Rural Broadband Wireless in Karnali of Nepal

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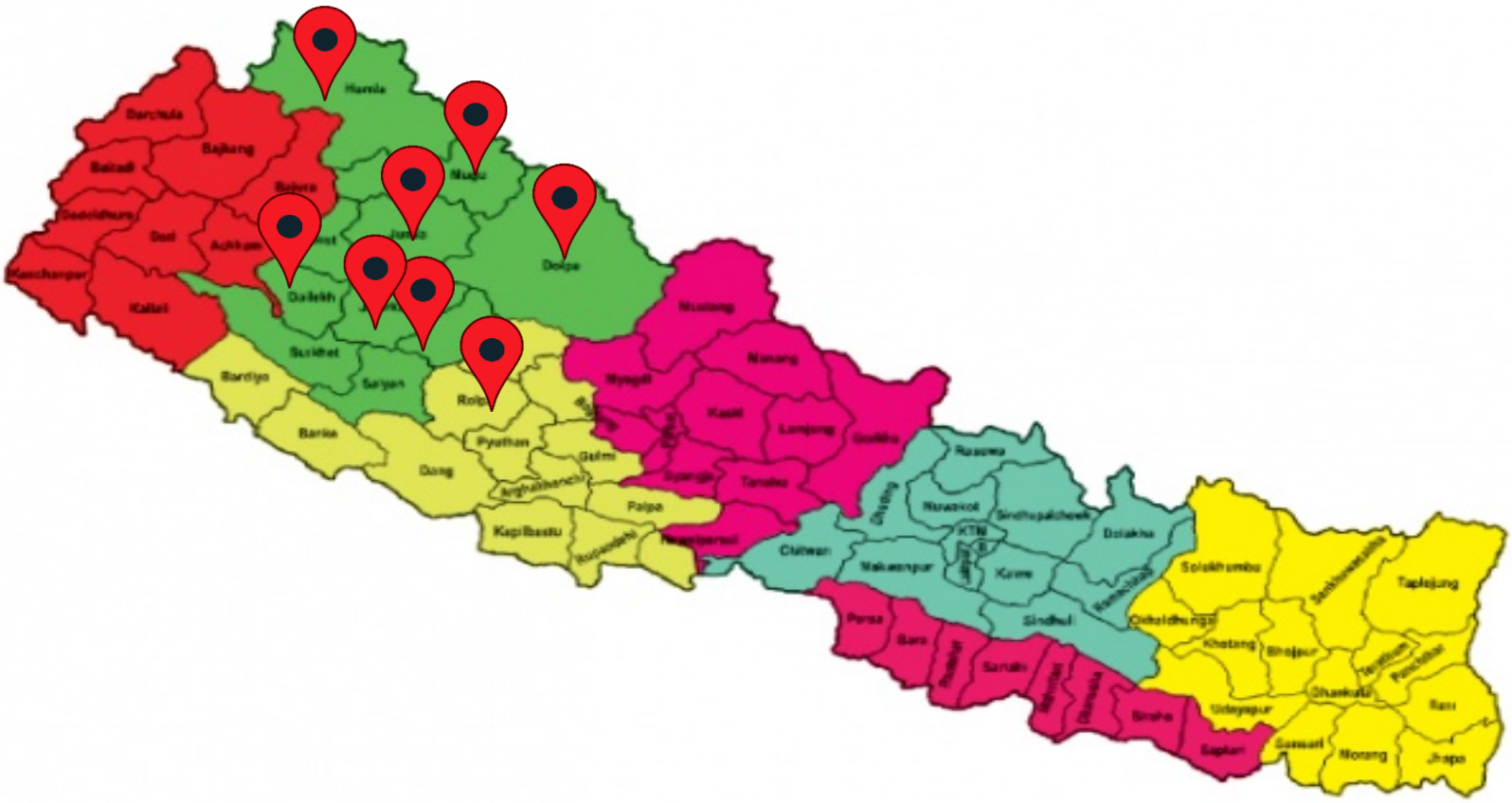
World Link Communication

About Karnali

- One of the most remote and poorest region of Nepal
- Population only Seven lakhs
- But the largest Zone of Nepal
- Two Largest National Park
- Largest Lake RARA
- The most pristine (as of today) and difficult Geography

