



# Open Data for monitoring to Improve Natural Resource Governance

## *Tanintharyi Natural Resource Watch Portal*

Tar Yar Maung

*Community and NGOs' role in spatial data verification and validation  
Myanmar Spatial Data Platform Conference*

# *Project Overview*



**Area : Tanintharyi Region**

Pilot in Dawei – Large Scale Mining

## **Target Issues**

- Mining
- Forest
- Industrial Agriculture
- Energy
- Mega Development
- Fishery & Agriculture
- Others

## **Stakeholders**

Agents : Local Communities and Local Civil societies

Government : Natural resources and environmental conservation Ministry

Other related ministry and government officials in Tanintharyi

Academic sector : Myeik University, individual technical experts & Professional technician from international and national organization

# Why we start in Tanintharyi?



- Tanintharyi – highest incident of land conflict in Myanmar
- Biodiversity forest and archipelago
- Conflict area KNU
- Highlight the issues
- Gov't not release any data spatial
- Information black hole (concessions etc)
- Touted for mega investment
  - Coal
  - Mining
  - SEZ
  - Oil palm
  - Tourism
  - Etc

# Purposes

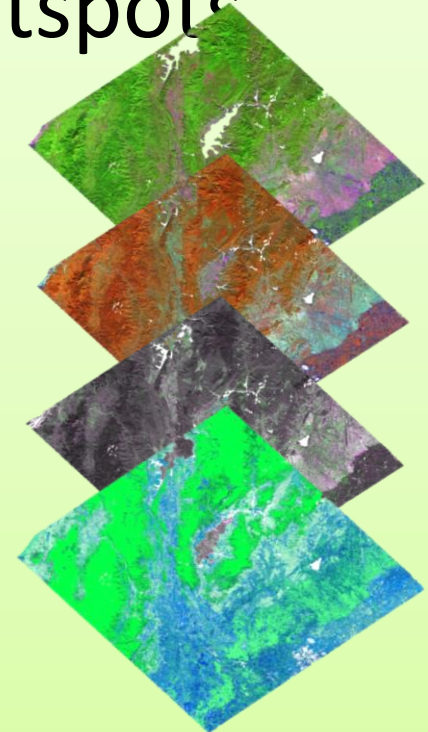


- To create a space where data relating to land and resources can be crowd sourced and visualized.
- To use as a monitoring and advocacy tool to put data in the public domain for taking action such as policy change
- Spatial data;
- Narrative data;
- Documents:

# Remote Study objectives



- Study on forest cover and deforestation
  - Overall forest cover and forest cover change
  - Identification of deforestation hotspots
  - Patterns of deforestation
- Using open source tools
  - Landsat Imagery
  - Analysis in QGIS and R



