

# USING RADIO TELEMETRY TO STUDY MAHASEER MOVEMENT IN BHUTAN





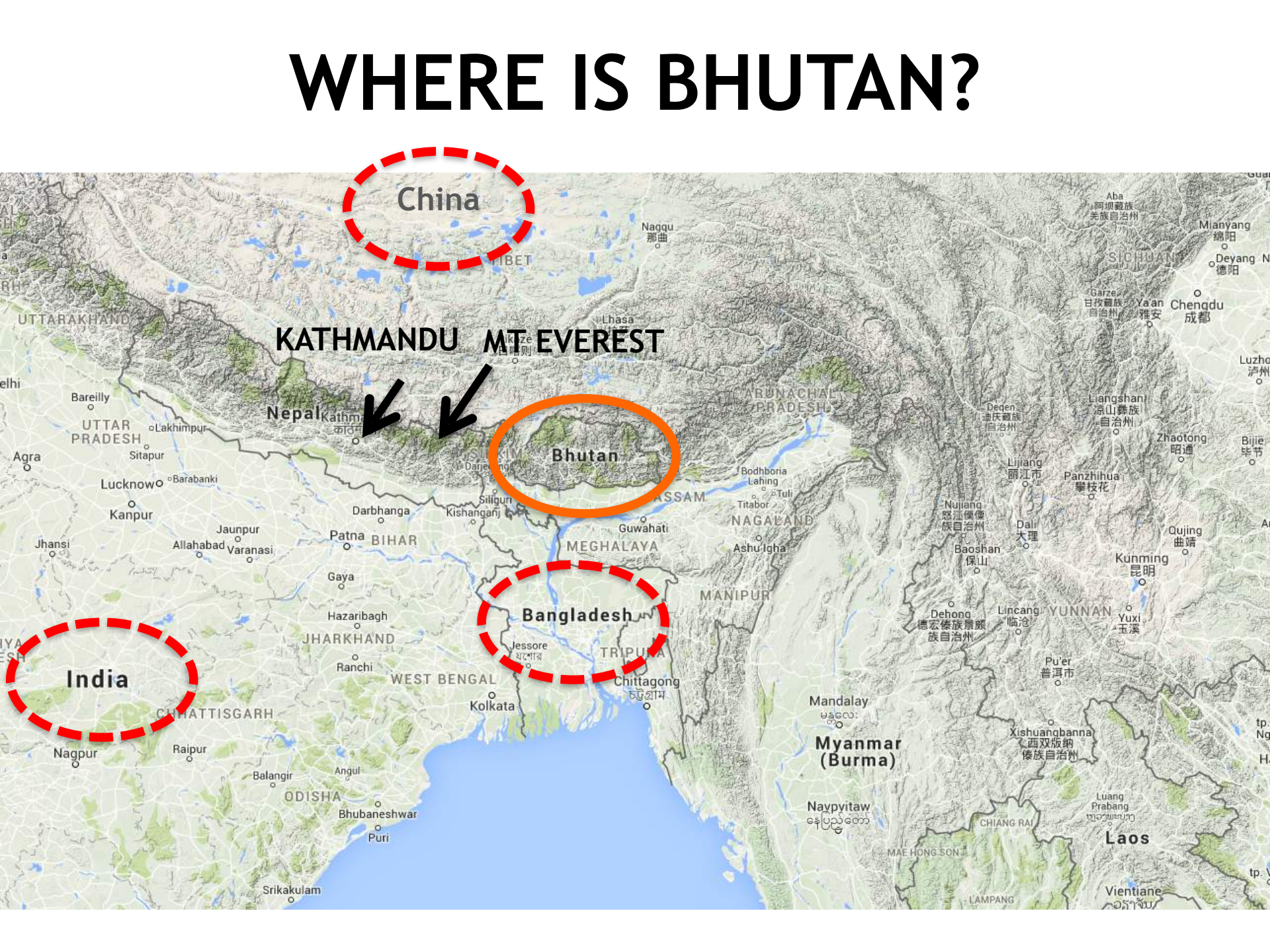
# WHERE IS BHUTAN?





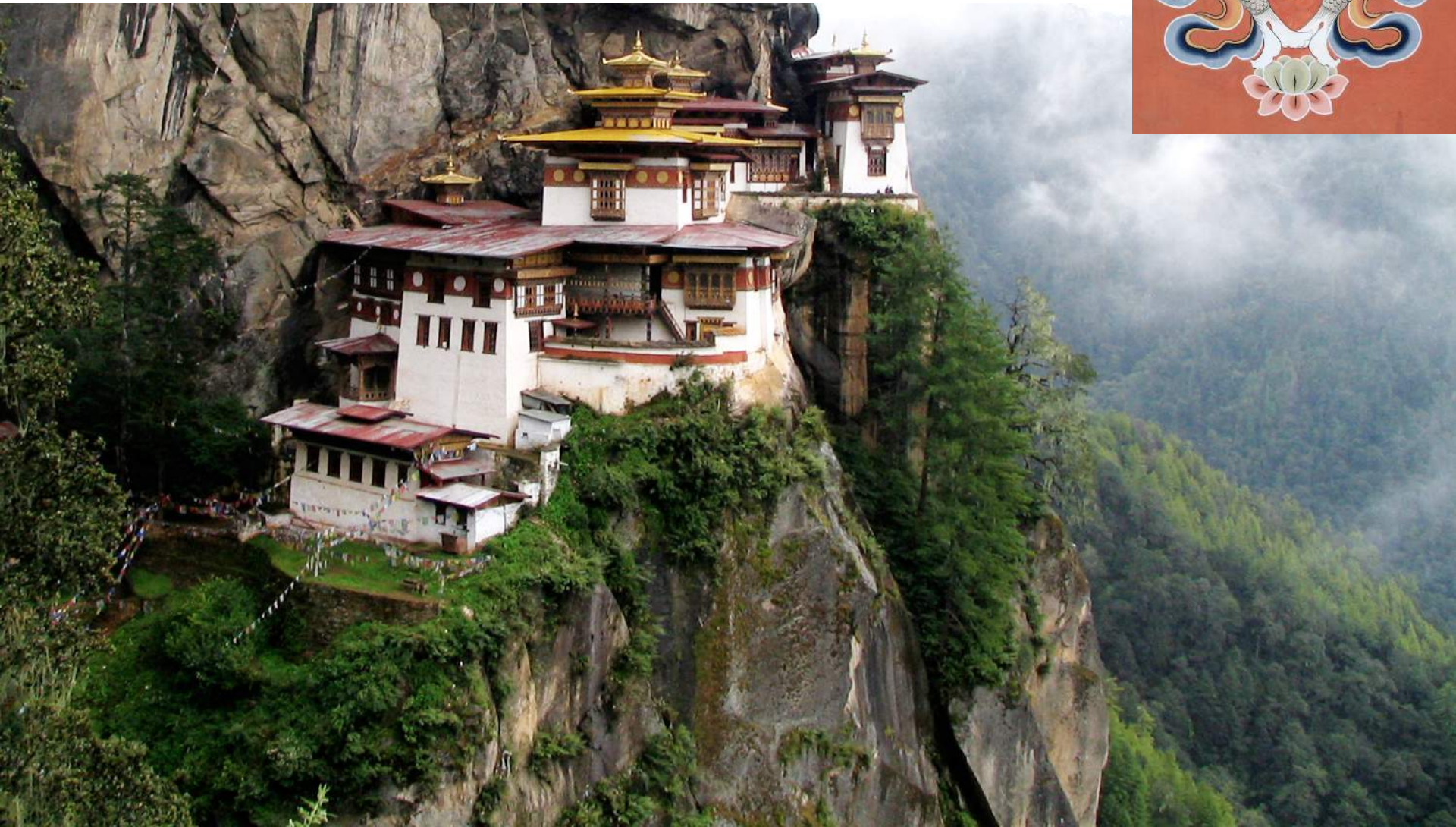
# WHERE IS BHUTAN?

The map illustrates the geographical context of Bhutan. It is a small, landlocked country nestled between the massive Himalayan mountain ranges. To its north lies China, specifically the Tibet region. To its west and south is India, with various states like Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Odisha, and Chhattisgarh visible. To the south of Bhutan is Bangladesh. The map also shows neighboring countries like Nepal, Myanmar (Burma), and Laos. Key locations marked include Kathmandu and Mt. Everest in Nepal, and major Indian cities like Delhi, Kolkata, and Mumbai. The map uses color coding to distinguish between different regions and countries, with Bhutan highlighted in orange and its neighbors in red dashed outlines.



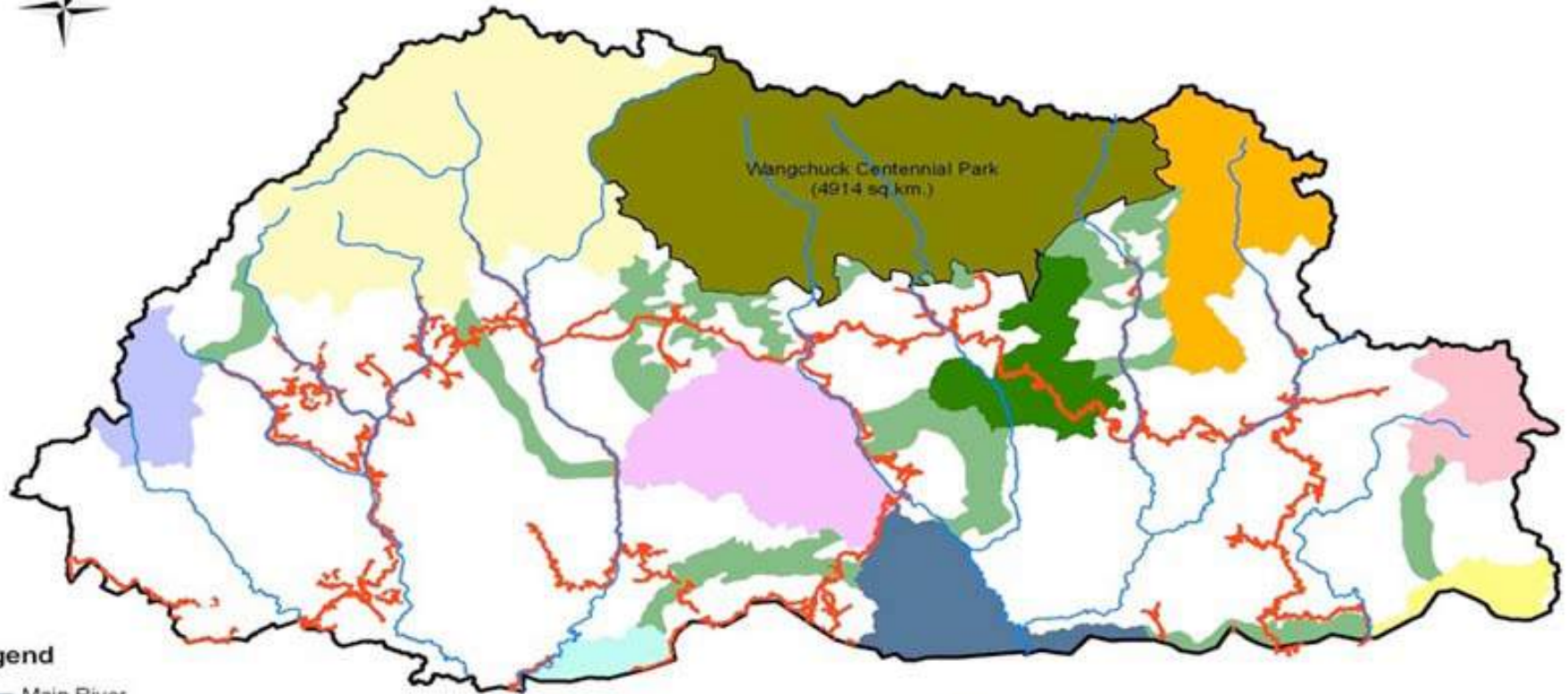


# Kingdom of Bhutan





# BHUTAN NATIONAL PARKS



## Legend

- Main River
- National Highway
- International Boundary

- Bumdeling Wildlife Sanctuary
- Jigme Dorji National Park
- Jigme Singye Wangchuck National Park
- Khaling Wildlife Sanctuary
- Phipsoo Wildlife Sanctuary
- Wangchuck Centennial Park

