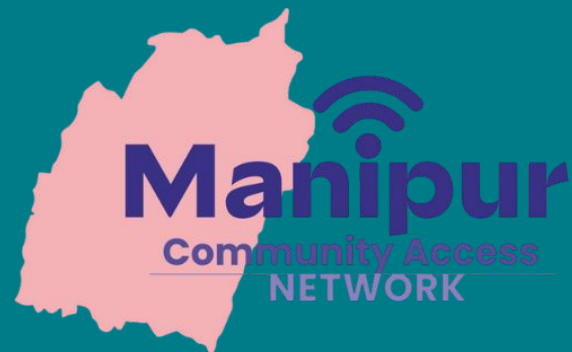


# MANIPUR CAN

## Community Access Network

Rebuilding Lives Through Internet Resilience  
in Conflict-Affected Zones of Manipur



APNIC FOUNDATION · ISIF ASIA

Final Report · 2025

### LOCATION

Churachandpur, Manipur · NE India

### PERIOD

Sep 2024 - Jan 2026

### BY

Council for Social & Digital Development (CSDD) &  
Amri Karbi Community Development Project AKCDP

### PROGRAM

Inclusion Thematic Area

# THE CRISIS IN MANIPUR



**70,000+**

**Displaced Persons**

Ethnic violence · May 2023



**5,000+**

**Hours of Shutdown**

World's longest shutdown · 2023



**3.5M**

**People Affected**

Across 9 districts initially



**2+ Yrs**

**Ongoing Conflict**

No settlement as of Jan 2026

## CONTEXT

- Meitei vs Kuki-Zo ethnic clashes erupted May 2023 – ongoing
- Rooted in land rights disputes & 2021 Myanmar refugee influx
- India's longest internet shutdown – over 5,000 hours (2023)
- Manipur High Court ruled against ban in Dec 2023
- President's Rule imposed; borders locked; State Assembly suspended
- Mobile shutdowns continued into Dec 2025; signals in Jan 2026

## ACCESS CHALLENGES ADDRESSED

- Availability – infrastructure destroyed in buffer & hilly zones
- Affordability – economic collapse denied relief camps internet
- No community-owned access infrastructure in affected areas
- Geographical isolation of Kuki-Zo tribes from Imphal valley
- Access disparity – women & girls disproportionately excluded
- Safety fears – State actor surveillance of minority groups

# PROJECT OVERVIEW



## AIM

Provide 'Access' relief & rehabilitation for conflict/shutdown-affected communities through inclusive, affordable internet – a vital lifeline for rebuilding lives & livelihoods in Churachandpur District, Manipur.



2  
Networks

### Resilient Community Network

Fibre-leased (4.5 km radius, 9 schools) + FWA mesh (8 nodes, 4 km, 1,300m altitude)



385  
Households

### Accessible & Affordable Access

1,422 individuals directly reached; 2,587 indirectly; relief camps & IDP families included



221  
Trained

### Info, Services & Opportunities

6 safety & digital literacy sessions; govt schemes, banking, jobs & education facilitated



40%  
Women

### Gender-Inclusive & Youth-Led

Women-led hub management; 12 youth volunteers (5 women); all tribes & IDPs served

# DELIVERABLE · IMPROVE INTERNET AFFORDABILITY

## Supportive local access networks & connectivity to underserved areas

### HOW WE DID IT

**ISP Partnership (Gignet)** – Local ISP engaged for tech support, configuration, maintenance & training. Dedicated leased line at SSPP campus hub.

**Fixed-Line + Wireless Extension** – Central high-speed connection extended via directional antennas to 4.5 km radius across 9 schools & community zones.

**Mesh Network (Charoi Khullen)** – 300 Mbps Airtel backhaul via PtP bridge to village church. 8 self-healing dual-band 802.11ac/s nodes across 4 km.

**Affordable Membership Model** – Cooperative/subscription model: vulnerable users access free; others pay a small affordable fee to sustain operations.

