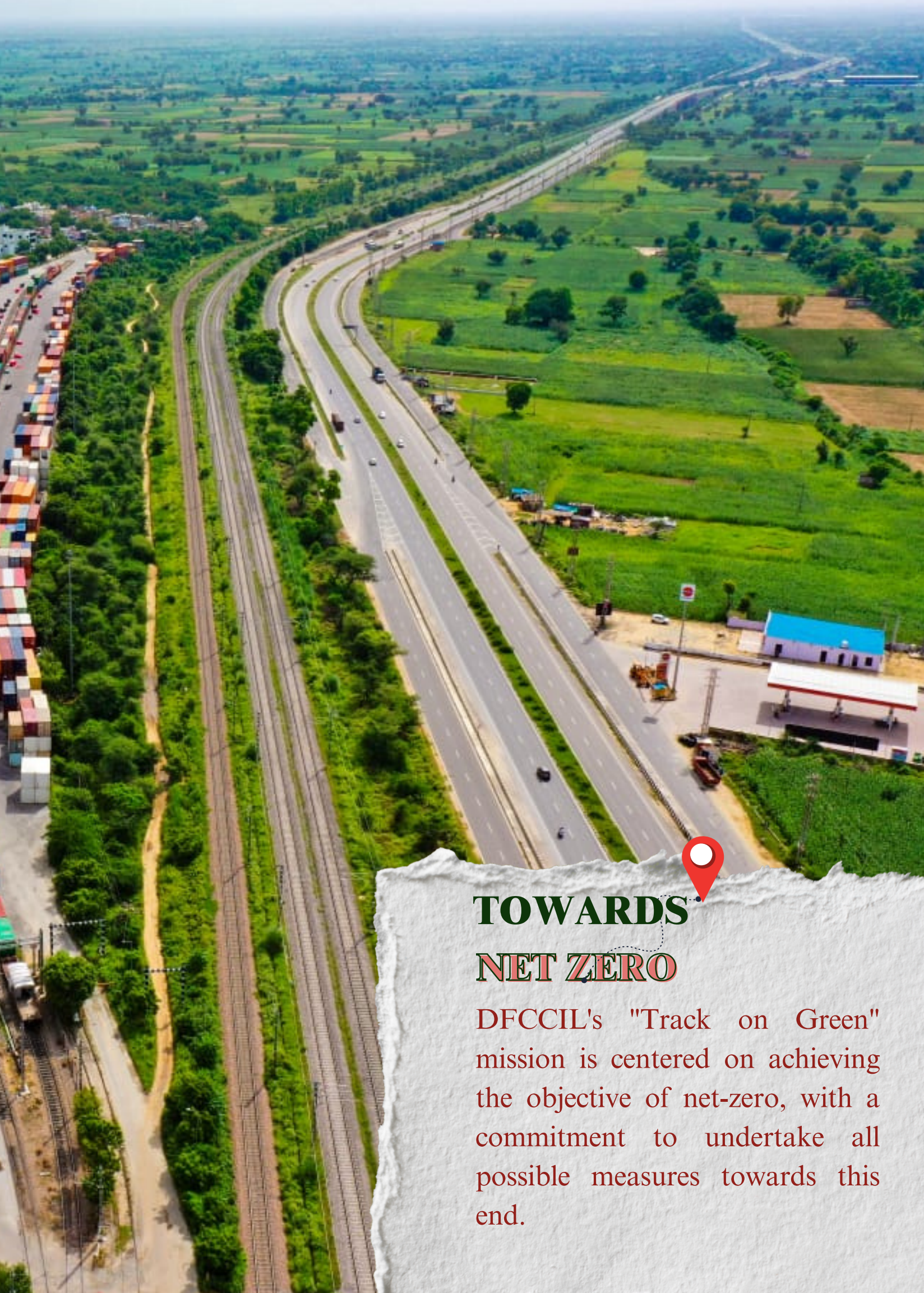




Sustainability Report

2022-2023





TOWARDS NET ZERO

DFCCIL's "Track on Green" mission is centered on achieving the objective of net-zero, with a commitment to undertake all possible measures towards this end.



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"EARTH'S RESILIENCE
IS OUR RESPONSIBILITY;

SUSTAINABILITY

IS THE BLUEPRINT FOR OUR
SHARED LEGACY."

2022-2023

P R E F A C E

DFCCIL's Pledge to a Greener Tomorrow

Within the expansive landscape of India's transportation network, the Dedicated Freight Corridor Corporation of India Limited (DFCCIL) is a pivotal entity committed to revolutionizing freight logistics by developing and managing dedicated rail corridors. Our relentless pursuit of innovation and sustainable practices emphasizes our commitment to enhancing efficiency, reliability, and environmental responsibility.

DFCCIL's projects encompass the **Western and Eastern Dedicated Freight Corridors**, strategically designed to cater to diverse freight types, connecting key industrial hubs and major ports, destined for Inland Container Depots (ICDs). **The corridors are aligned to speed up freight movement, facilitating coal transportation as a critical energy resource, and addressing the need for thermal plants.** We aspire not just to meet current demands but also to safeguard opportunities for future generations by championing efficiency, with environmental protection. This leads to DFCCIL's commitment which includes ecological sustainability aligned with the government's objectives, advocating for railways as the foremost environmentally friendly transportation mode. Our strategic initiatives emphasize reducing congestion, minimizing greenhouse gas emissions, and offering cost-effective, safer mobility solutions.

In line with this vision, DFCCIL has embarked on a journey toward comprehensive sustainability, emphasizing environmental conservation, community engagement, and economic development along the Dedicated Freight Corridors. DFCCIL's sustainability endeavors are highlighted, in our sustainability report and stand as a cornerstone, meticulously evaluating and integrating social, environmental, and governance activities. Furthermore, our engagement in Sustainable Development Goals (SDGs) is evident through initiatives like “Saksham” for skill development, renewable energy exploration with solar projects, and a focus on employee welfare by providing decent working conditions and wages/salary.

As part of our commitment to advancing SDGs, DFCCIL has actively pursued innovation. Our innovative approach encompasses groundbreaking services such as 'Trucks on Trains' (ToT) and 'NMG trains,' seamlessly integrating truck and train transportation to heighten operational efficiency and contributing to reduction in CO2 emission from truck carrying load. Additionally, our strategic vision includes the proactive planning of Multimodal Logistic Parks (MMLPs) positioned along the corridors. These initiatives collectively optimize logistics solutions, aligned with sustainable development.

As we progress, DFCCIL remains steadfast in its dedication to sustainability, social responsibility, and the advancement of India's transportation landscape.



CHAIRPERSON'S MESSAGE

Smt. Jaya Varma Sinha

Dear Stakeholders,

I am honoured to address you as the Chairperson of DFCCIL. We have endeavored and worked relentlessly thus far to align our organisation with India's impressive growth story and endeavor to focus on developing world-class infrastructure within the railway sector. The increasing investments in capacity enhancement and core facility improvements reflect upon our committed approach to furthering the cycle of India's growth story.

DFCCIL is a growing organisation, with a responsible corporate citizenship attitude having initiatives aimed at minimizing ecological footprints, which promotes welfare and safety for all stakeholders in our operational areas, ensuring a sustainable legacy for future generations.

DFCCIL's vast rail network is a key driver of sustainability and India's economic progress. Its reach fosters sustainable growth, developing industrial corridors, New Private Freight Terminals, Goods Sheds, Multi-Modal Logistics Parks, and Inland Container Depots. This expansion integrates underdeveloped regions into national and global markets sustainably.

With sustainability embedded in our corporate DNA, we strive to pursue the best practices and craft a clear path to move towards a sustainable work culture and a better tomorrow.

MANAGING DIRECTOR'S MESSAGE

Shri Ravindra Kumar
Jain

Dear Colleagues and Stakeholders,

At DFCCIL, our commitment to sustainability remains unwavering as we integrate responsible and sustainable practices into our operations. As stewards of the environment, we recognize the imperative need for transformative action while conducting our construction activities, ensuring the protection and preservation of our ecosystem.

Over time, DFCCIL has initiated several commendable measures for fostering sustainable development. The efforts stress our dedication to mitigating the environmental and social impact of our operations.

Our journey towards sustainability is ongoing, and we are steadfast in our resolve to collaborate closely with all stakeholders. By fostering partnerships and collective action, we aim to position DFCCIL as a frontrunner in eco-friendly practices within our industry.

Thank you for your unwavering dedication and continued support as we embark on this collective journey towards a greener and more sustainable future.





DIRECTOR'S (OP&BD) MESSAGE

Shri Nanduri Srinivas

DFCCIL, an iconic game changer in the freight movement, has been striving to build a different ecology in the Indian railways and logistics sector. The core competency of higher speed is assured transit time. DFC is poised to break the myths about freight being a neglected segment in the movement priorities of Indian Railways.

Construction of such a project involved land acquisition, reshaping, and building tracks using steel and cement in enormous proportions. All the work undertaken has followed established norms in environmental protection.

Various measures undertaken during construction and later on while conducting operations are listed to bring out the effort to protect the environment and ensure economical and logistical efficiency for the transportation of freight.

This initial attempt at putting up a sustainability report should be seen as an attempt at listing various measures undertaken to provide a healing touch to ensure social and environmental impact is positive while building and operating such a mammoth project.

AUTHOR'S DESK



Col. Mayank Upadhyha
(JGM BD)
Author

As we embark on this pivotal journey of sustainable development, I am honored to introduce the DFCCIL Sustainability Report, which encapsulates our commitment, achievements, and ongoing efforts towards environmental stewardship and social responsibility.

The report serves as a testament to DFCCIL's unwavering dedication to integrating sustainability into our core operations. It highlights our initiatives, milestones, and collaborative endeavors that outline our vision of fostering a more ecologically balanced and socially inclusive future.

At DFCCIL, sustainability is not just a goal; it is an ethos that resonates across every facet of our organization. It encapsulates our relentless pursuit of innovation, our commitment to environmental conservation, and our deep-rooted responsibility towards the communities we serve.

As the custodians of India's freight corridors, we understand our pivotal role in shaping the nation's sustainable future. Through this report, we aim to transparently communicate our journey, emphasizing our achievements, challenges, and the transformative actions that guide our path ahead.

I extend my heartfelt gratitude to every individual, stakeholder, and partner whose unwavering support has propelled us forward. Together, we have laid the groundwork for a sustainable legacy that extends far beyond our present endeavors.

I would also congratulate Ms. Sabhya Sharma and Ms. Jyoti Yadav (JM OP and BD) for collating and sifting the data and information and assisting in editing.

May this report serve as a testament to our collective dedication to sustainable practices and inspire continued action, innovation, and collaboration for a brighter, more sustainable tomorrow.

- Col. Mayank Upadhyha, SM



Sabhya Sharma
(JM OP & BD)
Assistant Author



Jyoti Yadav
(JM OP & BD)
Assistant Author

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ABOUT

"DFCCIL: CONNECTING DREAMS,
FUELING PROGRESS."

For many decades, the Indian Railways (IR) has prioritized social factors, sometimes at the expense of its commercial activities. The formation of the Dedicated Freight Corridor Corporation of India Limited (DFCCIL) addresses this issue.

DFCCIL's mission of ensuring **safety, security, and speed** in freight transportation plays a critical role in shouldering the commercial factor of Indian Railways.

The establishment of DFCCIL as an independent organization is a valuable opportunity to focus and enhance commercial operations within the railway network by creating a corporation for the establishment and operation of the Dedicated Freight Corridors (DFC), the intention was to improve the efficiency and competitiveness of freight transportation in India.

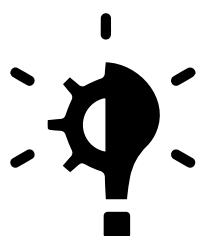
With DFCCIL's focus on the commercial part, its activities are in line with the broader objective of maximizing the rail network's potential for economic growth. This initiative not only enhances Indian Railways' revenue generation capabilities but also propels the country's development and financial prosperity by providing efficient and cost-effective freight transportation services. In 2021, the Ministry of Railways (MOR) assumed full ownership of the Dedicated Freight Corridor Corporation of India Limited (DFCCIL). In the original Concession Agreement (CA) of February 21, 2011, DFCCIL was granted ownership of the new railway infrastructure until the end of the 30-year concession period, from the date of final commissioning post which the ownership would transfer to the MOR. This arrangement embodies a concession-based model where DFCCIL was authorized to operate and manage the infrastructure for a specified duration.

“JEWEL OF INDIAN RAILWAY”

-Ashwini Vaishnaw

NEED FOR DFCCIL

DFCCIL's establishment is geared towards reducing congestion on India's overburdened rail network and promoting a concerted modal shift towards the more effective rail mode. This transition would not only benefit the Indian Railways but also significantly contribute to mitigating greenhouse gas (GHG) emissions within India's transport sector. Ernst & Young's assessment suggests that the Dedicated Freight Corridors (DFC) will save over 450 million tons of CO2 emissions during their initial three decades of operation.



VISION

To create a partnership with Indian Railways for retaining and expanding the market share of rail freight transport through efficient and reliable customer centric services and to promote sustainability

MISSION

Vision into Reality



- To build a corridor with appropriate technology that enables Indian Railways to regain its market share of freight transport by creating additional capacity and guaranteeing efficient, reliable, safe, and cheaper options for mobility to its customers
- To set up Multimodal logistic parks along the DFC to provide complete transport solution to customers.
- To support the government's initiatives toward ecological sustainability by encouraging users to adopt railways as the most environment friendly mode for their transport requirements.

Stage of commissioning

DFCCIL manages two major freight corridors: the Eastern Dedicated Freight Corridor (EDFC) and the Western Dedicated Freight Corridor (WDFC). Alongside these existing corridors, in the 2016 Budget speech, the Honorable Minister of Railways announced plans to incorporate further four more Dedicated Freight Corridors:

1. The East-West Corridor (Kolkata-Mumbai, approx. 2328 km)
2. North-South Corridor (Delhi-Chennai, approx. 2327 km)
3. East Coast Corridor (Kharagpur-Vijayawada, approx. 1114 km).
4. Southern Corridor (Madgaon-Ankola-Rinigunta, approx. 893 km)

The two operational Dedicated Freight Corridors managed by the Dedicated Freight Corridor Corporation of India Limited (DFCCIL) are as follows:

Eastern Dedicated Freight Corridor (EDFC)

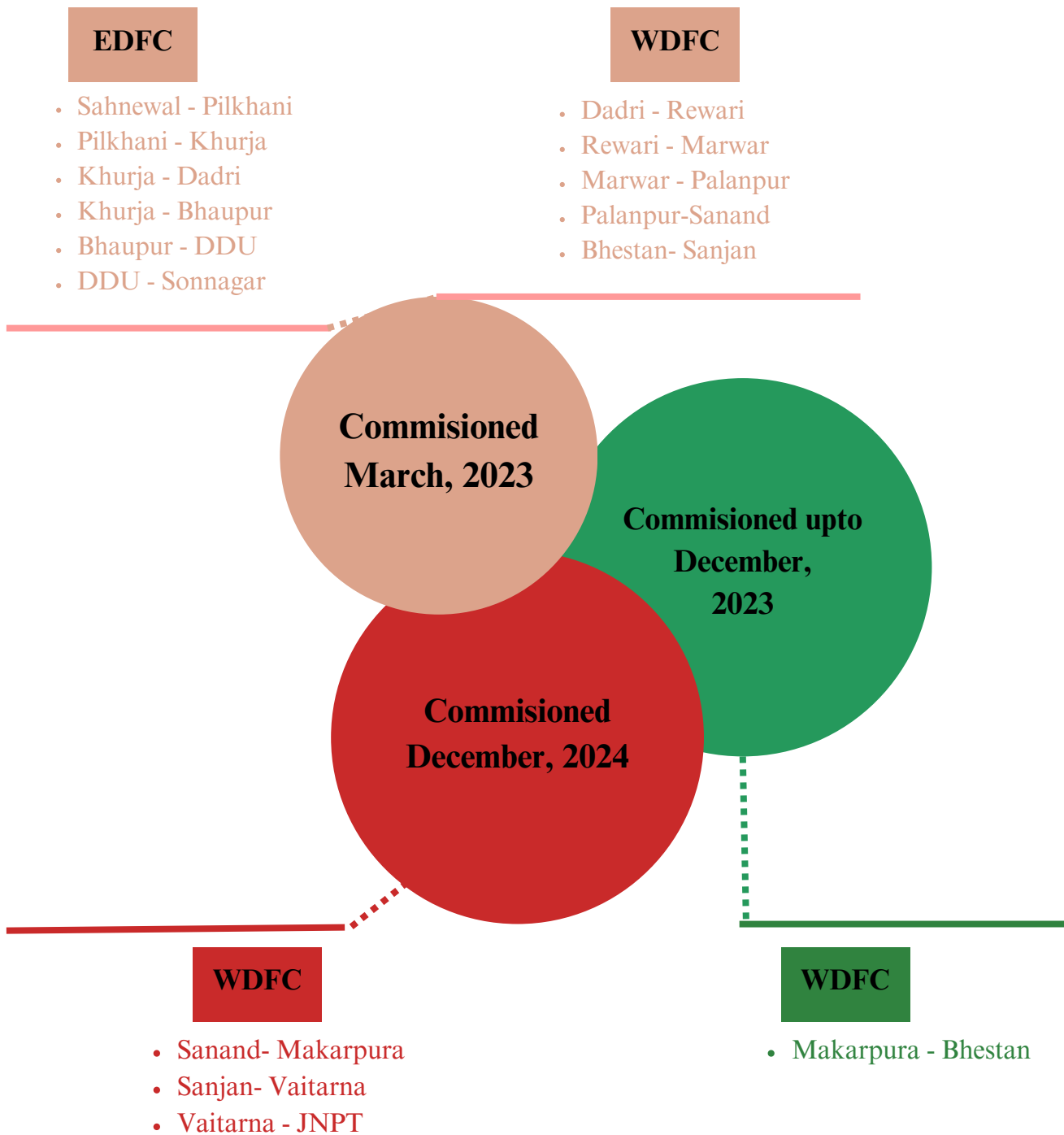
The Eastern Corridor spans **1337 km + 538km**, comprising electrified single and double-line segments connecting Ludhiana to Dankuni. Junctions strategically built at key locations facilitate traffic transfer between existing Indian Railway corridors and the DFC. Due to spatial constraints near urban centers and industrial hubs detours are incorporated. This corridor primarily caters to transporting coal for northern region power plants, finished steel, food grains, cement, fertilizers, and limestone to steel plants.

Western Dedicated Freight Corridor (WDFC)

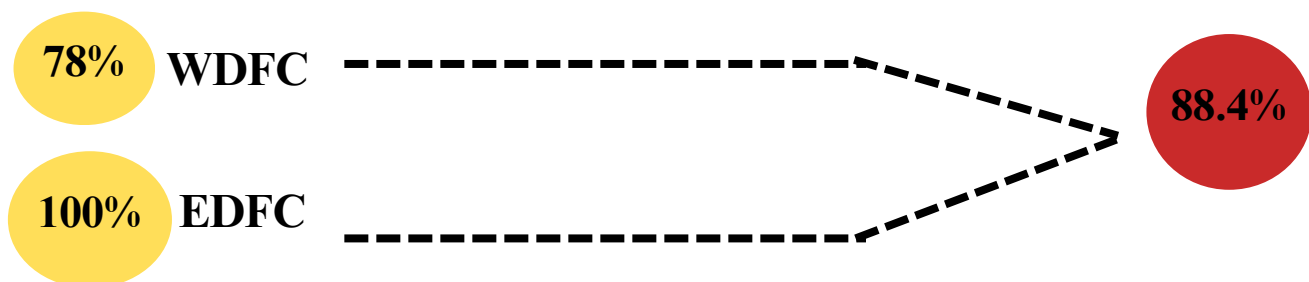
The Western Corridor, spanning **1504 km** of double-line electrified track from JNPT to Dadri via Vadodara-Sanand-Palanpur-Phulera-Rewari, maintains alignment parallel to existing lines with strategic detours. Notably, it diverges from Rewari to Dadri and Sanand to Vadodara, intersecting the New Delhi - Mathura line at Asaoti from Pirthala station of DFC. Primarily catering to ISO containers from principal ports like JNPT, Mumbai, Pipavav, Mundra, and Kandla destined for Inland Container Depot (ICDs) in northern India, such as Tughlakabad, Dadri, and Dandharikalan, the corridor handles a diverse cargo range including POL, Fertilizers, Food grains, Salt, Coal, Iron & Steel, and Cement.

Both corridors are part of a larger plan to improve freight logistics in India by providing dedicated rail routes for cargo transportation, aiming to reduce transit time and logistical costs.

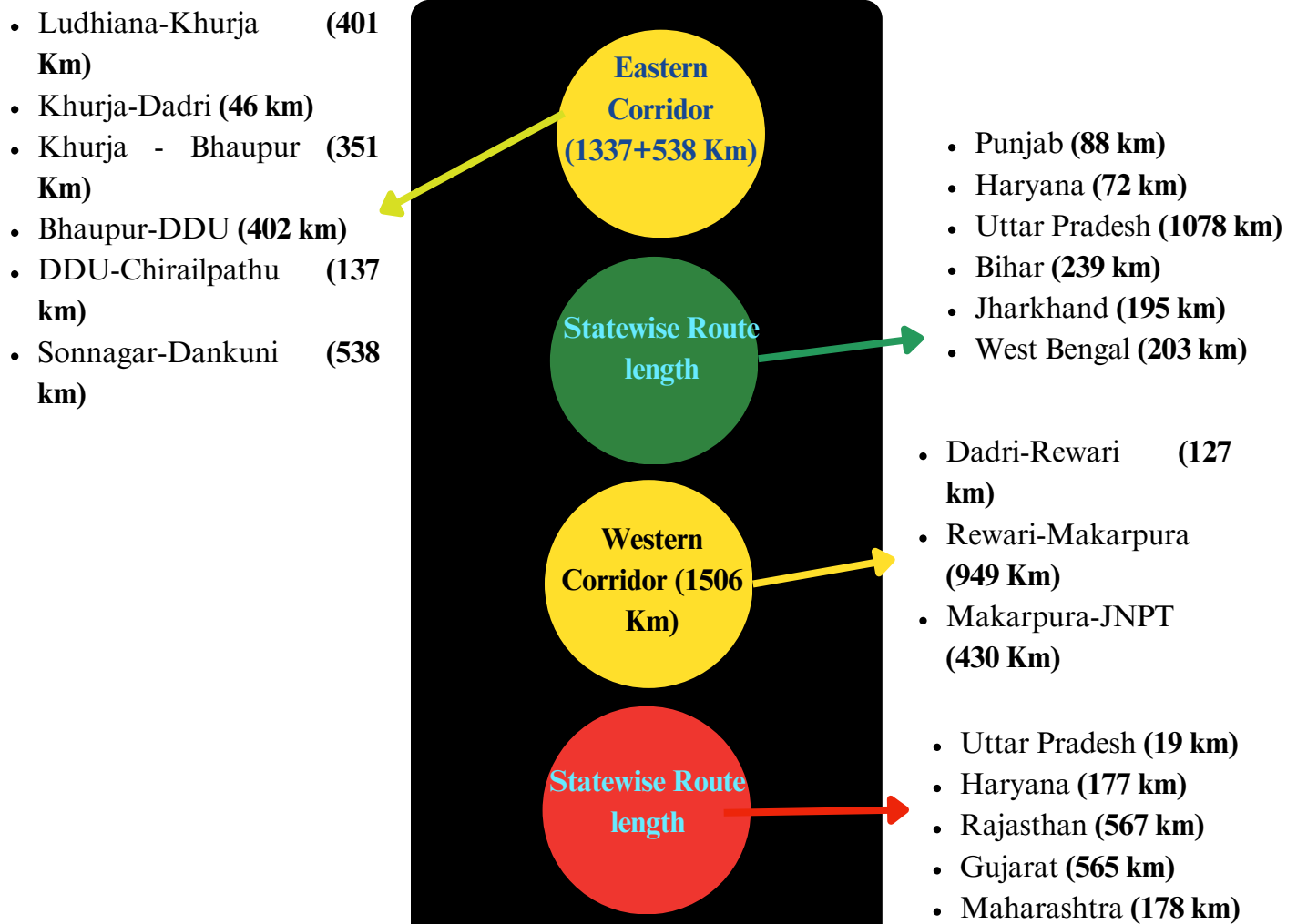
Progress Update: Dedicated Freight Corridor (DFC) Projects Commissioned and Ongoing Development



The Western Dedicated Freight Corridor (WDFC) stands at 78% completion, while the Eastern Dedicated Freight Corridor (EDFC) has reached 100%, resulting in an overall advancement of the dedicated freight corridor projects to an impressive 88.4%.

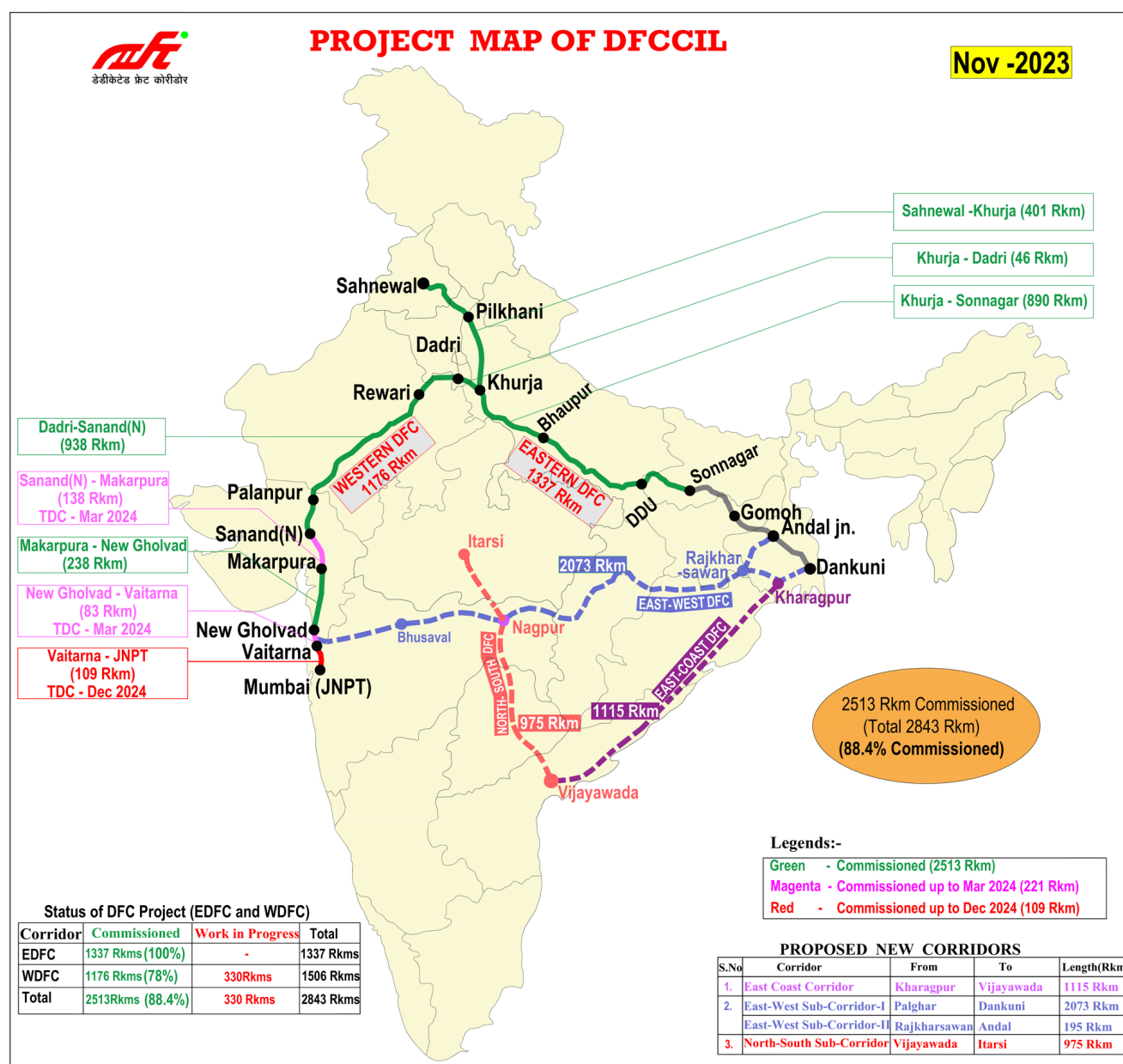


Segmented Route Lengths of Dedicated Freight Corridors Across States in India



A

The project map of Dedicated Freight Corridor Corporation of India Limited (DFCCIL) illustrates an extensive network of modern freight routes connecting key economic centers across the country.