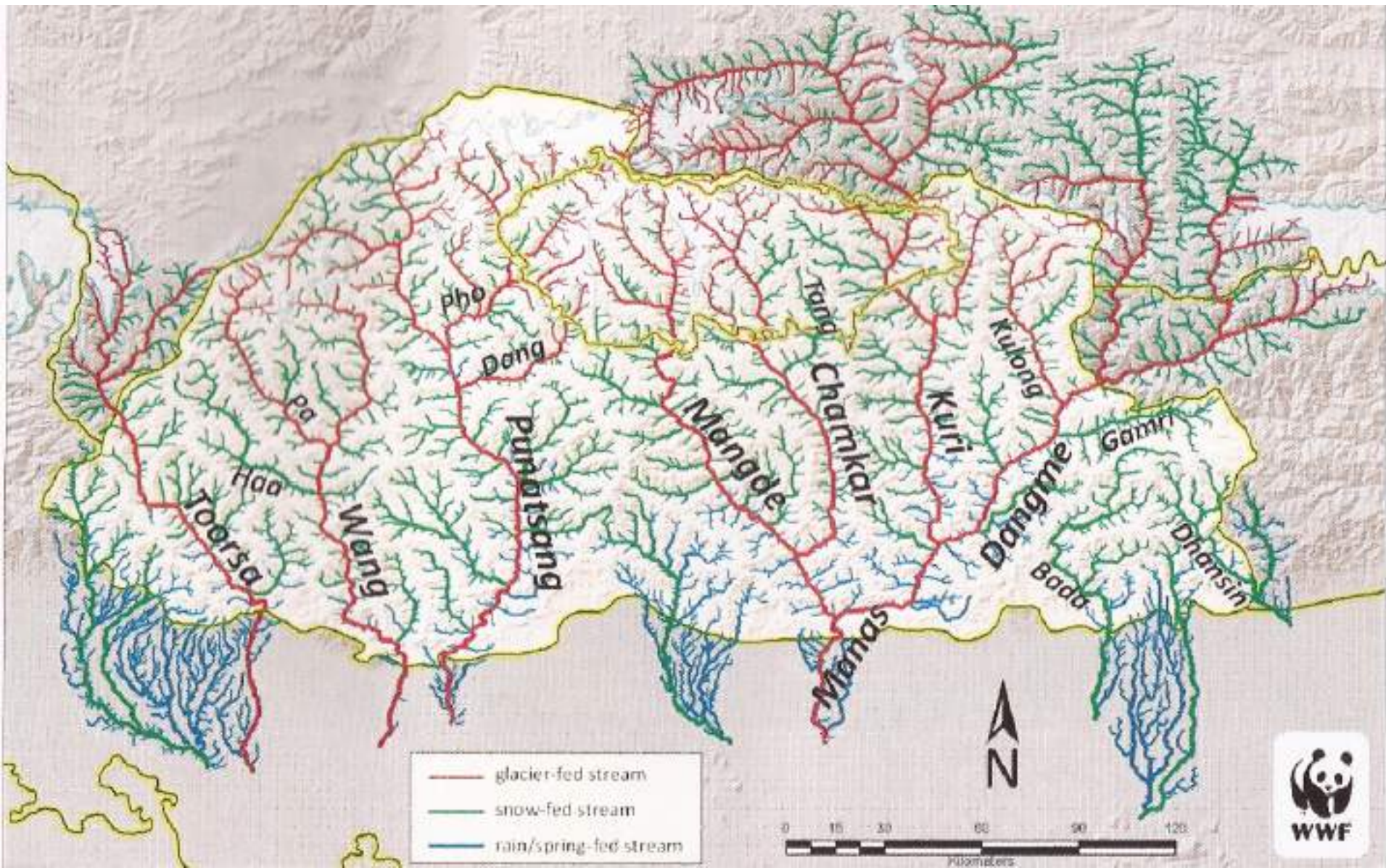
- Royal Manas National Park
- Sakteng Wildlife Sanctuary
- Thrumshingla National Park
- Torsa Strict Nature Reserve
- Biological Corridor

