



Project Progress Report

2018 - 2019

Green Digital Village Centres

Connecting Tribal Telecom Dark Zones of Done, in West Champaran, Bihar

An initiative of



Project Summary

| | |
|-------------------|---|
| Programme Name | Wireless for Communities |
| Phase | Phase VIII |
| Project Name | Green Digital Village Centres – Done, West Champaran, Bihar |
| Objectives | <ol style="list-style-type: none"> 1. Deploy solar energy-powered Zero Connect’s Internet-in-a-Box solution in three locations, namely Done and Bankatwa and Naurangiya panchayats of Bihar 2. Provide wireless Internet connectivity in the three regions 3. Interconnect the three Zero Connect boxes to create an ecosystem of wireless network in tribal locations 4. Provide solar and wireless network training to community members to sustain the centre and create local entrepreneurs 5. Improve educational and livelihood opportunities by introducing rural entrepreneurship models based on community networks 6. Enable easy and seamless access to information and information services available online |
| Locations Covered | 2 Panchayats of Done - Naurangiya and Bankatwa |
| Activities | <ol style="list-style-type: none"> 1. Selected two locations - Naurangiya and Bankatwa in Done region to establish the wireless network centre 2. Digital infrastructure – 4 laptops and 4 smartphones, one printer, one camera, one projector along with screen and 1 battery and UPS, are purchased and set-up at each location. 3. Identified the backhaul connectivity, which is available at 14 kms away from the region 4. The booster has been established to amplify the existing internet connectivity available in the region 5. Developed two solar enabled Zero Connect boxes 6. Conducting the training on establishing and operating of Zero Connect boxes 7. One centre coordinator and one centre trainer per location are selected from rural community 8. Conducted various focused mobilization camps at each level of community stakeholders 9. Integrated MeraApp with the project to provide government schemes and entitlement related information services 10. Registered rural communities, including students for digital literacy trainings. |
| Outcome | <ol style="list-style-type: none"> 1. Establishment two wireless centres with digital infrastructure 2. Various door-to-door mobilization camps and campaigns were conducted enabling them to access information and information services online 3. Integrated MeraApp service to provide the government schemes and entitlement related information service at household level 4. Engaging with local youth as fellows to integrate entrepreneurship model and transform these fellows as ‘Information Entrepreneurs’ |

A. Background

With 17 percent of internet penetration, rural regions of India are still lagging behind in terms of internet connectivity, access to information and delivery of services. As per NITI Aayog's 15-year Vision Document¹, more than 100 districts are marked 'backward' and 'worst districts' in the country. These backward districts do not only are in telecom darkness but also in conventional darkness due to lack of electricity supply in the region. Most of these rural regions are backward and tribal, including Araria and Done (Bihar), Simdega (Jharkhand), Kanker (Chhatisgarh), Mahoba (Uttar Pradesh), Sheopur (Madhya Pradesh) and Malkangir (Odisha).

Since 2010, Internet Society (ISOC), an international non-profit organization in partnership with Digital Empowerment Foundation (DEF) has been providing the last mile connectivity in unconnected regions of the country through its Wireless for Communities (W4C) program. This year, ISOC & DEF planned to implement the Phase VIII of W4C program in 2018 at Done region of West Champaran district in Bihar. The project, titled Digital Green Centre aims to establish wireless network centres in two tribal locations of Done region - Naurangiya and Bankatwa.

Each wireless network centre, a cost-effective and solar-powered wireless connectivity needs to be established and interconnect them to create a wireless network ecosystem. These wireless network centres will also be facilitating unrestricted digital access to knowledge available online for community members, besides providing an array of services like digital literacy, digital services, information services, solar engineering training and wireless network skill building programmes. The wireless network centres will also serve as central points of connectivity for local public institutions. Another objective of the project is to create a network of barefoot wireless engineers who are trained on establishing and managing wireless networks. Lastly, the project aims to enabling rural community members to be local entrepreneurs.