# Activities relating to setting up a system, integrating data



## **Spatial Data**

Remote Sensing Work through Satellite Image

Secondary Information from other organizations and government

Other research and report as well as documentations by technicians

## **Crowd Sourcing**

Using Mobile Application

Using GPS for measuring land and mapping

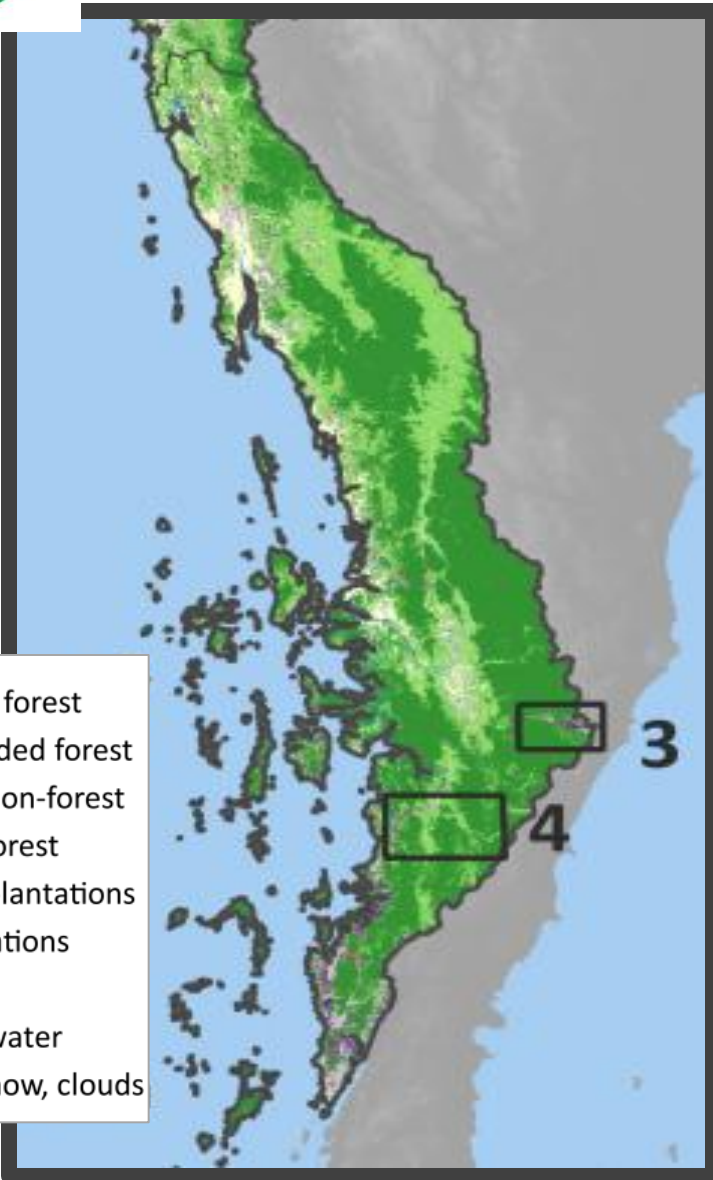
Using UVA/Drone for land mapping



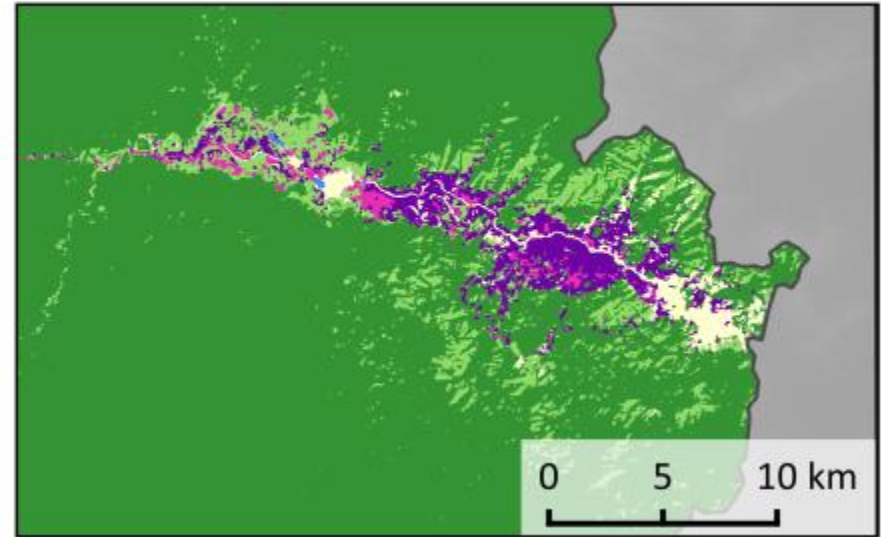


# Remote sensing work with Smithsonian

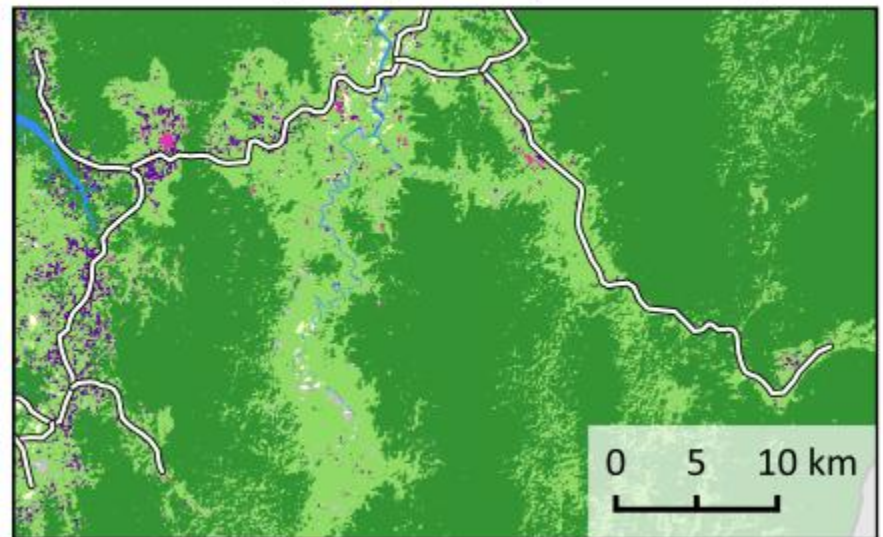
- intact forest
- degraded forest
- new non-forest
- non-forest
- new plantations
- plantations
- water
- new water
- ice, snow, clouds



