TASKFORCE ON NATURE-RELATED FINANCIAL DISCLOSURES (TNFD)

JSW Steel
TNFD Report
2025

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About the Report

Released in September 2023, the Task Force on Nature-related Financial Disclosures (TNFD) unveiled a comprehensive set of recommendations designed to integrate environmental considerations into business strategies across the globe. This initiative is a collaborative effort that combines market knowledge, scientific accuracy, and governmental endorsement to encourage businesses to factor nature into their decision-making processes. Modelled on the success of the Task Force on Climate-related Financial Disclosures (TCFD), TNFD serves as a framework for companies to identify, assess, manage, and disclose nature-related issues. It recognizes the urgent need to address financial and economic challenges arising from biodiversity loss and the deterioration of ecosystems. TNFD guidelines are structured around four critical pillars: Governance, Strategy, Risk and Impact Management, and Metrics and Targets, which encompass fourteen specific disclosure elements that address a company's nature-related Dependencies, Impacts, Risks, and Opportunities (DIRO). TNFD offers a robust risk management and reporting framework suitable for organizations of all sizes, helping them to navigate nature-related challenges in tandem with other essential disclosures. Furthermore, TNFD has also issued sector-specific guidance for metals and mining.

This TNFD Report explains how JSW Steel is engaging with nature-related issues. By adopting TNFD's LEAP framework—Locate, Evaluate, Assess, and Prepare—the company systematically examines the impact and dependency of its own operations and critical upstream suppliers. The report evaluates both the physical and transitional risks tied to natural elements at specific operational sites. It also identifies opportunities to enhance biodiversity at these sites, which will be integrated into site-specific Biodiversity Management Plans (BMPs). Finally, the report outlines the performance indicators and objectives that JSW Steel has established to track and enhance its environmental stewardship in the years ahead.

Disclaimer: The intent of this report is to present the dependencies, impacts, risks and opportunities of JSW Steel and its critical upstream suppliers for strategy purposes and for managing nature-related risks and opportunities. The findings presented are based on a combination of primary data, secondary information and information collated through online tools. The TNFD Recommendation document and LEAP Framework were both used for preparing the report, as well as tools and resources suggested by TNFD for quantifying nature-related dependencies and impacts. However, it should be recognized that, nature being complex, the dependencies and impacts identified in this report might vary with time, scale and geographical area, meaning actual conditions on the ground may differ from those indicated in this report. Moreover, the tools used require detailed data inputs that may vary in consistency or availability across different regions. As a result of this, there may be variation in the veracity of outputs depending on the quality and granularity of the data provided, as well as the specific sector and geographic focus.

[1]Recommendations of the Taskforce on Nature-related Financial Disclosures, September 2023

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A Message from our JMD & CEO

Steel is one of the most essential materials in the global economy, forming the backbone of infrastructure, transportation, construction, and manufacturing. It has been, is, and will continue to be a critical component in the development of societies and economies across the world.

However, it is an undeniable reality that the process of steel production comes with a significant environmental footprint that spans both climate and nature through energy use, greenhouse gas emissions, air and water pollution and resource consumption.

And herein lies the challenge. How do we ensure that we continue to provide to society the steel it needs to develop and grow whilst at the same time ensuring that the very fabric of our natural world, those ecosystems that are essential for sustaining the flow of the natural services that our communities and businesses rely on to thrive, are protected and enhanced?

We do this, by acknowledging our dependence on, and our connectedness with, the natural world around us, and recognizing that the strength and stability of our societies and economies are inextricably bound to the health and vitality of nature, the stability of climate and the retention and enhancement of biodiversity.

It will only be by working alongside nature, and not against it, that we will truly be able to deliver the sustainable society that we all seek to create. That is the path we are following at JSW Steel. Of course, it will not be an easy path. We recognize that our commitments to address climate and nature-related risks will throw up challenges that directly impact profitability and shareholder value. But these are challenges that we are ready and willing to tackle. We already have in place our Climate Change and Biodiversity Policies which are effectively deployed through our robust Sustainability Framework, enabling us to set and pursue ambitious targets and plans to embrace climate and nature-related risks and opportunities. In our Climate Action Report, we have laid out our plans for the decarbonization of our business. And now, through this, JSW Steel's first Taskforce on Nature-related Financial Disclosures (TNFD) report, we are able to provide to our many and varied stakeholders an overview of how we are further expanding our efforts to better account for biodiversity, land use, water availability and ecosystem services across our operations – all of which will directly contribute to our goal of long-term sustainability.

It is therefore with great enthusiasm that we present this TNFD report, hoping that its contents further reinforces our commitment to the belief that long-term business success will only be achieved through meaningful progress on the challenges of climate change and the protection of our natural world.

Best Regards,

Mr. Jayant Acharya

> Nature is not a constraint on growth; it is the foundation of it. Through TNFD, we are aligning steelmaking with the protection and restoration of land, water, and biodiversity.
>
> **Mr. Jayant Acharya**
> Joint MD & CEO
> JSW Steel

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A Message from our CSO

It is with immense pride and a deep sense of responsibility that we present JSW Steel's inaugural Taskforce on Nature-related Financial Disclosures (TNFD) report. This publication represents a pivotal step in our ongoing journey to embed nature conservation and biodiversity stewardship into the heart of our business strategy, based on our profound respect for nature and our unwavering commitment to sustainable development.

At JSW Steel, we acknowledge the intrinsic link between our operations and the ecosystems in which we function. Indeed, the steel industry as a whole faces a range of nature-related risks that are closely linked to its resource-intensive operations. The extraction of raw materials like iron ore and coal often results in land degradation, deforestation, and the loss of biodiversity, while production processes can contribute to air and water pollution, placing pressure on local ecosystems and communities. High water usage, waste generation, and the alteration of natural landscapes further intensify these impacts. Addressing these risks effectively requires an integrated approach that considers nature alongside climate within the business framework, informed by better data, supported by collaboration across the value chain, and shared with stakeholders through regular and transparent disclosures.

This TNFD report is another key element of this integrated approach. It is also, we believe, a testament to our dedication to transparency and accountability regarding our environmental interactions. It, and the future updates we intend to publish in the years ahead, re-emphasizes our commitment to the further integration of nature-related considerations into our strategic planning, and supports our ambitious goal of achieving "No-Net-Loss" (NNL) of biodiversity by 2030, ensuring that our operations contribute positively to the health and resilience of ecosystems for many decades to come.

I extend my heartfelt gratitude to our employees, partners, and to our stakeholders for their steadfast support and collaboration. Together, we are forging a path towards a future where industrial growth and environmental stewardship are seamlessly aligned, and I thank you for your trust and engagement as we continue this journey towards a more sustainable and nature-positive future.

Best Regards,

Mr. Prabodha Acharya

> Steel builds economies, nature sustains them. Our commitment is to deliver both by aligning every investment with climate stability and nature's vitality.

Mr. Prabodha Acharya
CSO
JSW Group

Conserving Biodiversity and Nature at JSW Steel

JSW Steel is a vanguard in the global steel industry, acclaimed for its innovative and sustainable practices. As one of the world's largest integrated steel manufacturers, JSW Steel commands significant market shares domestically and internationally, due to its comprehensive product range and state-of-the-art facilities. With operations across various locations, JSW Steel is dedicated to balancing industrial growth with environmental stewardship.

A key focus of JSW Steel is its commitment to biodiversity conservation, an integral element of its broader sustainability strategy. Recognizing biodiversity as a material topic, the company is dedicated to achieving "No-Net-Loss" (NNL) of biodiversity by 2030 across all its operational sites. This commitment is harmonized with National Biodiversity Targets and is woven into JSW Steel's decision-making processes through a risk-based approach.

Local Initiatives and Programs

JSW Steel actively engages in efforts to restore and protect ecosystems, ensuring that its operations contribute positively to the environment. Some of its key programmes are briefly described below:

1. **Mangrove Restoration at Dolvi:** JSW Steel has implemented a mangrove restoration project at its Dolvi facility, planting over 2 million mangroves saplings. This initiative not only safeguards farmlands from saltwater intrusion but it is also projected to capture approximately 185,000 tonnes of carbon over 25 years.
2. **Green Mechari Project in Salem:** Utilizing the Miyawaki method[2], JSW Steel has rapidly increased green cover through the Banapuram plantation drive, planting 1,200 trees across 2.5 hectares. This project aims to improve the microclimate and provide livelihood opportunities for local communities.
3. **Sasan Vana Biodiversity Park at Vijayanagar:** Spanning 97 hectares, this initiative focuses on creating a thriving ecosystem to support diverse flora and fauna, promoting environmental sustainability and preserving regional biodiversity.
4. **Forest Conservation and afforestation at JSW Steel, Vijayanagar:** JSW Steel has entered into a series of Memoranda of Understanding (MoUs) with the Karnataka Forest Department (KFD) to conserve and enhance the biodiversity of an area of approximately 6,395 hectares. This area encompasses the Kodalu, Daroji, Torangallu, and Yerabannahalli Reserved Forests and their surrounding areas. The MoUs include the below-mentioned activities:
    - Afforestation
    - Creation of waterholes for fauna, perches for birds, and islands within the protected areas
    - Erection of chain links to protect natural habitats or afforestation areas
    - Purchase of mechanical boats and fire protection equipment
    - Nature education and the development of a Nature Interpretation Centre (NIC) at Daroji Bear Sanctuary

[2]The Miyawaki method is a forest creation technique pioneered by Japanese botanist Akira Miyawaki, designed to rapidly establish dense, self-sustaining forests in urban areas. This method involves planting multiple native tree and shrub species very close together in a small area, promoting faster growth and natural forest development

Recognition of International Standards and Guidance

JSW Steel refers to international guidance documents such as the IUCN No-Net-Loss (NNL) guidance, Convention on Biological Diversity (CBD), International Finance Corporation Performance Standard 6 (IFC PS6) and the United Nations Convention on Biological Diversity (CBD) Post 2020 Global Biodiversity Framework targets.

Global and National Partnerships

JSW Group actively engages in both national and global partnerships to bolster its biodiversity and sustainability initiatives. Here are some key partnerships:

1. **Indian Business and Biodiversity Initiative (IBBI):** JSW Steel was among the pioneers to sign up and commit to the IBBI, an initiative by the Confederation of Indian Industry (CII) in partnership with India's Ministry of Environment, Forest & Climate Change (MoEF&CC). In compliance with the IBBI declaration, JSW Steel has mapped the biodiversity interfaces with its business operations, designating itself as a biodiversity champion. The company has also implemented schemes to enhance biodiversity awareness within the organization.
2. **Local Partnerships for Biodiversity Conservation:** JSW Steel collaborates with local entities like the Bombay Natural History Society (BNHS) and People for Environment (PFE) for biodiversity mapping and conservation studies, as seen in their work at Vijayanagar. This partnership helps in identifying and conserving local species, including those on the IUCN Red List.
3. **Joint Initiatives with Government Bodies:** JSW Steel undertakes joint forest management initiatives with the State Forest Department for greenery development, emphasizing biodiversity. This partnership with government bodies aids in the restoration and conservation of local ecosystems.
4. **Community and Environmental Engagement:** Through the JSW Foundation, the JSW Group also engages with communities around its plants, focusing on areas like agriculture, water, sanitation, and environment, which indirectly supports biodiversity conservation efforts.

These partnerships reflect JSW Steel's commitment to integrating national and global biodiversity standards into its business operations and collaborating with various stakeholders to achieve its sustainability goals.

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JSW Steel's Biodiversity Policy

In May 2020, JSW Steel formalized its dedication to biodiversity preservation by adopting a Biodiversity Policy , integral to its overarching Sustainability Vision. Endorsed by the Board of Directors, this policy proactively addresses critical environmental challenges, including deforestation, habitat degradation, over-exploitation of natural resources, proliferation of invasive species, pollution, and the far-reaching effects of climate change. With a commitment to not only mitigate adverse impacts but also to enhance ecological resilience, JSW Steel is actively pursuing strategies that foster positive contributions to biodiversity conservation. Some key objectives of this policy are:

1. **Impact Assessments:**
   - Conduct rigorous assessments of species, habitats, and ecosystems around its sites.
   - Identify potential changes (positive or negative) in biodiversity due to JSW Steel's activities.
   - Develop programs to prevent or minimize adverse impacts and enhance positive impacts on biodiversity.
2. **No-Net-Loss (NNL) Goal:**
   - Aim to achieve 'No-Net-Loss' (NNL) of biodiversity at all operating sites.
   - Explore opportunities to prevent and minimize adverse impacts on biodiversity.
   - Enhance and reinforce positive impacts on biodiversity.
   - Regularly monitor and report on the nature and scale of impacts on biodiversity.
3. **Employee Education:**
   - Educate employees about biodiversity to help them minimize their impacts both at work and at home.
   - Support research and development of innovative technologies for biodiversity protection and enhancement.
4. **Supply Chain Engagement:**
   - Promote biodiversity protection and enhancement across all suppliers and business partners.
   - Define and share a Code of Practice outlining minimum expectations for biodiversity protection.
   - Establish a detailed and transparent process through which Suppliers' attitudes, risk profiles and performance regarding biodiversity, is evaluated"
5. **Support for National Projects:**
   - Support national projects aimed at protecting and enhancing biodiversity.
   - Engage in initiatives to protect endangered species, mitigate negative impacts on unique habitats, and enhance critical ecosystems' well-being and viability.
   - Aim to achieve a 'net gain' in biodiversity through these projects.
6. **Reporting and Compliance:**
   - Regularly report on efforts to protect and enhance biodiversity.
   - Ensure compliance with local and national regulations and global sustainability frameworks such as the Global Reporting Initiative (GRI) and the United Nations Sustainable Development Goals (UNSDGs).

[3]Our Biodiversity Policy can be accesse here

TNFD General Requirements

In alignment with the recommendations provided by the Taskforce on Nature-related Financial Disclosures (TNFD), the criteria for defining the boundaries of this report are outlined as follows:

Materiality Applications

JSW Steel adopts the materiality definition provided by the Global Reporting Initiative (GRI), which states that an organization should prioritize reporting on topics that reflect its most significant impacts on the economy, environment, and people, including their human rights. Consistent with this approach, JSW Steel systematically assesses, evaluates, and strategically manages the nature-related dependencies, impacts, risks and opportunities arising from its operations.