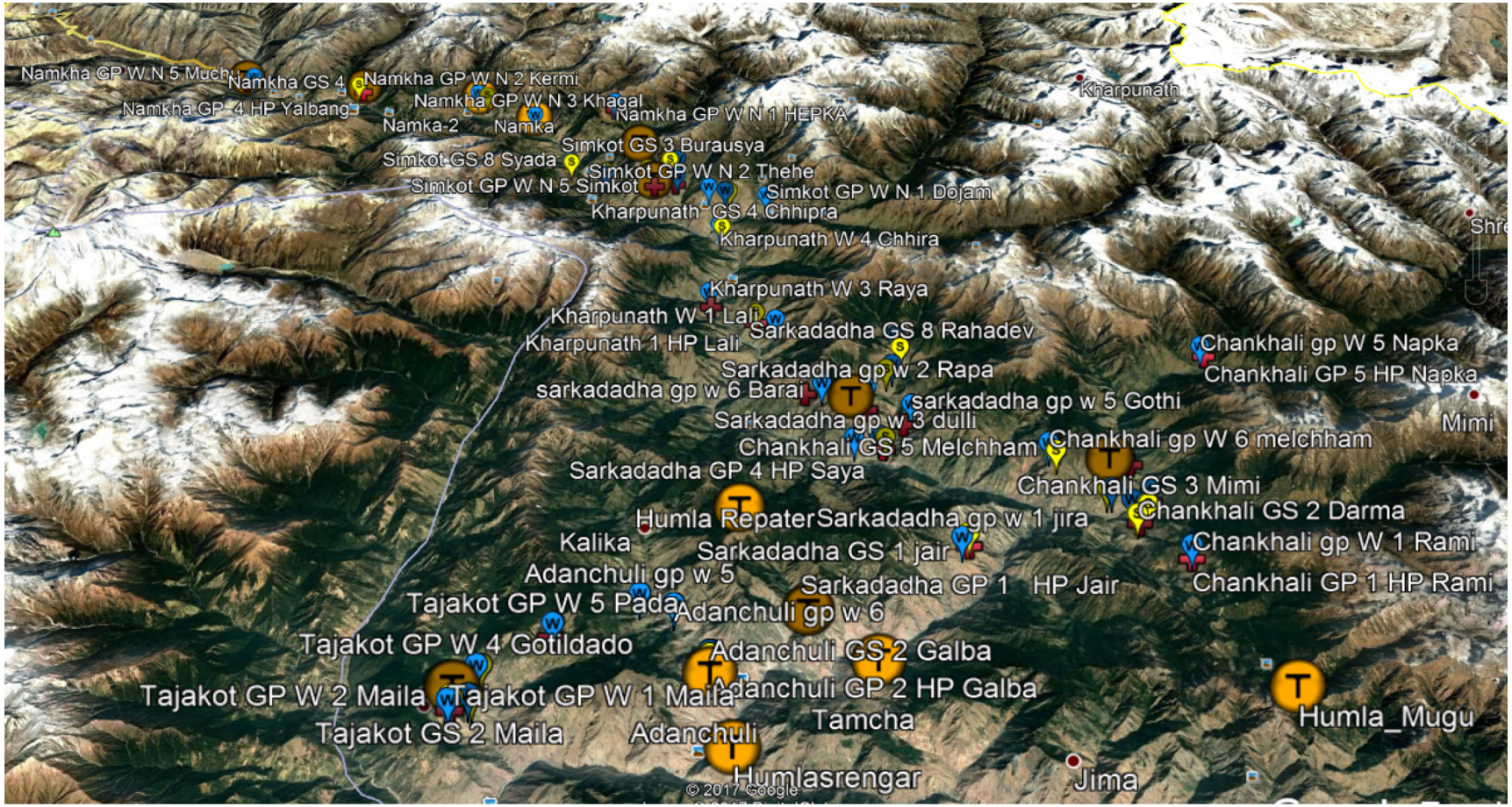
Project Area



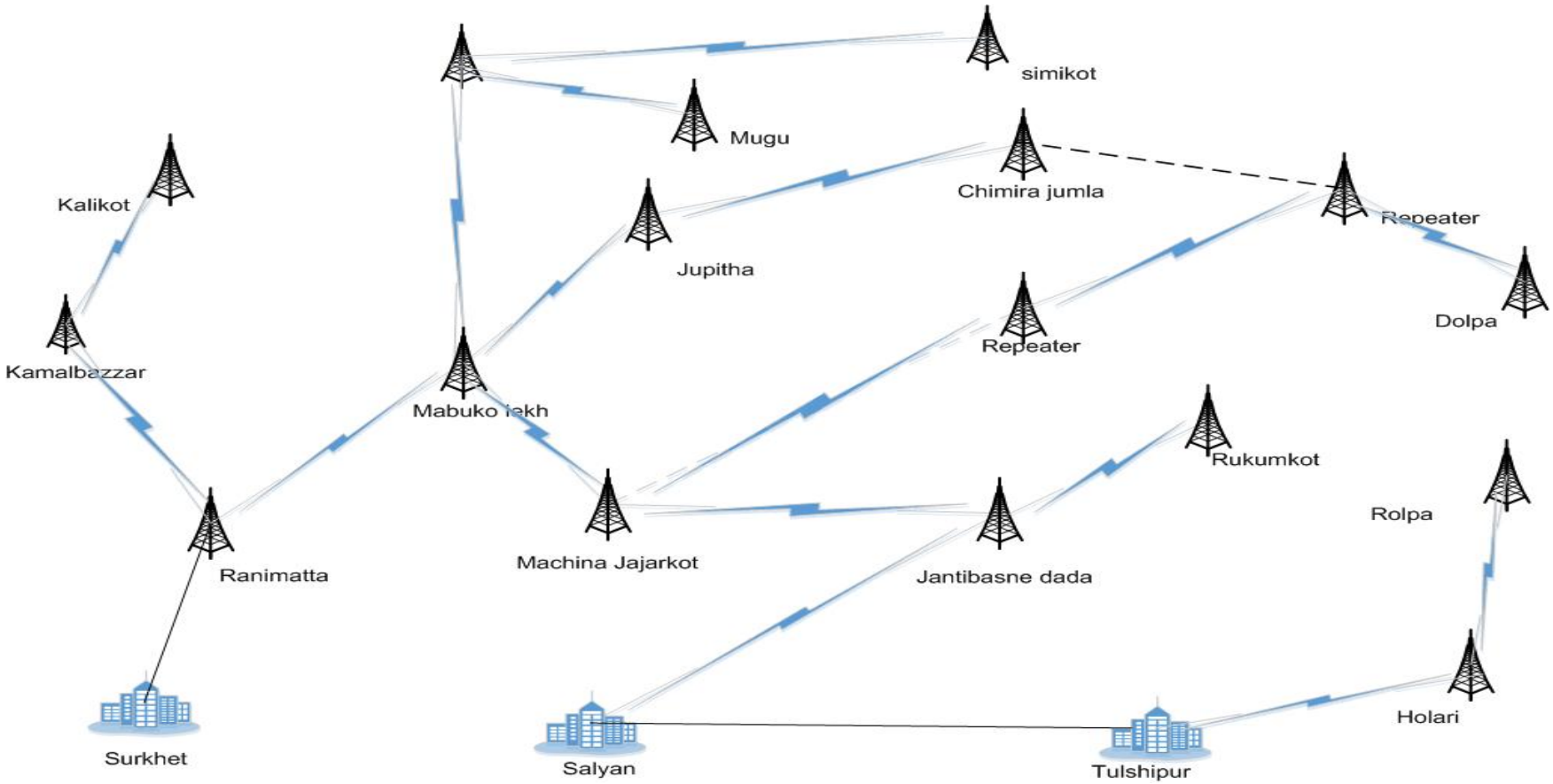
Scope of Project

- To build broadband network and provide Internet Access to:
  - Schools
  - Health Centers
  - Village/Municipality Development Committee offices