*Latest project map depicting progress of DFCCIL

Covering over 6,000 kilometers (Approx) of track linkage, the Dedicated Freight Corridor features numerous components, which are as follows:

2,843 major bridges, 543 minor bridges, 304 Road Over Bridges (ROBs), 114 Road Under Bridges (RUBs), and 53 Rail Fly Overs (RFOs). The project also involves the complete elimination of 557 level crossing gates and encompasses the construction of 7 stations along the alignment, utilizing a staggering 2,371 lakh cubic meters of earthwork and occupying 11,827 hectares of land.



"डीएफसीसीआईएल रेल ट्रैक पर डेढ़ किमी डबल स्टैक मालगाड़ी चलने का नया कीर्तिमान"

अश्विनी वैष्णव

केन्द्रीय मंत्री, रेल, संचार, लेक्ट्रॉनिक्स और प्रौद्योगिकी मंत्रालय



CHAPTER 1

ORGANIZATIONAL PROFILE

"Dedicated Freight Corridor Corporation of India Limited (DFCCIL) is a specialized entity operating and developing freight corridors across India, enhancing the nation's railway infrastructure for efficient freight transportation."

The chapter include following topics :

- Corporate Overview
- Board Of Director's
- Milestone

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Website - <https://dfccil.com/>



https://twitter.com/dfccil_india



in.linkedin.com/company/dfccil



facebook.com/dfccil.india/



instagram.com/dfccil_india/



youtube.com/@DFCCILIndia

1.1 Corporate Overview

2,089 Rkm

Rkm Operational in
DFC as of 31 March,
2023

INR 1,03,287 Crore

Project expenditure

5,151 Km

Track linking completed
as on 31 March, 2023

4,452 Km

OHE wiring completed as on
31st March 2023

100 Kmph

train speed potential on
DFC

**Eastern Dedicated Freight Corridor
(EDFC) Plan**

273 **8322** M

Bridges and
RFOs

Net tonne per Km

22

Junction stations

30

Crossing stations

**Western Dedicated Freight Corridor
(WDFC) Plan**

367 **8,322** M

Bridges and RFOs

Net tonne per Km

44

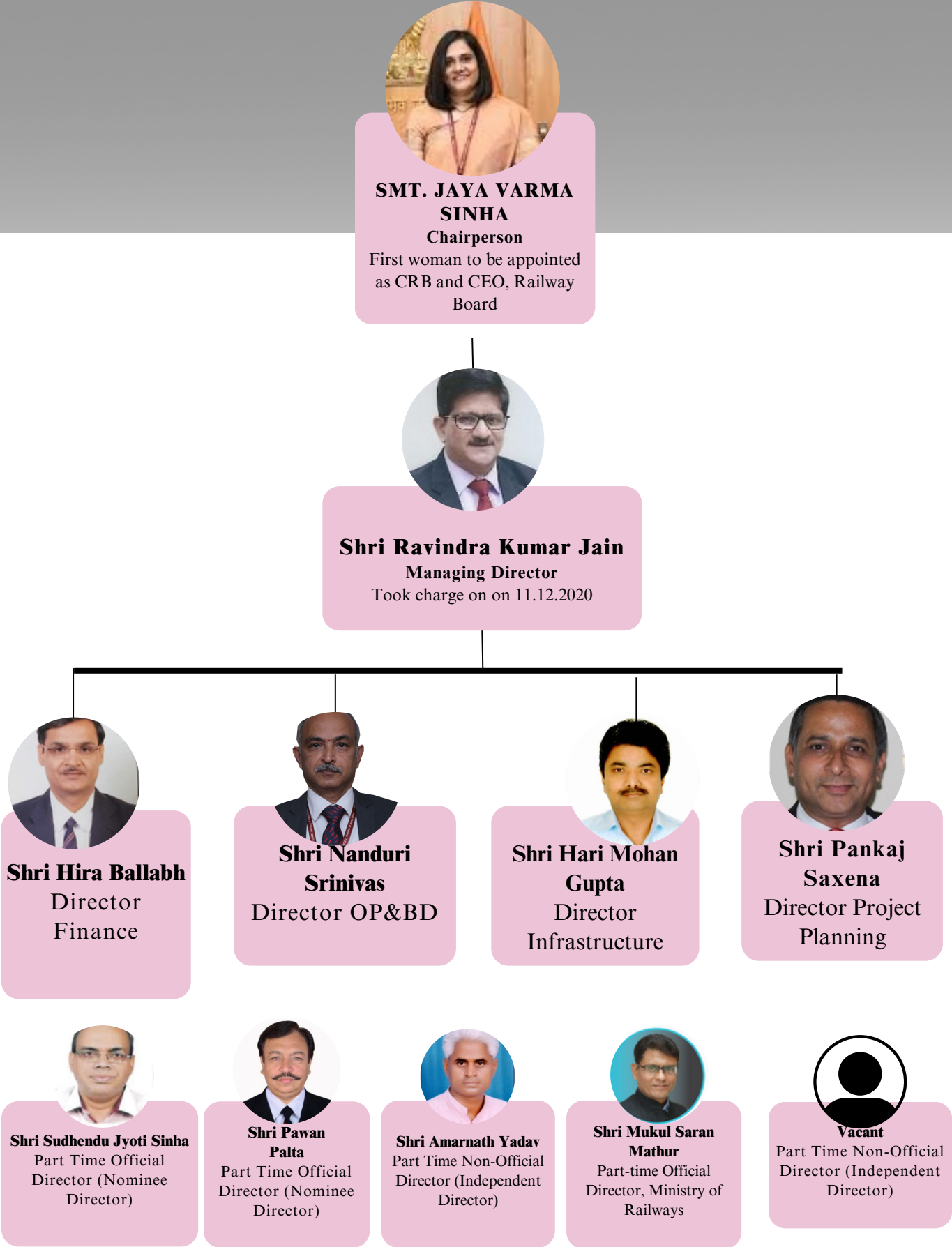
Crossing stations

18

Junction stations



1.2 BOARD OF DIRECTORS





1.3 MILESTONE

Commenced milestones for each section from 2022 to 2023.

Hon'ble Prime Minister Shri Narendra Modi dedicated the Madar to Palanpur section, which extends over a distance of 353 kilometers, of **WDFC** to the nation on June 18, 2022.

JUNE 2022

- New Karchna (KCNN)-New Dagmagpur (DAPN)-Chunar section, spanning 110 kilometers, of the Eastern Dedicated Freight Corridor (EDFC) was successfully commissioned on September 30, 2022.
- New Khurja- New Dadri Section, covering a distance of 46 kilometers, of the **Eastern Dedicated Freight Corridor (EDFC)** was officially commissioned.
- Hon'ble Prime Minister Shri Narendra Modi dedicated the New Palanpur-New Mehsana section to the nation on September 30, 2022., which includes the Palanpur connecting line, spanning 75 kilometers, of the **Western Dedicated Freight Corridor (WDFC)**.

A successful electric locomotive trial was conducted on both lines of the Dadri-Prithala section, covering a distance of 52 kilometers, on the **Western Dedicated Freight Corridor (WDFC)** on November 30, 2022.

- New Mehsana- New Sanand (North) section, spanning 77 kilometers, of the **Western Dedicated Freight Corridor (WDFC)** was commissioned, including the Indian Railways (IR) Sanand and IR Goraghuma Connecting Lines.
- New Kanpur to New Bhimsen section, which also includes the Indian Railways (IR) Bhimsen link line, covering a distance of 28.183 kilometers, was officially commissioned on October 19, 2022, as part of the **Eastern Dedicated Freight Corridor (EDFC)**.

SEPTEMBER 2022

OCTOBER 2022

NOVEMBER 2022

New Sujatpur- New Karchana section, spanning 62 kilometers and part of the **Eastern Dedicated Freight Corridor (EDFC)**, was successfully commissioned on December 31, 2022. This commissioning marked a significant milestone as it established uninterrupted connectivity covering a distance of 327 kilometers, extending from Bhimsen to Chheoki on the EDFC.

- New Rewari- New Dadri Broad Gauge double-line electrified section, spanning 127 kilometers, became operational with the successful commencement of goods train operations from ICD Dadri to New Rewari on March 31, 2023.
- On March 31, 2023, the New Khurja-New Khatauli Broad Gauge single-line electrified section, covering a distance of 135 kilometers, was officially commissioned as a part of the **Eastern Dedicated Freight Corridor (EDFC)**.
- The New Dagmagpur to New Ahraura Road Broad Gauge double-line electrified section, spanning 23 kilometers and part of the **Eastern Dedicated Freight Corridor (EDFC)**, was successfully commissioned with a train run on the double-line electrified track on March 31, 2023.
- New Bhestan- New Sanjan Broad Gauge double-line electrified section, covering a distance of 108 kilometers and part of the **Western Dedicated Freight Corridor (WDFC)**, was officially commissioned, along with Indian Railways connectivity, on March 31, 2023.

DECEMBER 2022

FEBRUARY 2023

MARCH 2023

On February 28, 2023, New Bhimsen - New Bhaupur section, spanning 25 kilometers and part of the **Eastern Dedicated Freight Corridor (EDFC)**, was successfully commissioned. This commissioning marked a significant milestone as it established uninterrupted connectivity spanning 752 kilometers between New Dadri, New Khurja, New Bhaupur, and New Chunar stations along the EDFC.

Chapter 2

About The Report

- **Introduction**
- **Scope of the Report**
- **Reporting Boundaries**

Reducing carbon footprint

Over a quarter of global greenhouse gas (GHG) emissions can be attributed to the transportation industry. Railways have always stood out as one of the most energy-efficient modes of transportation for both goods and passengers. The dedicated freight corridors play an essential role in substantially reducing GHG emissions. We are making focused interventions to fortify the network in the long run.

CHAPTER 2 ABOUT THE REPORT

2.1 About the report

In the quest for a better tomorrow, DFCCIL has taken momentous strides towards sustainable practices, as exemplified in its efforts towards environmental conservation and social responsibility. The company's commitment to preserving the earth, engaging with communities, and fostering economic development along the Dedicated Freight Corridor is encapsulated in its sustainability report, which serves as a blueprint for future endeavors. DFCCIL recognizes the need for a comprehensive sustainability framework, one that fosters inclusive practices and social well-being along the corridors. The report highlights the company's unwavering commitment to governance practices, prioritizing stakeholder interests, and delineating clear strategies to fulfill these commitments, particularly in the realms of sustainability and social responsibility.

2.2 Scope of the report

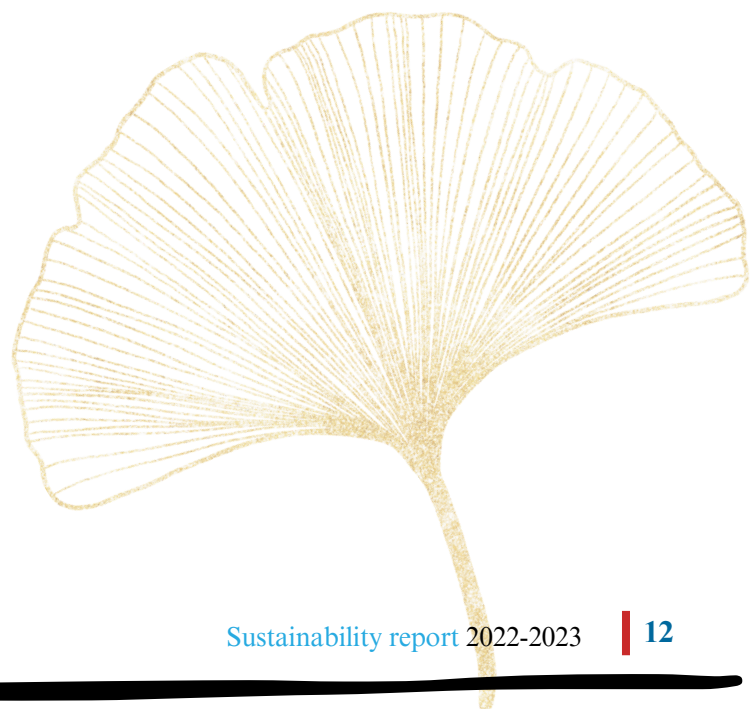
The report framework aims to put forward the sustainability and SDG for both the WDFC and EDFC corridors.

The comprehensive framework encompassing the entire project's social, environmental, and governance activities, serves as an essential component of DFCCIL's sustainability report.

2.3 Reporting boundaries

The sustainability report has been meticulously crafted by parameters followed by contractors closely captured with the GRI (Global Reporting Initiative) index for sustainability reporting. DFCCIL's reporting boundary encompasses the following areas unless stated otherwise:

1. DFCCIL's junction station and crossing station.
2. DFCCIL's station building and running room.
3. Section-wise CGM units.



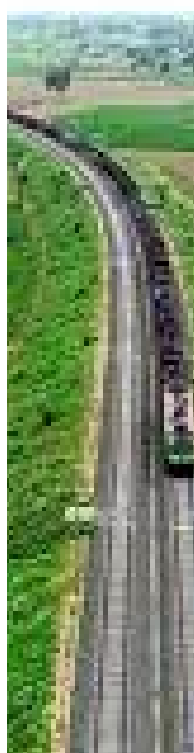
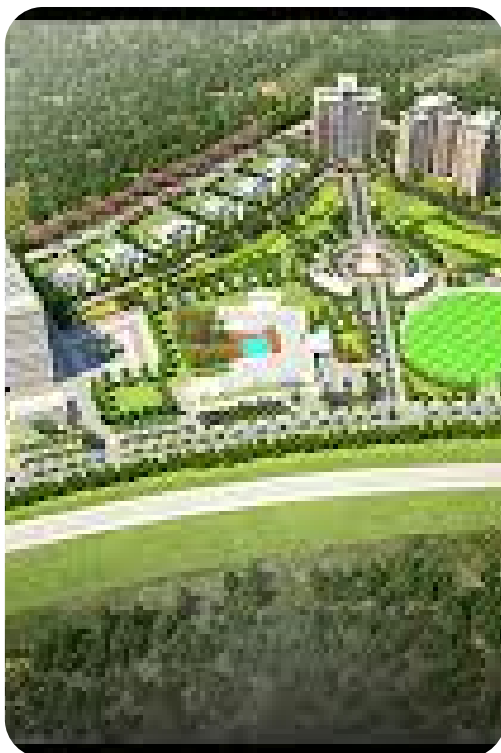
CHAPTER 3

SUSTAINABILITY FRAMEWORK

DFCCIL's steadfast commitment to sustainability is apparent in its conscientious approach to infrastructure development. By adopting sustainable practices such as **electrification**, **resource management**, **biodiversity conservation**, and **community engagement**, DFCCIL is setting a precedence for large-scale railway projects to operate while minimizing their ecological footprint and contributing to societal welfare. These sustainability initiatives signify DFCCIL's unwavering devotion to promoting a greener, cleaner, and more sustainable future for India's freight transportation.

The chapter includes the following :

- **VISION AND MISSION**
- **STAKEHOLDERS**
- **HIGHLIGHTS (2022-2023)**



3.1 VISION AND MISSION

“Pioneering Sustainable Journeys Ahead”

Building Sustainability in our corporate DNA

VISION

Our vision revolves around “**pioneering sustainable rail freight transportation, harmonizing economic growth with environmental responsibility and societal well-being**”. DFCCIL aspires to meet current needs while aligning with Indian Railways to champion efficiency, reliability, and ecological sustainability. This vision encompasses creating additional transport capacity, and a modal shift to railways, establishing multimodal logistic parks, promoting environmentally friendly practices, contributing significantly to reducing congestion on roads thereby minimizing greenhouse gas emissions, and offering cost-effective, safer mobility solutions to customers.

MISSION

DFCCIL is to align with the government's ecological sustainability objectives by promoting railways as the foremost environmentally friendly transportation mode.

Through active advocacy for the adoption of railways, our initiative not only meets present transportation demands but also positions Indian Railways as a pivotal contributor to fostering sustainable practices for the future. Our forward-thinking approach underscores a firm commitment to sustainable development, embodying a visionary perspective that carefully considers the long-term positive impact of railways on the environment and the broader transportation landscape in India.

3.2. STAKEHOLDERS

The Investment Regions and Industrial Areas identified by Delhi Mumbai Industrial Corridor Development Corporation Limited (DMICDC) and Amritsar-Kolkata Industrial Corridor (AKIC corridor) hold tremendous potential to generate diverse non-conventional traffic. The Dedicated Freight Corridor (DFC) alignment is poised to complement these developments.

DFCCIL's stakeholders include government bodies overseeing railways, investors providing financial support, industries relying on freight transport, and employees concerned with labor conditions. Local communities affected by corridor construction, regulatory authorities ensuring compliance, and technology/service providers are also involved. These stakeholders collectively shape DFCCIL's policies, operations, and impact on society, influencing its services, and relationships within the transportation ecosystem.

To facilitate the consolidation of logistics traffic, the establishment of multimodal logistic parks is well underway, supported by consultancy studies across various locations.

Once operational, the freight train services will primarily cater to exporters and importers, shipping lines, container operators, power plants, entities within



Fig 1: Major Stakeholder Groups during Construction Phase

industrial corridors and logistic parks, corporate enterprises, petroleum refineries, petrochemical industries, mineral processing facilities (such as coal, bauxite, mica, etc.), mines, food and consumables distributors, and the transportation of imported goods from Jawaharlal Nehru Port Trust (JNPT) to the mainland. This will ensure equitable distribution across various regions of the country.

The implementation of the greenfield Dedicated Freight Corridor (DFC) project complying with environmental responsibility norms provides an opportunity to tackle environmental concerns.

While meeting the increasing logistics demand, the DFC project promotes sustainability and addresses the critical infrastructure need for efficient and cost-effective freight transportation in response to increasing demand.



Fig 2: Major Stakeholder Groups during Operation Phase

Various stakeholders of DFCCIL in different capacities are as under :

- 1. Exporters and Importers:** Companies or organizations involved in exporting and importing goods, such as coal and cement, utilizing the freight corridor for transportation.
- 2. Coal, Fertilizers, and Cement Plants:** Entities responsible for the production and distribution of coal and cement, using the corridor for transporting their goods.
- 3. JICA and World Bank:** JICA has funded EDFC and World Bank has funded WDFC.
- 4. Thermal Plants:** Rakes moving on DFC alignment, ensuring expeditious supply of coal to thermal power plants and

proving to be instrumental in continuous power generation and assisting thermal plants in maintaining mandatory reserve levels.

5. NMGHS - Amazon Parcel: DFCCIL is transforming old GS Coaches from Indian Railways into advanced NMGHS (New Modified Goods) coaches, leading the efficient transport of smaller cargo on the Dedicated Freight Corridor (DFC) network.

6. Millennium (Milk wagons): The Dedicated Freight Corridor Corporation of India Limited (DFCCIL) has emerged as a game-changing conduit for milk transport, drastically reducing the transit time of Millennium (Milk) trains between New Palanpur and Palwal by an impressive 37%.

7. Employees and local communities: Employees at DFCCIL serve as the operational backbone, ensuring safety (by regular interaction and counselling), efficiency, and effective management of the freight corridor.

8. Indian Railway: Indian Railways (IR) is a key stakeholder in DFCCIL due to its ownership and operational involvement in managing dedicated freight corridors, playing a vital role in enhancing India's rail infrastructure and facilitating efficient freight transportation.



मन 104th episode of Mann ki Baat की बात

Hon'ble Prime Minister Narendra Modi in his Mann Ki Baat radio address highlighted the **Truck-on-Track** facility started by Indian Railways for transportation of milk from Gujarat's Banas Dairy to other States. He said this new method takes just half the time compared to conventional transport apart from other benefits.

-Shri Narendra Modi

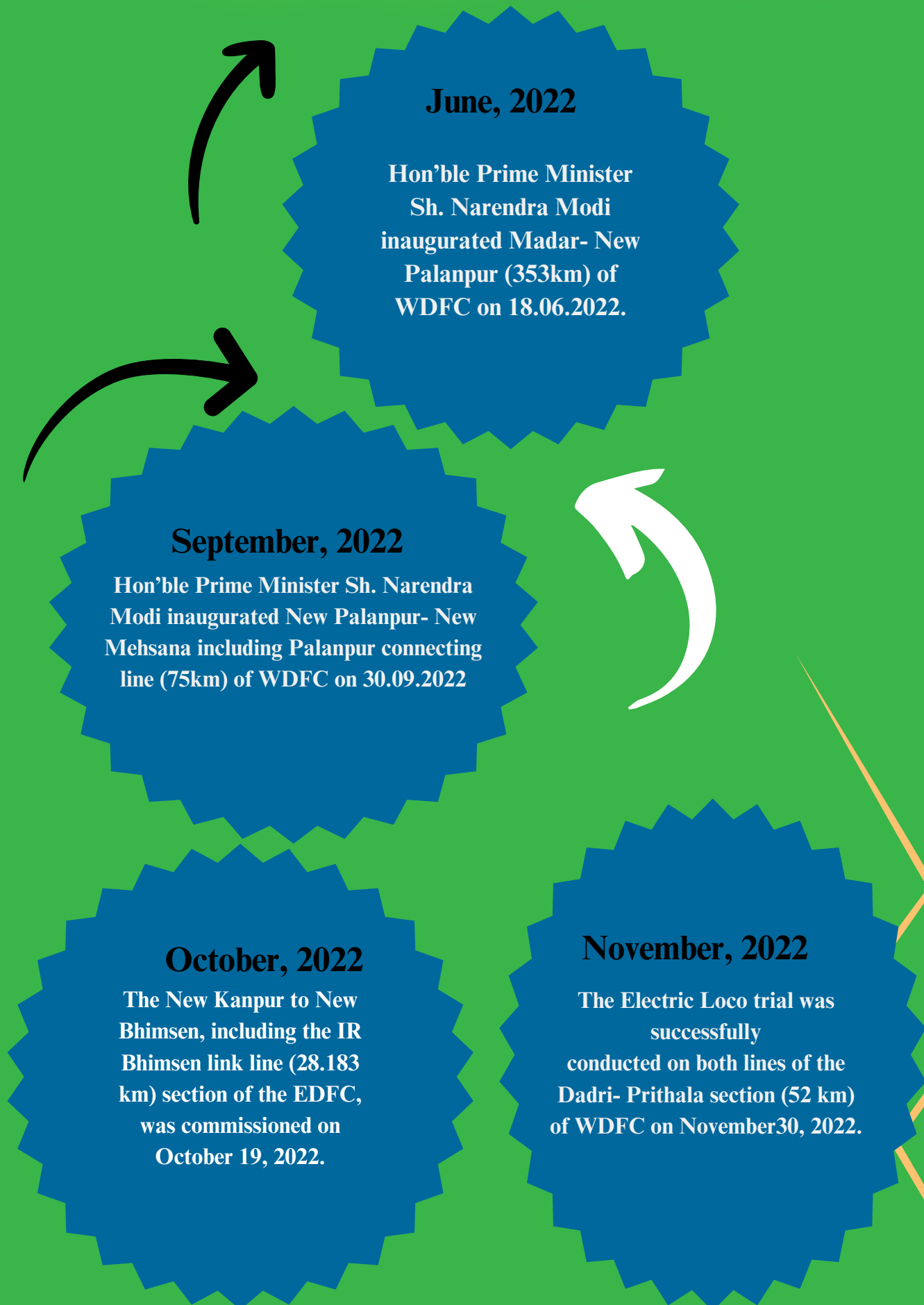
STAKEHOLDERS

Engaging Stakeholders: Approaches to engaging stakeholders encompass a variety of methods tailored to specific stakeholder groups and their needs.

In a commitment to innovative and engaging communication, DFCCIL has also adopted novel methods to inform and educate its stakeholders.

DFCCIL has meticulously crafted its Communication Strategy, implementing an effective action plan to cater to the communication requirements of its stakeholders. Pertinent updates and information regarding major events are consistently disseminated via Press Releases and the website, often accompanied by relevant photographs. To track the progress of work within DFCCIL, news items are regularly featured in magazines and newspapers. Furthermore, media interactions, including interviews with senior officers of DFCCIL, are organized and published in the media.

3.3 Highlight 2022-2023



December, 2022

The Sujatpur-Karchana (62 km) section of the EDFC was commissioned on December 31, 2022.

With the commissioning of this section, continuous connectivity of 327 km from Bhimsen to Chheoki was achieved on the EDFC.

February, 2023

The New Bhimsen - New Bhaupur section (25 km) of EDFC was successfully commissioned on February 28, 2023. With this commissioning, connectivity of 752 km between Dadri- Khurja- Bhaupur-Chunar stations of the EDFC was achieved.

March, 2023

The superstructure of WDFC's Bridge No 122 consisting of 6 x 76.2 m span over the Ulhas river in Maharashtra's Thane district has been completed. A new section was commissioned on 31st March Bhestan to Sanjan.

CHAPTER 4

ENVIRONMENTAL CONTRIBUTION

Paving Way for a Greener Tomorrow

The Environment Aspect of Sustainability focuses on how DFCCIL affects both living and non-living elements of the natural world, encompassing ecosystems, land, air, and water. To gauge environmental performance, indicators are used to measure resource inputs like materials, energy, and water, as well as outputs such as emissions, effluents and waste. The chapter elaborates various aspects of construction to operational phase, giving out sustainable practices observed with special emphasis on environment protection.