Scope of disclosures

For this TNFD report, JSW Steel has focused on its direct operations,excluding project sites. which include 20 facilities spanning Mining (Two clusters - 12 Mines), Manufacturing (Integrated Steel Plants), Downstream Rolling Mills and a Direct Reduced Iron (DRI) unit. Additionally, the company has evaluated those critical suppliers that are crucial to its value chain to identify their physical and transitional-reputational risks using the WWF Biodiversity Risk Filter Tool.

The scope of this disclosure is depicted in Figure 1 below. Tables 1 and 2 and Map 1 (also below) offer details on the direct operations, their locations within biomes, and their spatial distribution across various biogeographic zones in India.

Figure 1: Scope of Business Value Chain covered in the Report

Table 1: List of JSW Steel Operational Units along with Locations and IUCN Biomes Typology

S. No.	Plant Name	Locations- District & State	IUCN Biomes Typology	Operations
1	JSW Steel - Gonua mines, Odisha	Sundargarh, Odisha	Tropical & Subtropical Moist Broadleaf Forests	Mining
2	JSW Steel - Nuagaon mines, Odisha	Keonjhar, Odisha	Tropical & Subtropical Moist Broadleaf Forests	Mining
3	JSW Steel - Narayanposhi mines, Odisha	Sundargarh, Odisha	Tropical & Subtropical Moist Broadleaf Forests	Mining
4	JSW Steel - Vijayanagar Mines [9 Mines (1 UG block), 8 in Bellary District, 1 in Chitradurga District]	Bellary, Karnataka	Deserts & Xeric Shrublands	Mining
5	JSW Steel Vijayanagar Works	Bellary, Karnataka	Deserts & Xeric Shrublands	Manufacturing facility (Integrated Steel Plant)
6	JSW Steel Salem Works	Salem, Tamil Nadu	Tropical & Subtropical Dry Broadleaf Forests	Manufacturing facility (Integrated Steel Plant)
7	JSW Steel Dolvi Works	Raigad, Maharashtra	Tropical & Subtropical Moist Broadleaf Forests	Manufacturing facility (Integrated Steel Plant)
8	JSW BPSL Sambalpur Works	Sambalpur, Odisha	Tropical & Subtropical Dry Broadleaf Forests	Manufacturing facility (Integrated Steel Plant)
9	JSW Steel - Raigarh	Chhattisgarh	Tropical & Subtropical Dry Broadleaf Forests	Manufacturing Facility (Integrated Steel Plant)
10	JSW Steel Salav Works	Raigad, Maharashtra	Tropical & Subtropical Moist Broadleaf Forests	Direct Reduced Iron (DRI) unit
11	JSW Steel Coated Products Ltd. Vasind Works	Thane, Maharashtra	Tropical & Subtropical Moist Broadleaf Forests	Downstream operations (Downstream Rolling Mill)
12	JSW Steel Coated Products Ltd. Tarapur Works	Palghar, Maharashtra	Tropical & Subtropical Moist Broadleaf Forests	Downstream operations (Downstream Rolling Mill)
13	JSW Steel - Anjar	Kachchh, Gujarat	Deserts & Xeric Shrublands	Downstream operations (Downstream Rolling Mill)
14	JSW Steel Coated Products Ltd. Bawal Works	Rewari, Haryana	Deserts & Xeric Shrublands	Downstream operations (Downstream Rolling Mill)
15	JSW Steel Coated Products Ltd. Kamleshwar Works	Nagpur, Maharashtra	Tropical & Subtropical Dry Broadleaf Forests	Downstream operations (Downstream Rolling Mill)
16	JSW Steel Coated Products Ltd. Khopoli Works	Raigad, Maharashtra	Tropical & Subtropical Moist Broadleaf Forests	Downstream operations (Downstream Rolling Mill)
17	JSW Steel Coated Products Ltd. Dhar Works	Indore, MP	Tropical & Subtropical Dry Broadleaf Forests	Downstream operations (Downstream Rolling Mill)
18	JSW Steel Coated Products Ltd. Rajpura Works	Punjab	Deserts & Xeric Shrublands	Downstream operations (Downstream Rolling Mill)
19	JSW BPSL Chandigarh Works	Chandigarh	Deserts & Xeric Shrublands	Downstream operations (Downstream Rolling Mill)
20	JSW BPSL Serampore Works	Serampore, Kolkata	Tropical & Subtropical Moist Broadleaf Forests	Downstream operations (Downstream Rolling Mill)

The map below shows the locations of the JSW Steel direct operations included in this TNFD report, with each operation situated within its respective biogeographic zone. Of the 20 business operations, two mining clusters are spread across 12 sites in the states of Odisha and Karnataka, located in the Deccan Plateau biogeographic zone. The other operations are situated in the Semi-Arid, Desert, Western Ghats and Gangetic Plain biogeographic zones. Locations of all operation in biogeographic zones are compiled and provided in the table below.

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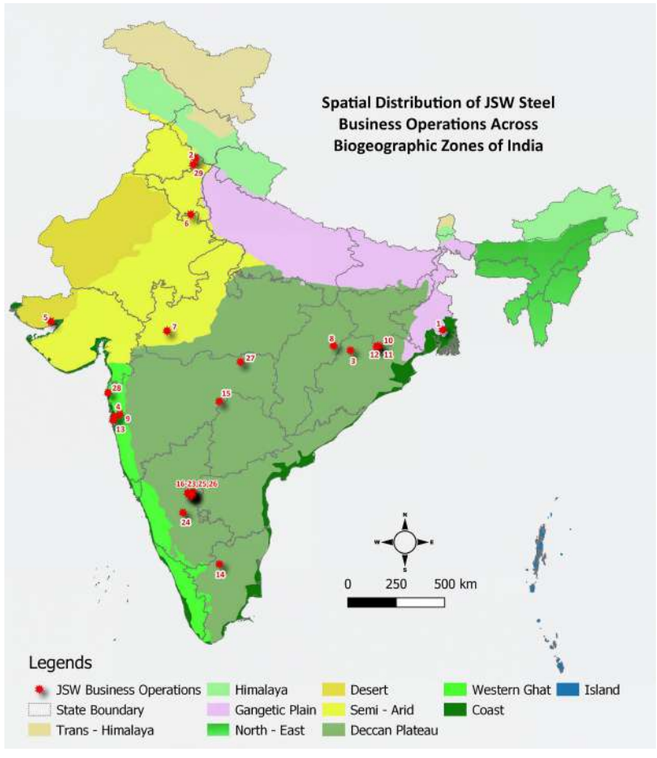
Table 2: Biogeographic Zones of Business Operations

Biogeographic Zone	Business Operations
Semi-Arid	JSW Steel Coated Products Ltd. Rajpura Works, JSW Steel Coated Products Ltd. Bawal Worksl, JSW BPSL Chandigarh Works, JSW Steel Coated Products Ltd. Dhar Works
Deccan Plateau	JSW Vijayanagar Mines – Dharma Mines, Rama Mines, Nandi mines, Devdhari Mines, Narayana Mines, Ubbalgundi Mines, Bhadra UG Block, Bhadra Mines, Tunga Mines, Bhomman Mines, JSW Steel Vijayanagar Works, JSW Steel Salem Works, JSW Steel Odisha Mines, JSW Steel - Raigarh, JSW Steel Coated Products Ltd. Kamleshwar Works, JSW BPSL Sambalpur Works
Western Ghats	JSW Steel Salav Works, JSW Steel Dolvi Works, JSW Steel Coated Products Ltd. Vasind Works, JSW Steel Coated Products Ltd. Tarapur Works, JSW Steel Coated Products Ltd. Khopoli Works
Desert	JSW Steel Anjar
Gangetic Plain	JSW BPSL Serampore Works

Map 1: Spatial Distribution of JSW's Operations over Biogeographic Zones of India



[The Vijayanagar Mines consist of 9 mines and 1 UG Block -Bhadra Mines. Of these 9 sites, 8 are in the Bellary District (refer to serial numbers 17-23 and 25-26), while the Bhomman Mines (refer to serial number 24) are situated in the Chitradurga District]

JSW Business Operations

1. Bhushan Power & Steel (BPSL) – Serampore
2. Bhushan Power & Steel (BPSL) – Chandigarh
3. Bhushan Power & Steel (BPSL) – Sambalpur
4. JSW Steel Dolvi Works
5. JSW Steel – Anjar
6. JSW Steel Coated Products – Bawal
7. JSW Steel Coated Products – Dhar
8. JSW Steel – Raigarh
9. JSW Steel Coated Products – Khopoli Works
10. JSW Steel – Gonua Mines, Odisha
11. JSW Steel – Nuagaon Mines, Odisha
12. JSW Steel – Narayanposhi Mines, Odisha
13. JSW Salav Works
14. JSW Steel Salem Works
15. JSW Steel Coated Products – Vasind
16. JSW Steel Vijayanagar Works
17. JSW Vijayanagar – Dharma Mines
18. JSW Vijayanagar – Bhadra Mines
19. JSW Vijayanagar – Bhadra UG Block
20. JSW Vijayanagar – Devdhari Mines
21. JSW Vijayanagar – Ubbalagundi Mines
22. JSW Vijayanagar – Rama Mines
23. JSW Vijayanagar – Narayana Mines
24. JSW Vijayanagar – Bhomman Mines, Chitradurga
25. JSW Vijayanagar – Nandi Mines
26. JSW Vijayanagar – Tunga Mines
27. JSW Steel Coated Products – Kalmeshwar Works
28. JSW Steel Coated Products – Tarapur
29. JSW Steel Coated Products – Rajipura

The Time Horizons

As part of its comprehensive sustainability strategy, JSW Steel has developed a structured approach to managing biodiversity and environmental impacts across different timeframes. By categorizing its initiatives into short, medium, and long-term horizons, the company ensures that its actions are strategic and adaptive to evolving environmental challenges. This approach not only addresses immediate ecological needs but also lays the groundwork for significant, lasting contributions to biodiversity conservation and ecosystem health. The following table outlines key initiatives and commitments JSW Steel has been considering across these time horizons, highlighting its dedication to achieving "No-Net-Loss" (NNL) of biodiversity, and advancing Nature-Based Solutions to enhance resilience against climate change.

Table 3: Time Horizons

Time Horizons	Years	Description
Short	0-1 year	These are short-term initiatives that are considered for a timeframe of one year yet contribute significantly to the existing state of nature. This timeframe covers initiatives such as: **Biodiversity Assessments**: Conducting initial assessments to understand the biodiversity status in areas surrounding our operations. **Awareness Programs**: Implementing employee and community awareness programs about the importance of biodiversity. **Partnerships with Local NGOs**: Partnering with local environmental NGOs for community-based conservation projects. **Restoration Projects**: Initiating small-scale habitat restoration projects to immediately mitigate impacts on local biodiversity.
Medium	2-5 year	These are medium-term initiatives that take a period of at least 2 to 5 years to yield results. This timeframe covers initiatives such as: **Comprehensive Biodiversity Management Plans**: Developing and implementing detailed plans that aim to protect and enhance biodiversity in and around operational sites. **Reforestation Initiatives**: Engaging in significant reforestation and afforestation projects to restore degraded lands and start the journey towards No-Net-Loss (NNL). **Sustainable Sourcing**: Establishing policies and practices for sustainable sourcing of raw materials to minimize biodiversity impact. **Research and Monitoring**: Investing in research to monitor biodiversity impacts and the effectiveness of conservation efforts.
Long	5-10 Year	These are long-term initiatives that need a longer timeframe i.e. 5 to 10 years to show results. This timeframe covers initiatives such as: **Biodiversity Offsetting**: Implementing biodiversity offset programs to compensate for unavoidable impacts on biodiversity and measure results against No-Net-Loss (NNL) targets. **Ecosystem Restoration**: Undertaking large-scale ecosystem restoration projects aimed at long-term environmental resilience. **Legacy Projects**: Establishing legacy projects that contribute to global biodiversity goals, such as supporting endangered species. **Climate Resilience Programs**: Integrating biodiversity conservation with climate change adaptation and resilience strategies. **Policy Advocacy**: Engaging in advocacy for stronger biodiversity protection policies at national and international levels. **Wildlife Corridors**: Creating or supporting the development of wildlife corridors to maintain ecosystem connectivity.

Engagement with local communities and affected stakeholders on Nature-Related Issues

JSW Steel actively engages local communities and other stakeholders in the Biodiversity Management Planning Process for its business operations. Guided by its Biodiversity Policy and Technical Standard on Biodiversity and Ecosystem Management, the company ensures that perceptions and opinions of local communities are considered during various phases of Biodiversity Management Planning:

i. **Assessment Phase**

As a part of the Biodiversity Management Planning Process, a dedicated study is carried out through engagement with local communities and other stakeholders to understand and integrate knowledge regarding the following:

- Perception of the condition of ecosystem services;
- Changes in the patterns of ecosystem services;
- Impact of these changes on the community; and
- Their suggestions on managing the ecosystems.

