmental damage, amount of compensation and restitution plan (in case of damages). He, however, expressed the limitation in compiling time series maps beyond 1990 due to difficulty in obtaining the high-resolution images.

Representative from IIT-Bombay expressed that historical data i.e. baseline environmental information with respect to various environmental attributes may be obtained and analysed from the environment impact assessment reports of the industry wherever applicable and possible. With regard to allegation on effects of dumping of waste/by-product i.e. slag on agricultural fields, he also expressed that in addition to analysis of slag samples for relevant parameters listed in Schedule-II of the Hazardous Waste Rules, 2016 and its correlation w.r.t. crop productivity due to its hazardous characteristics, if any; presence of the boron and sodium (being non-hazardous in nature) in such slags and soils may also be taken into consideration as soil fertility and crop productivity may have effect also due to boron and sodium.

### **Decisions:**

After detailed discussions, following decisions were taken by the committee:

- (i) Action plan and various studies/activities require to be carried out along with the concerned agency, as finalised during the discussions, are given at **Annexure-III**. The concerned agencies, as given at the said **Annexure-III**, shall submit their respective report to CPCB and MPCB before 15/9/2021.  
CPCB and MPCB may co-ordinate with the concerned agency and circulate the compiled report to the committee before next meeting of the committee.
- (ii) Various assessment studies w.r.t. damage of mangroves, creeks/channels/nallahs, soil, agricultural land and Kharbandistibandh due to activities of the industry under reference, as outlined in **Annexure-III**, be carried out w.r.t. prior to establishment of the industry under reference i.e. 1990 as base period and till May 2021 or afterwards.
- (iii) Source/Fugitive/Work zone emission monitoring of the coke oven plant and ambient air quality monitoring including sampling & analysis of slags, as given at **Annexure-III**, may be carried out by CPCB and MPCB after monsoon or during visit of the committee.  
Such monitoring & analysis may be carried out by MPCB Laboratory. In case, such facility is not available with MPCB Laboratory, MPCB may engage EPA approved or NABL accredited Laboratory for the same.
- (iv) Violations of provisions of Environmental Clearance Notifications and Environmental Clearance conditions may be assessed jointly by the MoEF&CC's Regional Office, Nagpur and MPCB.
- (v) Next meeting of the committee be held on 27/09/2021 (at 11.30 hrs) to deliberate on the findings of the report.
- (vi) Visit to the site may be carried out after the monsoon and as finalised in the next meeting scheduled on 27/09/2021.
- (vii) MPCB to compile representations received from the applicant as well as the project proponent, if any, and present to the committee in the next meeting or during the site visit. Further, MPCB may co-ordinate in case applicant or the project Proponent makes any request to represent during the site visit of the committee.

The meeting ended with vote of thanks to the chair.

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**Annexure- II**

<b>S. no.</b>	<b>Name of the participants</b>	<b>Department</b>
1.	ShriJigmetTakpa, Joint Secretary, Chairman of the joint committee	MoEF&CC, Gol
2.	ShriNishchal C., Scientist 'D'	CPCB, Regional Directorate - Pune
3.	Prof. AnuragGarg	IIT Bombay, Powai, Mumbai
4.	Mrs.NidhiChaudhari, District Magistrate	District Magistrate, GoM
5.	Shri V. V. Killedar, In-charge: Regional Officer	MPCB, Raigad
6.	Dr. Ramesh Ramachandran, Director	National Centre for Sustainable Coastal Management
7.	Shri Bharat K Sharma, Regional Director	CPCB, Regional Directorate - Pune

**ACTION PLAN FOR EXECUTION OF HON'BLE NGT ORDER DATED 27.05.2021 IN THE MATTER OA NO. 165 OF 2020**  
**[EARLIER O. A. NO. 122/2015 (WZ), SAMITA RAJENDRA PATIL VS JINDAL STEEL WORKS LTD., & ORS.**

**Table: Way forward for compliance of Hon'ble NGT order dated 27.05.2021**

<b>S. no.</b>	<b>Studies/activities require to be carried-out w.r.t. compliance of the Hon'ble NGT order dated 27.05.2021</b>	<b>Agency who will execute/provide the report to the joint committee</b>	<b>Time target for execution of action plan/providing information</b>
1.	<ul style="list-style-type: none"> <li>• Assessment of destruction of mangroves of Dharmtar creek and within &amp; around the industry premises due to various developmental/expansion activities carried-out by the industry using CRZ Map, toposheets and satellite images (w.e.f. 1990 till May, 2021 or afterwards):               <ul style="list-style-type: none"> <li>i. In case destruction of mangroves are established, estimation of extent of environmental damage, remedial measures &amp; restitution plan and the amount of compensation. (w.e.f. 1990 till May, 2021 or afterwards).</li> <li>ii. Status of compliance of order dated 6<sup>th</sup> October, 2005 of the Hon'ble Bombay High Court in a group of Petitions bearing W.P. No. 3246 of 2004.</li> </ul> </li> </ul>	W.r.t. (i) & (ii): National Centre for Sustainable Coastal Management (NCSCM)	15.09.2021
2.	Status of encroachment of natural creeks and channels with details due to various developmental/expansion activities carried-out by the industry including jetty areas (w.e.f. 1990 till May, 2021 or afterwards).	District Collector, Govt. of Maharashtra	15.09.2021
3.	<ul style="list-style-type: none"> <li>• Assessment of destruction of natural creeks and channels around the industry premises including jetty areas due to various developmental/expansion activities carried-out by the industry using CRZ Map, toposheets and satellite images (w.e.f. 1990 till</li> </ul>	National Centre for Sustainable Coastal Management (NCSCM)	15.09.2021

	<p>May, 2021 or afterwards):</p> <p>i. In case destruction of natural creeks and channels, estimation of extent of environmental damage, remedial measures &amp; restitution plan and the amount of compensation (w.e.f. 1990 till May, 2021 or afterwards).</p>		
4.	<p>• Assessment of adverse effects due to coke oven plant:</p> <p>i. Source emission monitoring of stack attached to coke oven plant for the notified standards/parameters and as mentioned in CC&amp;A (SO<sub>2</sub>, NO<sub>x</sub>, PM, CO and BaP).</p> <p>ii. Ambient air quality monitoring at 06 locations (03 locations at about 120° each within and outside the plant premises, preferably at alleged locations) for the parameters viz. PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub>, CO and BaP.</p> <p>iii. In case non-compliances are established, estimation of environmental compensation and suggesting the remedial measures.</p>	W.r.t. (i), (ii) & (iii): MPCB and CPCB	After monsoon or during visit of the committee
5.	<p>• Assessment of illegal dumping of by-products/waste products i.e. slag generated from hot strip mill, blast furnace etc. on mangrove areas, natural drains/nalas shall be done as below:</p> <p>i. Inventorization of various by-products/waste products, their management as per CC&amp;A conditions, status of management of the same w.r.t. disposal and utilization details (w.e.f. 1990 till May, 2021 or afterwards).</p> <p>ii. Assessment of illegal dumping of by-products/waste products i.e. slag on mangrove areas, natural drains/nalas in &amp; around at alleged villages (viz. Kharmachi, Kharkaravi, Juibapuji, Dolwi, Kharchirbi, Wadkhal, Vave, Kolve etc. situated within Taluka Pen) with the help of toposheets and satellite images (w.e.f. 1990 till May, 2021 or afterwards).</p> <p>iii. In case of destruction of mangroves, natural creeks/nalas due to dumping of by-products/waste products, estimation</p>	<p>• MPCB</p> <p>• W.r.t.(ii) &amp; (iii): National Centre for Sustainable Coastal Management (NCSCM)</p>	<p>• W.r.t. (i): 15.09.2021</p> <p>• W.r.t. (ii) &amp; (iii): 15.09.2021</p>

	<p>of extent of environmental damage, remedial measures &amp; restitution plan and the amount of compensation (w.e.f. 1990 till May, 2021 or afterwards).</p> <p>iv. Visual observations of mangrove areas, natural drains/nalas in &amp; around at alleged villages (viz. Kharmachi, Kharkaravi, Juibapuji, Dolwi, Kharchirbi, Wadkhal, Vave, Kolve etc. situated within Taluka Pen).</p>	<ul style="list-style-type: none"> <li>• Joint committee</li> </ul>	<ul style="list-style-type: none"> <li>• W.r.t. (iv): After monsoon or during visit of the committee</li> </ul>
6.	<ul style="list-style-type: none"> <li>• Assessment of illegal dumping of by-products/waste products i.e. slag generated from hot strip mill, blast furnace etc. on agricultural land in surrounding areas of the industry and in villages (viz. Kharmachi, Kharkaravi, Juibapuji, Dolwi, Kharchirbi, Wadkhal, Vave, Kolve etc. situated within Taluka Pen) <ul style="list-style-type: none"> <li>i. Reconnaissance survey of the areas.</li> <li>ii. Collection of soil samples from various locations of the above areas and also suitable reference soil samples (from unaffected area) and their analysis for relevant parameters including Boron and Sodium.</li> <li>iii. Compilation of year wise crop productivity data and assessing its trend (w.e.f. 1990 till May, 2021 or afterwards).</li> <li>iv. Based on the analysis results of soil samples and the crop productivity data, assessment of areas affected in terms of soil fertility/ agricultural productivity in the above-mentioned areas.</li> <li>v. In case of effect on soil fertility/ agricultural productivity due to illegal dumping of by-products/waste products, estimation of extent of environmental damage, remedial measures &amp; restitution plan and the amount of compensation (w.e.f. 1990 till May, 2021 or afterwards).</li> <li>vi. Collection of various slag samples stored within the industry and TCLP/STLC analysis for parameters Arsenic, Barium,</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• W.r.t. (i) to (v): District Collector through Agriculture Dept. (Govt. of Maharashtra) of their own or engaging a reputed Govt. agriculture institute/university</li> <li>• W.r.t. (vi) and (vii): MPCB and CPCB</li> </ul>	<ul style="list-style-type: none"> <li>• W.r.t. (i) &amp; (iii): 15.09.2021.</li> <li>• W.r.t. (ii), (iv) &amp;(v): After monsoon or during visit of the committee.</li> <li>• W.r.t. (vi) &amp; (vii): After monsoon or during visit of the committee</li> </ul>