- Total: 1209 sites of 62 Rural Municipality/Municipality and 600 villages

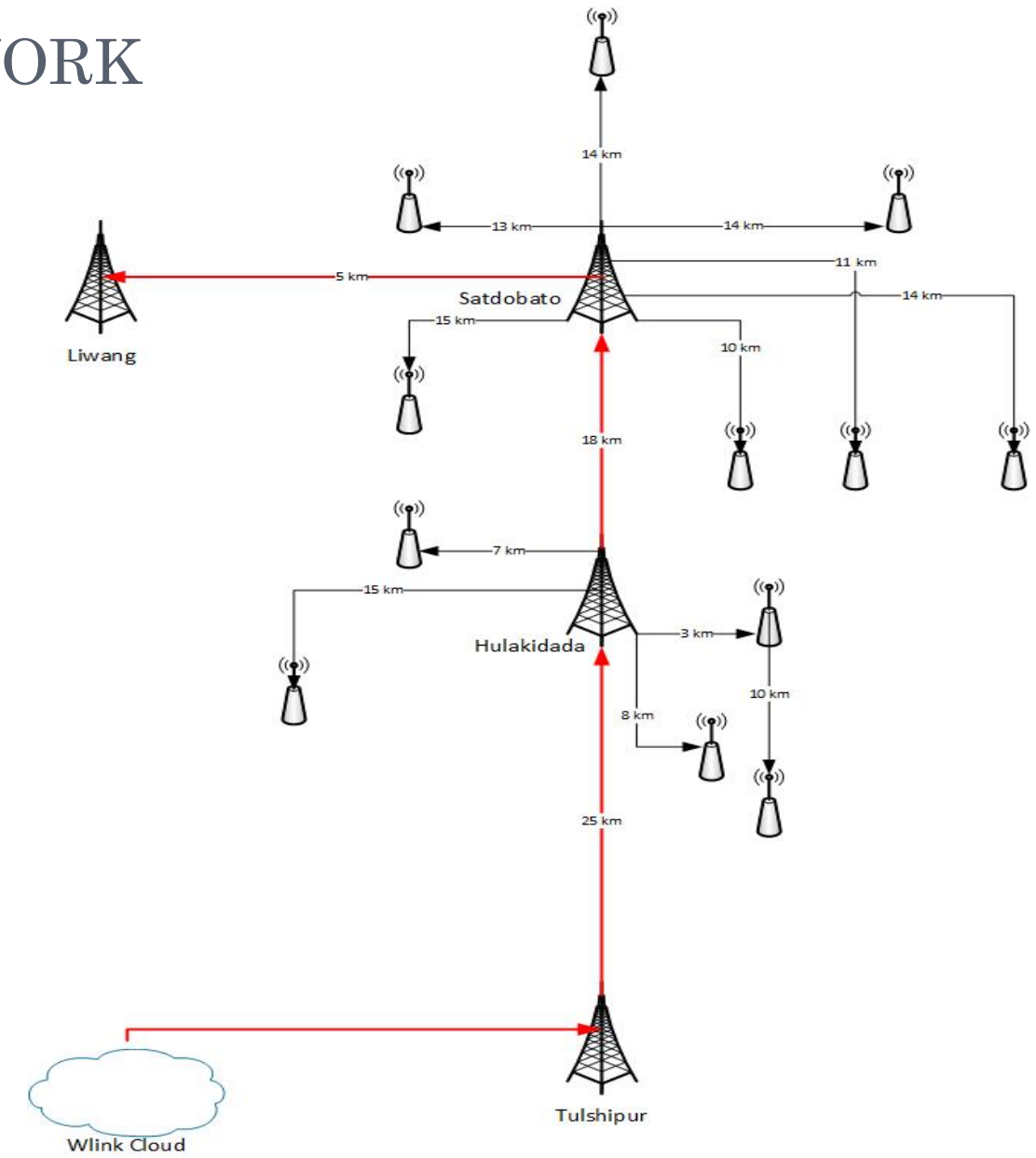
Site GPS Co-ordinates



TRUNK LINK


simikot
Mugu
Kalikot
Chimira jumla
Repeater
Jupitha
Dolpa
Repeater
Kamalbazzar
Mabuko lekh
Rukumkot
Rolpa
Machina Jajarkot
Jantibasne dada
Ranimatta
Holari
Surkhet
Salyan
Tulshipur

