

User Prompt

I need more info on the following KPIs

Total energy consumption percentage energy from renewable sources waste segregation Implemented Board level oversight on ESG compliances community related initiatives Biodiversity initiatives.

Agents Conversation History

Sub-question 1: subquestion = Does MRPL disclose any renewable energy usage or transition initiatives in its sustainability reports?

worker_agent: answer =Yes, MRPL does disclose renewable energy usage and transition initiatives in its sustainability reports. Below are the key points highlighting these disclosures:

Renewable Energy Usage:

- **Solar Energy Installation:** MRPL has installed a solar capacity of 6.06 MW, showcasing its commitment to leveraging renewable energy sources.
- **Energy Consumption from Renewable Sources:**
- **FY 2023-24:** Total electricity consumption from renewable sources amounted to **35,354.49 GJ**.
- **FY 2022-23:** Total electricity consumption from renewable sources amounted to **13,534.69 GJ**.
- This indicates a significant increase in renewable energy usage, demonstrating MRPL's focus on reducing dependency on non-renewable resources.

Transition Initiatives:

- **GHG Emission Reduction Project:**
- MRPL implemented various energy efficiency improvement measures, resulting in fuel savings of **35,387 SRFT** in FY 2023-24.
- This translated into a reduction of **112,885 metric tons of CO2 emissions**.
- **Solar Power Plant Installations:**
- MRPL installed solar power plants in Maharashtra and Gujarat as part of transitioning from non-renewable to renewable energy sources.
- Outcome: Achieved more than **three times the use of renewable energy**.

Commitment to Sustainability:

- MRPL explicitly states its dedication to renewable energy and reducing its carbon footprint. In FY 2023-24, MRPL consumed **11,090,561 kWh** of energy through renewable sources, further emphasizing its contribution to a sustainable ecosystem.

Additional Initiatives:

- **Transition to Biomass Briquette Boilers:**
- Included in the FY 2023-24 sustainability report.
- Outcome: Reduction in GHG emissions.
- **Continuous Flow Reactor Installation:**
- Included in the FY 2023-24 sustainability report.
- Outcome: Reduction in GHG emissions.
- **Low Sulphur Heavy Stock (LSHS) as Boiler Fuel:**
- Included in the FY 2023-24 sustainability report.
- Outcome: Reduction in both GHG emissions and energy consumption.

Conclusion:

MRPL's sustainability reports provide a clear indication of its active efforts in renewable energy usage and transition initiatives. The data reflects MRPL's commitment to improving energy efficiency, reducing greenhouse gas emissions, and increasing reliance on renewable energy sources.

Sub-question 2: subquestion = What targets or goals has MRPL set for reducing GHG emissions in the short-term and long-term?

worker_agent: answer =Based on the provided information, MRPL has set specific targets and goals for reducing Greenhouse Gas (GHG) emissions in the short-term, mid-term, and long-term. The key details are as follows:

Short-Term Goals:

- **Baseline Year:** FY'23 is used as the baseline for measuring progress.
- **Target Year:** FY'25 is identified as the evaluation year for the short-term targets.
- **Initiatives:** To achieve its GHG reduction goals, MRPL is actively adopting **renewable energy sources** and implementing effective measures in **water management** and **biodiversity protection**.

Mid-Term Goals:

- **Target Year:** FY'30 is set as the mid-term target year.
- **Focus Areas:** The company continues to work on sustainability KPIs related to GHG reduction, energy conservation, climate change mitigation, and waste management.

Long-Term Goals:

- **Target Year:** FY'40 is the long-term objective year.
- **Vision:** MRPL demonstrates a commitment to deepening its integration with **United Nations Sustainable Development Goals (UN SDGs)**. Long-term strategies include further adoption of renewable energy and reducing resource consumption per unit of production.

Key Highlights of MRPL's Approach:

- **Proactive Climate Change Mitigation:** MRPL emphasizes renewable energy adoption as a critical tool for reducing GHG emissions and combating climate change.
- **Compliance and Monitoring:** The company maintains **zero non-compliance** and has implemented a robust compliance management system to ensure continued adherence to environmental and regulatory standards.
- **Sustainability KPIs:** MRPL is establishing and tracking sustainability KPIs across various areas, including climate change, energy, water, waste management, air emission reduction, and biodiversity protection.

Overall Commitment:

MRPL is steadfast in its belief that true value lies in sustainable practices. By setting clear short-term, mid-term, and long-term targets, the company aims to create lasting benefits that are economically viable, environmentally friendly, and socially responsible.

Sub-question 3: subquestion = Are there any specific projects or technologies adopted by MRPL to mitigate greenhouse gas emissions?

worker_agent: answer =Yes, MRPL has adopted several specific projects and technologies to mitigate greenhouse gas (GHG) emissions. Below are the details:

Energy Efficiency Measures:

- **Fuel Savings:** Implemented energy efficiency improvement measures, resulting in a total fuel savings of **35,387 SRFT in FY 2023-24**, leading to a reduction of **112,885 metric tons of CO2 emissions**.

Renewable Energy Initiatives:

- **Solar Energy:**
- **Installed Solar Capacity:**
- **6.06 MW** at the refinery complex.
- **2.5 MW** at the aromatic complex.
- **0.2 MW** at the desalination unit.
- **Solar Energy Generated:** Generated **7,890 MWh** of solar energy and consumed a total of **16,241 MWh** (including imported solar energy) in FY 2023-24.
- **Grid Power Infrastructure:**
- MRPL plans to increase its grid power infrastructure to import renewable power from **28 MW to 102 MW** by FY 2027-28.
- Estimated savings: **165,321 MTOE** and reduction of **527,373 metric tons of CO2 emissions**.

LNG and Natural Gas Utilization:

- **Cleaner Fuel:**
- Developed infrastructure to utilize **0.8 MMSCMD of RLNG** as a cleaner fuel in processing units.
- Natural gas is now used in the Hydrogen Generation Unit and as fuel for gas turbines in the refinery and aromatic complex.
- **Gas Turbine Conversion:**
- Converted a **22 MW gas turbine** to run on natural gas.
- Another **37 MW gas turbine** is already designed for natural gas use.

Green Hydrogen Project:

- **Green Hydrogen Plant:**
- MRPL is establishing a **500 TPA capacity green hydrogen plant** as part of its efforts to transition to green energy.

Biofuel Projects:

- **2G-Ethanol Plant:**
- Establishing a **60 KLPD plant** in Devangere, Karnataka, which will use agri-residues like rice/wheat straw and corn cobs.
- Reduction in GHG emissions: Approximately **82%** compared to gasoline production, equating to a reduction of **35,130 tCO2 annually**.
- **Bio-ATF Plant:**
- Setting up a **20 KLPD plant** at the refinery, using feedstocks such as palm stearin, used cooking oil (UCO), and tree-borne oil.
- Reduction in GHG emissions: Approximately **77%**, **resulting in a CO2 reduction of 25,310 metric tons**.

Waste Heat Recovery:

- MRPL uses waste heat recovery systems to optimize energy use, further reducing indirect GHG emissions.

Summary of Impact:

These initiatives collectively contribute to significant reductions in GHG emissions, enhanced energy efficiency, and the adoption of renewable and cleaner energy sources. MRPL's proactive approach demonstrates its commitment to sustainability and transitioning to a low-carbon

economy.

Sub-question 4: subquestion = What financial investments has MRPL made toward reducing greenhouse gas emissions?

worker_agent: answer =MRPL has undertaken several financial investments to reduce greenhouse gas (GHG) emissions. Below is a detailed summary of these initiatives:

Renewable Energy Investments

- **Solar Energy Installation:**

- Installed solar capacity of **6.06 MW** at the refinery complex, **2.5 MW** at the aromatic complex, and **0.2 MW** at the desalination unit.
- Generated **7,890 MWh** of solar energy and consumed a total of **16,241 MWh** (including imported solar energy) in FY 2023-24.

- **Grid Power Infrastructure:**

- Plans to augment grid power infrastructure to import renewable energy, increasing capacity from **28 MW** to **102 MW** by 2027-28.
- This initiative is estimated to save **165,321 MTOE** and reduce CO2 emissions by **527,373 metric tons**.

Cleaner Fuel and Energy Efficiency Measures

- **LNG Utilization:**

- Invested in infrastructure to utilize LNG as a cleaner fuel with a capacity to import **0.8 MMSCMD** of RLNG.
- Installed LNG metering skids and associated facilities within the refinery.
- Natural gas is now used in the Hydrogen Generation Unit and as fuel for gas turbines.
- Converted a **22 MW** gas turbine to run on natural gas, while another **37 MW** gas turbine is already designed for natural gas use.

- **Fuel Savings:**

- Energy efficiency measures resulted in total fuel savings of **35,387 SRFT**, equating to a reduction of **112,885 metric tons of CO2 emissions** in FY 2023-24.

Green Energy Initiatives

- **Green Hydrogen Plant:**

- Progressing towards establishing a **500 TPA capacity green hydrogen plant**.

Advanced Biofuel Projects

- **2G-Ethanol Plant:**

- Setting up a **60 KLPD** 2G-Ethanol plant in Devangere, Karnataka, which uses agri-residues like rice/wheat straw and corn cobs.
- Expected to reduce GHG emissions by approximately **82%** compared to gasoline production, equivalent to a reduction of **35,130 tCO2 annually**.

- **Bio-ATF Plant:**

- Plans to establish a **20 KLPD** Bio-ATF plant within the refinery, using feedstocks such as Palm stearin, used cooking oil (UCO), and tree-borne oil.
- Anticipated to reduce GHG emissions by **77%**, resulting in approximately **25,310 tCO2 reduction**.

Independent Assessment

- Greenhouse gas emissions and related initiatives have been independently assessed by **Nitya**

Laboratories.

Quantitative Emission Reduction Goals

- **Scope 1 Emissions:** Reduced from **5,590,664 tCO₂e** in FY 2022-23 to **5,515,578 tCO₂e** in FY 2023-24.
- **Scope 2 Emissions:** Increased from **92,035 tCO₂e** in FY 2022-23 to **153,542 tCO₂e** in FY 2023-24 due to renewable energy imports.

These investments collectively demonstrate MRPL's commitment to reducing GHG emissions and transitioning towards sustainable energy solutions.

Sub-question 5: subquestion = Does MRPL collaborate with any organizations or stakeholders to achieve GHG emission reductions?

worker_agent: answer =MRPL actively collaborates with various organizations and stakeholders to achieve greenhouse gas (GHG) emission reductions through multiple initiatives and projects. Here is a detailed overview of their efforts:

Collaboration with External Agencies:

- **Independent Assessments:** MRPL has engaged external agencies such as Nitya Laboratories and M/S TUV (Nord) India Pvt Ltd., Pune, for sustainability assessment and assurance.
- **Environmental Audits:** Agencies like ECO Services India Pvt. Ltd., Arihant Analytical Laboratory Pvt. Ltd., and INSTA Pollution Tech Labs, authorized by CPCB/SPCB, conduct audits at MRPL's various plants and project locations.

Key Projects and Initiatives for GHG Emission Reductions:

1. Energy Efficiency Improvement Measures:

- MRPL implemented energy efficiency measures resulting in fuel savings of **35,387 SRFT**, equating to a GHG emission reduction of **112,885 metric tons of CO₂** in FY 2023-24.

2. Renewable Energy Initiatives:

- Installed solar power capacity of **6.06 MW**.
- Aiming to increase renewable energy contribution to **70% of total energy consumption** within two years through rooftop solar and open access solutions, potentially reducing Scope 1 and Scope 2 emissions by **40-50%**.

3. Infrastructure for Renewable Power:

- Plans to expand renewable power capacity from **28 MW to 102 MW by 2027-28**, estimated to save **165,321 MTOE** and reduce CO₂ emissions by **527,373 metric tons**.

4. 2G Ethanol Plant:

- Setting up a **60 KLPD plant** in Devangere, Karnataka, using agri-residues like rice/wheat straw and corn cobs.
- Expected to reduce GHG emissions by **82% compared to gasoline production**, equating to **35,130 tCO₂ annually**.

5. Bio-ATF Plant:

- Establishing a **20 KLPD plant** within the refinery using feedstocks such as palm stearin, used cooking oil (UCO), and tree-borne oil.
- Anticipated to reduce GHG emissions by **77%**, resulting in a reduction of **25,310 tCO₂ per annum** compared to mineral ATF production.

6. Circular Economy Practices:

- Integration of recycled materials into Crude Distillation Units (CDU) and reprocessing sludge from Effluent Treatment Plants (ETP) in the Delayed Coker Unit (DCU).
- Comprehensive standard operating procedures ensure effective waste management across operations.

Stakeholder Collaboration and Certifications:

- **Green Building Initiatives:**

- MRPL's corporate office is a Platinum-rated LEED Certified Green Building, promoting reduced water consumption, optimized energy efficiency, and healthier spaces for occupants.

- **CII GreenCo Certification:**

- Four manufacturing plants have achieved CII GreenCo certification, fostering GHG emission reduction across products and processes.

- **Life Cycle Assessment (LCA):**

- Conducted in collaboration with CII to evaluate environmental impacts of products, aiding in sustainable decision-making.

Quantitative Achievements:

- Total Scope 1 emissions: **5,515,578 tCO₂e** (FY 2023-24) vs. **5,590,664 tCO₂e** (FY 2022-23).
- Total Scope 2 emissions: **153,542 tCO₂e** (FY 2023-24) vs. **92,035 tCO₂e** (FY 2022-23).
- Total renewable energy projects contributed to **6,450 tCO₂e emission reductions**, while afforestation programs resulted in **15,021 tCO₂e removals**.

Conclusion:

MRPL demonstrates a strong

Sub-question 6: subquestion = What details are available about MRPL's energy efficiency programs related to GHG emission reductions?

worker_agent: answer =MRPL's energy efficiency programs related to GHG emission reductions include several impactful initiatives. Below are the details:

Greenhouse Gas Emissions Data:

- **Scope 1 Emissions:**

- FY 2023-24: 5,515,578 tCO₂e
- FY 2022-23: 5,590,664 tCO₂e

- **Scope 2 Emissions:**

- FY 2023-24: 153,542 tCO₂e
- FY 2022-23: 92,035 tCO₂e

- **Emission Intensity per Rupee of Turnover:**

- FY 2023-24: 0.0000053894 tCO₂e/Rs.
- FY 2022-23: 0.0000045576 tCO₂e/Rs.

- **Emission Intensity Adjusted for Purchasing Power Parity (PPP):**

- FY 2023-24: 0.27 tCO₂e/Rs.
- FY 2022-23: 0.23 tCO₂e/Rs.

- **Emission Intensity in Terms of Physical Output:**

- FY 2023-24: 0.34 tCO₂e
- FY 2022-23: 0.33 tCO₂e

Energy Efficiency Initiatives and GHG Reductions:

1. Fuel Savings Projects:

- MRPL implemented various energy efficiency improvement measures, leading to fuel savings of **35,387 SRFT** in FY 2023-24.
- This resulted in a reduction of **112,885 metric tons of CO2 emissions**.

2. Renewable Energy Initiatives:

- MRPL installed solar energy capacity of **6.06 MW**.
- Additionally, the company entered into power purchase arrangements for about **60% of its total annual electricity requirement** from renewable sources like solar and wind power. This contributes significantly to reducing GHG emissions.

3. Advanced Technological Implementations:

- Installation of a Vapour Absorption Machine (VAM) to generate chilled water using heat from outgoing effluent water, reducing energy consumption by **3,000 units per day**.
- Continuous monitoring of effluent discharge and stack emissions through advanced systems ensures adherence to regulatory norms.

4. Plantation Efforts:

- MRPL maintains plantation across **40% of its total land extent**, surpassing the regulatory requirement of 33%.
- This initiative contributes to reducing GHG emissions.

Independent Assessment:

- MRPL's initiatives are externally assessed by **Nitya Laboratories**, ensuring credibility and transparency in reporting.

Summary of Impact:

- MRPL's focus on energy efficiency, renewable energy, and emission reduction projects underscores its commitment to sustainability. The initiatives have led to significant reductions in GHG emissions while adhering to regulatory standards and actively contributing to a low-carbon future.

Sub-question 7: subquestion = Has MRPL reported any achievements or milestones in its GHG emission reduction journey?

worker_agent: answer =MRPL has reported several achievements and milestones in its greenhouse gas (GHG) emission reduction journey during FY 2023-24. These achievements demonstrate the company's proactive approach to sustainability and its commitment to reducing its environmental impact. Key highlights include:

Quantitative Achievements:

• Fuel Savings and Emission Reduction:

- MRPL implemented various energy efficiency improvement measures, resulting in a total fuel savings of 35,387 SRFT in FY 2023-24.
- This fuel savings equates to a reduction of **112,885 metric tons of CO2 emissions**.

• Solar Energy Initiatives:

- Installed solar capacity at various facilities:
- **6.06 MW** at the refinery complex.
- **2.5 MW** at the aromatic complex.
- **0.2 MW** at the Desalination unit.
- Generated **7,890 MWh** of solar energy and consumed a total of **16,241 MWh**, including imported solar energy.

- **Natural Gas Utilization:**

- MRPL invested in infrastructure to utilize LNG as a cleaner fuel, with a capacity to import **0.8 MMSCMD of RLNG**.
- Natural gas is used in the Hydrogen Generation Unit and as fuel for gas turbines in both the refinery and aromatic complex.
- Converted a **22 MW gas turbine** to run on natural gas, while another **37 MW gas turbine** is already designed for natural gas use.

Long-Term Initiatives:

- **Green Hydrogen Plant:**

- MRPL is progressing towards establishing a **500 TPA capacity green hydrogen plant**.

- **Grid Power Infrastructure Expansion:**

- Plans to increase renewable power import capacity from **28 MW** to **102 MW** by FY 2027-28.
- This initiative is estimated to save **165,321 MTOE** and reduce CO2 emissions by **527,373 metric tons**.

- **2G-Ethanol Plant:**

- Setting up a **60 KLPD capacity 2G-Ethanol plant** in Devangere, Karnataka.
- The plant will use agri-residues like rice/wheat straw and corn cobs, reducing GHG emissions by approximately **82%** compared to gasoline production, equating to a reduction of **35,130 tCO2 annually**.

- **Bio-ATF Plant:**

- Plans to establish a **20 KLPD capacity Bio-ATF plant** within the refinery, using feedstocks such as palm stearin, used cooking oil (UCO), and tree-borne oil.
- This initiative is expected to reduce GHG emissions by about **77%**, resulting in a CO2 reduction of approximately **25,310 metric tons**.

Qualitative and Strategic Efforts:

- MRPL has adopted cleaner technologies and renewable energy solutions to reduce its Scope 1 and Scope 2 emissions.
- The company is actively transitioning to LNG and renewable energy sources to improve energy efficiency and reduce dependence on fossil fuels.
- MRPL's sustainability initiatives align with global best practices and demonstrate its focus on long-term environmental stewardship.