	<p>Cadmium, Chromium, Copper, Cyanide, Lead, Manganese, Mercury, Nickel, Selenium, Silver and Zinc as per Hazardous &amp; Other Wastes (Management &amp; Transboundary) Rules, 2016 and also Barium and Sodium.</p> <p>vii. Based on the analysis results of slag samples, suggesting environmental impact, if any, and remedial measures, as applicable.</p>		
7.	<ul style="list-style-type: none"> <li>• Assessment on damage of Kharbandistibandh (if any) due to industrial activity. <ul style="list-style-type: none"> <li>i. Examining alleged incidence of 03/01/2015 by the Tahasildar, Pen, as referred at Para 2 at page no. 4 of the order dated 27/05/2021 of the Hon'ble NGT.</li> <li>ii. In case of damage of the Kharbandistibandh due to the industrial activity: <ul style="list-style-type: none"> <li>- status report including extent of salt level in the agricultural fields and areas affected, and;</li> <li>- estimation of extent of land damage, remedial measures &amp; restitution plan and the amount of compensation (w.e.f. 1990 till May, 2021 or afterwards).</li> </ul> </li> </ul> </li> </ul>	W.r.t. (i) & (ii): Khar Land Department, Govt. of Maharashtra	15.09.2021
8.	<ul style="list-style-type: none"> <li>i. Assessment of violations of provisions of Environmental Clearance notifications and Environmental Clearance conditions in development/expansion of jetty (w.e.f. 1990 till May, 2021 or afterwards).</li> <li>ii. In case violations, estimation of extent of environmental damage, remedial measures &amp; restitution plan and the amount of compensation (w.e.f. 1990 till May, 2021 or afterwards).</li> </ul>	<ul style="list-style-type: none"> <li>• W.r.t. (i): Regional Office of MoEF&amp;CC.</li> <li>• W.r.t. (ii): Joint committee</li> </ul>	15.09.2021
9.	<ul style="list-style-type: none"> <li>• Assessment of CRZ Rules violations w.r.t. construction of conveyor belt and development/expansion/operation of jetty. <ul style="list-style-type: none"> <li>i. Assessment of violations of provisions of CRZ Rules and</li> </ul> </li> </ul>	• W.r.t. (i) & (ii): National Centre for Sustainable Coastal Management (NCSCM)	15.09.2021

	<p>CRZ clearance conditions (w.e.f. 1990 till May, 2021 or afterwards).</p> <p>ii. In case of violations, estimation of extent of environmental damage, remedial measures &amp; restitution plan and the amount of compensation (w.e.f. 1990 till May, 2021 or afterwards).</p>		
10.	<ul style="list-style-type: none"> <li>• Compliance status w.r.t. conditions of The Water (Prevention and Control of Pollution) Act, 1974 shall be done as below: <ul style="list-style-type: none"> <li>i. Compliance of CC&amp;A conditions w.r.t. effluent discharge/ZLD i.e. establishment of requisite effluent treatment system, OCEMS installed, effluent monitoring of the industry, violations observed and actions taken, as applicable (w.e.f. 1990 till May, 2021 or afterwards).</li> <li>ii. In case non-compliances, estimation of extent of environmental damage, remedial measures &amp; restitution plan and the amount of compensation (w.e.f. 1990 till May, 2021 or afterwards).</li> </ul> </li> </ul>	W.r.t. (i) & (ii): MPCB.	15.09.2021
11.	<ul style="list-style-type: none"> <li>• Compliance status w.r.t. conditions of The Air (Prevention and Control of Pollution) Act, 1981 shall be done as below: <ul style="list-style-type: none"> <li>i. Compilation of CC&amp;A conditions w.r.t. installation of requisite no. of stacks and associated air pollution control devices installed for management of source emission, OCEMS installed, source emission monitoring of the industry, violations observed and actions taken, as applicable (w.e.f. 1990 till May, 2021 or afterwards).</li> <li>ii. Compilation of CC&amp;A conditions w.r.t. installation and monitoring of manual/continuous ambient air quality monitoring stations within the industry premises, violations observed and actions taken, as applicable (w.e.f. 1990 till May, 2021 or afterwards).</li> <li>iii. In case non-compliances, estimation of extent of</li> </ul> </li> </ul>	W.r.t. (i), (ii) & (iii): MPCB	15.09.2021

	environmental damage, remedial measures & restitution plan and the amount of compensation (w.e.f. 1990 till May, 2021 or afterwards).		
12.	<ul style="list-style-type: none"> <li>• Compliance status w.r.t. conditions of Hazardous &amp; Other Wastes (Management &amp; Transboundary) Rules, 2016 shall be done as below: <ul style="list-style-type: none"> <li>i. Listing, quantification and their management details of various hazardous wastes generated by the industry and their compliance status w.r.t. HoWM Rules, 2016 and authorization conditions (w.e.f. 1990 till May, 2021 or afterwards).</li> <li>ii. In case non-compliances, estimation of extent of environmental damage, remedial measures &amp; restitution plan and the amount of compensation (w.e.f. 1990 till May, 2021 or afterwards).</li> </ul> </li> </ul>	W.r.t. (i) & (ii): MPCB	15.09.2021
13.	Health impact assessment on residents nearby to the plant premises within 5 Km based on the health records due to industrial activity especially w.r.t. particulate matter and gaseous emissions (SO <sub>2</sub> , NO <sub>x</sub> , PM, CO and BaP) w.e.f. 1990 till May, 2021 or afterwards.	District Collector through District Health Officer	15.09.2021

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**MINUTES OF SECOND MEETING OF THE JOINT COMMITTEE CONSTITUTED BY THE HON'BLE NATIONAL GREEN TRIBUNAL (NGT) VIDE ORDER DATED 27/5/2021 IN THE MATTER OF OA NO. 165 OF 2020 (PB) [EARLIER OA NO. 122 OF 2015 (WZ) TITLED AS SAMITA RAJENDRA PATIL VS JINDAL STEEL WORKS LTD., & ORS.**

Second meeting of the joint committee was held on 19/11/2021 through video conference under the Chairmanship of ShriJigmetTakpa, Joint Secreatry, MoEF&CC, to discuss the progress on action plan formulated during its first meeting held on 04/08/2021. List of participants present in the aforesaid joint committee meeting is given at **Annexure-I**.

Representative from CPCB, Regional Directorate-Pune, welcomed the Chairman and members of the joint committee and invitee participants. It was briefed that the joint committee in its first meeting held through video conference on 04/08/2021 deliberated in detail on the various alleged issues mentioned in the Hon'ble NGT order dated 27/05/2021 w.r.t. non-compliances of Water & Air Acts, HOWM Rules, destruction of mangroves/creeks/natural channels/nallahs, damage to agriculture fields and unscientific disposal of slag by M/s Jindal Steel Works Ltd., Dolwi. After detailed discussions, various assessment/studies were identified to be carried out through respective concerned agencies and an action plan was also formulated in this regard. Such concerned agencies were requested to submit reports and the same have been received on most of such assessment/studies. Representations from applicant were also received and concerned agencies were also requested to incorporate such represented issues in their reports. Status on the same along with draft gaps/issues shall be presented by CPCB representative for deliberations by all in this meeting.

It was also informed that MPCB vide office order no. MPCB/MS/B-29, dated 08/09/2021 has included its two more officials as members of the joint committee namely Shri P. K. Mirashe, Asstt. Secretary (Tech), MPCB, Mumbai and Shri N.N. Gurav, RO (HQ), MPCB, Mumbai.Sri.Sundeep, Scientist F and Director, Control of Pollution Division, MoEF&CC was co-opted as a member to the committee as an expert in Pollution Control in Integrated Iron & Steel Industries in the committee.

Chairman of the joint committee in his introductory remarks mentioned that most of the preliminary studies/reports on various assessment outlined in the action plan have been submitted by concerned agencies and appreciated the collective efforts made by various

agencies towards achieving compliance of the aforesaid order of the Hon'ble NGT. He urged that there is need to evaluate such findings and address gaps, if any, taking into account scientific based evidences followed by its field validation. He also urged all members of the committee and invitees to actively put forward their views and arrive to solutions with consensus of all. However, it shall also be endeavored to comply orders of the Hon'ble NGT expeditiously and in case more time is required the committee may seek time extension submitting progress made so far with period requirement to complete remaining tasks.

Thereafter, representative from CPCB made a detailed point-wise presentation on the each of the activities of the action plan decided in previous meeting vis-à-vis progress status, findings and draft gaps/issues and way forward.

The joint committee deliberated on the assessment period to be considered for assessing the destruction of mangroves, loss/encroachment of natural creeks and mangrove buffer areas due to various activities of the industry under reference and collectively decided that assessment, be carried out w.e.f. September, 2010 to May, 2021<sup>1</sup> also considering that most of the expansion & developmental activities of the industry was in progress during 2016 to 2021. Pre September, 2010 may also be helpful to understand trend/effect of damages due the natural process of any other activities. Representative from NCSCM expressed that better & high-resolution image may be available for the said assessment period which will help in high resolution mapping.

With regard to quantification and dumping of slag in the alleged areas (agricultural lands/low lying areas), the committee decided that ground verification of the satellite image based inferences, slag disposal information submitted by Industry to MPCB in past years, response of land owners where slag is found dumped, their acceptance with documentary support, status of ownership of land, consent of takers for utilization/dumping of slag should be verified. Further, soil sampling & analysis in alleged areas, ground water samples (as applicable), compilation of crop productivity trend and damage assessment & their monetary valuation, remedial measures/plan, as applicable; may also be worked-out by the subcommittee, based on field observations.