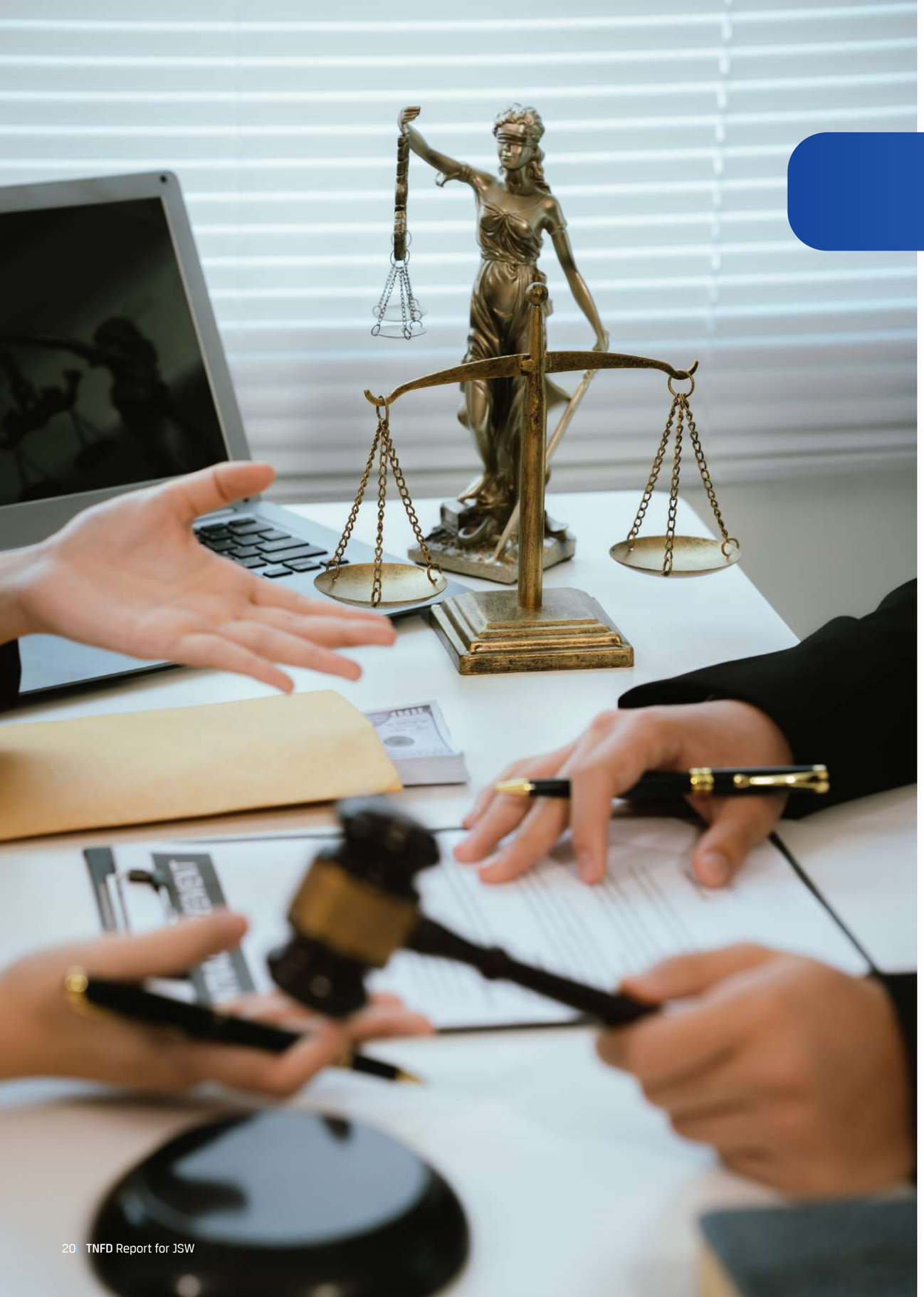
ii. **Planning Phase**

Knowledge on perceptions, changes and trends, along with the suggestions of local communities are integrated into the Biodiversity Management Plans (BMPs) for each site. The Biodiversity Management Plans also provide supplementary actions for engagement with local communities and other stakeholders on biodiversity related initiatives.

iii. **Implementation Phase**

Biodiversity Management Plans also define the role of the Environment Sustainability Team to engage with the local community in the implementation of developed Biodiversity Management Plans (BMPs). In addition to this, Biodiversity Management Plans (BMPs) also identify the capacity building gaps required for communities to understand the importance of linking biodiversity with livelihood opportunities. Biodiversity Management Plans (BMPs) also recommend engagement and collaboration with local communities for actions outside the boundaries of JSW Steel's business operations. Engagement with local community leaders, NGOs, and Biodiversity Management Committees (BMCs) are also recommended.

JSW Steel's dedication to community engagement and sustainable practices highlights its commitment to environmental responsibility and social well-being. By actively involving local communities and stakeholders in its Biodiversity Management Planning Process, the company sets a benchmark for integrating corporate responsibility with community and environmental stewardship. This approach not only ensures the incorporation of local insights and needs but also fosters a collaborative effort towards preserving biodiversity while enhancing livelihood opportunities.



Governance

JSW Steel places a strong emphasis on climate and nature action, integrating these priorities into the heart of its governance structure. The company's corporate governance framework ensures that sustainability is a central factor in all business decisions. A team of senior executives spearheads this initiative, guiding strategic directions and embedding climate considerations throughout the organization. Figure 2 illustrates JSW Steel's corporate governance framework, which includes specific committees dedicated to addressing nature-related issues. The sections below provide insight into the role of the board and management's approach to overseeing nature-related issues.

Figure 2: Corporate Governance Framework

(Out of 14 Board Committees, the Business Responsibility/Sustainable Reporting Committee along with the CSR Committee addresses issues concerning climate change, water, and biodiversity, while the Risk Management Committee develops and periodically reviews the Risk Management Policy, considering evolving industry dynamics. The details of these committees are provided below.)

Board Oversight

The Board of Directors oversees 14 Board Committees including the Business Responsibility/Sustainability Reporting Committee, the Risk Management Committee, and the Corporate Social Responsibility Committee. The Business Responsibility/Sustainability Reporting Committee and the Risk Management Committee convene semi-annually to assess the company's action strategies and sustainability performance along with the Corporate Social Responsibility Committee. They collaborate closely on climate-related matters and to ensure a holistic understanding and approach to nature-related challenges and opportunities, reporting directly to the Board to secure approval for key initiatives.

A. Business Responsibility/Sustainability Reporting Committee

This committee is instrumental in shaping JSW Steel's sustainability strategy. It is led by a Non-Executive Independent Director and includes a mix of non-executive and executive directors. The committee is tasked with implementing the National Guidelines on Responsible Business Conduct (NGRBC) and ensuring alignment with national and international sustainability standards. It reviews the progress of sustainability initiatives, evaluates long-term low-carbon development plans, and ensures these efforts are consistent with global benchmarks. Additionally, the committee addresses issues concerning climate change, water and biodiversity, providing guidance on necessary actions to promote sustainable practices.

B. Risk Management Committee

Risk Management Group, consisting of a Senior Leadership Team, and a Risk Management Committee (RMC) uses a top-down approach to identify and assess long-term, strategic, and macro-level risks affecting the business. The RMC, a sub-committee of the Board of Directors, is responsible for overseeing the organization's entire risk management process. JSW Steel follows the globally recognized Committee of Sponsoring Organizations (COSO) framework for Environmental Risk Management (ERM), which helps integrate internal controls into business operations while also offering a better understanding of potential opportunities and risks. Led by an Independent Director, the RMC ensures that this Enterprise Risk Management (ERM) framework effectively addresses key areas, including:

- Taking calculated risks to strategically plan for optimal outcomes while preparing for potential challenges;
- Implementing strategies and plans with a focus on actionable execution;
- Managing unintended risks—such as performance, incident, process, and transaction risks—by avoiding, mitigating, transferring (e.g., through insurance), or sharing them (e.g., through subcontracting). The likelihood or impact of these risks is minimized through strategic and executive management, policies, processes, built-in system controls, Management Information Systems (MIS), and internal audit reviews.

C. Corporate Social Responsibility Committee

The Corporate Social Responsibility (CSR) Committee plays a pivotal role in guiding the company's commitment to social and environmental responsibility. It is entrusted with formulating and recommending a comprehensive CSR Policy to the Board, outlining a strategic approach to projects and programs aligned with Schedule VII of the Companies Act, 2013. The committee is responsible for recommending appropriate expenditure for each activity, ensuring alignment with legal stipulations and company values. It also approves the Annual Report on CSR activities for inclusion in the Director's Report, providing insights into any challenges faced in expenditure. Furthermore, the committee is tasked with the ongoing monitoring and evaluation of the CSR Policy and projects, instituting a transparent mechanism to ensure effective implementation and accountability. Through these efforts, the CSR Committee ensures that the company not only meets its statutory obligations but also contributes meaningfully to societal development.

Management Oversight

At the management level, the Executive Committee, supported by the Climate Action Group (CAG) and various corporate functions, oversees the implementation and progress of climate-related initiatives. This oversight includes a comprehensive review of sustainability Key Performance Indicators (KPIs), ensuring alignment with broader strategic objectives. The management's proactive approach facilitates swift adaptation to emerging climate trends and ensures that the organization remains at the forefront of sustainable practices.

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A. Executive Committee

The Executive Committee, comprising of senior leadership such as the CEO and Joint Managing Director and Plant Heads, plays a critical role in governance. Supported by the Chief Sustainability Officer, this committee meets regularly to discuss climate change and sustainability performance. Their discussions and decisions are pivotal in driving JSW Steel's commitment to reducing its environmental footprint and achieving its sustainability goals.

B. Climate Action Group

Formed as a central think-tank, the Climate Action Group (CAG) is vital to JSW Steel's coordinated climate efforts. Chaired by the Chief Operating Officer of JSW Steel Vijayanagar Works and facilitated by the Chief Sustainability Officer, the CAG draws on expertise from various functions, including R&D, strategy, operations, finance and marketing. The group is responsible for tracking climate performance, evaluating climate risks and opportunities, and developing mitigation strategies. Meeting monthly, the CAG ensures that JSW Steel not only meets its sustainability targets but also stays ahead of regulatory and technological changes.

Human Right and Engagement with Local Communities and Stakeholders

The international community acknowledges the strong, longstanding reliance of Indigenous People and local communities on biological resources, as highlighted in the preamble to the Convention on Biological Diversity (CBD). Additionally, there is widespread recognition of the valuable role traditional knowledge plays in the conservation and sustainable use of biological diversity, which are two core objectives of the CBD. For all future projects, including work in new locations or expansion of existing sites, JSW Steel aims to minimize any disruption to livelihoods, ensuring that they fully understand and respect the rights, interests and perspectives of Indigenous People.

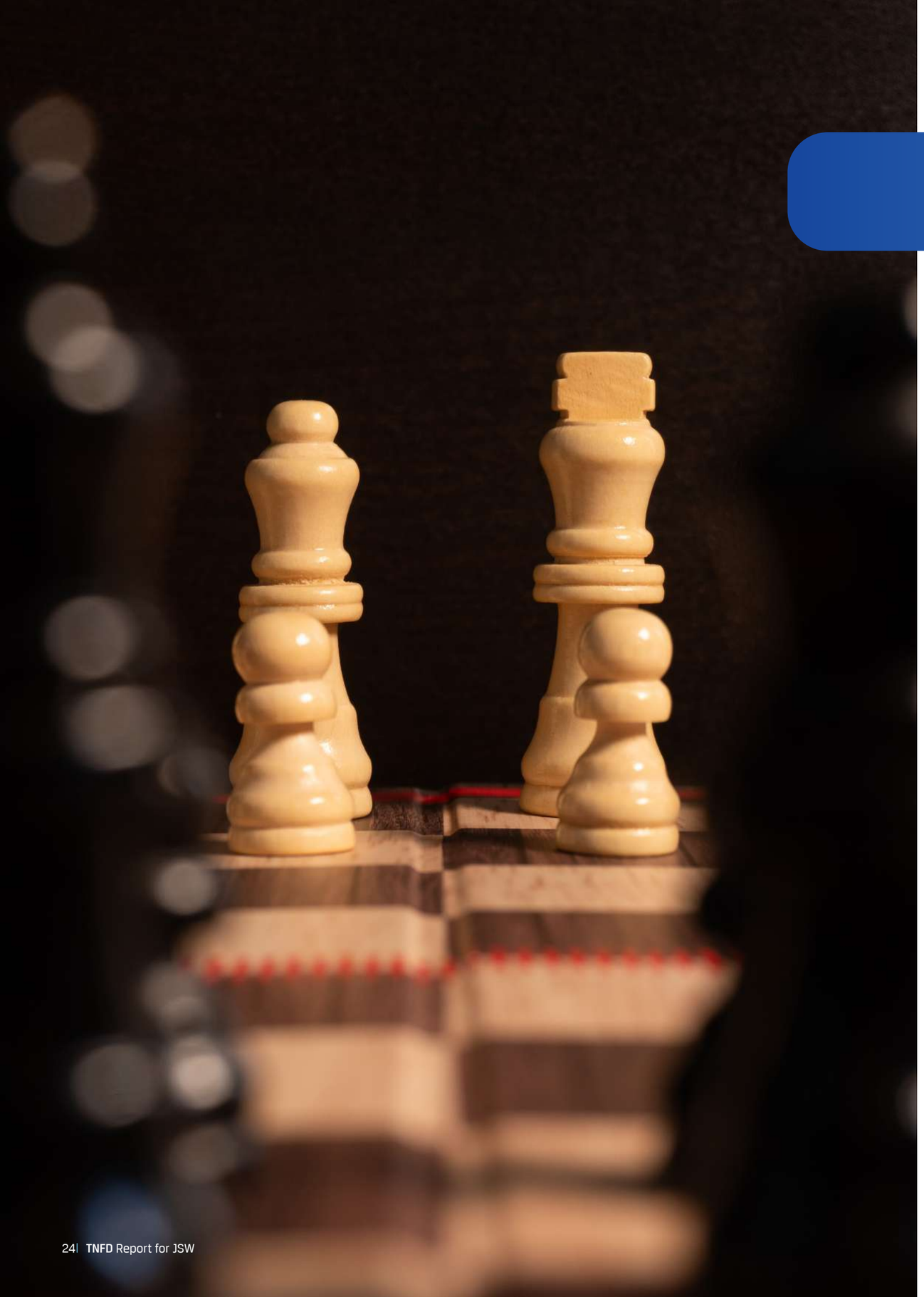
To facilitate this JSW Steel has an Indigenous Peoples and Resettlement Policy. Under this Policy, JSW Steel will:

- Undertake detailed assessment processes as part of the initial project feasibility studies to:
  - Identify any and all Indigenous Peoples who may be affected;
  - Identify all the potential impacts upon those Indigenous Peoples;
- Engage an independent expert to help prepare an engagement plan to obtain and maintain the Free Prior and Informed Consent (FPIC) of the affected Indigenous Peoples;
- Ensure access for Indigenous Peoples to resources such as specialist lawyers and experts;
- Undertake a detailed impact assessment leading to a binding agreement;
- Implement agreed actions within agreed timescales whilst constantly sharing information;
- Ensure the provision of a robust and balanced system for reporting and addressing grievances;
- Ensure a comprehensive and independent evaluation and review of the resettlement project at its conclusion to confirm all commitments have been honored;
- Report on the status of all projects where interactions with Indigenous Peoples have been identified, including details relating to resettlements undertaken and compensations paid.

Furthermore, JSW Steel has also developed a Human Rights Due Diligence (HRDD) process to fulfill its commitment to human rights protection, which includes conducting a comprehensive Human Rights Impact Assessment (HRIA). This process aligns with international standards and draws on the guidance of the United Nations Development Programme (UNDP) and the International Council on Mining and Metals (ICMM). It is designed to ensure that the rights of all stakeholders, including employees, contract workers, local communities, suppliers and customers, are respected and protected. The due diligence procedure involves identifying and evaluating actual or potential human rights impacts, responding to the identified issues, documenting the response measures, and communicating with stakeholders about how these issues have been managed.