### PROJECT PHOTOS – AFFORDABILITY & ACCESS



Community Wi-Fi Access Point



PM-WANI / PDO Setup



Community Members Using Internet Hub





Bungmual Village, Lamka – Churachandpur District, Manipur

4.5 km Radius

9 Schools Connected

219 Households

893 Individuals

## NETWORK DESIGN & IMPLEMENTATION

**Hub:** SSPP (Siamsinpawlpi) campus – Paite Tribe Students Welfare Org. as nodal partner

**Technology:** Fixed-line leased line from Gignet ISP as central high-speed internet source

**Coverage Extension:** Directional antennas + Wi-Fi access points across 4.5 km radius

**Schools Connected:** 9 schools wired with Wi-Fi hotspots, including SSPP residential school hosting IDPs

**Security:** Wireless encryption, access control lists, firewalls configured by local ISP

**Training:** 2 technical workshops for 7 youth volunteers on setup, config, maintenance

**Sustainability:** SSPP student membership subscription model funds ongoing ISP costs

## BUNGMUAL NETWORK PHOTOS



Captured by Timestamp Camera  
#Timestamp Camera  
08/11/2025 01:12 PM GMT+05:30  
Charoikhullen, Manipur, India...  
24.6079°N, 93.72052°E  
Timestamp camera



Antenna / Equipment Install



Charoi Khullen Village — Hilltop · 1,300m Above Sea Level · Churachandpur District

4 km Radius

8 Mesh Nodes

166 Households

529 Individuals

## MESH NETWORK DESIGN & IMPLEMENTATION

**Architecture:** Fixed Wireless Access (FWA) + self-healing mesh fabric

**Backhaul:** 300 Mbps Airtel wireless plan from main town via high-gain PtP bridge

**Gateway:** Receiver on village church rooftop — highest line-of-sight point in village

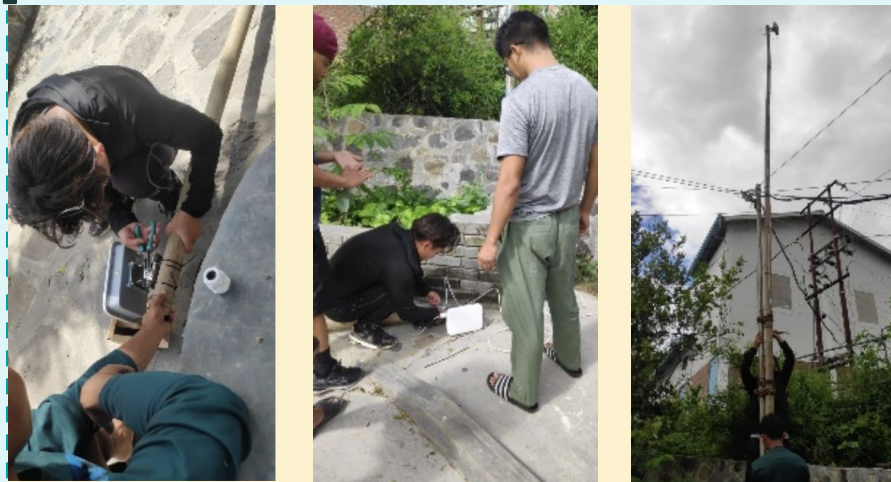
**Mesh Nodes:** 8 dual-band 802.11ac/s nodes deployed across 4 village blocks