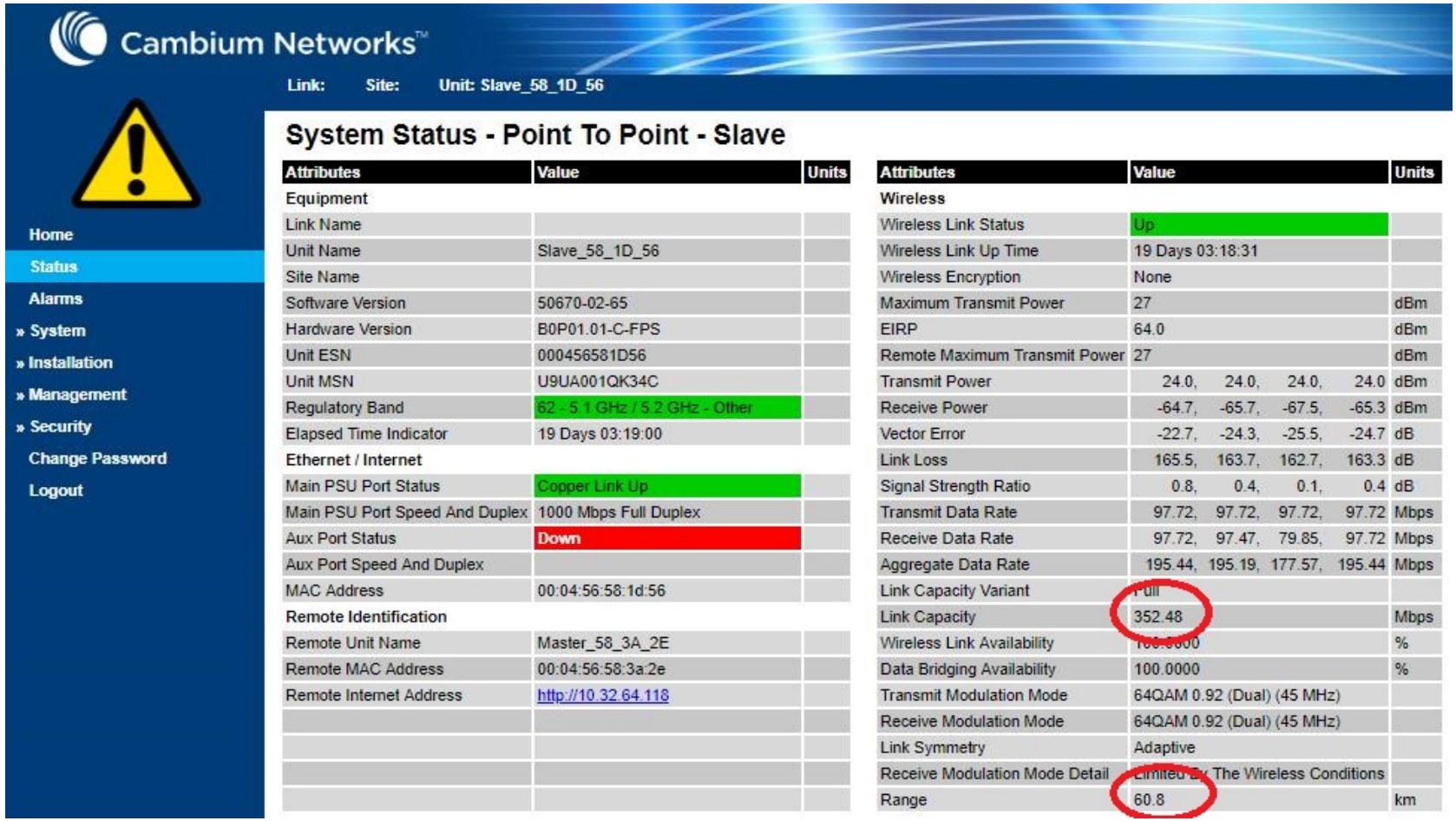
NETWORK


14 km
13 km
14 km
5 km
11 km
14 km
Satdobato
15 km
10 km
Liwang
18 km
7 km
15 km
Hulakidada
3 km
10 km
8 km
25 km
Tulshipur
Wlink Cloud

