

ACCESS TO RIGHTS

A consortium for
last-mile access
and rights

Addressing Last-Mile Access in Unconnected Mountain and Indigenous Regions



Background

The seventh Community Network Xchange 2023 was organised in Guwahati and focussed on the connectivity challenges of the mountain and tribal communities in South Asia. The discussions emphasised the need to go beyond mere connectivity and create interventions embedded in the local and indigenous traditions of the locale of interventions. Three regions emerged as locations that need urgent interventions. Nandurbar district in the Kandesh region of Maharashtra, different parts of North-East India and Ladhak region. All three of these regions share a unique geography of uneven terrain, with hills and mountains mostly inhabited by indigenous communities residing in remote villages.

Areas in Urgent Focus:

Nandurbar:

Nandurbar district is one of the 112 aspirational districts by NITI Ayog for its peculiar developmental problems. As per the 2011 census, the literacy rate of the district is 64.4 per cent, which is comparatively lower than the state's (82.3 per cent). The Growth Rate of the district is 25.7. Scheduled Tribes (STs) account for 63% of the total population of the district. The specific geographical terrain of the area makes them more vulnerable to weak network and internet coverage. For example, one of the villages, Sawarya Digar, is water-locked from three sides by the backwaters of Narmada. No mobile network reaches them, so they have to travel 27 km by boat, on foot, by jeep, and by bus to get to the closest point with 5 g internet. They spend around Rs. 200 for a trip to access the internet, recharge for 1 GB, download all the information they want and get back to their villages. There are villages that have network coverage in certain spots, but the connection is weak; as a consequence of a weak network, digital literacy is subsequently low, and online fraud is very high. Ashram schools, the residential tribal schools (since many villages are far apart from each other), do not have any digital equipment or internet. The villages speak Pawri, a tribal language with its own script. The region is mainly agrarian, with a rich collection of indigenous seed varieties.

North-East Region of India

The northeast region of India comprises seven states and is home to a population of 46 million, which is around 3.78% of the country's population¹. The region has over 220 ethnic groups and dialects. Within the seven states of the region, Assam is the most densely populated state comprising around 68% of the total population. However, the region lacks internet connectivity, which translates into a digital divide, economic disadvantages, and limited access to services. Various factors have contributed to the region's lack of internet connectivity, such as hilly terrain and frequent natural calamities that includes flooding and landslides.

The internet subscription rate in the northeast region is 43%, below the national average of 55%². This data might also not give a real picture of the region due to the relatively higher internet penetration in urban Assam. Additionally, the region faces higher network downtime and slower internet speeds, resulting in frequent digital transaction failure. One of the ways to measure internet penetration in a region is by looking at its teledensity, and it measures the internet connection per 100 individuals. As per the statistics, Assam has the lowest teledensity (at 71.75) followed by Meghalaya and Nagaland. Sikkim has the highest teledensity (at 142.49), followed by Mizoram and Arunachal Pradesh. While the overall teledensity has been increasing in the region, there has been a decline in the teledensity of Arunachal Pradesh, Manipur, and Tripura. This might be due to rising tariffs, increased WiFi use, and COVID-19-induced lockdown. Additionally, there is a vast difference between the download speeds in North-East India and the rest of India. While the average download speed in India is 108.86 MB/s and the median speed is 25.29 MB/s, the median speed in North-East India, except Assam, is below 20 MB/s.

The lack of access to the internet has also translated into 9,326 villages in the region being unconnected. Out of this, 2,000 villages are in Arunachal Pradesh, Assam, and Meghalaya⁶. Data from Mission Antayodya has also pointed out that Sikkim has the least number of banks with internet connectivity, consisting of only 69 banks, hampering access to various government services, including Aadhar penetration and necessitating cash-in-cash-out requirements. Nagaland on the other hand, has the least amount of business correspondents with internet connectivity with 79 correspondents, this has also translated into low digitisation of stores in the region.

This has also resulted into low computer usage in the region – less than 10% of people are able to operate a computer in Arunachal Pradesh, Assam, Nagaland, Manipur, and Meghalaya. A study by CSD on Pradhan Mantri Gramin Digital Sharsakta Abhigyan (PMGDISHA) in 2019 noted that the percentage of households owning a computer is below 40%. The highest was recorded in Sikkim, at 60.8% in urban areas. In rural areas, it drops to below 20% and as low as 3.2% in Tripura resulting in low ability to use and operate computers.

Ladakh:

Ladakh is a region in the northern part of India known for its high altitude. It is divided between India and Pakistan, with China administrating northeastern Ladakh. The region of Ladakh primarily consists of high plains and deep valleys consisting of several Buddhist monasteries; the region is known for its tourist destination. According to India's census, the region's population is around 2,74,289. The region of Ladakh faces multiple issues in terms of Internet connectivity. This includes fairly limited mobile connectivity within the region and low internet speed during the peak season. While the areas around Leh and its adjoining areas offer 4G connectivity, the rest often offers a 3G/2G network, restricting the network speed. This has resulted in many students walking miles to reach network areas to attend online classes.

Apart from the residents, this has an adverse impact on the tourism industry of Ladakh on which the economy is dependent. The impact can be twofold: one, it impacts the ability of tourists to communicate with hotels, and tour operators, effectively adding hindrance in booking a reservation and communicating with potential visitors. Secondly, it might make it difficult for tourist to stay connected and access resources for travel information. Additionally, it might prevent the citizens from using the digital modes of payment.

See an experiential note on Ladakh's connectivity here:
<https://www.defindia.org/ladakh-basking-in-the-daunting-beauty-of-unconnectivity/>

In light of the dire state of connectivity in these three regions, this initiative aims to provide context-specific and community-based interventions highlighting the urgent need to address issues of access, affordability, and exclusion.

Objectives:

- Establish two digital access centres in each North East State, Ladakh and Nandurbar, fostering connectivity and inclusivity.
- Infuse elements of local wisdom, art, and culture into each centre, creating a cluster-oriented approach that resonates with the community.
- Leverage satellite technology, providing free satellite dishes and connectivity to the designated centres.
- Regular engagement between the communication partners
- Encouraging regional and international players to join the consortium.

Activities

The Consortium for Last Mile Access and Rights will employ a phased approach:

1. Deciding the governance structure of the consortium
2. Website development for the consortium
3. Need assessment: Conduct a comprehensive study to identify the unique needs and challenges of each location, ensuring tailored solutions. The study will conduct Key Informant Interviews (KII), community Focussed Group Discussions (FGDs) and Personal Interviews (PIs) for need assessment.
4. Sharing the findings: Sharing the insights from the need assessment with the consortium members for strategic suggestions and inputs.
5. Resource Mobilisation
6. Connectivity Establishment: Establishing digital access centres in each region. Partner with unique partners for connectivity solutions
7. Training and capacity building: Create a curriculum for digital literacy, critical digital literacy and entrepreneurship. Include unique local traditions and knowledge systems in the development of the curriculum. Conduct training and capacity-building sessions.
8. Explore private and public partnerships: Establish private-public partnerships in leveraging digital technology for the social and economic development of the regions and ensure the sustainability of the connectivity. For example, connecting the indigenous craft with an enterprise interested in marketing it.

Proposed Steering Committee Members

- International Telecommunication Union
- Universal Service Obligation Fund (USOF)
- Digital Empowerment Foundation
- Hughes Communications
- Association for Progressive Communications
- Internet Society
- World Association for Christian Communications
- Asia-Pacific Network Information Centre
- Broadband India Forum

Any interested national or international organisation working in the field of last-mile connectivity can be part of the consortium.