- Construction Material
- Energy efficiency
- Water conservation
- Waste Management
- GHG Emission
- Rehabilitation of the burrowing area
- Green Belt
- Dust Management



2022-2023



“DFCs are going to be big game changer for freight operations of India.”

Shri Ravindra Kumar Jain
(MD, DFCCIL)

4.1 Construction Material

In DFCCIL, a significant portion of the major construction material being utilized, includes concrete, borrow material (earth) primarily sourced from cutting and filling areas within the DFC land, quarry material (aggregate, ballast, blanketing), rail supply, sleepers, high-speed diesel (HSD), and various other resources.

4.1.1 Environmentally sustainable construction material

The WDFC and EDFC project place a strong emphasis on the incorporation of environmentally sustainable material as alternatives to conventional construction materials. These alternatives (mentioned below) are chosen to reduce the project's otherwise likely negative environmental impact and promote sustainability.

- **Manufactured sand:** The utilization of "Manufactured Sand" (M-sand) as a substitute for natural sand in concrete-related tasks, particularly at the Sleeper Plant and Bridge Work, is implemented to enhance sustainability and reduce the reliance on natural resources. This approach aims to promote environmentally responsible practices by utilizing manufactured sand in place of natural sand for concrete activities. This also **promotes care for river beds**, thereby leading to **saving ecology** and the environment. It also checks/reduces illegal mining of sand.
- **Fly ash:** The use of fly ash for the construction of DFC station buildings, reduces natural sand consumption. For further details refer to section 4.1.5. station building, other building and other civil engineering works.
- **Steel shuttering:** The use of Steel shuttering for formwork in place of plywood for all structural works is a way to stand up against deforestation. Steel shutters are reusable, therefore support sustainable practices.
- **RMC (Ready-Mix Concrete) Procured/Made:** RMC were procured or produced during the project. The data shows monthly quantities of RMC used, with the highest amount used in March 2023.
- **Precast:** Small amount of precast was used in February 2023 for the construction, that are manufactured off-site and then assembled on-site for efficiency.
- **Plywood Procurement:** The project procured plywood, with varying monthly quantities. **Plywood is often used for formwork and temporary structures in construction. Plywood prevents unnecessary felling of trees and the use of artificial non-biodegradable material, leading to environmental care.**

Table 1: Alternate materials used for replacing Cement.

Alternate Materials	UOM	FY21-22	FY 22-23
% concrete done with m sand ("alternate to natural sand")	%	80%	89%
% Steel Shuttering / System formwork	%	90%	90%

Source: TATA Projects Ltd (CTP- 11)

Over the fiscal years, there has been a steady increase in the utilization of alternative materials like M- sand, the usage rising from 80% to 89% this shift has positively impacted the environment by **reducing reliance on natural sand and minimizing waste**. Using M-sand decreases environmental strain caused by excessive mining contributing to sustainable construction practices and reduced ecological footprint.

Table 2: Construction Material Usage Summary (FY 2021-2022 and 2021-2023)

Site Name	Quantity of RMC procured/made (cum)	Quantity of m-sand 2021-22 (cum)	Quantity of Concrete made using M-Sand (cum) 2022-23
Apr-22	12,442.00	11367	12,442.00
May-22	12,473.00	11324	12,473.00
Jun-22	10,073.50	9786	10,073.50
Jul-22	1,661.00	1020	1,661.00
Aug-22	2,191.75	800	2,191.75
Sep-22	1,792.25	1564	1,792.25
Oct-22	2,704.65	1500	2,704.65
Nov-22	4,337.75	1824	2,352.10
Dec-22	10,186.00	7654	8,603.44
Jan-23	13,582.25	10633	11,331.79
Feb-23	14,812.50	11645	12,251.56
Mar-23	15,059.35	10763	11,988.00
Total	101,316.0	79880	89,865.04

*Further details are attached in annexure 1.

Source: TATA Projects Ltd. (CTP- 11)

4.1.2 Utilisation of concrete waste

Utilization of concrete waste **prevents the mining of soil for making bricks thereby, preserving sub-soil fauna and conservation of fragile ecosystems.** Meantime, making waste into resources. A few of these examples are benches and walkways.



Fig 3: Concrete waste being used to make bricks for further use

Repurposing concrete waste not only curbs soil mining for brick production, safeguarding sub-soil fauna and fragile ecosystems, but also tackles landfill overflow, mitigating environmental risks. Through techniques like crushing and reusing rubble, the construction industry slashes its ecological impact, embracing circular economy principles and cutting energy consumption for new concrete, thereby reducing greenhouse gases. Its versatile use aligns with sustainability goals, fostering a shift to eco-conscious construction practices.

With collaborative efforts, recycling concrete stands as a beacon for responsible resource management, illustrating innovation's role in harmonizing human development and the environment for a greener future.

4.1.3 Commitment to quality, efficiency, and eco-friendly practices

The procurement and usage data presented reflect the backbone of a construction project. **Quantities of Ready-Mix Concrete and M-Sand outline a commitment to quality, efficiency, and eco-friendly practices**, which are vital for durable structures. Plywood and steel shuttering figures highlight meticulous planning by using Industrial plywood which is commonly produced from larger sheets of wood obtained from sustainable forestry practices and steel for shuttering that are then reused, therefore presenting any depletion to the environment due to use of other material which are non-biodegradable thereby, caring for climate, ensuring robust temporary structures and interior elements. These materials not only signify technological advancements but also emphasize resource optimization and streamlined construction processes. The quantities recorded across months showcase a balanced approach, combining traditional reliability with modern sustainability, crucial for building resilient and enduring constructions.

4.1.4 Eco-friendly approach to construction

In the pursuit of sustainable and environmentally conscious construction practices, DFCCIL has embraced the integration of fly ash as a pivotal alternative material in its infrastructure projects.

4.1.5 Details of Fly ash consumption in DFCCIL

Fly ash, a residual product derived from coal combustion in thermal power plants, stands as a valuable resource in construction applications, notably in the production of cement and concrete. Its adoption not only signifies a commitment to innovative construction methodologies but also is a significant step towards reducing dependency on traditional raw materials sourced from the environment.

By incorporating fly ash, DFCCIL not only enhances the quality and durability of its infrastructure but also contributes to a more eco-friendly and resource-efficient approach to construction, aligning with contemporary sustainability goals. The adoption of fly ash in construction aligns with sustainable practices, **reducing reliance on cement, curbing carbon emissions, and repurposing industrial byproducts.**

Table 3: Details of Fly Ash Consumption in CTP-13 over WDFC in DFCCIL.

Details of Fly Ash Consumption at Project		
Location	No. of bricks	Approx Weight (MT)
Gothangam Station Building	130000	413.4
Gothangam ASS Building	12500	39.75

Location	No. of bricks	Approx Weight (MT)
Gothangam Track Building	57692	183.4
Varediya Station Building	175000	556.5
Varediya ASS Building	35000	111
Varediya Service Building	100000	318
Varediya Staff Quarter	22000	69.96
Sanjali Station Building	240000	763.2
Udhana Station Building	186040	591.6
Udhana ASS Building	12500	39.75

Source: Tata Projects Ltd. (CTP- 13)

Total No. of Bricks – 970732**Approx Weight – 3086.92776**

Table 4: Details of Fly Ash Consumption over EDFC

FY 2022-23	Quantity of Flysash Used for concreting with OPC only (Flyash content in PPC cement not to be considered), back filling, filling for making of embankment
Apr-22	0
May-22	8387
Jun-22	6345
Jul-22	0
Aug-22	0
Sep-22	0
Oct-22	312
Nov-22	4483
Dec-22	1075
Jan-23	2708
Feb-23	216
Mar-23	0
Total	23526

Source: Contractors over EDFC

Total No. of Bricks – 23526

The Western Dedicated Freight Corridor (WDFC) and Eastern Dedicated Freight Corridor (EDFC) differ primarily in their geographical alignment, spanning different regions of India. Both corridors aim to **enhance freight movement, reduce logistics costs, and boost economic growth.**

4.1.6 Environmental advantage accrued.

These alternatives can significantly contribute to making construction more sustainable, reducing environmental impact, and often improving the strength and quality of structures.

Resource Conservation: Robo Sand/M-Sand serves as a sustainable alternative to natural sand, as it is manufactured by crushing rocks. Similarly, utilizing fly ash and GGBS from industrial by-products reduces the need for raw materials, conserving natural resources.

Technical Benefits: These alternative materials often offer technical advantages such as enhanced concrete strength, reduced permeability, and improved workability, which can positively impact the quality and longevity of the construction.

Regulatory Compliance: Many regions have regulations or guidelines encouraging or mandating the use of these alternatives in construction to promote sustainability and reduce the environmental impact of construction activities.

Handling of waste and recycling by Authorized Recycler:

The waste generated has been handed over to an authorized recycler. This demonstrates a proactive approach toward waste management and environmental responsibility.

Steady Decrease in Waste Generation:

There is a noticeable trend of decreasing waste generation from January 2023 (91,163 cement bags) to March 2023 (68,718 cement bags). This may indicate improvements in waste reduction practices with concerted efforts, the generation of **waste has been considerably reduced, subsequently leading to a cut in recycling services** (for further details refer section 4.4.6.)

Repurposing Stone:

Repurposing Stone obtained from hill cutting, specifically in regions like the Aravali hills within CTP-14 and CTP-11, for producing crushed stone of varying gradations offers a sustainable approach to managing tunneling by-products. This repurposed material serves as a valuable resource, capable of being recycled into versatile aggregates such as ballast, aggregates and blanketing material for construction purposes. By utilizing this extracted stone, the need for additional quarrying diminishes, mitigating environmental impact while addressing the surplus material from tunnel excavation.

4.2 Energy Conservation

The primary source of energy on construction sites of WDFC and EDFC include power supply from the State Electricity Board and solar PV for street and site security lighting.

The DFC (Dedicated Freight Corridor) project has a policy of allowing and implementing only energy-efficient equipment and machinery at construction sites. Furthermore, there is a focus on establishing a regular maintenance regime for equipment and machinery.

As a result of these efforts, the per capita energy consumption on construction sites is benchmarked to meet or exceed industry best standards. This commitment to energy efficiency and sustainability aligns with the project's goals and promotes responsible resource management.

DFCCIL's corridors are fully electrified & using 2x25 kV at feeding system used worldwide for heavy haul operations, which will have minimal environmental impact and low carbon emissions.

4.2.1 Use of LED light and solar light for FY 2022-2023.

LED Light (138,322 kWh):

LED lights are known for their energy efficiency, and the substantial consumption of 138,322 kWh suggests a widespread use of LED lighting fixtures. Thereby reducing the carbon footprint and sustainable utilization of electricity.

Use of Solar Light (4,105 kWh):

Solar light as a renewable energy source represents a pivotal step towards sustainable practices.

With industries increasingly embracing solar energy solutions, they benefit from clean and renewable power but also contribute to reducing their carbon footprint.

The data reflects a commitment to energy efficiency, as LED and solar lights are considered environmentally friendly options.

Table 5: Use of LED and solar lights(FY 2022- 2023)

Energy Efficient Fixtures	KWH Consumption	No's
LED Light	138322 (Approx.)	12028
Use of Solar LED Light	4105 (Approx.)	357

Source: Contractors over DFC

1. **LED Lights:** LED technology consumes significantly less energy than traditional lighting sources. The substantial deployment of 12028 LED lights indicates a conscious effort to decrease electricity consumption. LED lights have a longer lifespan and lower energy consumption, thus reducing greenhouse gas emissions and minimizing environmental impact by cutting down on electricity generation requirements.

2. **Solar Lights:** Solar lighting systems harness renewable energy from the sun, reducing dependence on grid-based electricity. The installation of 357 solar lights signifies a deliberate move toward sustainable and environmentally friendly lighting solutions. Solar lights utilize clean energy, thus reducing reliance on fossil fuels and decreasing carbon emissions, contributing positively to environmental conservation efforts.

Overall, with the attachment of both LED and solar lighting systems reflects a concerted effort to promote environmental sustainability. These energy-efficient fixtures will reduce energy consumption and contribute to mitigate climate change by curbing greenhouse gas emissions, aligning with efforts to create more eco-friendly and sustainable environments.

4.2.2 Energy Consumption (New Khurja to New Badhan)

Table 6: Energy Consumption over EDFC (KRJN to BDNN)
(FY 2021-2022 and 2022-2023)

Energy Consumption (KRJN - BDNN) FY 2021-2022	24129600 KWH
Energy Consumption (KRJN - BDNN) FY 2022-2023	20,57,578 KWH
Variation	10%

Source: Electrical Dept., DFCCIL

The 10% decrease in total energy consumption between New Khurja (KRJN) and New Badhan (BDNN) indicates of a positive shift towards sustainability. This reduction aligns with increased usage of energy-efficient solutions like solar panels installed across stations and other buildings, coupled with the adoption of LED lighting systems.

The emphasis on renewable energy sources like solar panels has likely contributed significantly to this decrease, demonstrating a commitment to a more sustainable approach. These measures foster energy efficiency by using renewable energy resource and showcase a concerted effort towards environmental conservation, making strides towards a more environmentally conscious and sustainable operational model overall. Details is as attached in annexure 2.



4.2.3. Details of Solar panel in EDFC and WDFC

Table 7: Details of Solar panel in EDFC

EDFC Section	Location	Solar Panel/Fitting Details	Remarks
New Sonagar-DDU	Station	2 kW Solar Panel at each stn	Installed
	Station	5 kW Solar Panel at each stn	WIP
DDU-New Bhaupur	Station	5 kW Solar Panel at each stn	WIP
	IMD	5 kW Solar Panel at each IMD	
	IMSD	2.5 kW Solar Panel at each IMSD	
New Bhaupur-New Khurja	OCC	50 kW Solar Panel at OCC/PRYJ	Installed
	JN. Station	5 kW Solar Panel at each stn	
	Cross. Station	2 kW Solar Panel at each stn	
	IMD	5 kW Solar Panel at each IMD	
	IMSD	1 kW Solar Panel at each IMSD	
New Khurja-New Dadri	JN. Station	5 kW Solar Panel at Boraki stn	WIP
	IMSD	1 kW Solar Panel at IMSD Boraki	
New Khurja-Pilkhani	Station	3 kW Solar Panel at each stn	
Pilkhani-Sahnewal	Station	3 kW Solar Panel at each stn	
	Guest House	5 kW at Saharanpur Guest House	

Source: OCC

The planned installations span diverse capacities, ranging from 2 kW to 50 kW per station or location. This diversity suggests an adaptive approach, aligning with the specific energy needs and available infrastructure at different sites, optimizing solar power utilization. Once completed, these solar installations are poised to play a pivotal role in reducing the environmental footprint of the corridor, aligning with broader sustainability objectives and showcasing a commitment to greener infrastructure development. The installation of pending solar panel will likely contribute significantly to the corridor's overall sustainability and environmental impact.

Table 8: Details of Solar panel in WDFC

Details of solar panels				
S.N.	Station	Building	Capacity	Remark
1	REJN	Station Building	2KW	Installed
2		IMD-I	5 KW	Installed
3		Quarter T-IV	3 KW	Installed
4		Service Building	2KW	Installed
5	AELN	Station Building	2KW	Installed
6		Service Building	2KW	Installed
7		Quarter T-IV	3 KW	Installed
8	DBLN	Station Building	2KW	Installed
9		Service Building	2KW	Installed
10		Quarter T-IV	3 KW	Installed
11	BAGN	Station Building	2KW	Installed
12		Service Building	2KW	Installed
13	SMPN	Station Building	2KW	Installed
14		Service Building	2KW	Installed
15		IMD-I	5 KW	Installed
16		All the building roof	200 KW	Tender Awarded. WIP
17	PMPN	Quarter T-IV	3 KW	Installed
18		Station Building	2KW	Installed
19		Service Building	2KW	Installed
20	FLN	Station Building	2KW	Installed
21		Service Building	2KW	Installed
22		Quarter T-IV	3 KW	Installed
23	SKNN	Station Building	2KW	Installed
24		Service Building	2KW	Installed
25	KSGN	Station Building	2KW	Installed
26		Service Building	2KW	Installed
27		Quarter T-IV	3 KW	Installed

Source: OCC

Completed installations, ranging from 2 kW to 5 kW capacities in station buildings, service structures, and Integrated Maintenance Depots (IMD), highlight operational readiness and a proactive approach in utilizing renewable energy resources efficiently. Simultaneously, ongoing initiatives with installations in progress, varying from 2 kW to 3 kW capacities across different buildings, signify a continuous commitment to expanding solar energy utilization, ensuring a broader coverage of sustainable power sources within the station premises.

A 200 kW tender awarded for installing solar panels on all building roofs represents a significant leap forward in scaling up solar power capacity within the station.

This future initiative, once completed, is poised to enhance overall solar energy generation substantially, solidifying the station's commitment to transitioning toward renewable energy.

Note:

EDFC and WDFC within the DFC are on their last stage in completion, with a strong emphasis on sustainability. The focus persists on optimizing electricity usage, incorporating renewable energy resources, and implementing energy conservation measures (ENCON). This dedication aligns with a broader commitment to environmental responsibility and sustainable development. Both divisions actively contribute to minimizing environmental impact and cultivating a resilient and eco-friendly operational setting. The transition from completion to complete operation underscores EDFC and WDFC's unwavering commitment to sustainable practices, showcasing a forward-thinking approach within the dynamic landscape of the DFC.

4.3 Water Conservation

The primary water consumption on construction sites within the DFC project serves various purposes. This includes the **usage of water for essential processes such as concreting and in curing tanks** for concrete slabs and sleepers. Additionally, water is used for other purposes such as **dust suppression and meeting the domestic needs of labor colonies, kitchen facilities, and canteen areas.**

Water required for **dust suppression is largely sourced from reused or recycled water sources, aligning with sustainable water management practices.** For other requirements, such as those **related to processes, labor colonies, and kitchen facilities, the project relies** on the supply of water via **water tankers** from locally available reliable and authorised water sources to ensure adequate access to water.

The construction of the DFC Corridor is categorized as a linear project, and it **does not rely extensively on local water sources** for an **extended duration.**

Water Management:

Undermentioned are the norms at DFCCIL construction sites for water management.

- Water abstraction is limited to fulfilling construction requirements and the domestic needs of the construction workforce.
- Groundwater abstraction is strictly prohibited in areas designated critical areas by the Central Ground Water Board (CGWB).
- Critical areas are identified before construction, ensuring responsible water management.
- The primary water sources for this project are groundwater and tanker water and at certain places water harvesting .
- Each construction site provides both underground and above-ground water storage facilities.
- Maintaining flexibility in selecting water source for various construction activities.
- Ensuring responsible water management.

The DFC project employs a combination of water sources, including groundwater from bore wells or existing wells and other local authorities. This approach underlines the project's commitment to responsible water use and the preservation of local water resources.

The allocation of water usage within construction activities is as follows:

Table 9: Water Usage Breakdown in Construction Activities and Facilities (FY 2022-23)

S.No	Description in Detail	Description of Activities	Unit Of Measurement	FY 21-22	FY 22-23
1.	Water used in Excavation, Back filling works	Earth work (Excavation and Soil Compaction)	KL	498.69	2940
2.	Water consumed for making of concrete & mortar	Batching Plant / Conc. Mixing Plant	KL	10440.76	16019
3.	Water usage for Curing purpose	Curing	KL	8799.3	13477
4.	Water consumption in labour colonies	Labour Colony	KL	9023.66	10804
5.	Water Consumption in Guest House	Guest House	KL	9611.44	15183
6.	Water consumption in Site Office, Pantry, Stores, All staff toilets, Quality lab etc	Site/store office	KL	3083.5	2912
7.	Water usage for Dust suppression at site, batching plant area, stores, cleaning	Dust suppression / cleaning	KL	420.21	1554
	Amount of water consumed		KL	41877	62889

Source: TATA Projects Ltd. (CTP- 11)

4.3.1 Water Usage Breakdown in Construction Activities for FY 2022-2023.

The content of the table 9, provides a detailed breakdown of water usage in various aspects of the construction project. It helps to understand how water resources are allocated and consumed within the project.

According to this following can be concluded:

- **Primary water source:** Primary water sources for the project are groundwater, tankers, and rainwater harvesting.
- **Water storage facilities:** Each construction site provides both underground and groundwater storage facilities.

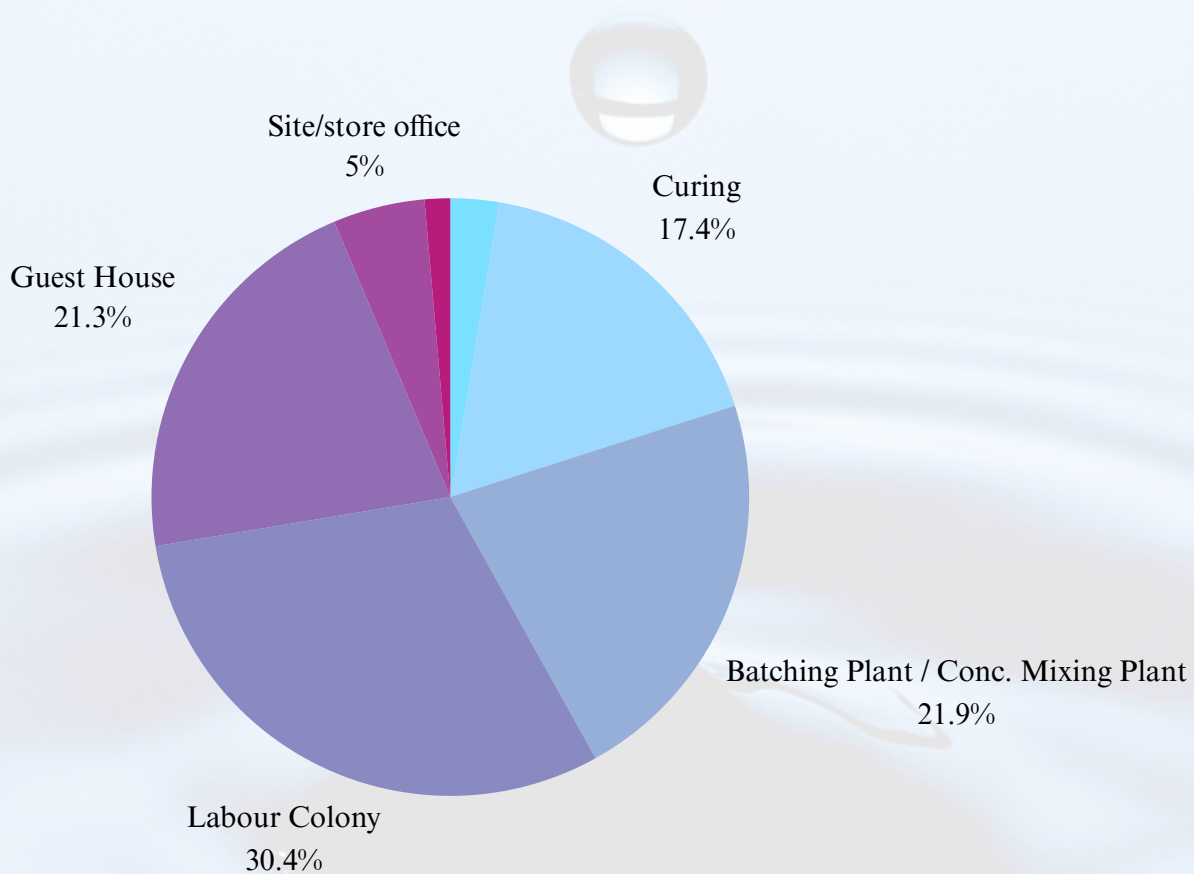


Fig 4: Water Usage Breakdown in Construction Activities and Facilities (FY 2022-2023). Further details attached as annexure 3.

Water Conservation

The DFC project's construction sites are actively engaged in water conservation efforts, primarily by **minimizing water wastage and misuse**. Various measures **are being practiced** to prevent or reduce water wastage on these sites.

To further alleviate stress on groundwater resources, **water harvesting methods** are being considered along the project corridor. **During the monsoon season (June- Sept), rainwater from the rooftops of site huts is collected in tanks and later reused for activities such as dust suppression, landscaping, gardening, and construction.**

As an example of sustainable water management, using treated wastewater for various purposes, including irrigation, toilet flushing, cleaning, and dust suppression. This **approach demonstrates a high level of water recycling, with 50-60% of waste water generated** being treated and reused. These initiatives reflect a commitment to responsible water management and the preservation of local water resources.



Wastewater management in DFCCIL is integral to the organization's commitment to sustainable and responsible railway operations. Water usage and discharge directly affect ecosystems and human needs; efficient usage preserves freshwater sources, while responsible discharge safeguards water quality and biodiversity, crucial for long-term sustainability and ecological balance.

Table 10: Monthly Water Usage and Water available for reuse (FY 2022 - 2023)

Month	Quantity of water used in works (m3)	Quantity of water available for reuse (m3)	Remarks
Apr-22	8081	3,153.48	Monsoon season result in decline of sourced water consumption as the water is used from rainwater harvesting and rain collected in pits for construction activities e.g. DDUN (DEEN DAYAL UPADHYAY)
May-22	7402	3,233.88	
Jun-22	3418	2,357.85	
Jul-22	2387	1,859.58	
Aug-22	1944	1,457.88	
Sep-22	1763	1,303.55	
Oct-22	3138	1,816.32	
Nov-22	4215	2,331.37	
Dec-22	6070	2,860.51	
Jan-23	7386	3,570.82	
Feb-23	8034	3,828.40	
Mar-23	9052	4,427.08	
Total	62889	32,200.71 (51.2%)	

Source: TATA Projects Ltd.(CTP- 11)

The table 10, titled "Monthly Water Usage and water available for reuse (Apr 2022 - Mar 2023)," presents data on water consumption and discharge for 12 months. Here's a summary of the key points:

- **Leveraging rainwater:** The fluctuation in water usage across months, notably decreasing from June to September (1,763 cubic meters) and escalating from October (3,138 cubic meters) onwards, reflects a direct correlation with seasonal patterns. The dip in consumption during these months aligns with the monsoon season, where natural rainfall reduces the reliance on artificial water sources.

Conversely, the subsequent increase in water usage from October signifies a shift in sourcing, moving away from rainwater harvesting and artificial water pits as the primary sources. This adaptive approach highlights the project's **responsiveness to seasonal changes, leveraging natural resources** during abundant periods while strategically transitioning to alternative sources to sustain operations during drier months.

- **Water Reuse:** Notably, the total water usage is significantly higher than the total discharged, indicating that a portion of the water used is being managed, and reused rather than being directly discharged.

Overall, DFCCIL has a strong commitment to responsible water management and conservation, with an emphasis on minimizing water discharge.

The data demonstrates continued efforts in responsible water management, with a significant difference between water usage and available water totals.

Use of Admixture for curing:

Apart from different measures taken for wastewater management procurement of PC-based admixtures was done signifying a strategic shift towards sustainable water management in concrete production.