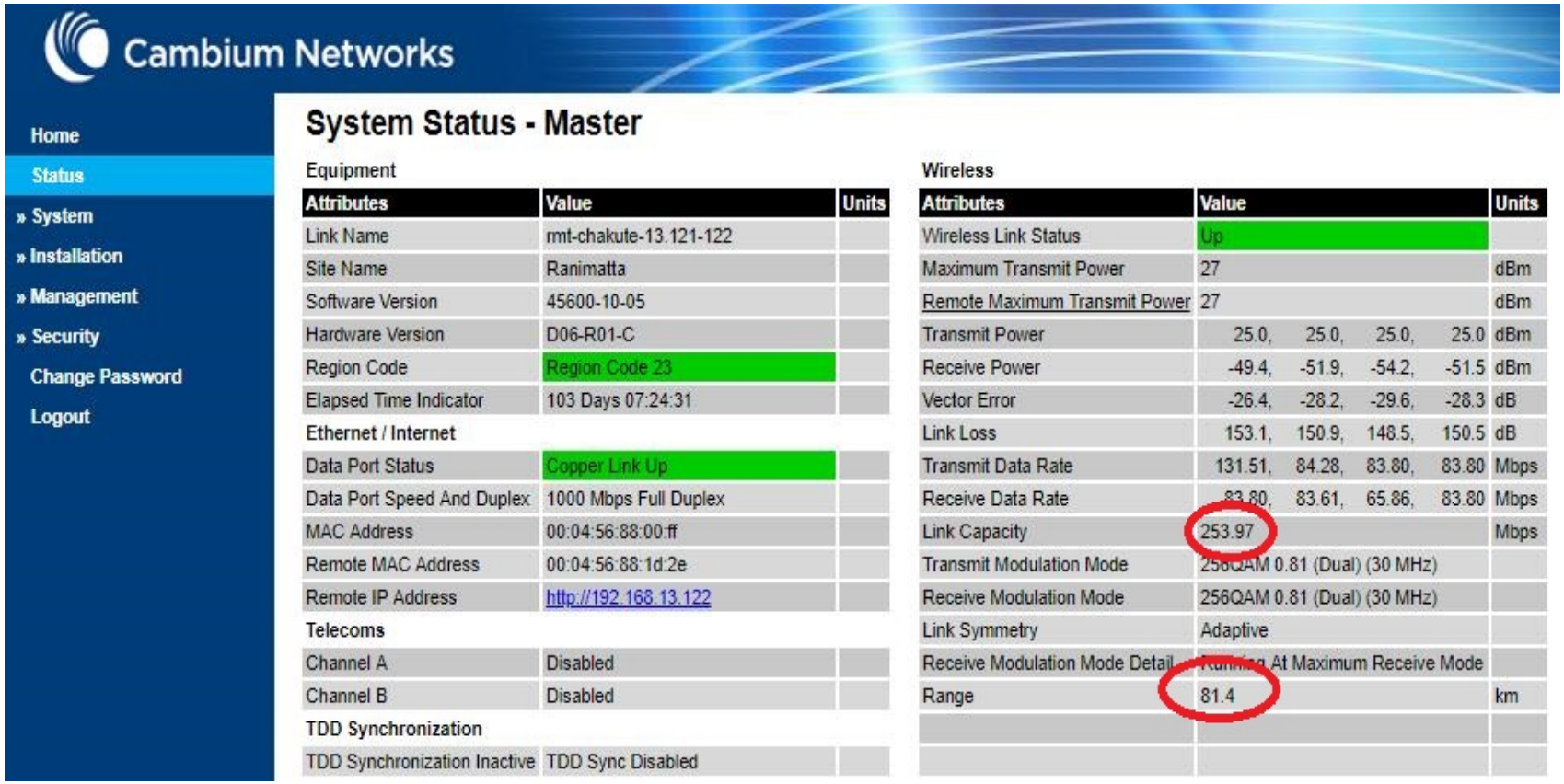
Trunk Link

- Built 20 nos of 15 meter tower for core Backhaul link
- 4 nos of tower are above 3800 meter
- We have use 12 nos of 250 watt solar panel 12 nos 100 watt 12 volt batteries in all tower
- For back up there is generator in each site
- We have chemical earthling in all of these sites