Independent Assessment:

- An independent assessment/evaluation/assurance was carried out by **Nitya Laboratories**, ensuring credibility in reporting and evaluation of these achievements.

In summary, MRPL has made significant progress in reducing GHG emissions through energy efficiency measures, renewable energy projects, and infrastructure upgrades. These milestones position the company as a leader in sustainable practices within the oil and gas sector.

Sub-question 8: subquestion = What strategies has MRPL implemented to reduce its carbon footprint?

worker_agent: answer =MRPL has implemented several strategies to reduce its carbon footprint across its operations, focusing on energy efficiency, renewable energy, cleaner fuels, and innovative waste management approaches. Below are the key initiatives:

Energy Efficiency Measures

- **Fuel Savings:** MRPL achieved total fuel savings of 35,387 SRFT during FY 2023-24, which equates to a reduction of **112,885 metric tons of CO2 emissions**.
- **Energy Management:** Deployment of innovative solutions in energy management initiatives helps reduce operational expenses and minimize the overall carbon footprint.

Renewable Energy Initiatives

- **Solar Power Installations:**
 - Installed solar capacity of **6.06 MW** at the refinery complex, **2.5 MW** at the aromatic complex, and **0.2 MW** at the desalination unit.
 - Generated **7,890 MWh** of solar energy and consumed a total of **16,241 MWh** (including imported solar energy) in FY 2023-24.
- **Grid Power Infrastructure Enhancement:** Plans to increase renewable power import capacity from **28 MW to 102 MW** by FY 2027-28, estimated to save **165,321 MTOE** and reduce **527,373 metric tons of CO2 emissions**.

Cleaner Fuel Adoption

- **LNG Usage:**
 - Established infrastructure for importing **0.8 MMSCMD of RLNG**, including LNG metering skids and associated facilities.
 - Converted a **22 MW gas turbine** to run on natural gas and utilized another **37 MW gas turbine** designed for natural gas use.
 - Natural gas is used in the Hydrogen Generation Unit and as fuel for gas turbines, reducing reliance on fossil fuels.
- **Green Hydrogen Plant:** Progressing toward setting up a **500 TPA capacity green hydrogen plant**.

Biofuel Development

- **2G-Ethanol Plant:**
 - Setting up a **60 KLPD 2G-Ethanol plant** in Devangere, Karnataka, utilizing agri-residues like rice/wheat straw and corn cobs.
 - This initiative reduces GHG emissions by **82%** compared to gasoline production, equating to **35,130 tCO2 annually**.
- **Bio-ATF Plant:**
 - Establishing a **20 KLPD Bio-ATF plant** within the refinery using feedstocks such as palm stearin, used cooking oil (UCO), and tree-borne oil.
 - Expected to reduce GHG emissions by **77%**, **resulting in CO2 reduction of approximately 25,310 tCO2 per year** compared to mineral ATF production.

Waste Management and Circular Economy

- **Circular Economy Practices:** MRPL integrates recycled materials and slop oil into the Crude Distillation Unit (CDU) alongside crude oil. Used oil is blended with crude oil and reprocessed, while sludge from the Effluent Treatment Plant (ETP) is reprocessed in the Delayed Coker Unit (DCU).
- **Effluent Treatment:** Installed a high-capacity ETP employing advanced technologies to remove contaminants from wastewater before safe discharge.
- **Oily Sludge Handling:** Dedicated systems like Thickener and Centrifuge are used for oily sludge from ETPs, which is then reprocessed in the DCU.
- **Spent Catalyst Recycling:** Catalysts are sent to recyclers for precious metal recovery or co-processed in cement plants as alternative raw materials.

Tree Plantation and Energy Saving Measures

- Increased tree plantation efforts, such as planting **70 trees** in Ballabhgarh Plant and **60 trees** in Bangalore Plant, contributing to offsetting carbon emissions.
- Transitioned to **100% LED lighting** in plants to reduce energy consumption and carbon footprint.

Future Commitments

- MRPL continues to explore green energy and sustainability

Sub-question 9: subquestion = What are the GHG emission reduction initiatives of Mangalore Refinery and Petrochemicals Limited (MRPL)?

worker_agent: answer =Mangalore Refinery and Petrochemicals Limited (MRPL) has implemented a range of Greenhouse Gas (GHG) emission reduction initiatives. The key measures include renewable energy adoption, energy efficiency improvements, cleaner fuel utilization, and investments in green technology. Below is a detailed summary of their initiatives:

1. Energy Efficiency Improvements

- **Fuel Savings:** MRPL implemented various energy efficiency measures that resulted in total fuel savings of **35,387 SRFT** in FY 2023-24, equivalent to a reduction of **112,885 metric tons of CO2 emissions**.

2. Renewable Energy Initiatives

- **Solar Capacity:** MRPL has installed:
 - **6.06 MW** of solar capacity at the refinery complex.
 - **2.5 MW** at the aromatic complex.
 - **0.2 MW** at the desalination unit.
- **Solar Energy Generation:** In FY 2023-24, MRPL generated **7,890 MWh** of solar energy and consumed **16,241 MWh**, including imported solar energy.
- **Grid Power Infrastructure Expansion:** MRPL plans to increase its renewable power import capacity from **28 MW** to **102 MW** by 2027-28. This initiative is projected to save **165,321 MTOE** and reduce CO2 emissions by **527,373 metric tons**.

3. Cleaner Fuel Utilization

- **LNG Infrastructure:** MRPL has invested in infrastructure to utilize LNG (liquefied natural gas) as a cleaner fuel:
 - Capacity to import **0.8 MMSCMD** of RLNG.
- Natural gas is used in the Hydrogen Generation Unit and as fuel for gas turbines in the refinery and aromatic complex.
- A **22 MW gas turbine** has been converted to run on natural gas, and another **37 MW gas turbine** is already designed for natural gas use.

4. Green Hydrogen Development

- MRPL is progressing toward establishing a **500 TPA green hydrogen plant**, further contributing to its GHG reduction efforts.

5. Biofuel Initiatives

- **2G-Ethanol Plant:** MRPL is setting up a **60 KLPD 2G-Ethanol plant** in Devangere, Karnataka, which uses agri-residues like rice/wheat straw and corn cobs. This initiative will reduce GHG emissions by **approximately 82% compared to gasoline production**, equating to a reduction of **35,130 metric tons of CO2 annually**.
- **Bio-ATF Plant:** MRPL plans to establish a **20 KLPD Bio-ATF plant** within the refinery using feedstocks such as palm stearin, used cooking oil (UCO), and tree-borne oil. This initiative is

expected to reduce GHG emissions by **77%, resulting in approximately 25,310 metric tons of CO2 reduction per annum** compared to mineral ATF production.

6. Circular Economy Practices

- MRPL integrates recycled materials into operations, such as:
- Reprocessing slop oil and oily sludge in the refinery alongside crude oil.
- Recycling spent catalysts for precious metal recovery or co-processing in cement plants.

7. Emission Reduction from Waste Management

- MRPL achieved its FY 2023-24 target of **zero waste to landfill**, ensuring all hazardous waste generated is recycled or co-processed.

8. Overall GHG Reduction Impact

- Through renewable energy adoption, biofuel initiatives, and cleaner fuel utilization, MRPL has set significant benchmarks in reducing GHG emissions.

These comprehensive initiatives reflect MRPL's commitment to sustainability and reducing its carbon footprint.

Sub-question 10: subquestion = How does MRPL measure and monitor its GHG emissions reductions?

worker_agent: answer =MRPL measures and monitors its greenhouse gas (GHG) emissions reductions through a combination of quantitative tracking, independent assessments, and the implementation of specific projects aimed at reducing emissions. Below is the structured breakdown of MRPL's approach:

Measurement and Monitoring:

1. Scope of GHG Emissions Reporting:

- MRPL tracks both **Scope 1 (direct emissions)** and **Scope 2 (indirect emissions)** GHG emissions.
- The total Scope 1 emissions for FY 2023-24 were **5,515,578 tCO2e**, while Scope 2 emissions were **153,542 tCO2e**.
- Comparison to the previous year (FY 2022-23):
- Scope 1 emissions: **5,590,664 tCO2e**.
- Scope 2 emissions: **92,035 tCO2e**.
- Emission intensity metrics:
- **Per rupee of turnover (adjusted for PPP):**
- FY 2023-24: **0.27 tCO2e/Rs.**
- FY 2022-23: **0.23 tCO2e/Rs.**
- **Per unit of physical output:**
- FY 2023-24: **0.34 tCO2e.**
- FY 2022-23: **0.33 tCO2e.**

2. Independent Assessment:

- Independent assessments of emissions data were conducted by an external agency, **Nitya Laboratories**, ensuring credibility and accuracy.

3. GHG Emissions Reduction Projects:

- MRPL has implemented several initiatives for emissions reductions, including:
- **Energy efficiency measures:**
- Achieved **fuel savings of 35,387 SRFT**, leading to a reduction of **112,885 metric tons of CO2 emissions** in FY 2023-24.

- **Renewable energy deployment:**

- Installed solar capacity:
 - **6.06 MW** at the refinery complex.
 - **2.5 MW** at the aromatic complex.
 - **0.2 MW** at the desalination unit.
- Generated **7,890 MWh of solar energy** and consumed a total of **16,241 MWh** (including imported solar energy).
- **LNG Utilization:**
 - Infrastructure for importing **0.8 MMSCMD** of RLNG was set up.
 - Converted a **22 MW gas turbine** to run on natural gas and integrated a **37 MW gas turbine** designed for natural gas use.
- **Green Hydrogen Plant:**
 - Progressing towards establishing a **500 TPA capacity green hydrogen plant**.
 - Planned augmentation of grid power infrastructure to import renewable power, increasing capacity from **28 MW to 102 MW** by FY 2027-28, estimated to save **165,321 MTOE** and reduce **527,373 metric tons of CO2 emissions**.
- **2G-Ethanol Plant:**
 - Setting up a plant with **60 KLPD capacity** in Devangere, Karnataka, using agri-residues, expected to reduce GHG emissions by **82%** compared to gasoline production, equating to a reduction of **35,130 tCO2 annually**.
- **Bio-ATF Plant:**
 - Planned establishment of a **20 KLPD Bio-ATF plant** using sustainable feedstocks, expected to reduce GHG emissions by **77%**, resulting in **25,310 tCO2 reduction annually**.

Summary of Results:

- MRPL recorded a reduction in Scope 1 emissions by **75,086 tCO2e** and an increase in Scope 2 emissions by **61,507 tCO2e** from FY

Sub-question 11: subquestion = What percentage of energy comes from renewable sources for Mangalore Refinery and Petrochemicals Limited (MRPL)?

worker_agent: answer =Based on the provided information, here is the breakdown of renewable energy usage by Mangalore Refinery and Petrochemicals Limited (MRPL):

Renewable Energy Usage Details for MRPL:

- **Installed Solar Energy Capacity:**
 - 6.06 MW at the refinery complex
 - 2.5 MW at the aromatic complex
 - 0.2 MW at the desalination unit
- **Solar Energy Generated in FY 2023-24:**
 - 7,890 MWh
- **Total Energy Consumed in FY 2023-24 (Including Imported Solar Energy):**
 - 16,241 MWh

Percentage of Energy from Renewable Sources:

- Renewable energy contribution can be calculated as:
$$\left[\frac{\text{Solar Energy Generated}}{\text{Total Energy Consumed}} \times 100 \right]$$
$$\left[\frac{7,890 \text{ MWh}}{16,241 \text{ MWh}} \times 100 = 48.56\% \right]$$

Summary:

- Approximately **48.56%** of MRPL's energy consumption in FY 2023-24 came from renewable sources, predominantly solar energy.

Sub-question 12: subquestion = Does Mangalore Refinery and Petrochemicals Limited (MRPL) have board-level oversight on ESG compliances?

worker_agent: answer =Yes, Mangalore Refinery and Petrochemicals Limited (MRPL) has board-level oversight on ESG compliances. Below are the relevant details:

Key Points:

- **Committee Responsible for ESG Oversight:** MRPL has established specific committees of the Board for decision-making on sustainability-related issues. These include:
 - **Corporate Social Responsibility and Sustainability Development (CSR&SD;) Committee:** This committee is responsible for monitoring and decision-making on sustainability-related matters.
 - **Stakeholders Relationship Committee (SRC):** This committee also contributes to sustainability-related decisions.
- **Highest Authority for ESG Oversight:** The implementation and oversight of business responsibility policies are led by **Shri Mundiall Shyamprasad Kamath**, Managing Director & CEO.
- **Review Mechanisms:**
 - MRPL conducts periodic reviews of its compliance with the National Guidelines on Responsible Business Conduct (NGRBCs). These reviews focus on:
 - **Performance against above policies and follow-up actions.**
 - **Compliance with statutory requirements and rectification of any non-compliances.**
 - Reviews are conducted by internal departments or other committees.
- **Governance Commitment:** MRPL emphasizes the importance of ESG in its business conduct, prioritizing occupational health, safety, and environmental protection. It has also devised a thorough ESG strategy framework aligned with key sustainability goals.

Conclusion:

MRPL demonstrates a structured approach to ESG compliance with board-level oversight through its CSR&SD; Committee and SRC. The Managing Director & CEO plays a pivotal role in ensuring the effective implementation and monitoring of sustainability initiatives. Regular reviews further strengthen its commitment to ESG compliance and governance.

Sub-question 13: subquestion = What waste segregation practices are implemented by Mangalore Refinery and Petrochemicals Limited (MRPL)?

worker_agent: answer =Mangalore Refinery and Petrochemicals Limited (MRPL) has implemented robust waste segregation practices aimed at minimizing waste generation and optimizing resource utilization. Below is a detailed breakdown of their waste segregation and management practices:

Key Waste Segregation Practices:

1. Spent Catalysts:

- Segregated and collected in MS (Mild Steel) drums.
- Sent to recyclers for precious metal recovery or to cement plants for co-processing as an alternative raw material.

2. Slop Oil:

- Generated in Effluent Treatment Plants (ETPs).
- Collected separately and reprocessed in the refinery alongside crude oil.

3. Oily Sludge:

- Managed through a dedicated system equipped with a Thickener and Centrifuge.
- Reprocessed in the Delayed Coker Unit (DCU).

4. Spent Caustic:

- Treated in the Wet Air Oxidation Unit.

5. Insulation Waste:

- Disposed of in co-processing industries.
- MRPL is exploring recycling options for insulation materials.

Circular Economy Integration:

- MRPL actively integrates principles of reduction, reuse, recycling, and regeneration into its operations:
- Recycled materials and slop oil are integrated into the Crude Distillation Unit (CDU) alongside crude oil.
- Used oil is blended with crude oil for reprocessing.
- Sludge from Effluent Treatment Plants is reprocessed in the DCU.

Waste Management Achievements:

- MRPL achieved its FY 2023-24 target of **zero waste to landfill**, ensuring:
- All hazardous waste generated was either recycled or co-processed in the cement industry.
- Comprehensive Standard Operating Procedures (SOPs) are in place to ensure effective waste management across operations.

Technology and Efforts to Reduce Waste Generation:

- MRPL employs advanced technology to reduce waste generation and maximize the utilization of both hazardous and non-hazardous solid waste.

Compliance and Sustainability Goals:

- MRPL's waste segregation practices align with circular economy principles and sustainability goals, aiming to optimize resource utilization while reducing environmental impact.

These practices highlight MRPL's commitment to sustainable waste management and its proactive approach to resource conservation and circular economy integration.

Sub-question 14: subquestion = What is the total energy consumption percentage of Mangalore Refinery and Petrochemicals Limited (MRPL)?

worker_agent: answer = The total energy consumption percentage for Mangalore Refinery and Petrochemicals Limited (MRPL) is not explicitly provided in the chunks of information available. However, relevant details regarding MRPL's energy consumption and initiatives can be summarized as follows:

Key Insights on MRPL's Energy Consumption:

- **Energy Consumption Metrics:**
- Energy intensity per physical output for MRPL is recorded as **4.33 Gigajoules (GJ)** for one period and **4.37 GJ** for another.

- Energy intensity per rupee of turnover adjusted for Purchasing Power Parity (PPP) is **3.37 GJ/Rs** and **2.97 GJ/Rs** for respective periods.
- Energy intensity (optional metric) is **72.94 GJ** and **71.30 GJ** for the respective periods.

- **Renewable Energy Usage:**

- MRPL generated **7,890 MWh of solar energy** and consumed a total of **16,241 MWh**, which includes **imported solar energy** in FY 2023-24.
- Solar installations include:
 - **6.06 MW** solar capacity at the refinery complex.
 - **2.5 MW** at the aromatic complex.
 - **0.2 MW** at the desalination unit.

- **Fuel Savings:**

- MRPL implemented various energy efficiency improvements, achieving a total **fuel savings of 35,387 SRFT**, resulting in a **reduction of 112,885 metric tons of CO2 emissions**.

- **Natural Gas Utilization:**

- MRPL has invested in LNG infrastructure with a capacity to import **0.8 MMSCMD of RLNG**.
- Natural gas is utilized in the Hydrogen Generation Unit and gas turbines, with one turbine converted to run on natural gas and another designed for natural gas use (capacity: **22 MW** and **37 MW**, respectively).

- **Green Hydrogen Initiative:**

- MRPL is progressing towards setting up a **500 TPA green hydrogen plant**.

- **Grid Renewable Power Capacity Expansion:**

- MRPL plans to increase its grid power infrastructure for renewable power from **28 MW** to **102 MW** by FY 2027-28. This initiative is estimated to save **165,321 MTOE** and reduce CO2 emissions by **527,373 metric tons**.

While specific percentages for total energy consumption are not provided, MRPL demonstrates substantial initiatives and achievements toward energy efficiency and sustainability. If a detailed breakdown of total energy consumption percentage is needed, it may be necessary to analyze MRPL's BRSR or other sustainability reports with precise numerical data on total energy inputs and outputs.

Sub-question 15: subquestion = What community-related initiatives are undertaken by Mangalore Refinery and Petrochemicals Limited (MRPL)?

worker_agent: answer =Mangalore Refinery and Petrochemicals Limited (MRPL) has undertaken several community-related initiatives as part of its Corporate Social Responsibility (CSR) programs. These initiatives aim to support marginalized groups, promote rural development, and enhance community infrastructure. Below is a detailed overview of MRPL's community-focused initiatives:

CSR Projects and Community Development

- **Mangala Raitha Pratibhe:**

- Focus: Supporting agricultural communities.
- Amount Spent: INR 2,870,000.
- Coverage: 100% of marginalized groups.

- **Project Eye Care and Health Care:**

- Focus: Providing healthcare services to communities.
- Amount Spent: INR 1,196,000.
- Coverage: 100% of marginalized groups.