The due diligence process and response mechanism in JSW Steel includes the following:

- Identification of potential human rights issues;
- Engagement with external and internal stakeholders to identify and quantify potential or actual high human rights risks, considering factors such as scale, scope, irremediability, and likelihood;
- Risk evaluation and assessment;
- Reporting of results;
- Development of site-specific Human Rights Management Plans.



Strategy

In this section, JSW Steel presents an in-depth analysis of how nature-related dependencies, impacts, risks and opportunities (DIRO) affect its direct operations. The company recognizes that its activities are intertwined with various environmental factors, making it crucial to understand and manage these dependencies and impacts. Additionally, JSW Steel evaluates the risks associated with its critical suppliers, acknowledging that supply chain vulnerabilities can significantly influence its overall risk profile.

This section also explores JSW Steel's strategic alignment with LEAP (Locate, Evaluate, Assess, and Prepare) indicators. Further details are provided below.

The LEAP Approach

In alignment with the Taskforce on Nature-related Financial Disclosures (TNFD), JSW Steel has embraced the TNFD's LEAP approach (Locate, Evaluate, Assess, and Prepare) to systematically identify and analyze the nature-related dependencies, impacts, risks and opportunities associated with each of its business operations. This approach empowers JSW Steel to accurately determine how its operations rely on ecosystems and their services, evaluate the impact of these operations on vital resources, and assess associated risks and opportunities.

The key parameters covered under each phase of the LEAP approach, along with JSW Steel's specific approach, are outlined in the table below.

Table 4: Key Parameters to be covered under each phase of LEAP Approach along with JSW Steel's Approach

LEAP indicators		JSW Steel's Approach
Locate	**L1. Span of the business model and value chain**	Direct Operation: 20 business operations (includes – Mines, Rolling Mills and Integrated Steel Plants) Upstream: 81 critical suppliers are considered for the assessment.
	L2. Dependency and impact screening	By integrating ENCORE* tool ratings into our assessment processes, we ensure a robust, data-driven approach to understanding and managing our ecological dependencies and impacts.
	L3. Interface with nature	To better understand how our business operations interact with nature, we have systematically mapped their spatial distribution across different biomes using the IUCN Biome Typology**. Additionally, we delineated biogeographic zones to further analyze the spatial distribution of business operations within these zones.
	L4. Interface with sensitive locations	A proximity analysis was conducted to examine the interaction between business operations and sensitive locations. A 10 km buffer zone was delineated to assess the interaction of each business operation to ecologically sensitive areas.
Evaluate	**E1. Identification of environmental assets and ecosystem services**	At each of JSW Steel's direct operational sites, we conducted comprehensive mapping of ecosystem services to identify valuable environmental assets and ecosystem services.
	E2. Identification of dependencies and impacts (Business Sectors)	The identification of dependencies and impacts of JSW Steel's business sector, i.e., Metals and Mining, was conducted using the ENCORE* and WWF Biodiversity Risk Filter (BRF) tool***.
	E3. Dependency and impact measurement (size and scale)	The WRI Ecosystem Services Review tool**** has been utilized to analyze the dependency and impact of each site on ecosystem services. The size and scale of these dependencies and impacts are identified and then ranked accordingly.
	E4. Impact materiality assessment	JSW Steel has identified the impacts on its operations, employees, and local communities as material factors for assessing risks and opportunities.

	LEAP indicators	JSW Steel's Approach
Assess	**A1. Risk and Opportunity identification**	The risks and opportunities are identified based on the results obtained from the WRI Ecosystem Services Review exercise. Additionally, the WWF Biodiversity Risk Filter tool was used to assess the risks associated with critical suppliers.
	A2. Adjustment of Existing risk mitigation and risk and opportunity management	JSW Steel has developed a comprehensive biodiversity risk assessment and management framework that is fundamental to its sustainability initiatives. At the core of this framework is the adoption of the WRI's Ecosystem Services Review tool, which enables the identification of site-level impacts, dependencies, risks and opportunities.
	A3. Risk and opportunity measurement and prioritization	The risks and opportunities identified will be duly integrated into the specific site-level Biodiversity Management Plans.
	A4. Risk and Opportunity materiality assessment	JSW Steel recognizes all medium and high impact and dependency-related risks as material risks and opportunities. By categorizing these as material, we ensure that they are prioritized within our strategic planning and risk management processes.
Prepare	**P1. Strategy and resource allocation plans**	The risks and opportunity management strategy and resource allocations shall be included in the site-level Biodiversity Management Plans for each business operation.
	P2. Target setting and performance management	JSW Steel has adopted targets for 2030 for three Nature Realms (Land, Water and Atmosphere). Also, it has adopted the TNFD core global disclosure indicators and metrics for reporting and monitoring its performance.
	P3. Reporting	JSW Steel has included the assessment results in the 'Strategy' and 'Metrics & Targets' sections of this report.
	P4. Presentation	JSW Steel is committed to maintaining transparency about nature-related risks and opportunities by adhering to the guidelines established by the Taskforce on Nature-related Financial Disclosures (TNFD) in the coming years.

* ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) is a free, online tool that helps organisations explore their exposure to nature-related risk and take the first steps to understand their dependencies and impacts on nature

** Boimes defined as Global-scale zones, generally defined by the type of plant life that they support in response to average rainfall and temperature patterns. Examples are tundra, coral reefs or savannas. Refer: IUCN Global Ecosystem Typology 2.0 Descriptive profiles for biomes and ecosystem functional groups using below link for more details: https://portals.iucn.org/library/sites/library/files/documents/2020-037-En.pdf

*** The WWF Biodiversity Risk Filter is a free online tool that enables companies and financial institutions to Inform, Explore, Assess, and Act on biodiversity risks

**** WRI Ecosystem Services Review tool - a structured methodology developed jointly by World Resource Institute, World Business Council for Sustainable Development and Meridian Institute to help businesses develop strategies for managing risks and opportunities arising from their dependence and impact on ecosystems

JSW Steel's Approach to Mapping Nature-related Issues

To understand its nature-related dependencies, impacts, risks and opportunities (DIRO), JSW Steel has implemented a three-tier approach. The process begins with a dependency and impact screening specific to the metal and mining sector using the WWF Biodiversity Risk Filter Tool and ENCORE tool, which helps JSW Steel gain insights into the nature-related issues inherent in its industry. Following this initial screening, JSW Steel conducts DIRO mapping at the site level for its direct operations. Finally, the company utilizes the 'Assess' module of the WWF Biodiversity Risk Filter to evaluate the nature-related risks associated with its critical suppliers.

The three-tier approach is summarized in Figure 3 below. Further details on the processes and results of site level DIRO and of critical suppliers are also provided in the sections below.

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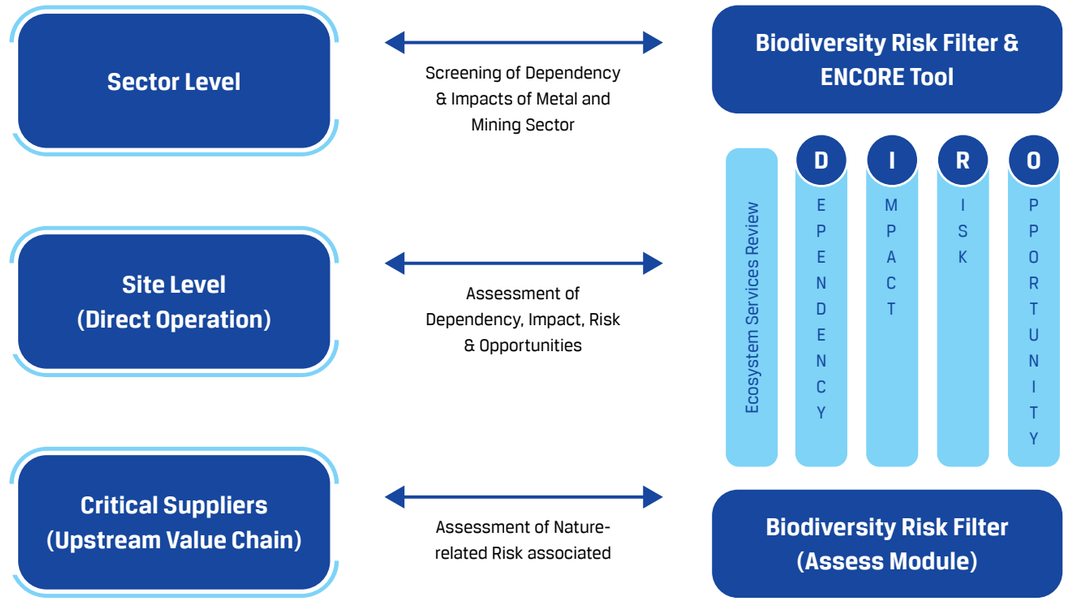


Figure 3: JSW Steel's Approach to Mapping Dependencies, Impacts, Risks and Opportunities

JSW Steel's Site Level Nature-related Issues

In order to assess the magnitude and implications of its site-level impacts and dependencies, JSW Steel has adopted the guidelines from the World Resources Institute's (WRI) Corporate Ecosystem Services Review (ESR). This guideline is designed to pinpoint and evaluate how a company's operations depend on and impact various ecosystem services.

The ESR process involved collecting data on the specific ecosystem services utilized or affected by the JSW Steel's operations within a 10 km buffer zone. This included identifying Provisioning, Regulating, and Cultural services that support the company's activities. The review also offered insights into potential risks and opportunities related to these dependencies and impacts.

To facilitate analysis and decision-making, JSW Steel categorized dependencies into three levels—low, medium, and high, based on the degree of reliance on ecosystem services. Similarly, impacts were classified as low, medium, and high to indicate the magnitude of the company's operational effects on these services. Additionally, impacts were assigned positive (+) or negative (–) signs to reflect the beneficial or adverse effects of business operations on specific ecosystem services. These categorizations help prioritize areas for action and mitigation, enabling JSW Steel to effectively manage environmental risks while promoting sustainability and responsible resource management.

The detailed results of dependencies and impact with high medium ratings are available in Annexure 1. Based on the dependency and impact results, the risks and opportunities have been assessed, and the assessment results are provided in tables 5 and 6 below.

Table 5: Site Specific Physical and Transition Risk based on the Ecosystem Services Review

The sites included in Table 5 have been selected based on their level of dependency and impact on ecosystem services. Specifically, only those sites demonstrating medium or higher dependency and/or impact ratings, as documented in Annexure 1, have been considered. This selection criterion ensures that the analysis focuses on locations where nature-related interactions are most significant and where potential risks and opportunities warrant detailed assessment.

Risk Indicators	Business Operation	Physical Risk	Transition Risk
Freshwater	1. JSW Vijayanagar Works 2. JSW Steel – Raigarh 3. JSW BPSL Sambalpur Works 4. JSW Steel Mines – Odisha 5. JSW Steel - Vijayanagar Mines 6. JSW Steel Coated Products – Vasind, 7. JSW Steel Coated Products - Khopoli Works 8. JSW Steel Coated Products Ltd. Rajpura Works 9. JSW Steel Coated Products Ltd. Dhar Works 10. JSW Steel – Anjar 11. JSW Steel Coated Products Ltd. Bawal Works 12. JSW BPSL Serampore Works 13. JSW Steel Coated Products Ltd. Kamleshwar Works 14. JSW Steel Salem Works 15. JSW Steel Dolvi Works	**Acute Risk:** Potential disruptions in water supply from the water source due to sudden events, such as water contamination, could temporarily disrupt water supply, affecting production until alternative sources are secured. (Risk: Low) **Chronic Risk:** Long-term reliance on a depleting water source could lead to chronic risks if water availability decreases over time due to climate change, prolonged droughts, or increased demand from other users of waters, making it challenging to maintain a consistent water supply for the facility resulting in significant disruption in production. (Risk: High)	**Policy Risk:** Changes in environmental policies or water usage regulations could impact the facility's water access. Any new policies could require the facility to adjust its water sourcing strategies or invest in alternative technologies to maintain compliance and operational continuity. (Risk: Low) **Reputational Risk:** Negative public perceptions of the company's water usage practices could pose a reputational risk. Failure to initiate CSR initiatives focused on water conservation could weaken stakeholder trust and community relations. However, currently, no negative perceptions have been observed. (Risk: Low) **Technology Risks:** To comply with evolving water conservation policies and to ensure a stable water supply, the company may need to adopt new water management technologies. This could involve significant costs and require specialized training for facility staff. (Risk: Low)
Maintenance of air quality	1. JSW Vijayanagar Works 2. JSW Steel – Raigarh 3. JSW BPSL Sambalpur Works 4. JSW Steel Dolvi Works 5. JSW Steel - Vijayanagar Mines 6. JSW Steel Coated Products Ltd. Khopoli Works 7. JSW Steel Coated Products Ltd. Rajpura Works 8. JSW Steel Coated Products Ltd. Dhar Works 9. JSW Steel Coated Products Ltd. Bawal Works 10. JSW BPSL Serampore Works 11. JSW Steel Coated Products Ltd. Kamleshwar Works 12. JSW Steel Salem Works 13. Chitradurga Mine (Vijayanagar)	**Chronic Risk:** Long-term reliance on existing practices without further enhancement could lead to gradual degradation of air quality posing health risks to employees and eventually hindering operations. (Risk: Medium)	**Policy Risk:** Changes in environmental regulations could impose stricter air quality standards, necessitating additional investments in advanced air quality monitoring and control technologies. (Risk: Low) **Reputational Risk:** Although there are no negative perceptions from the local community or reported health issues among employees, the company could face reputational risks if perceived as contributing to poor air quality. (Risk: Low)
Regional/ local climate regulation & Global climate regulation	1. JSW Dolvi Works 2. JSW Steel Coated Products Ltd. Khopoli Works 3. JSW Steel Salem Works 4. JSW Steel Vijayanagar Works 5. JSW Steel Vijayanagar Mines 6. JSW Steel Coated Products Ltd. Dhar Works 7. JSW Raigarh	**Chronic Risk:** Long-term changes in climate patterns, such as variations in rainfall and rising temperatures, could affect the facility's operational efficiency. (Risk: High)	**Policy Risk:** Potential changes in environmental policies related to climate change could impact the facility's operations. Compliance with new regulations may require additional investments in emission reduction technologies and practices, posing a policy risk that could affect financial planning and operational strategies. (Risk: Medium) **Technology Risk:** The facility may need to adopt and integrate new technologies for climate regulation and sustainability. This may require specialized training and resources to ensure effective implementation. (Risk: Medium)
Natural hazard mitigation	1. JSW Steel Mines – Odisha 2. JSW Steel – Anjar 3. JSW BPSL Serampore Works	**Acute Risk:** The company faces acute risks from severe weather events such as cyclones or heavy rains, which can disrupt operations and force temporary shutdowns. (Risk: Medium) **Chronic Risk:** Long term exposure to recurring natural hazards could gradually impact the plant's operational efficiency and increase maintenance costs. (Risk: Low)	**Policy Risk:** Operating in a high-risk area may lead to stricter government policies or local mandates such as disaster response requirements, which could increase compliance costs. (Risk: Medium) **Reputational Risk:** Frequent disruptions caused by natural hazards could harm the company's reputation, especially if it is perceived to be unprepared to handle such risks. This could lead to reduced trust amongst employees, local communities and stakeholders. (Risk: High) **Technology Risk:** The need for advanced technologies and infrastructure upgrades to enhance resilience against natural hazards may require significant investment. Delays or inadequacies in implementing these technologies could increase vulnerability. (Risk: High)