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<sup>1</sup> Taking reference from Section 15, Sub-Section 3 of The National Green Tribunal Act, 2010 and to limit a period since when default/non-compliance is to be considered for assessing environmental damage and compensation, the period of default/non-compliance has been taken into account in the past five years prior to the day; OA no. 165 of 2020 (PB) [earlier OA no. 122 of 2015 (WZ)] was filed before Hon'ble NGT (i.e. 26.09.2015) and till the date of Hon'ble NGT (i.e. 27.05.2021) viz. 26.09.2010 to 27.05.2021.

Detailed status report was sought with regard to damage to various bhandhs of Dharmatar Creek, besides Kharbandistibandh, MachelaChirbi and JuiHabbasKharland scheme bunds, as there are multiple natural and manmade sources (navigation of barges/cargo ships, dredging activities etc.) were reported by the Khar Land Dept.

**Decisions:**

After detailed discussions, following decisions were taken by the joint committee:

- (i) NCSCM to carry-out assessment studies w.r.t. destruction of mangroves, loss/encroachment of natural creeks and mangrove buffer areas due to various activities of the industry under reference, comparing with three set of time-series maps viz. 1997 to August, 2010, September, 2010 to 2014 and 2015 till May, 2021 as outlined in **Annexure-II**. NCSCM to examine mapping of mangroves and natural creeks reported by Maharashtra Remote Sensing Application Centre (MRSAC) and the same to be taken into account while reporting damages/loss/encroachment of mangroves/natural creeks/mangrove buffer areas in its report. MPCB will help in getting the maps of mangroves and natural creeks prepared by Maharashtra Remote Sensing Application Centre (MRSAC), available to NCSCM. Amended Environment / CRZ Clearance was issued for construction of additional conveyor belts/streams in respect of expansion of the Dharamtar Jetty facility, vide MoEF&CC OM No. F. No. 11-79/2013-IA-III dated 10.01.2020, based on recommendation dated 16/02/2019 by the MCZMA, with the condition that “no activity shall be carried out in mangroves or its 50 m buffer zone, as per 17th Sept. 2018 High Court order in PIL 87/2006”. Thus, with regard to year/period (or closest date) of mangroves areas and demarcating the affected area, if any, of mangroves buffer areas thereto, NCSCM may provide a short brief on compliance status under relevant CRZ Notification, Env Clearance & CRZ clearance of 2015 as well as amended in 2020, as applicable.
- (ii) A sub-committee headed by the District Collector-Raigad or his representative not below the rank of Add. District Magistrate, with representatives from Mangrove Cell (Govt. of Maharashtra), NCSCM, MRSAC and the District Revenue Department, shall carry out field validation of damage/encroachment of mangroves/mangroves buffer zone/creeks as per satellite image report of NCSCM along with landownership of such premises & activities therein. Action plan for review including validation through field survey on various activities by the aforesaid sub-committee and concerned agencies, including Terms of Reference (ToR) are given at **Annexure-II**.

- (iii) The various assessment studies/report given at **Annexure-II** shall also include areas in & around 13 no. of alleged villages and period of studies reporting shall be September, 2010 to May, 2021 except in case of destruction of mangroves, encroachment of natural creeks areas studies being conducted by NCSCM. Further, the sub-committee may also highlight its observation on adverse impact on mangroves creeks arising due to any direct or indirect activities of M/s JSW and its associated work activities.
- (iv) The sub-committee shall also co-ordinate with various organisations in this regard & evaluate (with field validation also) other damage assessment/reports of various agencies such as State Agricultural Dept., State Khar Land Dept., State Fisheries Dept. and State Maritime Board, as outlined in **Annexure-II**, for the period September, 2010 to May, 2021, as given at **Annexure-II**, and submit its report to the joint committee. The said sub-committee shall submit its target date for each of the activities, as given at **Annexure-II**, for submitting its report to the joint committee considering as expeditious as possible. Such time target date for each of the activities, as given at **Annexure-II**, be submitted positively by 29/11/2021 to enable the committee in seeking necessary time extension by the Hon'ble NGT.
- (v) With regard to valuation of services losses due to encroachment/loss/destruction of mangroves, natural creeks and mangroves buffer areas including required remedial measures, restitution plan and estimated cost thereto, an expert committee comprising of representative from NCSCM, Indian Institute of Forest Management-Bhopal, Madras School of Economics, Mangrove Cell (Govt. of Maharashtra) and NEERI may be constituted. The expert committee may deliberate and work out approach/methodology for such valuation/remedial measures/restitution plan and estimated cost which may be applied on validated encroachment/loss data to be worked out by the sub-committee. NCSCM may co-ordinate the activities of the said expert committee.
- (vi) Upon receipt of the aforesaid sub-committee's report with field validations, wherever applicable, the joint committee shall carry-out site inspection wherein source/fugitive emission monitoring of the coke oven plant and ambient air quality monitoring at 03 alleged locations, as given at **Annexure-II**, shall also be carried out by MPCB and CPCB. Such monitoring & analysis may be carried out by MPCB Laboratory. In case, such facility is not available with MPCB Laboratory, MPCB may engage EPA approved or NABL accredited Laboratory for the same.
- (vii) Health record of employees working in the coke oven plant of the industry under reference for the assessment period w.e.f. September, 2010 to May, 2021, may also be assessed

especially w.r.t. respiratory diseases by the District Health Officer. Report in this regard be submitted to the joint committee by the District Collector, Raigad through District Health Officer.

- (viii) The joint committee observed that the findings and preliminary assessment discussed during the meeting are based either on secondary data or are have been provided by the concerned agencies. It was felt prudent to have a field visit by a team comprising of Sh. Sundeep, MoEF&CC, Sh. Bharat Sharma, RD, CPCB-Pune, Sh. Nishchal C., and senior officer of MPCB in next week for further assessment of some of the findings apart from the scope defined for the sub-committee constituted in this meeting, in order to expedite the work of the committee and prepare the progress report to be submitted before the next date of hearing before the Hon'ble NGT. MPCB may co-ordinate the site visit in association with the District Collector.
- (ix) Progress report of the joint committee shall be submitted to the Hon'ble NGT before scheduled date of hearing, mentioning overall status, action plan formulated & agencies identified for assessment of various studies/activities, meetings conducted and progress made so far; so that the joint committee can seek extension of time period for submission of final report.

NCSCM shall submit budget proposal for conducting various studies, as at **Annexure-II**, by them including estimated expenses in co-ordinating the expert committee for valuation of damages, to the joint committee. The estimate Expenditure for completing the said work by NCSCM shall be submitted to CPCB for reimbursement. The cost estimated shall be limited to and on actual basis including deployed resource cost, lab Expenditure, data procurement (soft/satellite imaginary, TA&DA and other miscellaneous contingency expenses shall be reimbursed. NCSCM shall submit their financial proposal to CPCB-Pune for further reimbursement.

The meeting ended with vote of thanks to the chair.

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**Annexure – I**

<b>S. no.</b>	<b>Name of the participants</b>	<b>Department</b>
1.	ShriJigmetTakpa, Joint Secretary, Chairman of the joint committee	MoEF&CC, Gol
2.	ShriNishchal C., Scientist 'D'	CPCB, Regional Directorate - Pune
3.	Prof. AnuragGarg	IIT Bombay, Powai, Mumbai
4.	Dr.MahendraKalyankar	District Collector, RaigadGoM
5.	Shri P. K. Mirashe, Asstt. Secretary (Tech)	MPCB, Mumbai
6.	Shri N.N. Gurav, RO (HQ)	MPCB, Mumbai
7.	Shri V. V. Killedar, In-charge: Regional Officer	MPCB, Raigad
8.	Shri Bharat K Sharma, Regional Director	CPCB, Regional Directorate - Pune
9.	ShriSundeep, Director	MoEF&CC, Gol
10.	ShriSurehAdapa, Addl. Director	MoEF&CC, IRO-Nagpur
11.	Dr. Ramesh Ramachandran, Director	National Centre for Sustainable Coastal Management, Chennai
12.	Mrs.UjjwlaBankhele, District Agriculture Office, Raigad.	Agriculture Department, Alibag, Raigad.
13.	ShriJagdishPatil, Deputy Executive Engineer	Khar Land Departmen, Kharland Survey and Investigation Division
14.	ShriSudhakar More, District Health Officer, Raigad	District Health Office, Raigad

**Annexure – II**

**Action plan for compliance of Hon’ble NGT order and Terms of Reference of sub-committee constituted in meeting dated 19.11.2021**

<b>S. no.</b>	<b>Assessment on various activities/studies</b>	<b>Present status of assessment on various activities/studies</b>	<b>Terms of Reference for assessment on various activities/studies</b>	<b>Responsible agency/ Sub-committee</b>
1.	Destruction of mangroves of Dharamtar creek and within & around M/s JSW premises (w.e.f. September, 2010 to May, 2021) due to various developmental/ expansion activities carried-out by M/s JSW.	As per the studies undertaken using satellite images and report submitted by NCSCM that during 1997 – 2021 the total loss of mangrove areas estimated at Site-1 is 12.4 ha and at Site-2 is 9.25 ha.	<p>a. Compilation of three set of time-series satellite maps at Site-1 &amp; Site-2 w.r.t. status of destruction of mangroves of Dharamtar creek and within &amp; around M/s JSW viz. 1997 to August, 2010, September, 2010 to 2014 and 2015 till May, 2021, to delineate the present status.</p> <p>b. To examine mapping of mangroves reported by MRSAC and the same to be taken into account while reporting damages/ loss of mangroves areas, if any, in its report,</p> <p>c. After compilation w.r.t. a &amp; b, at above, delineation of the area(s) under Site-1 and Site-2 with superimposition of land</p>	<p>i. National Centre for Sustainable Coastal Management (NCSCM), Chennai. NCSCM to carry-out activity i.e. a &amp; b of Col. No. 4 and submit its report to the sub-committee.</p> <p>ii. MPCB will make the maps of mangroves and natural creeks prepared by Maharashtra Remote Sensing Application Centre (MRSAC), available to NCSCM.</p> <p>ii. The sub-committee headed by the District Collector-Raigad, with representatives from Mangrove Cell (Govt. of Maharashtra), NCSCM, Maharashtra Remote Sensing Application Centre, (MRSAC), and the District Revenue Department to carry-out activity i.e. c &amp; d of Col. No. 4</p>

