

**INTRODUCTION TO  
ENVIRONMENT &  
HOUSEKEEPING  
IN INDIAN  
RAILWAYS**

- **Creation of Environment Directorate**

- As per Railway Board Office Order

- Dated 07-01-2015

**Objective:**

- Ensuring Effective Utilization of Water Resource

- Conducting Energy and Water Audit

- All Matters related to Environment

# PRECURSOR

- Vide Office Order of Railway Board
  - Dated 01-04-2015
  - Environment Directorate as
  - Monitoring Agency
  - Not as Executing Agency
- 
- Concerned Directorates
  - To Execute the Works
  - To Maintain Files

# ENHM DIRECTORATE

- Environment and Housekeeping Directorate brought under Member Mechanical (then)
- Detailed Guidelines issued Vide Railway board Letter dated 28-08-2015
  
- To deal with
  - Environment Issues
  - As well as
  - Housekeeping Issues

# ROLLING OUT STRATEGY

- Environment and Housekeeping Directorate
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- To Create EnHM Wing at
- NR – Firozpur Division
- SCR – Secunderabad Division
- SR – Chennai Division
- As a Pilot Project

# ENHM WING

- Environment & Housekeeping Wing: to be Established
  - In Zonal Railway
  - Function as Independent Wing

- In Zonal Railways

Under GM and PCME

- In Division

Under DRM

# VISION

To promote Green environment and clean energy while making the Indian Railways a global leader in sustainable mass transport solutions.

# MISSION

- To promote energy conservation measures.
- To maximize the use of alternate forms of clean energy, thereby minimizing the carbon footprint of Railways.
- To provide clean and hygienic environment to customers.
- To promote conservation of water and other natural resources.
- To march towards Zero waste discharge from the major Railway units.
- To promote Green built-up spaces and expand tree-cover.
- Building in house capacity to set up an effective Environment Management System.
- Noise reduction in Railway operations.

# SCOPE OF WORK

To undertake

- Monitoring and Co-ordination Functions
- For All Environment Related Issues

Concerned Department

- Execution
- Planning
- Sanction of Environment Related Work



# SCOPE OF WORK

Responsible for

- Execution
- Monitoring
- Co-ordination of
  - Housekeeping Activities of
  - Coaching Trains
  - Major Railway Stations
  - Coaching Maintenance Depots

# HOUSEKEEPING MANAGEMENT FUNCTIONS

- Mechanized Cleaning of  
AI & A Class Railway Stations
- Restricted to Passenger Interface Area  
Excluding Retiring Room, Officers Rest House
- If Existing Contract covers the areas  
Retiring Room, Officers Rest House also to be covered

# HOUSEKEEPING MANAGEMENT FUNCTIONS

- Mechanized Cleaning of Coaches
  - in Coaching Depot/Station
  - Including Clean Train station
- Mechanized Cleaning of
  - Maintenance Depots
- Pest & Rodent Control of
  - Station
  - Coach Maintenance Depots
  - Coaching Trains

# HOUSEKEEPING MANAGEMENT FUNCTIONS

On Board Housekeeping Services in

- Coaching Trains

Linen Management in

- Trains
- AI & A Category Stations

Petty Repair to Amenity Fittings in

- Trains
- AI & A Category Stations

# **POSTS FOR ENVIRONMENT & HOUSEKEEPING ACTIVITIES**

- No creation of New Posts
- Posts from Departments undertaking activities as Housekeeping Management
- Functions as Mentioned Earlier
- Identification and Transfer of Posts by Zonal Railways
- Depending upon Quantum of Workload

# POSTS FOR ENVIRONMENT & HOUSEKEEPING ACTIVITIES

To Start with

- A JAG Post of HQ
- Sr Scale Post at Division

Officers to man the posts from departments

- Mechanical, electrical, traffic/commercial, engineering
- To use expertise from experience gained supervisors of all departments engaged in housekeeping activities
- To be deputed to work exclusively for EnHM wing

# POSTS FOR ENVIRONMENT & HOUSEKEEPING ACTIVITIES

- As per Railway Board Letter dated 15-02-2016, Designation of EnHM Officers:

## At HQ

- CEnHM – SAG
- Dy CEnHM – JAG
- XEnHM – Sr Scale

## At Division

- Sr DEnHM - JAG
- DEnHM – Sr Scale
- AEnHM – Jr Scale

# MANAGEMENT OF HOUSEKEEPING ACTIVITIES

- EnHM Wing to manage Housekeeping Activities at Locations where such Activities already outsourced completely
- Respective Departments to manage Housekeeping Activities where Departmental Staffs are carrying out such Activities till Outsourcing is done
- In Charge Supervisors of Respective Department to continue to monitor as Inspectorial Role Besides EnHM Supervisors



# **BUDGET FOR HOUSEKEEPING ACTIVITIES**

EnHM Wing to manage Budget for

- Housekeeping Activities of
- Station and Coaching Trains

FA&CAO to suitably reallocate

# ENVIRONMENT DIRECTORATE

- Environment Issues
  - Pollution Control
  - Consumption of Energy
  - Conservation of Resources – Water
  - Proper Use of Land – Afforestation
  - Development Production and Use of
  - Alternative Source of Energy

# ENVIRONMENT ISSUES

- Pollution Control

Water Pollution

Air Pollution

Land Pollution

Noise Pollution

# ENVIRONMENT ISSUES

- Pollution Control Acts
- Water (Prevention & Control of Pollution) Act 1974
- Air (Prevention & Control of Pollution) Act 1981
- Environment (Protection) Act 1986
- Public Liability Insurance Act 1991
- National Environment Tribunal Act 1995
- National Environment Appellate Authority Act 1995

# ENVIRONMENT ISSUES

- Consumption of Energy
- Trend of Consumption of Traction Energy
- Electricity Consumption
- 1.8% of Country's Consumption
- HSD Consumption
- 3.5% of Country's Consumption

# ENVIRONMENT ISSUES

- Consumption of Energy
- Trend of Consumption of Traction Energy (Contd..)
- Action Plan for Reduction in SFC/SEC
- Regenerative Braking in EMUs
- provision of APUs in Diesel Loco
- Electronic Fuel Injection
- Rolling stock with higher Pay Load to Tare Ratio

# ENVIRONMENT ISSUES

- Consumption of Energy
- Trend of Consumption of Non-Traction Energy
  - Energy Audits
  - Use of Energy Efficient LED Fittings
  - Procurement of 3 Star & Above Appliances
  - Adoption of Energy Efficient Building Code
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# ENVIRONMENT ISSUES

- Conservation of Resources – Water
- Vide CRB Letter 27-04-2016
- Effective Water Management
- Rain Water Harvesting wherever possible
  - Especially where Rooftop Area > 220 SqM
  - To recharge Water Table
- Water Audit of Major Consumption Centers
- Expeditious Completion of Ongoing Works of
  - Water Recycling Plant



# ENVIRONMENT ISSUES

- Conservation of Resources – Water (Contd...)
- Indian Railways Water Policy 2017 Salient Points
  - Reduce                      Recycle                      Recharge
  - Upgrading Water Supply System
  - Water Audit
  - Provision of Automatic Valves
  - Water Efficient Fittings
  - Rain Water Harvesting
  - Revival of Old Water Bodies
  - Water Recycling Plant on BOOT
  - Solar Water Heater

# ENVIRONMENT ISSUES

- Proper Use of Land – Afforestation
- Prime Minister Committee on Climate Change
- Massive Drive on Plantation of Trees
  - Linear Stretches of Railway Land Boundary
  - Alongside Track
  - Block Plantation on Railway Vacant Land
  - Not required Development/Operation
- Model Agreement circulated to Zonal Railway
  - For Liaison with State Forest Department
  - To get Expertise of them

# ENVIRONMENT ISSUES

- Development Production & Use of Alternative Source of Energy
  - Wind Energy
  - Solar Energy
  - Roof top of Station Building
  - CNG/LNG
  - DEMU
  - Bio Diesel (Blending of HSD by 5%)

# ENVIRONMENT ISSUES

- Audit & Accreditation of Major Activity Centers
- Accreditation of IMS of PU/Workshop/Loco Sheds/Major Coaching Depot/Wagon Depot
  - ISO 9001 – Quality Management
  - ISO 14001 – Environment Management
  - ISO 18001 – Occupational Health & Safety
  - ISO 50001 – Energy Management
  - GRIHA Rating
  - IRICEN      SCR Rail Nirman Nilayam