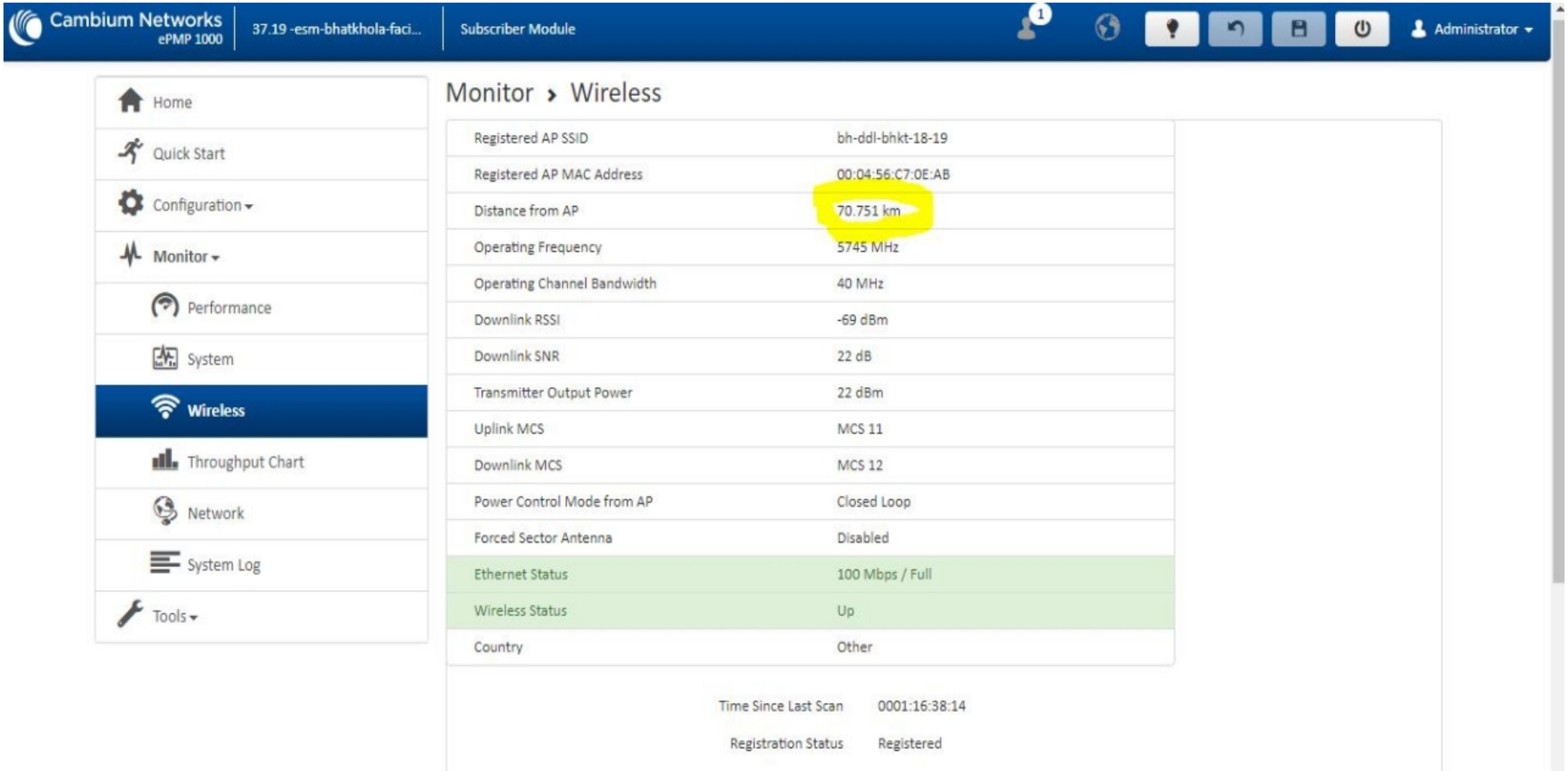
LINK OF 61 KM PTP 670



PTP 600 LINK OF 81 KM

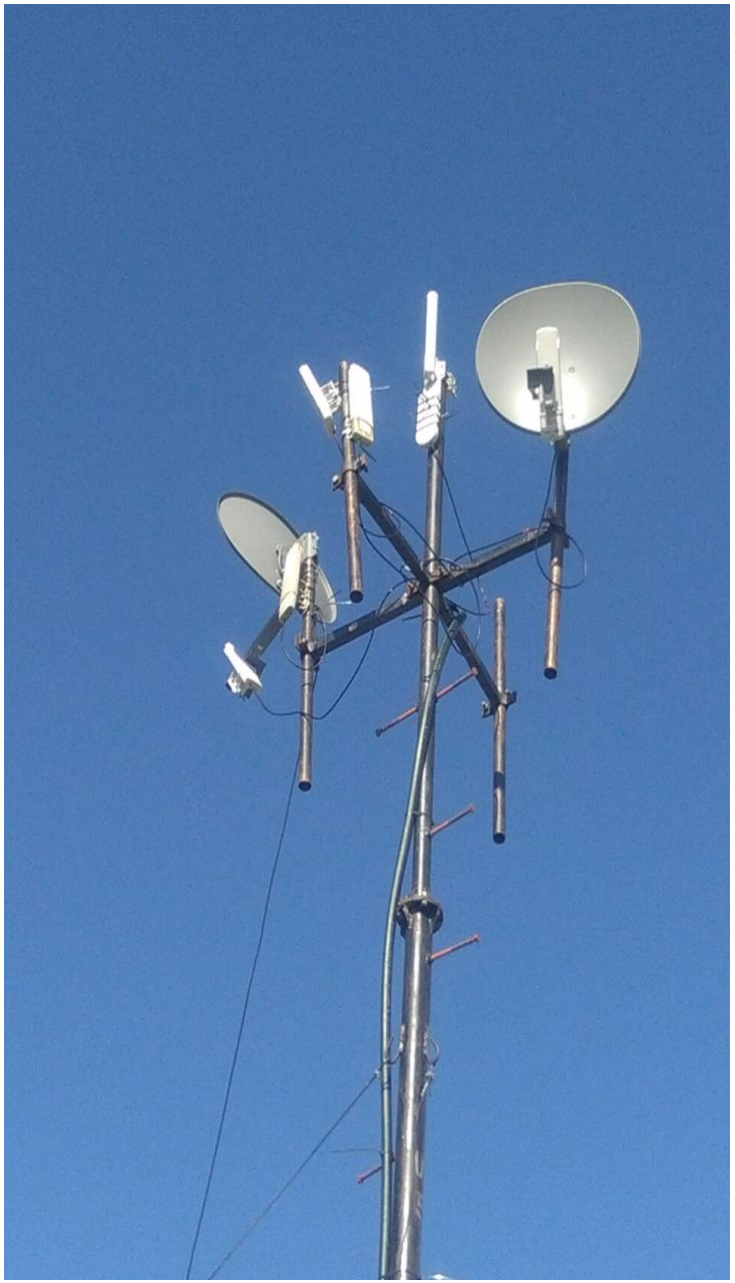


Link of Epmp 1000 of 71 Km



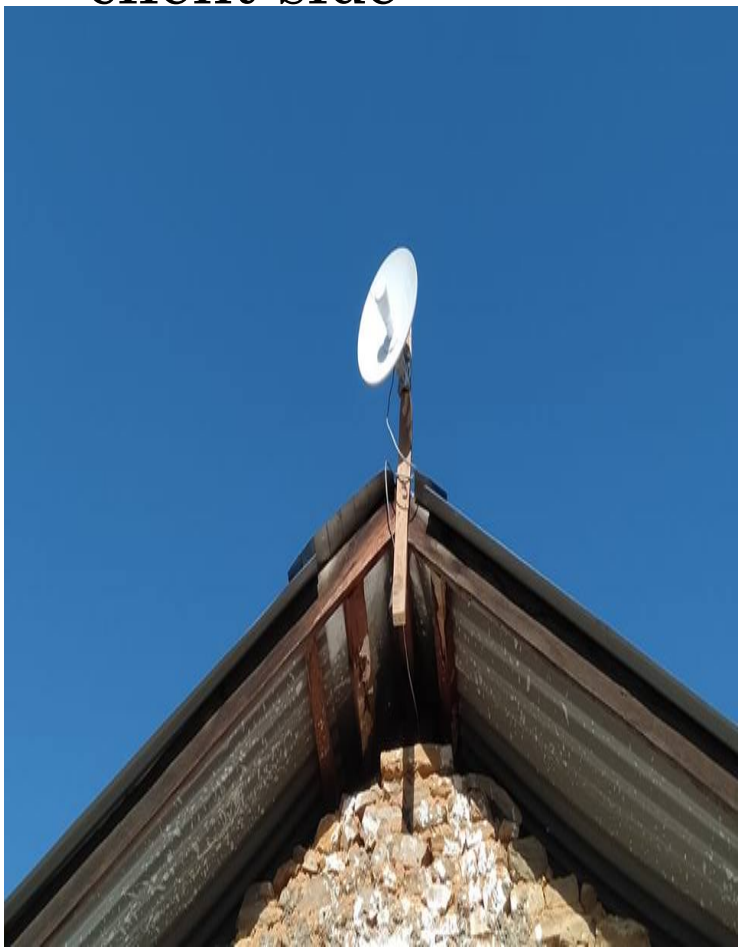
Distribution Tower