			<p>revenue map, to validate such reported loss/destruction of mangrove areas falling within M/s JSW premises, Govt. land and Pvt. Land if any; through reconnaissance survey including activities at such lands.</p> <p>d. Mapping reported damages of mangroves areas with activities (direct or indirect) of M/s JSW by field validation and relevant information collation.</p>	as per report provided by NCSCM and also gathering other information/ data/ report.
i.	Valuation of services losses due to encroachment/loss/destruction of mangroves areas including required remedial measures, restitution plan and estimated cost thereto.	--	An expert committee to rationalize and propose approach/methodology for monetizing through valuation of services and cost for remedial measures / restitution plan and propose rationale / algorithm for estimating cost which may be applied on validated destruction/ encroachment/ loss of mangroves observed, if any.	Expert committee comprising representatives from NCSCM, Indian Institute of Forest Management (IIFM) Bhopal, Madras School of Economics, Mangrove Cell (Govt. of Maharashtra) and NEERI.
2.	Status of encroachment of natural	As per the report of District	a. Compilation of three	i. NCSCM to carry-out activity

	<p>creeks and channels with details due to various developmental/ expansion activities carried-out by M/s JSW including jetty areas (w.e.f. September, 2010 to May, 2021).</p>	<p>Collector, Raigad; no encroachment or unauthorized construction has been done in natural creek or nala by M/s JSW. However, as per report of NCSCM; the total loss of area of Natural Creeks estimated at two locations viz. Natural Creek # 1 is 1.27 ha and at Natural Creek # 2 is 1.09 ha.</p>	<p>set of time-series satellite maps at Site-1 &amp; Site-2 w.r.t. loss/encroachment of area of Natural Creeks and within &amp; around M/s JSW viz. 1997 to August, 2010, September, 2010 to 2014 and 2015 till May, 2021, to delineate the present status.</p> <p>b. To examine and mapping of natural creeks reported by MRSAC and the same to be taken into account while reporting loss/encroachment of natural creeks areas in its report.</p> <p>c. After compilation w.r.t. a &amp; b, at above, delineation of the Natural Creek-1 &amp; 2 with superimposition of land revenue map, to validate such reported loss/encroachment of area of Natural Creeks, caused due to activities (Direct/indirect) of M/s. JSW and identification as within/outside the premises</p>	<p>i.e. a &amp; b of Col. No. 4 and submit its report to the sub-committee.</p> <p>ii. MPCB will make the maps of mangroves and natural creeks prepared by Maharashtra Remote Sensing Application Centre (MRSAC), available to NCSCM.</p> <p>iii. The sub-committee headed by the District Collector-Raigad, with representatives from Mangrove Cell (Govt. of Maharashtra), NCSCM, Maharashtra Remote Sensing Application Centre, (MRSAC), and the District Revenue Department to carry-out activity i.e. c &amp; d of Col. No. 4 as per report provided by NCSCM and also gathering other information/ data/ report.</p>
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			<p>of M/s JSW premises, Govt. land and Pvt. Land if any; through reconnaissance survey including present activities on such lands.</p> <p>d. Establishing reported loss/encroachment of Natural Creeks with the activities of M/s JSW by field validation and relevant information collation.</p>	
i.	Valuation of services losses due to encroachment/ loss of Natural Creek areas including required remedial measures, restitution plan and estimated cost thereto.	--	After completion of works w.r.t. a, b, c & d of above, and validation, submission of reports by the sub-committee, the expert committee to work out approach/methodology for such valuation/ remedial measures/ restitution plan and estimated cost which may be applied on validated encroachment/ loss of Natural Creek areas data being worked out by the sub-committee.	Expert committee comprising representatives from NCSCM, Indian Institute of Forest Management (IIFM) Bhopal, Madras School of Economics, Mangrove Cell (Govt. of Maharashtra) and NEERI.
3.	Assessment of adverse effects due to emissions from coke oven plant.			
i.	Source emission monitoring of stack attached to coke oven plant.	--	a. To carry-out source emission monitoring of stack attached to coke oven plant for the notified	W.r.t. (a to d): Jointly by MPCB and CPCB during joint committee visit.

			<p>standards /parameters/ as per CC&amp;A i.e.SO<sub>2</sub>, NO<sub>x</sub>, PM and CO.</p> <p>b. Fugitive emission for PM during coke pushing in coke oven and during quenching operation in coke oven.</p> <p>c. Fugitive emission for BaP near battery area and near other units in coke oven plant.</p> <p>d. Fugitive visible emissions (PLD, PLL &amp; PLO) of Coke oven as per prevailing notification of CTO condition battery areas.</p>	
ii.	Ambient air quality monitoring.	--	To carry-out ambient air quality monitoring at 03 locations at about 120° inside & outside the plant premises, preferably at alleged locations, near to residential area shall be carried-out jointly by MPCB and CPCB during joint committee visit for the parameters viz. PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , NO <sub>2</sub> , CO.	Jointly by MPCB and CPCB during joint committee visit.
4.	Assessment on illegal dumping of by-products/waste products i.e. slag generated by M/s JSW on mangrove areas, natural drains/nalas and also on agriculture lands in & around alleged villages (viz. Kharmachi, Kharkaravi, Juibapuji, Dolwi, Kharchirbi,			

	Wadkhal, Vave, Kolve etc. situated within Taluka Pen). Also, on agricultural land/private lands/Govt. lands in & around alleged villages (viz. Gadab, Beneghat, Khardombi, Kharjambhela and Kharghat), (w.e.f. September, 2010 to May, 2021).			
i.	Inventorization of various by-products/waste products, their management as per CC&A conditions, status of management of the same w.r.t. disposal and utilization details.	As per report of MPCB, w.e.f. 2008 to 2021, M/s JSW has generated 95,14,831 MT of slag, out of which 92,12,044 MT has been either reused for captive utilization as RM, disposal in low-lying areas within premises as per CC&A and also on private lands.	a. To provide the status/information on various parties to whom slags were handed over, slags intended use while handing over, nature of actual use of the slags by the parties, locations where used and land ownership details, MoU/ consent of individual(s) etc. taking into account of Environment Statement of M/s JSW also.  b. Mass balance on generation, storage and disposal/transfer of slags during September, 2010 to May, 2021	W.r.t. (a and b): MPCB
ii.	Assessment of illegal dumping of by-products/waste products i.e. slag generated by M/s JSW on mangrove areas, natural drains/nalas in the aforesaid alleged villages.	As per the studies undertaken using satellite images and report submitted by NCSCM, the details of dumping of waste/by-products on the mangrove areas, natural drains/nalas could not be discerned/ established from satellite images.	To verify legal and illegal dumping (with estimated quantity) of by-products/waste products i.e. slag generated by M/s JSW on mangrove areas, natural drains/nalas in the aforesaid alleged villages through reconnaissance survey.	The aforesaid sub-committee having representative from Agriculture Department (Govt. of Maharashtra) also.
iii.	Assessment of illegal dumping of	Desired information yet to	To verify legal and illegal	The aforesaid sub-committee

	by-products/waste products i.e. slag generated by M/s JSW on agricultural lands in the aforesaid alleged villages.	be provided by District Collector, Raigad through Agriculture Department (Govt. of Maharashtra).	dumping (with estimated quantity) of by-products/waste products i.e. slag generated by M/s JSW on agricultural lands in the aforesaid alleged villages through reconnaissance survey.	having representative from Agriculture Department (Govt. of Maharashtra) also.
iv.	Collection of soil samples from various locations of the above areas and also suitable reference soil samples (from unaffected area) and their analysis for relevant parameters including Boron and Sodium.	As per the information provided by District Collector, Raigad through Agriculture Department (Govt. of Maharashtra), soil sampling & analysis shall be done in rabi season.	Upon assessment of activity as at s. no. ii & iii of 4 above, collection of soil samples and analysis for relevant parameters (to be decided by Agriculture Dept. besides Boron and Sodium) in such places where, dumping of slag if any; or impact due to elsewhere dumping are expected/observed on the agricultural lands in the aforesaid alleged villages. The report shall also conclude about impact on crop productivity in such affected agricultural lands.	District Collector, Raigad through Agriculture Department (Govt. of Maharashtra).
v.	Compilation of year wise crop productivity data and assessing its trend (w.e.f. September, 2010 to May, 2021). In case, the aforesaid areas affected in terms of soil fertility/ agricultural	As per the information provided, in villages of Dolwi, Karavi, Gadab, Kharkarvi, Kharmathela, Juibapuji, no crop has been produced for last 15	Upon completion of activity as at s. no. iv of 4, above, compilation of year wise crop productivity data wise (w.e.f. September, 2010 to May, 2021) in the aforesaid	District Collector, Raigad through Agriculture Department (Govt. of Maharashtra).