Prepared at GIS Unit, DoF, MoA  
Thimphu





# BHUTAN RIVERS









# GOLDEN MAHASEER

## *Tor putitora*





THE ULTIMATE  
ANGLING  
ADVENTURE

14  
DAY  
FLOAT TRIP

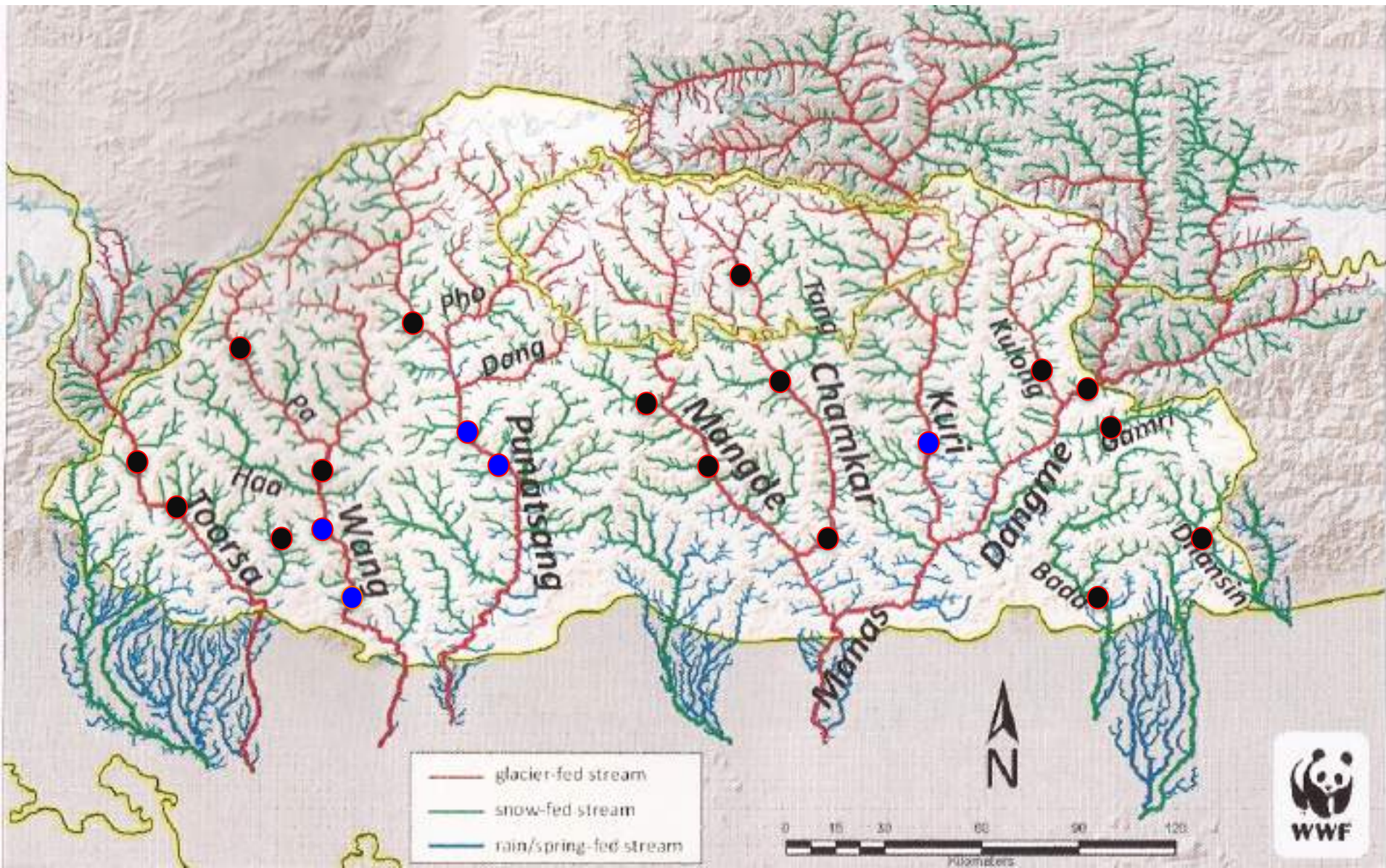
*with Misty Dhillon*

**PLAN YOUR  
NEXT ADVENTURE**





# HYDROPOWER IN BHUTAN





# HYDROPOWER IN BHUTAN





# PARTNERSHIP



David Philipp  
Julie Claussen  
Jeff Koppelman  
Karl Anderson  
Chris Haak

\*Cam Grant  
\*Karen Murchie  
\*Steve Cooke



Dechen Dorji  
Tandin Wangdi  
Jigme Tsuendrup

Chening Dorji  
Lopsang Dorji  
Sonam Drukpa  
Uygen Wangdi  
Dhawa Dorji



Tshewang Tashi

Karma Wangchuk  
DK Gurung  
Tshering Dorji

Tenzing Dorji  
Tingley Chab  
Namgay Dorji





**Fisheries Conservation**  
FOUNDATION

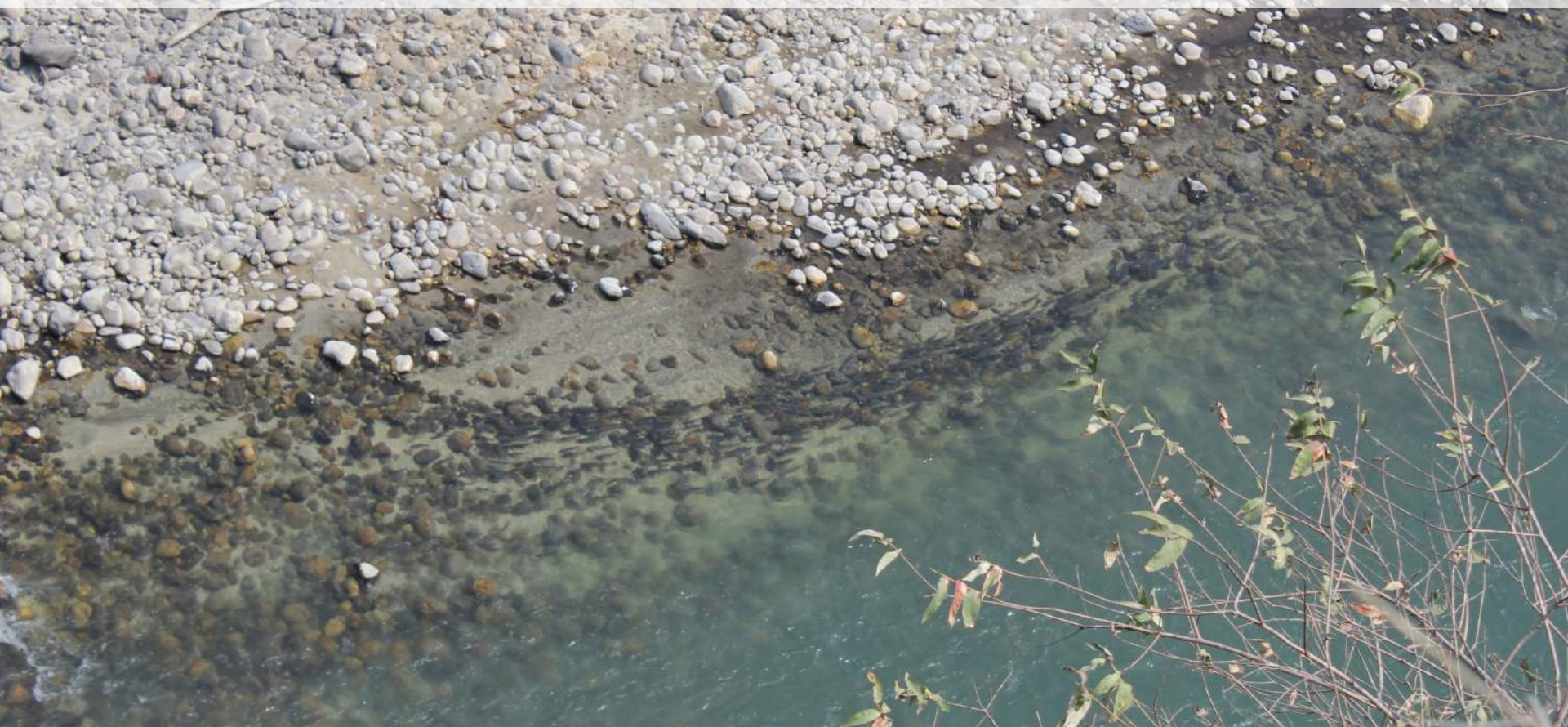
# PARTNERSHIP





# RESEARCH QUESTIONS

When and where do Mahaseer spawn, and how far do they migrate?  
Where do Mahaseer live during the rest of the year?  
How do Mahaseer respond to high water during the monsoon season?  
Do Mahaseer move into India, where they are potentially harvested?