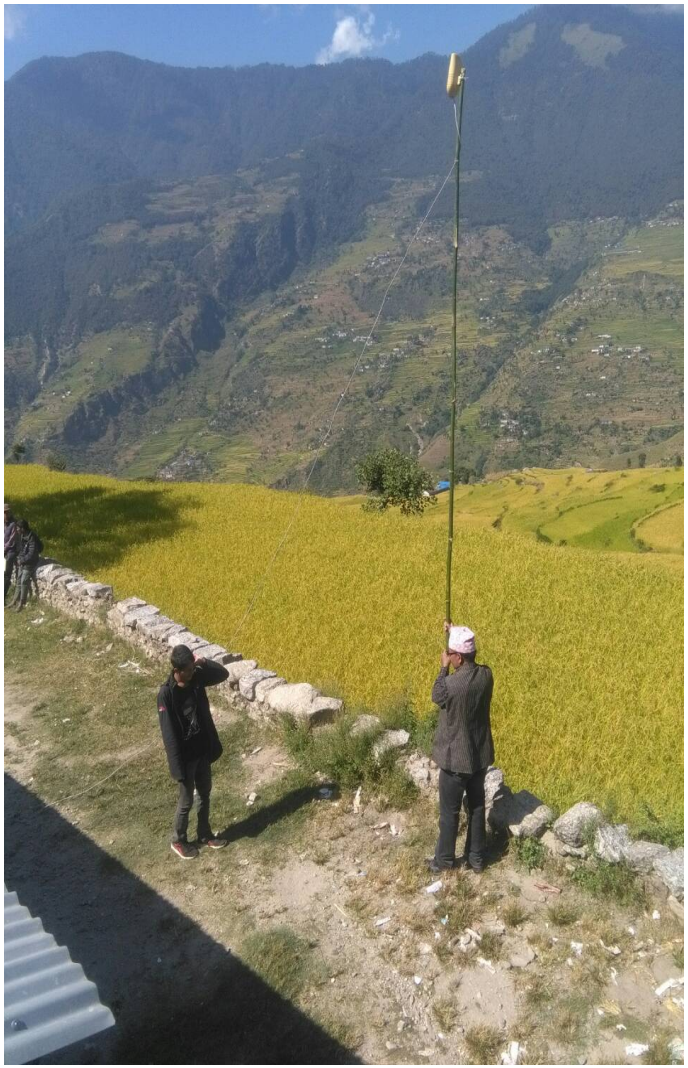
- There is more the 100 nos of distribution tower
- For the uplink of distribution tower we are using PTP 450i , PTP 450 and ePMP 1000 force 200, BH 20
- For the AP we are using ePMP 1000 , Canopy AP