	productivity, then estimation of extent of environmental damage, remedial measures & restitution plan and the amount of compensation as applicable;	years. However, w.e.f. 2014-15, paddy productivity is at par with that of taluka average.	alleged villages (viz. Kharmachi, Kharkaravi, Juibapuji, Dolwi, Kharchirbi, Wadkhal, Vave, Kolve, Gadab, Beneghat, Khardombi, Kharjambhela and Kharghat)	
vi.	Collection of various slag samples stored within the industry and TCLP/STLC analysis for parameters Arsenic, Barium, Cadmium, Chromium, Copper, Cyanide, Lead, Manganese, Mercury, Nickel, Selenium, Silver and Zinc as per Hazardous & Other Wastes (Management & Transboundary) Rules, 2016 and also Bronon& Sodium.	MPCB has collected slag samples generating from hot strip mill (EAF slag) and blast furnace slag on 25/10/2021. Slag samples were submitted to NABL/E(P)A approved laboratory for TCLP/STLC analysis of said parameters.	a. MPCB to submit the analysis results of slag samples.  b. Suggesting environmental impact, if any, and remedial measures, as applicable	i. w.r.t. a: MPCB.  ii. w.r.t. b: Joint committee.
5.	Assessment on damage of Kharbandistibandh(if any) due to activity of M/s JSW. Also, status report including extent of salt level in the agricultural fields and areas affected, and estimation of extent of land damage, remedial measures & restitution plan and the amount of compensation (w.e.f. 1990 till May, 2021 or afterwards).	As per the report submitted by Khar Land Dept., Exe. Eng. no such instances of damage to the Kharland Bund are observed due to any Industrial activity.	To examine the reports of Exe. Eng. of Khar Land Dept. and overall assessment of damage to Kharbandistibandh if any; due to activity of M/s JSW with field validation/reconnaissance survey.	The aforesaid sub-committee having representative from Khar Land Dept. (Govt. of Maharashtra) also.
i.	Examining alleged incidence of 03/01/2015 by the Tahasildar, Pen, as referred at Para 2 at	As per the report submitted by Khar Land Dept., EE & AEE, the alleged incidence	a. To provide detailed status report on damages to various bandhs of	i. w.r.t. a: The aforesaid sub-committee having representative from Khar Land

	<p>page no. 4 of the order dated 27/05/2021 of the Hon'ble NGT.</p>	<p>is related to damage caused to the MachelaChirbi and JuiHabbasKharland scheme bunds, mainly to due excessive rains and high tide resulting in breaches in the bund and damage to slice gates that resulted in ingress of saline water in the adjoining agricultural land.</p> <p>Also, mentioned that due to traffic of barges and ships in Dharamtar Creek have caused speedy erosion of the bunds which can cause the breach of bund resulting in ingress of saline water in reclaimed area.</p> <p>Dredging activity in Dharmatar Creek has resulted into the sliding of bund in the creek.</p>	<p>Dharamtar Creek, if any; due to activity of M/s JSW with field validation/ reconnaissance survey. Also, details on ingress of saline water into adjoining agricultural lands (survey no./ghat no. &amp; location/villages name).</p> <p>b. To examine whether barges and cargo ships of M/s JSW are only being navigated in Dharamtar Creek.</p> <p>c. To provide status report on events of dredging activities had been carried-out in the Dharamtar Creek.</p>	<p>Dept. (Govt. of Maharashtra) also.</p> <p>ii: w.r.t. b and c: The aforesaid sub-committee having representative from Maharashtra Maritime Board (Govt. of Maharashtra) also.</p>
<p>ii.</p>	<p>Status report including extent of salt level in the agricultural fields and areas affected</p>	<p>As per the report of AEE, Kharland Act 1979 doesn't have mandate to determine soil properties like salt level in the</p>	<p>In case, incidence of ingress of salt water reported, then delineation of agricultural areas around the Dharmatar Creek and</p>	<p>District Collector through Agriculture Dept. (Govt. of Maharashtra).</p>

		agricultural field, area affected, extent of land damage & remedial measures.	estimation of salt level, extent of land damage & remedial measures, as applicable.	
6.	Assessment of violations of provisions of Environmental Clearance (EC) Notifications and EC conditions in development/expansion of jetty (w.e.f. September, 2010 to May, 2021).	<p>MoEF&amp;CC's Regional Office, Nagpur has verified and reported the details of compliance of EC Notifications and conditions of Dharamtar jetty facility.</p> <p>M/s JSW Dharamtar Port Private Limited without obtaining prior EC, started the construction activity for expansion of existing jetty facility from 331.5 to 1,750 m. Hence, the industry was found violated the provisions of Environment Impact Assessment Notification, 2006 &amp; its amendments. However, EC was granted in 2015.</p>	MoEF&CC may provide information on post-facto consideration of EC and provide necessary comments to the joint committee.	MoEF&CC, IRO Nagpur.
7.	Assessment of violations of provisions of CRZ Rules and CRZ clearance conditions by M/s JSW w.r.t. construction of conveyor belt and development/expansion/ operation of jetty (w.e.f. September, 2010 to May,	As per the analysis of the satellite images and report submitted by NCSCM, it is observed that the conveyor belt has been constructed in the 50 m buffer zone around mangroves. The	a. To provide probable month of loss of mangrove buffer areas visible from satellite images during construction of conveyor belt/ other constructions on mangrove buffer areas.	<p>i. w.r.t. a: NCSCM.</p> <p>ii. The sub-committee headed</p>

	2021).	mangrove buffer areas have also been utilized for other industrial uses. The total area of mangrove buffer areas lost due to construction of conveyor belt in 50 m mangrove buffer areas and other constructions in 50 m mangrove buffer areas are 10.62 ha.	Amended Environment / CRZ Clearance was issued for construction of additional conveyor belts/streams in respect of expansion of the Dharamtar Jetty facility, vide MoEF&CC OM No. F. No. 11-79/2013-IA-III dated 10.01.2020, based on recommendation dated 16/02/2019 by the MCZMA, with the condition that “no activity shall be carried out in mangroves or its 50 m buffer zone, as per 17th Sept. 2018 High Court order in PIL 87/2006”. Thus, with regard to year/period (or closest date) of mangroves areas and demarcating the affected area, if any, of mangroves buffer areas thereto, NCSCM may provide a short brief on compliance status under relevant CRZ Notification, Env Clearance & CRZ clearance of 2015 as well as amended in 2020, as applicable.	by the District Collector- Raigad, with representatives from Mangrove Cell (Govt. of Maharashtra), NCSCM, Maharashtra Remote Sensing Application Centre, (MRSAC), and the District Revenue Department to carry-out activity i.e. b of Col. No. 4 as per report provided by NCSCM and also gathering other information/ data/ report.
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			b. After submission of report w.r.t. a, at above, delineation of areas under reference to validate such reported loss of mangrove buffer areas through reconnaissance survey.	
i.	In case of violations of provisions of CRZ Rules and CRZ clearance conditions w.r.t. construction of conveyor belt and development/expansion/operation of jetty, estimation of amount of compensation (w.e.f. September, 2010 to May, 2021).	Based on the assessment on violations of provisions of CRZ Rules and CRZ clearance conditions, as above; NCSCM, has calculated the amount of environmental compensation based on the guidelines issued by the CPCB. The environmental compensation for the aforesaid violations is worked-out to be ₹ 14,216,000/- (Rupees One Crore Forty-two Lakhs Sixteen Thousand Only) (excluding loss of mangroves and natural creeks evaluation).	After completion of works w.r.t. a & b of above, and validation, submission of reports by the sub-committee, the expert committee to work out the approach/methodology for such valuation/ remedial measures/ restitution plan and estimated cost which may be applied on validated encroachment/ loss of mangroves buffer areas data being worked out by the sub-committee.	Expert committee comprising representatives from NCSCM, Indian Institute of Forest Management (IIFM) Bhopal, Madras School of Economics, Mangrove Cell (Govt. of Maharashtra) and NEERI.
8.	Compliance status w.r.t. conditions of The Water (Prevention and Control of Pollution) Act, 1974 (w.e.f.	MPCB has submitted plant-wise compiled status report on the compliance of CC&A conditions i.e.	a. To submit compliance status of 55 MW Captive Power Plant and Harsco India Metals Pvt Ltd., (Slag	w.r.t. (a, b & c): MPCB.

	September, 2010 to May, 2021).	conditions under The Water (Prevention and Control of Pollution) Act, 1974 for discharge of effluent.	processing Plant).  b. To submit compliance status of reported for non-compliances w.r.t. discharge of effluent and estimation of environmental compensation for the reported non-compliances, as applicable.  c. To submit compiled compliance status report on the compliance of CC&A conditions i.e. conditions under The Water Act, 1974 for Phase-II plant (5 – 10 MTPA) and compliance status reported for non-compliances w.r.t. discharge of effluent and estimation of environmental compensation for the reported non-compliances, as applicable.	
9.	Compliance status w.r.t. conditions of The Air (Prevention and Control of Pollution) Act, 1981 (w.e.f. September, 2010 to May, 2021).	MPCB has submitted plant-wise compiled status report on the compliance of CC&A conditions i.e. conditions under The Air (Prevention and Control of Pollution) Act, 1981 for	a. To submit compliance status of 55 MW Captive Power Plant and Harsco India Metals Pvt Ltd., (Slag processing Plant).  b. To submit compliance	w.r.t. (a, b & c): MPCB.

		discharge of emission.	<p>status of reported for non-compliances w.r.t. discharge of emission and estimation of environmental compensation for the reported non-compliances, as applicable.</p> <p>c. To submit compiled compliance status report on the compliance of CC&amp;A conditions i.e. conditions under The Air Act, 1981 for Phase-II plant (5 – 10 MTPA) and compliance status reported for non-compliances w.r.t. discharge of emission and estimation of environmental compensation for the reported non-compliances, as applicable.</p>	
10.	Compliance status w.r.t. conditions of The Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 (w.e.f. September, 2010 to May, 2021).	MPCB has submitted plant-wise compiled status report on the compliance of CC&A conditions i.e. conditions under The Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016.	<p>a. To submit compliance status of 55 MW Captive Power Plant and Harsco India Metals Pvt Ltd., (Slag processing Plant).</p> <p>b. To submit compliance status of reported for non-compliances w.r.t. conditions of HW and</p>	w.r.t. (a, b & c): MPCB.