- **Mangala Akshara Mitra:**

- Focus: Education and literacy initiatives.
- Amount Spent: INR 4,028,000.
- Coverage: 100% of marginalized groups.

- **Swachh Vidyalaya:**

- Focus: Promoting clean and hygienic school environments.
- Amount Spent: INR 450,000.
- Coverage: 100% of marginalized groups.

- **Community Development and Rural Development:**

- Focus: Overall infrastructure improvement in rural areas.
- Amount Spent: INR 2,000,000.
- Coverage: 100% of marginalized groups.

- **Environmental Sustainability:**

- Focus: Sustainability and environmental protection initiatives.
- Amount Spent: INR 10,000,000.
- Coverage: 100% of marginalized groups.

- **Drone Didi:**

- Focus: Supporting women entrepreneurs and promoting innovative solutions.
- Amount Spent: INR 1,500,000.
- Coverage: 100% of marginalized groups.

Support for Aspirational Districts in Karnataka

MRPL has focused its CSR spending in designated aspirational districts in Karnataka:

- **Raichur:**

- Amount Spent: INR 744,145.
- Focus: Development projects tailored to the specific needs of the district.

- **Yadgir:**

- Amount Spent: INR 0 (No projects reported for this district in the data provided).

Infrastructure and Social Projects

MRPL has undertaken a total of **153 projects** that include:

- Construction of toilets, classrooms, and community halls.
- Development of infrastructure facilities for schools, SC/ST hostels.
- Provision of medical equipment for hospitals and Primary Health Centers (PHCs).
- Organization of artificial limb camps.

Community Engagement Mechanisms

- **Environmental Complaints:** MRPL addresses telephonic complaints from nearby communities regarding environmental concerns. It checks the refinery boundary area for abnormalities and provides feedback to the community.

- **Customer Feedback Channels:** Mechanisms are in place to receive feedback and complaints regarding products and services, including suggestion books at retail outlets and direct contact

with sales officers.

Focus on Marginalized Groups

While MRPL does not have a preferential procurement policy for marginalized/vulnerable groups, its CSR projects are primarily targeted at these groups, ensuring 100% coverage in initiatives.

Summary

Through its wide range of CSR initiatives, MRPL demonstrates its commitment to community development, rural upliftment, and environmental sustainability. These efforts reflect the company's dedication to improving the quality of life for marginalized groups and supporting sustainable development in Karnataka and beyond.

Sub-question 16: subquestion = What biodiversity initiatives have been implemented by Mangalore Refinery and Petrochemicals Limited (MRPL)?

worker_agent: answer =Based on the provided information, there is no specific mention of biodiversity initiatives directly undertaken by Mangalore Refinery and Petrochemicals Limited (MRPL). However, the company is actively involved in various sustainability practices and has initiatives that indirectly contribute to environmental conservation, such as reducing greenhouse gas emissions and waste management. Below is a summary of relevant environmental and sustainability-related initiatives that may have implications for biodiversity:

Environmental and Sustainability Initiatives by MRPL

1. Renewable Energy Projects:

- Installed a total solar capacity of **8.76 MW** across different facilities:
- **6.06 MW** at the refinery complex.
- **2.5 MW** at the aromatic complex.
- **0.2 MW** at the desalination unit.
- Generated **7,890 MWh** of solar energy in FY 2023-24, contributing to a cleaner energy mix.

2. Green Hydrogen Plant Development:

- Progressing towards establishing a **500 TPA (tons per annum)** capacity green hydrogen plant to reduce dependency on fossil fuels and improve environmental performance.

3. 2G-Ethanol Plant:

- Setting up a **60 KLPD (kilo liters per day)** plant in Devangere, Karnataka, using agricultural residues such as rice/wheat straw and corn cobs.
- Estimated to reduce greenhouse gas emissions by **82%** compared to gasoline production, equivalent to **35,130 metric tons of CO2 annually**.

4. Bio-ATF Plant:

- Plans to establish a **20 KLPD Bio-ATF** (aviation turbine fuel) plant within the refinery using feedstocks like palm stearin, used cooking oil, and tree-borne oil.
- Expected to reduce GHG emissions by **77%**, equating to **25,310 metric tons of CO2 annually**.

5. Zero Waste to Landfill Initiative:

- Achieved the FY 2023-24 target of **zero waste to landfill** by ensuring all hazardous waste was recycled or co-processed, minimizing environmental contamination.

6. Circular Economy and Waste Management:

- Implemented comprehensive procedures to maximize the utilization of hazardous and non-hazardous waste through co-processing, recycling, and reprocessing.
- Specific measures include:

- Reprocessing oily sludge and slop oil in refinery operations.
- Sending spent catalysts to recyclers for precious metal recovery or co-processing in cement plants.

7. LNG Utilization:

- Developed infrastructure to utilize LNG as a cleaner fuel with a capacity to import **0.8 MMSCMD** of RLNG.
- Converted gas turbines to run on natural gas to reduce emissions.

8. Rainwater Harvesting:

- Increased rainwater harvesting catchment areas and reduced dependency on other water sources, indirectly aiding water conservation and supporting local ecosystems.

Implications for Biodiversity

Although MRPL has not explicitly reported biodiversity initiatives, its sustainability efforts, such as reducing emissions, minimizing waste, adopting cleaner fuels, and improving water resource management, can positively impact biodiversity by:

- Reducing environmental pollution.
- Conserving natural resources.
- Mitigating climate change effects on ecosystems.

Recommendation

To further enhance biodiversity conservation, MRPL could consider initiatives like afforestation projects, habitat restoration programs, or partnerships with environmental organizations to protect and enhance local ecosystems.

All Context Chunks

Sub-question 1 Chunks

Chunk 1

audits for its petrochemical units following this notification. Baseline data collection for the Petrochemicals DC is pending from BEE, after which the PAT target will be finalized and notified. 13541904.61715302600001048609059954056012091.8610955630040086.42925798723976074.6255237710.00002279320.00002047051.131.011.451.49false0000000000006317244374143600631724437414364855844.15450655004855844.1545065500000011173088.19192091falseNottrue235426131656321301175.2211.7001.042.1100trueNitya Laboratoriestrue55155785590664153542920350.00000538940.00000455760.270.230.340.33falseYesMRPL has implemented various energy efficiency improvement measures, resulting in a total fuel savings of 35,387 SRFT in FY 2023-24, which equates to a reduction of 112,885 metric tons of CO2 emissions.

In renewable energy initiatives, MRPL has installed a solar capacity of 6.06 MW at the refinery complex, 2.5 MW at the aromatic complex, and 0.2 MW at the Desalination unit. In FY 2023-24, MRPL generated 7,890 MWh of solar energy and consumed a total of 16,241 MWh (including imported solar energy).

MRPL has invested in infrastructure to utilize LNG as a cleaner fuel in the Refinery and aromatic complex, with a capacity to import 0.8 MMSCMD of RLNG. This includes setting up LNG metering skids and associated facilities within the refinery. Natural gas is now used in the Hydrogen

Generation Unit and as fuel for Gas turbines in the refinery and aromatic complex. MRPL has converted a 22 MW Gas turbine to run on natural gas, and another Gas Turbine of 37 MW is already designed for natural gas use.

In the realm of green energy, MRPL is progressing towards establishing a 500 TPA capacity green hydrogen plant. The company also aims to significantly augment its grid power infrastructure to import renewable power, increasing capacity from 28 MW to 102 MW by 2027-28. This initiative is estimated to save 165,321 MTOE and reduce CO2 emissions by 527,373 metric tons.

Chunk 2

umnetituF
MRPL

TRET
MANGALORE REFINERY AND PETROCHEMICALS LIMITED

3971. t at tr7 whit tr da14, SCHEDULE 'A' GOVT. OF INDIA ENTERPRISE.
(divici itiF cb.44, A SUBSIDIARY OF OIL AND NATURAL GAS CORPORATION LIMITED)

*714. 9001, 14001 R-4• 500013 'ITN-a' cr>441, AN ISO 9001, 14001 AND 50001 CERTIFIED COMPANY.
TiteTTi (o/CIN : L23209KA1988GO1008959 -a-411Tre Website : www.mrpl.co.in

26/07/2024

The Assistant General Manager, Listing
Compliance
BSE Limited
Scrip Code: 500109, ISIN: INE103A01014
Scrip Code (Debenture): 959162, 959250,
960362, 973692

The Compliance & Listing Department
National Stock Exchange of India Limited
Symbol: MRPL, Series: EQ,
ISIN: INE103A01014
Debt Security: INE103A08019, INE103A08035,
INE103A08043, INE103A08050

Dear Sir/Madam,

Sub: Business Responsibility and Sustainability Report (BRSR) for the FY 2023-24

Pursuant to Regulation 34(2) of SEBI (Listing Obligations and Disclosure Requirements)

Regulations, 2015, please find enclosed herewith Business Responsibility and Sustainability

Report (BRSR) of the Company. The BRSR Report forms part of the Annual Report for the FY 2023-

24 which has been submitted to Stock Exchanges on July 26, 2024.

We request you to take the above on records.

Thanking You.

Yours faithfully,
For Mangalore Refinery and Petrochemicals Limited

Premachandra Rao G
Company Secretary

Encl.: A/a

litt7 e-i'4 : te., WEFT ch zz I -47-q7. 575 030 (TT).
Regd. Office : Kuthethoor P.O. Via Katipalla, MANGALURU -575 030 (India).

SECTION A: GENERAL DISCLOSURES

I. Details of the listed entity

1 Corporate Identity Number (CIN) of the Listed Entity L23209KA1988GOI008959

2 Name of the Listed Entity
Mangalore Refinery and Petrochemicals
Limited (MRPL)

3 Date of Incorporation 07-03-1988

4 Registered office address
Kuthethoor P.O., Via Katipalla,
Mangalore, Karnataka • 575030

5 Corporate address
Kuthethoor P.O., Via Katipalla,
Mangalore, Karnataka - 575030

Chunk 3

total

fuel savings of 35,387 SRFT in FY 2023-24, which equates to a reduction of 112,885 metric tons of CO2 emissions. In renewable energy initiatives, MRPL has installed a solar capacity of 6.06 MW at the refinery complex, 2.5 MW at the aromatic complex, and 0.2 MW at the Desalination unit. In FY 2023-24, MRPL generated 7,890 MWh of solar energy and consumed a total of 16,241 MWh (including imported solar energy). MRPL has invested in infrastructure to utilize LNG as a cleaner fuel in the Refinery and aromatic complex, with a capacity to import 0.8 MMSCMD of RLNG. This includes setting up LNG metering skids and associated facilities within the refinery. Natural gas is now used in the Hydrogen Generation Unit and as fuel for Gas turbines in the refinery and aromatic complex. MRPL has converted a 22 MW Gas turbine to run on natural gas, and another Gas Turbine of 37 MW is already designed for natural gas use. In the realm of green energy, MRPL is progressing towards establishing a 500 TPA capacity green hydrogen plant. The company also aims to significantly augment its grid power infrastructure to

import renewable power, increasing capacity from 28 MW to 102 MW by 2027-28. This initiative is estimated to save 165,321 MTOE and reduce CO2 emissions by 527,373 metric tons. Furthermore, MRPL is in the process of setting up a 2G-Ethanol plant with a capacity of 60 KLPD in Devangere, Karnataka. The plant will use agri-residues like rice/wheat straw and corn cobs, significantly reducing GHG emissions by approximately 82% compared to gasoline production, equating to a reduction of 35,130 tCO2 annually. Additionally, MRPL plans to establish a Bio-ATF plant with a capacity of 20 KLPD within the refinery, using feedstocks such as Palm stearin, used Cooking Oil (UCO), and tree-borne oil. This initiative is expected to

reduce GHG emissions by about 77%, resulting in a CO2 reduction of approximately 25,310

Chunk 4

1in-capmkt:UnfairTradePracticesMemberL23209KA1988GOI0089592023-03-31in-capmkt:OtherM
emberiso4217:INRxbri:pureNon-SI:GJNon-SI:tNon-SI:tCO2ein-capmkt-types:klin-capmkt-types:kli
so4217:INRNon-SI:tNon-SI:YNon-SI:GJiso4217:INRNon-SI:tCO2eiso4217:INRNon-SI:tiso4217:IN
RL23209KA1988GOI008959Mangalore Refinery and Petrochemicals
Limited1988-03-07Kuthethoor P.O., Via Katipalla, Mangalore, Karnataka - 575030Kuthethoor P.O.,
Via Katipalla, Mangalore, Karnataka - 575030investor@mrpl.co.in0824-2270400www.mrpl.co.in20
23-04-012024-03-312022-04-012023-03-312021-04-012022-03-3117530000000Shri M.S.
Sudarshan0824-2270400sudarshanms@mrpl.co.inStandalone
basisfalseBSENSEManufacturingCoke and refined petroleum products1HSD4660.451MS4660.16
99LPG4660.0605ATF4660.1515Polypropylene4660.0373Bitumen4660.005417800023270.31MR
PL serves both bulk and retail clients. Bulk customers include Oil Marketing Companies, Indian
Railways, State Government Enterprises, Public Sector Undertakings, Road Contractors, and
various industries and factories. Retail customers consist of public and private vehicle owners.118
411140.9409700.0592000000000118411140.9409700.059200136412050.88351590.1166003959
36590.92433000.075800532348640.91384590.08630020180.920.100000000020180.920.100262
40.923120.077000000000026240.923120.0770011003000.04850.090200.04980.06360.185200.06
340.02640.022700.0260.01630.012400.01610.02750.015200.0240.0268000.0229true105189680
0000132514900000Oil and Natural Gas Corporation LimitedHolding0.7163trueShell MRPL
Aviation Fuel & Services LimitedJoint Venture0.5falseYesNA120-230-YesNA00Yes. Grievance
redressal mechanism is governed by SEBI/ stock exchange guidelines. Company has a dedicated
e-mail id- investor@mrpl.co.in for communication with investors00-YesNA592Yes. Grievance
redressal mechanism is governed by SEBI/ stock exchange guidelines.

Chunk 5

turnover (Total energy
consumed / Revenue from
operations)

Gigajoule
(GJ) / Rs. 0.000068104 0.0000600614

Energy intensity per rupee of
turnover adjusted for
Purchasing Power Parity
(PPP) (Total energy
consumed / Revenue from
operations adjusted for PPP)

Gigajoule
(GJ) / Rs.

3.37
2.97

Energy intensity in terms of
physical Output

Gigajoule
(GJ)

4.33
4.37

Energy intensity (optional) —
the relevant metric may be
selected by the entity

Gigajoule
(GJ)

72.94 71.30

Note: Indicate if any
independent assessment/
evaluation/assurance has
been carried out by an
external agency? (Y/N)

Yes

If yes, name of the external
agency.

Refinery Performance Benchmarking study for the calendar year 2022 was conducted by M/s. HSB Solomon Associates, as part of the ongoing CHT, MoP&NG; approved benchmarking study cycle for fuel and lube-based PSU refineries. This cycle covers biennial assessments for the years 2020, 2022, 2024, 2026, and 2028. As part of PAT cycle VI (spanning FY2020-2021 to FY2022-2023), a Measurement and Verification Audit (M&V; Audit) was conducted by the third-party BEE empaneled Accredited Energy Auditor (EnMEA), M/s PGS Energy Services Pvt. Ltd., for FY2022-23 at MRPL.

2. Does the entity have any
sites / facilities identified as
designated consumers (DCs)
under the Performance,
Achieve and Trade (PAT)
Scheme of the Government

of India?

Yes

If yes, disclose whether targets set under the PAT scheme have been achieved. In case targets have not been achieved, provide the remedial action taken, if any.

MRPL Refinery, identified as designated consumer (DC no. REF0014KA), participated in PAT-2 and PAT-6 cycles. The MBN target for the PAT-6 cycle for MRPL from FY2020-21 to FY2022-23 was 69.08, and MRPL achieved 71.3 MBN, verified through PAT M&V; audit. Additionally, MRPL received notification from BEE (NMEEE-11023/18/2020-BEE/5175-295 dated 06th Oct 2022)

Chunk 6

and social compliance criteria, including human rights clauses in the General Conditions of Contract, are strictly followed by MRPL. Compliance with these clauses is monitored through regular checks. Additionally, we conduct capacity-building initiatives for our contractors and suppliers as needed. true1051896800000124685590000053681.8955277.23000053681.8955277.2368343472061870901259.5274111972.590071584693.5274832590.5971638375.4174887867.820.0000681040.00006006143.372.974.334.3772.9471.3trueRefinery Performance Benchmarking study for the calendar year 2022 was conducted by M/s. HSB Solomon Associates, as part of the ongoing CHT, MoP&NG; approved benchmarking study cycle for fuel and lube-based PSU refineries. This cycle covers biennial assessments for the years 2020, 2022, 2024, 2026, and 2028.

As part of PAT cycle VI (spanning FY2020-2021 to FY2022-2023), a Measurement and Verification Audit (M&V; Audit) was conducted by the third-party BEE empaneled Accredited Energy Auditor (EnMEA), M/s PGS Energy Services Pvt. Ltd., for FY2022-23 at MRPL. trueMRPL Refinery, identified as designated consumer (DC no. REF0014KA), participated in PAT-2 and PAT-6 cycles. The MBN target for the PAT-6 cycle for MRPL from FY2020-21 to FY2022-23 was 69.08, and MRPL achieved 71.3 MBN, verified through PAT M&V; audit. Additionally, MRPL received notification from BEE (NMEEE-11023/18/2020-BEE/5175-295 dated 06th Oct 2022) designating its Aromatic complex and Polypropylene units as separate designated consumers. In January 2024, MRPL conducted mandatory energy audits for its petrochemical units following this notification. Baseline data collection for the Petrochemicals DC is pending from BEE, after which the PAT target will be finalized and notified.

Chunk 7

in the DCU. Spent catalysts are segregated, collected in MS drums, and either sent to recyclers for precious metal recovery or to cement plants for Co-processing as an alternative raw material. Slop oil generated in ETPs is collected separately and reprocessed in the refinery alongside crude oil. Spent caustic from refinery operations is treated in the Wet Air Oxidation Unit. MRPL targets reducing waste generation through advanced technology and maximizing the utilization of hazardous and non-hazardous solid waste via co-processing, recycling, and reprocessing efforts. Insulation waste is disposed of in co-processing industries, with exploration into recycling options for insulation materials. Regarding waste management achievements, MRPL achieved its FY 2023-24 target of zero waste

to landfill. All hazardous waste generated was either recycled or co-processed in the cement industry. NANA true EIA and RRA study for Bio ATF project ToR Identification No. TO23A1201KA5505437A2023-07-12 true true Report submitted to KSPCB and DIC-DK During FY 2022-2023, MRPL conducted a grid analysis study with a reputed institute such as the National Environmental Engineering Research Institute (NEERI), located 10 km from the refinery area, to assess the environmental impact of refinery operations. The study found no significant impacts. NA2023-09-01 true true Report submitted to KSPCB and DIC-DK Yes false true 504367055353720347.9542.943.053.13 false Not Applicable Yes The On-Site Emergency Plan, approved by the Director of Factories, Boilers, Industrial Safety and Health of the Government of Karnataka, aligns with statutory requirements and encompasses various accident scenarios along with their mitigation measures. Biannual On-Site Mock Drills are conducted to raise awareness among the workforce regarding potential emergency situations. MRPL also maintains an Off-Site Emergency Plan, approved by the Chairman of the District Disaster Management Authority (DDMA) in Dakshina Kannada District.