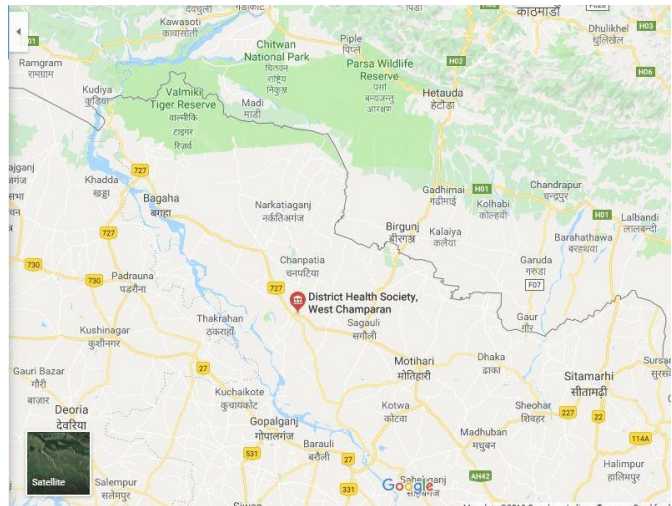
B. Location Demography

In Done, there are 22 remote pockets situated at the lower reaches of Gobhardhana range and engulfed with Valmiki Tiger Reserve. Both panchayats are separated by patch of jungle, mountain and rivulet. This ecology makes the area inaccessible especially during rainy season. These two panchayats have 14 wards and 13 villages. Tharu and Urwan are two tribes living in these 13 villages. The population of Tharu tribe is about 12000 people; out of which 7000 are male and about 5000 are female population. Scheduled caste dominates in the region with Mushar, Dome and Dhangand

¹ Niti Aayog Report, <https://www.bloomberquint.com/opinion/2017/06/03/the-unending-saga-of-100-worst-districts-and-the-discovery-of-india>; accessed on 2nd April 2018

communities. Other communities Saha and Muslims constitute of 2 per cent of the population. The main occupation of the people is daily wage labour and sand mining.

In terms of public institutions, there is one middle school and additional health centre at Serwa Doan and high school at Gobariya Doan. Literacy rate is less than 40 percent and teachers at both primary and secondary schools are irregular. Similarly, aaganwadi centre is also irregular because this region is close to Indo-Nepal Border, so para-military force - Sashastra Seema Bal (SSB) keeps its base at the centre.



Connectivity & Accessibility Status

The mobile network connectivity is hardly available, but most of households have installed booster antenna with cable dangles along with the pole of either Jio or BSNL and the other end is connected to the mobile to access mobile network. There is one Common Service Centre, however, it is non-functional due to low scarcity of network. Thus, in terms of accessibility of banking and digital services such as photocopy, printing, scanning, etc, people mostly visit 50 kilometers in Ramnagar to access these services.

C. Project Objective

1. Deploy solar energy-powered Zero Connect's Internet-in-a-Box solution in two locations of Done region - Bankatwa and Naurangiya panchayats
2. Provide wireless Internet connectivity in the two regions
3. Interconnect the three Zero Connect boxes to create an ecosystem of wireless network in tribal locations
4. Provide solar and wireless network training to community members to sustain the centre and create local entrepreneurs
5. Improve educational and livelihood opportunities by introducing rural entrepreneurship models based on community networks
6. Enable easy and seamless access to information and information services available online

D. Implementation Methodology

We established Community Information Resource Centre (CIRC) enabled with wireless network to conduct the activities of the project. These centres will be ICT enabled information and provides digital services, digital literacy, information services and entitlement services to rural people living in these two villages. These centres will provide government schemes related information services and strengthen the last mile connectivity by establishing Zero Connect boxes in three locations.

We will extend these services by providing information services at the doorstep of households. Moreover, DEF will also enable panchayats with digital equipment and services. The model is based on entrepreneurship model where local fellow will be trained on entrepreneurship course and able to run the centre sustainably.

E. Activities Undertaken

We conducted the mobilization and door-to-door campaign and establishment of wireless network centre in-parallel in order expedite the work on ground. While conducting the door-to-campaign, we also identified that awareness about governance schemes are minimal. We conducted three prime activities on the ground:

1. Establishment of wireless network centre

As part of our recce activity, we selected two panchayats of Done region – Naurangiya and Bankatwa to establish the wireless network centre. Naurangia Done village is located in Ramnagar Block and Bankatwa village is located in Bankatwa block of West Champaran. Naurangiya Done centre is close to the local police station, while Bankatwa centre is located at the market place.

After renovating the centres, we procured the digital infrastructure, including 4 laptops, 4 smartphones, one printer, one camera and one projector along with screen, one battery and UPS for each centre. It was identified during recce that 2G mobile signal was available and backhaul was available 14 kms away from the centre location. Therefore we have also procured booster to amplify the mobile signal and use it for creating wi-fi hotspot. We are presently talking to local ISP to provide the connectivity at the centre. As part of the project activity, we have developed solar-enabled Zero Connect box. One centre coordinator and one centre trainer per location are selected from rural community to manage and run the day-to-day activities at the centre. The centre coordinator is presently mobilising youth from community and identified 10 young men to impart the training on installing and assembling of Zero Connect box.

2. Mobilisation & door-to-door campaign to engage local communities

To mobilise the local community, centre coordinator had identified 10 project fellows. The project head from Delhi office visited administrative officials along with centre coordinator and fellows to talk about the project objectives and how it will support the local administration. A day was fixed to conduct the mobilization camp at each centre, so that community members can understand the aspect of project activities and engage with them in longer term. In-result, 65 female, 45 male and 25 students participated at Naraungiya and 75 female and 50 male participated at Bankatwa centre. Moreover, fellows also visited primary school and middle school and surrounding coaching institutes to mobilise about our digital literacy trainings and to

engage students in project activities. Due to this mobilization camp, 40 students visited Bankatwa centre, out of which 21 students have registered for digital literacy training. Similarly, about 20 students have registered themselves for digital literacy training at Naurangiya centre. Under this mobilization camp, we also initiated various focused group meetings with stakeholders, including panchayat members, Aaganwadi members, teachers, and women about government schemes.