			<p>estimation of environmental compensation for the reported non-compliances, as applicable.</p> <p>c. To submit compiled compliance status report on the compliance of CC&amp;A conditions i.e. conditions under The HW rules, 2016 for Phase-II plant (5 – 10 MTPA) and compliance status reported for non-compliances w.r.t. conditions of HW and estimation of environmental compensation for the reported non-compliances, as applicable.</p>	
11.	Health impact assessment on residents nearby to the plant premises within 5 Km based on the health records due to industrial activity especially w.r.t. particulate matter and gaseous emissions (SO <sub>2</sub> , NO <sub>x</sub> , PM, CO and BaP) (w.e.f. September, 2010 to May, 2021).	As per the report of DHO, health data analyzed from 04 PHC (02 within 5 Km of industry & 02 within Panvel Tal.) during 2015-2021. Submitted that respiratory diseases, acute eye disorders, skin diseases and other acute & chronic diseases found in vicinity of M/s Jindal Steel and non-industrial areas are remarkably the same. Data	To verify and provide report on health record of employees working in the coke oven plant of the industry under reference for the assessment period w.e.f. September, 2010 to May, 2021, may also be assessed especially w.r.t. respiratory diseases.	District Collector through District Health Officer.

		<p>of 02 PHC within 5 Km of industry are not significant with above mentioned diseases including respiratory &amp; allergic conditions.</p> <p>Surveillance activity prior to 2015 was mainly focused on diseases like Guinea worm disease, Measles, Rubella, Filaria, leprosy etc. Hence no data on the respiratory &amp; allied diseases.</p>		
12.	Loss in fish catch/productivity due to navigation of ships in the Dharamtar creek around M/s JSW: Compilation of year wise fish catch/productivity data and assessing its trend (w.e.f. September, 2010 to May, 2021).	Desired information yet to be provided by District Collector, Raigad.	<p>a. To identify the sources for loss in fish catch/productivity in the Dharamtar creek, if any;</p> <p>b. To compile year wise fish catch/productivity data and assessing its trend in the Dharamtar creek.</p>	w.r.t. a & b: District Collector, Raigad, through Department of Fisheries (Govt. of Maharashtra) of their own or engaging a reputed Govt. Fisheries Science College/ Institute/ University.
13.	Status of compliance of order dated 6 <sup>th</sup> October, 2005 of the Hon'ble Bombay High Court in a group of Petitions bearing W.P. No. 3246 of 2004;			
i.	Total freeze on the destruction and cutting of mangroves in the entire State of Maharashtra.	<p>Pertains to the State of Maharashtra – as per NCSCM.</p> <p>As per the report of District Collector, Raigad M/s JSW</p>	Nil	The joint committee may report the said statement of District Collector in its report.

		has destructed mangrove area, encroached on Govt. land and constructed a protective wall at S. no. 50/D at MaujeJuibapuji without prior permission. Complaint lodged before Hon'ble CJM, Alibag in RCC no. 85/2020, dtd 05/10/2200 and it is pending.		
ii.	All construction and rubble/garbage dumping on the mangrove areas shall be stopped forthwith.	As per the studies undertaken using satellite images and report submitted by NCSCM, the details of dumping of waste/by-products on the mangrove areas could not be discerned/ established from satellite images.	To verify legal and illegal dumping (with estimated quantity) of by-products/ waste products i.e. slag generated by M/s JSW on mangrove areas, natural drains/nalas in the aforesaid alleged villages through reconnaissance survey.	The sub-committee headed by the District Collector-Raigad, with representatives from Mangrove Cell (Govt. of Maharashtra), NCSCM, Maharashtra Remote Sensing Application Centre, (MRSAC), and the District Revenue Department.
iii.	Regardless of ownership of the land, all construction taking place within 50 metres on all sides of all mangroves shall be forthwith stopped.	As per the studies undertaken using satellite images and report submitted by NCSCM, it is observed that the conveyor belt has been constructed in the 50 m buffer zone around mangroves. The mangrove buffer areas have also been utilized for other industrial uses. The	a. To provide probable month of loss of mangrove buffer areas visible from satellite images during construction of conveyor belt.  b. After submission of report w.r.t. a, at above, delineation of areas under reference to validate such	i. w.r.t. a: NCSCM.  ii. The sub-committee headed by the District Collector-Raigad, with representatives from Mangrove Cell (Govt. of Maharashtra), NCSCM,

		total area of mangrove buffer areas lost due to construction of conveyor belt in 50 m mangrove buffer areas and other constructions in 50 m mangrove buffer areas are 10.62 ha.	reported loss of mangrove buffer areas through reconnaissance survey.	Maharashtra Remote Sensing Application Centre, (MRSAC), and the District Revenue Department to carry-out activity i.e. b of Col. No. 4 as per report provided by NCSCM and also gathering other information/ data/ report.
iv.	No development permission whatsoever shall be issued by any authority in the State of Maharashtra in respect of any area under mangroves.	Pertains to the State of Maharashtra – as per NCSCM.	To provide the compliance status of permission if any; obtained by M/s JSW in the area under reference.	District Collector, Raigad through Mangrove Cell (Govt. of Maharashtra).
v.	The Municipal Commissioner of Greater Mumbai shall forthwith issue the necessary directions to the Municipal Corporation of Greater Mumbai Building Proposals Department not to entertain any applications for development (as defined in the Maharashtra Regional and Town Planning Act, 1966) on or in respect of the mangrove lands, regardless of the nature of ownership.	Pertains to the Municipal Commissioner of Greater Mumbai / MCGM – as per NCSCM.	Nil	Not applicable for the present matter.
vi.	The State Government and the Maharashtra Coastal Zone Management Authority (MCZMA) are directed to file monthly report on the above action plan to this Court. The first report will be	Pertains to MCZMA – as per NCSCM.	To provide the status of grievance and redressal regarding cutting of mangroves reported if any; in the areas under reference.	District Collector, Raigad through MCZMA.

	submitted within four weeks from today. The report shall specifically state, in addition to the progress/action taken, (a) the number of complaints received, if any, (b) the action taken thereon, if any, (c) the number of offenders named, and (d) the details of prosecutions/action launched/taken against such offenders.			
vii.	The State of Maharashtra is directed to file in Court and furnish to the petitioners copies of the maps referred to in paragraph 10 of the affidavit dated 16 <sup>th</sup> August, 2005, filed by Mr. GajanandVarade, Director, Environment Department, State of Maharashtra (Page 346 on the record), within four weeks from today.	Pertains to the State of Maharashtra – as per NCSCM.	Nil	Not applicable for the present matter.
viii.	The areas shown as mangrove area in the satellite study report “Mapping of mangroves in the Maharashtra State using Satellite Remote Sensing” dated August, 2005, prepared by the Maharashtra Remote Sensing Application Centre (MRSAC) for the MCZMA which was submitted to this Court on 29th August,	Pertains to MRSAC/MCZMA – as per NCSCM.	To examine mapping of mangroves reported by MRSAC and matching of the same to that assessed through satellite images by NCSCM. Also, the same to be taken into account while reporting damages/ loss of mangroves/ natural creeks areas in its report.	NCSCM.  MPCB will make the maps of mangroves and natural creeks prepared by Maharashtra Remote Sensing Application Centre (MRSAC), available to NCSCM

	2005, form part of Phase I of the mapping by MRSAC. The MRSAC will, in Phase-II, carry out mangroves study using high resolution for detailed mapping of mangroves with a view to identify more precisely mangrove areas in Mumbai and Navi Mumbai. After receiving the said satellite data, transfer of mangrove details on city survey/village maps (cadastral map) will be carried out within a period of 6 months from today;			
ix.	After the aforesaid process in clause (viii) is completed, the areas so identified which are government owned shall be declared and notified as “protected forests” in accordance with law after carrying out ground survey etc. The areas so identified that are privately owned shall be declared and notified as “forests” in accordance with law, after carrying out ground survey etc. The said declaration/notification will be completed within a period of 8 weeks of the completion of Phase-II mapping;	Pertains to the State of Maharashtra – as per NCSCM.	To provide status/information on identification and declaration of notified “protected forests” and identification and declaration of notified “forests” in the areas under reference.	District Collector, Raigad through District Revenue Department or concerned agency.
x.	The mangrove areas that are on	Pertains to the State of	To provide the	District Collector,

	government owned lands will be handed over to the Forest Department within a period of 12 weeks from the declaration of the same as “protected forests”;	Maharashtra – as per NCSCM.	status/information on handing over of notified “protected forests” in the areas under reference (if any) to the Forest Department.	Raigad through District Revenue Department or concerned agency.
xi.	From the list of “mangrove areas” so identified, Government owned lands will automatically be declared/notified as “protected forests”. Likewise, privately owned lands from the list of mangrove areas so identified, the same will be declared/notified as “forests”;	Pertains to the State of Maharashtra – as per NCSCM.	To provide status/information on identification and declaration of notified “forests” in the areas under reference.	District Collector, Raigad through District Revenue Department or concerned agency.
xii.	The Secretary, Revenue Department, shall from the said date of taking over possession of the Government owned land by the Forest Department, update all the revenue records to ensure that the said Government lands are shown as “protected forests” in the said revenue records within a period of 12 weeks from the same being declared as “protected forests”. In the case of lands that are private owned, the secretary, Revenue Department, shall update all the revenue records to ensure that the said private lands are shown as	Pertains to the State of Maharashtra – as per NCSCM.	To provide the status/information on updation of land records w.r.t. “protected forests” and “forests” in the areas under reference.	District Collector, Raigad through District Revenue Department or concerned agency.