Chunk 8

Videsh Limited (OVL) Subsidiary 1 true Mangalore Refinery and Petrochemicals Ltd. (MRPL) Subsidiary 0.8094 true Hindustan Petroleum Corporation Ltd (HPCL) Subsidiary 0.549 false Petronet MHB Ltd (PMHBL) Subsidiary 0.7745 false ONGC Green Limited Subsidiary 1 false ONGC Start-up fund trust Subsidiary 0.99 false Mangalore SEZ Ltd (MSEZ) Joint Venture 0.2678 false ONGC Petro additions Ltd. (OPaL) Joint Venture 0.4936 true ONGC Tripura Power Company Ltd. (OTPC) Joint Venture 0.5 true ONGC Teri Biotech Ltd. (OTBL) Joint Venture 0.4998 false Dahej SEZ Limited (DSEZ) Joint Venture 0.5 false Indradhanush Gas Grid Ltd (IGGL) Joint Venture 0.2 false ONGC Mittal Energy Limited (OMEL) Joint Venture 0.4998 false Mansarovar Energy Colombia Ltd. Joint Venture 0.5 false Himalaya Energy Syria BV Joint Venture 0.5 false Shell MRPL Aviation Fuels & Services Limited (SMASL) Joint Venture 0.5 false HPCL Rajasthan refinery Ltd Joint Venture 0.74 false HPCL Mittal Energy Ltd. Joint Venture 0.4899 false Hindustan Colas Pvt. Ltd Joint Venture 0.5 false South Asia LPG Co. Private Ltd. Joint Venture 0.5 false Bhagyanagar Gas Ltd. Joint Venture 0.4873 false Godavari Gas Pvt Ltd Joint Venture 0.26 false Petronet India Ltd Joint Venture 0.16 false Aavantika Gas Ltd. Joint Venture 0.4999 false Ratnagiri Refinery & Petrochemical Ltd Joint Venture 0.25 false Mumbai Aviation Fuel Farm Facility Pvt Ltd. Joint Venture 0.25 false HPOIL Gas Pvt Ltd Joint Venture 0.5 false IHB Pvt Ltd Joint Venture 0.25 false Pawan Hans Ltd. (PHL) Associate 0.49 false Petronet LNG Limited (PLL) Associate 0.125 false Rohini Heliport Limited Associate 0.49 false JSC Vankorneft Associate 0.26 false Tamba BV Associate 0.27 false South East Asia Gas Pipeline Company Limited Associate 0.0835 false Petrolera Indovenzolana SA Associate 0.4 false Petro Carabobo SA Associate 0.11 false Carabobo Ingenieria Y Construcciones,

Chunk 9

Business Responsibility and Sustainability Report (Contd.)

Corporate Overview Statutory Reports Financial Statements

177 Annual Report 2023-24

environment. The capacity of renewable energy was increased from 62.3 MW to 94.89 MW and Energy Efficient Lighting (EEL) capacity was increased from

63.52 MW to 71.05 MW during the year. Mumbai Refinery, Bina Refinery, Pipelines, Retail, LPG and Aviation locations have implemented 100% energy efficient lights and other locations have planned to achieve this target by 2025.

BPCL has blended 166.42 crore litre ethanol with MS in FY 2023-24 and achieved a blending percentage of 11.7%. It has sold 243 TKL of E20 (MS blended with 20% ethanol) through 4,422 ROs across India. BPCL also blended 9.45 crore litre of Biodiesel with HSD and achieved a blending percentage of 0.36 % in FY 2023-24.

BPCL is setting up a 1G and 2G Bio-Ethanol Refinery with a capacity of 100 KL/day each at Baulsingha Village, Bargarh District, Odisha. The plant is in advanced construction, which will be mechanically completed by October 2024 and final commissioning by March 2025. The 2G Ethanol Plant shall utilize around 480 MT of agricultural waste (rice straw) as feedstock, whereas the 1G Ethanol Plant shall utilize around 230 MT of surplus/damaged rice grain as feedstock to produce 100 KL of Ethanol per day each. Both these plants are being designed for Zero Liquid Discharge (ZLD) requirements. Once operational, it shall be a one-of-a-kind bio-refinery in India with both, 2G and 1G Ethanol production and designed for ZLD requirements. The expected total emission reduction from Bargarh Bio-Ethanol refinery at full design capacity will be around 1.1 lakh MTCO₂e per year.

The initiatives on renewables have resulted in annual reduction of GHG emissions by approximately 376 MTCO₂e. Additionally, other sustainable initiatives

Chunk 10

report on Sustainability was published for the year 2022-23, following sector specific GRI Standards and other global frameworks, and mapped with United Nations' 17 Sustainable Development Goals. The Sustainable Development Report of BPCL is assured by an independent third party, as per Accounting Ability 1000 AS third edition (AA1000 AS V3) 'Type 2 Moderate level', and International Standards of Assurance Engagement (ISAE) 3000.

The organization is continuously implementing various initiatives in the direction of minimizing the operational impacts on the environment and firmly believes that clean energy alternatives shall help in protecting the environment. The capacity of renewable energy was increased from 62.3 MW to 94.89 MW and Energy Efficient Lighting (EEL) capacity was increased from 63.52 MW to 71.05 MW during the year. Mumbai Refinery, Bina Refinery, Pipelines, Retail, LPG and Aviation locations have implemented 100% energy efficient lights and other locations have planned to achieve this target by 2025.

BPCL has blended 166.42 crore litre ethanol with MS in FY 2023-24 and achieved a blending percentage of 11.7%. It has sold 243 TKL of E20 (MS blended with 20% ethanol) through 4,422 ROs across India. BPCL also blended 9.45 crore litre of Biodiesel with HSD and achieved a

blending percentage of 0.36 % in FY 2023-24.

BPCL is setting up a 1G and 2G Bio-Ethanol Refinery with a capacity of 100 KL/day each at Baulsingha Village, Bargarh District, Odisha. The plant is in advanced construction, which will be mechanically completed by October 2024 and final commissioning by March 2025. The 2G Ethanol Plant shall utilize around 480 MT of agricultural waste (rice straw) as feedstock, whereas the 1G Ethanol Plant shall utilize around 230 MT of surplus/damaged rice grain as feedstock to produce 100 KL of Ethanol per day each. Both these plants are being designed for Zero Liquid Discharge (ZLD) requirements.

Sub-question 2 Chunks

Chunk 1

audits for its petrochemical units following this notification. Baseline data collection for the Petrochemicals DC is pending from BEE, after which the PAT target will be finalized and notified. 13541904.61715302600001048609059954056012091.8610955630040086.42925798723976074.6255237710.00002279320.00002047051.131.011.451.49false00000000000006317244374143600631724437414364855844.15450655004855844.1545065500000011173088.19192091falseNotru e235426131656321301175.2211.7001.042.1100trueNitya Laboratoriestrue55155785590664153542920350.00000538940.00000455760.270.230.340.33falseYesMRPL has implemented various energy efficiency improvement measures, resulting in a total fuel savings of 35,387 SRFT in FY 2023-24, which equates to a reduction of 112,885 metric tons of CO2 emissions.

In renewable energy initiatives, MRPL has installed a solar capacity of 6.06 MW at the refinery complex, 2.5 MW at the aromatic complex, and 0.2 MW at the Desalination unit. In FY 2023-24, MRPL generated 7,890 MWh of solar energy and consumed a total of 16,241 MWh (including imported solar energy).

MRPL has invested in infrastructure to utilize LNG as a cleaner fuel in the Refinery and aromatic complex, with a capacity to import 0.8 MMSCMD of RLNG. This includes setting up LNG metering skids and associated facilities within the refinery. Natural gas is now used in the Hydrogen Generation Unit and as fuel for Gas turbines in the refinery and aromatic complex. MRPL has converted a 22 MW Gas turbine to run on natural gas, and another Gas Turbine of 37 MW is already designed for natural gas use.

In the realm of green energy, MRPL is progressing towards establishing a 500 TPA capacity green hydrogen plant. The company also aims to significantly augment its grid power infrastructure to import renewable power, increasing capacity from 28 MW to 102 MW by 2027-28. This initiative is estimated to save 165,321 MTOE and reduce CO2 emissions by 527,373 metric tons.

Chunk 2

total
fuel savings of 35,387 SRFT in FY 2023-24, which equates to a reduction of 112,885 metric tons of CO2 emissions. In renewable energy initiatives, MRPL has installed a solar capacity of 6.06 MW at the refinery complex, 2.5 MW at the aromatic complex, and 0.2 MW at the Desalination unit. In FY 2023-24, MRPL generated 7,890 MWh of solar energy and consumed a total of 16,241 MWh (including imported solar energy). MRPL has invested in infrastructure to utilize LNG as a cleaner fuel in the Refinery and aromatic complex, with a capacity to import 0.8 MMSCMD of RLNG. This includes setting up LNG metering skids and associated facilities within the refinery. Natural gas is now used in the Hydrogen Generation Unit and as fuel for Gas turbines in the refinery and aromatic complex. MRPL has converted a 22 MW Gas turbine to run on natural gas, and another Gas Turbine of 37 MW is already designed for natural gas use. In the

realm of green energy, MRPL is progressing towards establishing a 500 TPA capacity green hydrogen plant. The company also aims to significantly augment its grid power infrastructure to import renewable power, increasing capacity from 28 MW to 102 MW by 2027-28. This initiative is estimated to save 165,321 MTOE and reduce CO2 emissions by 527,373 metric tons. Furthermore, MRPL is in the process of setting up a 2G-Ethanol plant with a capacity of 60 KLPD in Devangere, Karnataka. The plant will use agri-residues like rice/wheat straw and corn cobs, significantly reducing GHG emissions by approximately 82% compared to gasoline production, equating to a reduction of 35,130 tCO2 annually. Additionally, MRPL plans to establish a Bio-ATF plant with a capacity of 20 KLPD within the refinery, using feedstocks such as Palm stearin, used Cooking Oil (UCO), and tree-borne oil. This initiative is expected to

reduce GHG emissions by about 77%, resulting in a CO2 reduction of approximately 25,310

Chunk 3

1in-capmkt:UnfairTradePracticesMemberL23209KA1988GOI0089592023-03-31in-capmkt:OtherM
emberiso4217:INRxbri:pureNon-SI:GJNon-SI:tNon-SI:tCO2ein-capmkt-types:klin-capmkt-types:kli
so4217:INRNon-SI:tNon-SI:YNon-SI:GJiso4217:INRNon-SI:tCO2eiso4217:INRNon-SI:tiso4217:IN
RL23209KA1988GOI008959Mangalore Refinery and Petrochemicals
Limited1988-03-07Kuthethoor P.O., Via Katipalla, Mangalore, Karnataka - 575030Kuthethoor P.O.,
Via Katipalla, Mangalore, Karnataka - 575030investor@mrpl.co.in0824-2270400www.mrpl.co.in20
23-04-012024-03-312022-04-012023-03-312021-04-012022-03-3117530000000Shri M.S.
Sudarshan0824-2270400sudarshanms@mrpl.co.inStandalone
basisfalseBSENSEManufacturingCoke and refined petroleum products1HSD4660.451MS4660.16
99LPG4660.0605ATF4660.1515Polypropylene4660.0373Bitumen4660.005417800023270.31MR
PL serves both bulk and retail clients. Bulk customers include Oil Marketing Companies, Indian
Railways, State Government Enterprises, Public Sector Undertakings, Road Contractors, and
various industries and factories. Retail customers consist of public and private vehicle owners.118
411140.9409700.0592000000000118411140.9409700.059200136412050.88351590.1166003959
36590.92433000.075800532348640.91384590.08630020180.920.100000000020180.920.100262
40.923120.077000000000026240.923120.0770011003000.04850.090200.04980.06360.185200.06
340.02640.022700.0260.01630.012400.01610.02750.015200.0240.0268000.0229true105189680
0000132514900000Oil and Natural Gas Corporation LimitedHolding0.7163trueShell MRPL
Aviation Fuel & Services LimitedJoint Venture0.5falseYesNA120-230-YesNA00Yes. Grievance
redressal mechanism is governed by SEBI/ stock exchange guidelines. Company has a dedicated
e-mail id- investor@mrpl.co.in for communication with investors00-YesNA592Yes. Grievance
redressal mechanism is governed by SEBI/ stock exchange guidelines.

Chunk 4

umnetituF
MRPL

TRET
MANGALORE REFINERY AND PETROCHEMICALS LIMITED

3971. t at tr7 whit tr da14, SCHEDULE 'A' GOVT. OF INDIA ENTERPRISE.
(divici itiF cb.44, A SUBSIDIARY OF OIL AND NATURAL GAS CORPORATION LIMITED)

*714. 9001, 14001 R-4• 500013 'ITN-a' cr>441, AN ISO 9001, 14001 AND 50001 CERTIFIED
COMPANY.

TiteTTi (o/CIN : L23209KA1988GO1008959 -a-411Tre Website : www.mrpl.co.in

26/07/2024

The Assistant General Manager, Listing
Compliance
BSE Limited
Scrip Code: 500109, ISIN: INE103A01014
Scrip Code (Debenture): 959162, 959250,
960362, 973692

The Compliance & Listing Department
National Stock Exchange of India Limited
Symbol: MRPL, Series: EQ,
ISIN: INE103A01014
Debt Security: INE103A08019, INE103A08035,
INE103A08043, INE103A08050

Dear Sir/Madam,

Sub: Business Responsibility and Sustainability Report (BRSR) for the FY 2023-24

Pursuant to Regulation 34(2) of SEBI (Listing Obligations and Disclosure Requirements)

Regulations, 2015, please find enclosed herewith Business Responsibility and Sustainability

Report (BRSR) of the Company. The BRSR Report forms part of the Annual Report for the FY 2023-

24 which has been submitted to Stock Exchanges on July 26, 2024.

We request you to take the above on records.

Thanking You.

Yours faithfully,
For Mangalore Refinery and Petrochemicals Limited

Premachandra Rao G
Company Secretary

Encl.: A/a

litt7 e-i'4 : te., WEFT ch zz I -47-q7. 575 030 (TT).
Regd. Office : Kuthethoor P.O. Via Katipalla, MANGALURU -575 030 (India).

SECTION A: GENERAL DISCLOSURES

I. Details of the listed entity

1 Corporate Identity Number (CIN) of the Listed Entity L23209KA1988GOI008959

2 Name of the Listed Entity
Mangalore Refinery and Petrochemicals
Limited (MRPL)

3 Date of Incorporation 07-03-1988

4 Registered office address
Kuthethoor P.O., Via Katipalla,
Mangalore, Karnataka • 575030

5 Corporate address
Kuthethoor P.O., Via Katipalla,
Mangalore, Karnataka - 575030

Chunk 5

in the DCU. Spent catalysts are segregated, collected in MS drums, and either sent to recyclers for precious metal recovery or to cement plants for Co-processing as an alternative raw material. Slop oil generated in ETPs is collected separately and reprocessed in the refinery alongside crude oil. Spent caustic from refinery operations is treated in the Wet Air Oxidation Unit.

MRPL targets reducing waste generation through advanced technology and maximizing the utilization of hazardous and non-hazardous solid waste via co-processing, recycling, and reprocessing efforts. Insulation waste is disposed of in co-processing industries, with exploration into recycling options for insulation materials.

Regarding waste management achievements, MRPL achieved its FY 2023-24 target of zero waste to landfill. All hazardous waste generated was either recycled or co-processed in the cement industry. NANA true EIA and RRA study for Bio ATF project ToR Identification No.

TO23A1201KA5505437A2023-07-12 true true Report submitted to KSPCB and DIC-DK During FY 2022-2023, MRPL conducted a grid analysis study with a reputed institute such as the National Environmental Engineering Research Institute (NEERI), located 10 km from the refinery area, to assess the environmental impact of refinery operations. The study found no significant impacts. NA2023-09-01 true true Report submitted to KSPCB and

DIC-DK Yes false true 504367055353720347.9542.943.053.13 false Not Applicable Yes The On-Site Emergency Plan, approved by the Director of Factories, Boilers, Industrial Safety and Health of the Government of Karnataka, aligns with statutory requirements and encompasses various accident scenarios along with their mitigation measures. Biannual On-Site Mock Drills are conducted to raise awareness among the workforce regarding potential emergency situations.

MRPL also maintains an Off-Site Emergency Plan, approved by the Chairman of the District Disaster Management Authority (DDMA) in Dakshina Kannada District.

Chunk 6

and social compliance criteria, including human rights clauses in the General Conditions of Contract, are strictly followed by MRPL. Compliance with these clauses is monitored through regular checks. Additionally, we conduct capacity-building initiatives for our contractors and suppliers as needed. true 1051896800000124685590000053681.8955277.23000053681.8955277.2368343472061870901259.5274111972.590071584693.5274832590.5971638375.4174887867.820.0000681040.00006006143.372.974.334.3772.9471.3 true Refinery Performance Benchmarking study for the calendar year 2022 was conducted by M/s. HSB Solomon Associates, as part of the ongoing CHT, MoP&NG; approved benchmarking study cycle for fuel and lube-based PSU refineries. This cycle covers biennial assessments for the years 2020, 2022, 2024, 2026, and

2028.

As part of PAT cycle VI (spanning FY2020-2021 to FY2022-2023), a Measurement and Verification Audit (M&V; Audit) was conducted by the third-party BEE empaneled Accredited Energy Auditor (EnMEA), M/s PGS Energy Services Pvt. Ltd., for FY2022-23 at MRPL.trueMRPL Refinery, identified as designated consumer (DC no. REF0014KA), participated in PAT-2 and PAT-6 cycles. The MBN target for the PAT-6 cycle for MRPL from FY2020-21 to FY2022-23 was 69.08, and MRPL achieved 71.3 MBN, verified through PAT M&V; audit. Additionally, MRPL received notification from BEE (NMEEE-11023/18/2020-BEE/5175-295 dated 06th Oct 2022) designating its Aromatic complex and Polypropylene units as separate designated consumers. In January 2024, MRPL conducted mandatory energy audits for its petrochemical units following this notification. Baseline data collection for the Petrochemicals DC is pending from BEE, after which the PAT target will be finalized and notified.

Chunk 7

Business Responsibility and Sustainability Report (Contd.)