3. Identification of schemes & entitlements & integration of MeraApp

We have identified district-level schemes so that it can be integrated in MeraApp, so that our fellows can provide the services at the doorstep of households and also sustain themselves by providing information related services. We have also integrated our MeraApp project to provide information related to government schemes. We received the following registration from local community members to access schemes and grievances at Naurangiya and Bankatwa.

| Naurangiya | | | | |
|------------------------|----------------------------|--------------|--------|-------|
| Scheme and Entitlement | | Registration | | |
| Sr. No. | Scheme Name | Male | Female | Total |
| 1. | Old Age Pension | 8 | 10 | 18 |
| 2. | Ayushman Card | 7 | 30 | 37 |
| 3. | Ration Card (new) | 18 | 30 | 48 |
| 4. | Indira Awas | 0 | 15 | 15 |
| Total | | 33 | 85 | 118 |
| Grievance | | | | |
| 1. | Loss of land due to floods | 0 | 30 | 30 |
| 2. | Non Payment of Sauchalaya | 0 | 30 | 30 |
| 3. | Ration Card | 0 | 5 | 5 |
| Total | | 0 | 65 | 65 |

| Bankatwa | | | | |
|------------------------|---------------------------|--------------|--------|-------|
| Scheme and Entitlement | | Registration | | |
| Sr. No. | Scheme Name | Male | Female | Total |
| 1. | Old Age Pension | 10 | 26 | 36 |
| 2. | Ayushman Card | 20 | 30 | 50 |
| 3. | Ration Card (new) | 30 | 15 | 45 |
| 4. | Indira Awas | 0 | 20 | 20 |
| Total | | 60 | 91 | 151 |
| Grievance | | | | |
| 1. | Non Payment of Sauchalaya | 0 | 25 | 25 |
| 2. | Ration Card | 0 | 15 | 15 |
| Total | | 0 | 40 | 40 |

F. Outcome

1. Established two wireless centres in Done region with digital infrastructure
2. Identified the backhaul and the work-in-progress to bring the connectivity in wireless centres

3. The booster has been established to amplify the existing internet connectivity available in the region
4. Developed two solar enabled Zero Connect boxes
5. Conducting the training on establishing and operating of Zero Connect boxes
6. Conducted various door-to-door mobilization camps and campaigns to initiate the discussion about the project objectives, activities and how it will help in improving their livelihoods
7. Integrated MeraApp service to provide the government schemes and entitlement related information service at household level
8. Engaging with local youth as fellows to integrate entrepreneurship model and transform these fellows as 'Information Entrepreneurs'

G. Future Activities

- a) Establishment of Zero Connect Box at each centre and create the local network by interconnecting these two boxes;
- b) Initiate the wireless and solar training to community members to sustain the centre and create local entrepreneurs
- c) Initiating the digital literacy trainings at each centre;
- d) Provide the information related to government related schemes and entitlements;
- e) Improve educational and livelihood opportunities by introducing rural entrepreneurship models based on community networks

Case-stories

1. Vishwvashar Mehto
Resident: Naurangiya
Occupation: Owns school

Vishwvashar Mehto, resident of Naurangiya runs his private school and also provides banking services using private bank codes through its mobile. Since there is no bank available in both panchayats, thus local people either needs to travel



50 kilometers to access the banking services such as withdrawal of cash; transfer of money, etc, for which people were spending about Rs. 100 for their travel.

Vishwvashar has established Jio router at the pole, through which he provides banking services to local communities. This way, he not only used to save people's time to travel and the cost of travel but also generates his extra income.

This sort of internet arrangement provided him Edge or maximum 2G services and he was able to serve limited people. After realizing there is need to have better internet speed, we have established the booster at his place to increase the existing internet bandwidth. Due to booster, he is able to serve more people living in the community.

Brijesh Kumar
Samerhoni village,
Bankatwa
Education: Primary

Brijesh Kumar is resident of Samerhoni village in Bankatwa panchayat. He could not able to study after his primary schooling due to his lower financial condition and coming from poor family. Being a daily wage labourer, he used to travel 50 kilometers for his work. While working, he was fond of listening music and everyday, he used to spend about Rs. 10 for downloading music in his phone. He always thought this kind of service could also be provided in his village, if he has laptop. So he opened a small shop in his village and bought second-hand laptop and printer to provide digital services like printing, scanning. However, he did not have internet connectivity at his shop. We have provided him internet connectivity to provide other digital services such as downloading music, recharging mobile phones, filling up government schemes, etc.