	“forests” in the said revenue records within a period of 12 weeks of completion of the steps in clause (x) above;			
xiii.	<p>In respect of Government lands, the Forest Department and other authorities of the State of Maharashtra shall take the following necessary steps of protection, conservation and regeneration of the areas that would be declared/notified as “protected forests: in terms of clause (x) above;</p> <p>a. Removal of all obstructions that are impeding the growth of mangroves as also the impediments which restrict the flow of sea water in the mangrove areas;</p> <p>b. Wherever mangrove growth is found to be sparse and denuded (i.e. with forest density less than 0.4 which means canopy less than 40%) within these identified areas, taking necessary steps for rejuvenation;</p> <p>c. On identification of the areas as forest, the Municipal Corporation of Greater Mumbai would remove garbage and debris within these areas within a</p>	Sub-paras (a), (b), (c) and (d) pertain to the State of Maharashtra – as per NCSCM.	To provide the status/information w.r.t. sub-paras (a to d) of col. no. 2 of the table in the areas under reference.	District Collector, Raigad through Mangrove Cell (Govt. of Maharashtra).

<p>period of three months as per the instructions of the Forest Department. These areas shall be rejuvenated with mangroves;</p> <p>d. The Forest Department is directed to take necessary action against the offenders in accordance with law for damaging or destroying mangroves.</p>			
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**Annexure-3**

<b>S. no.</b>	<b>Name of the participants</b>	<b>Department</b>
1.	ShriSundeep, Scientist 'F'	MoEF&CC, Gol
2.	Shri Bharat K Sharma, Regional Director	CPCB, Regional Directorate - Pune
3.	ShriNishchal C., Scientist 'D'	CPCB, Regional Directorate - Pune
4.	Shri P. K. Mirashe, Asstt. Secretary (Tech)	MPCB, Mumbai
5.	Shri N.N. Gurav, RO (HQ)	MPCB, Mumbai
6.	Shri V. V. Killedar, In-charge: Regional Officer	MPCB, Raigad
7.	Dr.Sudhakar More, DHO	Dist. Health Office, RZP, Alibaug
8.	Suresh H. Sawant, Executive Engineer	Kharland Survey & Investigation Division, Pen
9.	Prashant S. Dhage, SDO	SDO, Alibaug, Revenue
10.	Vitthal G. Inamdar, SDO	SDO, Pen, Revenue
11.	Sandhya Thakur, Regional Port Officer	Regional Port Office, Mora
12.	Mrs.UjjwlaBankhele, District Agriculture Officer	Agriculture Department, Alibag, Raigad
13.	Anil Rokade, Taluka Agriculture Officer	Agriculture Department, Pen
14.	Pravinkumar B. Patil, Port Inspector	Maharashtra Maritime Board
15.	Miss. Swati S. DumbrePatil, Range Forest Officer	Forest Department, Wadkhal
16.	PradipJagtap, Dy. Surveyor	Revenue Dept.,Alibaug

Item No. 04

(Court No. 1)

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

(By Video Conferencing)

Original Application No. 165/2020  
(Earlier O. A. No. 122/2015 (WZ)  
(M.A. No. 211/2015) & M.A. No.220/2015)

(With report dated 07.08.2020)

Samita Rajendra Patil

Applicant

Versus

Jindal Steel Works Ltd. & Ors.

Respondent(s)

Date of hearing: 27.05.2021

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE SUDHIR AGARWAL, JUDICIAL MEMBER  
HON'BLE MR. JUSTICE M. SATHYANARAYANAN, JUDICIAL MEMBER  
HON'BLE MR. JUSTICE BRIJESH SETHI, JUDICIAL MEMBER  
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

Applicant: Mr. Shriram S. Kulkarni and Mr. Aniruddha Kulkarni, Advocates

Respondent: Mr. T.N. Subramanian, Senior Advocate with Mr. Saket Mone,  
Advocate for R-1 and 2  
Mr. Mukesh Verma, Advocate for MPCB and MCZMA

**ORDER**

1. Grievance in this application is against violation of environmental norms in running the industrial operations by respondents 1 and 2 - Jindal Steel Works Limited at Village Dolwi, Karawi, Gadab, KharKaravi, Kharmachela and Jui Bapuji and other surrounding areas, District Raigarh, near Mumbai.

2. The case set out in the application is that the location of the plant in question adjoins the creek up to village Dolvi. Kharmachela and other villages are covered by Mangroves which protect the environment in the area. Similarly, the Dharamtar creek has covered complete one side of

the plant. Even the large area of their plant was covered by the then existing mangroves. The respondent Company has also constructed the coke oven plant by destroying mangroves and construction of coke oven plant is in process. The Respondent is also causing expansion of the jetty. The respondents are using one conveyer belt. The company has not only destructed mangroves on a large scale within their company premises but also destroyed the natural water/creak water/ water channels in their activity. On 6<sup>th</sup> October, 2005 in a group of Petitions bearing W.P. No. 3246 of 2004, the Hon'ble Bombay High Court has issued various, directions including to the present Respondent authorities, for protection and reservation of the fast depleting mangrove forest. Mangrove area were directed to be identified including from privately owned land and declared/notified as forest. Similarly, no mapping of mangroves is done till date, within the knowledge of the applicants. On the contrary, the applicants are informed that respondents are not aware as to whether the conveyor belt is being constructed on the mangrove's area. Now the Respondent Company has encroached the natural creak channels, mangroves and destroyed the same and expanded their plant. The Respondent Company is having coke oven plant in the manufacturing of the Steel manufacturing plant. There is potential of adverse effect of coke plant on human health on account of noxious gases. Impact is also on the organism and/or via the food chain. Injurious heavy metals viz. lead, mercury, cadmium can enter the food chain. The plant is working and gases/smoke are generated on huge level which demonstrates that the Respondent Company has no concern with the environmental damage and human lives in the locality. The air pollution caused by the Respondent No. 1 Company has also destroyed the agricultural land, because the dust

carries the waste material of the company which gets settled on the agricultural field. The Respondent Nos. 1 and 2 have dumped the by-product/waste product in the surrounding area which has caused the air pollution, water pollution and soil pollution. Large area of village Kharmachi, Kharkaravi, Juibapuji, Dolwi, Kharchirbi, Wadkhal, Vave, Kolve etc. villages situated within Taluka Pen is covered by mangroves/kandalvan. It is useful for reproduction of the fishing activities and it maintains the natural balance of environment. It also controls the soil pollution. It also controls the creek water entering in the agricultural area. It is also useful for soil conservation. The huge waste material/by-product is generated in the manufacturing process of the respondent no. 1 and 2 activities which is illegally and dumped upon the mangroves spread over the large area of the villages referred hereinabove. Similarly, the said waste material is also dumped upon the Agricultural lands situated in the above said villages. The said by-product/hazardous material is dumped even in agricultural lands and it has also destroyed the fertility not only of those lands but also of the adjoining one. This by-product/waste product has choked the natural drains/nalas and the rain water gets accumulated and either enters the agricultural fields with the said material or in the residential houses. Similarly, it destroys the aquatic flora and fauna and also affects their productivity. The salt level in the land has increased and it is dangerous to all types of crops. The Agricultural fields around salty water bodies are completely protected by a bandh which is popularly known as "Kharbandisti". Kharbandisti protects the agricultural fields from sea water entering in them. This Kharbandisti is in existence since time immemorial. The respondent no. 1 and 2 have damaged the said Kharbandisti which has rendered the agricultural field as unfertile. The factory premises as well as their village

and agricultural field are situated near creek which is popularly known as Dharmtar Creek. The natural canal of the creek water is passing East-West and situated on southern side of company premises. On the northern side of the field there is Kharbandisti. The Government has created a separate Khar Land Department which has to take the precaution to protect the agricultural land from the creek water and it is their duty to maintain the Kharbandisti. On 03.01.2015, the Tahasildar, Pen has informed the respondent no. 1 that the company has destroyed the Kharbandisti and the entire construction of the Bandh is incomplete between *Ughadi* No. 1 to *Ranchhoddas Ughadi* No. 4 and he called upon the report of the company about the action taken by them. The respondent Company has dumped the waste products in the mangrove areas, destroyed the mangroves of the large area and destroyed the aquatic life, in expansion of the Jetty. Fishing business has completely stopped and all the families of various villages referred hereinabove have lost their source of livelihood and the loss is enormous and beyond repairs, because once the sea water enters the agricultural field or if the soil is damaged by the bye products of the Respondent Company, it becomes infertile and then the villagers have no other option than to purchase the fertile land elsewhere and/or to shift from the said area forever in search of the livelihood.

3. The application was originally filed on 26.09.2015 before the Pune Bench and notice was issued on 01.10.2015 to the respondents which includes the Project Proponent, the Maharashtra State PCB, the Ministry of Environment, Forest and Climate Change (MoEF&CC) and the concerned authorities of the State of Maharashtra. Apart from the National Coastal Zone Management, the contesting respondents have filed their replies.

4. The State PCB in its reply filed on 22.12.2015 has stated that Environment Clearance has been granted for Jetty on 04.01.1995. The State PCB granted consent to operate and consent to establish to the predecessor of the respondent. On receiving a complaint about destruction of mangroves, the matter was referred to the District Collector, Raigad with regard to the EC conditions in constructing Jetty. It was found that additional length has been constructed without requisite EC. Further, air pollution control systems were inadequate for which show cause Notice was issued on 02.11.2015. A report was also sought about CRZ violations and adverse impact on health of villagers and the agricultural land. With regard to fish mortality, compensation was found to have been paid. The PCB has also directed taking of precautionary measures.