# BIG QUESTIONS

**Do dams impact Mahaseer?**

**What key areas should be protected?**

**Can a recreational fishery be supported?**





# PLANNING





# RECEIVER STATIONS



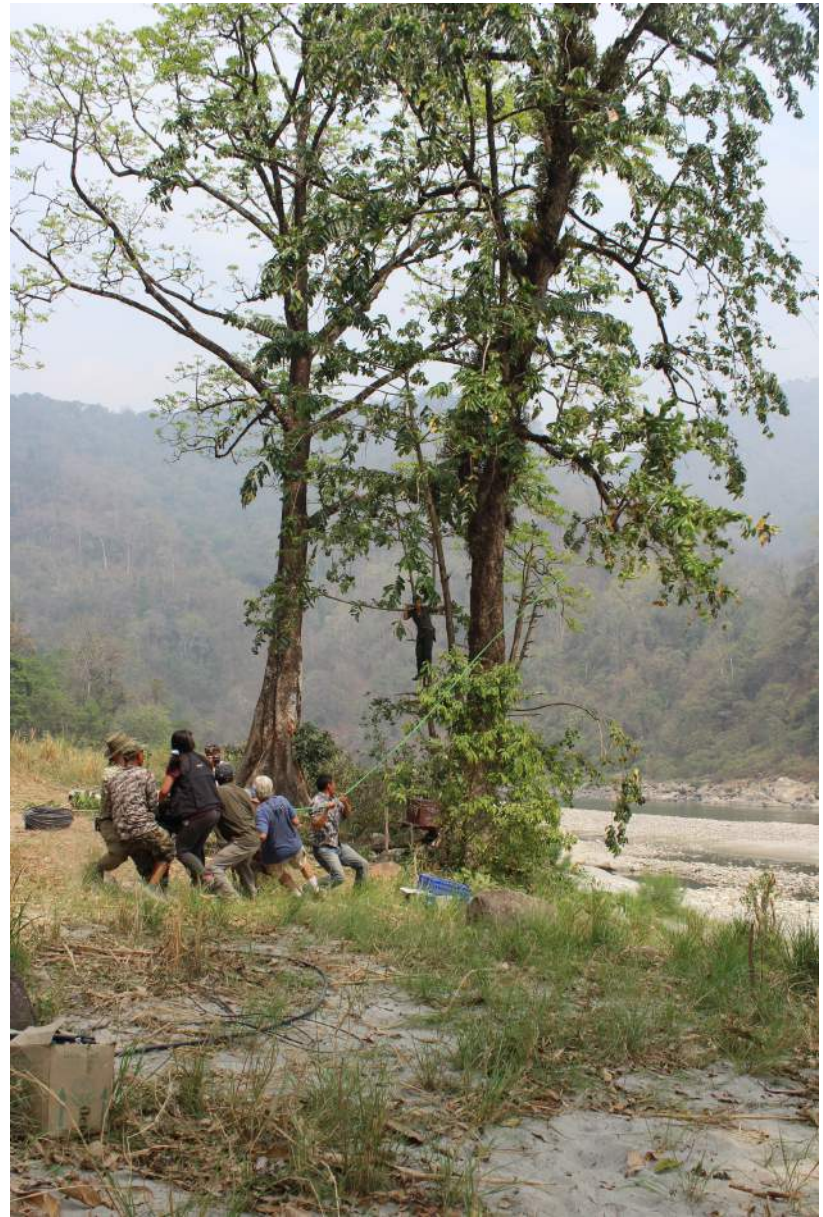


# ANTENNAS





# SOLAR POWERED RECEIVER STATIONS



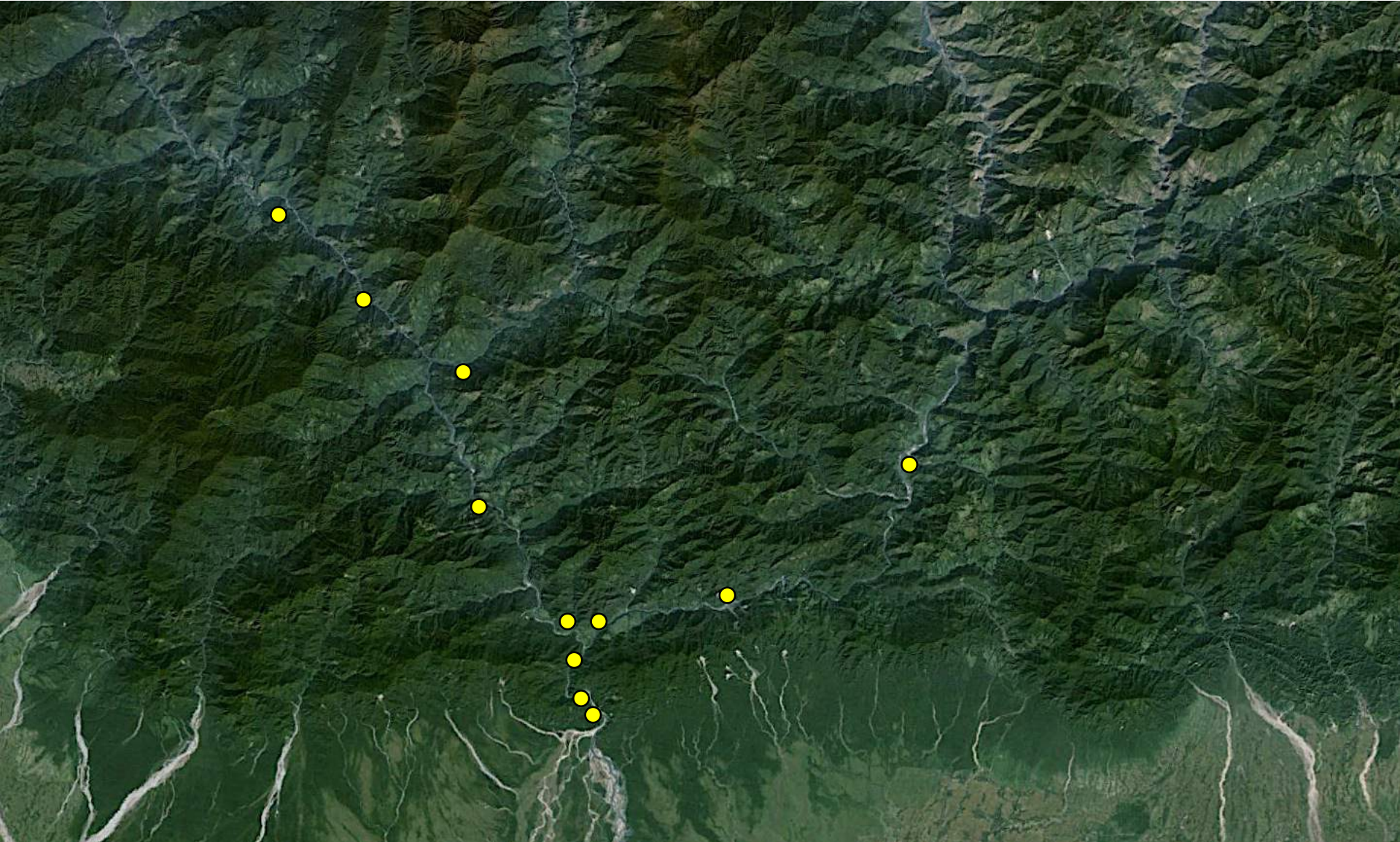


# LINE POWERED RECEIVER STATIONS





# RECEIVER STATIONS





# MANUAL TRACKING



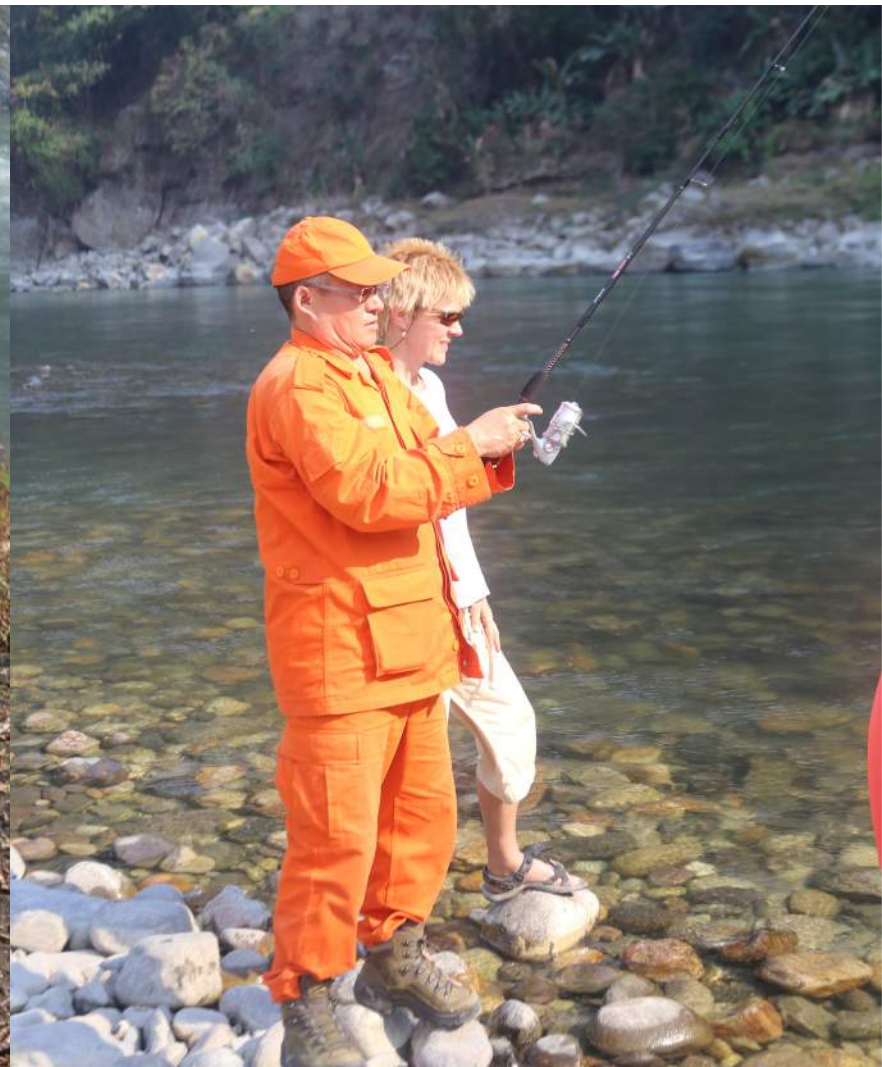


# ANGLING





# ANGLING



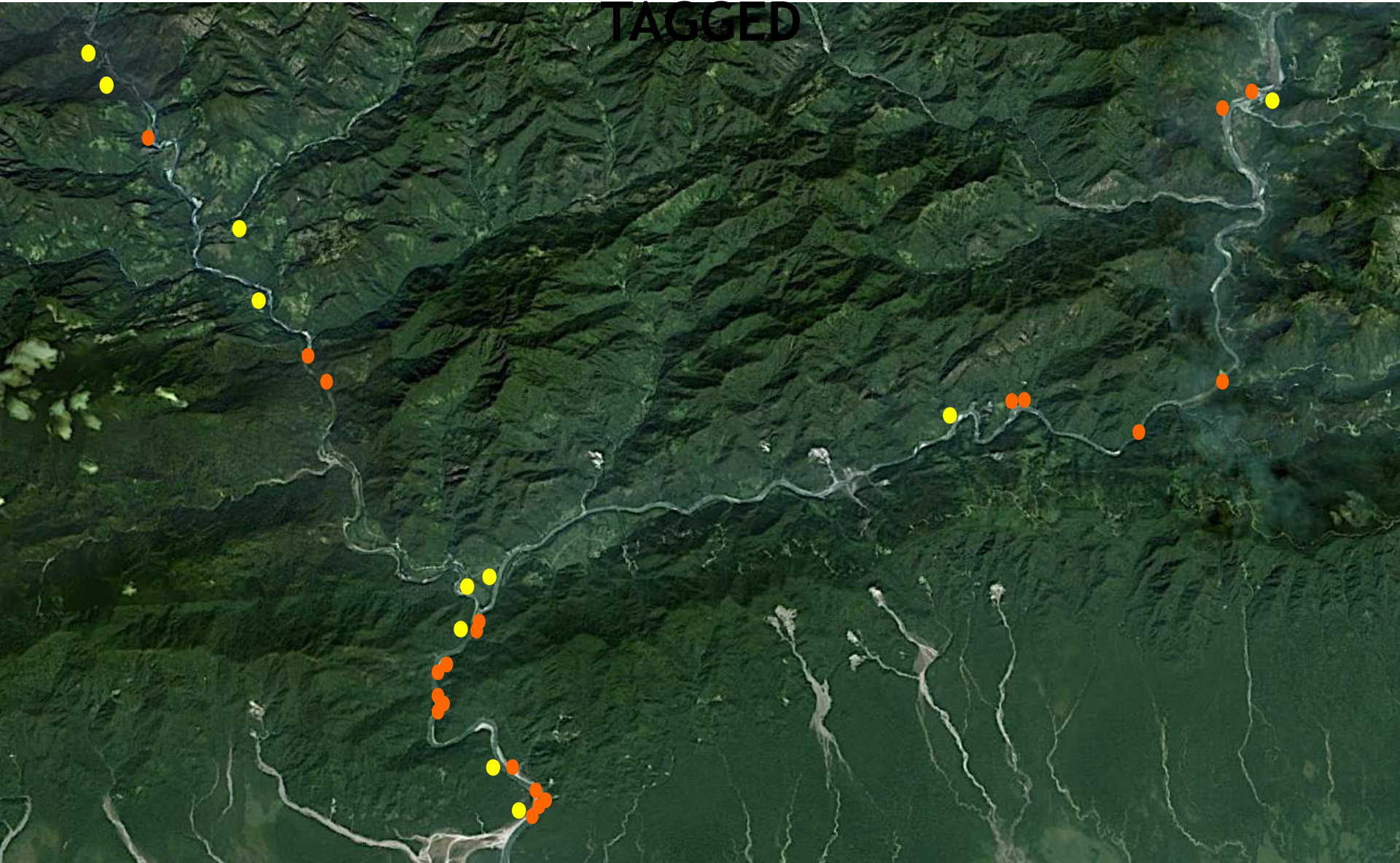


# SURGERY





# LOCATION WHERE FISH WERE TAGGED



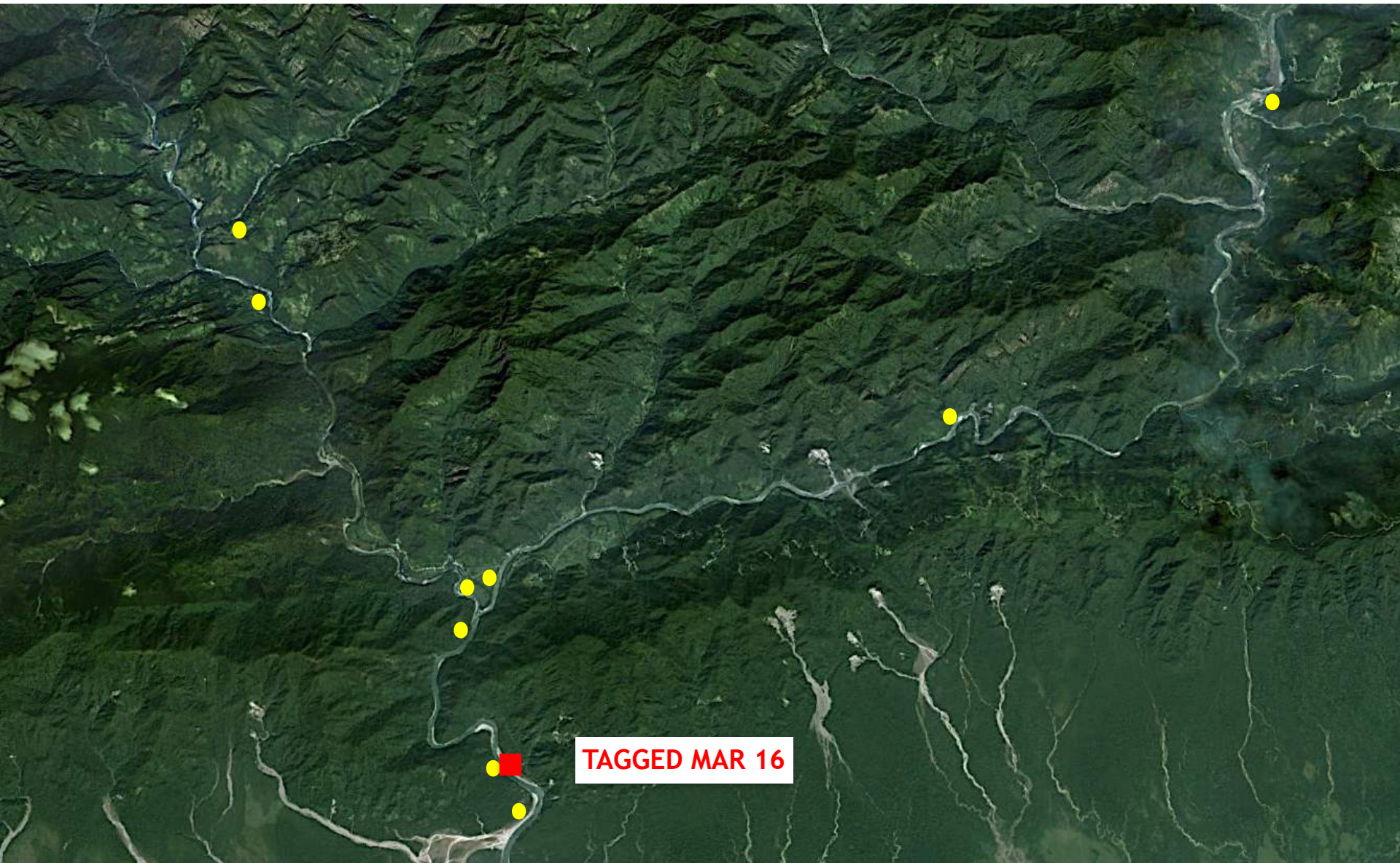


- 11 Receiver Stations
- 19 Fish Tagged
- 1<sup>st</sup> Download of Data in June - Sent to us July 5
  - Data from 9 Receivers
  - 2 could not be reached due to landslide
- 13 of 19 fish were detected



