



Indian Railway Innovation Policy

For Prelims: Indian Railway Innovation Policy, Headquarters of the Zones of Indian Railways

For Mains: Issues in Indian Railway, Indian Railway Innovation Policy, Government Interventions and Policies

Why in News?

Recently, the Minister of Railways has launched **Indian Railway Innovation Policy- “StartUps for Railways”**.

What are the Key Highlights of the Policy?

▪ About:

- Grant up to **Rs. 1.5 Crore to innovators on equal sharing** basis with provision of milestone-wise payment.
- The complete process from floating of problem statement to development of prototype is online with defined time line to make it transparent and objective.
- Trials of prototypes will be done in Railways.
- **Enhanced funding will be provided** to scale up deployment on successful performance of prototypes.
- **Selection of Innovator/s will be done by a transparent and fair system** which will be dealt through an online portal inaugurated today by the Minister of Railways.
- Developed **Intellectual property rights (IPR)** will remain with innovators only.
- De-centralization of complete product development process at divisional level to avoid delays.

▪ Issues Identified:

- **Eleven problem statements such as rail fracture, headway reduction, etc.**, have been taken up for this program's phase 1 out of the more than 100 problem statements received from various divisions, field offices or zones of Indian Railways.

▪ Expected Benefits:

- This policy will **bring scale and efficiency in the field of operation, maintenance** and infrastructure creation through participation of a very large and untapped startup ecosystem.
- It also aims to **leverage innovative technologies** developed by Indian **Startups/MSMEs /Innovators/Entrepreneurs** to improve operational efficiency and Safety of Indian Railways.
- It will Promote **“Innovation Culture” in the country for co-creation** and co-innovation in the Railway sector.

What are the Key Facts about Indian Railways?

▪ About:

- The Indian Railways network is **one of the longest in the world.**

- It **facilitates the movement of both freight and passengers** and contributes to the growth of the economy.
 - The Indian Railway was introduced in **1853**, when a line was constructed **from Bombay to Thane** covering a distance of 34 km.
 - Indian Railways is the **largest government undertaking in the country**.
 - The length of the Indian Railways network was 67,956 km (Railway yearbook 2019-20).
- **Zones:**
- In India, the railway system has been divided into 16 zones.

Railway Zone	Headquarters
Central	Mumbai CST
Eastern	Kolkata
East Central	Hajipur
East Coast	Bhubaneswar
Northern	New Delhi
North Central	Allahabad
North Eastern	Gorakhpur
North East Frontier	Maligaon (Guwahati)
North Western	Jaipur
Southern	Chennai
South Central	Secunderabad
South Eastern	Kolkata
South East Central	Bilaspur
South Western	Hubli
Western	Mumbai (Church Gate)
West Central	Jabalpur

- Indian Railways is the proud owner of **four UNESCO accorded World Heritage Sites** namely **Darjeeling Himalayan Railway** (1999), **Nilgiri Mountain Railway** (2005), **Kalka Shimla Railway** (2008) and **Chhatrapati Shivaji Terminus**, Mumbai (2004).
 - There are two more in waiting or in the tentative list namely **Matheran Light Railway and Kangra Valley Railway**.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. With reference to bio-toilets used by the Indian Railways, consider the following statements: (2015)

1. The decomposition of human waste in the biotoilets is initiated by a fungal inoculum.
2. Ammonia and water vapour are the only end products in this decomposition which are released into the atmosphere.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (d)

Exp:

- Bio-toilet project of Indian Railways is an innovative and an indigenous development of technology.

This technology is the first of its kind and is being used for the first time by any railroad in the world for onboard accelerated digestion of human waste.

- These bio-toilets are fitted underneath the lavatories and the human waste discharged into them is acted upon by a colony of anaerobic bacteria that convert human waste, mainly into water and a small amount of bio-gases like Methane, Ammonia etc. **Hence, statements 1 and 2 are not correct.**
- The gases escape into the atmosphere and waste water is discharged after chlorination onto the track.
- Human waste, thus, does not fall on the railway tracks, thus improving cleanliness and hygiene at platforms, and facilitate track and coaches maintenance staff to perform their work more efficiently.
- Therefore, option (d) is the correct answer.

Source: PIB

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