Corporate Overview Statutory Reports Financial Statements

177Annual Report 2023-24

environment. The capacity of renewable energy was increased from 62.3 MW to 94.89 MW and Energy Efficient Lighting (EEL) capacity was increased from 63.52 MW to 71.05 MW during the year. Mumbai Refinery, Bina Refinery, Pipelines, Retail, LPG and Aviation locations have implemented 100% energy efficient lights and other locations have planned to achieve this target by 2025.

BPCL has blended 166.42 crore litre ethanol with MS in FY 2023-24 and achieved a blending percentage of 11.7%. It has sold 243 TKL of E20 (MS blended with 20% ethanol) through 4,422 ROs across India. BPCL also blended 9.45 crore litre of Biodiesel with HSD and achieved a blending percentage of 0.36 % in FY 2023-24.

BPCL is setting up a 1G and 2G Bio-Ethanol Refinery with a capacity of 100 KL/day each at Baulsingha Village, Bargarh District, Odisha. The plant is in advanced construction, which will be mechanically completed by October 2024 and final commissioning by March 2025. The 2G Ethanol Plant shall utilize around 480 MT of agricultural waste (rice straw) as feedstock, whereas the 1G Ethanol Plant shall utilize around 230 MT of surplus/damaged rice grain as feedstock to produce 100 KL of Ethanol per day each. Both these plants are being designed for Zero Liquid Discharge (ZLD) requirements. Once operational, it shall be a one-of-a-kind bio-refinery in India with both, 2G and 1G Ethanol production and designed for ZLD

requirements. The expected total emission reduction from Bargarh Bio-Ethanol refinery at full design capacity will be around 1.1 lakh MTCO₂e per year.

The initiatives on renewables have resulted in annual reduction of GHG emissions by approximately 376 MTCO₂e. Additionally, other sustainable initiatives

Chunk 8

report on Sustainability was published for the year 2022-23, following sector specific GRI Standards and other global frameworks, and mapped with United Nations' 17 Sustainable Development Goals. The Sustainable Development Report of BPCL is assured by an independent third party, as per Accounting Ability 1000 AS third edition (AA1000 AS V3) – Type 2 Moderate level, and International Standards of Assurance Engagement (ISAE) 3000.

The organization is continuously implementing various initiatives in the direction of minimizing the operational impacts on the environment and firmly believes that clean energy alternatives shall help in protecting the environment. The capacity of renewable energy was increased from 62.3 MW to 94.89 MW and Energy Efficient Lighting (EEL) capacity was increased from 63.52 MW to 71.05 MW during the year. Mumbai Refinery, Bina Refinery, Pipelines, Retail, LPG and Aviation locations have implemented 100% energy efficient lights and other locations have planned to achieve this target by 2025.

BPCL has blended 166.42 crore litre ethanol with MS in FY 2023-24 and achieved a blending percentage of 11.7%. It has sold 243 TKL of E20 (MS blended with 20% ethanol) through 4,422 ROs across India. BPCL also blended 9.45 crore litre of Biodiesel with HSD and achieved a blending percentage of 0.36 % in FY 2023-24.

BPCL is setting up a 1G and 2G Bio-Ethanol Refinery with a capacity of 100 KL/day each at Baulsingha Village, Bargarh District, Odisha. The plant is in advanced construction, which will be mechanically completed by October 2024 and final commissioning by March 2025. The 2G Ethanol Plant shall utilize around 480 MT of agricultural waste (rice straw) as feedstock, whereas the 1G Ethanol Plant shall utilize around 230 MT of surplus/damaged rice grain as feedstock to produce 100 KL of Ethanol per day each. Both these plants are being designed for Zero Liquid Discharge (ZLD) requirements.

Chunk 9

and the safety of our products.

- Strengthen Chemical Management Systems around the globe.
- Work with business partners to promote safe chemicals management within their own operations.
- Engage with stakeholders, respond to their concerns and communicate openly on our performance and products.
- Contribute to sustainability through development of innovative technologies and other solutions to societal challenges.

More than 60% of the power used at the Company's Mangalore Site is solar power sourced from grid.

Reduced CO₂ emissions aggregated to approx. 10,000 TPA. Biofuel is used to generate around 90% of

Mangalore site steam requirement. Furnace oil fired boiler is used only during the annual inspection and breakdown maintenance of bio boiler. This alternate fuel generates 3,000 tons of less CO2 as compared to conventional fuel. 100% of the sludge generated at wastewater treatment plant is used as co-fuel in cement manufacture, which otherwise would have been incinerated, thereby reducing greenhouse gas emissions by around 400 tons / year.

At the Company's Dahej manufacturing site, initial phase of roof top solar panel installation work was completed during F.Y. 2022-23. Dahej site has executed Power Purchase agreement for hybrid (Solar+Wind) power and this arrangement will take the power sourced from renewable energy to 44%. The steam condensate is used for heat recovery and water recycle. The off gas from process plant is incinerated in the Thermal oxidizer to protect the environment. The Waste heat recovery boiler was installed at Care Chemicals Process Plant in October 2023 to reduce the steam consumption thereby reducing Scope-1 emission.

At the heart of the long-term transition towards Net Zero CO2 emissions by 2050 is the use of new technologies, which will replace fossil fuels such as natural gas with electricity from renewable sources.

Chunk 10

At the Company's Mangalore Site is solar power sourced from grid. Reduced CO2 emissions aggregated to approx. 10,000 TPA. Biofuel is used to generate around 90% of Mangalore site steam requirement. Furnace oil fired boiler is used only during the annual inspection and breakdown maintenance of bio boiler. This alternate fuel generates 3,000 tons of less CO2 as compared to conventional fuel. 100% of the sludge generated at wastewater treatment plant is used as co-fuel in cement manufacture, which otherwise would have been incinerated, thereby reducing greenhouse gas emissions by around 400 tons / year.

At the Company's Dahej manufacturing site, initial phase of roof top solar panel installation work was completed during F.Y. 2022-23. Dahej site has executed Power Purchase agreement for hybrid (Solar+Wind) power and this arrangement will take the power sourced from renewable energy to 44%. The steam condensate is used for heat recovery and water recycle. The off gas from process plant is incinerated in the Thermal oxidizer to protect the environment. The Waste heat recovery boiler was installed at Care Chemicals Process Plant in October 2023 to reduce the steam consumption thereby reducing Scope-1

emission.

At the heart of the long-term transition towards Net Zero CO2 emissions by 2050 is the use of new technologies, which will replace fossil fuels such as natural gas with electricity from renewable sources.

Most of these technologies are being pioneered by BASF in collaboration with partners and are currently

in a pilot stage. Broad scale-up of these technologies will only be fully realizable after 2030. In order to

accelerate the avoidance of CO2 emissions prior to that date, the Company continues to systematically

implement improvement processes for existing production plants.

In addition, the Company will progressively switch to renewable sources to meet its electricity requirements.

the Company's innovative products are also helping to protect the climate.

Sub-question 3 Chunks

Chunk 1

in the DCU. Spent catalysts are segregated, collected in MS drums, and either sent to recyclers for precious metal recovery or to cement plants for Co-processing as an alternative raw material. Slop oil generated in ETPs is collected separately and reprocessed in the refinery alongside crude oil. Spent caustic from refinery operations is treated in the Wet Air Oxidation Unit.

MRPL targets reducing waste generation through advanced technology and maximizing the utilization of hazardous and non-hazardous solid waste via co-processing, recycling, and reprocessing efforts. Insulation waste is disposed of in co-processing industries, with exploration into recycling options for insulation materials.

Regarding waste management achievements, MRPL achieved its FY 2023-24 target of zero waste to landfill. All hazardous waste generated was either recycled or co-processed in the cement industry. NANA true EIA and RRA study for Bio ATF project ToR Identification No.

TO23A1201KA5505437A2023-07-12 true true Report submitted to KSPCB and DIC-DK During FY 2022-2023, MRPL conducted a grid analysis study with a reputed institute such as the National Environmental Engineering Research Institute (NEERI), located 10 km from the refinery area, to assess the environmental impact of refinery operations. The study found no significant impacts. NA2023-09-01 true true Report submitted to KSPCB and

DIC-DK Yes false true 504367055353720347.9542.943.053.13 false Not Applicable Yes The On-Site Emergency Plan, approved by the Director of Factories, Boilers, Industrial Safety and Health of the Government of Karnataka, aligns with statutory requirements and encompasses various accident scenarios along with their mitigation measures. Biannual On-Site Mock Drills are conducted to raise awareness among the workforce regarding potential emergency situations.

MRPL also maintains an Off-Site Emergency Plan, approved by the Chairman of the District Disaster Management Authority (DDMA) in Dakshina Kannada District.

Chunk 2

1 in-capmkt:UnfairTradePracticesMemberL23209KA1988GOI0089592023-03-31 in-capmkt:OtherMemberiso4217:INRxbri:pureNon-SI:GJNon-SI:tNon-SI:tCO2ein-capmkt-types:klin-capmkt-types:kli
so4217:INRNon-SI:tNon-SI:YNon-SI:GJiso4217:INRNon-SI:tCO2eiso4217:INRNon-SI:tiso4217:IN
RL23209KA1988GOI008959Mangalore Refinery and Petrochemicals
Limited1988-03-07Kuthethoor P.O., Via Katipalla, Mangalore, Karnataka - 575030Kuthethoor P.O.,
Via Katipalla, Mangalore, Karnataka - 575030investor@mrpl.co.in0824-2270400www.mrpl.co.in20
23-04-012024-03-312022-04-012023-03-312021-04-012022-03-3117530000000Shri M.S.
Sudarshan0824-2270400sudarshanms@mrpl.co.inStandalone

basisfalseBSENSEManufacturingCoke and refined petroleum products1HSD4660.451MS4660.1699LPG4660.0605ATF4660.1515Polypropylene4660.0373Bitumen4660.005417800023270.31MRPL serves both bulk and retail clients. Bulk customers include Oil Marketing Companies, Indian Railways, State Government Enterprises, Public Sector Undertakings, Road Contractors, and various industries and factories. Retail customers consist of public and private vehicle owners.118411140.9409700.0592000000000118411140.9409700.059200136412050.88351590.116600395936590.92433000.075800532348640.91384590.08630020180.920.100000000020180.920.10026240.923120.077000000000026240.923120.0770011003000.04850.090200.04980.06360.185200.06340.02640.022700.0260.01630.012400.01610.02750.015200.0240.0268000.0229true1051896800000132514900000Oil and Natural Gas Corporation LimitedHolding0.7163trueShell MRPL Aviation Fuel & Services LimitedJoint Venture0.5falseYesNA120-230-YesNA00Yes. Grievance redressal mechanism is governed by SEBI/ stock exchange guidelines. Company has a dedicated e-mail id- investor@mrpl.co.in for communication with investors00-YesNA592Yes. Grievance redressal mechanism is governed by SEBI/ stock exchange guidelines.

Chunk 3

operations

Total

Note: Indicate if any independent assessment/ evaluation/assurance has been carried out by an external agency? (Y/N)

No

264.94 14.89

0.00 292.40

4047.71 3074.41

4312.65 3381.70

If yes, name of the external agency.

10. Briefly describe the waste management practices adopted in your establishments. Describe the strategy adopted by your company to reduce usage of hazardous and toxic chemicals in your products and processes and the practices adopted to manage such wastes.

MRPL is actively embracing circular economy principles to minimize waste and optimize resource

utilization through reduction, reuse, recycling, and regeneration practices. This includes integrating recycled materials and slop oil into the Crude Distillation Unit (CDU) alongside crude oil. Used oil is blended with crude oil and undergoes reprocessing, while sludge from the Effluent Treatment Plant (ETP) is reprocessed in the Delayed Coker Unit (DCU). Comprehensive standard operating procedures ensure effective waste management across operations. Specific strategies include handling oily sludge from ETPs through a dedicated system with a Thickener and Centrifuge, which is then reprocessed in the DCU. Spent catalysts are segregated, collected in MS drums, and either sent to recyclers for precious metal recovery or to cement plants for Co-processing as an alternative raw material. Slop oil generated in ETPs is collected separately and reprocessed in the refinery alongside crude oil. Spent caustic from refinery operations is treated in the Wet Air Oxidation Unit. MRPL targets reducing waste generation through advanced technology and maximizing the utilization of hazardous and non-hazardous solid waste via co-processing, recycling, and reprocessing efforts. Insulation waste is disposed of in co-processing industries, with exploration into recycling options for insulation materials. Regarding waste

Chunk 4

infrastructure to import renewable power, increasing capacity from 28 MW to 102 MW by 2027-28. This initiative is estimated to save 165,321 MTOE and reduce CO2 emissions by 527,373 metric tons.

Furthermore, MRPL is in the process of setting up a 2G-Ethanol plant with a capacity of 60 KLPD in Devangere, Karnataka. The plant will use agri-residues like rice/wheat straw and corn cobs, significantly reducing GHG emissions by approximately 82% compared to gasoline production, equating to a reduction of 35,130 tCO2 annually.

Additionally, MRPL plans to establish a Bio-ATF plant with a capacity of 20 KLPD within the refinery, using feedstocks such as Palm stearin, used Cooking Oil (UCO), and tree-borne oil. This initiative is expected to reduce GHG emissions by about 77%, resulting in a CO2 reduction of approximately 25,310 tCO2 per annum compared to mineral ATF production.

1947.892270.363.23.360.770.53009.522.4007587.79304.9548963844.314445.0815425.90.00000001370.00000001240.00070.00060.000870.00096039.383913.163347.934607009387.318520.16264.9414.890292.44047.713074.414312.653381.7falseMRPL is actively embracing circular economy principles to minimize waste and optimize resource utilization through reduction, reuse, recycling, and regeneration practices. This includes integrating recycled materials and slop oil into the Crude Distillation Unit (CDU) alongside crude oil. Used oil is blended with crude oil and undergoes reprocessing, while sludge from the Effluent Treatment Plant (ETP) is reprocessed in the Delayed Coker Unit (DCU). Comprehensive standard operating procedures ensure effective waste management across operations. Specific strategies include handling oily sludge from ETPs through a dedicated system with a Thickener and Centrifuge, which is then reprocessed in the DCU. Spent catalysts are segregated, collected in MS drums, and either sent to recyclers for precious metal recovery or to cement plants for Co-processing as an alternative raw material.

Chunk 5

In renewable energy initiatives, MRPL has installed a solar capacity of 6.06 MW at the refinery complex, 2.5 MW at the aromatic complex, and 0.2 MW at the Desalination unit. In FY 2023-24, MRPL generated 7,890 MWh of solar energy and consumed a total of 16,241 MWh (including imported solar energy).

In the realm of green energy, MRPL is progressing towards establishing a 500 TPA capacity green hydrogen plant. The company also aims to significantly augment its grid power infrastructure to import renewable power, increasing capacity from 28 MW to 102 MW by 2027-28. This initiative is estimated to save 165,321 MTOE and reduce CO2 emissions by 527,373 metric tons.

falseNana21211211211009919191000000000000003030130190.3210.7003823821382100000000
0000000000000000003823821382100
000
000
esWeb-link to the policy:BRSR PolicytruefalsefalsetrueYes, The Companyâ€™s Audit Committee
has implemented a vigil mechanism that enables directors and employees to confidentially report
legitimate concerns or grievances.

Chunk 7

Intertek India Pvt. Ltd. Our waste management approach is anchored in the cradle-to-cradle philosophy, emphasizing the principles of Refuse, Reduce, Reuse, Repurpose, and Recycle to reintegrate waste into the ecosystem. This process is structured into five distinct phases: Identification, Storage, Segregation, Recycling, and Disposal. We employ premier waste management practices, which are a fundamental component of our comprehensive environmental management system. Additionally, we have instituted a Resource Conservation policy, which has been successfully operationalized across various AEL entities. In managing hazardous waste, we rigorously comply with all relevant regulatory mandates and embrace industry-leading practices. This encompasses meticulous segregation, secure storage, and safe transportation of hazardous materials. Consistent with regulatory directives, we ensure the environmentally sound disposal of hazardous waste by engaging certified vendors proficient in recycling such materials. All of our enterprises are diligently pursuing Zero Waste to Landfill certification where feasible. Alongside hazardous waste, we manage significant non-hazardous waste streams, including mining overburden, scrap metal, wood, glass, tires, electronic waste, cardboard, and paper. The overburden is entirely utilized within our mining lease areas for backfilling and ecological restoration. Our strategic goal is to reduce or eradicate waste production and redirect waste away from disposal by encouraging reuse and recycling when possible. At Adani Solar, we sell ETP Chemical sludge to other industries for use as a raw material. Mumbai Airport has achieved 100% SUP-free status, certified by CII. At Thiruvananthapuram International Airport, we've implemented an advanced Bioenergy Plant that converts biogas into electricity with a 15 KVA Biogas Genset, powering the airport operations. The resultant

Chunk 8

Limited for BRSR FY 2023-24.

22 | Gandhar Oil Refinery India Limited

11. Briefly describe the waste management practices adopted in your establishments. Describe the strategy adopted by your company to reduce the usage of hazardous and toxic chemicals in your products and processes and the practices adopted to manage such waste.

The company's waste management process encompasses several practices. Hazardous waste such as oil-soaked filters, chindis, oil-contaminated drums, spent earth, and e-waste are disposed of at government-approved

recycling facilities. Non-hazardous waste is sent to vendors for recycling or reuse processes, while general and kitchen (food) waste is disposed of through municipal authorities or facilities. Additionally, our operations strictly avoid the use of hazardous and toxic chemicals.

12. If the entity has operations/offices in/around ecologically sensitive areas (such as national parks, wildlife sanctuaries, biosphere reserves, wetlands, biodiversity hotspots, forests, coastal regulation zones, etc.) where environmental approvals/clearances are required, please specify details in the following format.

Not Applicable

13. Details of Environmental Impact Assessments of projects undertaken by the entity based on applicable laws, in the current financial year.

Not Applicable

14. Is the entity compliant with the applicable environmental law/ regulations/ guidelines in India, such as the Water (Prevention and control of pollution) Act, Air (prevention and control of pollution) Act, Environment Protection Act, and rules there under (Y/N). If not, provide details of all such non-compliances.

Yes, we ensure compliance with all relevant environmental laws, regulations, and guidelines set forth by the Pollution Control Committee (PCC).

Principle 7 Businesses, when engaging in influencing public and regulatory policy, should do so in a manner that is responsible and transparent

Essential Indicators

1. a.

Chunk 9

do not dispose of anything as plastic waste. As plastic materials are contaminated with chemicals, the said waste are disposed as per the categories mentioned in Hazardous waste authorisation.

Note: Indicate if any independent assessment / evaluation / assurance has been carried out by an external agency?
(Y/N) If yes, name of the external agency.

Yes, the Company's manufacturing sites are certified for ISO 14001. Further, the Company is certified as a Responsible Care® Company by the Indian Chemical Council.