**Coverage:** All 166 households covered; average 40-50 Mbps steady throughput

**Partner:** Village Authority owns & manages; cooperative membership model

**Youth Training:** 5 local youth trained in maintenance, signal alignment, node protocols

## CHAROI KHULLEN NETWORK PHOTOS



Youth Installing / Testing Mesh Nodes

# DELIVERABLE · NEW SKILLS & CAPACITIES IN COMMUNITY ACCESS NETWORK

## Sustainable Access in Difficult Situations like Conflicts

12

Youth CAN Volunteers

5

Women Volunteers

4

Major Training Programs

221

Total Trained

### 12 CAN YOUTH VOLUNTEERS – WHAT THEY LEARNED

**Identified & Onboarded:** 12 youth from SSPP student network & local community; 5 are young women

**Network Essentials:** Router config, antenna placement, signal alignment, Wi-Fi protocols, IP addressing

**Maintenance & Troubleshooting:** Node reboot, bandwidth monitoring, cabling, hardware repair basics

**Online Safety & Security:** Encryption, safe browsing, misinformation detection, privacy tools

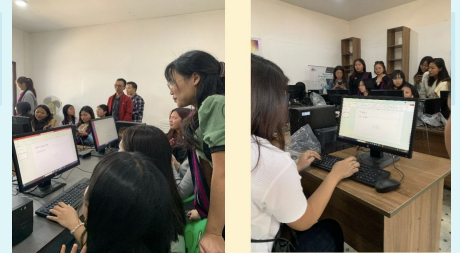
**Digital Peace-Building:** Responsible internet use, combating online hatred, digital rights awareness

**Ongoing Support:** User manuals (Gignet), configuration guides, continued mentoring from ISP

### TRAINING & CAPACITY BUILDING PHOTOS



Training Session with Youth Volunteers



Hands-On Network Setup / Field Training



# DELIVERABLE · ACCESS TO SERVICES & OPPORTUNITIES



## Education

Students accessing online resources, exam prep & e-learning materials at CAN hubs



## Relief & Rehab

IDP families reaching govt schemes, banking, relief info & rehabilitation services



## Jobs & Income

Youth securing call-centre jobs from village; 4-5 more youths now working from home



## Safety & Privacy

Online safety training; secure comms tools; misinformation awareness for 221 people



## IDP Support

Displaced families accessing identity docs (Aadhar, PAN), entitlements & aid info



## Digital Inclusion

Tribal minorities, women, elderly – all served equitably; subsidised/free access



# RESULTS & REACH

## *What the Manipur CAN Project Achieved*



### **Outcome 1 – Resilient Community Network**

2 networks deployed: fibre-leased (4.5 km, 9 schools) + FWA mesh (4 km, 8 nodes, 1,300m). Both fully operational.



### **Outcome 2 – Accessible & Affordable Access**

385 households / 1,422 individuals direct internet access; 2,587 indirectly. Steady 40-50 Mbps for call-centre work.



### **Outcome 3 – Information & Services Access**

Govt schemes, education, banking, relief & rehabilitation info delivered. Students used hub during tribal incidents.



### **Outcome 4 – Local Network Cadre Built**

12 youth volunteers fully trained; 5 women. 4-5 more youth now in call-centre employment from Charoi Khullen village.



### **Outcome 5 – Trust & Safety in Internet**

6 training sessions: safety, privacy, misinformation, digital peace-building. 221 participants. Digital rights promoted.

# IMPACT STORIES FROM THE FIELD



## Education Amidst Uncertainty

March 7, 2025 · Churachandpur District

A chaotic incident erupted between Hmar, Kuki & Zomi tribes. Rumours spread that internet would be shut down again.

8 students in 5th-semester degree courses rushed to the CAN hub late that evening. Facing semester exams, they needed a secure, reliable space to research and download study materials – which the CAN hub provided, regardless of what was happening to mobile internet outside.



*The CAN hub was their lifeline – the one place where access was guaranteed, no matter what.*



## Jobs & Livelihoods from the Village

Ronald Chiru · Charoi Khullen Village

Returned home from Delhi during the 2023 conflicts. With shutdowns, economic hardship and borders locked, he had no stable income for months.

When the mesh network node was set up near his house (Aug-Sep 2025), he secured a medical insurance call-centre job serving western clients – from his own village, with a steady 40-50 Mbps connection. Today, 4-5 more youth in Charoi Khullen are seeking similar remote jobs.