Note: Risks rating has been done based on the impacts and dependencies evaluation, the company's current measures in place, the nature of risk involved and expert discretion.
Risk Rating Class: Low, Medium, High

Table 6: Ecosystem Services as Risk Indicators and Opportunities

Ecosystem Services as Risk Indicators	Opportunities
Freshwater	**Water Recycling and Reuse Systems:** Invest in closed loop systems to reduce freshwater withdrawal and discharge. **Nature-based Solution for Water Treatment:** Invest in constructed wetlands or vegetated buffers to naturally treat effluents and reduce pollution loads. **Rainwater Harvesting:** Install on-site harvesting infrastructure to reduce dependency on freshwater sources. **Watershed Stewardship Programmes:** Collaborate with local communities and NGOs to restore local watersheds, improve recharge and build resilience.
Maintenance of air quality	**Adoption of Cleaner Technologies:** Invest in clean energy and low-emission furnaces or electric arc furnaces (EAF) technology. **Green Belt Development:** Plantations around factory premises to act as bio-filters for air pollutants. **Advanced Air Monitoring Systems:** Real-time monitoring and public disclosure to enhance transparency and build trust. **Collaboration with Local Authorities:** Joint initiatives to reduce regional particulate matter and improve ambient air quality.
Natural Hazard Mitigation	**Ecosystem-based Adaptation (EbA):** Restore nearby mangroves, forests or grasslands to buffer against floods, storms, and landslides. **Resilience Infrastructure Planning:** Integrate nature-positive designs in plant infrastructure (e.g. green roofs, permeable pavements). **Landscape-Level Risk Management:** Partner in regional climate adaptation plans that strengthen local ecological resilience. **Community-Based Monitoring:** Engage local communities in monitoring natural hazard indicators, leveraging local knowledge for timely and effective response.
Local Climate Regulation	**Urban Greening and Cooling Projects:** Invest in green corridors and urban forestry in nearby towns to reduce heat island effects. **Carbon Farming or Agroforestry Support:** Finance local farmers for afforestation and regenerative agricultural practices. **Emission Offsets via Nature-based Solutions (NbS):** Offset residual emissions by supporting conservation or restoration of local ecosystems. **Participation in Landscape-Level Climate Initiatives:** Join public-private partnerships for reforestation and soil carbon sequestration.
Erosion Control	**Erosion and Sediment Control:** Implement measures to control erosion and reduce sedimentation from adjacent lands, which can degrade wetland quality. This might involve incorporating green infrastructure solutions such as bioengineered slopes, buffer strips, silt fences, constructed wetlands and retention basins. **Waterbodies Rejuvenation:** Collaborate with environmental organizations and local governments in restoration initiatives/projects of surrounding waterbodies, as they act as retention basins during flooding. **Site Management and Design:** Implement better land-use planning and design practices for new sites to minimize soil disturbance during construction and operational activities. **Revegetation and Afforestation:** Initiate revegetation projects using native plant species to stabilize soil and reduce erosion on-site and in surrounding areas.
Ethical and Spiritual Values	**Aesthetic Enhancement:** Create green spaces around the facilities where employees and visitors can connect with nature, promoting well-being and inspiration. **Spiritual and Recreational Opportunities:** Designate areas within or near the business units for spiritual or meditative activities, such as Yoga gardens or nature trails. **Habitat Restoration:** Engage in habitat restoration projects that not only benefit biodiversity but also provide spaces for spiritual and ethical reflection. **Community Engagement and Education:** Organize workshops and events that educate employees and the local community about the spiritual and ethical importance of nature conservation.

Nature-related Risk Identification for Critical Suppliers

JSW Steel has demonstrated its dedication to responsible mining and manufacturing by assessing the risks linked to its critical suppliers. By conducting a detailed screening, the company identified 81 suppliers crucial to its operations. To understand the risks, JSW Steel employed the WWF's Biodiversity Risk Filter, taking into account factors like the exact geographical coordinates of suppliers, their importance to the business, and the industries they represent. The risks related to these suppliers were evaluated using the 'Assess Module' of the Biodiversity Risk Filter.

The categories of different risks used for the assessment are provided in the figure below, with a summary of the results in the following paragraphs.

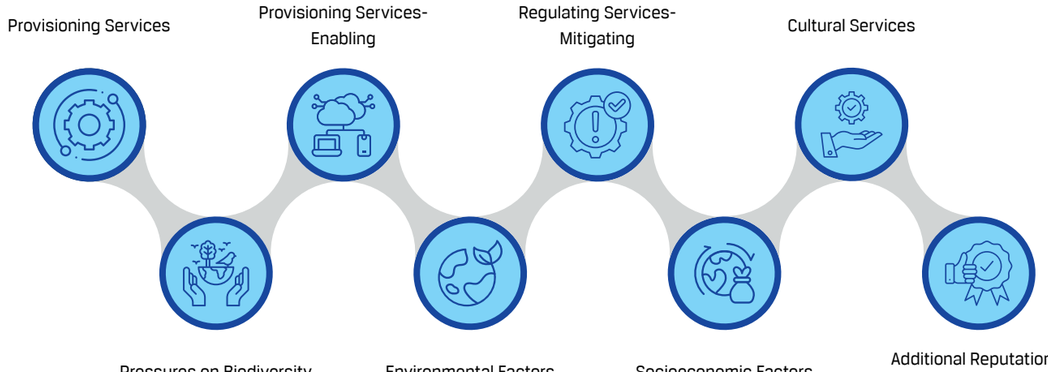


Figure 4: Categories of Biodiversity Risk Filter

Key Highlights of Physical Risk

- For Water Availability, 20 critical suppliers experience 'Very high' risk. 58 critical suppliers are under the 'High' risk category, indicating challenges in ensuring adequate water access.
- For Wildfire Hazard, 44 critical suppliers face 'High' risk. 23 suppliers are at 'Medium' risk, emphasizing the need for robust fire management strategies.
- For Land, Freshwater, and Sea Use Change, there is 'Very high' concern for 25 critical suppliers, raising alarms for biodiversity and ecosystem health.
- Pollution is a major issue with 55 regions showing 'Very high' levels, representing significant environmental pressure requiring immediate attention.

Key Highlights of Reputational Risk

- Media scrutiny is a very high concern for 37 suppliers, highlighting the need for proactive media management to prevent negative publicity.
- The rights and territories of Indigenous People (IPs) and Local Communities (LCs) are a high concern for 36 suppliers, stressing the importance of respectful engagement to avoid conflicts and reputational damage.
- Operations near sites of international interest are a high concern for 30 suppliers, requiring careful management to avoid international scrutiny and preserve cultural and ecological heritage.
- Labor and human rights issues are a medium concern for 55 suppliers, underlining the importance of upholding labor standards to maintain a positive reputation and avoid social and legal repercussions.

Details are provided in Tables 7 and 8 below.

Table 7: Number of Critical Suppliers Under Different Physical Risk

	Physical Risk																			
	Provisioning Services				Regulating & Supporting Services- Enabling					Regulating Services - Mitigating						Cultural Services	Pressures on Biodiversity			
Risk Level	Water Availability	Forest Productivity and Distance to Markets	Limited Wild Flora & Fauna Availability	Limited Marine Fish Availability	Soil Condition	Water Condition	Air Condition	Ecosystem Condition	Pollination	Landslides	Wildfire Hazard	Plant/Forest/Aquatic Pests and Diseases	Herbicide Resistance	Extreme Heat	Tropical Cyclones	Natural & Cultural Resources	Land, Freshwater and Sea Use Change	Forest Canopy Loss	Invasives	Pollution
Very High	20	1	0	0	13	1	6	5	11	0	8	0	0	22	1	0	25	0	0	55
High	48	29	16	0	0	5	61	8	2	11	44	13	0	52	35	0	14	8	6	19
Medium	10	19	21	0	0	23	3	0	0	12	23	0	13	3	25	0	10	46	20	7
Low	0	6	8	0	0	52	8	0	0	55	3	0	0	1	17	0	19	2	29	0
Very Low	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	22	2	0
NA (Not Applicable)	3	3	3	78	3	0	3	1	3	3	3	3	3	3	3	0	0	3	0	0
NR (No Risk)	0	23	33	3	65	0	0	67	65	0	0	65	65	0	0	81	0	0	24	0

Table 8: Number of Critical Suppliers Under Different Reputational-Transition Risk

	Reputational Risk												
	Environmental Factors				Socioeconomic Factors					Additional Reputational Factors			
Risk Level	Protected/Conserved Areas	Key Biodiversity Areas	Other Important Delineated Areas	Ecosystem Condition	Range Rarity	Indigenous Peoples (IPs); Local Communities (LCs) Lands and Territories	Resource Scarcity: Food - Water - Air	Labor/Human Rights	Financial Inequality	Media Scrutiny	Political Situation	Sites of International Interest	Risk Preparation
Very High	0	0	1	0	0	0	0	0	0	37	0	0	0
High	12	16	22	5	6	36	7	14	0	7	1	30	0
Medium	31	15	0	41	13	42	30	55	1	34	29	0	0
Low	38	41	31	28	36	0	27	6	77	0	45	29	1
Very Low	0	9	27	7	26	0	1	3	0	0	3	22	77
NA (Not Applicable)	0	0	0	0	0	3	3	3	3	3	3	0	3
NR (No Risk)	0	0	0	0	0	0	13	0	0	0	0	0	0

JSW Steel's Actions in accordance with the SBTN's AR3T Framework and Mitigation Hierarchy

JSW Steel takes guidance from the SBTN's AR3T[4] Framework and Mitigation Hierarchy[5] to guide its actions and initiatives towards achieving sustainable environmental practices, reducing biodiversity loss, enhancing ecosystem resilience, and promoting sustainable resource management, all while aligning with global sustainability goals and contributing to climate change mitigation.

The SBTN's AR3T Framework and Mitigation Hierarchy are strategic approaches designed to guide organizations in managing their environmental impacts effectively. The AR3T Framework stands for Avoid, Reduce, Regenerate, Restore, and Transform, providing a comprehensive pathway for companies to address their ecological footprint. The framework emphasizes avoiding negative impacts as the first step, followed by reducing unavoidable impacts through technological and operational improvements. Regeneration and restoration efforts focus on actively improving ecosystems and biodiversity, while transformation involves systemic changes that drive significant socio-economic and environmental shifts. This approach ensures that companies not only mitigate their impacts but also contribute positively to the environment.

The Mitigation Hierarchy is a structured process and widely used good practice framework that prioritizes actions to manage biodiversity impacts. It begins with avoiding impacts in critical areas, followed by minimizing unavoidable impacts through innovative solutions and operational efficiencies. Restoration and regeneration efforts aim to rehabilitate affected ecosystems, while offsetting involves compensating for residual impacts through conservation efforts elsewhere. This hierarchy ensures that companies can achieve No-Net-Loss (NNL) in biodiversity and Net Positive Impact (NPI), aligning their operations with international sustainability standards and demonstrating a commitment to environmental stewardship. JSW Steel ensures that its actions are aligned with and guided by the objectives of these frameworks. A few actions are briefly described below which are in alignment with both the guiding frameworks.

Table 9: JSW Steel's Actions in Accordance with the SBTN's AR3T Framework and Mitigation Hierarchy