3. Plantations, Mawdaung, Tanintharyi



4. Plantations, Lenya River, Tanintharyi









# Crowd Sourcing

Tanintharyi Natural Resource Watch

တို့တိုင်း၊ တို့ဌာနေ၊ တို့များ စေ

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နယ်စပ်ဒေသများ



Tanintharyi Myanmar

Telenor MPTGSM 3G 2G 08:22



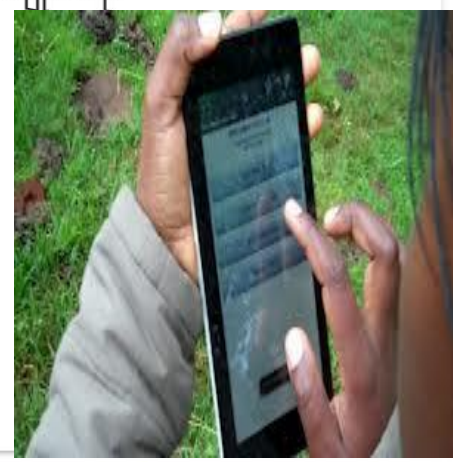
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မြန်မာ



- သတ္တုတွင်း
- သစ်တော
- စီးပွားဖြစ်စက်မှုစိုက်ပျိုးရေး
- စွမ်းအင်
- အကြီးစားဖွံ့ဖြိုးရေးစီမံချက်
- ငါးလုပ်ငန်းနှင့် စိုက်ပျိုးရေး
- အခြား



နောက်သို့

ရှေ့သို့



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သတ္တုတွင်း

- ကျောက်မီးသွေး
- ရွှေ
- ခဲ
- သံ
- လမ်းခင်းကျောက်
- အခြား

အခြားမှတ်ချက်များ

ပုံစံ -၉ သတ္တုတွင်းအမျိုးအစားများ

- အကြီးစားထုတ်လုပ်မှု
- အသေးစားထုတ်လုပ်မှု
- စမ်းသပ်ရှာဖွေခြင်း
- အခြား

အခြားမှတ်ချက်များ

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နောက်သို့

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**Environmental Monitoring**