By integrating these admixtures into **ready-mix concrete (RMC)**, the project aims to reduce reliance on freshwater during concrete mixing. Admixtures serve as an innovative alternative, not only enhancing the concrete's properties but also mitigating the need for excessive fresh water usage. It represents a proactive step towards sustainable construction practices, aligning with efforts to optimize resource utilization and promote eco-friendly methodologies.

Recycled water

A consistent effort to recycle and reuse water from various sources for operation purposes is done. This sustainable water management approach aligns with environmental responsibility and conservation practices, aiming to reduce the consumption of freshwater and minimize the environmental footprint.

Table 11: Waste Water Reused in WDFC

	FY 21-22	FY 22-23
Total Water recycled and reused from (Outlet of WTP/ STP/ RO Plant Reject / MEE/ Batching Plant/ Curing Water) (back to process / gardening)	40-50% of water reused	50-60% of water reused

4.3.2. Waste water reuse management WDFC

DFCCIL recognizes the critical significance of responsible water management within its infrastructure projects. The following dataset (Fig. 5) detailing monthly wastewater generation and reuse in construction activities including others and specifically for dust suppression on access roads, underscores DFCCIL's commitment to efficient resource utilization.

The emphasis on reusing wastewater for dust suppression not only aligns with environmental sustainability but also reflects DFCCIL's dedication to reducing its ecological footprint.

This strategic reuse not only conserves water resources but also showcases DFCCIL's holistic approach to infrastructure development in an environmentally conscious manner.

4.3.3. Waste water generated and reused over EDFC

The wastewater generated in both WDFC and EDFC corridors holds significant importance. The provided dataset offers details on monthly wastewater generation and reuse in kilolitres (KL) over 12 months from April 2022 to March 2023, specifically outlining the wastewater generated and reused in EDFC.

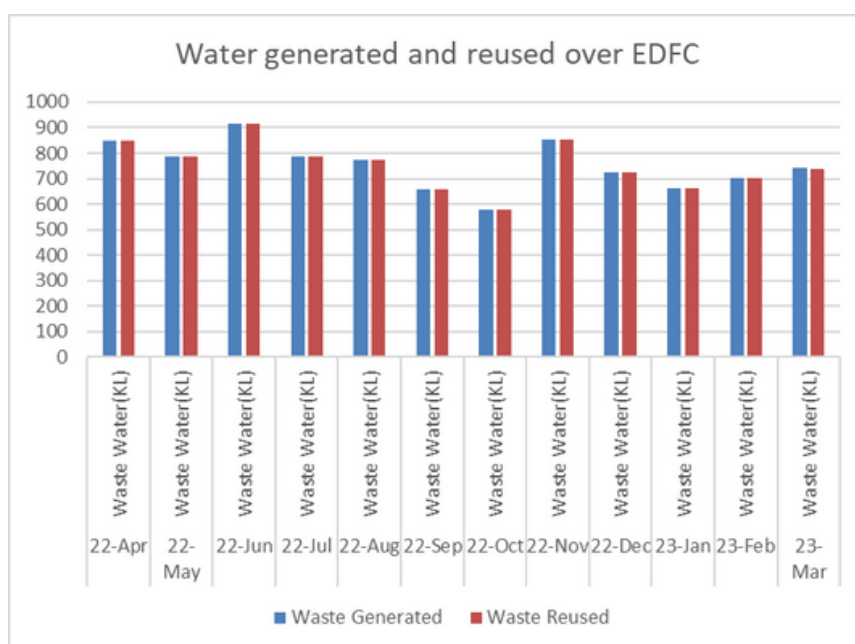


Fig 5: Waste Water Generated and Reused over EDFC (FY 2022- 2023)

The data shows the monthly quantities of wastewater generated in KL. Similarly, waste water reuse displays the amounts of wastewater reused each month for dust suppression on access roads. **Further details are attached in Annexure 4.**

Closing this chapter, the following conclusions emerge:

Table 12: Water footprint in WDFC

	FY 2021-2022	FY 2022-2023
Water consumed (m3)	41877	62888.927
*Blue water footprint	41877	62888.927
Amount of water available for reuse (m3)	18,844.65	32200.711
% of water recycled	40-50% of water reused	50-60% of water reused

*A blue water footprint refers to the volume of water that has been sourced from surface or groundwater resources.

The entirety of water consumed in WDFC was exclusively drawn from groundwater sources. Of this total consumption, approximately 51.2% (refer to table- 10) was available for reuse, while 50% (refer to table- 11) underwent recycling, showcasing a significant effort in reusing water resources and minimizing overall discharge. From FY 2021-22 to FY 2022-23, the percentage of water recycling has increased.

In EDFC, the total amount of wastewater generated equates to the total amount of water reused i.e. the EDFC achieves a one-to-one balance between wastewater generation and water reuse, exemplifying effective resource conservation by executing a 100% water recycling rate.

4.4 Waste Management

DFCCIL has established a mandate for every contractor engaged through contractual arrangements in various contract packages to develop, implement, and oversee the "Solid Waste & Hazardous Waste Management Plan" throughout the construction phase.

4.4.1 Categories of Solid waste generated

The categories of solid waste generated at construction sites are diverse and include:

1. **Municipal Solid Waste (MSW):** General waste associated with daily activities in the construction area.
2. **Construction Solid Waste:** Debris and waste materials resulting from construction activities.
3. **Hazardous Waste:** Waste materials that pose potential environmental or health hazards.
4. **Concrete Waste:** Waste originating from concrete-related processes.
5. **Vegetation & Biomass Waste:** Organic waste such as plant matter and wood.
6. **E-waste:** Electronic waste, which includes discarded electronic equipment.
7. **Bio-Medical Waste:** Waste associated with medical or healthcare activities.

The significant sources of waste generation within the project encompass:

- Waste from construction and labor camps.
- Waste generated in the staff colony.

- Waste originating from site offices and huts.
- Kitchen and canteen waste.
- Plastics and packaging waste are often generated in in-store yards and workshops.
- Any other waste generated by on-site activities.

By addressing these various waste categories and sources, DFCCIL aims to ensure responsible waste management practices and promote environmental sustainability throughout the construction process.

4.4.2 Management and Handling of MSW

- Provision of dustbins at labor colony and staff colony for collection of waste.
- Different colored bins (2 nos.) are being provided at the canteen to carry kitchen waste, which includes vegetable/food waste and other waste.
- The waste collected is temporarily stored at the site for not more than three days and disposed of through approved vendors or to a municipality bin or approved disposal site.
- Training is given to staff and construction workers on health, hygiene, and effective management & handling of solid waste at the site.
- Regular inspection is carried out, of which records are maintained.

Construction waste is an inevitable byproduct of construction activities. It encompasses various forms of waste, such as debris, surplus materials, and remnants resulting from excavation and site clearing. To address this, measures have been developed to minimize waste generation, promote reuse, and ensure proper disposal of construction waste throughout the construction process. These measures are guided by key principles for effective construction waste management and are as under:

Waste Avoidance/Minimization:

One of the fundamental principles is waste avoidance or minimization. This involves:

- **Choosing options with high potential for waste reduction:** Assessing different construction options and giving preference to those that have a higher potential for waste reduction, provided they are economically viable. This approach prioritizes practices that inherently generate less waste, contributing to more sustainable construction processes.
- **Avoidance of waste generation:** In the procurement process for the project, a deliberate effort is made to reduce or even **avoid the generation of waste**. This is achieved by **careful estimation and ordering of materials** are carried out to ensure that the quantities required are accurate. This minimizes the excess or surplus materials that might lead to waste generation.

- **Reuse of waste material:** Another essential aspect of waste management is the **reuse of waste materials**. The project adopts the following good practices to make the most of waste materials:
- **Identification for Reuse:** Waste materials are scrutinized to identify their potential for reuse.
- **Segregation at Source:** Waste materials are separated and segregated at the source of generation. This makes it more convenient and feasible for reuse.
- **Storage and Reuse:** Items that have the potential for reuse are stored and reused, either on-site or off-site, as long as it is economically and logistically viable.
- **Filling Low-Lying Areas:** In cases where low-lying areas are filled with waste materials, it is ensured that the levels match those of the surrounding areas. Additionally, precautions are taken to ensure that these filled areas are not designated for rainwater storage.

In DFCCIL such good practices not only reduce waste generation but also promote the efficient use of resources and materials, contributing to more sustainable and responsible construction processes.

4.4.3 Hazardous Material Handling

Hazardous waste produced on the site is managed in accordance with the rules for handling and managing hazardous waste.

Every precaution is taken to avoid having a negative impact on the local population or environment.

Examples of common hazardous wastes produced on-site:

- Oil spills or leaks of petroleum products and spent oil from the operation and maintenance of machinery and equipment; hazardous chemicals, including fast setter, etc.

Protocol for the administration of Hazardous waste:

Sufficient protocols are being implemented for the administration and processing of hazardous waste. It consists of the following:

- All construction workers have received the appropriate training on managing hazardous waste.
- Everyone on the job site is responsible for handling hazardous waste; workers are in charge of clearing up material spills, and the safety officer is in charge of preventing and reporting any occurrences at the site and responding appropriately to ensure safety and protect the environment.

Construction materials that may be hazardous are stored under waterproof conditions, yet remain easily usable; spent oil and diesel are stored separately in closed containers on paved surfaces to prevent spills and soil contamination; appropriate sign boards or warning boards are erected at these locations; workers are not permitted to enter the hazardous waste storage area without prior authorization from the site's safety in-charge; and the hazardous waste temporarily stored at the site is disposed of by licensed vendors.

Alongside focusing on the administration of hazardous waste and solid waste, DFCCIL has focused on minimizing waste generated during construction activities by implementing stringent practices. This includes measures aimed at reducing, reusing, and recycling materials whenever possible. By adopting efficient construction methodologies and employing innovative recycling techniques, DFCCIL ensures that surplus materials are either repurposed for other project needs or recycled to limit the overall waste footprint.

4.4.4 Waste Generated and Reused over EDFC

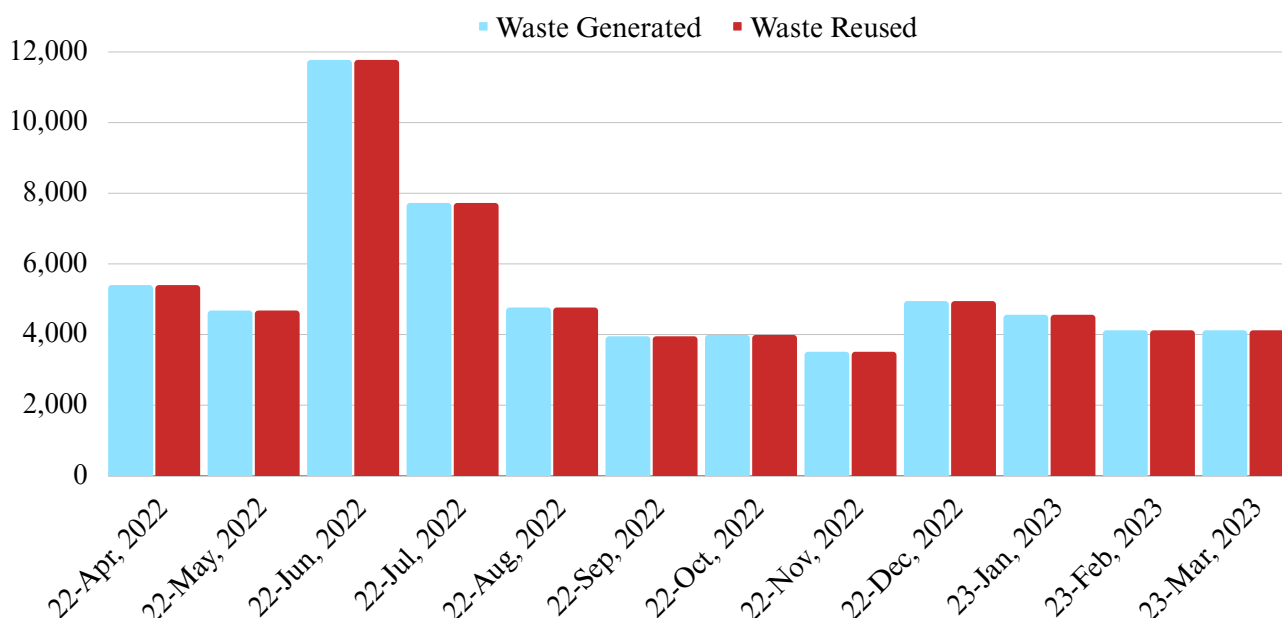


Fig 6: Cement and Concrete waste Generated and Reused (FY 2022- 2023)

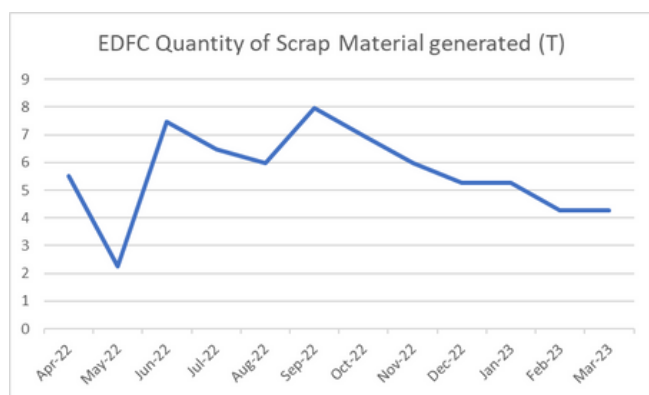
Source: Contractors on EDFC

Futher details is attached in annexure 5.

In the provided data, the lines representing waste generation and waste reuse overlap, indicating a consistent match between the amounts generated and reused each month. However, a notable distinction in trends emerges. The fluctuations in waste generation demonstrate variability from month to month, while the reuse trend remains consistent, showcasing a stable and sustainable approach to managing Cement and concrete Waste.

- The data shows monthly variations in the amount of Cement and concrete Waste generated, ranging from a minimum of 3512Kg to a maximum of 11775 Kg.
- The reuse of waste is done for various purposes such as making access roads, rest sheds, pedestrian pathways, low landfill areas, fencing pole casting, stairs, etc.

4.4.5 Waste Generated by Scrap material



Source: Contractors on EDFC

Fig 7: Waste Generated by Scrap Materials EDFC (FY 2022- 2023). Further details attached in annexure 6

- The above-mentioned Figure 5 and Figure 6, showcase the waste generated by Scrap materials from both of the corridors. (WDFC and EDFC). For the WDFC, waste generation has been low over the months.
- The EDFC's resource management strategies and environmental impact are more consistent and comparatively lower material **usage patterns hint at a potential emphasis on resource efficiency and optimized consumption, aligning with sustainable practices** that aim to minimize waste and ecological degradation footprint in infrastructure development.
- The recent reduction in material consumption for both corridors, particularly in the last few months, signals a **possible shift towards sustainability**.

These declines indicate adaptive measures, and efficiency improvements that contribute to reducing resource consumption and environmental impact.



Source: TATA Project Ltd. (CTP- 11)

Fig 8: Waste Generated by Scrap Materials WDFC (FY 2022- 2023). Further details attached in annexure 6

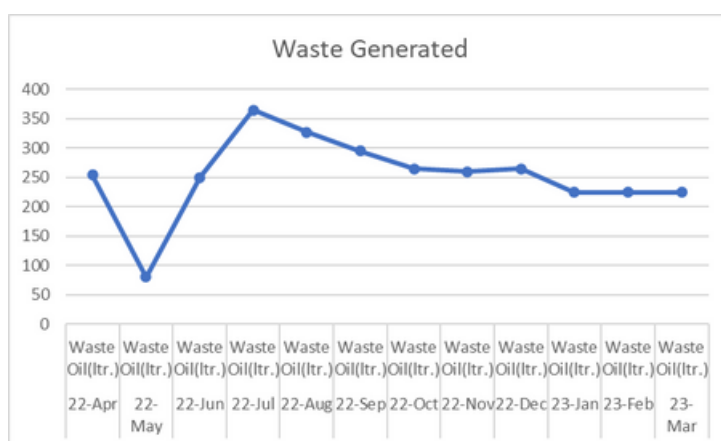
The trend signals a positive shift in waste management practices within the specified time frame.

The generated waste, being repurposed in crash barrier **reinforcement and subsequently handed over to recyclers marks** the project's dedication to sustainable construction practices.

This approach aligns with the principles of a circular economy, promoting the reuse of materials and contributing to resource efficiency. Beyond environmental benefits, **incorporating waste into construction components yields cost savings and efficient resource management**. Further details are attached in Annexure 4.

Note: The above data (Fig 7 and 8) have recorded the entire quantity of all sizes of Reinforcement Steel scrap generated at the store, Fabrication yard, Site locations

Other than waste material mentioned above, waste management encompasses various other categories like waste oil, biodegradable waste, and plastic/rubber waste. **Waste oil** requires specialized handling to prevent environmental harm and can be recycled into new lubricants or utilized as fuel. **Biodegradable waste**, comprising organic matter, benefits from composting to create nutrient-rich soil amendments, reducing landfill methane emissions. **Plastic and rubber waste** demand recycling, upcycling, or alternative disposal methods like waste-to-energy processes due to their non-biodegradable nature, highlighting the need for comprehensive waste management strategies emphasizing reduction, recycling, proper disposal, and community education and involvement.



Source: Tata Projects Ltd. (CTP-11)

Fig 9: Waste Generated by Waste oil over EDFC (FY 2022-2023). Further details attached in annexure 7

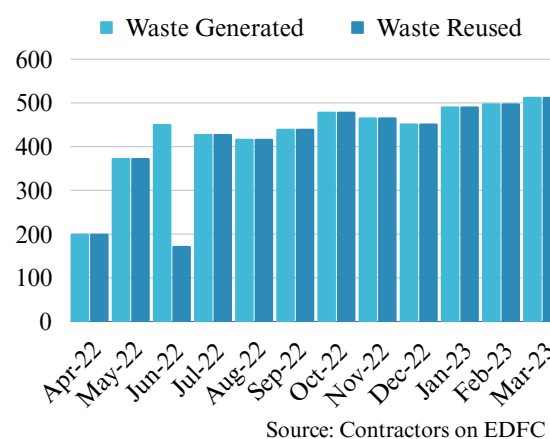
The data in fig (9) indicates a relatively consistent pattern of waste oil generation from August 2022 to March 2023, with fluctuations in the quantity of waste oil produced.

Waste oil handed over to an authorized recycler

The generated waste oil, ranging from 95 to 365 litres monthly, is consistently handed over to an authorized recycler on a quarterly basis.

The quarterly handovers demonstrate a systematic and compliant strategy for managing and recycling waste oil. Further details areas annexure 7.

Monthly Analysis of Biodegradable Waste Generation and Management are as follows:



Source: Contractors on EDFC

Fig 10: Biodegradable waste, EDFC (FY 2022-2023). Further details attached in annexure 8

Kitchen waste to local farmers

The kitchen waste generated, ranging from 201kg to 514kg monthly, is consistently handed over to a local farmer for cattle feeding.

This consistent and regulated disposal of waste oil to authorized recyclers every quarter along with, the practice of diverting kitchen waste to local farmers for cattle feeding showcases a sustainable approach that benefits both waste reduction and agricultural sustainability.

4.4.6 Reuse of Plastic and Rubber over EDFC

Data outlines the monthly waste generation, specifically waste generation from cement bags. Here is the analysis given below:

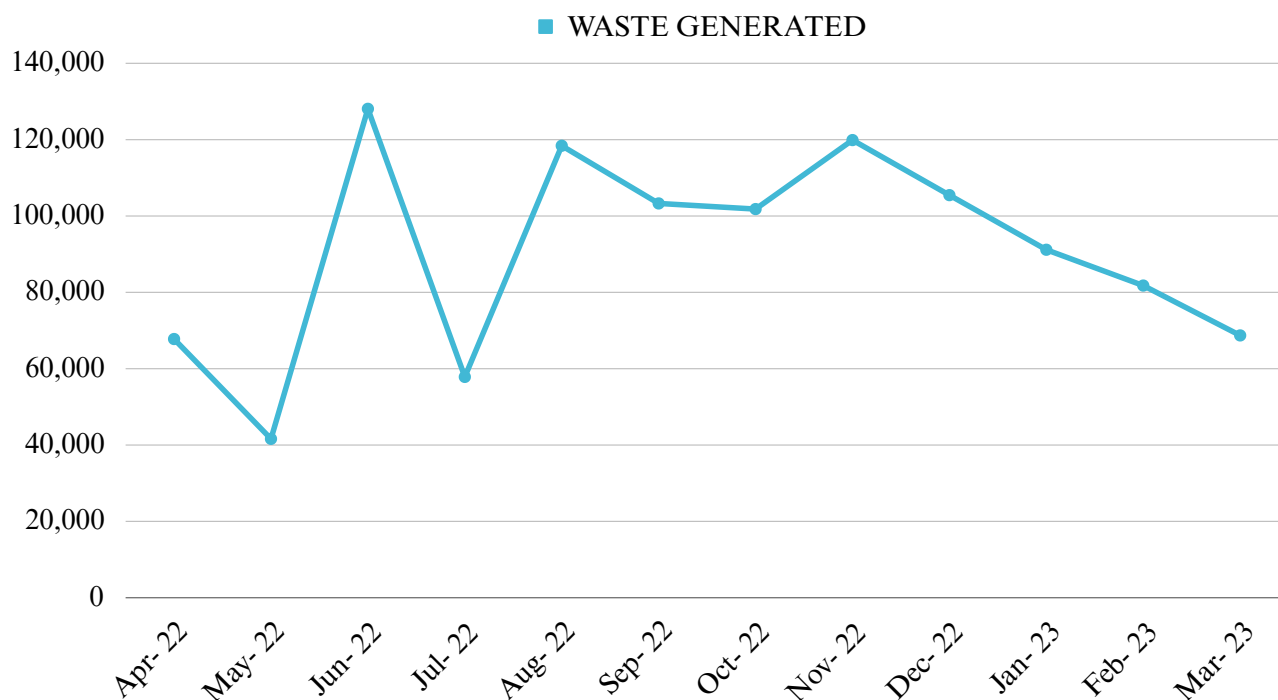


Fig 11: Waste Generated by Cement Bags (FY 2022- 2023)

Source: Contractors over EDFC

Further details is attached in annexure 9.

Consistent Waste Generation:

The data indicates a consistent generation of waste in the form of cement bags. The quantities vary from month to month, suggesting fluctuations in construction or related activities.

Steady decline in waste generation:

A decline in waste generation from November 2022 indicates an improvement in waste management practices.

The waste disposal practices observed by the DFCCIL based on analysis of the data above suggest a positive practice of reusing all generated (All kinds) waste for various constructive purposes.

4.5 GHG Emission

The development of Dedicated Freight Corridors (DFCs) in India represents a significant step toward establishing a low-carbon and environmentally friendly transportation network. Here are the key points about DFCCIL's efforts and the benefits it brings:

- **Low Carbon Green Transportation Network:** DFCs are designed to serve as a low-carbon, green transportation network. They are a more sustainable alternative to traditional freight transportation methods.
- **Reduction in GHG Emissions:** Since freight transportation is dependent on electric loco, DFCs contribute to the reduction of greenhouse gas (GHG) emissions associated with freight transportation.
- **Long-Term Low Carbon Roadmap:** DFCCIL is in the process of aligning with the carbon market to reduce its carbon footprint.
- **Energy Efficiency:** The adoption of energy-efficient technologies and practices within the DFC system is a vital aspect of reducing its carbon footprint. These measures can lead to reduced energy consumption and lower emissions.
- **Reduced Environmental Impact:** By reducing GHG emissions and promoting sustainable practices, The DFCCIL aims to minimize the environmental impact. This benefits both the environment and local communities along the freight corridors.
- **Economic and Social Benefits:** In addition to environmental benefits, DFCs can bring economic advantages through more efficient freight transportation and potentially boost regional development along their routes.
- **Sustainable Future:** The development of DFCs aligns with India's efforts to create a more sustainable and environmentally responsible future for transportation and logistics.

Addressing Climate Change

The establishment of Dedicated Freight Corridors represents a positive step in addressing climate change and promoting sustainable freight transportation. It emphasizes the importance of adopting green technologies and practices within the transportation sector, contributing to a more environmentally friendly and efficient system.

DFCCIL's approach encompasses measures targeting CO₂ reduction across Scope 1, 2, and 3 emissions through strategies like deploying High-Speed Diesel (HSD) and Liquid Petroleum Gas (LPG) and other sustainable practices in their operations.

4.5.1 EMISSION SCOPE 1,2 AND 3

Scope 1: Direct emissions from owned or controlled sources, like company vehicles and burning fuel.

Scope 2: Indirect emissions from purchased energy, like electricity and heating.

Scope 3: All other indirect emissions along the value chain, like employee travel and waste disposal.

4.5.2 EMISSION SCOPE 1

DFCCIL utilized HSD (High-speed diesel) and Liquid Petroleum Gas (LPG) to curtail Scope 1 emissions of CO2 in their operations.

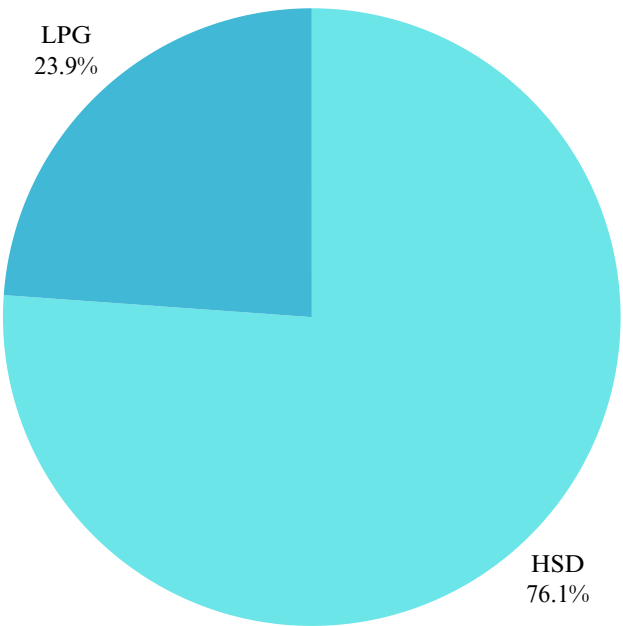


Fig 12: Scope 1 Data for FY 2022-2023

	FY 2022-2023 tCo2e
HSD	10407
LPG	3262

HSD and LPG technologies contribute to sustainability by prioritizing energy efficiency and reducing environmental impact. **HSD** focuses on high-efficiency systems, optimizing energy use in buildings and infrastructure, while **LPG**, as a cleaner fuel, emits fewer pollutants, enhancing air quality. Both promote resource optimization, encouraging the adoption of eco-friendly practices and fostering a transition towards cleaner energy sources, thus contributing significantly to a more sustainable future. Moreover, HSD (High-Speed Diesel) increases the engine performance and decreases the carbon footprint.

Both LPG and HSD are less polluting as a fuel.