# ENVIRONMENT ISSUES

- Celebration of
  - Swachhata Pakhwada
  - Station Cleanliness Campaign and Ranking
  - Swachh Bharat Abhiyan

# ENVIRONMENT ISSUES

- Works having Positive Contribution towards Environment:  
Guideline issued by Railway Board 03-02-16
- List of Work can be taken up under CSR by  
Corporate/PSUs

## List of Works:

- Environment Sustainability
- Sanitation and Cleanliness of Station
- Passenger Amenities at Station

# ENVIRONMENT ISSUES

- Funding
  - To Earmark 1% Lump sum Provision in
  - All Works/Estimate towards
  - Environment Related Works
- CSR Works by Corporates and PSUs

# List of Environmental Related Works

Annexure

(Board's letter no. 2016/EnHM/13/02 dt. .5.2016)

## Environment related works/items

1. Water conservation works i.e. Rain Water Harvesting, Water recycling plant etc.
  2. Sewage treatment plant
  3. Effluent Treatment plant
  4. Solid waste management solutions e.g. waste to compost, waste to energy plants etc.
  5. Eco-friendly faecal treatment/disposal arrangements.
  6. Solar energy plants including PV modules for off-grid applications e.g. for hospitals, stations, office building, colonies, LC gates, signaling equipments etc.
  7. Energy efficient lighting fixtures
  8. Afforestation including development of green areas
  9. Use of Green Building features in built up space to be constructed/renovated etc.
  10. Water efficient fixtures
  11. Protection and/or improvement of water bodies in railway land which helps in recharging the aquifer.
  12. Measures for mitigation of Air & Water pollution during construction & operation
  13. Construction and Demolition waste recycling Plant
  14. Measures for natural air-conditioning of the building including geo-thermal cooling.
  15. Environment related studies including water audit and/or energy audit and works relating to implementation of recommendations of such audits.
  16. Environment related monitoring devices and tools
- Any other item required as per local Regulations and Court order for upkeep of environment.



# ENVIRONMENT ISSUES

- Zero Discharge from Major Activity Centers
- Setting up of Waste to Energy Plant
- Bio Mass Gas Plant
- Bio Toilets
- Incinerator
- Effluent Treatment Plant

# HOUSEKEEPING ISSUES

- For Cleaning and Housekeeping
- Railway Board issued
- Standard Bid Document 2017
- General Condition of Contract Service
- In order to Standardize
- Practice
- Manpower
- Material
- Machines
- Contract Administration

# HOUSEKEEPING ISSUES

- Practice
  - Frequency of Cleaning
- Manpower
  - Norm for Manpower
  - Qualification
- Material
  - Cleaning Agents
  - Norm for Amount of Solution
- Machines
  - Type of Machines
  - Brand and Rating
  - Norm for Machine Deployment

# HOUSEKEEPING ISSUES

- Contract Administration
  - Quality of Work done
  - To measure Performance
  - Quantity and Timing of Work done
  - Penalty Clause
  - Insurance of Workers and Third Party
  - Adherence to Statutory Labour Laws
    - Minimum Wages
    - ESI                  EPF                  Bonus
  - Duty of Principal Employer

# LATEST DEVELOPMENT

- Railway Board Office Order 105 & 111 of 2018
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- Responsibility of EnHM revised as
- Policy Formulation of
  - Housekeeping of
    - Trains
    - Railway Stations
    - Rolling Stock Maint Depots
    - Linen Management
- Training Seminar of EnHM Matters
- Swachh Bharat Abhiyan
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# LATEST DEVELOPMENT

- Railway Board Office Order 105 & 111 of 2018
- Responsibility of EnHM revised as (Contd...)
- Policy and Monitoring Solid Waste Management
- Environment Management Plan and Accreditation
- Co-ordination with
  - NGT
  - Other Ministry
  - Other Department
  - Audit Case
  - Parliament
  - Court Cases

# LATEST DEVELOPMENT

- Railway Board Office Order 105 & 111 of 2018
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- Responsibility of EnHM shifted to (Contd...)
- Execution of All Works by
  - Concerned Department
- Budgeting by Concerned Department
- Execution of Station Cleaning including Circulating Area to
  - Commercial Department
- Execution of Colony Cleaning
  - By Respective division