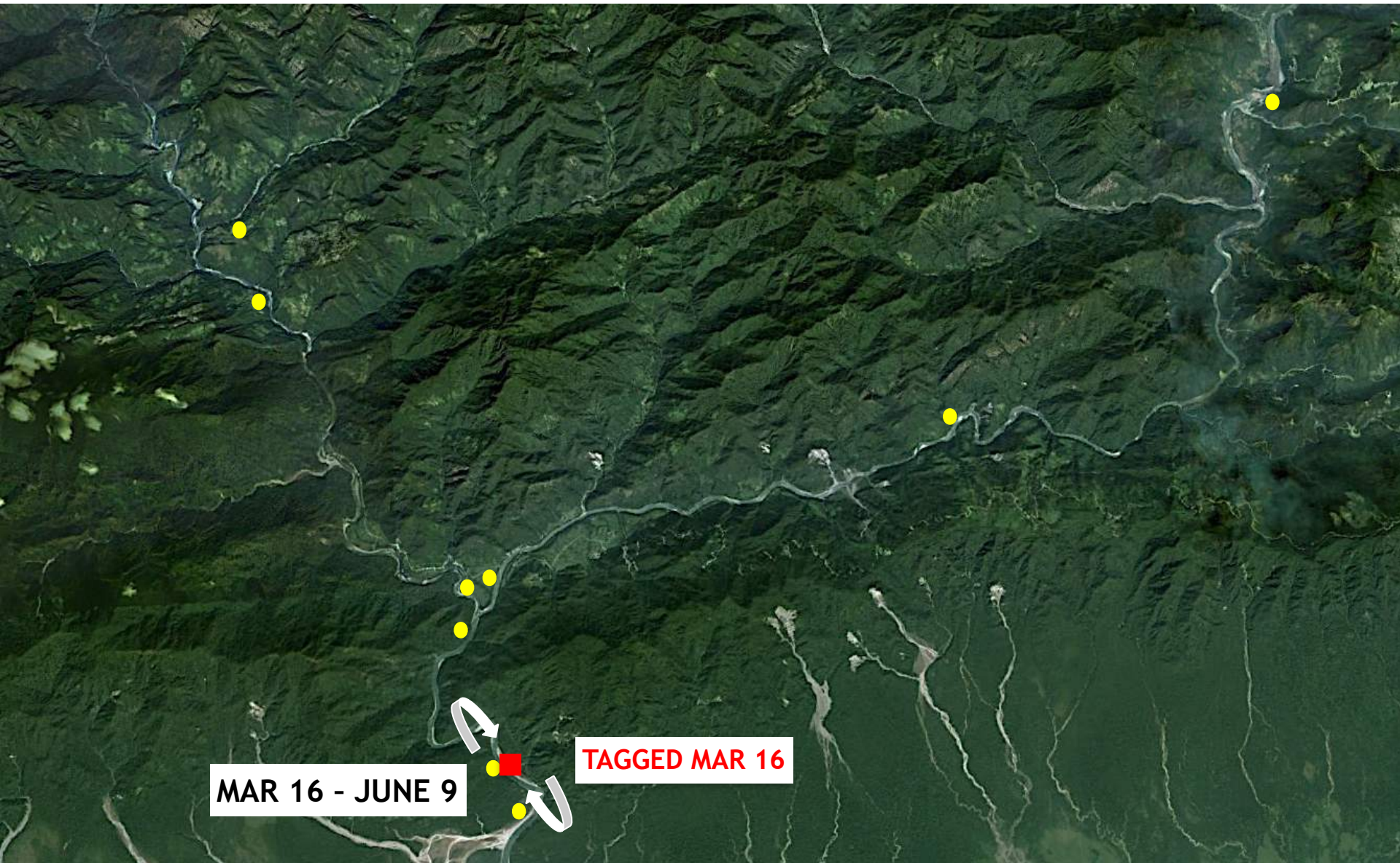


# FISH 720.1



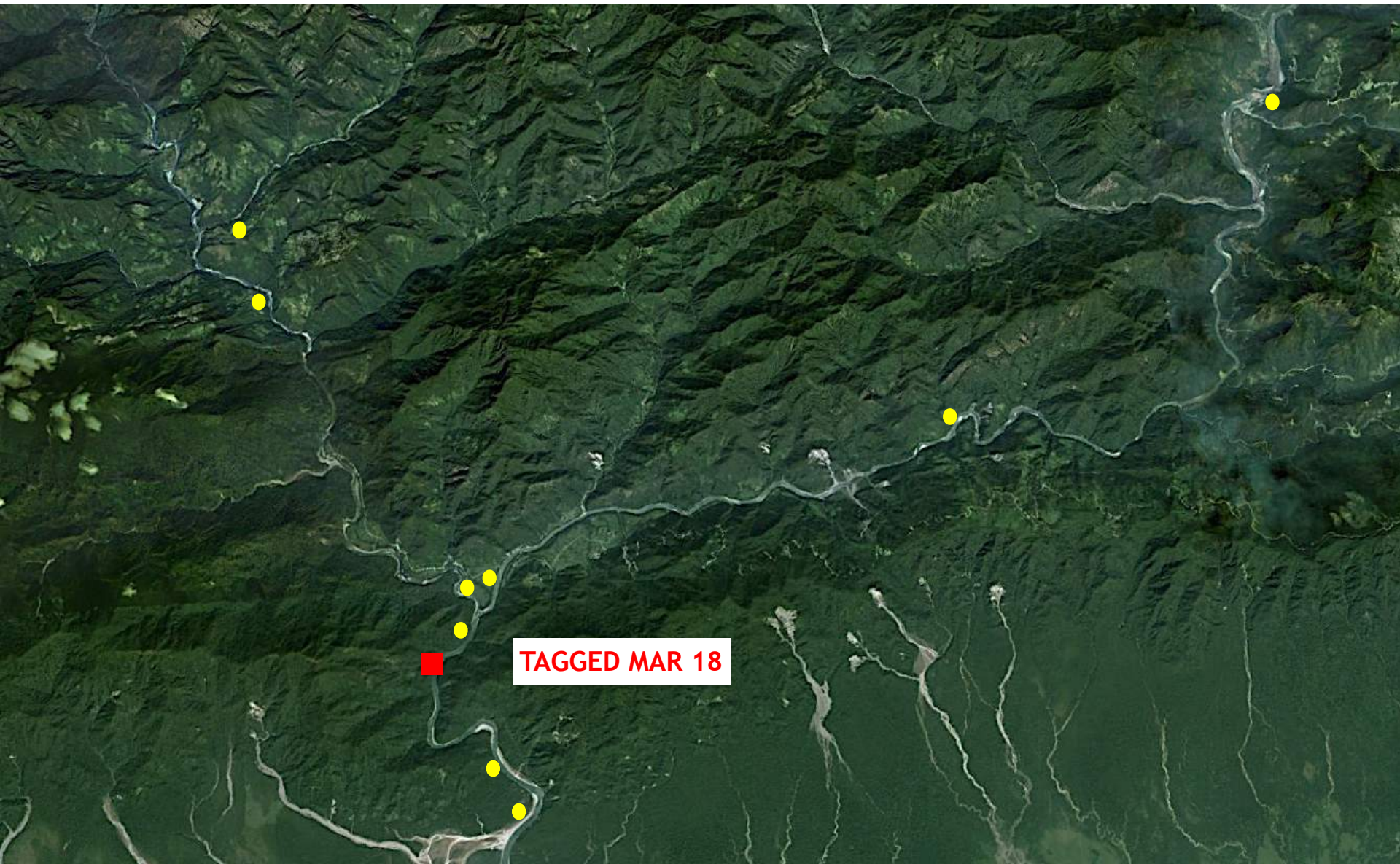


# FISH 720.1



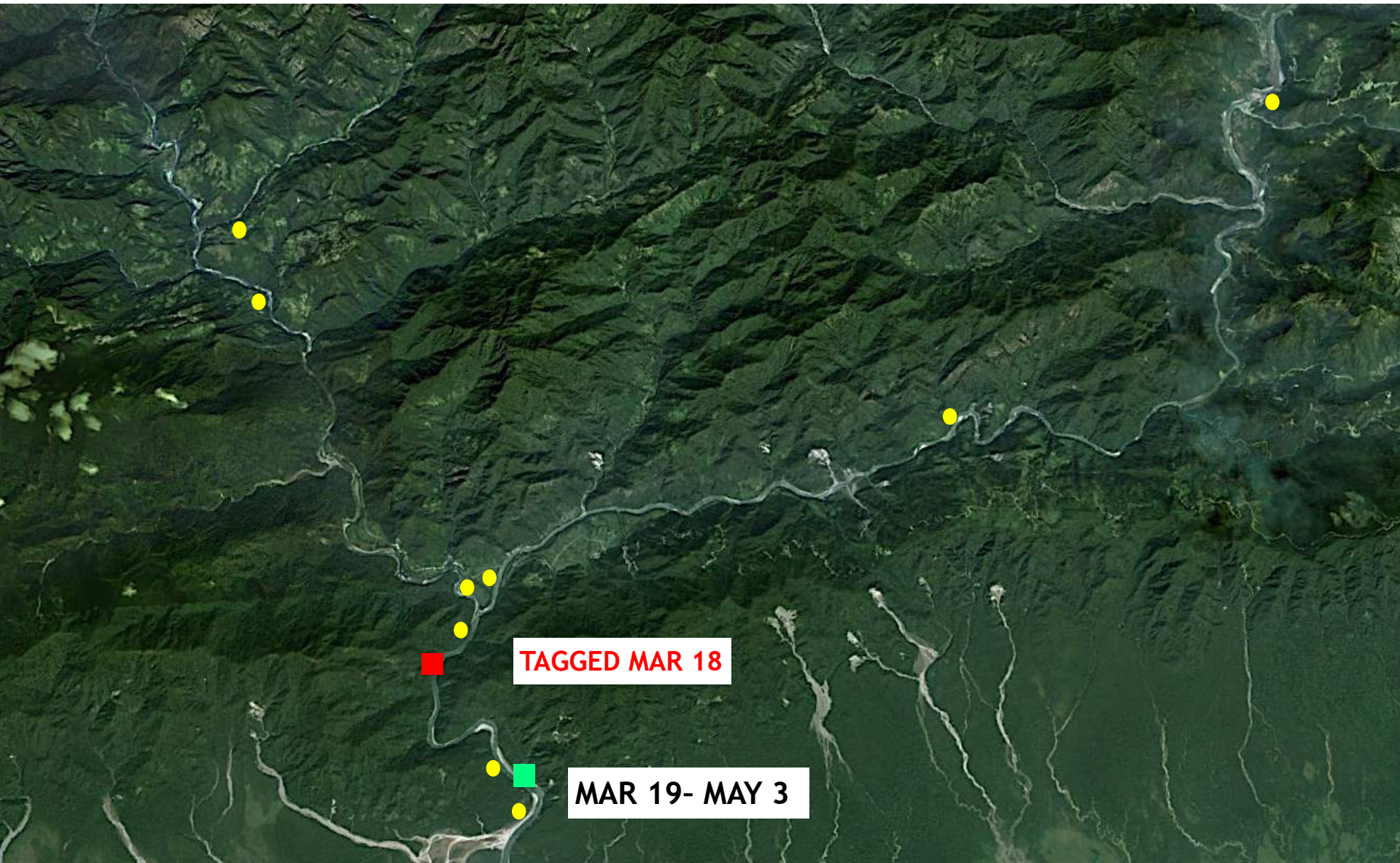