Mitigation Level	Actions Taken	Potential Impacts of Actions
Avoid	JSW Steel categorizes Biodiversity Impacts and Biodiversity Risks into four levels: Critical, High, Medium, and Low. Impacts deemed 'Critical' are avoided by following the Mitigation Hierarchy to accomplish No-Net-Loss (NNL).	By avoiding operations in biodiversity and eco-sensitive areas[6], JSW Steel immediately reduces the risk of significant biodiversity loss and legal repercussions, ensuring compliance with international standards.
Reduce (Minimize)	Reduction in CO2 emissions through various technological interventions such as advanced process control, reuse of waste gas, and optimization of fuel rates at different plants (e.g., Vijayanagar, Dolvi, Salem, steel coated products plants). Reduction in power consumption through optimization and installation of energy-efficient systems (e.g., Variable Frequency Drives, MaxR100). JSW Vijayanagar Works: Reduction in water consumption through increased recycling and optimization of water usage in cooling systems. Utilization of advanced process control technology and waste gas reuse to cut emissions. The Single Oven Pressure Control system (SOPRECO) system and fuel rate optimization in Corex and Blast Furnace operations further enhance efficiency. Power optimization, including compressor line merging and Coke Oven Gas injection, have contributed to a total of 269,568 tCO2 savings in emissions in FY23-24.	Reduction in CO2 Emissions: The technological interventions at Vijayanagar, Dolvi, Salem and steel coated products plants lead to significant CO2 reductions, enhancing operational efficiency and reducing the carbon footprint. This contributes to mitigating climate change impacts and aligns with global sustainability goals. Reduction in Power Consumption: Optimizing power usage through energy-efficient systems decreases operational costs and reduces reliance on non-renewable energy sources, promoting sustainable energy management. Water Consumption Reduction at Vijayanagar: Increased recycling and optimized water usage in cooling systems enhances water resource management, reducing dependency on freshwater sources and mitigating risks associated with water scarcity.
Reduce (Minimize)	JSW Steel Dolvi Works: Implementation of a 60 MW waste heat recovery system and a 175 MW gas-based Captive Power Plant to lower emissions. Reduction of solid fuel rates in Blast Furnace 2 and installation of MEROS® (Maximized Emission Reduction of Sintering) at Sinter Plant 2 are key initiatives. Optimization of Regasified Liquefied Natural Gas (RLNG) consumption and increasing scrap charge in the Basic Oxygen Furnace (BOF) further support emission reductions. These actions contributed to a 799,342 tCO2 reduction in emissions in FY23-24. JSW Steel Salem Works: Focused efforts on fuel and power optimization, achieving emission reductions through external screening of iron ore lumps and burden distribution optimization in Blast Furnace 2. Implementation of a hot metal silicon prediction model and anthracite coal consumption optimization in the Sinter Plant have also contributed to reduced emissions. A total reduction in emissions of 24,075 tCO2 was achieved in FY23-24.	JSW Dolvi Works will achieve significant CO2 emission reductions and enhance operational efficiency by implementing advanced waste heat recovery and cleaner energy systems while optimizing resource use through sustainable practices, demonstrating a commitment to climate change mitigation. JSW Salem Works will integrate advanced emission reduction and efficiency enhancements, including optimization of fuel, energy, and materials, to achieve significant CO2 reductions, promote sustainable resource management, and align operations with international sustainability standards, demonstrating a robust commitment to climate change mitigation and environmental stewardship.
Regenerate and Restore	Efforts such as tree plantation and mangrove conservation at Vijayanagar and Dolvi aim to regenerate local ecosystems, improve biodiversity, and provide long-term ecological benefits. Mangrove Plantation at Dolvi: JSW Steel has taken up a Mangrove restoration project at Dolvi and planted more than more than 2 million saplings are planted, which is estimated to have carbon capture, over a 25-year period, of approximately 185,000 tonnes. This initiative tries to restore coastal ecosystems, providing habitat conservation and stabilizing the coastline. JSW Steel has been actively trying to regenerate and restore the natural habitat affected by its operations. Reclamation and Rehabilitation in Mining Areas: For mining operations, JSW Steel has undertaken comprehensive Reclamation and Rehabilitation (R&R) programs, in line with government mandates, ensuring the enhancement and preservation of biodiversity. The tailings management area at the Vijayanagar plant features a well-engineered system for handling iron ore tailings from the beneficiation process. Tailings are transported as slurry and stored in lined ponds, with excess water being recycled back to the plant. The facility includes protective bunds and water recovery systems to prevent seepage and uses HDPE for stability. Renovation of Water Ponds: Increasing water holding capacity at Nandihalli restores local water resources, supporting community water needs and enhancing water security.	Mangrove Plantation at Dolvi: Tree plantation and mangrove conservation efforts regenerate local ecosystems, enhancing biodiversity and providing ecological benefits such as saving farmlands from saltwater intrusion and increased resilience against environmental changes. These initiatives also contribute to carbon sequestration, supporting climate change mitigation efforts. Reclamation and Rehabilitation Structures: These structures help manage run-off water by intercepting and diverting it away from sensitive areas, thereby minimizing soil erosion and preserving the ecological balance of the surrounding environment and mainly serving the broader purpose of rainwater harvesting.

[4]SBTN
[5]Mitigation Hierarchy
[6]Eco sensitive Zones

Conserving Biodiversity and Nature at JSW Steel | TNFD General Requirements | Governance | Strategy | Risk and Impact | Metrics & Targets | Way Forward

Mitigation Level	Actions Taken	Potential Impacts of Actions
Transform	The 'Transform' category of the AR3T framework typically involves large-scale, systemic changes and innovations that drive profound shifts in socio-economic and environmental systems. Some potential initiatives include: Reduction in specific emissions: JSW Steel is working to reduce its specific CO2 emissions to 1.95 tCO2/ton of crude steel by 2030. JSW Steel coated products plants are targeting to become carbon neutral by 2030. Waste Recycling: As a company engaged in activities that generate substantial waste, JSW Steel is committed to achieving 100% waste recycling by 2030. Biodiversity Conservation and Habitat Transformation: Through various interventions such as large-scale plantations, nature-based gap assessment and risk analysis, Mangrove Plantation, and Biodiversity Management Plans, JSW Steel intends to transform the ecological landscape around its operational areas.	Reduction in specific CO2 emissions: Reducing specific CO2 emissions is a critical step towards minimizing the environmental footprint of the company. By aligning its CO2 emissions closer to the global average, JSW Steel can significantly contribute to environmental sustainability efforts. This reduction helps in mitigating climate change effects by decreasing the overall greenhouse gas emissions associated with steel production. An improved environmental performance can also enhance the company's reputation as a responsible corporate entity committed to sustainable practices. Waste Recycling: Striving for 100% waste recycling can drive innovation as JSW Steel invests in new technologies and processes to achieve this goal. This can lead to the development of new products or more efficient production methods. Recycling waste can lead to significant cost savings in the long run. By reusing materials, the company can reduce the need for raw materials, which can be costly to procure. By recycling waste, JSW Steel contributes to the circular economy, where resources are used more efficiently and waste is minimized, supporting global sustainability goals. Biodiversity Conservation and Habitat Transformation: These efforts aim to enhance local biodiversity, restore degraded habitats, and ensure sustainable environmental practices that align with both conservation goals and the company's operational objectives. By integrating these strategies, JSW Steel seeks to contribute positively to regional biodiversity while minimizing its ecological footprint.
Offset	JSW Steel intends to offset its impacts on habitats by the creation of Biodiversity Management Plans for its facilities. Biodiversity Management Plan (BMP) include strategies for biodiversity offsetting, ensuring that any negative impacts on biodiversity are balanced by conservation efforts elsewhere.	Biodiversity offsetting enhances conservation by creating, restoring, or preserving habitats to compensate for biodiversity loss and accelerate efforts towards No-Net-Loss (NNL). When carefully planned and executed, biodiversity offsetting can mitigate environmental impacts and maintain or improve biodiversity values.

Material Locations

JSW Steel conducted a proximity analysis to evaluate the closeness of its business operations to ecologically sensitive areas, including Protected Areas, Wildlife Sanctuaries, and Key Biodiversity Areas. Additionally, the company assessed the presence of IUCN Red List species within these sensitive ecological areas. Areas of water stress were also evaluated using CGWB (Central Ground Water Board) reports. The findings are compiled and presented in the table below.

Table 10: Sensitivity of JSW Steel Business Operations

S. No.	Business Operation	State	Protected Areas	Key Biodiversity Areas	IUCN Red List Species	High Integrity Ecosystems	*Areas of Water Stress
1.	JSW BPSL Sambalpur Works	Odisha	0	1	3	Yes	Safe
2.	JSW BPSL Serampore Works	West Bengal	0	0	0	No	Safe
3.	JSW Steel Coated Products Ltd. Tarapur Works	Maharashtra	0	0	0	No	Safe
4.	JSW Steel - Gonua mines, Odisha	Odisha	0	0	0	No	Safe
5.	JSW Steel - Narayanposhi mines Odisha	Odisha	0	0	0	No	Safe
6.	JSW Steel - Nuagaon mines, Odisha	Odisha	0	0	0	No	Safe
7.	JSW Steel Salav Works	Maharashtra	1	1	0	Yes	Safe
8.	JSW Steel Dolvi Works	Maharashtra	0	0	0	No	Safe
9.	JSW Steel - Raigarh	Chhattisgarh	0	0	0	No	Safe
10.	JSW Steel - Anjar	Gujarat	0	0	0	No	Safe
11.	JSW Steel Coated Products Ltd. Kamleshwar Works	Maharashtra	0	0	0	No	Safe
12.	JSW Steel Coated Products Ltd. Khopoli Works	Maharashtra	0	1	4	Yes	Safe
13.	JSW Steel Coated Products Ltd. Vasind Works	Maharashtra	1	1	3	Yes	Safe
14.	JSW Steel - Vijayanagar Mines	Karnataka	1	2	3	Yes	Safe
15.	JSW Vijayanagar Works	Karnataka	1	0	1	Yes	Safe
16.	JSW BPSL Chandigarh Works	Punjab	2	0	3	Yes	Semi-critical
17.	JSW Steel Coated Products Ltd. Dhar Works	Madhya Pradesh	0	0	0	No	Over-exploited
18.	JSW Steel Coated Products Ltd. Bawal Works	Haryana	0	0	0	No	Over-exploited
19.	JSW Steel Coated Products Ltd. Rajpura Works	Punjab	0	0	0	No	Over-exploited
20.	JSW Steel Salem Works	Tamil Nadu	0	0	0	No	Over-exploited

*Area of water stress is obtained from the Dynamic Ground Water Resource Assessment Report of CGWB [2023]

Risk and Impact

Nature Risk Identification and Management at JSW Steel

JSW Steel has implemented a Biodiversity Policy aimed at identifying and managing biodiversity risks. To support this initiative, it is developing Biodiversity Management Plans tailored for its business operations. The evaluation of biodiversity and ecosystem services is conducted through a systematic, multi-step process designed to ensure thorough assessment and effective management, also building upon JSW Group's Technical Standards.

Step 1: Biodiversity Risk Screening
JSW Steel identifies its operations in line with the biodiversity importance category and applies its management strategy accordingly. Based on their resources and operations, JSW Steel businesses determine the following two biodiversity impact categories (BIC), namely Red or Green. This classification is used to highlight the scope of biodiversity management likely required to achieve No-Net-Loss (NNL). 'Red' undertakings or operations have large natural resource demands and/or the potential for a direct high level of impact on biodiversity and ecosystem services, while 'Green' category undertakings have the least potential for impacts on biodiversity and ecosystem services. Business operations falling under the 'Red' category shall move ahead with a Comprehensive Biodiversity Assessment which shall include the collection of secondary data, an IBAT[7] study of the project boundary, three season primary biodiversity site assessments followed by an Ecosystem Service Review. JSW Steel falls under 'Red' category.

Step 2: Ecosystem Service Review (ESR) and Developing BES (Biodiversity and Ecosystem Services) Inventory
The Ecosystem Services Review (ESR) is an assessment focused on pinpointing the key ecological services and evaluating how JSW Steel operations rely on and affect these natural systems. It aims to analyze the trends, drivers, risks, opportunities and actions that will minimize risks/impacts and maximize ecosystem service benefits. The company follows the Ecosystem Services Review (ESR) methodology developed by the World Resource Institute (WRI) on Corporate Ecosystem Service Review. As per the JSW Group Technical Standard, all JSW Steel sites qualify under red category, and shall carry out an Ecosystem Services Review (ESR) at their operational sites. A comprehensive BES (Biodiversity and Ecosystem Services) inventory shall be developed for the above two BIC categories.

Step 3: Understanding Impacts and Risks associated with the operations
The purpose of the biodiversity impact and risk assessment is to identify potential risks to biodiversity under consideration, and the ability to mitigate and categorize them into one of four categories: Critical; High; Medium; Low. With the results obtained from this impact and risk assessment, a mitigation hierarchy table is developed detailing activities to Avoid, Minimize, Restore and Offset, as per the No-Net-Loss (NNL) approach.

Step 4: Development of Biodiversity Management Plan/Mitigation and Management Plan
The Biodiversity Management Plan (BMP) is one complete document which not only covers the existing EIA compliance (i.e. Physical Environment) but also guides the company's management on initiatives towards Biological Socio-Economic Environment.
The Biodiversity Mitigation and Management Plan gives priority to biodiversity protection/restoration and enhancement targets, including those related to supporting ecosystem components (e.g. air, water, soil/landscape) targets. Key aspects to be covered in the Biodiversity Management Plan (BMP) are:

- Biodiversity opportunities with targets;
- Identification of habitats, and categorization of impacts with mitigation measures;
- Specific impact mitigation measures related to species or habitat enhancement;
- Monitoring programs to assess progress and management effectiveness; and
- Details on how to implement, e.g. assigning roles and responsibilities, annual action plan, budget, schedules, initiate monitoring, adaptive management and continuous improvement cycle.

[7]Integrated Biodiversity Assessment Tool (IBAT) developed by IUCN to screen for areas of biodiversity importance using the World Database of Protected Area, the World Database on Key Biodiversity Areas and the IUCN Red List of Threatened Species.
[8]JSW/SUST/TSTD/08, Page 9, Version 01, JSW Technical Standard, Biodiversity and Ecosystem Management

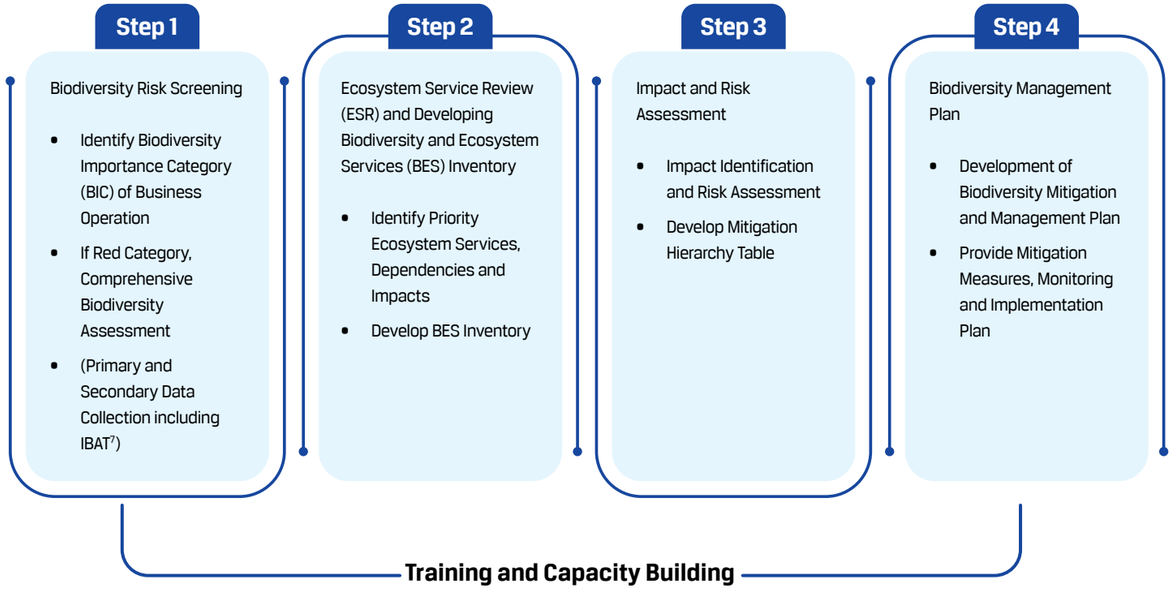


Figure 5: Biodiversity Management Process at JSW Steel

Nature-related Dependencies, Impacts, Risk and Opportunities Assessment Process

The Ecosystem Services Review under step two of JSW Steels' biodiversity risk assessment and management process is specifically focused on identifying nature-related dependencies, impacts, risks and opportunities. JSW Steel recognizes the methodology developed by the World Resource Institute (WRI) to carry out corporate ecosystem services review. WRI's Ecosystem Services Review methodology provides a structured approach to evaluate the company's dependency and impact on more than 20 ecosystem services. This evaluation helps in identifying which of these are priority ecosystem services—the ones most likely to be a source of risk or opportunity for the company. Priority ecosystem services are the ones having medium/high dependency or medium/high impact on the company.