Choose -time- ▾

Choose -issue- ▾

Choose -area- ▾

**Map Layers**

▼ Mining

Mining

▼ Boundaries

Forest Reserved Forest

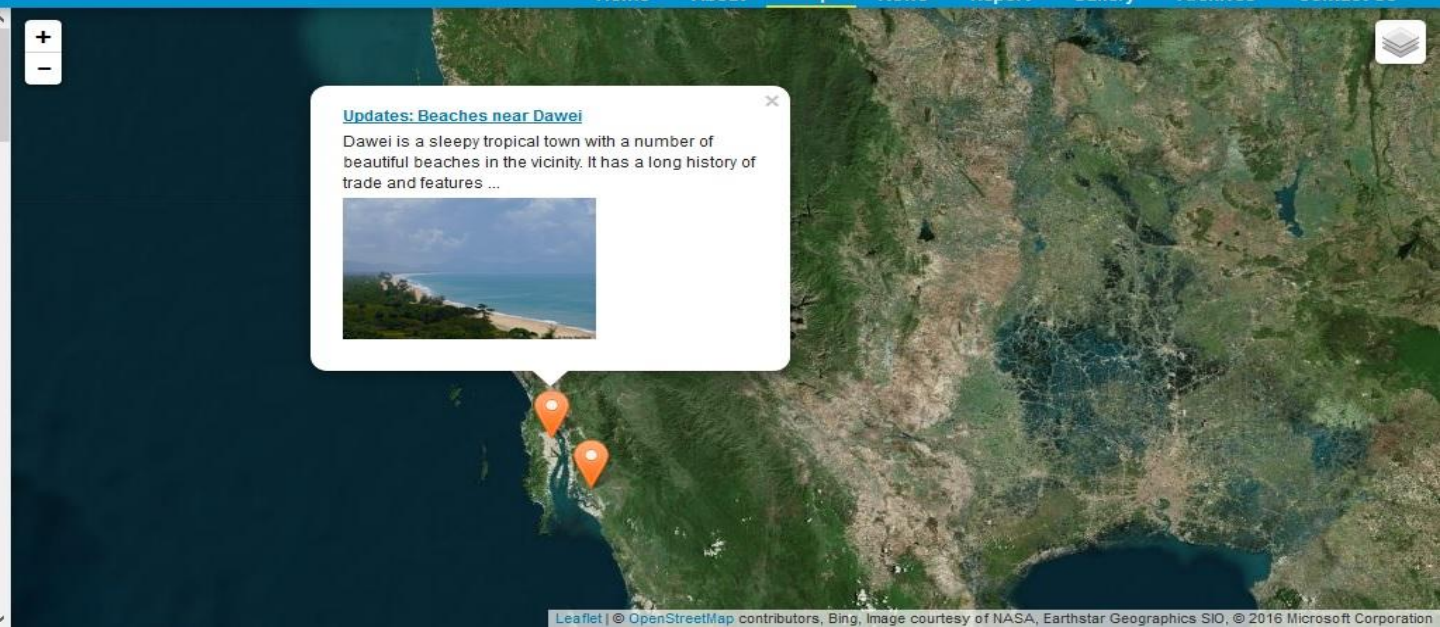
Forest Protected Area

TNRTY Village Track Boundary

Boundary From MIMU

TNRTY Cover Boundary

TNRTY Tourist Boundary




**Updates: Beaches near Dawei** ✕

Dawei is a sleepy tropical town with a number of beautiful beaches in the vicinity. It has a long history of trade and features ...




**Updates: Beaches near Dawei** ✕



Dawei is a sleepy tropical town with a number of beautiful beaches in the vicinity. It has a long history of trade and features some interesting colonial architecture, with many old wooden, thatch-roofed bungalows and some brick and stucco mansions. Under British rule Dawei was known as Tavoy, and is still sometimes referred to by that name.

The Shwe Taung Zar Pagoda is the main religious site in Dawei, and is set in a charming little complex. The short walk from the centre of Dawei is also a pleasant one, following streets lined with colonial era-buildings. In the centre of town, the busy Si Pin Tharyar and Minagalar markets are worth a visit – they can be found opposite each other.

For a wider selection of photos, go to our Dawei Flickr photo album.

MAUNG MACHAN BEACH

TNRTY Cover Boundary

TNRTY Village Track Boundary

Boundary From MIMU

TNRTY Tourist Boundary

Leaflet | © OpenStreetMap contributors, Bing, Image courtesy of NASA, Earthstar Geographics SIO, © 2016 Microsoft Corporation