4.5.3 EMISSION SCOPE 2

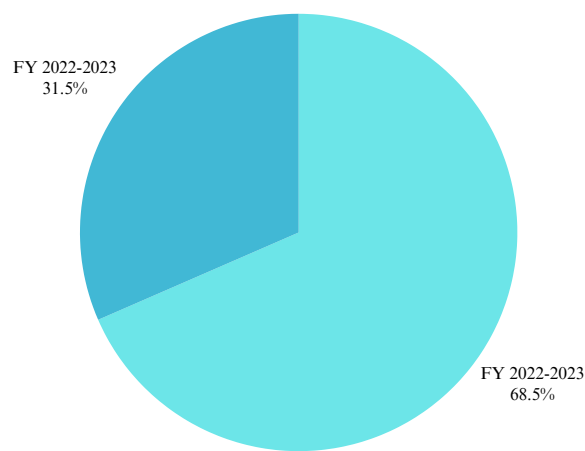


Fig 13: Scope 2 Emission Data for FY 2022-2023 and Apr-Sept 2023

Curbing Grid electricity

One of the significant positive steps in curbing carbon emissions associated with DFCCIL is non-renewable grid electricity, contributing to a healthier environment and aligning with efforts to combat climate change.

- **Significant Reduction in tCO2e:** The recorded data indicates a substantial decrease in carbon dioxide equivalent emissions (tCO2e) from non-renewable grid electricity between FY 2022-2023.
- **Environmental Impact Mitigation:** The drop from 358 tCO2e to 165 tCO2e signifies a notable environmental impact reduction. This substantial decline demonstrates efforts to minimize the carbon footprint associated with electricity sourced from non-renewable means.

	FY 2022-2023 tCo2e
Grid Electricity - Non renewable	358

- **Transition Towards Cleaner Energy:** This transition contributes positively to environmental conservation and aligns with climate change mitigation goals.
- **Improved Energy Efficiency:** Investments in technology or operational changes have led to reduced emissions per unit of electricity produced, reflecting an emphasis on eco-friendly practices and sustainable energy generation methods.
- **Positive Step in Climate Mitigation:** Overall, the decline in tCO2e emissions denotes progress in environmental stewardship, reflecting a commitment to reducing greenhouse gas emissions and combatting climate change through cleaner energy practices.

4.5.4 EMISSION SCOPE 3

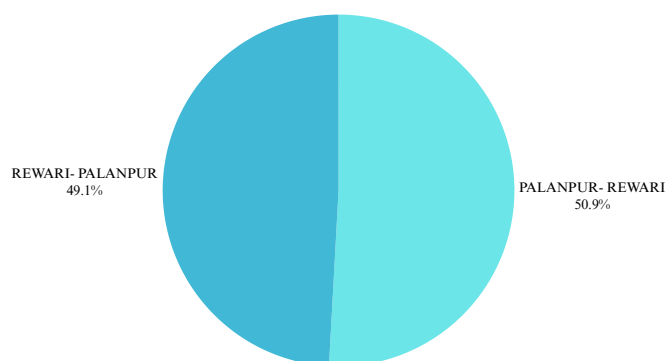


Fig 14: Scope 3 Emission Data for FY 2022-2023 and Apr-Sept 2023 (TOT)

The data provided pertains to transportation between two stations, **Palanpur and Rewari**, and provides information on the total number of trips, the total number of trucks carried, and the approximate reduction in carbon dioxide (CO₂) emissions achieved through rail transport. The savings in terms of CO₂ emission reduction may appear to be significant in the initial phase of operations however in the future this will be a major CO₂ emission saving factor.

- The consistent number of trips between the two stations on each route (57 and 55 trips) indicates a regular and scheduled transport service.
- The fact that a substantial number of trucks (2125 and 1375) were carried via rail brings forth the efficiency and capacity of rail transport in moving goods over long distances, supporting

STATION	TOTAL NO. OF TRIPS	TOTAL TRUCK CARRIED	REDUCED CO ₂ EMISSION BY RAIL (KG)
PALANPUR-REWARI	57	2,125	29,750 approx
REWARI-PALANPUR	55	1,375	19,250 approx

environmental care and decongesting road space, leading to less CO₂ emission from the exhaust of logistic trucks and other vehicles on the road affected/congested due to the above trucks.

- The CO₂ emission reductions signify the positive environmental impact of rail transport, which is often considered a more sustainable mode of freight transportation.

Analysis:

The data showcases the environmental benefits of using rail transport for freight. **Rail transport typically generates fewer CO₂ emissions compared to road transport**, which is evident in the estimated reductions in CO₂ emissions for both routes.

4.5.5 TRUCK ON TRAIN (REWARI TO PALANPUR)

Carrying loaded and empty trucks on flat rail wagons, will enable the door-to-door service to piggyback on fast and safe movement on Tracks.

Benefits:

Environment	Safety	Finance
Reduced Carbon Emission	Less Congestion on Roads	Saving of Diesel import Bill
Proper Rest to Driver and Cleaner and better quality time to them	Cargo is much safer on track than on road	Less wear & tear of trucks : Reduced expenditure on maintenance.
	Less Accidents and Mishaps on Road	Cost Effective : Base Price Rs 24000/- per wagons
	Faster & Assured transit time - 10 hours vs >24 hours Road	Reduced Inventory Cost
		No toll charges enroute :13 Toll Plaza enroute

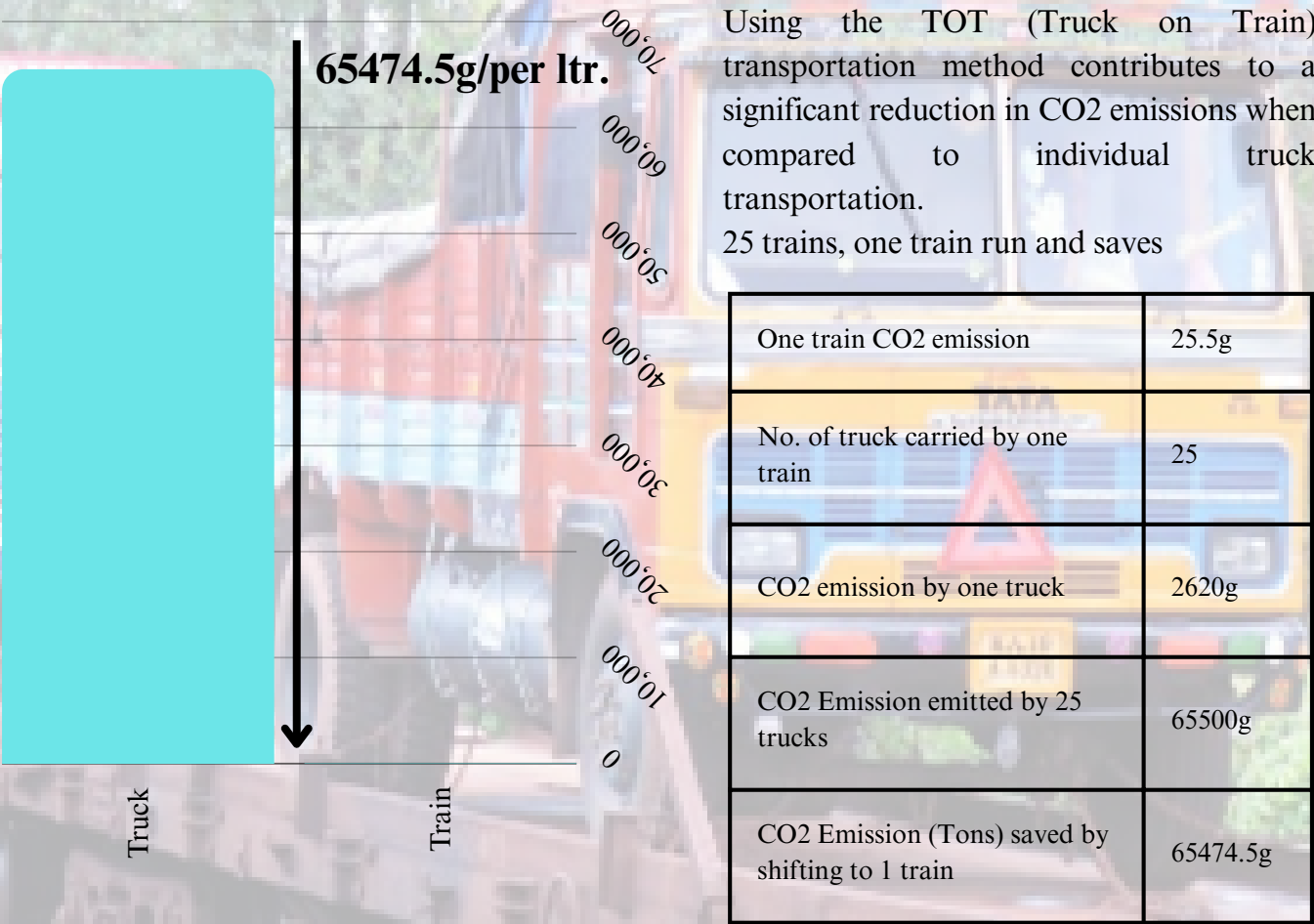
Phase 1

(10.06.2023- 09.07.2023)

STATION	TOTAL NO. OF TRIPS	TOTAL TRUCK CARRIED	REDUCE CO2 EMISSION(KG)/LTR BY RAIL
PALANPUR-REWARI	28	700	1834 approx.
REWARI-PALANPUR	27	650	1768 approx.

Phase 2
(18.9.2023- 17.10.2023)

STATION	TOTAL NO. OF TRIPS	TOTAL TRUCK CARRIED	REDUCE CO2 EMISSION(KG)/LTR BY RAIL
PALANPUR-REWARI	29	725	1899 approx.
REWARI-PALANPUR	28	700	1834 approx.



This represents a substantial reduction in CO2 emissions. By transporting goods more efficiently through trains, especially over longer distances, the overall carbon footprint associated with freight transportation can be reduced. This not only benefits the environment but also offers economic advantages and can help alleviate road congestion. Further details on CO2 emission saved (Kg) in terms of Diesel used by trucks are in section 4.5.6.

4.5.6 ANALYSIS OF TOT TRANSPORT ON NEW PALANPUR (PNUN)-NEW REWARI (REJN) ROUTE AND VICE- VERSA.

Table no. 13 presents a comprehensive analysis of freight transport metrics for the PNUN-REJN route, highlighting key factors such as distance, truck quantity, diesel consumption, and associated carbon emissions.

Table 13: Diesel saving by TOT

Station	Distance (km)	Total Trucks	Total Diesel saved (Litres)	CO2 Reduction @ 2640 grams/Litre diesel
PNUN-REJN-PNUN	641	4525	11.62 Lakh	3.02 MT

The CO2 reduction is calculated based on the assumption that each liter of diesel saved leads to a reduction of 2640 grams of CO2 emissions.

The CO2 reduction is a direct consequence of reduced diesel consumption, presumably due to more efficient operations or reduced distances when using the Dedicated Freight Corridor compared to the road route.

The reduction in CO2 emissions is substantial and reflects the environmental benefits of utilizing the Dedicated Freight Corridor.

This shift has resulted in a significant decrease in carbon emissions, contributing positively to environmental sustainability efforts.

Thus, the tangible environmental impact and efficiency gains of utilizing the Dedicated Freight Corridor presents a strong case for its continued use to reduce carbon emissions associated with transportation.

Factors Contributing to CO2 Reduction: The reduction in CO2 emissions is primarily due to the improved efficiency of transport via the DFC compared to traditional road transport. DFCs often use more efficient engines, have better aerodynamics, and operate on cleaner fuel sources compared to typical road vehicles, leading to reduced emissions per unit of goods transported.

In summary, the use of the Dedicated Freight Corridor (DFC) in transporting goods along the specified route significantly reduced diesel consumption, which in turn led to a substantial reduction in CO2 emissions, amounting to 3.06 metric tons during the mentioned period.

SCOPE 1, 2 AND 3

The provided data indicates a breakdown of greenhouse gas emissions across different scopes, with Scope 1 accounting for a significant majority at 81%.

SCOPE	PERCENTAGE
Scope 1	81%
Scope 2	2%
Scope 3	17%

This suggests that the organization primarily generates emissions from sources it directly owns or controls, such as on-site combustion and industrial processes. In contrast, Scope 2 emissions represent a relatively small portion at just 2%, implying that the organization's indirect emissions from purchased energy sources are limited. Scope 3 emissions, which encompass a broader range of indirect emissions, including those associated with the organization's supply chain and other activities, make up 17% of the total.

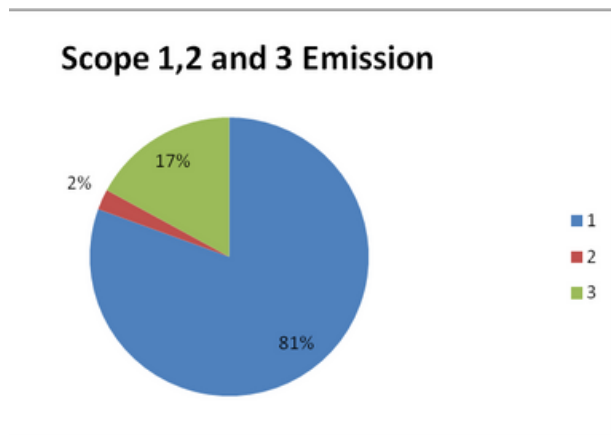


Fig 15: Scope 1, 2 and 3 Emission.



4.5.7 Cement Loading

The following data reflects cement loading figures in million tonnes (MT), tonnes, and lead kilometers for the years 2022-23 and 2023-24. Comparing the two years reveals an increase in cement loading by 0.88 million tonnes (MT), accounting for 880,000 tonnes, despite a reduction in lead kilometers.

Table 14: Cement Plant (2022-2023)

Cement loading upto OCT year 2022-23 and 2023-24			
Year	Loading (MT)	Loading (T)	Lead Km
2022-23	2.08	2080000	523
2023-24	2.96	2960000	506.29
Difference	0.88	880000	-16.71

Source: FOIS

- 1. Change in Loaded Quantity:** There's an increase in cement loaded from 2.08 MT in 2022-23 to 2.96 MT in 2023-24, marking a difference of 0.88 MT. This elevation in loaded quantity (880,000 tons) showcases a growing demand for cement transportation.
- 2. Impact on Transportation:** The shift from coal transportation from road to railway transport for cement, suggests a conscious effort to utilize more environmentally friendly modes of transport, due to lower emissions per ton of cargo transported.
- 3. Environmental Implications:** By shifting from other modes to railway transport, there might be a reduction in greenhouse gas emissions and air pollutants associated with traditional means of transportation, especially if coal was previously transported using less eco-friendly methods. Rail transport tends to be more energy-efficient and has lower emissions per ton-kilometer compared to road transport, potentially reducing the environmental footprint of cement transportation.
- 4. Efficiency in Rail Transport:** The decrease in lead kilometers (from 523 km to 506.29 km) in 2023-24 indicates a reduction in the distance traveled for cement transportation. This signifies potentially more efficient transportation routes or the optimization of railway networks, contributing to lower energy consumption and emissions per ton-kilometer.

In summary, the increase in cement loaded, signifies a shift from less eco-friendly modes of transport (like coal) to railway transport, potentially have positive environmental impacts.

Table 15: Saving in CO2 Emission by Cement loading

One truck CC	15
No. of truck carring saved	58667
Truck Km	29702346.67
Consumption Diesel Save	9900782.222
CO2 Emission (Kg)	25742033.78
CO2 Emission (Tons)	25742.03378

Source:FOIS

The provided data outlines the environmental impact resulting from the avoidance of 58,667 trucks, showcasing a reduction of 29,702,346.67 truck kilometers, savings of 9,900,782.222 litres of diesel, and a substantial decrease of approximately 25,742.03378 tons in CO2 emissions. This reflects the significance of reducing truck-based transportation and adopting more fuel-efficient modes, emphasizing the immense potential for CO2 emission mitigation and diesel consumption reduction on a considerable scale.

4.5.8 CONTAINER LOADING

Handling container rakes at the CONCOR freight terminal in Kathuwas (CMLK) and New Swarupganj (CPFS) has seen a remarkable improvement, with a notable increase of +26%. Moreover, the turn-round time for container rakes has also experienced a significant enhancement, indicating more efficient operations and a positive impact on logistics and cargo transportation in the region.

Table 16: Container loading

Cement loading upto OCT year 2022-23 and 2023-24			
Year	Loading (MT)	Loading (T)	Lead Km
2022-23	2.98	2980000	544.18
2023-24	3.49	3490000	501.97
Difference	0.51	510000	-42.21

Source:FOIS

The increase in cement loading from 2.98 to 3.49 million tons between 2022-23 and 2023-24, despite a relatively shorter lead distance in the latter year, reflects heightened industrial activity.

Table 17: Saving in CO2 Emission by Container loading

One truck CC	15
No. of truck carrying saved	34000
Truck Km	17066980
Consumption Diesel Save	5688993.333
CO2 Emission (Kg)	14791382.67
CO2 Emission (Tons)	14791.38267

Source:FOIS

From the use of trucks with a higher CC (cubic centimeters) capacity. By deploying trucks with a larger CC (15), 34,000 truck journeys were saved, reducing truck kilometers by 17,066,980. This led to significant diesel savings of 5,688,993.33 units and a reduction in CO2 emissions by 14,791.38 tons. The use of higher CC trucks reduced fuel consumption and emissions by optimizing transportation efficiency, demonstrating a tangible positive impact on the environment. This reduction in CO2 emissions aligns with environmental conservation efforts, promoting cleaner air quality and contributing to overall sustainability goals.

4.6 REHABILITATION OF THE BURROWING AREA

"Burrow and Rehabilitation" in DFCCIL, typically refers to the process of sourcing construction materials (such as soil, gravel, or sand) from specific burrow areas for railway projects, and subsequently rehabilitating these areas to their natural or usable state after material extraction.

Burrow Areas: These are locations from which construction materials like earth, soil, or stone are extracted for use in railway projects. These materials are sourced from designated areas to ensure quality and suitability for construction purposes.

Rehabilitation: After the extraction of materials, rehabilitation involves restoring the burrow areas to their original state or rendering them suitable for other uses. This process may include landscaping, erosion control, planting vegetation, and other measures to minimize environmental impact and ensure sustainable land use.

DFCCIL, like other responsible construction organizations, follows strict guidelines and regulations to ensure that borrowing activities are conducted sustainably and that the rehabilitation efforts meet environmental standards. These initiatives aim to balance infrastructure development needs with environmental conservation and responsible land use practices.



"Environmental Assessment and Audit of Environmental Performance" (6th- 8th APRIL, 2022)

Improvement and restoration efforts in the borrowing area of DFCCIL at different sites are given below :

SITE - 1

- BA No- 2005
- village/ Tehsil- Handod/ Karjan
- Nearest DFC CH- 118/ 100KM
- Location- 500m from DFC ROW
- Rehabilitation Measures Taken-
 - A. Excavated Burrow pit filled with black cotton soil generated during cutting of area for formation bed.
 - B. Compaction and levelling was carried out.
 - C. Shall be utilized in future for crop cultivation.



SITE - 2

- BA No-110
- village/ Tehsil- Parkhet- Pipaliya/ Bharuch
- Nearest DFC CH- 95/ 110KM
- Location- 150m from DFC ROW
- Rehabilitation Measures Taken-
 - A. Used as water holding tank.
 - B. Slopes and surrounding uncovered soil surface duly stabilized.
 - C. Catchment area favourable to capture surface run- off.



SITE - 3

- BA No-02
- village/ Tehsil- Parkhet- Pipaliya/ Bharuch
- Nearest DFC CH- 95/ 350KM
- Location- 100m from DFC ROW
- Rehabilitation Measures Taken-

A. Borrow pit filled with black cotton soil generated during cutting of area for formation bed.

B. Compaction and levelling was carried out.

C. Shall be utilized in future for crop cultivation.



SITE - 4

- BA No-2065
- village/ Tehsil- Parkhet- Pipaliya/ Bharuch
- Nearest DFC CH- 95 KM
- Location- 2.5 km from DFC ROW
- Rehabilitation Measures Taken-

A. No rehabilitation properly.

B. No positive result was visible such as land levelling, usage as pond, compatibility from surrounding land area, etc.



SITE - 5

- BA No- 98
- village/ Tehsil- Wantarsa/ Amod
- Nearest DFC CH- 101/ 80KM
- Location- 150m from DFC ROW
- Rehabilitation Measures Taken-

A. Used as village pond.

B. Development under, “Sujalam Safalam Jal Sanchay Abhiyan” Scheme since the contractor received benefit on waiver of royalty.

C. Surrounding area around pond is well suited and stabilized to help in (1) less evaporation and (2) more water retaining even in peak summert time.

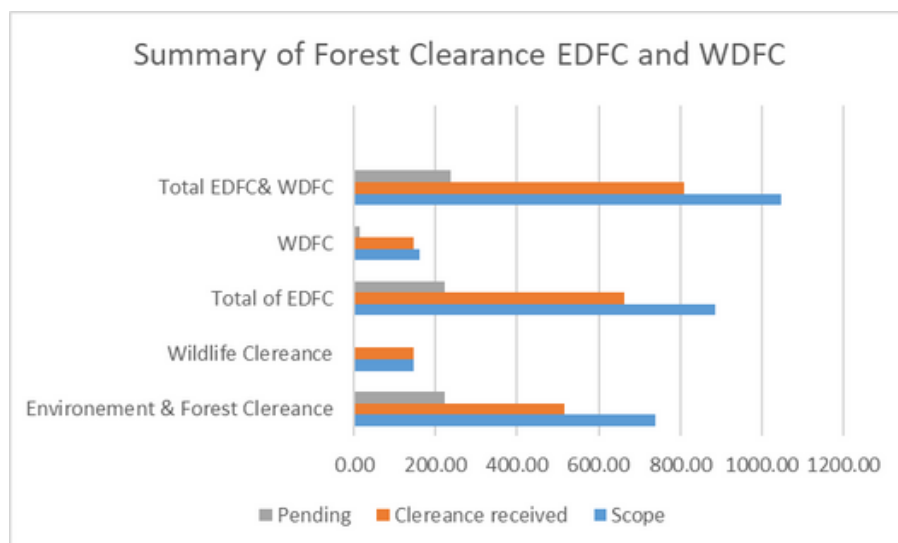


4.7 GREEN BELT

Camouflage bridges stand as innovative infrastructural solutions meticulously designed to integrate within the natural landscape seamlessly. These structures, adorned with carefully cultivated vegetation or crafted to mirror the surrounding environment, hold a pivotal role along rail corridors, particularly in preserving vital wildlife corridors and upholding ecological connectivity.

Their significance lies in their ability to provide unimpeded pathways for wildlife, allowing these animals to traverse across the railway infrastructure without hindrance. This crucial functionality minimizes the risk of collisions, ensuring the safety of both the fauna and the rail operations while actively contributing to the conservation of biodiversity.

Plantation Initiatives: DFCCIL undertakes extensive plantation drives along its freight corridors. Planting trees, shrubs, and native vegetation not only enhances the visual appeal of the area but also contributes to environmental conservation. These plantations aid in soil conservation, erosion control, and the creation of green buffers that mitigate noise, dust, and pollution from passing trains.



In the pursuit of ensuring responsible and sustainable project development, strides have been taken towards securing environmental, forest, and wildlife clearances.

Fig 16: Summary of Forest Clearance EDFC (Kolkata, Meerut, Ambala, Allahabad East and West and Tundla) and WDFC (Noida and Jaipur unit). Further details is attached in annexure 10.

While significant progress has been achieved, a notable segment of these vital approvals remains pending, beckoning for continued dedication to uphold stringent environmental regulations and conservation measures.

GREEN BELT IN EDFC

The following figure represents compensatory tree plantation efforts in two lots, along with the number of trees planted and the number of trees that have survived within the Right of Way (ROW) and near the Batching Plant.

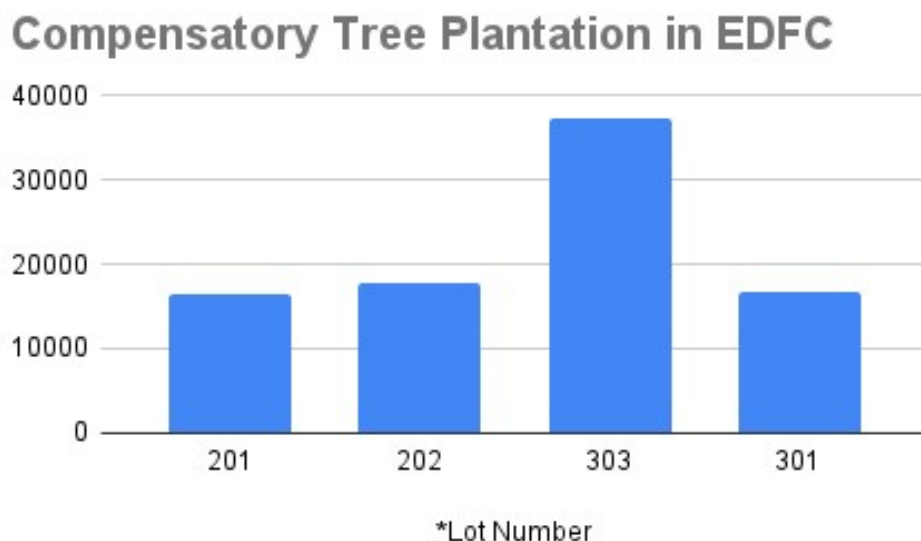


Fig 17: Summary of Compensatory Tree Plantation in EDFC .
Further details is attached in annexure 11.

The data represent quantities planted in different lots, presumably related to the Dedicated Freight Corridor Corporation of India Limited (DFCCIL), which is responsible for developing and maintaining freight corridors.

Lot 201: This could represent the number of trees, plants, or some other form of vegetation planted in a specific area associated with DFCCIL.

Lot 202: Similar to Lot 201, Lot 202 likely involves the planting of a specific quantity of items, possibly for environmental or landscaping purposes associated with DFCCIL's projects.

Lot 301: Understanding the specific goals and objectives tied to this plantation would provide insight into its significance within the broader context of DFCCIL's activities.

Lot 303: This has a notably higher quantity planted, suggesting a larger-scale plantation effort. The context would reveal the purpose, whether it's related to green cover, beautification, or any other DFCCIL-related initiatives.

Developing a Miyawaki Forest (Meerut Unit, Lot 303) within a 1-hectare area along the vacant Right of Way (ROW) under the Viaduct of Major Bridge 138 & 139 by DFCC (Dedicated Freight Corridor Corporation) is a notable environmental endeavor. This initiative involves planting approximately 4000 saplings, embodying the Miyawaki method, known for its dense, diverse, and fast-growing forests.

The project's **conservation of 4.49 lakh cubic meters of natural soil** by employing fly ash and waste soil in the formation embankment of DFCC (Dedicated Freight Corridor Corporation) is a commendable demonstration of sustainable construction practices and resource optimization.