# FISH 720.2



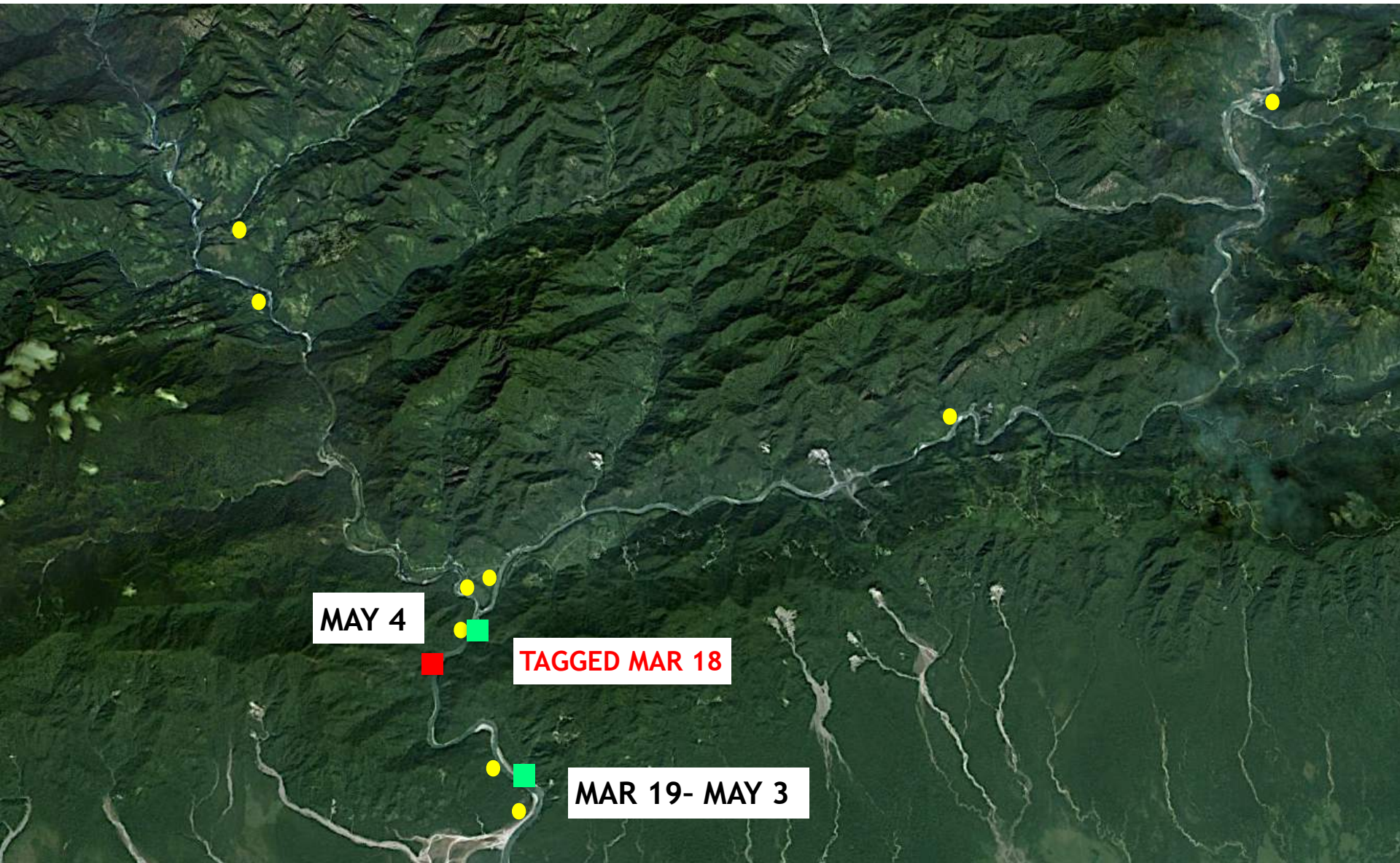


# FISH 720.2



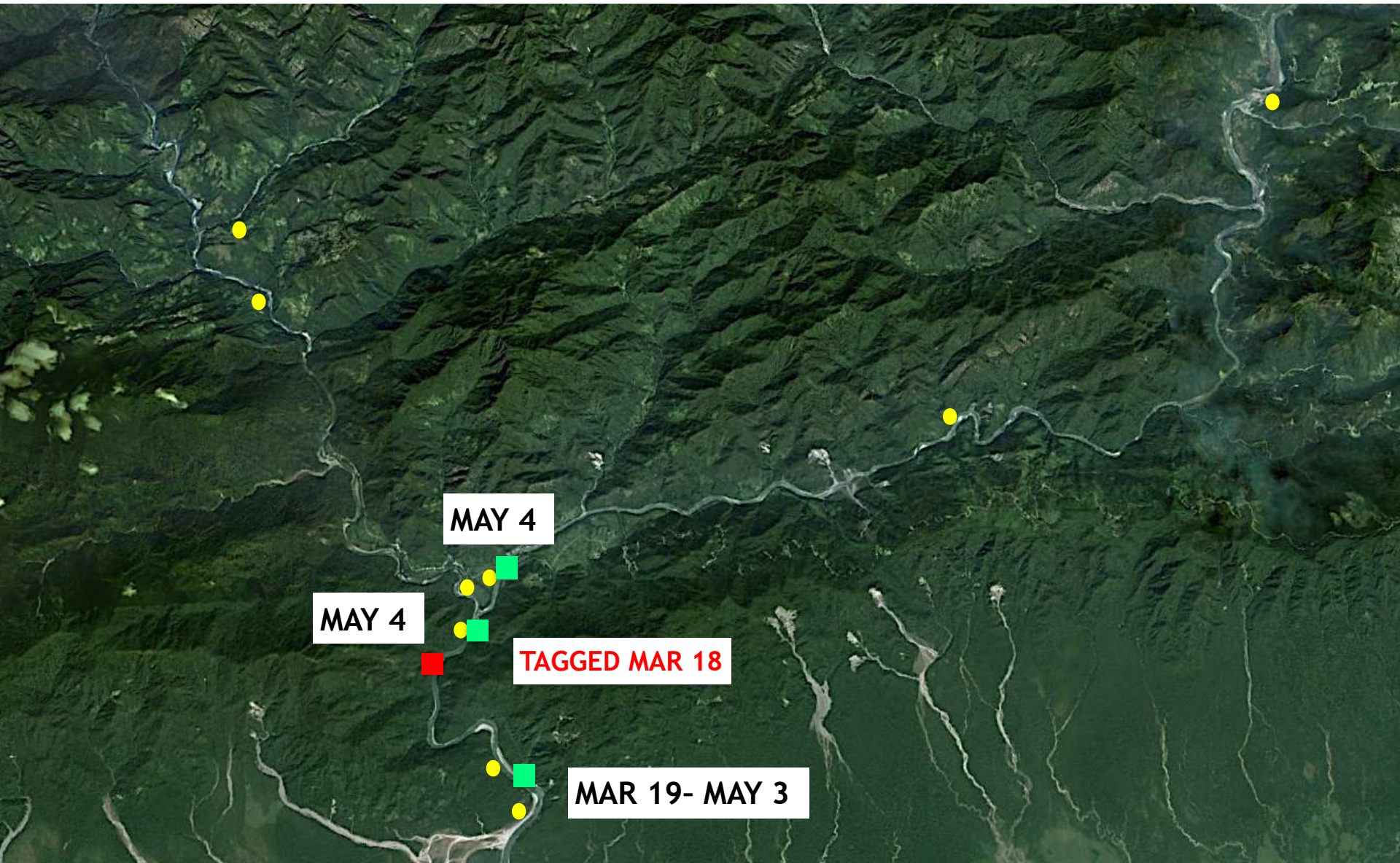


# FISH 720.2



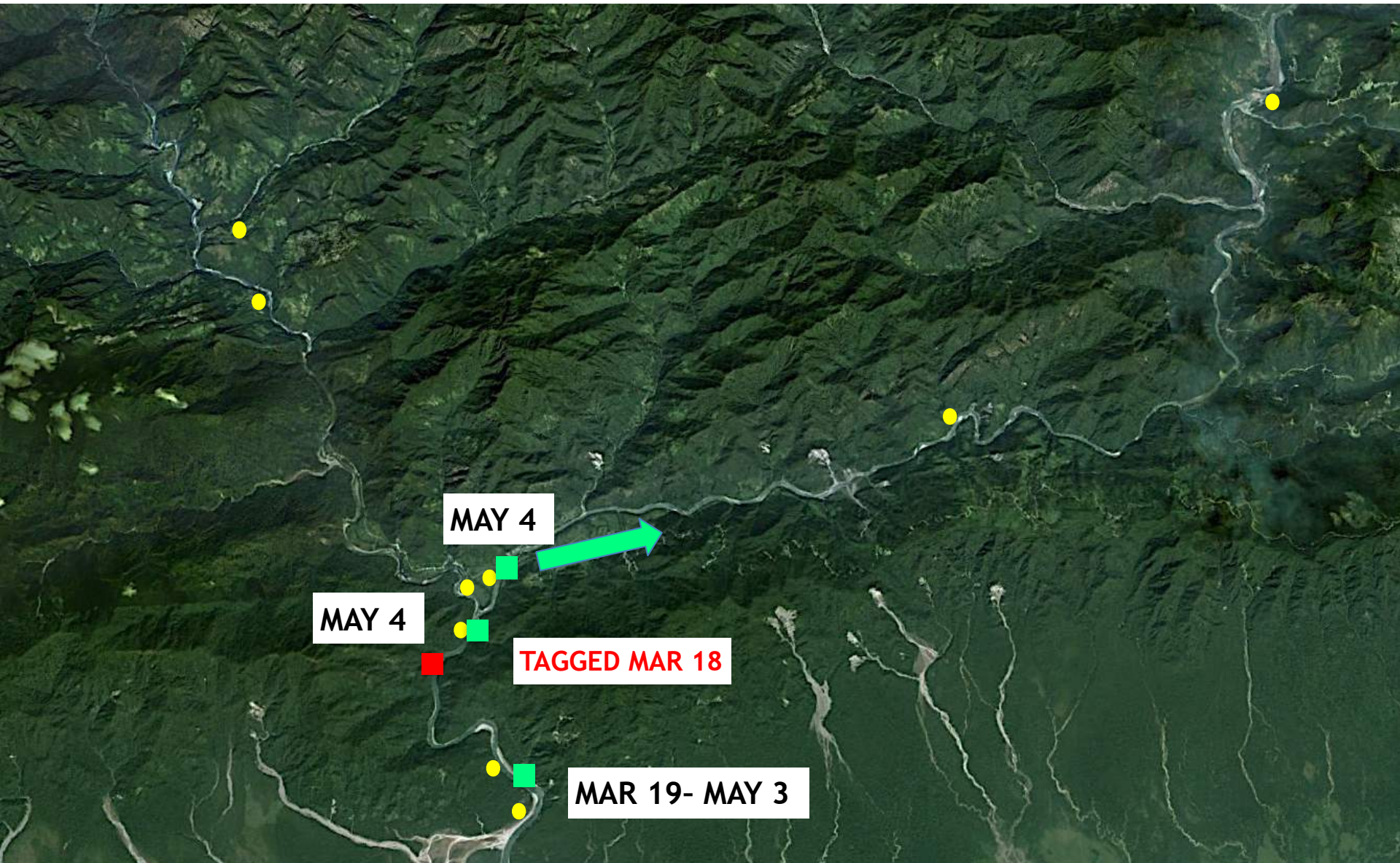