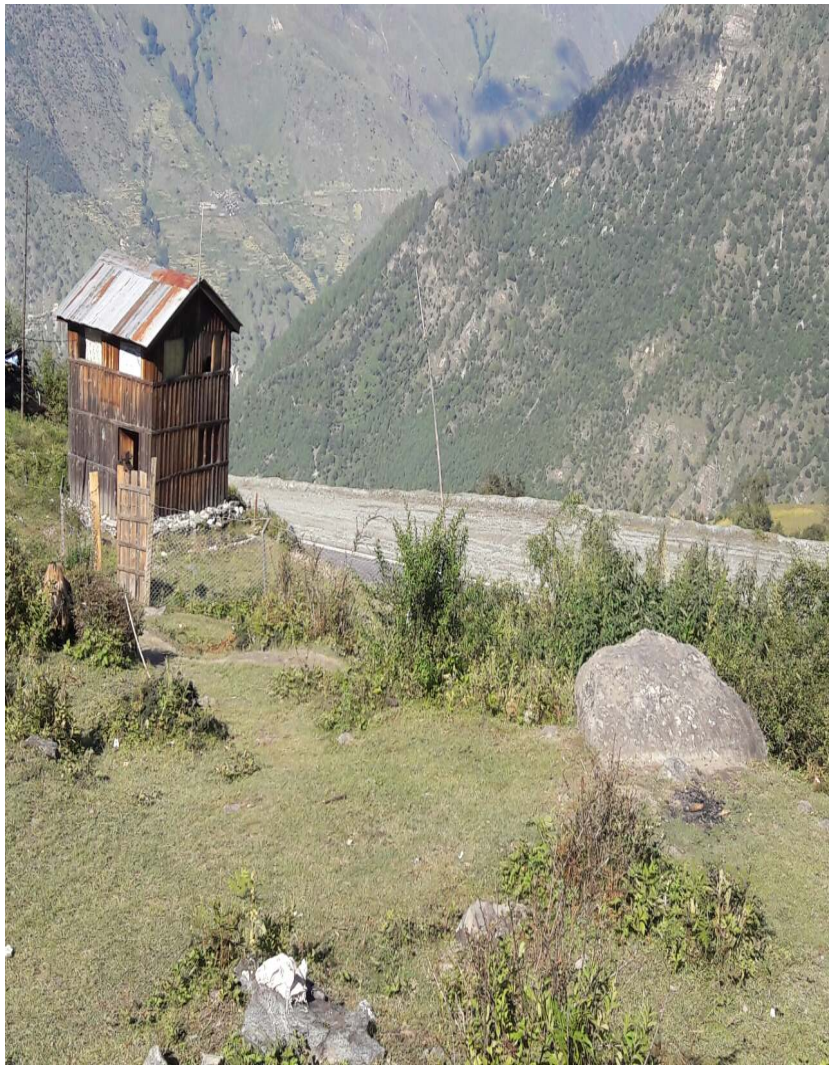


CLIENT

- We have use Cn pilot R190w broadband router in client side





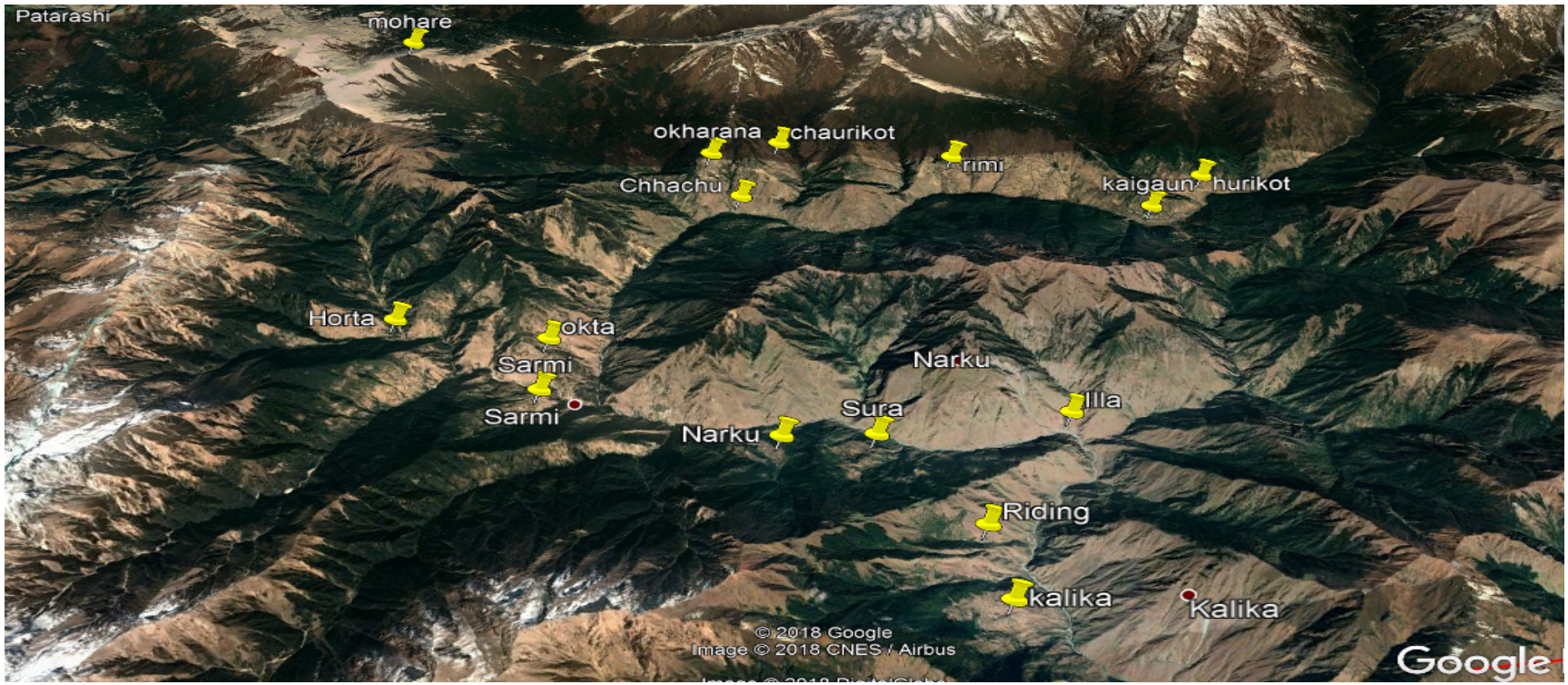


CHALLENGES

- Geographical Challenges

All the project area are in hilly region and villages are geographically spread so we have to make many distribution point

There is also villages in above 4300 meter



CHALLENGES

Most part of the project there is no Road facility so we have to use human, horses for transportation of goods

- Some time we have to make own road

FURTHER SCOPE

- Worldlink have just awarded another RTDF project of 4 district of province 4
- Connect 1148 sites
- Among then 60 % through Fixed Wireless and 40 % FTTH.
- Annapurna Circuit Trekking route and Annapurna Conversation are in this area

THANK YOU