Dependence

Key Questions:

- Q1. Does this ecosystem service serve as an input, or does it enable/enhance conditions for successful company performance?
- Q2. If the answer to question 1 is 'Yes', does this ecosystem service have a cost-effective substitute?

Impact

Key Questions:

- Q3. Does the company affect the quantity or quality of this ecosystem service?
- Q4. If the answer is to question 3 is 'Yes,' then is the company's impact positive or negative?
- Q5. If the answer to question 3 is 'Yes,' then does the company's impact limit or enhance the ability of others to benefit from the ecosystem services?

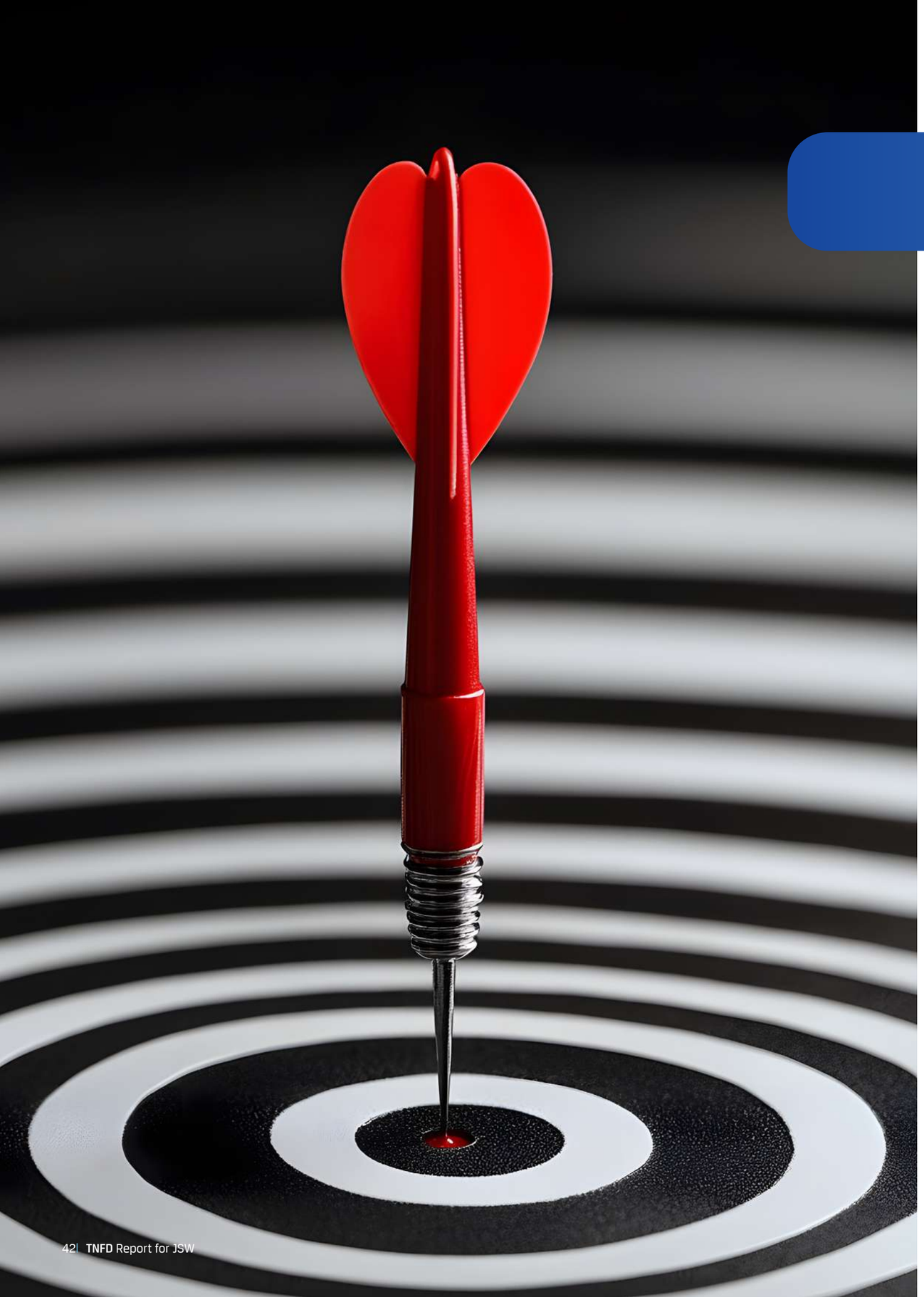
Identifying the Company's Nature-related risks: The Nature-related risks are evaluated based on potential threats posed to JSW Steel that arise from its dependencies and impacts on nature. These risks are categorized into physical risks and transition risks. A description for the same is provided below:

Table 11: Physical Risk and Transition Risk Assessment

Category		Description
Physical Risks	Acute	Occurrence of short term, specific events that change the state of nature.
	Chronic	Gradual changes to the state of nature. For example, pollution stemming from pesticide use or climate change.
Transition Risks	Policy	Changes in the policy context due to new (or enforcement of existing) policies to create positive impacts on nature or mitigate negative impacts on nature.
	Technology	Substitution of products or services with a reduced impact on nature and/or reduced dependency on nature.
	Reputational	Changes in perception concerning an organization's actual or perceived nature impacts, including at the local, economic and societal level. This can result from direct company impacts, industry impacts and/or impacts of activities upstream and/or downstream in a value chain.

Table 12: Nature Related Opportunities Assessment

Category		Description
Sustainability performance	Sustainable use of natural resources	Substitution of natural resources by recycled regenerative, renewable and/or ethically responsibly sourced organic inputs.
	Ecosystem protection, restoration and regeneration	Activities that support the protection, regeneration or restoration of habitats and ecosystems, including areas both within and outside the organization's direct control.



Metrics & Targets

Nature Risk Identification and Management at JSW Steel

JSW Steel is recognized for its pioneering approach to integrating sustainability into its operations. The company focuses on three realms: Atmosphere, Freshwater, and Land, underscoring its commitment to minimizing its environmental footprint and enhancing the natural ecosystems surrounding its operations.

JSW Steel demonstrates its commitment to the Atmosphere through a robust climate strategy. It is dedicated to achieving net neutral in carbon emissions by 2050, positioning itself as a leader in combating climate change. JSW Steel also places a strong emphasis on reducing air pollutants, showcasing its commitment to maintaining cleaner air quality.

In the realm of Freshwater, JSW Steel prioritizes responsible water stewardship. The company endeavors to minimize water consumption and is committed to achieving water neutrality at its Coated Steel Plants, ensuring sustainable water use. Additionally, JSW Steel upholds a Zero Liquid Discharge policy, reflecting its dedication to preventing water pollution and promoting sustainable water practices.

JSW Steel's approach to Land involves promoting the circular economy and conserving biodiversity. The company is focused on recycling all wastes generated from its operations, thereby reducing landfill use and enhancing resource efficiency. Furthermore, JSW Steel is committed to ensuring that its activities do not negatively impact local ecosystems, demonstrating its dedication to preserving and enhancing natural habitats around its operational sites.

By addressing key environmental challenges across Atmosphere, Freshwater, and Land, the company not only reduces its impact on nature but also actively contributes to the enhancement and preservation of the environment. JSW Steel continues to lead the way in sustainable industrial practices, reinforcing its position as an environmental steward.

Table 13: JSW Steel's Sustainability Targets for Nature Realms

Nature Realms		
Atmosphere	**Freshwater**	**Land**
Climate Change	**Water Stewardship**	**Circular Economy**
• Targeting Net Neutral in carbon emission by 2050 • **Reduction of emission**: Aligning with India's NDC[9], 42% intensity to 1.95 tCO_2/tcs by 2030 • **Air:** Particulate Matter, Sulphur Oxides (SOx) and Nitrogen Oxides (NOx) emission targets of 0.26, 0.82 and 0.91 kg/tcs respectively, by 2030	• 39% reduction in specific water consumption to 2.21 m^3/tcs • Water neutrality at Coated Steel Plants • Maintaining zero liquid discharge across all Business Operations	• 100% Recycling of all waste generated from operations **Biodiversity Conservation** • 'No-Net-Loss' (NNL) of Biodiversity by 2030

In addition to the above targets, JSW Steel has also adopted the applicable TNFD's Core global disclosure metrics and started reporting against these in this report. From 2025 onwards, the company shall report its progress against these metrics annually.

[9]Nationally Determined Contributions (NDC) are climate action plans that countries submit to the UNFCCC under the Paris Agreement. NDCs outline a country's commitment to reducing greenhouse gas emissions and adapting to climate

Table 14: JSW Steel's Disclosure Data Against TNFD Core Global & Sector Disclosure Indicators and Metrics

Metric no.	Driver of nature change	Indicator	Metric	Status (FY24-25)	Connection to GBF Targets
	Climate change	GHG emissions	Refer to ISSB's IFRS-S2[10] Climate related Disclosures Standard	Scope 1: **53,100,751.63 ton CO_2** Scope 2: **1,653,056 ton CO_2**	Target 7
C1.0		Total spatial Footprint (km2)	Total surface area controlled/managed by the company, where the company has control (km2) A. Total disturbed area (km2) B. Total rehabilitated/ restored area (km2)	Total Mine Lease- 2,476 ha Total area: 8380.44 Ha Area –7,189 ha 7,175 Ha	(A.2 Extent of natural ecosystems), Target 2, Target 5, Target 11 (B.1 Services provided by ecosystems)
C1.1	**Land/ freshwater/ ocean-use change**	Extent of land/ freshwater/ ocean-use change	Extent of land/ freshwater/ ocean ecosystem use change (km2) by: A. Type of ecosystem B. Type of business activity.	**Terrestrial ecosystem: (7,189 Ha)** **Mining: 1,489 Ha** **Steel manucturing: 5,700 Ha**	Target 1 (A.2 Extent of natural ecosystems), Target 2, Target 5, Target 11 (B.1 Services provided by ecosystems)
			Extent of land/ freshwater/ocean ecosystem conserved or restored (km2), split into:	**Voluntary: 6,725 Ha**	Target 1 (A.2 Extent of natural ecosystems), Target 2, Target 5, Target 11 (B.1 Services provided by ecosystems)
C2.1	**Pollution/ pollution removal**	Wastewater discharged	Volume of water discharged (m^3), A. Total B. Freshwater C. Other D. Concentrations of key pollutants in the wastewater discharged, [by type of pollutant, referring to sector-specific guidance for types of pollutants]	**Zero Liquid Discharge (ZLD)** All plants have ZLD.	Target 7 (7.1 Index of coastal eutrophication potential), Target 11 (B.1 Services provided by ecosystems)
C2.2	**Pollution/ pollution removal**	Waste generation and disposal	Weight of hazardous and non-hazardous waste generated by type (tonnes), referring to sector-specific guidance for types of waste. A. Hazardous Waste B. Non-Hazardous Waste	Total = **15,531,320 MT** (Hazardous + Non-Hazardous waste) Hazardous Waste generated: **158,340 MT** Non-Hazardous waste generated: **15,372,980 MT** JSW Steel follows a 'Zero Waste to Landfill' Model	Target 7, Target 11 (B.1 Services provided by ecosystems)
			Weight of hazardous and nonhazardous waste (tonnes) disposed of, split into: A. Waste incinerated (with and without energy recovery); B. Waste sent to landfill; and C. Other disposal methods	A. Waste incinerated (w/o energy recovery) – **154.032 MT** B. Waste sent to landfill - **3,221.835 MT** C. Other disposal methods - **0 MT**	Target 7, Target 11 (B.1 Services provided by ecosystems)
			Weight of hazardous and non-hazardous waste (tonnes) diverted from landfill, split into waste: A. Recycled/Reused B. Other recovery operations	A. Recycled/Reused – **16,546,749.85 MT** B. Other recovery operations - **0**	Target 7, Target 11 (B.1 Services provided by ecosystems)
C2.3	**Pollution/ pollution removal**	Plastic pollution	Plastic footprint as measured by total weight (tonnes) of plastics (polymers, durable goods and packaging) used or sold broken down into the raw material content: For plastic packaging, percentage of plastics that is: • Re-usable; • Compostable; • Technically recyclable; and • Recyclable in practice and at scale.	Total plastic consumed: **591.05 MT**	Target 7, Target 11 (B.1 Services provided by ecosystems)
C2.4	**Pollution/ pollution removal**	Non-GHG air pollutants	Non-GHG air pollutants (tonnes) by type: A. Particulate matter (PM2.5 and/ or PM10); B. Nitrogen oxides (NO2, NO and NO3); C. Volatile organic compounds (VOC or NMVOC); D. Sulphur oxides (SO2, SO, SO3, SOX); and E. Ammonia (NH_3)	A. Particulate matter – **0.36 kg/tcs** B. Nitrogen oxides (NO_2, NO and NO_3) - **1.09 kg/tcs** C. VOC – Not Applicable D. Sulphur oxides – **1.51 kg/tcs** E. Ammonia – Not Applicable	Target 7, Target 11 (B.1 Services provided by ecosystems)
C3.0	**Resource use/ replenishment**	Water withdrawal and consumption from areas of water scarcity	Water withdrawal and consumption (m^3) from areas of water scarcity, including identification of water source: A. Surface Water B. Ground Water C. Rainwater D. Mine Intersection/ Produced Water E. Third Party Water (Water Supply including treated water) F. Sea Water	Total Water – **95,735,450 m^3** Surface Water –**95,372,136.05 m^3** Ground Water – **118,140 m^3** Rainwater – Included in Surface water Mine Intersection/ Produced Water – **Nil** Third Party Water – **245,174.61 m^3** Sea Water – Not Applicable	Target 11 (B.1 Services provided by ecosystems)

