



## BharatNet Project

**For Prelims:** [BharatNet Project](#), [Optical Fibre](#), [Bharat Broadband Network](#), [Companies Act, 1956](#), [Village Level Entrepreneurs \(Udyamis\)](#), [Digital Divide](#).

**For Mains:** BharatNet Project, Significance and Challenges.

**Source:** IE

### Why in News?

Recently, the Union Cabinet has approved Rs 1.39 lakh crore for the **Modernization of the [BharatNet project](#)**.

### What is BharatNet Project?

#### ▪ About:

- **National Optical Fibre Network (NOFN)** was launched in October 2011 and was renamed as **Bharat Net Project in 2015**.
- It is the **world's largest rural broadband connectivity programme** using [Optical Fiber](#). And also a flagship mission implemented by [Bharat Broadband Network Ltd. \(BBNL\)](#).
  - BBNL is a Special Purpose Vehicle (SPV) set up by the Government of India under the [Companies Act, 1956](#).
  - It is being implemented by the Department of Telecommunication under the Ministry of Communications.
- This project involves altering the **execution strategy and employing [Village Level Entrepreneurs \(Udyamis\)](#)** to provide fiber connections to the last mile, thereby **accelerating the connectivity process** over the next 2.5 years.
- It is financed by the [Universal Service Obligation Fund \(USOF\)](#).
  - **USOF** ensures that there is **universal non-discriminatory access** to quality ICT (Information and Communications Technology) services at **economically efficient prices** to people in rural and remote areas.
  - It was created under the Ministry of Communications in 2002.

#### ▪ Objective:

- The project aims to **compete with private operators like Jio and Airtel** by leveraging its presence in rural areas where these private operators are less prominent.
- The quality of service provided by BharatNet is **expected to play a role in attracting users**.
- It aims to **connect all 640,000 villages** across India with high-speed internet access.
- It seeks to bring broadband internet connectivity to each of the more than 2.5 lakh gram panchayats across the country.
- The government intends to provide a minimum of **100 Mbps bandwidth at each Gram Panchayat through BharatNet** so that everyone, especially those in rural India, can access online services.

- **Revamped Approach:**
  - Similar to private telecom companies like **Airtel and Jio**, the revamped BharatNet model will **collaborate with Village Level Entrepreneurs (VLEs)** for the implementation of **fiber connections**.
  - Under this approach, the **government will bear the cost of extending the infrastructure** to homes, while the entrepreneurs **will contribute to the maintenance** and operation of home connections.
    - This partnership will work on a **50:50 revenue-sharing basis**.
- **Phases of the Project:**
  - **First Phase:**
    - Provide more one lakh gram panchayats with broadband connectivity by laying **underground Optic Fibre Cable (OFC)** lines by December 2017.
  - **Second Phase:**
    - Provide connectivity to all the gram panchayats in the country using an optimal mix of underground fibre, fibre over power lines, radio and **satellite media by March 2019**.
  - **Third Phase:**
    - From 2019 to 2023, a state-of-the-art, future-proof network, **including fibre between districts and blocks**, with ring topology to provide redundancy would be created.

## What are the Progress and Milestones of BharatNet Project?

- Previously, the challenge was to **extend fiber-based internet connections to households** after laying the infrastructure under the BharatNet project.
- To address this, a successful pilot was conducted in 60,000 villages, involving local partners to connect households.
- This success paved the way for the **involvement of Udyamis** in the project, expected to generate employment opportunities for around 250,000 people.
- Up to this point, the government has connected approximately 194,000 villages, providing internet **access to around 567,000 households**.
- Notably, 351,000 fiber connections have been **established using the new BharatNet Udyami project**.

## What are the Challenges to the BharatNet Project?

- **Slow Progress and Implementation Delays:**
  - The project has faced significant delays in implementation, with the pace of progress being slower than anticipated.
  - Despite the government's efforts to connect villages, **only about 194,000 out of the targeted 640,000 villages** have been connected so far. This slow progress has hindered the **project's ability to bridge the Digital Divide** in rural areas.
- **Infrastructure and Connectivity Issues:**
  - The challenging terrain, **lack of proper roads, and logistical difficulties** have all contributed to delays in connecting villages. Connectivity issues have also led to poor service quality and interrupted internet access in some areas.
- **Technical and Operational Issues:**
  - Technical challenges such as signal quality, bandwidth limitations, and network downtime **have affected the overall user experience**.
  - Moreover, managing the operations, maintenance, and complaint resolution processes in a decentralized manner involving local entrepreneurs has proven to be complex and requires effective coordination.
- **Competition from Private Operators:**
  - The presence of private telecom operators like Jio and Airtel in some rural areas poses a challenge for BharatNet. These private operators have established their own network infrastructure and services, making it important for BharatNet to offer competitive pricing and reliable service quality to attract users.

## Way Forward

- The BharatNet Project faces a combination of technical, financial, operational, and awareness-related challenges.
- Addressing these challenges is essential for the project's success in achieving its goal of providing digital connectivity to every corner of rural India.
- Efforts should be made to expedite the **implementation process by addressing bottlenecks and streamlining** the deployment of infrastructure. Collaborative efforts between government agencies, local bodies, and private partners can help speed up the process.
- Ensuring a consistent and sustainable **flow of funds is crucial for the project's success**. Clear financial planning, allocation, and management are necessary to support the project's expansion and maintenance activities.
- Focusing on improving the quality of service is vital to attract and retain users. This involves addressing technical issues, ensuring consistent bandwidth, and minimizing network downtime.

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