5. In the affidavit filed by the Project Proponent, apart from raising plea of limitation, it is stated that the Project Proponent is using latest technology of steel making and compact strip production (CSP) for producing hot rolled coils. The plant is also vital as it provides raw materials to feed the other JSW Steel cold rolling and downstream facilities at Vasind, Tarapur and Kalmeshwar. The plant also supplies steel to industries of national importance including the air and gas automotive and machinery industries, infrastructure and construction sectors, cold rollers industry, factories and consumers durables and steel production. In the year 1984 Nippon Denro Ispat Limited was established by its founding Chairman, Mr. M.L. Mittal with interests in Iron, Steel, mining, energy and manufacturing sectors and had set up various plants including the Dolvi Plant. This land has been declared as Industrial Zone by Government of Maharashtra as Nagothane Growth Centre as per

notification of Urban Development Department; Government of Maharashtra dated 04.07.1992. The plant of the respondent no. 1 was set up in the industrial zone duly notified by the Government of Maharashtra under a notification which is valid, legal and subsisting. On the issue of destruction of mangroves, it is stated that there is no destruction of mangroves by any of the activities carried out by the respondent no. 1 in the plant. Damage to the Khar Bandisti has also been denied. It is stated that respondent no. 1 has spent more than 2 crores for the repair and maintenance of the Khar Bandisti as a part of its Corporate Social Responsibility (CSR) activities and states that the Dharamtar creek is having around 25 kilometers of khar bandisti which is to be maintained by khar land Department of Government of Maharashtra. Respondent No. 1 has erected conveyor belt along sides the old conveyor belt. I further state that the land being used by the Respondent No. 1 is owned by the Maharashtra Maritime Board is enclosed by boundary wall. Hence, question of destruction of mangroves does not arise. On 05.05.2015, the Maharashtra Pollution Control Board has also issued consent to operate in favour of Amba River Coke Limited for running the Coke Oven Plant at Dolvi.

6. It is not necessary to refer to the pleadings filed by the other respondents.

7. Vide order dated 07.11.2017, in continuation of earlier directions, the Tribunal directed as follows:-

*“Learned Counsel appearing on behalf of MPCB undertakes to produce copy of the investigative, scientific and laboratory analysis Reports in respect of various locations visited in connection with the said joint visit before us and give its suggestions in terms of prayer Clause 'b' of the Application in respect of pollution detected by them on 7.8.2016.”*

8. On 30.01.2018, following further order was passed:-

*“The Applicant’s counsel could submit that MPCB as well as MCZMA have not complied with the direction of this Tribunal but submit a report making recommendations and suggestions which is factually incorrect. Mrs. Supriya Dangare, learned counsel for MPCB submits that based on the inspection appropriate recommendations and suggestions will be worked out and submit to the Tribunal. In the circumstances, we direct MPCB to prepare the report giving recommendations and suggestions and serve copy to the respondent industry for his response.”*

9. On 28.07.2020, the matter was transferred to the Principal Bench.

We have heard Learned Counsel for the applicant, the Project Proponent and the State PCB.

10. We have accordingly heard learned Counsel for the Applicant, the project proponent and for the MPCB. After referring to the averments in the application, learned counsel for the Applicant has drawn our attention to the report filed by the State PCB on 07.08.2020 in compliance of order dated 30.01.2018, as follows:-

*“In compliance of the said Hon'ble NGT Order dated 30.01.2018, the Maharashtra Pollution Control Board is filing its report as under:-*

1. *The Respondent Board has granted Consent to Operate to M/s. JSW Steel Ltd (Formerly known as M/s. Jindal Steel Works Ltd.) an Integrated Steel Plant, located at Dolvi Raigad, Tal: Pen, Dist: Raigad for HSM and BFP Plants vide consents dated 07.04.2018 and 02.11.2018 respectively. As per the consent conditions, the slag's generated from hot strip mill and blast furnace plant are under the Non-Hazardous Waste category.*
2. *The Respondent Board issued a letter dtd. 05.08.2020 incorporating the following suggestions & recommendations to the Respondent industry.*
  - i. *The industry shall comply with all conditions prescribed in the consent issued by the Board and dispose off existing as well as proposed generated slags as per consent conditions at designated places in scientific manner.*
  - ii. *The industry shall also explore the possibilities of utilization of slag in cement manufacturing, used as aggregates in civil & road construction and brick manufacturing activity including land reclamation and in marine applications as per CPCB guideline without violating of consent conditions.*

- iii. The industry shall strictly follow the guideline on handling and management of High Volume Low Effect Waste Slag from pyrometallurgical operations of Iron & Steel and Ferrous Alloy units prepared by CPCB.
- iv. The industry shall take all precautionary measures to avoid any soil contamination, groundwater and surface water pollution also any adverse effect on environment and nearby villagers.
- v. The industry shall strictly comply with all consent condition, CPCB guidelines and orders issued by Hon'ble NGT.”

11. It was submitted that though the report shows that there are non-compliances, the true status of compliance has not been set out with reference to the allegations in the application.

12. Learned Counsel for the project proponent - respondent nos. 1 and 2, has drawn our attention to the compilation of documents filed, list of which is as follows:-

<b>Sr. No.</b>	<b>Date</b>	<b>Particulars</b>	<b>Page No.</b>
<b>Judgments/Orders</b>			
1.	17.09.2018	Judgment and Order of Hon'ble Bombay High Court in PIL No. 87 of 2006	<b>1-83</b>
2.	13.11.2017	Order of Hon'ble Bombay High Court in PIL No. 102 of 2014	<b>84-91</b>
3.	15.10.2019	Order of Hon'ble Bombay High Court in WP No. 1643 of 2019	<b>92-94</b>
4.	09.07.2020	Order of Hon'ble Bombay High Court in WP (st.) No. 4894 of 2020	<b>95-102</b>
5.	23.05.2017	Order of this Hon'ble Tribunal in Appeal No. 30 of 2016	<b>103-124</b>
<b>Clearances/Permissions</b>			
6.	24.02.2015	CRZ Recommendation issued by Maharashtra Coastal Zone Management Authority (Respondent No. 2) (" <b>MCZMA</b> ") for expansion of the existing jetty facility.	<b>125-128</b>
7.	25.08.2015	Environment clearance for further expansion of integrated steel plant from 5 MTPA to 10 MTPA and power plant from 300 MW to 600 MW	<b>129-137</b>
8.	26.11.2015	Environment and CRZ Clearance issued by the Ministry of Environment, Forest and climate Change dated 26.11.2015 for Expansion of the Dharamtar Jetty facility.	<b>138-144</b>

9.	26.03.2016	Amended Environment and CRZ Clearance issued by the Ministry of Environment, Forest and Climate Change amending the Environment and CRZ Clearance dated 26.11.2015, for expansion of the Dharamtar Jetty facility.	<b>145-146</b>
10.	16.02.2019	CRZ Recommendation by MCZMA for construction of additional conveyor belts/ streams in respect of expansion of the Dharamtar Jetty facility.	<b>147-148</b>
11	10.01.2020	Amended Environment and CRZ Clearance issued by MoEFCC for construction of additional conveyor belts/streams in respect of expansion of the Dharamtar Jetty facility.	<b>149-151</b>
<b>Compliance of Order dated 30.01.2018 passed by this Hon'ble Tribunal</b>			
12	06.08.2020	Letter issued by Respondent No. 1 to MPCB in response to MPCB's letter dated 05.08.2020	<b>152-154</b>
13	07.08.2020	Compliance Report of MPCB	<b>155-157</b>
<b>Miscellaneous Document(s)</b>			
	Jan-March 2018	Report on Mangrove Restoration prepared by Nature Environment & Wildlife Society	<b>158-183</b>

13. Having regard to the nature of the violations alleged in the application, which have been denied by the Project Proponent, we are of the view that an updated status report is required by an independent and credible Committee to determine whether any further remedial action is necessary. Learned Counsel for the PP submitted that acquittal orders may be looked into but the same are not relevant. Standard of proof in a criminal trial is different from civil case. We have not expressed any opinion on merits of the violation as we leave the question to be gone into later. It is however made clear that acquittal in criminal cases is not final for the civil liability in environmental law.

14. Accordingly, we constitute a five Members Joint Committee, to be headed by an officer of the rank of Joint Secretary, MoEF&CC, nominated by the Secretary MoEF&CC and comprising the CPCB, the IIT Mumbai, the District Magistrate, Raigad, the State PCB as Members. The Committee may look into the issues raised by the Applicant summed up

above including compliance of the Water and Air Acts and HoWM Rules, destruction of Mangroves and damage to Agriculture, if any, status of scientific disposal of solid waste. It may also estimate the extent of environmental damage and the amount of Compensation required and restitution plan (in case of non-compliance). The Committee will be at liberty to take assistance from any other Expert Institution or individual and conduct proceedings online, except for site visit, if necessary. The CPCB and the State PCB will facilitate the functioning of the Committee and act as nodal agency for coordination and compliance. The applicant as well as the project Proponent will be at liberty to represent their respective versions to the Committee through the State PCB. If the violations are found, the Committee may also suggest the amount of compensation to be recovered apart from other restoration measures. The Committee may give its report to the Tribunal as far as possible within four months by e-mail at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in) preferably in the form of searchable PDF/ OCR Support PDF and not in the form of Image PDF. The first meeting of the Committee may be held preferably within one month to take stock of situation and plan further course of action. While giving a report to this Tribunal, its copies be given to the applicant as well as the Project Proponent for their response, if any, before the next date.

In view of above order, all pending M.A.s stand disposed of.

A copy of this order be forwarded to Secretary MoEF&CC, CPCB, State PCB, District Magistrate, Raigad and IIT Mumbai by email for compliance.

List for further consideration on 06.12.2021.

Adarsh Kumar Goel, CP

Sudhir Agarwal, JM

M. Sathyanarayanan, JM

Brijesh Sethi, JM

Dr. Nagin Nanda, EM

May 27, 2021  
Original Application No. 165/2020  
(Earlier O. A. No. 122/2015 (WZ)  
(M.A. No. 211/2015) & M.A. No.220/2015)  
SN