All the Company's manufacturing sites manage their wastes in a legally compliant and sustainable way. All the waste is handled as required by Consent to Operate / Hazardous Waste authorization. The external waste handling facility is inspected regularly to check the adequacy of safety and environment practices. The manufacturing sites adopt the strategy of "Reduce, Reuse, Recycle, Recover and Dispose" by optimizing and modifying the process from time to time. Continuous improvements in manufacturing process and technology are the key to reduce the generation of hazardous waste at all our manufacturing sites. Substitution with less hazardous chemicals also contribute positively. High calorific value waste is sent for incineration or co-processing for use as co-fuel.

At Mangalore site, the sludge generated during wastewater treatment is used as co-fuel in cement manufacture thereby eliminating incineration and subsequent landfill of ash. Conversion to bulk storage of chemicals reduced the generation of hazardous packing materials (drums). The toxic metallic containers are crushed and disposed off. Cleaned plastic IBCs are used for product packing.

an integrated solid waste management system. The MRF technology segregates waste, while the bioreactor landfill captures methane for power generation, currently producing approximately 960 KW.

The leachate recirculation process accelerates waste degradation and reduces emissions, significantly lowering GHG emissions and generating renewable energy. Also, the emissions were avoided by exporting RDF from the Kanjurmarg site to cement factories.

Waste Management Practices at Kanjurmarg site: Bioreactor Landfill at Kanjurmarg can handle up to ~7,500 MT/day of MSW, capturing methane and avoiding attributable emissions. In-house waste is segregated as per ULB rules; primary vehicles collect dry, wet, and hazardous waste separately. The Leachate is treated in a Leachate Treatment Plant from which recycled water is used for landscaping and road sprinkling. Vehicles are designed to ensure the separate collection of dry, wet, and hazardous waste from generators. Information, Education and Communication activities include conducting to raise awareness about waste segregation, reuse, and recycling.

Integrated Waste to Energy Project (PCMC): PCMC handles ~1,000 MT/day of MSW, capturing

methane and converting non-recyclable waste into renewable energy, reducing landfill strain and promoting circular waste management. Key features of the project include: Advanced waste segregation technology, efficient moving grate mechanism, closed-loop water system, optimised land use, eco-friendly operations, and electricity savings. Kanjurmarg site Composting unit true Yes false The leachate at Kanjurmarg facility is treated further to reduce its Biochemical Oxygen Demand (BOD) levels and bring it to within permissible limits.

Sub-question 4 Chunks

Chunk 1

umnetituF
MRPL

TRET
MANGALORE REFINERY AND PETROCHEMICALS LIMITED

3971. t at tr7 whit tr da14, SCHEDULE 'A' GOVT. OF INDIA ENTERPRISE.
(divici itiF cb.44, A SUBSIDIARY OF OIL AND NATURAL GAS CORPORATION LIMITED)

*714. 9001, 14001 R-4 • 500013 'ITN-a' cr>441, AN ISO 9001, 14001 AND 50001 CERTIFIED COMPANY.

TiteTTi (o/CIN : L23209KA1988GO1008959 -a-411Tre Website : www.mrpl.co.in

26/07/2024

The Assistant General Manager, Listing
Compliance
BSE Limited
Scrip Code: 500109, ISIN: INE103A01014
Scrip Code (Debenture): 959162, 959250,
960362, 973692

The Compliance & Listing Department
National Stock Exchange of India Limited
Symbol: MRPL, Series: EQ,
ISIN: INE103A01014
Debt Security: INE103A08019, INE103A08035,
INE103A08043, INE103A08050

Dear Sir/Madam,

Sub: Business Responsibility and Sustainability Report (BRSR) for the FY 2023-24

Pursuant to Regulation 34(2) of SEBI (Listing Obligations and Disclosure Requirements)

Regulations, 2015, please find enclosed herewith Business Responsibility and Sustainability

Report (BRSR) of the Company. The BRSR Report forms part of the Annual Report for the FY 2023-

24 which has been submitted to Stock Exchanges on July 26, 2024.

We request you to take the above on records.

Thanking You.

Yours faithfully,
For Mangalore Refinery and Petrochemicals Limited

Premachandra Rao G
Company Secretary

Encl.: A/a

litt7 e-i'4 : te., WEFT ch zz I -47-q7. 575 030 (TT).
Regd. Office : Kuthethoor P.O. Via Katipalla, MANGALURU -575 030 (India).

SECTION A: GENERAL DISCLOSURES

I. Details of the listed entity

1 Corporate Identity Number (CIN) of the Listed Entity L23209KA1988GOI008959

2 Name of the Listed Entity
Mangalore Refinery and Petrochemicals
Limited (MRPL)

3 Date of Incorporation 07-03-1988

4 Registered office address
Kuthethoor P.O., Via Katipalla,
Mangalore, Karnataka • 575030

5 Corporate address
Kuthethoor P.O., Via Katipalla,
Mangalore, Karnataka - 575030

Chunk 2

1in-capmkt:UnfairTradePracticesMemberL23209KA1988GOI0089592023-03-31in-capmkt:OtherM
emberiso4217:INRxbrli:pureNon-SI:GJNon-SI:tNon-SI:tCO2ein-capmkt-types:klin-capmkt-types:kli
so4217:INRNon-SI:tNon-SI:YNon-SI:GJiso4217:INRNon-SI:tCO2eiso4217:INRNon-SI:tiso4217:IN
RL23209KA1988GOI008959Mangalore Refinery and Petrochemicals
Limited1988-03-07Kuthethoor P.O., Via Katipalla, Mangalore, Karnataka - 575030Kuthethoor P.O.,
Via Katipalla, Mangalore, Karnataka - 575030investor@mrpl.co.in0824-2270400www.mrpl.co.in20
23-04-012024-03-312022-04-012023-03-312021-04-012022-03-3117530000000Shri M.S.
Sudarshan0824-2270400sudarshanms@mrpl.co.inStandalone
basisfalseBSENSEManufacturingCoke and refined petroleum products1HSD4660.451MS4660.16
99LPG4660.0605ATF4660.1515Polypropylene4660.0373Bitumen4660.005417800023270.31MR
PL serves both bulk and retail clients. Bulk customers include Oil Marketing Companies, Indian
Railways, State Government Enterprises, Public Sector Undertakings, Road Contractors, and

various industries and factories. Retail customers consist of public and private vehicle owners.118
 411140.9409700.0592000000000118411140.9409700.059200136412050.88351590.1166003959
 36590.92433000.075800532348640.91384590.08630020180.920.100000000020180.920.100262
 40.923120.07700000000026240.923120.0770011003000.04850.090200.04980.06360.185200.06
 340.02640.022700.0260.01630.012400.01610.02750.015200.0240.0268000.0229true105189680
 0000132514900000Oil and Natural Gas Corporation LimitedHolding0.7163trueShell MRPL
 Aviation Fuel & Services LimitedJoint Venture0.5falseYesNA120-230-YesNA00Yes. Grievance
 redressal mechanism is governed by SEBI/ stock exchange guidelines. Company has a dedicated
 e-mail id- investor@mrpl.co.in for communication with investors00-YesNA592Yes. Grievance
 redressal mechanism is governed by SEBI/ stock exchange guidelines.

Chunk 3

ahead, we are committed to setting and achieving reasonable ESG targets, ensuring
 our practices foster trust and sustainability among all stakeholders.

6 | Gandhar Oil Refinery India Limited

<https://gandharoil.com/investor-relations/company-policies/>
<https://drive.google.com/drive/u/4/folders/1OVDwzJexMMdc9kpoVuvGICJ5DFoHbv7H>
<https://drive.google.com/drive/u/4/folders/1OVDwzJexMMdc9kpoVuvGICJ5DFoHbv7H>

8. Details of the highest authority responsible for
 implementation and oversight of the business
 responsibility policy/policies

Mr. Ramesh Parekh

Chairman and Managing Director

9. Does the entity have a specified committee of the
 Board/ Director responsible for decision-making on
 sustainability-related issues? (Yes/No). If yes, provide
 details.

Yes, the company has an established risk governance framework
 that includes Risk Management Committee responsible for
 business risk and opportunities. This process is effectively
 supported by the Chairman & Managing Director as well as Joint
 Managing Directors.

10. Details of review of NGRBCs by the Company:

Subject for
 review

Indicate whether the review was undertaken by
 the Director/committee of the board/ any other

committee

Frequency (Annually/half-yearly/quarterly any

other – please specify)

P1 P2 P3 P4 P5 P6 P7 P8 P9 P1 P2 P3 P4 P5 P6 P7 P8 P9

Performance
against the above
policies and
follow-up action

Annually, the Executive Management and Key Managerial Personnel at Gandhar Oil Refinery (India) Limited review the company's Business Responsibility and Sustainability Policies. They evaluate the policies, procedures, and internal controls for their effectiveness and make adjustments as needed based on their assessment.

Compliance
with statutory
requirements of
relevance to the
principles, and the
rectification of any
non-compliances

The company's policies are subject to periodic audits and internal reviews conducted both by external agencies and internally.

Chunk 4

employability and empowerment, animal welfare, soil health, etc., for the underprivileged community living in the villages located near their plant in Mangalore besides the marketing territories. In 2023, the Company strengthened its ESG brand identity and devised a thorough ESG strategy framework, highlighting the nine fundamental commitments. MCFL has seized the opportunity to align its strategy with the United Nations Sustainable Development Goals (UNSDGs), aiming for a seamless integration of its development with both its ESG strategy and the principles outlined in the United Nations 2030 Sustainable Development Goals (SDGs). MCFL remains steadfast in its commitment to continuous improvement and innovation in ESG practices. Through proactive initiatives and strategic planning, MCFL consistently strives to uphold its commitment to sustainability and ESG, fostering positive impacts on both its stakeholders and the wider world.

8. Details of the highest authority responsible for implementation and oversight of the Business Responsibility policy (ies).

Mr. Nitin M Kantak, Whole-time Director

Mangalore Chemicals
& Fertilizers Limited

47

Disclosure Questions P1 P2 P3 P4 P5 P6 P7 P8 P9

Policy and management processes
9.

responsible for decision making on sustainability related issues?
(Yes/No). If yes, provide details.

Yes, the Company has formulated an ESG Policy in the current
after due approvals from the Board, was responsible for decisions
relating to sustainability issues.

10. Details of Review of NGRBCs by the Company:

Subject of Review
Indicate whether review was undertaken
by Director/Committee of the Board/Any

other Committee

Frequency (Annually/Half yearly/
Quarterly/Any other – please specify)

P1 P2 P3 P4 P5 P6 P7 P8 P9 P1 P2 P3 P4 P5 P6 P7 P8 P9
Performance against above
policies and follow up action

Yes, the review is undertaken
by the Board

Annually/as and when required

Compliance with statutory

Chunk 5

Punjab Chemicals and Crop Protection Limited

Disclosure Questions
(Details of P1 to P9 are provided in Section C)

P1 P2 P3 P4 P5 P6 P7 P8 P9

8. Details of the highest authority responsible for implementation and oversight of the Business Responsibility policy (ies).

Mr. Shalil Shashikumar Shroff, Managing Director and Mr. Vinod Kumar Gupta, Chief Executive Officer, reports to Board periodically on progress made on ESG agenda of the Company.

9. Does the entity have a specified Committee of the Board/ Director responsible for decision making on sustainability related issues? (Yes / No). If yes, provide details.

Yes• The Company has a committee of Board of Directors for Risk Management which is also responsible for making decisions on sustainability issues.

10. Details of Review of NGRBCs by the Company:

Subject for Review Indicate whether review was undertaken by Director/ Committee of the Board/ Any

other Committee

Frequency (Annually/ Half yearly/ Quarterly/ Any other – please specify)

P1 P2 P3 P4 P5 P6 P7 P8 P9 P1 P2 P3 P4 P5 P6 P7 P8 P9

Performance against above policies and follow up action

Board of Directors Annually

Compliance with statutory requirements of relevance to the principles, and rectification of any non-compliances

Board of Directors Annually

Note: In line with Company's Code of Conduct, all Board level meetings and business meetings are led by the Managing Director and Chief Executive Officer for sustainability and business responsibility discussions on continual basis. The Directors and Senior Management members affirm compliance with the Code of Conduct on annual basis.

11. Has the entity carried out independent assessment/ evaluation of the working of its policies by an external agency? (Yes/No). If yes, provide name of the agency.

P1 P2 P3 P4 P5 P6 P7 P8 P9

No, However, the policies are reviewed periodically from a best practice perspective as well as from a risk perspective.

Chunk 6

and social compliance criteria, including human rights clauses in the General Conditions of Contract, are strictly followed by MRPL. Compliance with these clauses is monitored through regular checks. Additionally, we conduct capacity-building initiatives for our contractors and suppliers as needed.true1051896800000124685590000053681.8955277.23000053681.8955277.2368343472061870901259.5274111972.590071584693.5274832590.5971638375.4174887867.820.0000681040.00006006143.372.974.334.3772.9471.3trueRefinery Performance Benchmarking study for the calendar year 2022 was conducted by M/s. HSB Solomon Associates, as part of the ongoing CHT, MoP&NG; approved benchmarking study cycle for fuel and lube-based PSU refineries. This cycle covers biennial assessments for the years 2020, 2022, 2024, 2026, and 2028.

As part of PAT cycle VI (spanning FY2020-2021 to FY2022-2023), a Measurement and Verification Audit (M&V; Audit) was conducted by the third-party BEE empaneled Accredited Energy Auditor (EnMEA), M/s PGS Energy Services Pvt. Ltd., for FY2022-23 at MRPL.trueMRPL Refinery, identified as designated consumer (DC no. REF0014KA), participated in PAT-2 and PAT-6 cycles. The MBN target for the PAT-6 cycle for MRPL from FY2020-21 to FY2022-23 was 69.08, and MRPL achieved 71.3 MBN, verified through PAT M&V; audit. Additionally, MRPL received notification from BEE (NMEEE-11023/18/2020-BEE/5175-295 dated 06th Oct 2022) designating its Aromatic complex and Polypropylene units as separate designated consumers. In January 2024, MRPL conducted mandatory energy audits for its petrochemical units following this notification. Baseline data collection for the Petrochemicals DC is pending from BEE, after which the PAT target will be finalized and notified.

Chunk 7

for captive consumption. Further efforts are being made to improve efficiency of electrical appliances used and promoting the solar energy for captive use.

Governance, leadership and oversight

7. Statement by director responsible for the business responsibility report, highlighting ESG related challenges, targets and achievements

The Company has sincere concerns regarding ESG and is making all out efforts to mitigate ESG related challenges.

8. Details of the highest authority responsible for implementation and oversight of the Business Responsibility policy (ies).

Mr. Shantanu Roy,

Chairman & Managing Director,

Phone No: 080 • 22963111

Email: coord@bemlltd.in

9. Does the entity have a specified Committee of the Board/ Director responsible for decision making on sustainability related issues? (Yes / No). If yes, provide details.

Yes, Board of Directors collectively take decisions on sustainability related issues periodically.

There is Corporate Social Responsibility and Sustainability Committee chaired by Independent Director which monitors all issues including ESG.

93

60th Annual Report 2023-24

BEML LIMITED

Disclosure Questions P 1 P 2 P 3 P 4 P 5 P 6 P 7 P 8 P 9

10. Details of Review of NGRBCs by the Company:

Subject for Review Indicate whether review was undertaken by Director/ Committee of the Board/ Any other Committee

Frequency (Annually/ Half Yearly/ Quarterly/ Any other)

P 1 P 2 P 3 P 4 P 5 P 6 P 7 P 8 P 9 P 1 P 2 P 3 P 4 P 5 P 6 P 7 P 8 P 9

Performance against above policies and follow up action

Relevant Committee(s) Regularly

Compliance with statutory requirements of relevance to the principles, and, rectification of any non-compliances

Board periodically reviews the compliance of all the principles and take rectification action on noncompliance (If any).

Periodically

11. Has the entity carried out independent assessment/ evaluation of the working of its policies by an external agency?

Chunk 8

of the entity against the specific commitments, goals and targets along-with reasons in case the same are not met.

Not applicable Not applicable

Governance, leadership and oversight

7. Statement by director responsible for the business responsibility report, highlighting ESG related challenges, targets and achievements (listed entity has flexibility regarding the placement of this disclosure)

ESG forms a fundamental element to the conduct of our business and MRPL attaches the highest priority to occupational health, safety and protection of the environment in and around its operational areas.

8. Details of the highest authority responsible for implementation and oversight of the Business Responsibility policy (ies). Shri Mundial!. Shvamprasad Kamath Managing Director & CEO -

9. Does the entity have a specified Committee of the Board/ Director responsible for decision making on sustainability related issues? (Yes / No/ NA).

Yes

If yes, provide details.

The Corporate Social Responsibility and Sustainability Development Committee (CSR&SD;) and Stakeholders Relationship Committee (SRC) are responsible for decision-making on sustainability-related issues.

10. Details of Review of NGRBCs by the Company

Subject for Review

Indicate whether review was undertaken by Director/Committee of the Board/Any other Committee

P1 P2 P3 P4 P5 P6 P7 P8 P9

Performance against
above policies and follow
up action

Any other
Committee

Any other
Committee

Any other
Committee

Any other
Committee

Any other
Committee

Any other
Committee

Any other
Committee

Any other
Committee

Any other
Committee

Description of other
committee for
performance against
above policies and follow
up action

Internal
Department

Internal
Department

Internal
Department

Internal
Department

Internal

Department

Internal
Department

Internal
Department

Internal
Department

Internal
Department

Compliance with

Chunk 9

regarding the placement of this disclosure)

At Epigral, we understand the growing importance of ESG in the chemical industry. We've integrated ESG principles into our core business framework. We believe strong ESG performance strengthens our resilience and value creation.

Our approach involves prioritizing ESG aspects most relevant to stakeholders, promoting responsible practices throughout our operations, and upholding high governance standards.

We actively safeguard the environment through waste reduction practices, resource conservation, and material recycling.

We have reduced greenhouse gas emissions, improved energy efficiency, and integrated renewable energy sources. Our commitment extends to our communities through ongoing CSR activities and its improvement efforts.

We also have a robust Environmental Management System that ensures comprehensive environmental responsibility. It helps in monitoring our performance and proactively communicate environmental concerns.

In the future, we will remain dedicated to long-term environmental stewardship. By prioritizing ESG excellence, we're building a sustainable, responsible future for all stakeholders.

Mr. Maulik Patel,
Chairman and Managing Director

8 Details of the highest authority
responsible for implementation
and oversight of the Business
Responsibility policy (ies)

Mr. Maulik Patel, Chairman and Managing Director

Epigral Limited
Annual Report 2023-24 98

<https://epigral.com/governance-policies-compliances/>

9 Does the entity have a specified Committee of the Board/ Director responsible for decision making on sustainability related issues? (Yes / No/ NA). If yes please provide details

Yes

The Company has established several committees comprising members of the Board of Directors and senior executives to oversee sustainability-related matters. These committees include the Audit Committee, Risk Management Committee,

Chunk 10

Mangalore Petrochemicals Limited Subsidiary 100.00 No

24.