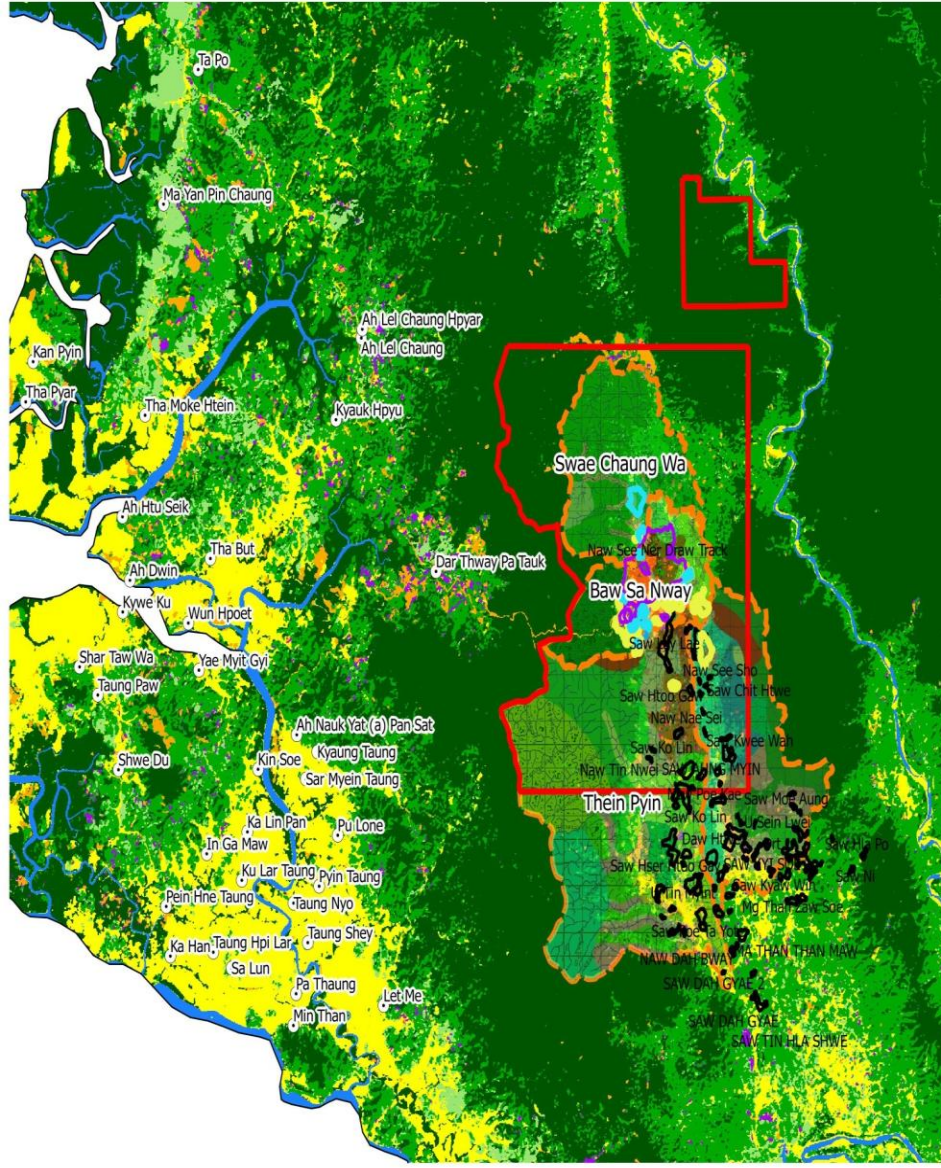
# How does it work?