4.8

DUST MANAGEMENT

Effective dust management in DFCCIL is pivotal to maintaining the efficiency and environmental sustainability of the freight corridors. To this end, DFCCIL has adopted various measures, including regular track cleaning, and the application of dust suppressants, and vegetation control. Moreover, the corporation has implemented stringent guidelines in this regard.

By implementing best practices that minimize dust emissions from construction and operational activities, DFCCIL demonstrates its commitment to effective dust management. This approach fosters a healthier environment for railway personnel and surrounding communities while adhering to environmental regulations and supporting sustainability goals.

Air pollution is a critical global issue, with severe consequences on public health, economies, and ecosystems worldwide. The majority of the world's population is exposed to air pollution levels that exceed the safe limits established by the World Health Organization (WHO), leading to approximately 7 million premature deaths annually, with a significant proportion of fatalities occurring in the Asia-Pacific region. Among the various air pollutants, particulate matter with diameters smaller than 10 and 2.5 microns (PM10 and PM2.5) pose a particular public health concern.

In India, construction and civil engineering activities are major contributors to air pollution. Dust generated from these activities includes a range of particle sizes, including PM10 and PM2.5, as well as materials like silica. Earthwork, excavation, blasting, transportation of bulk materials, loading and unloading dusty materials, open-air material storage, concrete production, stone crushing, cutting, and equipment movement are all on-site operations that contribute to dust emissions. These fine particles can be easily transported even in light winds, negatively impacting the local environment, the health of nearby residents, and construction workers.

The blowing of dust on construction sites is not only an environmental concern but also a potential safety hazard. In a professional context, it is imperative to address these challenges by implementing effective dust control measures, such as dust suppression systems, proper site planning, and worker protection protocols. Mitigating dust emissions not only aligns with environmental regulations but also ensures a safer and healthier working environment for all individuals involved in construction activities.

Chapter 5

Societal Contribution

Driving India's Prosperity on a Sustainable Track

Social contribution plays a pivotal role in ensuring the sustainability of the Dedicated Freight Corridor Corporation of India Limited (DFCCIL). Beyond the infrastructural and operational aspects, DFCCIL recognizes the significance of actively engaging with and positively impacting the communities along its corridors. By prioritizing social sustainability, DFCCIL contributes to the **well-being of local populations, fosters inclusive development, and promotes cultural preservation**. The corporation's commitment to **creating employment opportunities, ensuring health and safety standards, and involving communities in decision-making processes** not only enhances its public image but also **aligns with ethical business practices**. Socially responsible initiatives not only benefit the communities but also **make DFCCIL's operations more resilient, adaptive, and compliant with regulatory standards, reinforcing the corporation's dedication to holistic and sustainable development**. The following heads are involved in societal contribution are as follows:

- **Contribution to Employment- HR**
- **Noise Attenuation**
- **Speeding up of Supply chain**
- **Improving Livelihood**
- **Safety, Health and Environment (SHE)**

Human Resource and Industrial Relations

Overview

The DFC (Dedicated Freight Corridor) project has implemented two significant policies to ensure the protection of labor and prevent the spread of communicable disease HIV/AIDS in the stakeholders. These policies, namely "DFCCIL's Work Place Policy on Labor Protection" and "DFCCIL's Work Place Policy on HIV/AIDS Prevention & Control for Workers Engaged by Contractors," are designed to uphold and respect human rights and labor standards across all project operations, including the execution of a wide range of works contracts.

A significant portion of the workforce, spanning unskilled, semi-skilled, skilled, and highly skilled categories, engaged at various construction sites along the DFC alignment, has consistently received training and education on a diverse range of human rights aspects.

These educational initiatives encompass areas such as HIV/AIDS prevention and control, knowledge of their rights regarding minimum wages, occupational health, personal hygiene, safety management, and other labor-related policies and procedures. This comprehensive approach emphasizes the commitment of the organization to ensure the well-being and empowerment of its workforce by promoting awareness and compliance with essential human rights and labor standards.

Regardless of nationality, gender, race, economic status, or religion, the fundamental tenet stressed that all workers, including those employed by contractors, subcontractors, or consultants must live with social and economic freedom and dignity.



5.1 DFCCIL's Workplace Policy on Labor Protection

5.1.1 Basic values

DFCCIL is firmly dedicated to the belief that all its employees, including those contractors, subcontractors, or consultants, should lead lives marked by social and economic dignity and freedom. This commitment extends to individuals of all nationalities, genders, races, economic backgrounds, and religious affiliations.

Furthermore, **DFCCIL upholds a set of fundamental principles**, which include:

- a) A steadfast commitment to **prohibiting child labor and forced labor** within its operations.
- b) Ensuring a **workplace that is free from discrimination**.
- c) Promoting **gender equality**.
- d) Cultivating a **supportive work environment** that fosters the well-being of all employees.

In line with these values, DFCCIL is actively working towards the formulation of a workplace policy on labor protection, aimed at safeguarding the rights of citizens as enshrined in the Constitution of India. This policy will be rooted in the principles outlined in the Directive Principles of State Policy and the statutory provisions contained within applicable laws concerning the employment and service conditions of labor, their welfare, as well as occupational health and safety.

5.1.2. Aim

The policy aims to achieve the following objectives:

- a) **Establish legal framework:** Establish a legal framework governing the employment and service conditions of labor, ensuring their welfare, and prioritizing occupational health and safety.

- b) **Effective framework:** Develop an effective control system for ensuring compliance, enforcement, and incentives that encourage improved adherence to labor standards.

- c) **Administrative and technical control:** Offer administrative and technical support services to facilitate the implementation of these standards.

- d) **System of incentive:** Create a system of incentives for contractors and their employees, motivating them to attain higher health and safety standards.

- e) **Non-financial incentive:** Implement a system of non-financial incentives aimed at enhancing safety and health in the workplace.

- f) **System of penalties:** Enforce a system of penalties for non-compliance with provisions related to safety, health, and employee welfare, thereby ensuring strict adherence to these critical aspects.

5.1.3. Manpower mobilisation

The effective operation of the company hinges on the strategic **placement of suitable talent in the correct positions** and at the appropriate times. Recognizing the company's long-term needs, **4,230 employees** have been brought on board from diverse sources, with 1,014 candidates being selected through open market recruitment. This approach is instrumental in ensuring the company's sustained growth and success and job opportunities offered.

Furthermore, 2,635 positions were permanently filled through permanent staff across different levels and cadres within the company.

Additionally, a total of 354 retired government employees have been re-engaged and inducted as Consultants or Advisors in various departments, including Traffic, Mechanical, Electrical, Civil, and S&T. Some retired employees have also been engaged in the Finance, HR & Administration, and Rajbhasha departments. Moreover, during the fiscal year 2022-23, many employees were contracted for roles in the IT and OP&BD departments, contributing to the company's diverse and skilled workforce.

The Department of Public Enterprise has granted exemption to 341 below-Board level posts in the Company from the rule of immediate absorption up to 31st March, 2023. During the year, 227 employees have joined the Company on deputation basis. The total strength, as on 31st March 2023, stands at 4,230 employees (2,635 - Permanent, 227 - Deputation and 354 - Re-employed, 4,230- open market source). All, such initiatives add to the sustainable growth.

Table 18: No. of employees recruited from different sources

Source	No. of Employees
Open Market Recruitment	1014
Permanent Employees	2,635
Re-employed	354
Deputation	227
Total	4,230

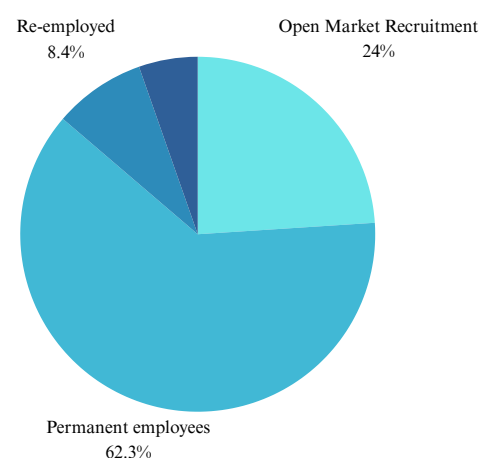


Fig 18: No. of employees recruited from different sources

5.1.4. Engagement of Staff and Laborers

The Contractor is required to adhere to specific conditions of employment that meet DFCCIL set policy or exceed the standards established for the DFCCIL. These standards align with the model standing orders provided under the "Industrial Employment (Standing Orders) Act, 1946" and the "Industrial Employment (Standing Orders) Central Rules, 1946."

The Contractor is also obligated to comply with the provisions set forth in the "Industrial Disputes Act, 1947," ensuring that labor-related matters are handled in accordance with this legislation.

Gender equality: Furthermore, the Contractor must maintain a commitment to gender equality by not discriminating against women during the recruitment process or in any aspect of their employment, including but not limited to promotions, training, or transfers.

Child labour: In addition, the Contractor is obliged to follow the guidelines outlined in "The Child Labor (Prohibition and Regulation) Act, 1986," thereby refraining from employing children in any capacity.

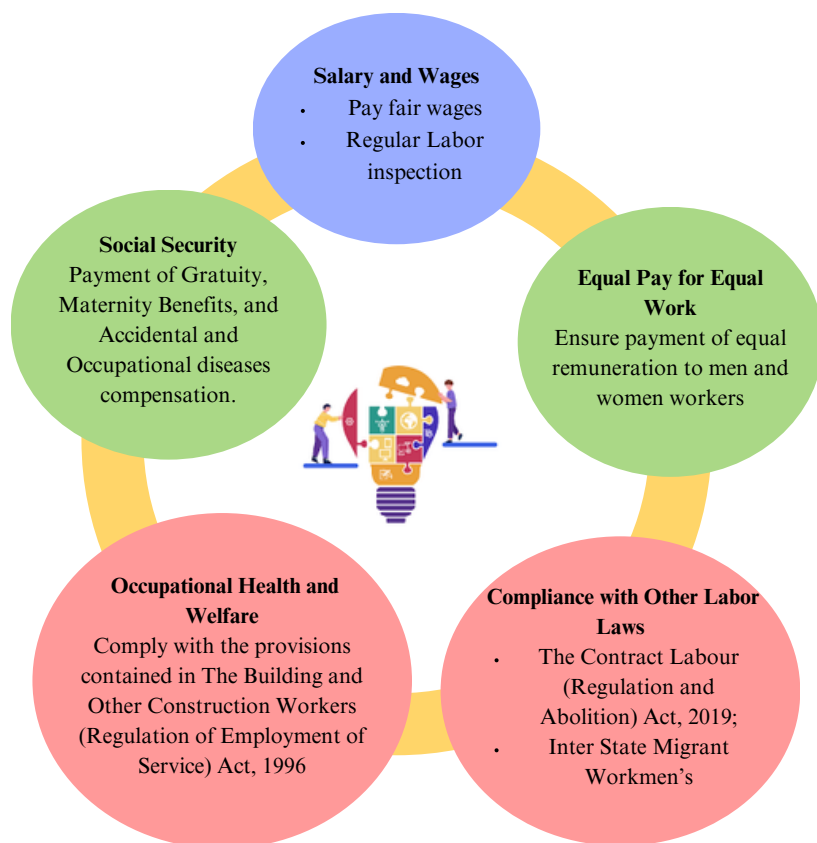


Fig 19: Employee Engagement

Industrial Disputes Act 1947: The Industrial Disputes Act, 1947, places an obligation on the contractor to adhere to its provisions, ensuring that labor-related matters are addressed in compliance with this legislation. This Act, a key labor law in India, outlines regulations pertaining to industrial disputes, employment conditions, and the resolution of conflicts between employers and workers. By incorporating the Industrial Disputes Act, 1947, into contractual agreements, there is an emphasis on fair and legal practices in managing labor relations, promoting a framework that safeguards the rights and interests of both employers and employees within the industry.

5.1.5. Training

DFCCIL recognizes its distinctive training needs, which are vital for ensuring the availability of well-trained personnel to support its ambitious projects. The training process begins with thorough induction training for new recruits and extends to periodic training sessions, including refresher training and promotional training. DFCCIL also conducts training through its own in-house training center. This self-operated training center plays a crucial role in equipping employees with the necessary skills and knowledge to meet the organization's unique requirements and ambitious projects.

In the fiscal year 2021-23, induction and specialized technical training sessions were organized for approximately 1,014 fresh recruits at various institutes including ZRTI, Udaipur, IRICEN, IRIEEN, IRISSET, and ZRTIs at Sabarmati, Ghaziabad, and Varanasi. This diligent approach to training ensures that DFCCIL's workforce remains well-prepared to contribute effectively to the organization's projects.

In addition to these technical aspects, DFCCIL also prioritizes training programs that focus on enhancing emotional intelligence, stress management, and other sensitization initiatives. These efforts contribute to the development of effective leadership and a highly productive workforce.

Table 19: Number of employees recruited for different departments (Open Market Recruitment)

S.No	Department	Post	No. of trainees attended	Payment for Training (Excluding GST)
1.	Civil	Executive	68	4,56,48,220 INR
2.	Civil	Jr.Mgr	28	99,79,200 INR
3.	S&T	Executive	67	3,03,13,800 INR
4.	S&T	Jr, Executive	140	83,32,600 INR
5.	Electrical	Executive	24	50,90,400 INR
6.	Electrical	Jr, Executive	128	2,48,81,781 INR
7.	OP & BD	Jr, Executive	227	71,76,436 INR
8.	OP & BD	Executive	240	NIL
9.	OP & BD	Jr.Mgr	74	NIL
10.	Mechanical	Jr, Executive	13	5,61,600 INR
11.	Mechanical	Executive	2	9,90,800 INR
12.	Mechanical	Jr.Mgr	3	2,01,600 INR
	Total no. of attendee		1,014	

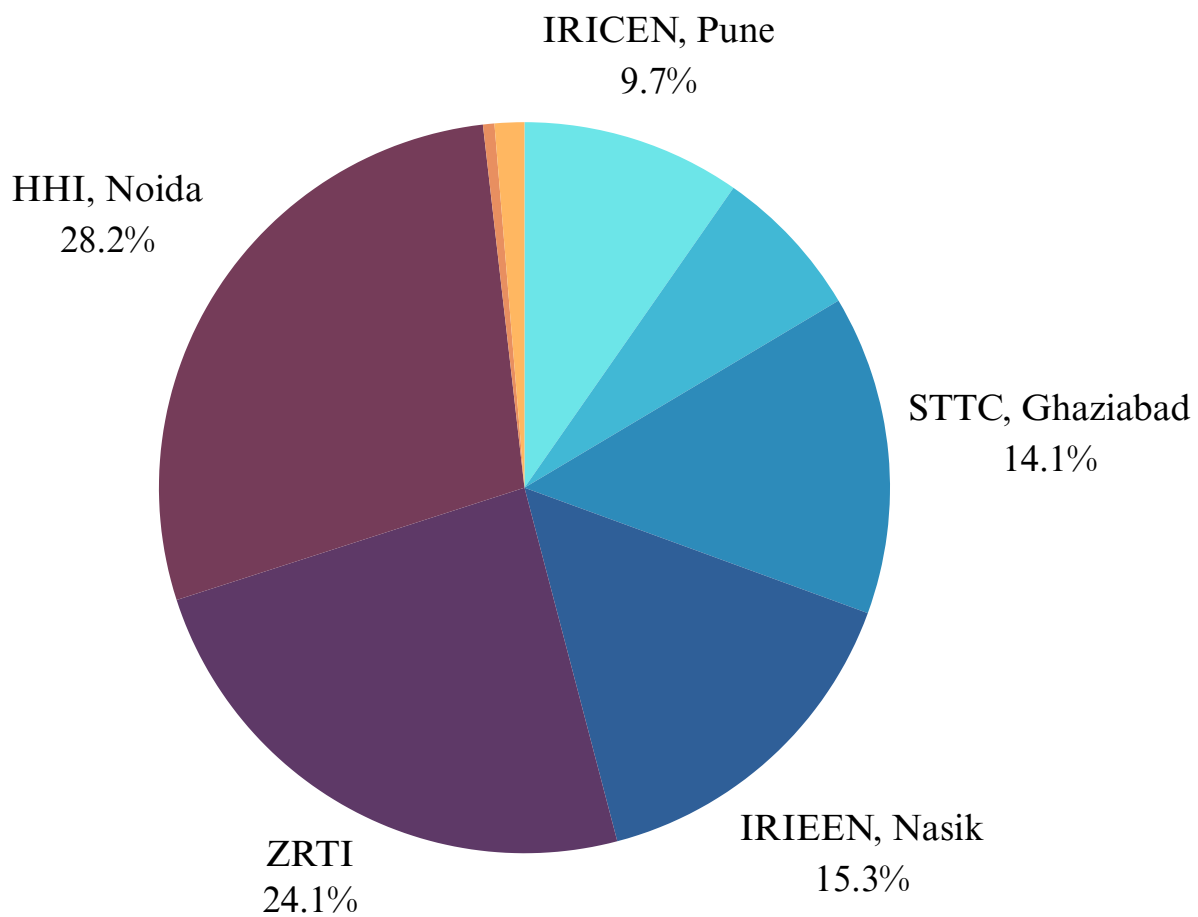


Fig 20: The breakdown of the percentage of trainees based on the institutes they attended for training. Further details are attached in annexure 12.

The majority of training sessions, approximately 28.2%, were conducted at HHI, Noida, making it the primary training location. ZRTI ranked second with 24.1% of trainees attending training there. Similarly, IRIEEN in Nasik accommodated 15.3% of trainees, while STTC in Ghaziabad hosted 14.1%. IRISET in Secundrabad accounted for 6.8% of trainees, and IRICEN in Pune saw 9.7% of trainees undergoing training at their facilities.

283

Employees Trained in HHI

1,014

Employees Trained

5.1.6. Welfare Trust

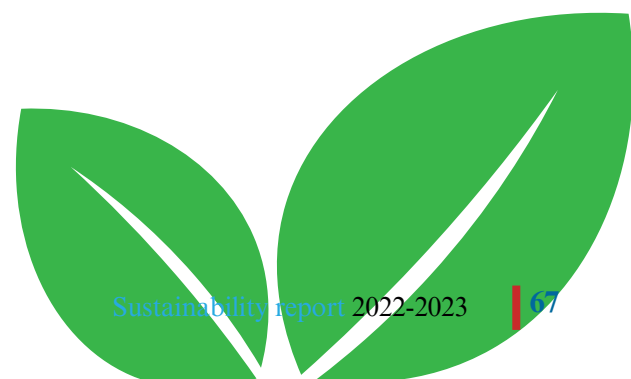
The DFCCIL Welfare Trust has recently revised its regulations, stating that in the event of an employee's untimely demise, their family shall receive financial aid of INR 5 Lakh. This updated assistance amount is a considerable increase from the previous INR 2 Lakh payout.

5.1.7. Industrial Relation

DFCCIL has consistently fostered a positive industrial relations environment, encouraging a collaborative approach among its employees to tackle challenges posed by a dynamic business landscape. The company's work culture promotes empowerment, transparency, decentralization, and participative management, resulting in a cohesive and productive workforce.

5.1.8. Recognition to security personnel

In order to further improve the working atmosphere, DFCCIL has implemented various measures to enhance employee commitment and dedication. For instance, the company has recognized and applauded the security personnel stationed at the corporate office for their exceptional service and commitment, particularly during the second wave of the COVID-19 pandemic. This recognition highlights the company's commitment to acknowledging and encouraging the efforts of its valued employees.



DFCCIL: EMPLOYEE WELFARE TRUST**MARRIAGE GIFT CLAIMS**

It refers to a benefit or token of appreciation provided by DFCCIL (Dedicated Freight Corridor Corporation of India Limited) to its employees upon their marriage. Companies sometimes offer marriage gifts or bonuses to their employees as a way to celebrate important milestones in their lives and express gratitude for their dedication and hard work.

Table 20: Marriage gift claims to employees under DFCCIL Employees Welfare Trust Rules

Date	Total Employees	Amount claimed (per person- 5000/-
12.09.2022	86	430000
29.05.2023	62	310000
12.06.2023	37	185000
06.10.2023	58	290000
Total	243	1215000

PROVISION TO EDUCATION TO EMPLOYEES CHILDREN

"Scholarship to Employees ward" could potentially refer to a program where DFCCIL, provides financial assistance or support for further education or training to its employees children. These programs are designed to help employees enhance their skills and knowledge, which can benefit both the employees and the organization.

Scholarship to wards of employees under DFCCIL Employees Welfare Trust Rules, applications will be called to grant awards to the wards, who secured 80% or above marks in secondary / sr. secondary examination in the academic session 2022- 2023.



Amount - 5000 Rs/- per employee (per ward)

FINANCIAL ASSISTANCE IN CASE OF DEATH OF EMPLOYEE

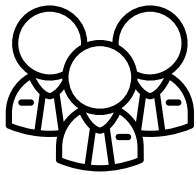
In the unfortunate event of the death of an employee DFCCIL, typically provide financial assistance and benefits to the deceased employee's family. These benefits are designed to support the family during a difficult time and may include various components.



Rs. 5 lakh will be paid to employees family

PICNIC FOR EMPLOYEES

Organizing a picnic for employees is a common way for companies and organizations, including DFCCIL (Dedicated Freight Corridor Corporation of India Limited), to promote team building, boost morale, and show appreciation for their employees' hard work. Picnics provide a relaxed and enjoyable environment for employees to socialize and unwind. Annual picnic to be organized by field units and corporate office for the employees and thier family members.



Picnic at Lohagarh farm, Gurugram on 25.02.2023 conducted by Corporate office, New Delhi.

SPORTS ACTIVITIES

Dedicated Freight Corridor Corporation of India Limited (DFCCIL) organizes various sports activities for its employees or thier family members as part of their employee engagement initiatives. These activities promote physical fitness, teamwork, and a healthy work-life balance among employees.

DFCCIL sanction fund from welfare trust to field units for procurement of sports items or to develop sports infrastructure.



An amount of Rs. 1 lakh distributed to all field units

BUILDING AND OTHER CONSTRUCTION WORKERS' BENEFICIARY SCHEME (BOCW)

Under The Building and Other Construction Workers' Act, 1996

The Building and Other Construction Workers' Beneficiary Scheme, operating under the Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996, is a social welfare initiative by the Indian government aimed at providing various benefits to construction workers and their families.

Scheme Implemented In DFCCIL:

MID DAY MEAL TO THE WORKMEN

The Maharashtra Government had launched a Mid-Day Meal Scheme (previously called as Atal Aahar Yojana) for the state's construction workers with an aim to provide nutritious and hygienic food to construction Labourers. This meal is being provided to workers free of cost twice a day and the same was implemented for workers of DFCCIL at the construction site.



REGISTRATION OF BUILDING WORKERS AS BENEFICIARIES AT CONSTRUCTION SITE OF DFCCIL



ISSUANCE OF ID CARDS OF A BOCW BENEFICIARY



RECEIVED BENEFIT DURING COVID PANDEMIC TO BOCW BENEFICIARY FROM MAHARASHTRA GOVERNMENT



5.2 NOISE ATTENUATION

Installation of noise barriers

The company has partnered with the World Bank to address the issue of train noise by installing noise barriers. From 2021 to 2022, four noise barriers were erected in highly sensitive locations such as shrines and schools located within 100 meters of the DFC tracks. Currently, there are 15 noise barriers in place along the EDFC. The application of these barriers is expected to decrease the noise generated by trains during their operations by around 10-15 decibels (A). Notably, this marks the first time that noise barriers have been implemented in a railway project in India.

The strategic placement of noise receptors at varying distances from the track, ranging from 14 to 90 meters, indicates a thoughtful approach to mitigate noise impacts on different entities along the Eastern Dedicated Freight Corridor (EDFC). This proactive measure aims to prevent disturbances in sensitive areas such as shrines, and other places where noise could have a significant impact. The varying distances likely reflect a tailored strategy to address the specific needs and sensitivities of each type of entity. This approach aligns with best practices in noise management, ensuring a balance between efficient freight operations and the well-being of the surrounding communities and sensitive locations. Further details is as annexure 13.

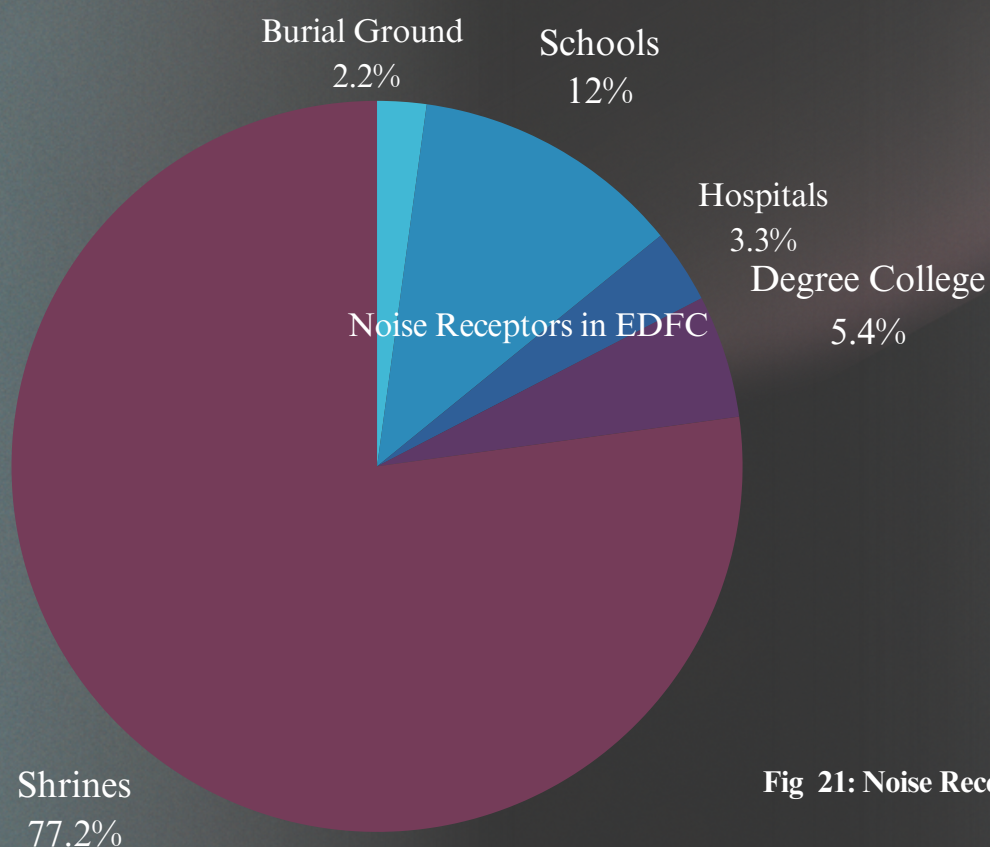


Fig 21: Noise Receptors in EDFC.