# FISH 720.2



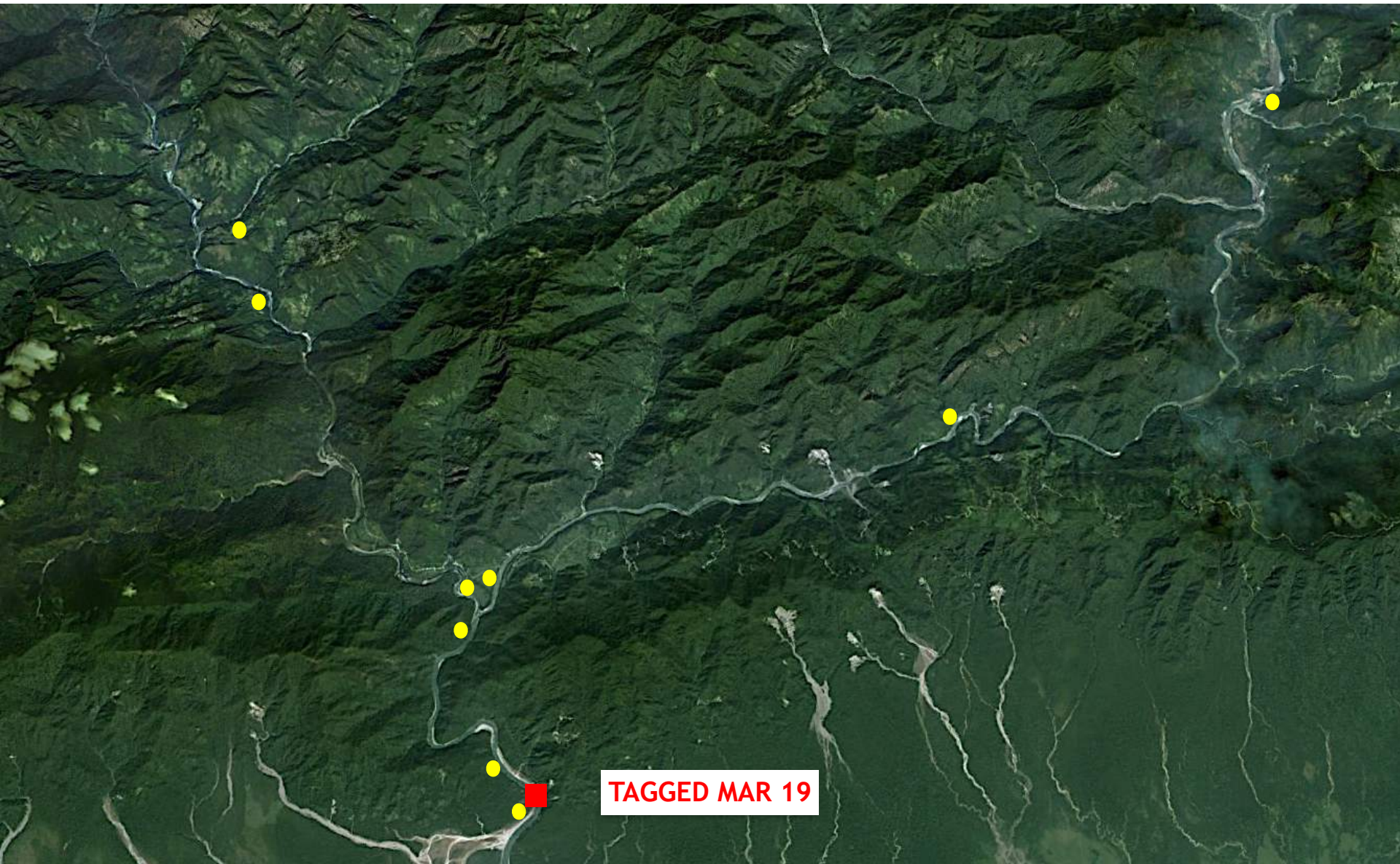


# FISH 720.2



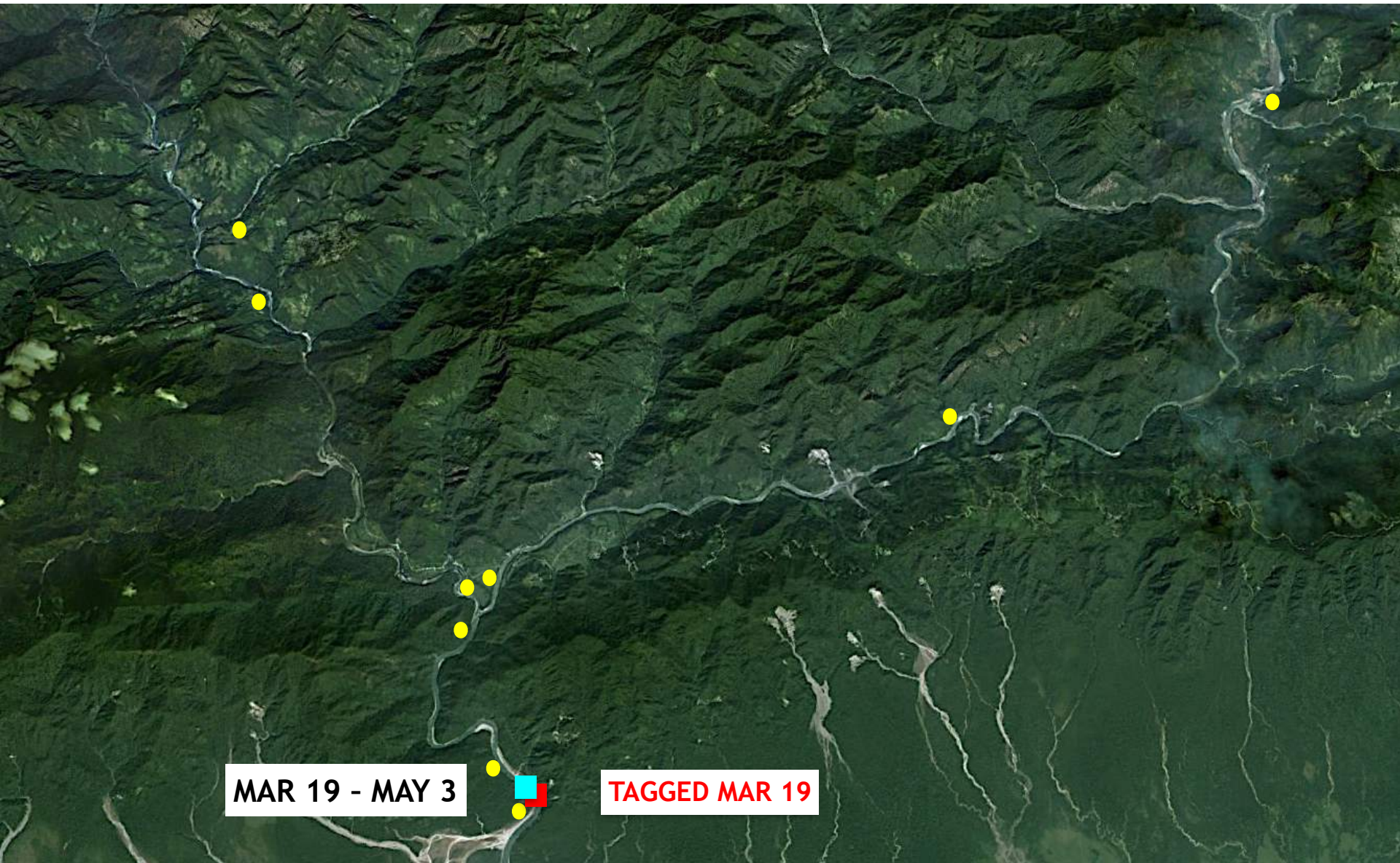


# FISH 720.4