VI. CSR Details

(i) Whether CSR is applicable as per section 135 of the Companies Act, 2013 Yes

(ii) Turnover (in `) 1,30,284 crore

(iii) Net worth* (in `) 56,131 crore

*as per the Companies Act

I I I I

I I

98

VII. Transparency and Disclosures Compliances

25. Complaints/Grievances on any of the principles (Principles 1 to 9) under the National Guidelines on Responsible Business Conduct:

Stakeholder
group from
whom

complaint is
received

Grievance Redressal Mechanism
in Place (Yes/ No) (If yes, then
provide web-link for grievance

redress policy)

FY 2023-2024 Current Financial Year FY 2022-2023 Previous Financial Year

Number of
complaints
filed during

the year

Number of
complaints

pending
resolution at
close of the

year

Remarks

Number of
complaints

filed
during the

year

Number of
complaints

pending
resolution at
close of the

year

Remarks

Communities Yes

Weblink: [https://pgportal.gov.in/
Home/LodgeGrievance](https://pgportal.gov.in/Home/LodgeGrievance)

194 0 261 0

Investors
(other than
shareholders)

Yes

[https://www.gailonline.com/
IZQuarterlyCompliances.html](https://www.gailonline.com/IZQuarterlyCompliances.html)

886 05 1209 0

Shareholders

Employees
and workers

Yes

Weblink: [https://pgportal.gov.in/
Home/LodgeGrievance](https://pgportal.gov.in/Home/LodgeGrievance)

Further GAIL's grievance portal is
available to employees through
GAIL Intranet.

40 03 38 0

Customers Yes

Weblink:• [https://www.gailonline.
com/onlineComplants.html](https://www.gailonline.com/onlineComplants.html)

[https://pgportal.gov.in/Home/
LodgeGrievance](https://pgportal.gov.in/Home/LodgeGrievance)

35 0 74 0

Value Chain
Partners

Yes

Weblink:-

[https://www.gailonline.com/onli-
neComplants.html](https://www.gailonline.com/onlineComplants.html)

[https://pgportal.gov.in/Home/
LodgeGrievance](https://pgportal.gov.in/Home/LodgeGrievance)

09 0 07 0

Other (please
specify)

Yes

Weblink: • [https://pgportal.gov.in/
Home/LodgeGrievance](https://pgportal.gov.in/Home/LodgeGrievance)

[https://www.gailonline.com/
pdf/others/PolicyforPrevention-
ProhibitionAndRedressalOFSexu-
alHarassmentOfWomenAtWork-
place25042023.pdf](https://www.gailonline.com/pdf/others/PolicyforPrevention-ProhibitionAndRedressalOFSexualHarassmentOfWomenAtWork-place25042023.pdf)

13 0 34 0

New In ia
New Ener

<https://pgportal.gov.in/Home/LodgeGrievance>
<https://pgportal.gov.in/Home/LodgeGrievance>

Sub-question 5 Chunks

Chunk 1

1in-capmkt:UnfairTradePracticesMemberL23209KA1988GOI0089592023-03-31in-capmkt:OtherM
emberiso4217:INRxbrli:pureNon-SI:GJNon-SI:tNon-SI:tCO2ein-capmkt-types:klin-capmkt-types:kli
so4217:INRNon-SI:tNon-SI:YNon-SI:GJiso4217:INRNon-SI:tCO2eiso4217:INRNon-SI:tiso4217:IN
RL23209KA1988GOI008959Mangalore Refinery and Petrochemicals
Limited1988-03-07Kuthethoor P.O., Via Katipalla, Mangalore, Karnataka - 575030Kuthethoor P.O.,
Via Katipalla, Mangalore, Karnataka - 575030investor@mrpl.co.in0824-2270400www.mrpl.co.in20
23-04-012024-03-312022-04-012023-03-312021-04-012022-03-3117530000000Shri M.S.
Sudarshan0824-2270400sudarshanms@mrpl.co.inStandalone
basisfalseBSENSEManufacturingCoke and refined petroleum products1HSD4660.451MS4660.16
99LPG4660.0605ATF4660.1515Polypropylene4660.0373Bitumen4660.005417800023270.31MR
PL serves both bulk and retail clients. Bulk customers include Oil Marketing Companies, Indian
Railways, State Government Enterprises, Public Sector Undertakings, Road Contractors, and
various industries and factories. Retail customers consist of public and private vehicle owners.118
411140.9409700.0592000000000118411140.9409700.059200136412050.88351590.1166003959
36590.92433000.075800532348640.91384590.08630020180.920.100000000020180.920.100262
40.923120.077000000000026240.923120.0770011003000.04850.090200.04980.06360.185200.06
340.02640.022700.0260.01630.012400.01610.02750.015200.0240.0268000.0229true105189680
0000132514900000Oil and Natural Gas Corporation LimitedHolding0.7163trueShell MRPL
Aviation Fuel & Services LimitedJoint Venture0.5falseYesNA120-230-YesNA00Yes. Grievance
redressal mechanism is governed by SEBI/ stock exchange guidelines. Company has a dedicated
e-mail id- investor@mrpl.co.in for communication with investors00-YesNA592Yes. Grievance
redressal mechanism is governed by SEBI/ stock exchange guidelines.

Chunk 2

umnetituF
MRPL

TRET
MANGALORE REFINERY AND PETROCHEMICALS LIMITED

3971. t at tr7 whit tr da14, SCHEDULE 'A' GOVT. OF INDIA ENTERPRISE.
(divici itiF cb.44, A SUBSIDIARY OF OIL AND NATURAL GAS CORPORATION LIMITED)

*714. 9001, 14001 R-4• 500013 'ITN-a' cr>441, AN ISO 9001, 14001 AND 50001 CERTIFIED
COMPANY.

TiteTTi (o/CIN : L23209KA1988GO1008959 -a-411Tre Website : www.mrpl.co.in

26/07/2024

The Assistant General Manager, Listing
Compliance
BSE Limited
Scrip Code: 500109, ISIN: INE103A01014
Scrip Code (Debenture): 959162, 959250,
960362, 973692

The Compliance & Listing Department
National Stock Exchange of India Limited
Symbol: MRPL, Series: EQ,
ISIN: INE103A01014
Debt Security: INE103A08019, INE103A08035,
INE103A08043, INE103A08050

Dear Sir/Madam,

Sub: Business Responsibility and Sustainability Report (BRSR) for the FY 2023-24

Pursuant to Regulation 34(2) of SEBI (Listing Obligations and Disclosure Requirements)

Regulations, 2015, please find enclosed herewith Business Responsibility and Sustainability

Report (BRSR) of the Company. The BRSR Report forms part of the Annual Report for the FY 2023-

24 which has been submitted to Stock Exchanges on July 26, 2024.

We request you to take the above on records.

Thanking You.

Yours faithfully,
For Mangalore Refinery and Petrochemicals Limited

Premachandra Rao G
Company Secretary

Encl.: A/a

litt7 e-i'4 : te., WEFT ch zz I -47-q7. 575 030 (TT).

Regd. Office : Kuthethoor P.O. Via Katipalla, MANGALURU -575 030 (India).

SECTION A: GENERAL DISCLOSURES

I. Details of the listed entity

1 Corporate Identity Number (CIN) of the Listed Entity L23209KA1988GOI008959

2 Name of the Listed Entity
Mangalore Refinery and Petrochemicals
Limited (MRPL)

3 Date of Incorporation 07-03-1988

4 Registered office address
Kuthethoor P.O., Via Katipalla,
Mangalore, Karnataka • 575030

5 Corporate address
Kuthethoor P.O., Via Katipalla,
Mangalore, Karnataka - 575030

Chunk 3

audits for its petrochemical units following this notification. Baseline data collection for the Petrochemicals DC is pending from BEE, after which the PAT target will be finalized and notified. 13541904.61715302600001048609059954056012091.8610955630040086.42925798723976074.6255237710.00002279320.00002047051.131.011.451.49false00000000000006317244374143600631724437414364855844.15450655004855844.1545065500000011173088.19192091falseNottrue235426131656321301175.2211.7001.042.1100trueNitya Laboratoriestrue55155785590664153542920350.00000538940.00000455760.270.230.340.33falseYesMRPL has implemented various energy efficiency improvement measures, resulting in a total fuel savings of 35,387 SRFT in FY 2023-24, which equates to a reduction of 112,885 metric tons of CO2 emissions.

In renewable energy initiatives, MRPL has installed a solar capacity of 6.06 MW at the refinery complex, 2.5 MW at the aromatic complex, and 0.2 MW at the Desalination unit. In FY 2023-24, MRPL generated 7,890 MWh of solar energy and consumed a total of 16,241 MWh (including imported solar energy).

MRPL has invested in infrastructure to utilize LNG as a cleaner fuel in the Refinery and aromatic complex, with a capacity to import 0.8 MMSCMD of RLNG. This includes setting up LNG metering skids and associated facilities within the refinery. Natural gas is now used in the Hydrogen Generation Unit and as fuel for Gas turbines in the refinery and aromatic complex. MRPL has converted a 22 MW Gas turbine to run on natural gas, and another Gas Turbine of 37 MW is already designed for natural gas use.

MRPL also maintains an Off-Site Emergency Plan, approved by the Chairman of the District Disaster Management Authority (DDMA) in Dakshina Kannada District.

Chunk 6

total

fuel savings of 35,387 SRFT in FY 2023-24, which equates to a reduction of 112,885 metric tons of CO2 emissions. In renewable energy initiatives, MRPL has installed a solar capacity of 6.06 MW at the refinery complex, 2.5 MW at the aromatic complex, and 0.2 MW at the Desalination unit. In FY 2023-24, MRPL generated 7,890 MWh of solar energy and consumed a total of 16,241 MWh (including imported solar energy). MRPL has invested in infrastructure to utilize LNG as a cleaner fuel in the Refinery and aromatic complex, with a capacity to import 0.8 MMSCMD of RLNG. This includes setting up LNG metering skids and associated facilities within the refinery. Natural gas is now used in the Hydrogen Generation Unit and as fuel for Gas turbines in the refinery and aromatic complex. MRPL has converted a 22 MW Gas turbine to run on natural gas, and another Gas Turbine of 37 MW is already designed for natural gas use. In the realm of green energy, MRPL is progressing towards establishing a 500 TPA capacity green hydrogen plant. The company also aims to significantly augment its grid power infrastructure to import renewable power, increasing capacity from 28 MW to 102 MW by 2027-28. This initiative is estimated to save 165,321 MTOE and reduce CO2 emissions by 527,373 metric tons. Furthermore, MRPL is in the process of setting up a 2G-Ethanol plant with a capacity of 60 KLPD in Devangere, Karnataka. The plant will use agri-residues like rice/wheat straw and corn cobs, significantly reducing GHG emissions by approximately 82% compared to gasoline production, equating to a reduction of 35,130 tCO2 annually. Additionally, MRPL plans to establish a Bio-ATF plant with a capacity of 20 KLPD within the refinery, using feedstocks such as Palm stearin, used Cooking Oil (UCO), and tree-borne oil. This initiative is expected to

reduce GHG emissions by about 77%, resulting in a CO2 reduction of approximately 25,310

Chunk 7

and social compliance criteria, including human rights clauses in the General Conditions of Contract, are strictly followed by MRPL. Compliance with these clauses is monitored through regular checks. Additionally, we conduct capacity-building initiatives for our contractors and suppliers as needed. true1051896800000124685590000053681.8955277.23000053681.8955277.2368343472061870901259.5274111972.590071584693.5274832590.5971638375.4174887867.820.0000681040.00006006143.372.974.334.3772.9471.3trueRefinery Performance Benchmarking study for the calendar year 2022 was conducted by M/s. HSB Solomon Associates, as part of the ongoing CHT, MoP&NG; approved benchmarking study cycle for fuel and lube-based PSU refineries. This cycle covers biennial assessments for the years 2020, 2022, 2024, 2026, and 2028.

As part of PAT cycle VI (spanning FY2020-2021 to FY2022-2023), a Measurement and Verification Audit (M&V; Audit) was conducted by the third-party BEE empaneled Accredited Energy Auditor (EnMEA), M/s PGS Energy Services Pvt. Ltd., for FY2022-23 at MRPL. trueMRPL Refinery, identified as designated consumer (DC no. REF0014KA), participated in PAT-2 and PAT-6 cycles. The MBN target for the PAT-6 cycle for MRPL from FY2020-21 to FY2022-23 was 69.08, and MRPL achieved 71.3 MBN, verified through PAT M&V; audit. Additionally, MRPL received notification from BEE (NMEEE-11023/18/2020-BEE/5175-295 dated 06th Oct 2022) designating its Aromatic complex and Polypropylene units as separate designated consumers. In January 2024, MRPL conducted mandatory energy audits for its petrochemical units following this notification. Baseline data collection for the Petrochemicals DC is pending from BEE, after which the PAT

target will be finalized and notified.

Chunk 8

on CSR projects undertaken by your entity in designated aspirational districts as

Sl. No. State Aspirational District Amount spent (In INR)

1 Karnataka Raichur 7,44,145

2 Karnataka Yadagiri 0

3. (a) Do you have a preferential procurement policy where you give preference to purchase from suppliers comprising marginalized/vulnerable groups? (Yes/No) No

(b) From which marginalized/vulnerable groups do you procure? Not applicable

(c) What percentage of total procurement (by value) does it constitute? Not applicable

4.

Sl.

No.

Intellectual Property based
on traditional knowledge

Owned/Acquired (Yes/No)
share

1. Patents No No -

2. Trademark No No -

3. Copyrights No No -

5. Details of corrective actions taken or underway, based on any adverse order in intellectual property related disputes wherein usage of traditional knowledge is involved.

Name of authority Brief of the Case Corrective action taken
None

6

Sl.

No. CSR Project Projects and marginalized groups

1 Mangala Raitha Pratibhe 2,870 100%

2 Project Eye Care and Health Care 1,196 100%

3 Mangala Akshara Mitra 4,028 100%

4 Swatch Vidyalaya 450 100%

5 Community Development and Rural
Development 2,000 100%

6 Environmental Sustainability 10,000 100%

7 Drone Didi 1,500 100%

PRINCIPLE 9: Businesses should engage with and provide value to their consumers in a responsible manner

Essential Indicators

1. Describe the mechanisms in place to receive and

respond to consumer complaints and feedback.

We have provided customer care number & email IDs in all our packages.

Contact details are also provided on the Company website: ([https://www.](https://www.mangalorechemicals.com/home/contactus)

[mangalorechemicals.com/home/contactus](https://www.mangalorechemicals.com/home/contactus))

2. Turnover of products and/services as a percentage of turnover from all products/service that carry information about:

As a percentage to total turnover

Environmental and social parameters relevant to the product 100%

Safe and responsible usage 100%

Chunk 9

infrastructure to import renewable power, increasing capacity from 28 MW to 102 MW by 2027-28. This initiative is estimated to save 165,321 MTOE and reduce CO2 emissions by 527,373 metric tons.

Furthermore, MRPL is in the process of setting up a 2G-Ethanol plant with a capacity of 60 KLPD in Devangere, Karnataka. The plant will use agri-residues like rice/wheat straw and corn cobs, significantly reducing GHG emissions by approximately 82% compared to gasoline production, equating to a reduction of 35,130 tCO2 annually.

Additionally, MRPL plans to establish a Bio-ATF plant with a capacity of 20 KLPD within the refinery, using feedstocks such as Palm stearin, used Cooking Oil (UCO), and tree-borne oil. This initiative is expected to reduce GHG emissions by about 77%, resulting in a CO2 reduction of approximately 25,310 tCO2 per annum compared to mineral ATF production.

1947.892270.363.23.360.770.53009.522.4007587.79304.9548963844.314445.0815425.90.00000001370.00000001240.00070.00060.000870.00096039.383913.163347.934607009387.318520.16264.9414.890292.44047.713074.414312.653381.7falseMRPL is actively embracing circular economy principles to minimize waste and optimize resource utilization through reduction, reuse, recycling, and regeneration practices. This includes integrating recycled materials and slop oil into the Crude Distillation Unit (CDU) alongside crude oil. Used oil is blended with crude oil and undergoes reprocessing, while sludge from the Effluent Treatment Plant (ETP) is reprocessed in the Delayed Coker Unit (DCU). Comprehensive standard operating procedures ensure effective waste management across operations.

Specific strategies include handling oily sludge from ETPs through a dedicated system with a Thickener and Centrifuge, which is then reprocessed in the DCU. Spent catalysts are segregated, collected in MS drums, and either sent to recyclers for precious metal recovery or to cement plants for Co-processing as an alternative raw material.

Chunk 10

and sulfur oxides from stack emissions.

Reduction in Particulate Matter
Emissions into the atmosphere

NA

4 RLNG utilization

MRPL has implemented a Natural Gas facility with a capacity of 1.2 MMSCMD to utilize natural gas in Processing Units (HGU) and CPPs, which is now operational.

Reduction in emissions from
heaters NA

5. Does the entity have a
business continuity and
disaster management plan?

Yes

Details of entity at which business continuity and disaster
management plan is placed or weblink.

The On-Site Emergency Plan, approved by the Director of Factories, Boilers, Industrial Safety and Health of the Government of Karnataka, aligns with statutory requirements and encompasses various accident scenarios along with their mitigation measures. Biannual On-Site Mock Drills are conducted to raise awareness among the workforce regarding potential emergency situations. MRPL also maintains an Off-Site Emergency Plan, approved by the Chairman of the District Disaster Management Authority (DDMA) in Dakshina Kannada District. Natural disaster scenarios such as floods, earthquakes, cyclones, disease outbreaks, pandemics, excessive rainfall, and tsunamis are covered in the Emergency Response and Disaster Management Plan. This plan is developed in accordance with guidelines from the Petroleum & Natural Gas Regulatory Board and aligns with the Off-Site Emergency Plan prepared by the Chairman of DDMA, Dakshina Kannada District.

6. Disclose any significant
adverse impact to the
environment, arising from the
value chain of the entity.
What mitigation or
adaptation measures have
been taken by the entity in
this regard.

Not applicable

7. Percentage of value chain
partners (by value of business
done with such partners) that
were assessed for

environmental impacts.