5.3 ACCELERATING THE FLOW OF GOODS AND INFORMATION

DFCCIL is significantly enhancing the efficiency of the supply chain in India by introducing innovative truck-on-train services like Roll-On/Roll-Off (Ro-Ro) and Roll-On/Lift-Off (Ro-La). These services allow for the direct loading of trucks onto specially designed rail wagons, streamlining the transition between road and rail transport. Truck-on-train services are particularly beneficial for the transportation of new and modified goods as they expedite long-distance cargo movement, reduce road congestion, and minimize the environmental impact of freight transportation. By incorporating these services into its operations, DFCCIL facilitates the faster and more cost-effective movement of goods, contributing to the overall optimization of the supply chain.



DFCCIL's commitment to modernized infrastructure and cutting-edge facilities plays a pivotal role in expediting the supply chain for new and modified goods. The dedicated freight corridors are equipped with state-of-the-art terminals and transshipment facilities that are designed to handle a wide range of cargo, including specialized and high-value goods. This infrastructure ensures that new and modified products can be efficiently loaded, unloaded, and transferred between different modes of transportation, allowing for swift and reliable logistics operations. Coupled with stringent safety measures and capacity expansion, DFCCIL is instrumental in meeting the increasing demand for the transportation of diverse goods, providing a solid foundation for the growth and efficiency of India's supply chain.

Optimizing Supply Chain Velocity

» TOT » NMG » Container Loading » Cement Loading

Table 21: New Rewari - New Palanpur - New Rewari Route, 641 Kms on DFC & 720 via Road)

S.No	Parameter	IR Scenario	DFC's Scenario	DFC Advantage
1.	Earning	5.5 Lakh Per Day	12 to 13 Lakh per Day	Double Earning
2.	Turn Round	10 – 11 Days	16 – 18 Hours Maximum 12 Hours Transit + 3 Hrs. Loading + 3 Hrs. Unloading	Turn Round of Less than One Day of Rly Wagons and Trucks
3.	Commodity	Billets / Rails / Steel Coils etc	All commodities which can be transported through Road/Rail	Modal Shift
4.	Speed	Average Speed not more than 45 kmph, No Assured Transit/Delivery Time	Average Speed near to 90% of Maximum Permitted Speed with Assured Transit & Delivery Time	Better Speeds, Assured Transit & Delivery Time, Ease of Doing Business
5.	Loading/ Unloading	Need special equipments for loading/Unloading & Lashing/Packing	No such requirement cargo itself driven onto wagons + Manual Lashing done	Ease of Operation

DFC demonstrates remarkable improvements in several critical aspects. Firstly, DFC significantly reduces the turnaround time from 10-11 days to a mere 16-18 hours, offering an exceptional advantage for shippers and logistics. Secondly, DFC is versatile, accommodating various commodities that can be transported via road or rail, promoting modal shift. The average speed near the maximum permitted speed, combined with assured transit and delivery times, enhances efficiency and ease of doing business.

Furthermore, DFC simplifies loading and unloading processes by eliminating the need for special equipment, as cargo can be directly driven onto wagons and manually lashed, streamlining operations. In conclusion, DFC offers a profitable, efficient, and versatile freight transportation system.

5.4 IMPROVING LIVELIHOOD

5.4.1 Introduction of TOT

The introduction of Truck on Train (ToT) systems has profoundly impacted the livelihoods of truck drivers, offering a spectrum of advantages that directly address the challenges inherent in long-haul transportation. DFCCIL (Dedicated Freight Corridor Corporation of India Limited) has played a pivotal role in implementing and facilitating this transformative initiative, significantly benefiting truck drivers in several key areas:

1. **Mitigation of Driver Fatigue and Safety Enhancement:** ToT systems have alleviated the burden of prolonged driving hours for truck drivers. By enabling the seamless transfer of goods onto railcars for extensive distances, it effectively reduces the need for continuous driving. This measure directly mitigates physical and mental strain, thereby enhancing driver alertness and substantially contributing to the safety of transportation operations.
2. **Improvement in Work-Life Balance:** Truck drivers traditionally struggle to maintain a balanced work-life balance due to prolonged absences from home. DFCCIL's implementation of ToT systems has the potential to establish more predictable schedules and increase the time drivers spend at home. This pivotal shift positively impacts the quality of life for drivers and fosters stronger familial connections.

3. **Health and Well-being Advancements:** Prolonged sedentary periods and irregular schedules pose significant health risks to truck drivers. DFCCIL's facilitation of ToT systems effectively curtails these health hazards by reducing the stress associated with continuous driving, contributing to the overall well-being and health maintenance of the drivers.

Thus, DFCCIL's proactive involvement in the adoption and execution of ToT systems has not only bolstered logistical efficiency but has also distinctly uplifted the livelihoods of truck drivers. More of such efficiency on different parameters are provided in table 21.

Moreover, DFCCIL is actively exploring new avenues to harness the enormous potential of the e-commerce sector in rail transportation.

5.4.2 Repurposing concrete waste

The project employs various approaches to manage and recycle concrete waste efficiently. A prominent technique involves repurposing concrete waste by using it to fill low-lying areas. Furthermore, the project utilizes the waste in the construction of village approach roads, and **recycles it for purposes such as paver blocks, concrete blocks, and pathways.** These methodologies accentuate the project's dedication to resource conversion towards the attainment of sustainability goals.

5.4.3 NMGHS coaches

Redefining Logistics and Connecting Business with Customers:

In its pursuit of this ambitious objective, DFCCIL has embarked on a transformative journey by repurposing Indian Railways' converted old GS Coaches into cutting-edge NMGHS coaches. These specially designed coaches serve as the vanguard for efficiently transporting smaller cargo consignments across the expansive Dedicated Freight Corridor (DFC) network.

This visionary initiative symbolizes DFCCIL's commitment to adapting to evolving market needs and emphasizes its role as a catalyst in shaping the future of freight transportation. By converting outdated coaches into state-of-the-art assets, DFCCIL is positioning itself as a vital player in facilitating the seamless movement of goods, aligning perfectly with the dynamic landscape of e-commerce. As the e-commerce sector continues to surge, DFCCIL's innovative approach ensures that the rail network remains at the forefront of this transformation, providing businesses with the means to transport their cargo swiftly and efficiently.

To deploy a single NMGHS coach, a policy initiative was implemented by the Mechanical department.

This initiative involved the attachment of an NMGHS coach to BLC rakes, facilitating transportation between New Rewari and New Palanpur/New Sanand along the Western Dedicated Freight Corridor (WDFC).

DFCCIL's unwavering dedication to harnessing the potential of the e-commerce sector within rail transportation reflects its commitment to redefining the logistics landscape.

In an era where e-commerce has become a driving force in commerce, DFCCIL has positioned itself as a forward-thinking player, committed to **offering advanced, eco-friendly, and dependable freight solutions.**

It also ensures faster movement of commodities, saving time and environment and job creation.

DFCCIL's vision extends beyond mere cargo transportation; it encompasses a broader transformation of how goods are moved. This transformation seeks to seamlessly connect businesses with their customers while prioritizing efficiency and environmental sustainability.

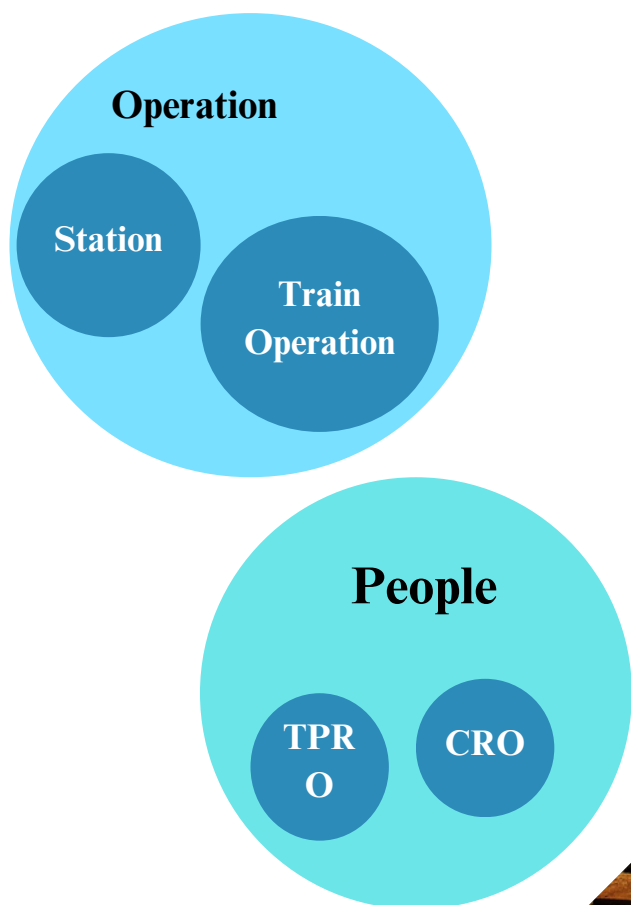
The organization's commitment to eco-friendly freight solutions is not a mere statement but an integral part of its operational philosophy.

By standing at the intersection of commerce and environmental responsibility, DFCCIL exemplifies its readiness to embrace the future of rail transportation and logistics, setting a new standard for businesses and industries seeking to thrive in an eco-conscious world.



5.5 SAFETY

Safety in DFCCIL refers to the implementation of policies, procedures, and measures to prevent accidents, injuries, and hazards within the operations of the Dedicated Freight Corridor Corporation of India Limited. It involves creating a secure environment for employees, stakeholders, and the public while adhering to industry standards and regulations.



SAFETY IN OPERATION PHASE

Safety within operational stations is paramount for the well-being of staff, and the overall efficiency of operations. Several key measures like Safety drives and protocols are implemented to ensure safety during the operational phase.

A safety drive conducted at DFCCIL stations by authorized officers for safety in train operations involves a focused effort to assess, enhance, and reinforce safety measures throughout the network.

Here's an overview of the key components and actions typically associated with such safety drives:

Safety Audits and Inspections:

Higher authorities conduct thorough safety audits and inspections at DFCCIL stations to identify potential hazards, assess compliance with safety protocols, and ensure adherence to established safety standards.

Training and Awareness Programs:

Specialized training sessions and Safety meetings (every Friday for station staff) are organized to update staff on the updated safety guidelines.

Verification of Infrastructure Integrity:

The integrity of station infrastructure, including tracks, platforms, and signaling systems, is verified to ensure that they meet safety standards and are properly maintained.

Mock Drills:

Mock emergency response drills are conducted to evaluate the preparedness of station staff in handling various emergency scenarios, such as train accidents, fires, or natural disasters.

Equipment Checks and Maintenance:

A thorough examination of equipment used in train operations, such as signals, switches, and communication systems, is carried out to confirm their proper functioning and identify any maintenance needs.

Communication and Coordination Protocols:

The safety drive assesses the effectiveness of communication and coordination protocols between different stakeholders involved in train operations, including station staff, train drivers, and control centers.

Technology Integration for Safety:

The integration and utilization of advanced technologies, such as Train Management System (TMS), Global System for Mobile Communications – Railway (GSM-R), End of Train Telemetry (EOTT), Crew Management System (CMS) are reviewed for their effectiveness in enhancing overall safety.



TPRO
(TRESSPASSER RUN OVER)

In the context of DFCCIL, the term "trespasser run-over" refers to an incident where an individual unlawfully enters railway property or tracks and subsequently collides with a moving train, resulting in significant safety concerns and potential injuries or fatalities.

Trespassing on railway tracks or property is not only illegal but also incredibly dangerous due to the size and weight of trains, which require substantial distances to come to a halt.

Such incidents often arise from individuals taking shortcuts, walking on or near tracks, or engaging in activities like photography or vandalism.

Railway companies and authorities emphasize the severity of trespassing incidents and strive to prevent them through education, enforcement, and safety measures.

Mitigation measures adopted:

Various methodologies have been applied to reduce the TPRO, which includes regular interaction with the communities residing along the track, building of walls along the railway line, regular patrolling, and pasting warning signs.

Table 22: Total no of TPRO cases over DFCCIL in FY- 2022- 2023

FY- 2022- 2023	
EDFC	185
WDFC	82
TOTAL	267

CRO

(CATTLE RUN OVER)

In railway terminology, a "cattle run over" refers to an incident where a train collides with or runs over domestic animals such as cows, buffaloes, goats, or other livestock that have entered the railway tracks. These incidents are unfortunate and pose risks not only to the animals but also to the safety of train passengers and railway operations.

Cattle run overs can occur due to animals straying onto the tracks in search of food or water.

Table 23: Total no of CRO cases over :DFCCIL in FY- 2022-2023

FY- 2022- 2023	
EDFC	981
WDFC	649
TOTAL	1,630

Mitigation measures adopted:

Railway authorities employ measures such as fencing, warning signs, and regular patrolling to prevent such incidents and ensure the safety of both train operations and the animals. When a cattle run over occurs, it can lead to train delays, damage to railway equipment, and sometimes injuries to passengers or railway staff, depending on the circumstances of the incident.

After such incidents, railway personnel and local authorities are usually involved in clearing the tracks and addressing the situation.

AWARENESS DRIVES

FOR CONTROLLING TPROs & CROs OVER WDFC



2022- 2023

TOTAL
AWARENESS
DRIVE- 394
APPROX.



AWARENESS DRIVES

FOR CONTROLLING TPROs & CROs OVER EDFC



2022- 2023

TOTAL
AWARENESS
DRIVE- 300
APPROX.



A stethoscope is positioned diagonally across the upper half of the image, resting on a light blue medical chart. The chart features a faint grid pattern and a large, dark outline of a human figure. The stethoscope's chest piece is prominent in the center, and its tubing loops around it. The overall image has a soft, blue-tinted aesthetic.

HEALTH

DFCCIL (Dedicated Freight Corridor Corporation of India Limited) addresses employee health through comprehensive measures, emphasizing safety, healthcare facilities, and wellness programs. The organization prioritizes employee safety by ensuring a secure working environment. Healthcare facilities, offer medical services and routine check-ups. Additionally, DFCCIL implements wellness programs aimed at promoting overall employee well-being, including fitness initiatives and stress management.

***Free Medical Health Checkup Camp Organised by DFCCIL welfare trust through Tata Communication GloHeal on 13 & 14 Sept, 2023**

Free medical camp cum demo of
E-HEALTH CARE CLINICAL TESTING MACHINE

on 13 and 14 Sept, 2023

A free medical camp cum demo of the health kiosk clinical multifunctional health testing machine, was organised by DFCCIL welfare trust through Tata Communication GloHeal on 13 & 14 Sept, 2023 at 3rd floor Conference Hall for health check-up(medical tests) of the officials of DFCCIL.

As known Tata Communication GloHeal interconnected & integrated e- health management platform powered by Tata Communication offers a plethora of healthcare Digital Solutions and equipped with the following basic tests:

- Strip based Urine tests
- ECG
- Dermatology
- Blood Pressure
- BMI
- Vision
- Pulse
- Otoscopic
- Oximeter
- Spirometer
- Digital Temp
- Digital Stethoscope
- Glucometer
- Urine based test
- Demo scope
- Rapid test
- etc (55 tests)

In this connection, 48 types of different Blood Tests with Real Time Multi- Speciality Doctors Consultations were done by trained medical staff i.e., nurse/paramedics with Wi-Fi connections and these medical/clinical examinations may be utilized in the Annual health check-up of APAR.



EMBRACE THE GREEN

Celebrating Environmental Day

"At DFCCIL, every day is World Environment Day. We are dedicated to building a sustainable and green future for all, safeguarding our environment with every rail we lay."

- World Water Day (22, March)
- World Earth Day (18- 22, April)
- International Noise Awareness Day (27, April)
- World Environment Day (5, June)



WORLD DAY

Highlight of the Events:

1. Display of World water Day Banner at Prominent locations & Notice Board.
2. Organize awareness sessions at site offices & other work sites location on following topics:
 - Importance of water in Ecosystem
 - Water pollution and control measures
 - Type of water (Ground water, Surface water)
 - Recycle and reuse of water.
3. Drawing & Quiz competition among workmen & site staff on “World Water Day – 2022”
4. Rally was taken out on water savings
5. Distribution of Prizes to water day Drawing & Quiz Winners.



Table 24: Details of Awareness Trainings Conducted at Various Locations

Total No. of Awareness sessions conducted: 08	Sec-A
Total participants in Awareness sessions	Total-165 (Staff-35, Workers-120)
Locations	Nilje Station Building Kalamboli Viaduct, MNB-99, Kundevahl Viaduct, Kopar Viaduct, Ch. 37+000, Panvel Office and Nilje Office
Associates Participated	M/s TIPL, M/s SKM, M/s ANG, M/s Kikash Tiwari, M/s Ritesh enterprise, M/s RJ construction
Total No. of Awareness sessions conducted: 10	Sec-B
Total participants in Awareness sessions	Total-285 (Staff-45, Workers-240)
Locations	Ch. 93+000, Viaduct 172, Ch. 86+300, Kharbao Viaduct, Ch. 76+600, Ch. 59+920, Ch 88+300, MJB 146, ROB 159, Paye Office
Associates Participated	M/s SDPL, M/s SKM, M/s Skyline, M/s Kripalu, M/s YT infra, M/s HB Infra, M/s YT infra

WORLD EARTH WEEK

Highlight of the Events

(18th to 22nd April 2022)

1. Display of World Earth Day Banner at Prominent locations and notice Boards.
2. Organize awareness sessions at the site office & and other work site locations on the following topics:
 - Importance of Ecosystem and Plants.
 - Practices for Sustainable Environment.
 - Different types of pollution and control measures.
 - Types of water (Groundwater, Surface water).
 - Recycle and reuse of water.
 - Conduct Mock drill on oil spillage.
3. Tree plantation drive.
4. Drawing & Quiz competition among workmen & site staff on “World Earth Day – 2022”.
5. Distribution of Prizes to Drawing & Quiz Winners.

(18th to 22nd April 2023)

1. Display of World Earth Day Banner at Prominent locations & Notice Board.
2. Organize awareness sessions at site office & other work sites locations on following topics:
 - Importance of Ecosystem and Plants.
 - Practices for Sustainable Environment.
 - 6 R Principle of Sustainable development.
 - Different types of pollution and control measures.
 - Type of water (Ground water, Surface water).
 - Recycle and reuse of water.
3. Quiz competition among workmen & site staff on “World Earth Day – 2023”.



Table 25: Training conducted at various places in WDFC

Training Place	Topic (2022)
MJB 147	Awareness On Earth Day
Tunnel Area	Theme, History, Importance, Good Behavior and Practices for Sustainable Environment
Viaduct 172	Theme, History, Importance, Good Behavior and Practices for Sustainable Environment
Viaduct 172	Waste Management, Good Housekeeping and Cleanliness
Viaduct 172	Oil Spill Mock Drill
Ch. 90+891	Preventing Environment Pollution
Kharbao Viaduct A2 side ,Ch.No.69+900	Environment Protection, Plantation, Air Pollution
Ch 93+000 (in front of SDPL office)	Plantation drive on occasion of Earth Week 2022
Ch. 37+700 (Station building)	Awareness program on Earth Day 2022
Kalamboli viaduct A-2 site	Awareness program on Earth Day 2022
Kundevahal Viaduct	Awareness program on Earth Day 2022
Kundevahal Casting yard	Training on Noise Awareness
Kundevahal viaduct	Training on Noise Awareness
Kundevahal viaduct, Kalamboli A1 site	Mass Water sprinkling

AWARENESS PROGRAMME ON

WORLD
EARTH
DAY



Tree prepared from waste iron materials



Mass Housekeeping Drive at Kopar Viaduct site



Waste to wealth: using tested cubes for Decorating in front of Site office/First -aid centre.



Manique has been prepared from waste materials



Banner for the Event



INTERNATIONAL NOISE AWARENESS DAY

International Noise Awareness Day is a global campaign, founded in 1996 by the Center for Hearing and Communication (CHC), aiming to raise awareness of the harmful effects of noise on hearing, health and quality of life, and inspire positive action in your community.

Noise affects people in many ways, but only deafness and annoyance receive actual interest from the general public. Worldwide, people are called upon to take part via various actions on this occasion.

The day is commemorated on the last Wednesday of April each year. Activities aimed at creating a focus not only on noise, but also on means of reducing noise levels.

Observing International Noise Awareness Day at DFCCIL (Dedicated Freight Corridor Corporation of India Limited) is a commendable effort to raise awareness about the impact of noise pollution on health and well-being.



Table 26: Training conducted at various places in WDFC (Noise Awareness)

Training Place	Topic
Kharbao Viaduct	Noise Awareness Day-Noise Sources, Prevention, Precautions, NIHL, Ear Plug & its usage, Distribution of Earplugs to labors
North Tunnel Ch. 94+041	Noise Awareness session on Occupational Noise exposure and health effects
Viaduct 172	Noise Awareness session on occupational noise exposure and health effects
Kundevahal Viaduct	International Noise Awareness Day
Kalamboli viaduct A1 Site	International Noise Awareness Day
MNB 100	International Noise Awareness Day

WORLD ENVIRONMENT DAY

Highlight of the Events (2023)

- Plantation Drive
- Awareness Programs / Trainings
- Poster Competition
- “Pick The Trash Challenge” Drive
- “Kabad Se Jugad” (Wealth from Waste) Drive (will be continued whole month)
- Oath/Pledge & Visible leadership
- Refreshment Activities
- Community Participation
- Rewards

Highlight of the Events (2022)

- Awareness Programs / Training
- Plantation Drive
- Clean-up/plastic collection Drive
- Quiz Competition
- Awards/Recognition



Awareness Programme

Rally was taken out on water saving at KOPOR Viaduct



Awareness on water saving at MNB-99



Staff Training at Paye Office



Site Awareness Programs / Trainings/ Banners



Quiz Competition



Award/Recognition



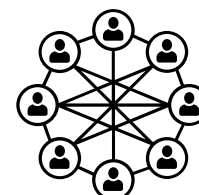
Plantation Drive



Clean-up/plastic collection Drive

DAYS OBSERVED BY DFCCIL FOR CREATING SHE AWARENESS

**KYOTO PROTOCOL DAY
(16TH FEBRUARY)**



**RED CROSS MONTH
(MARCH)**



**EMERGENCY PREPAREDNESS WEEK
(1ST TO 7TH MAY)**



**NATIONAL SAFETY DAY
(4TH MARCH)**



**WORLD HEALTH DAY
(7TH APRIL)**



**FIRE SAFETY DAY
(14TH APRIL)**



ROAD SAFETY WEEK
(1ST MONDAY TO SUNDAY OF JANUARY)



EARTH WEEK
(18TH - 22TH APRIL)



EARTH DAY
(20TH APRIL)



NOISE AWARENESS DAY
(20TH APRIL)



**ILO WORLD DAY FOR SAFETY AND
HEALTH AT WORK DAY**
(28TH APRIL)



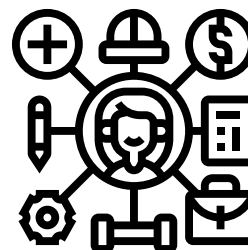
WORLD ENVIRONMENT DAY
(5TH JUNE)



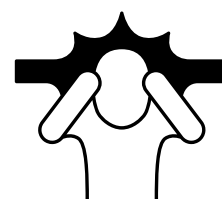
**WORLD DAY AGAINST CHILD LABOUR
(12TH JUNE)**



**OCCUPATIONAL HEALTH DAY
(9TH JULY)**



**WORLD TRAUMA DAY
(17TH OCTOBER)**



**WORLD AIDS DAY
(1ST DECEMBER)**



CHAPTER-6

GOVERNANCE CONTRIBUTION

Corporate governance in DFCCIL (Dedicated Freight Corridor Corporation of India Limited) refers to the system of rules, practices, and processes by which the company is directed and controlled. The chapter includes the following topics :

- Introduction
- Board Committee
- Risk Management

AT DFCCIL,

**our governance contribution
isn't just a responsibility; it's
a commitment to steering the
organization with unwavering
integrity, fostering a culture
of accountability, and
contributing to a sustainable
journey towards excellence.**



6.1. A brief statement on Company's philosophy on Corporate Governance

The company is dedicated to maintaining the highest business ethics and values standards. It complies with the provisions outlined in the Companies Act, 2013. This commitment reflects the company's focus on conducting its business ethically and transparently under legal and regulatory frameworks.

The company has been awarded the highest credit ratings by various Credit Rating Agencies, demonstrating its strong financial standing and creditworthiness. To pursue sustainability, the company contributes to economic growth and social progress and promotes care for climate and environmental protection.

Additionally, the company has received a certificate confirming its compliance with the conditions of Corporate Governance as per the Department of Public Enterprises (DPE) Guidelines on Corporate Governance from 2010. This certificate is included in the Directors' Report, underscoring the company's commitment to sound corporate governance practice.

6.2. Board of Directors

6.2.1 Composition of the Board

By Article 80 of the Articles of Association of the Company, the President of India has established that the Board of the Company must consist of a minimum of 6 Directors, with a maximum limit of 12 Directors. The President of India, through a letter numbered 2008/Infra/6/1 dated 04.05.2010, has officially approved the composition of the Board of Directors of DFCCIL as outlined in the document.

This composition specifies the structure and membership of the company's board.

- Chairman & Chief Executive Officer of Railway Board as Part-time Chairman.
- Five Full-time Functional Directors including Managing Director.
- One Part-time Official Director from Ministry of Railways, Government of India.
- One Part-time Official Director from NITI Aayog.
- Four Non-official Part-time/Independent Directors including one from Financial Institution depending on requirement

6.2.2. Strength of the Board

In accordance with Article 81(1) of the Articles of Association of the Company, the President of India holds the authority to appoint Directors of the Company. As of the date of the report, the total number of Directors on the Company's Board is ten.

This composition consists of:

- One Part-time Chairman.
- Five Wholtime Directors, including the Managing Director.
- One Part-time Official Director representing the Ministry of Railways.
- One Part-time Official Director representing NITI Aayog.
- Two Part-time Non-official Directors.

This composition reflects the diverse membership and governance structure of the company's Board of Directors.

6.3. Board Meetings

During the financial year 2022-23 the Board of Directors met six times to transact business. The meetings of the Board of Directors of the company were held on below-mentioned dates:

Meeting	Dates	Chairman
1st Meeting	11-04-2022	CRB, Railway board
2nd Meeting	30-06-2022	CRB, Railway board
3rd Meeting	27-07-2022	CRB, Railway board
4th Meeting	19-09-2022	CRB, Railway board
5th Meeting	09-11-2022	CRB, Railway board
6th Meeting	28-02-2023	CRB, Railway board

6.4. Board Evaluation

The Company operates as a Government entity under the administrative jurisdiction of the Ministry of Railways. The appointment process for all directors is established by the Government of India, and adherence to this procedure is maintained for the appointment of all Company directors. The selection of functional directors, including the Managing Director, follows the recommendations of the Public Enterprises Selection Board (PESB), aligning with the guidelines set by the Government of India. Additionally, the Department of Public Enterprises (DPE) has established a system and procedure for evaluating functional directors, including the Managing Director.

For functional directors, the evaluation process involves self-assessment by the respective directors, subsequent assessment by the Managing Director, and a final evaluation by the Ministry of Railways. The Managing Director undergoes self-evaluation, followed by a final evaluation by the Ministry of Railways.