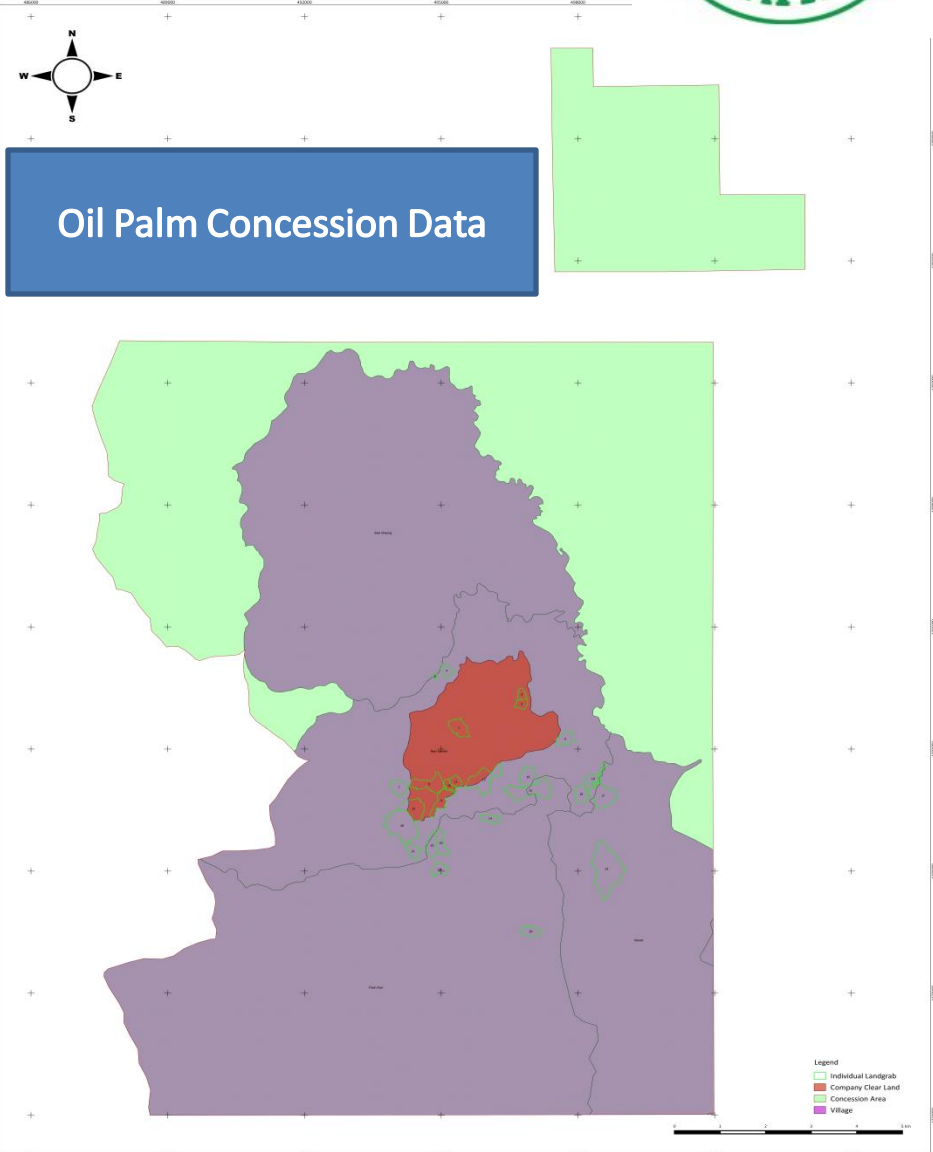
- Users input data into Android smartphone device when in the field
- This data is uploaded to the internet (instantly, or later)
- Data can be accessed on computers
- Data can be analyzed and shared with chosen audiences
- Data can be visualized on maps / Google Earth



# New results as a result of community engagement



MSP Area Map





# TANINTHARYI NATURAL RESOURCE WATCH : TNRW



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Apps Suggested Sites Web Slice Gallery Imported From IE

TNRW: Tanintharyi Natural Resource Watch

Would you like to translate this page? [Options](#)

Translate Nope

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## About TNRW

TNRW is Tanintharyi Natural Resource Watch.