Metric no.	Metric category	Indicator	Sector metric	Status (FY24-25)	Connection to GBF Targets
MM.C23.0	Response	Area of sites with plans in place to manage impacts on sensitive locations.	• Area (km^2) and proportion (%) of land owned, leased, managed in or adjacent to, or potentially impacting on, sensitive locations. • Area (km^2) and proportion (%) of land owned, leased, managed covered by plan to manage impacts on sensitive locations. • Area (km^2) and proportion (%) of land owned, leased, managed covered by plan to manage impacts on sensitive locations that has been verified or approved by a third party.	Area - 41.32 (km^2) Proportion – 49.31 % Area - 8380.4434 Km^2 Proportion - 100% Area - 8380.4434 Km^2 Proportion - 100%	Target 1 (A.1 Extent of natural ecosystems), Target 3 (A.1 Coverage of protected areas and OECMs), Target 14 (Multiple values of biodiversity reflected in decision-making)

[10]IFRS S2, a standard developed by the International Sustainability Standards Board (ISSB), requires companies to disclose information about their climate-related risks and opportunities

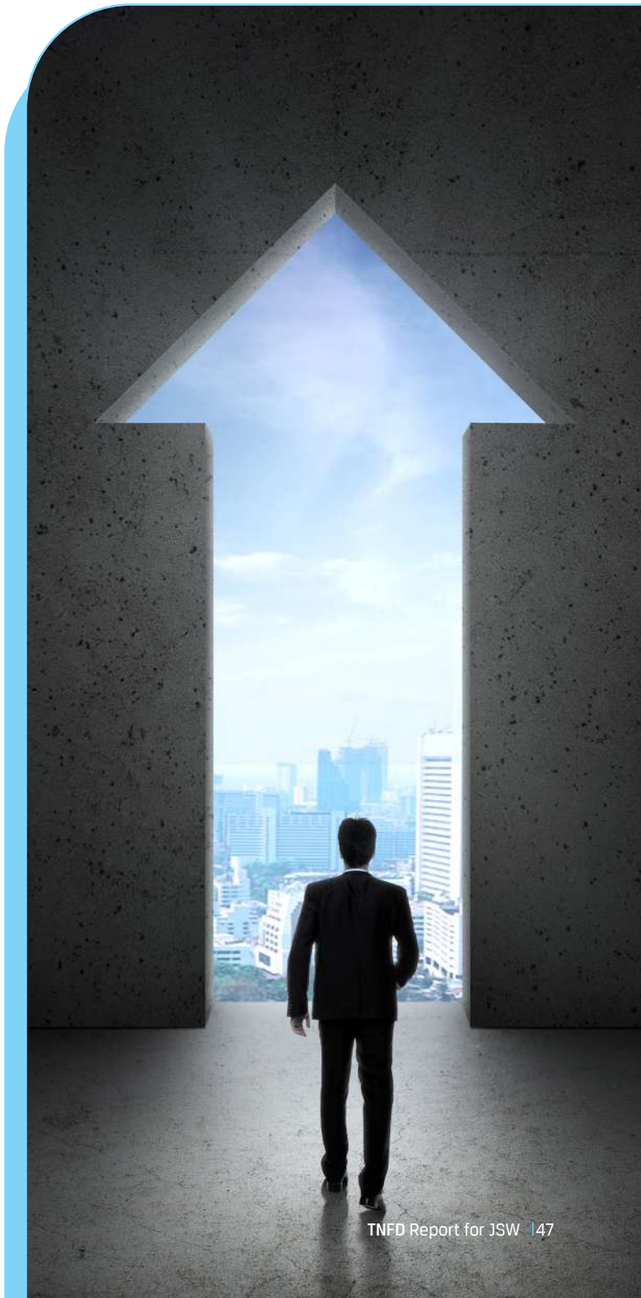
Way Forward

With a commitment to not only mitigate adverse impacts but also to enhance ecological resilience, JSW Steel is actively pursuing strategies that foster positive contributions to biodiversity conservation. The site-level Biodiversity Management Plans (BMPs) are now fully in place, and it is through these that the company intends to achieve its policy objectives relating to biodiversity conservation.

This is the first TNFD report in which JSW Steel discloses its nature-related dependencies, impacts, risks and opportunities. JSW Steel shall continue to accelerate its efforts to protect, conserve and enhance Biodiversity and Nature in and around its business operations through the effective and sustained implementation of our site level Biodiversity Management Plans, which include the following aims and actions: :

- To better Understand and communicate areas of high impacts and dependencies to all its business operations and brainstorm to reduce high impacts and dependencies and find sustainable alternatives;
- To continue to take proactive measures to mitigate physical and transition risks associated with biodiversity and ecosystem services;
- To deepen our understanding of how each biodiversity management plan contributes to the achievement of our target of achieving No-Net-Loss (NNL) of biodiversity by 2030 by quantifying the impact that each plan may have
- To aggressively implement rainwater harvesting, groundwater recharge, and Zero Liquid Discharge (ZLD) systems to ensure sustainable water use, so as to achieve Water Neutrality;
- The adoption of advanced emission reduction technologies to improve air quality and thereby minimise the impact on nature;
- Investing in resilient infrastructure and ensuring compliance with environmental regulations to handle climate risks;
- Strengthening local relationships through CSR initiatives focused on health, environment, and education
- Afforestation of degraded forests
- Avoiding the introduction of any invasive or alien species and take actions to eradicate such species from sites;
- To continue to communicate and train staff on biodiversity and nature related topics and issues

JSW Steel will enhance its efforts to safeguard, preserve, and improve biodiversity and natural environments surrounding its business operations. Through this strategy, the company aims to make a significant contribution to the global objective of nature recovery and achieving positive ecological outcomes.



Annexure 1: Results of Dependency and Impacts of Business Operations

Table 15: Dependencies of JSW Steel Business Operations on Provisioning Ecosystem Services [Assessed through Ecosystem Services Review]

JSW Steel	Provisioning Ecosystem Services												
Business Operations	Livestock	Capture fisheries	Aquaculture	Wild foods	Timber & other wood fibres	Fibres & resins	Animal skins	Sand	Ornamental resources	Biomass fuel	Freshwater	Genetic resources	Biochemicals, natural medicines, & pharmaceuticals
JSW Steel - Anjar	L	L	L	L	L	L	L	L	L	L	H	L	L
JSW Steel Coated Products Ltd. Bawal Works	L	L	L	L	L	L	L	L	L	L	H	L	L
JSW BPSL Chandigarh Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW BPSL Sambalpur Works	L	L	L	L	L	L	L	L	L	L	M	L	L
JSW BPSL Serampore Works	M	L	L	L	L	L	L	L	L	L	M	L	L
Chitradurga Mine (Vijayanagar)	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Dhar Works	L	L	L	L	H	L	L	L	L	L	H	L	L
JSW Steel Dolvi Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW - Raigarh	L	L	L	L	L	L	L	L	L	H	H	L	L
JSW Steel Coated Products Ltd. Kalmeshwar Works	L	L	L	L	L	L	L	L	L	L	H	L	L
JSW Steel Coated Products Ltd. Khopoli Works	L	L	L	L	L	L	L	L	L	L	H	L	L
JSW Steel - Odisha Mines	L	L	L	L	L	L	L	L	L	L	H	L	L
JSW Steel Coated Products Ltd. Rajpura Works	L	L	L	L	L	L	L	L	L	L	H	L	L
JSW Steel Salav Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Salem Works	L	L	L	L	L	L	L	L	L	L	H	L	L
JSW Steel Coated Products Ltd. Tarapur Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Vasind Works	L	L	L	L	L	L	L	L	L	L	H	L	L
JSW Steel Vijayanagar Mines	L	L	L	L	L	L	L	L	L	L	H	L	L
JSW Steel Vijayanagar Works	L	L	L	L	L	L	L	L	L	L	H	L	L

Dependency: L: Low, M: Medium, H: High

Impact: M⁻: Medium Negative, M⁺: Medium Positive, H⁻: High Negative H⁺: High Positive L: Low impact

Table 16: Dependencies of JSW Steel Business Operations on Regulating & Cultural Ecosystem Services [Assessed through Ecosystem Services Review]

JSW Steel	Regulating Ecosystem Services										Cultural Ecosystem Services		
Business Operations	Maintenance of air quality	Global climate regulation	Regional/local climate regulation	Regulation of water timing and flows	Erosion control	Water purification and waste treatment	Disease mitigation	Maintenance of soil quality	Pollination	Natural hazard mitigation	Ethical & spiritual values	Educational and inspirational values	Habitat
JSW Steel - Anjar	L	L	L	L	L	L	L	L	L	H	L	L	L
JSW Steel Coated Products Ltd. Bawal Works	H	L	L	L	L	L	L	L	L	L	L	L	L
JSW BPSL Chandigarh Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW BPSL Sambalpur Works	H	L	L	L	L	L	L	L	L	L	L	L	L
JSW BPSL Serampore Works	H	L	L	L	L	H	L	L	L	H	L	L	L
Chitradurga Mine (Vijayanagar)	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Dhar Works	H	H	M	H	L	L	L	L	L	L	L	H	H
JSW Steel Dolvi Works	H	L	L	L	L	M	L	L	L	L	L	L	L
JSW - Raigarh	H	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Kamleshwar Works	H	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Khopoli Works	H	M	H	L	L	L	L	L	L	L	M	L	L
JSW Steel - Odisha Mines	L	L	L	L	L	L	L	L	L	H	L	L	L
JSW Steel Coated Products Ltd. Rajpura Works	M	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Salav Works	L	L	L	L	L	H	L	L	L	L	L	L	L
JSW Steel Salem Works	H	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Tarapur Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Vasind Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Vijayanagar Mines	M	L	L	L	H	L	L	L	L	L	L	L	L
JSW Steel Vijayanagar Works	M	M	M	L	L	L	L	L	L	L	L	L	L

Dependency: L: Low, M: Medium, H: High

Table 17: Impacts of JSW Steel Business Operations on Provisioning Ecosystem Services [Assessed through Ecosystem Services Review]

JSW Steel	Provisioning Ecosystem Services												
Business Operations	Livestock	Capture fisheries	Aquaculture	Wild foods	Timber & other wood fibres	Fibers and resins	Animal skins	Sand	Ornamental resources	Biomass fuel	Freshwater	Genetic resources	Biochemicals, natural medicines, pharmaceuticals
JSW Steel - Anjar	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Bawal Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW BPSL Chandigarh Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW BPSL Sambalpur Works	L	L	L	L	M⁺	L	L	L	L	M⁺	M⁻	L	L
JSW BPSL Serampore Works	L	L	L	L	L	L	L	L	L	L	M⁻	L	L
Chitradurga Mine (Vijayanagar)	L	L	L	L	M⁻	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Dhar Works	L	L	L	L	L	L	L	L	L	L	M⁻	L	L
JSW Steel Dolvi Works	L	L	H⁺	L	L	L	L	L	L	L	M⁻	L	L
JSW - Raigarh	L	L	L	L	H⁺	L	L	L	L	L	H⁻	L	L
JSW Steel Coated Products Ltd. Kamleshwar Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Khopoli Works	L	L	L	H⁺	L	L	L	L	L	L	L	L	L
JSW Steel - Odisha Mines	M⁺	L	L	L	L	L	L	L	L	L	M⁺	L	L
JSW Steel Coated Products Ltd. Rajpura Works	L	L	L	L	L	L	L	L	L	L	H⁻	L	L
JSW Steel Salav Works	L	L	L	L	L	L	L	L	L	L	M⁻	L	L
JSW Steel Salem Works	H⁺	L	L	L	L	L	L	L	L	L	M⁻	L	L
JSW Steel Coated Products Ltd. Tarapur Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Vasind Works	L	L	L	L	L	L	L	L	L	L	M⁺	L	L
JSW Steel Vijayanagar Mines	L	L	L	L	M⁻	L	L	L	L	L	L	L	L
JSW Steel Vijayanagar Works	L	L	L	L	L	L	L	L	L	L	M⁺	L	L

L: Low, M⁻: Medium Negative, M⁺: Medium Positive, H⁻: High Negative H⁺: High Positive

Table 18: Impacts of JSW Steel Business Operations on Regulating & Cultural Ecosystem Services [Assessed through Ecosystem Services Review

JSW Steel	Regulating Ecosystem Services										Cultural Ecosystem Services		
Business Operations	Maintenance of air quality	Global climate regulation	Regional/local climate regulation	Regulation of water timing and flows	Erosion control	Water purification and waste treatment	Disease mitigation	Maintenance of soil quality	Pollination	Natural hazard mitigation	Ethical and spiritual value	Educational and inspirational	Habitat
JSW Steel - Anjar	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Bawal Works	L	L	L	L	L	L	H⁺	L	L	L	L	L	L
JSW BPSL Chandigarh Works	L	L	L	L	L	L	L	L	L	L	L	L	L
JSW BPSL Sambalpur Works	L	L	L	L	L	L	H⁺	L	L	L	L	L	L
JSW BPSL Serampore Works	L	L	L	M⁻	L	L	L	L	L	L	L	L	L
Chitradurga Mine (Vijayanagar)	M⁻	L	L	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Dhar Works	L	H⁻	H⁻	L	M⁺	L	L	L	L	L	L	M⁺	M⁺
JSW Steel Dolvi Works	L	L	H⁻	L	L	L	H⁺	L	L	L	L	L	L
JSW - Raigarh	L	L	H⁻	L	L	L	H⁺	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Kamleshwar Works	L	L	M⁺	M⁺	L	L	H⁺	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Khopoli Works	M⁻	M⁻	L	L	M⁺	L	L	L	L	L	L	L	L
JSW Steel - Odisha Mines	L	L	L	L	L	L	H⁺	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Rajpura Works	L	L	H⁺	L	L	L	L	L	L	L	L	L	L
JSW Steel Salav Works	L	L	L	L	L	M⁻	H⁺	L	L	L	L	L	L
JSW Steel Salem Works	L	H⁻	H⁻	M⁺	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Tarapur Works	M⁺	L	M⁺	L	L	L	L	L	L	L	L	L	L
JSW Steel Coated Products Ltd. Vasind Works	L	L	L	L	L	L	L	H⁺	L	L	L	L	L
JSW Steel Vijayanagar Mines	M⁻	H⁻	H⁻	L	L	L	L	M⁻	L	L	L	L	L
JSW Steel Vijayanagar Works	L	L	M⁺	M⁻	L	L	L	L	L	L	H⁺	L	L

L: Low, M⁻: Medium Negative, M⁺: Medium Positive, H⁻: High Negative H⁺: High Positive

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