*Working from home, feeling secure, avoiding city-based hardships – the network changed everything.*

# GENDER EQUALITY & SOCIAL INCLUSION

Women lead all hubs – project coordinated by a woman; 5 of 12 youth volunteers are women; ~40% of all beneficiaries are women accessing internet & services.



## Women Empowerment

- Woman coordinator manages Bungmual hub daily operations
- Women trained in network management, troubleshooting & safety
- Women from both Meitei & Kuki-Zo communities included
- Low-socioeconomic-background women given priority access
- Project inspired organisation to deepen diversity & inclusion



## Cultural & Tribal Diversity

- Serves Paite, Chiru Naga, Kuki, Zomi, Hmar tribes
- 10+ indigenous tribal groups in Manipur acknowledged
- Multilingual outreach & locally contextualised content
- Local CSO & village authority partnerships bridge divides
- Academic partnership with Manipur Central University



## IDPs & Vulnerable Groups

- SSPP school campus hosts refugees/IDPs – key access node
- IDP families among direct beneficiaries in relief camps
- Subsidised/free access ensures cost is no barrier
- Adaptive approach for persons with disabilities
- Aadhar & PAN identity document services provided on-site

# LESSONS LEARNED & RECOMMENDATIONS

## KEY LESSONS LEARNED

- ✓ Internet in conflict zones is a humanitarian need – not a luxury. Access = lifeline.
- ✓ Local youth & women are indispensable for managing community networks in crises.
- ✓ Digital access reduces online hatred and fosters peace & reconciliation.
- ✓ ISP partnerships are vital for trust, reliability & long-term sustainability.
- ✓ Community ownership from day one ensures sustainability beyond the project.
- ✓ Membership-based cooperative models can fund ongoing network costs effectively.
- ✓ Phased, consultative rollout reduces risk in volatile security environments.

## RECOMMENDATIONS FOR THE FIELD

- 01 Treat internet access as humanitarian aid in all conflict/disaster relief plans
- 02 Map conflict-prone zones; build 'Conflict Disaster Access Mitigation Plans'
- 03 Engage local ISPs, youth, NGOs & village authorities as co-owners from day one
- 04 Integrate digital peace-building: address online hate & digital conflict triggers
- 05 Promote 'Connectivity for Peace, Inclusion & Development' as rights-based framework
- 06 Expand to more conflict/disaster-vulnerable districts across NE India
- 07 Scale the North East CAN model – a wider community access network for NE region

# SUSTAINABILITY, SCALE-UP & FUTURE VISION



**EXIT STRATEGY EXECUTED** – Both networks handed over and now community self-sustaining.



## Bungmual · SSPP Model

- SSPP student network runs the CAN hub
- Student membership subscription funds operations
- 7 trained youth volunteers maintain network
- Commitment to strengthen the network further



## Charoi Khullen · Cooperative

- Village Authority owns & manages mesh network
- Cooperative model funds ISP rental & maintenance
- 5 locally trained youth handle technical upkeep
- Self-reliant hub maintaining its digital lifeline



## Organisation Growth

- CSDD positioned as leader in 'Access for Aid'
- CNX 2025 · RightsCon 2026 · Manipur Univ seminar
- NESRC collaboration on digital conflict & peace
- Building North East CAN – NE India-wide network

## FUTURE VISION

North East CAN – Expanding community internet access across NE India's conflict & disaster-vulnerable regions bordering China, Nepal, Bhutan, Bangladesh & Myanmar

# MANIPUR CAN

## Community Access Network

*"Connectivity for Peace, Inclusion  
and Development"*

<b>385</b>	<b>1,422</b>	<b>2,587</b>	<b>12</b>	<b>6</b>	<b>221</b>
Households	Direct	Indirect	Volunteers	Trainings	Trained

Implemented by Council for Social & Digital Development (CSDD)

Sep 2024 - Jan 2026



APNIC FOUNDATION · ISIF ASIA · 2025

Inclusion Thematic Area

Churachandpur, Manipur, India