Choose -Time- Choose -Issue- Choose -Area-

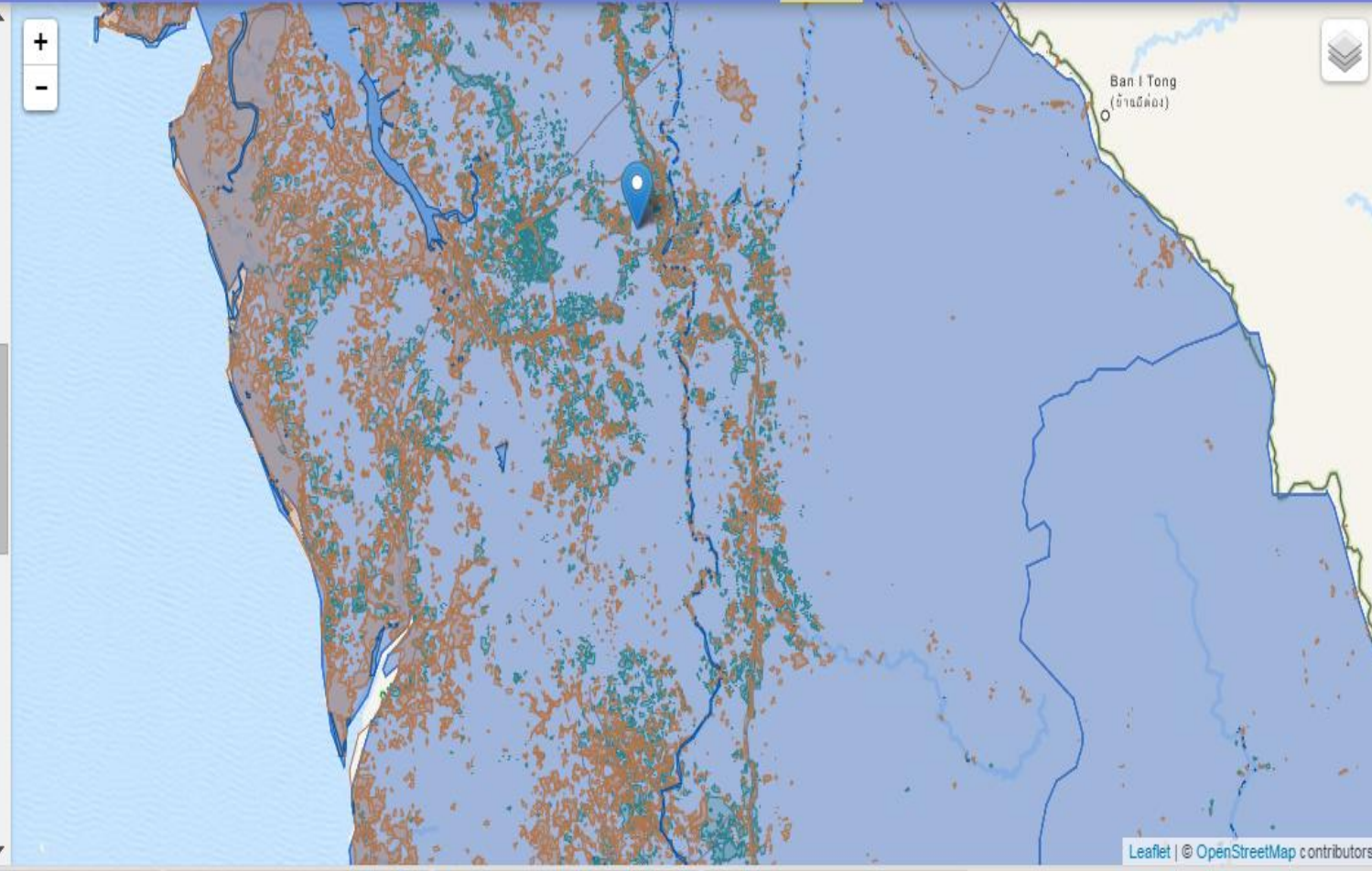
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11:05 AM 1/22/2016



# TNRW: Tanintharyi Natural Resource Watch

- TNRTY Village Track Bounder
- Bounder from MIMU
- TNRTY Cover Bounder
- TNRTY Township Bounder
- TNRTY District Bounder
- Non Forest Cover 2014 (Up)
- New Non Forest Cover (Down)
- New Non Forest Cover (Up)
- Non Forest Change (Down)
- Non Forest Change (Up)
- Water (Down)
- Water (Up)
- Forest**
  - Forest Reserved Forest





# Challenges and areas to coordinate collaborate

## *Security*

*Dual Administration & Two different policies*

*Very weak in Law Enforcement*

*Lack of participation from government  
departments*

*Lack of Transparency*

*Limited Transportation*

*No communication access ( Internet & phone )*



# Upcoming activities/next steps



Web Launching & Press Conference

Advocacy to State ministry, parliament, government departments and related stakeholders

Pilot in Dawei Mines for six months

Expanding to other issues in Dawei District

Expanding to Myeik & Kawtthaung District

Consultation session with multi-stakeholders for upcoming issue

Reporting and Public Hearing Session

# Opportunities



- Submission of credible, live data to (progressive) enforcement agencies relating to Natural Resources Issues such as;
  - Land conversion
  - Illegal logging
  - Mining Concession
- Visualizing data for a broader audience/media campaigns
- Visualizing impacts of spatial plan revisions
- Reduce the natural resource conflict issue through multi-stakeholder consultation approach
- Platform for public space to create public hearing session especially indigenous people





**thank  
you!**