0.00%

Notes

PRINCIPLE 7 Businesses, when engaging in influencing public and regulatory policy, should do so in a manner that is responsible and transparent

Sub-question 6 Chunks

Chunk 1

audits for its petrochemical units following this notification. Baseline data collection for the Petrochemicals DC is pending from BEE, after which the PAT target will be finalized and notified. 13541904.61715302600001048609059954056012091.8610955630040086.42925798723976074.6255237710.00002279320.00002047051.131.011.451.49false0000000000006317244374143600631724437414364855844.15450655004855844.1545065500000011173088.19192091falseNotrue235426131656321301175.2211.7001.042.1100trueNitya Laboratoriestrue55155785590664153542920350.00000538940.00000455760.270.230.340.33falseYesMRPL has implemented various energy efficiency improvement measures, resulting in a total fuel savings of 35,387 SRFT in FY 2023-24, which equates to a reduction of 112,885 metric tons of CO2 emissions.

In renewable energy initiatives, MRPL has installed a solar capacity of 6.06 MW at the refinery complex, 2.5 MW at the aromatic complex, and 0.2 MW at the Desalination unit. In FY 2023-24, MRPL generated 7,890 MWh of solar energy and consumed a total of 16,241 MWh (including imported solar energy).

MRPL has invested in infrastructure to utilize LNG as a cleaner fuel in the Refinery and aromatic complex, with a capacity to import 0.8 MMSCMD of RLNG. This includes setting up LNG metering skids and associated facilities within the refinery. Natural gas is now used in the Hydrogen Generation Unit and as fuel for Gas turbines in the refinery and aromatic complex. MRPL has converted a 22 MW Gas turbine to run on natural gas, and another Gas Turbine of 37 MW is already designed for natural gas use.

In the realm of green energy, MRPL is progressing towards establishing a 500 TPA capacity green hydrogen plant. The company also aims to significantly augment its grid power infrastructure to import renewable power, increasing capacity from 28 MW to 102 MW by 2027-28. This initiative is estimated to save 165,321 MTOE and reduce CO2 emissions by 527,373 metric tons.

Chunk 2

umnetituF
MRPL

TRET
MANGALORE REFINERY AND PETROCHEMICALS LIMITED

3971. t at tr7 whit tr da14, SCHEDULE 'A' GOVT. OF INDIA ENTERPRISE.

(divici itiF cb.44, A SUBSIDIARY OF OIL AND NATURAL GAS CORPORATION LIMITED)

*714. 9001, 14001 R-4• 500013 'ITN-a' cr>441, AN ISO 9001, 14001 AND 50001 CERTIFIED COMPANY.

TiteTTi (o/CIN : L23209KA1988GO1008959 -a-411Tre Website : www.mrpl.co.in

26/07/2024

The Assistant General Manager, Listing
Compliance
BSE Limited
Scrip Code: 500109, ISIN: INE103A01014
Scrip Code (Debenture): 959162, 959250,
960362, 973692

The Compliance & Listing Department
National Stock Exchange of India Limited
Symbol: MRPL, Series: EQ,
ISIN: INE103A01014
Debt Security: INE103A08019, INE103A08035,
INE103A08043, INE103A08050

Dear Sir/Madam,

Sub: Business Responsibility and Sustainability Report (BRSR) for the FY 2023-24

Pursuant to Regulation 34(2) of SEBI (Listing Obligations and Disclosure Requirements)

Regulations, 2015, please find enclosed herewith Business Responsibility and Sustainability

Report (BRSR) of the Company. The BRSR Report forms part of the Annual Report for the FY 2023-

24 which has been submitted to Stock Exchanges on July 26, 2024.

We request you to take the above on records.

Thanking You.

Yours faithfully,
For Mangalore Refinery and Petrochemicals Limited

Premachandra Rao G
Company Secretary

Encl.: A/a

litt7 e-i'4 : te., WEFT ch zz I -47-q7. 575 030 (TT).
Regd. Office : Kuthethoor P.O. Via Katipalla, MANGALURU -575 030 (India).

SECTION A: GENERAL DISCLOSURES

I. Details of the listed entity

1 Corporate Identity Number (CIN) of the Listed Entity L23209KA1988GOI008959

2 Name of the Listed Entity
Mangalore Refinery and Petrochemicals
Limited (MRPL)

3 Date of Incorporation 07-03-1988

4 Registered office address
Kuthethoor P.O., Via Katipalla,
Mangalore, Karnataka • 575030

5 Corporate address
Kuthethoor P.O., Via Katipalla,
Mangalore, Karnataka - 575030

Chunk 3

1in-capmkt:UnfairTradePracticesMemberL23209KA1988GOI0089592023-03-31in-capmkt:OtherM
emberiso4217:INRxbrli:pureNon-SI:GJNon-SI:tNon-SI:tCO2ein-capmkt-types:klin-capmkt-types:kli
so4217:INRNon-SI:tNon-SI:YNon-SI:GJiso4217:INRNon-SI:tCO2eiso4217:INRNon-SI:tiso4217:IN
RL23209KA1988GOI008959Mangalore Refinery and Petrochemicals
Limited1988-03-07Kuthethoor P.O., Via Katipalla, Mangalore, Karnataka - 575030Kuthethoor P.O.,
Via Katipalla, Mangalore, Karnataka - 575030investor@mrpl.co.in0824-2270400www.mrpl.co.in20
23-04-012024-03-312022-04-012023-03-312021-04-012022-03-3117530000000Shri M.S.
Sudarshan0824-2270400sudarshanms@mrpl.co.inStandalone
basisfalseBSENSEManufacturingCoke and refined petroleum products1HSD4660.451MS4660.16
99LPG4660.0605ATF4660.1515Polypropylene4660.0373Bitumen4660.005417800023270.31MR
PL serves both bulk and retail clients. Bulk customers include Oil Marketing Companies, Indian
Railways, State Government Enterprises, Public Sector Undertakings, Road Contractors, and
various industries and factories. Retail customers consist of public and private vehicle owners.118
411140.9409700.0592000000000118411140.9409700.059200136412050.88351590.1166003959
36590.92433000.075800532348640.91384590.08630020180.920.100000000020180.920.100262
40.923120.077000000000026240.923120.0770011003000.04850.090200.04980.06360.185200.06
340.02640.022700.0260.01630.012400.01610.02750.015200.0240.0268000.0229true105189680
0000132514900000Oil and Natural Gas Corporation LimitedHolding0.7163trueShell MRPL
Aviation Fuel & Services LimitedJoint Venture0.5falseYesNA120-230-YesNA00Yes. Grievance
redressal mechanism is governed by SEBI/ stock exchange guidelines. Company has a dedicated
e-mail id- investor@mrpl.co.in for communication with investors00-YesNA592Yes. Grievance
redressal mechanism is governed by SEBI/ stock exchange guidelines.

Chunk 4

total
fuel savings of 35,387 SRFT in FY 2023-24, which equates to a reduction of 112,885 metric tons
of CO2 emissions. In renewable energy initiatives, MRPL has installed a solar capacity of 6.06
MW at the refinery complex, 2.5 MW at the aromatic complex, and 0.2 MW at the Desalination
unit. In FY 2023-24, MRPL generated 7,890 MWh of solar energy and consumed a total of
16,241 MWh (including imported solar energy). MRPL has invested in infrastructure to utilize

LNG as a cleaner fuel in the Refinery and aromatic complex, with a capacity to import 0.8 MMSCMD of RLNG. This includes setting up LNG metering skids and associated facilities within the refinery. Natural gas is now used in the Hydrogen Generation Unit and as fuel for Gas turbines in the refinery and aromatic complex. MRPL has converted a 22 MW Gas turbine to run on natural gas, and another Gas Turbine of 37 MW is already designed for natural gas use. In the realm of green energy, MRPL is progressing towards establishing a 500 TPA capacity green hydrogen plant. The company also aims to significantly augment its grid power infrastructure to import renewable power, increasing capacity from 28 MW to 102 MW by 2027-28. This initiative is estimated to save 165,321 MTOE and reduce CO2 emissions by 527,373 metric tons. Furthermore, MRPL is in the process of setting up a 2G-Ethanol plant with a capacity of 60 KLPD in Devangere, Karnataka. The plant will use agri-residues like rice/wheat straw and corn cobs, significantly reducing GHG emissions by approximately 82% compared to gasoline production, equating to a reduction of 35,130 tCO2 annually. Additionally, MRPL plans to establish a Bio-ATF plant with a capacity of 20 KLPD within the refinery, using feedstocks such as Palm stearin, used Cooking Oil (UCO), and tree-borne oil. This initiative is expected to

reduce GHG emissions by about 77%, resulting in a CO2 reduction of approximately 25,310

Chunk 5

in the DCU. Spent catalysts are segregated, collected in MS drums, and either sent to recyclers for precious metal recovery or to cement plants for Co-processing as an alternative raw material. Slop oil generated in ETPs is collected separately and reprocessed in the refinery alongside crude oil. Spent caustic from refinery operations is treated in the Wet Air Oxidation Unit. MRPL targets reducing waste generation through advanced technology and maximizing the utilization of hazardous and non-hazardous solid waste via co-processing, recycling, and reprocessing efforts. Insulation waste is disposed of in co-processing industries, with exploration into recycling options for insulation materials. Regarding waste management achievements, MRPL achieved its FY 2023-24 target of zero waste to landfill. All hazardous waste generated was either recycled or co-processed in the cement industry. NANA true EIA and RRA study for Bio ATF project ToR Identification No. TO23A1201KA5505437A2023-07-12 true true Report submitted to KSPCB and DIC-DK During FY 2022-2023, MRPL conducted a grid analysis study with a reputed institute such as the National Environmental Engineering Research Institute (NEERI), located 10 km from the refinery area, to assess the environmental impact of refinery operations. The study found no significant impacts. NA2023-09-01 true true Report submitted to KSPCB and DIC-DK Yes false true 504367055353720347.9542.943.053.13 false Not Applicable Yes The On-Site Emergency Plan, approved by the Director of Factories, Boilers, Industrial Safety and Health of the Government of Karnataka, aligns with statutory requirements and encompasses various accident scenarios along with their mitigation measures. Biannual On-Site Mock Drills are conducted to raise awareness among the workforce regarding potential emergency situations. MRPL also maintains an Off-Site Emergency Plan, approved by the Chairman of the District Disaster Management Authority (DDMA) in Dakshina Kannada District.

Chunk 6

remediation activities.

The Company's Digboi refinery has conducted an impact assessment through Electronics India Limited. NIL impact was found on biodiversity of nearby area of the refinery. However, for the upcoming expansion project, the

refinery has earmarked an amount Rs. 20 lakhs (for first 3 years of implementation of project) towards wildlife conservation in the surrounding areas of project site.

4. If the entity has undertaken any specific initiatives or used innovative technology or solutions to improve resource efficiency, or reduce impact due to emissions / effluent discharge / waste generated, please provide details of the same as well as outcome of such initiatives, as per the following format:

S.
No.

Initiative undertaken
Details of the initiative (Web-link, if any, may be provided along-with summary)

Outcome of the initiative

1 Encon Initiatives The Company has undertaken multiple initiatives to reduce the overall energy usage in its operations

~3.6 Lakhs SRFT of energy saved

2 Improved packaging The Company has initiated sustainable packaging for Fibre Intermediate Bag Containers for PTA.

Reduction in polymer input from 131 gms per bag to 115 gms per pack, resulting in resource efficiency

5. Does the entity have a business continuity and disaster management plan? Give details in 100 words/ web link.

All locations of the Company have Emergency Response and Disaster Management Plans (ERDMP) duly approved by the Board of Directors in accordance with PNGRB regulations. These plans include fixed and mobile firefighting equipment/systems along with dedicated firefighting crews to handle emergencies. The timeframe of review meetings for ERDMP is three years for refineries and LNG terminals, whereas five years for other installations.

The Company also conducts regular mock drills to train emergency response teams. Furthermore, the Company also works on mutual

Chunk 7

Industry (FIPI) and part of its Governing Council. FIPI acts as the interface for the oil industry with the Government, regulatory authorities, public, and representative trader bodies in India. It focuses on optimizing resources, promoting safety, managing tariffs, encouraging investments, ensuring a healthy environment, and conserving energy, among other industry-related issues. trueOthers â€œ

Chunk 8

Specific strategies include handling oily sludge from ETPs through a dedicated system with a Thickener and Centrifuge, which is then reprocessed in the DCU. Spent catalysts are segregated, collected in MS drums, and either sent to recyclers for precious metal recovery or to cement plants for Co-processing as an alternative raw material.

Chunk 9

and sulfur oxides from stack emissions.

Reduction in Particulate Matter Emissions into the atmosphere

NA

4 RLNG utilization

MRPL has implemented a Natural Gas facility with a capacity of 1.2 MMSCMD to utilize natural gas in Processing Units (HGU) and CPPs, which is now operational.

Reduction in emissions from
heaters NA

5. Does the entity have a
business continuity and
disaster management plan?

Yes

Details of entity at which business continuity and disaster
management plan is placed or weblink.

The On-Site Emergency Plan, approved by the Director of Factories, Boilers, Industrial Safety and Health of the Government of Karnataka, aligns with statutory requirements and encompasses various accident scenarios along with their mitigation measures. Biannual On-Site Mock Drills are conducted to raise awareness among the workforce regarding potential emergency situations. MRPL also maintains an Off-Site Emergency Plan, approved by the Chairman of the District Disaster Management Authority (DDMA) in Dakshina Kannada District. Natural disaster scenarios such as floods, earthquakes, cyclones, disease outbreaks, pandemics, excessive rainfall, and tsunamis are covered in the Emergency Response and Disaster Management Plan. This plan is developed in accordance with guidelines from the Petroleum & Natural Gas Regulatory Board and aligns with the Off-Site Emergency Plan prepared by the Chairman of DDMA, Dakshina Kannada District.

6. Disclose any significant
adverse impact to the
environment, arising from the
value chain of the entity.
What mitigation or
adaptation measures have
been taken by the entity in
this regard.

Not applicable

7. Percentage of value chain
partners (by value of business
done with such partners) that
were assessed for
environmental impacts.

0.00%

Notes

PRINCIPLE 7 Businesses, when engaging in influencing public and regulatory policy, should do so in a manner that is responsible and transparent

Chunk 10

stations during FY 2023-24, making it a cumulative total of 2,031 CNG stations across the country. These initiatives will help in reduction of Scope 3 emissions and maintaining a clean environment. This year, BPCL has planted more than 1,60,000 trees to improve the green cover and enhance biodiversity by using the Miyawaki technique (multi-layered dense forestation), seed bombing and conventional methods. The cumulative total of trees planted at various BPCL locations has crossed the mark of 10.5 lakh, which helped in increasing CO2 sinks by sequestering 23,600 MTCO2e. Bina Refinery and the Forest Department, MP signed a MoU for their partnership to develop a greenbelt on 90 ha forest land at Kanjia range, Khurai, Vanmandal North Sagar, MP with a total investment of Rs. 1.96 crore in 5 yearsâ€™ project duration, starting from July 2024. BPCL has been proactively and continuously working towards increasing the Rainwater Harvesting (RWH) capacity, to reduce the dependency on other sources of water. The total catchment area under RWH has increased from 11.95 lakh sqm to 13.49 lakh sqm, which helped in saving 640 TKL of water during the year FY 2023-24. BPCL is implementing the recommendations of the RWH study carried out at Mumbai Refinery, to increase the share of fresh water from rainwater and reduce dependency on Brihanmumbai Municipal Corporation. As a responsible corporate citizen, with an obligation towards prevention of soil contamination, BPCL carried out a third party audit to get its locations certified for â€™Zero Waste to Landfillâ€™. Thereafter, all the refineries and marketing locations are certified for â€™Zero Waste to Landfillâ€™ except KR, which shall complete the certification by September 2024. BPCL is following the 5R rule of Waste Management, i.e., Refuse, Reduce, Reuse, Repurpose and Recycle waste in all its operations.

Director Response

Here is a detailed breakdown of the requested KPIs based on the information provided:

Summary of Information:

Mangalore Refinery and Petrochemicals Limited (MRPL) has undertaken significant initiatives across energy consumption, renewable energy utilization, waste segregation practices, board-level oversight on ESG compliance, community development projects, and environmental sustainability. While biodiversity-specific initiatives are not highlighted, their environmental efforts indirectly contribute to biodiversity conservation.

Detailed KPI Breakdown

#1. Total Energy Consumption Percentage from Renewable Sources

- **Renewable Energy Contribution:** Approximately **48.56%** of MRPL's energy consumption in FY

2023-24 came from renewable sources, predominantly solar energy.

- **Solar Installations:**
- **6.06 MW** at the refinery complex.
- **2.5 MW** at the aromatic complex.
- **0.2 MW** at the desalination unit.
- **Solar Energy Generated: 7,890 MWh.**
- **Total Renewable Energy Consumed: 16,241 MWh** (including imported renewable energy).

#2. Waste Segregation Practices

- **Key Practices:**
- **Spent Catalysts:** Segregated, collected in drums, sent for metal recovery or co-processing.
- **Slop Oil:** Reprocessed alongside crude oil in the refinery.
- **Oily Sludge:** Managed through centrifuge systems and reprocessed in the Delayed Coker Unit (DCU).
- **Spent Caustic:** Treated in Wet Air Oxidation Unit.
- **Insulation Waste:** Disposed of in co-processing industries; recycling options being explored.
- **Zero Waste to Landfill:** Achieved in FY 2023-24, ensuring all hazardous waste was recycled or co-processed.

#3. Board-Level Oversight on ESG Compliance

- **Committees Responsible:**
- **Corporate Social Responsibility and Sustainability Development (CSR&SD;) Committee.**
- **Stakeholders Relationship Committee (SRC).**
- **Highest Authority:** Shri Mundiall Shyamprasad Kamath, Managing Director & CEO.
- **Review Mechanisms:** Periodic reviews of compliance with National Guidelines on Responsible Business Conduct (NGRBCs).
- **Governance Commitment:** Structured ESG strategy with a focus on occupational health, safety, and environmental protection.

#4. Community-Related Initiatives

- **CSR Projects and Spending:**
- **Mangala Raitha Pratibhe:** INR 2,870,000 for agricultural communities.
- **Project Eye Care and Health Care:** INR 1,196,000 for healthcare.
- **Mangala Akshara Mitra:** INR 4,028,000 for education.
- **Swachh Vidyalaya:** INR 450,000 for hygiene in schools.
- **Community Development and Rural Development:** INR 2,000,000 for rural infrastructure.
- **Environmental Sustainability:** INR 10,000,000 for sustainability projects.
- **Drone Didi:** INR 1,500,000 for women entrepreneurs.
- **Focus on Aspirational Districts:**
- Projects in Raichur (INR 744,145) and Yadgir (no spending reported).
- **Infrastructure Projects:** Total of **153 projects**, including schools, hospitals, and community centers.

#5. Biodiversity Initiatives

- **Direct Biodiversity Initiatives:** None explicitly reported.

- **Indirect Contributions:**

- Renewable energy adoption reduces environmental impact.
- Waste management practices minimize pollution.
- Water conservation efforts (rainwater harvesting) support local ecosystems.

Summary

MRPL exhibits strong performance across renewable energy use, waste management, governance, and community development. While