Government Nominee Directors undergo evaluation by the Ministry of Railways in accordance with prescribed procedures. Independent Directors undergo evaluation by both the Ministry of Railways and, ultimately, the Department of Public Enterprises.

6.5. Training of Board Members

The board members and senior management personnel are nominated for various training programs from time to time. New directors joining the board are provided with documents about the company which includes the company's profile, memorandum and articles of association, Brochure, previous annual reports, MoU documents, DPE guidelines on corporate governance, terms of reference of various committees of the board.

6.6. Board Committees

In compliance with requirements under the Companies Act, 2013 and DPE Corporate Governance Guidelines 2010 as amended from time to time, the Board of Directors have constituted the following committees:

1. Audit Committee
2. Nomination & Remuneration Committee
3. Corporate Social Responsibility Committee

6.6.1. Audit Committee

Composition

The composition, quorum, role, and terms of reference of the Audit Committee are in accordance with Section 177 of the Companies Act, 2013, read with Rule 6 of the Companies (Meetings of the Board and its Power) Rules, 2014, and Chapter 4 of the DPE Corporate Governance Guidelines, 2010 as amended from time to time. The Audit Committee was originally constituted on 14.03.2008 and has been reconstituted as and when there has been a change in directors.

During FY 2022- 23, the Audit Committee was reconstituted one time and the composition thereof during the FY 2022-23 was as follows:

The composition of Audit Committee during the year was as follows:

Designation in Committee	From 01.04.2022 till 28.07.2022	29.07.2022 till 31.03.2023
Chairman	Shri B Ramana Kumar Independent Director	Shri Amarnath Yadav Independent Director
Members	Prof. Pawan Palta Independent Director	Prof. Pawan Palta Independent Director
	Shri Hira Ballabh Director (Finance)	Shri Hira Ballabh Director (Finance)
Special-Invited	Shri Hari Mohan Gupta Director (Infrastructure)	Shri Hari Mohan Gupta Director (Infrastructure)

Meetings

The FY 2022-23, seven meetings of the Audit Committee were held on 20.05.2022, 27.06.2022, 12.07.2022, 20.07.2022, 15.09.2022, 13.01.2023 and 06.03.2023 respectively.

Name of Member	Total meetings held during the tenure of Member	No. of meetings attended during the tenure of Member
Shri B. Ramana Kumar	4	4
Prof. Pawan Palta	7	6
Shri Amarnath Yadav	3	3
Shri Hira Ballabh	7	7

6.6.2. Nomination and Remuneration Committee

Composition

The composition, quorum, role, and terms of reference of the Nomination and Remuneration Committee are in accordance with Section 178 of the Companies Act, 2013, read with Rule 6 of Companies (Meetings of Board and its Powers) Rules, 2014 and Rule 4 of the Companies (Appointment and Qualification of Directors) Rules, 2014, and Chapter 4 of the DPE Corporate Governance Guidelines, 2010 as amended from time to time. The Committee was constituted on 13.08.2015 by dissolving and merging erstwhile HR Committee and Remuneration Committee.

Meetings

During the FY 2022-23, two meetings of the Nomination and Remuneration Committee were held on 28.06.2022 and 26.07.2022 respectively.

Name of Member	Total meetings held during the tenure of member	No. of meetings attended during the tenure of member
Shri Ravindra Nath Singh	2	2
Shri B. Ramana Kumar	2	2
Prof. Pawan Palta	2	2
Shri Amarnath Yadav	2	2
Shri Mukul Saran Mathur	N/A	N/A

During FY 2022-23, the Nomination and Remuneration Committee was reconstituted two times and the composition thereof during the FY 2022-23 was as follows:

Designation in Committee	From 01.04.2022 till 28.07.2022	From 29.07.2022 till 27.02.2023	From 28.02.2023 till 27.02.2023
Members	Shri Ravindra Nath Singh Nominee Director, MoR	Shri Ravindra Nath Singh Nominee Director, MoR	Shri Mukul Saran Mathur Nominee Director, MoR
	Shri B Ramana Kumar Independent Director	-	-
	Prof. Pawan Palta Independent Director	Prof. Pawan Palta Independent Director	Prof. Pawan Palta Independent Director
	Shri Amarnath Yadav Independent Director	Shri Amarnath Yadav Independent Director	Shri Amarnath Yadav Independent Director
Special-Invitee	Shri Nanduri Srinivas Director(OP&BD)	Shri Nanduri Srinivas Director(OP&BD)	Shri Nanduri Srinivas Director(OP&BD)
	Shri Hari Mohan Gupta Director (Infrastructure)	Shri Hari Mohan Gupta Director (Infrastructure)	Shri Hari Mohan Gupta Director (Infrastructure)

The acronym “N/A” denotes “Not Applicable” as no meeting was held during the tenure as Committee Member

6.6.3. Corporate Social Responsibility Committee

Composition

The composition, quorum, role, and terms of reference of the Corporate Social Responsibility Committee are in accordance with Section 135 of the Companies Act, 2013. The Committee was constituted on 13.06.2014 and has been reconstituted as and when there has been a change in directors. During FY 2022-23, the Corporate Social Responsibility Committee was reconstituted one time and the composition thereof during the FY 2022-23 was as follows:

Designation in Committee	From 01.04.2022 till 19.12.2023	From 20.12.2022 till 31.03.2023
Members	Shri B Ramana Kumar Independent Director	Prof. Pawan Palta Independent Director
	Shri Amarnath Yadav Independent Director	Shri Amarnath Yadav Independent Director
	Shri Hari MohanGupta Director (Infrastructure)	Shri Hari MohanGupta Director (Infrastructure)
Special-Invitee	Shri Hira Ballabh Director (Finance)	Shri Hira Ballabh Director (Finance)

Meetings

During the FY 2022-23, one meeting of the Corporate Social Responsibility Committee was held on 16.08.2022.

Name of Member	Total meetings held during the tenure of Member	No. of meetings attended during the tenure of Member
Shri B. Ramana Kumar	N/A	N/A
Shri Amarnath Yadav	1	1
Prof. Pawan Palta	1	1
Shri Hari Mohan Gupta	1	1

The acronym “N/A” denotes “Not Applicable” as no meeting was held during the tenure as Committee Member.

6.7. Code of Business Conduct and Ethics

The company has established a Code of Business Conduct and Ethics for the Board Members and Senior Management Personnel. This code is based on the Model Code of Conduct suggested in the Department of Public Enterprises (DPE) Guidelines on Corporate Governance, 2010. The Code of Business Conduct and Ethics has been approved by the Board of Directors and is available on the company's website at the provided link.

During the financial year 2021-22, the company received an annual affirmation of compliance with the Code of Business Conduct and Ethics from all Board Members and Senior Management Personnel. Additionally, a declaration signed by the Managing Director affirms the compliance with the Code of Business Conduct and Ethics by Board Members and Senior Management Personnel during that financial year. This highlights the commitment to ethical and responsible conduct within the organization.

6.8. Corporate Communication

Presence on numerous social media channels

The company has a dynamic social media presence across various platforms, including Twitter, Facebook, YouTube, Koo, and Instagram, with Instagram being added to the mix in March 2021. This presence has garnered a significant following from a diverse group of stakeholders and the general public.

The company actively utilizes its social media channels to showcase major milestones, achievements, project inaugurations, highlights, events, and participation in exhibitions. This approach enables the company to effectively communicate and engage with its stakeholders and audience of a varied diaspora, sharing information and updates and insights about its activities and contributions. Social media has become a valuable tool for transparently sharing information and maintaining an interactive connection with stakeholders and the public. This is our way of reporting to bring development and other activities to the knowledge of our stakeholders.

The status of DFCCIL' Social Media presence as on 31.09.2023

Particulars	Facebook Page (verified)	Twitter Handle (verified)	YouTube Channel (verified)	Koo Handle (verified)	LinkedIn Page
Page/Account/Channel created on	26.06.2015	09.09.2015	03.12.2015	03.12.2021	03.08.2022
No. of followers	46700+	28430+	24040+	38750+	4060+
No. of followers added in the FY	27000	4130	1320	33600	4060

6.9. Whistle Blower Policy

The company is committed to fostering an environment where any employee can voice concerns about unethical behavior or other wrongdoing without fear of repercussions. The policy offers a structure that allows workers to voice concerns about significant abnormalities inside the company without fear of retaliation. Protected disclosures made by Company employees, including those serving on deputation, are covered by the policy. As a result of a Whistle Blower reporting a Protected Disclosure under this Policy in good faith, DFCCIL is dedicated to making sure that the Whistle Blower receives no unfair treatment, including protection from victimization, disciplinary action, termination or suspension of service, harassment, threats, or intimidation. The CVO may grant such protection upon request from a party making a "Protected Disclosure" in accordance with this Policy.

Complete details regarding the Whistle-blower Policy of the Company can be accessed from <https://dfccil.com/Home/DynemicPages?MenuId=175> as available on the website.

Moreover, it is affirmed that no personnel has been denied access to the Audit Committee.

6.10. Compliance Certificate

A Certificate from Company Secretary in Practice regarding compliance of Corporate Governance Guidelines, 2010 issued by Department of Public Enterprises is placed at **Annexure - 14**.

6.11. Capital Expenditure on Project Execution

As of March 31, 2022, the cumulative expenditure on project execution (excluding land costs) amounted to INR 70,61,700.26 Lakh. During the financial year 2021-22, the gross capital expenditure on project execution was INR 13,22,055.87 Lakh.

6.12. Risk Management

6.12.1. Statement indicating development and implementation of risk management policy

The Company's unwavering commitment to operational excellence extends to its proactive approach to sustainable practices. In alignment with global standards, the company revised its Enterprise Risk Management (ERM) policy during the fiscal year 2022-23, recognizing the shift from construction to operational phases and the evolving nature of associated risks. Aligned with the ISO 31000-2018 standard, the comprehensive ERM framework systematically addresses risk across all facets of construction and operations, ensuring a sustainable and resilient business approach.

The company places a collective responsibility on fostering a risk-aware culture, engaging employees through training and awareness programs. This approach, encouraging active participation at all levels in risk identification and mitigation, enhances overall risk management capabilities, contributing to the establishment of a corporate ecosystem resilient to challenges. The Risk Management Committee (RMC) leads the ERM framework, ensuring activities align with guidelines and established policies, thus reinforcing a commitment to sustainability.

In addition to managing risks, the company remains at the forefront of technological advancements with a tool for robust data analysis on defects and risks. This technology supports sustainable practices by generating actionable insights for decision-makers. Proactive addressing of systemic issues, implementation of preventive measures, and efficient resource allocation through data-driven decision-making all contribute to the company's sustainability goals. By intertwining risk management practices with sustainability initiatives, the company is well-positioned to achieve long-term operational excellence while prioritizing environmental and social responsibility.

CHAPTER 7

CONTRIBUTION TO SDG GOALS

The Dedicated Freight Corridor Corporation of India Limited (DFCCIL) aligns its operations and initiatives with various Sustainable Development Goals (SDGs) outlined by the United Nations. The chapter include following topics :

- Sustainable Development Goals
- Advance Technology and Innovation
- Sustainability Assessment Report FY 22-23

7.1. Sustainable Development Goals



A Memorandum of Understanding is signed between the parties for the project “Saksham”-Phase IV skills in school 9th- 12th (1000 candidates) with Confederation of Indian Industry.

- Mix of Diesel and electric locomotives.
- Congestion-free rail movement.
- Payload in case of DFC scenario is higher (25T) w.r.t no DFC scenario (22.9T)
- DFCCIL held discussions with Solar Energy Corporation of India to explore the feasibility of setting up solar energy projects along its tracks and adjoining land parcels.



The company also focuses towards its employee and contribute towards one of the SDG goals i.e., decent work and economic growth.

The "Trucks on Trains" (ToT) service, specifically the "Innovative ToT" service, was initiated on the route between New Rewari in Haryana and New Palanpur in Gujarat on August 12, 2021. This service represents an innovative approach to transporting goods via a combination of trucks and trains.



Additionally, there is a reference to a "Reefer train" and the use of NMGHS wagons between New Rewari and New Palanpur for M/s AMAZON, indicating the specific operational aspects of this service.

Furthermore, it's mentioned that new Multimodal Logistic Parks (MMLPs) are being planned for New Kanpur in the Eastern Dedicated Freight Corridor (EDFC) and New Rewari & New Prithla in the Western Dedicated Freight Corridor (WDFC). These logistic parks play a crucial role in facilitating efficient and integrated logistics solutions, enhancing the transportation and distribution of goods.



The USP of DFC network is its capability to deliver faster, safer and reliable transit by virtue of its infrastructure standards and being dedicated for freight segment only.

- Crossed drainage structures are checked.
- Resettlement and rehabilitation to those affected during land acquisition.
- Plantation programme being carried.
- Burrow area Management.
- Batch type hot mix plants fitted with the bag filter / cyclonic spray scrubber will be installed for the reduction of the air pollution.

All vehicles, equipment and machinery used for construction will be regularly maintained to ensure that the emission levels conform to the SPCB/CPCB norms.



7.2. Advance Technology and Innovation

The Dedicated Freight Corridor Corporation of India Limited (DFCCIL) is committed to leveraging state-of-the-art technology and fostering innovation in its operations. Some key areas where DFCCIL incorporates advanced technology and innovation include:

- Internally developed DFIS (Dedicated Freight Information System)
- Truck-on-Train (TOT) service from New Rewari -New Palanpur-New Rewari
- EoTT (End of Train Telemetry)
- NMGHS (Newly Modified Goods) - Amazon Parcel
- Unidirectional automatic signaling with a 2 km inter-signal distance.
- Stations with Electronic interlocking system with LED light Multi-aspect color light signals.
- Mobile Radio Train Communication System (GSM-R).
- 2*25KV, 50 Hz AT traction feeding system.
- Usage of 60kg curved thick web switches.
- The ruling gradient in the running track will be 1 into 200.
- Distance between two TSS is 60- 80km.
- To run double stack containers on WDFC, the height of OHE is more than the conventional height.
- TPWS (Train Protection and Warning System) will be provided on WDFC to enhance safety.
- Mechanized laying of track.
- Use of Canted Turnouts.

List of Abbreviations

Abbreviation	
ABT	A-B Traction route
BNGS	M/S. Shree Cement Co. Ltd.
CA	Concession Agreement
CFL	Compact Fluorescent Lamps
CGM	Chief Project Manager
CGWB	Central Ground Water Board
CMS	Crew Management System
CO2	Carbon Di Oxide
CMLK	Kathuwas
CONCOR	Container Corporation of India
CPCB	Central Pollution Control Board
CPFS	Swaroopganj
CRO	Cattle Run Over
CSR	Corporate Social Responsibility
DDUN	New Deen Dayal Upadhyaya
DFC	Dedicated Freight Corridor
DFCR	Dedicated Freight Corridor - Railway
EDFC	Eastern Dedicated Freight Corridor
EOTT	End of Train Telemetry
GHG	Green House Gas

Abbreviation	
GRI	Global Reporting Index
GSM-R	Global System for Mobile Communications – Railway
HR	Human Resource
IR	Indian Railway
IRICEN	Indian Railways Institute of Civil Engineering
IRIEEN	Indian Railway Institute of Electrical Engineering Nashik
IRISET	Indian Railways Institute of Signal Engineering and Telecommunication
JICA	Japan International Cooperation Agency
Jr. Mgr	Junior Manager
JNPT	Jawaharlal Nehru port Trust
KWH	Kilowatt Hour
LCTS	Laxmi Cement Siding (BG)
LED	Light-Emitting Diode
MOR	Ministry of Railways
MMLP	Multimodal Logistic Parks
M-Sand	Manufactured Sand
NMGHS	New Modified Goods- High Speed
OP&BD	Operation and Business Development
PNUN	New Palanpur
RMCO	Risk Management Coordinators
RMC	Ready-Mix Concrete
REJN	New Rewari

Abbreviation	
Solar PV	Solar photovoltaic
SPCB	State Pollution Control Board
S&T	Signal and Telecommunication
SDG'S	Sustainability Development Goals
STTC	Signal & Telecommunication Training Centre
TAC	Track Access Charge
TMS	Train Management System
TOT	Truck-on-Train
TPRO	Trespasser Run Over
UNCK	M/S ultra tech NATHDWARA cement ltd
UOM	Unit of Measurement
WDFC	Western Dedicated Freight Corridor
YTD	Year To Date
ZRTI	Zonal Railway Training Institute

Annexure 1

Tata Projects Limited Sustainability Constuction Materials data Format FY 22-23

Key Performance Indicators (KPI)	Site Target FY 22-23	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	YTD FY 22-23
Alternate Materials														
Concrete done with m sand ("Alternate to Natural sand")	0%	100%	100%	100%	100%	100%	100%	100%	54%	84%	83%	83%	80%	90%
Concrete done with Flyash/ GGBS (in Concrete)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Steel Shuttering / System formwork	80%	67%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	90%
No of Trees planted		5	10	370	0	0	0	0	0	0	0	0	0	385

Annexure 2

Energy Consumption over EDFC (KRJN to BDNN) (FY 2021-2022 and 2022-2023)

SN	Bill Period		Section
	From	To	Khurja-Bhaupur (KWH)
1	02.03.2022	04.04.2022	95,247
2	04.04.2022	02.05.2022	1,23,373
3	02.05.2022	03.06.2022	1,37,684
4	03.06.2022	03.07.2022	1,38,885
5	03.07.2022	05.08.2022	1,28,243
6	05.08.2022	04.09.2022	1,30,066
7	04.09.2022	02.10.2022	1,13,149
8	02.10.2022	02.11.2022	1,02,589
9	02.11.2022	03.12.2022	1,08,348
10	03.12.2022	05.01.2023	1,11,187
11	05.01.2023	03.02.2023	1,04,677
12	03.02.2023	04.03.2023	94,436
13	04.03.2023	02.04.2023	1,05,848
14	02.04.2023	05.05.2023	1,20,484
15	05.05.2023	02.06.2023	1,30,213
16	02.06.2023	03.07.2023	1,28,531
17	03.07.2023	03.08.2023	1,36,073
18	03.08.2023	03.09.2023	1,28,335
19	03.09.2023	03.10.2023	1,33,321
20	03.10.2023	03.11.2023	1,61,044
21	03.11.2023	31.03.2024	7,03,793
Total (KRJN-BPUN)			31,35,521
Total (KRJN-BDNN)			20,57,578

Annexure 3

Water Usage Breakdown in Construction Activities and Facilities (FY 2022-2023).

Earth work (Excavation and Soil Compaction)	2940
Curing	19,626.83
Batching Plant / Conc. Mixing Plant	24607
Labour Colony	34260
Guest House	23949
Site/store office	5592
Dust suppression / cleaning	1554

Annexure 4

Waste Water Generated and Reused over EDFC (FY 2022- 2023)

Month	Description	Waste Generated	Waste Reused	Remarks
22-Apr	Waste Water(KL)	850.85	850	Reused for dust suppression for access road.
22-May	Waste Water(KL)	787.55	787	
22-Jun	Waste Water(KL)	916.35	916	
22-Jul	Waste Water(KL)	787.15	787	
22-Aug	Waste Water(KL)	774.65	774	
22-Sep	Waste Water(KL)	660	660	
22-Oct	Waste Water(KL)	576.4	576	
22-Nov	Waste Water(KL)	853.65	853	
22-Dec	Waste Water(KL)	724.78	724	
23-Jan	Waste Water(KL)	661.7	661	
23-Feb	Waste Water(KL)	702.33	702	
23-Mar	Waste Water(KL)	740.17	740	
	Total	9035.58	9030	

Annexure 5

Cement and Concrete waste Generated and Reused over EDFC (FY 2022- 2023)

Month	Description	Waste Generated	Waste Reused	Remaks
22-Apr	Cement & Concrete Waste(Kg)	5400	5400	Used in making access road, rest shed, pedestrian, low land fill area, fencing pole casting, stairs, etc.
22-May	Cement & Concrete Waste(Kg)	4680	4680	
22-Jun	Cement & Concrete Waste(Kg)	11775	11775	
22-Jul	Cement & Concrete Waste(Kg)	7725	7725	
22-Aug	Cement & Concrete Waste(Kg)	4765	4765	
22-Sep	Cement & Concrete Waste(Kg)	3950	3950	
22-Oct	Cement & Concrete Waste(Kg)	3989	3989	
22-Nov	Cement & Concrete Waste(Kg)	3512	3512	
22-Dec	Cement & Concrete Waste(Kg)	4947	4947	
23-Jan	Cement & Concrete Waste(Kg)	4560	4560	
23-Feb	Cement & Concrete Waste(Kg)	4120	4120	
23-Mar	Cement & Concrete Waste(Kg)	4120	4120	
Total		63543	63543	

Annexure 6

Waste Generated by Scrap material

	WDFC	EDFC
	Quantity of Scrap Material generated (T)	Quantity of Scrap Material generated (T)
Apr-22	3283.5	5.5
May-22	1097.2	2.24
Jun-22	1410.3	7.47
Jul-22	232.5	6.47
Aug-22	306.9	5.97
Sep-22	120.7	7.97
Oct-22	609.4	6.97
Nov-22	642.5	5.97
Dec-22	588.9	5.27
Jan-23	1901.5	5.27
Feb-23	4418.2	4.27
Mar-23	2108.3	4.27

Annexure 7

Waste Generated by Waste oil over EDFC (FY 2022- Sept 2023)

Month	Description	Waste Generated	Remarks
22-Apr	Waste Oil(ltr.)	254	Handed over to authorized recycler on quarterly basis
22-May	Waste Oil(ltr.)	80	
22-Jun	Waste Oil(ltr.)	250	
22-Jul	Waste Oil(ltr.)	365	
22-Aug	Waste Oil(ltr.)	327	
22-Sep	Waste Oil(ltr.)	295	
22-Oct	Waste Oil(ltr.)	265	
22-Nov	Waste Oil(ltr.)	260	
22-Dec	Waste Oil(ltr.)	265	
23-Jan	Waste Oil(ltr.)	225	
23-Feb	Waste Oil(ltr.)	225	
23-Mar	Waste Oil(ltr.)	225	

Annexure 8

Biodegradable waste, EDFC (FY 2022- 2023).

Month	Description	Waste Generated	Waste Reused	Remarks
Apr-22	Kitchen Waste(Kg)	201	201	Handed over to local farmer for cattle feeding
May-22	Kitchen Waste(Kg)	374	374	
Jun-22	Kitchen Waste(Kg)	452	173	
Jul-22	Kitchen Waste(Kg)	429	429	
Aug-22	Kitchen Waste(Kg)	418	418	
Sep-22	Kitchen Waste(Kg)	441	441	
Oct-22	Kitchen Waste(Kg)	480	480	
Nov-22	Kitchen Waste(Kg)	467	467	
Dec-22	Kitchen Waste(Kg)	453	453	
Jan-23	Kitchen Waste(Kg)	492	492	
Feb-23	Kitchen Waste(Kg)	499	499	
Mar-23	Kitchen Waste(Kg)	514	514	
	Total	5220	4941	

Annexure 9

Waste Generated by Cement Bags (FY 2022- 2023)

MONTH	DESCRIPTION	WASTE GENERATED	REMARKS
Apr- 22	CEMENT BAGS	67775	Handed over to authorized recycler
May- 22	CEMENT BAGS	41618	
Jun- 22	CEMENT BAGS	128082	
Jul- 22	CEMENT BAGS	57849	
Aug- 22	CEMENT BAGS	118410	
Sep- 22	CEMENT BAGS	103295	
Oct- 22	CEMENT BAGS	101818	
Nov- 22	CEMENT BAGS	119893	
Dec- 22	CEMENT BAGS	105468	
Jan- 23	CEMENT BAGS	91163	
Feb- 23	CEMENT BAGS	81783	
Mar- 23	CEMENT BAGS	68718	
Total		1085872	

Annexure 10

Summary of Forest Clearance EDFC and WDFC			
	Scope	Clearance recieved	Pending
Environement & Forest Clereance	739.70	517.48	222.22
Wildlife Clereance	146.65	146.65	0
Total of EDFC	886.35	664.13	222.22
Total of WDFC	160.89	147.16	13.73
Total EDFC& WDFC	1047.24	811.29	235.95

Annexure 11

Summary of Compensatory Tree Plantation in EDFC

Lot	Total scope	Compensatory tree plantation/survived (Within ROW and near Batching plant)	
		Planted	Survived
201	13460	16380	12496
202	21524	17,680	13,569
303	55,112	37,183	17,929
301	-	16700	-

Annexure 12

The total numbers of trainees attended training at different training centres

Training Centre	Total numbers of trainees
IRICEN, Pune	96
IRISET, Secundrabad	67
STTC, Ghaziabad	140
IRIEEN, Nasik	152
ZRTI	239
HHI, Noida	279
STC, Charbagh Lucknow	5
C&W Training center, Gaziabad	13

Annexure 13

Noise Receptors in EDFC.

	Noise Receptors in EDFC
Burial Grounds	2
Schools	11
Hospitals	3
Degree Colleges	5
Shrines	71

Annexure 14

Compliance Certificate on Corporate Governance

To,

The Members

Dedicated Freight Corridor Corporation of India Limited 5th Floor, Supreme Court Metro Station Building Complex, New Delhi - 110001

REG: COMPLIANCE CERTIFICATE WITH REFERENCE TO COMPLIANCE OF CONDITIONS OF CORPORATE GOVERNANCE UNDER GUIDELINES ON CORPORATE GOVERNANCE FOR CENTRAL PUBLIC SECTOR ENTERPRISES, 2010.

1. This certificate is in accordance with compliance of conditions of Corporate Governance by **DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED** (CIN: U60232DL2006GOI155068) hereinafter referred to as (“the Company”) for the Financial Year ended on 31st March 2023 as stipulated in Guidelines on Corporate Governance for Central Public Sector Enterprises, 2010 issued by Department of Public Enterprise (DPE), Ministry of Finance, Government of India.

2. The compliance of conditions of Corporate Governance is the responsibility of management. Our examination was limited to procedures and implementation thereof, adopted by the Company to ensure the compliance of the conditions of Corporate Governance. It is neither an audit nor an expression of opinion on the financial statements of the Company.

3. I have obtained all the information and explanations which to the best of my knowledge and belief were necessary for the purposes of certification and have been provided with such records, documents, certifications, etc., as had been required by me.

4. I certify that in respect of the aforesaid financial year ended on 31st March 2023, the Company has complied with various provisions of the Guidelines in its Corporate Governance Report except:

a. Clause No. 3.1 relating to Composition of Board of Directors – Independent Directors

5. I certify that in respect of the aforesaid financial year ended on 31st March 2023, the Company has complied with various provisions of the Guidelines with respect to its Corporate Governance.

For Balika Sharma & Associates

Company Secretaries

Sd/-

(Balika Sharma)

Partner FCS No.: 4816

Place: New Delhi CP No.: 3222

Date: 01.09.2023 UDIN: F004816E000914703

[illegible]

Email - contactdfccil@dfcc.co.in

Corporate Identity Number (CIN) - U60232DL2006GOI155068

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