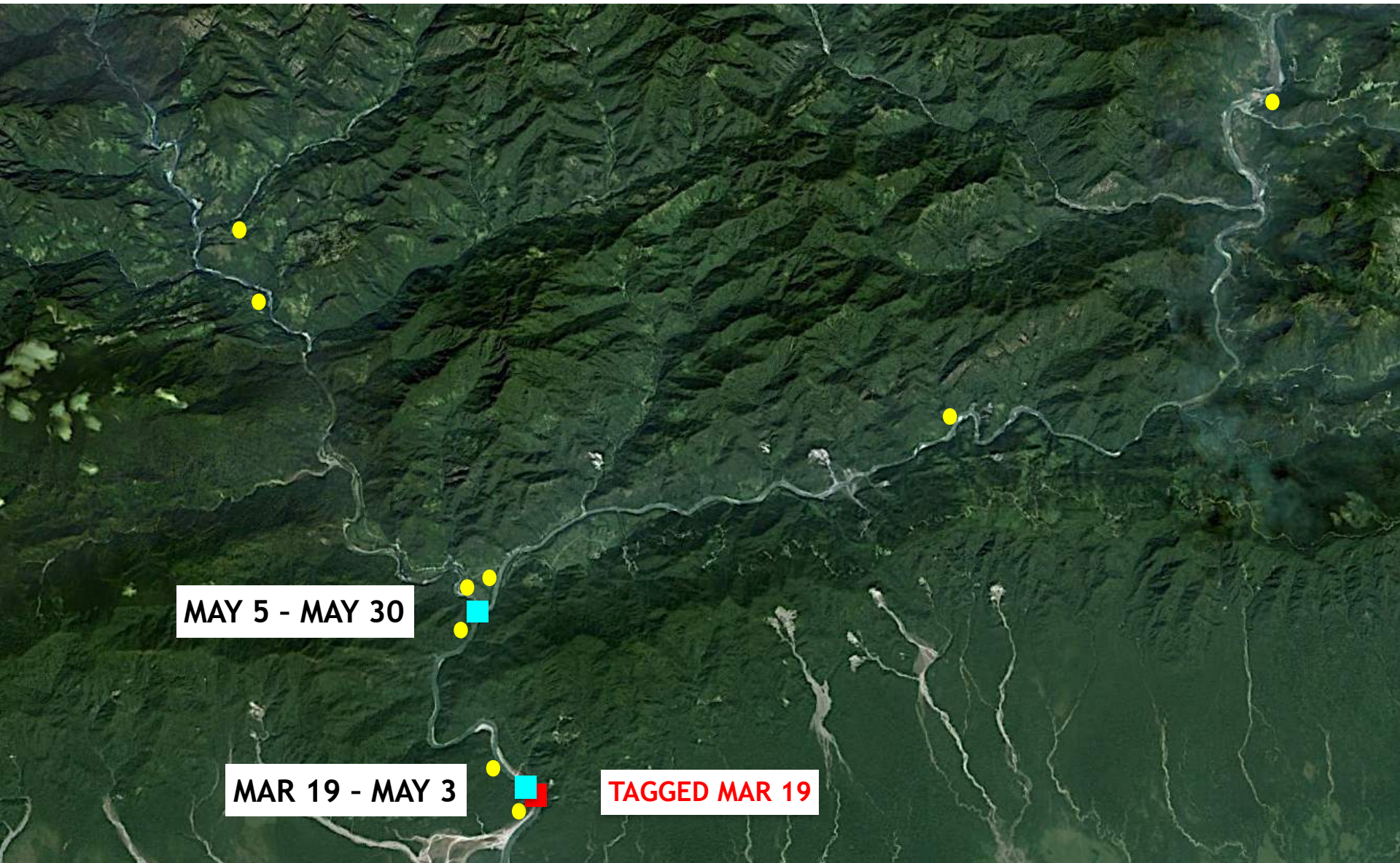


# FISH 720.4



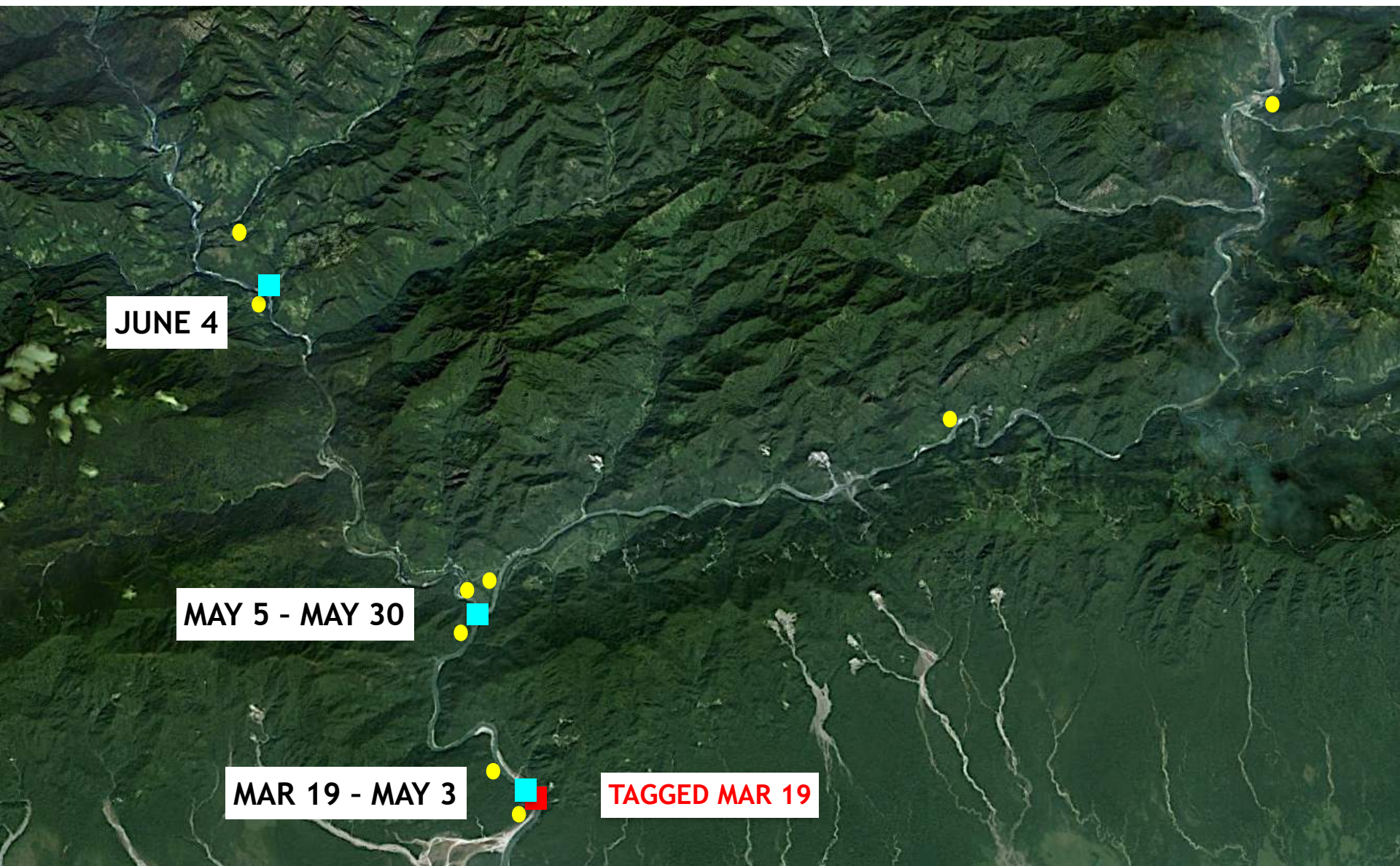


# FISH 720.4



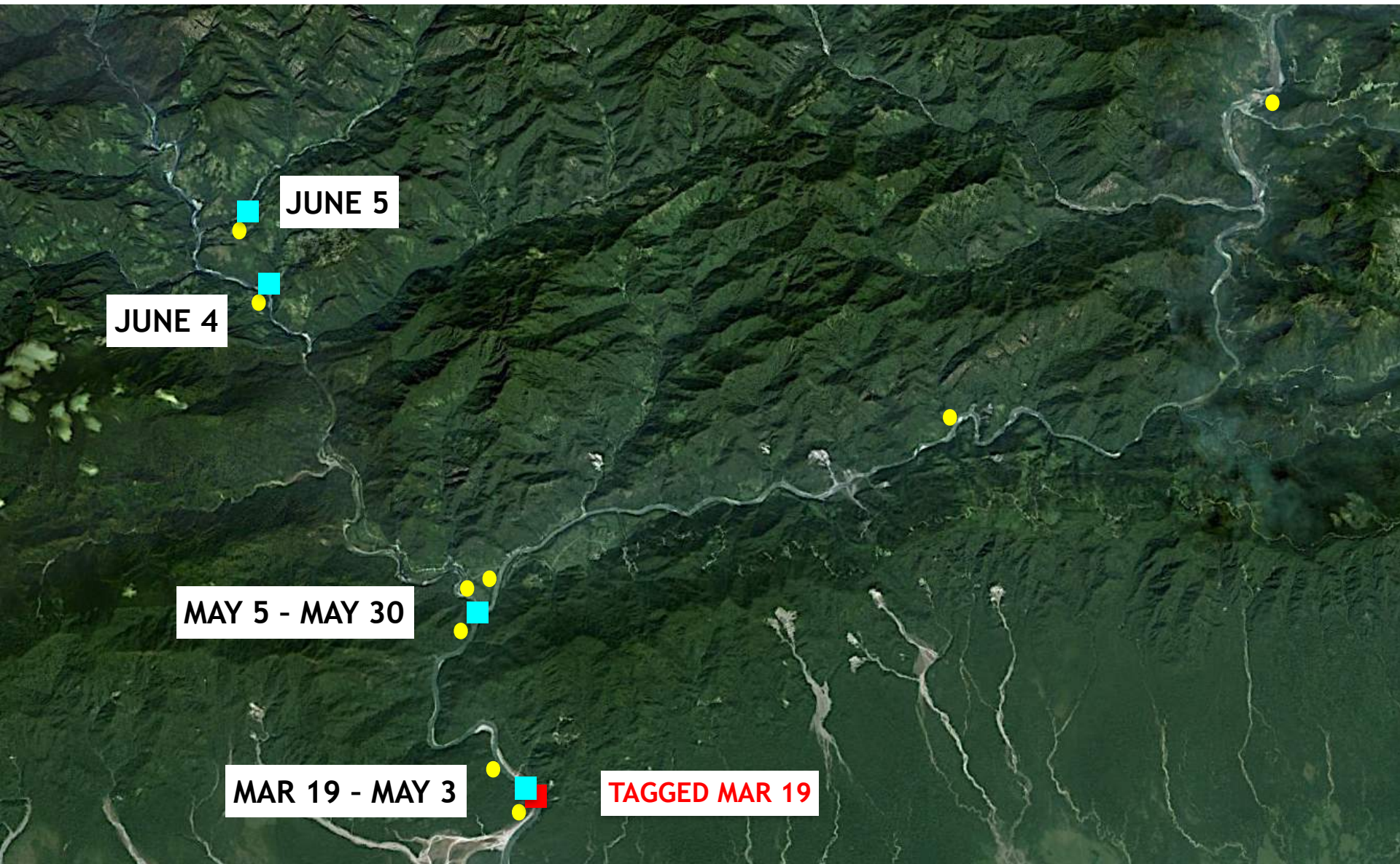


# FISH 720.4



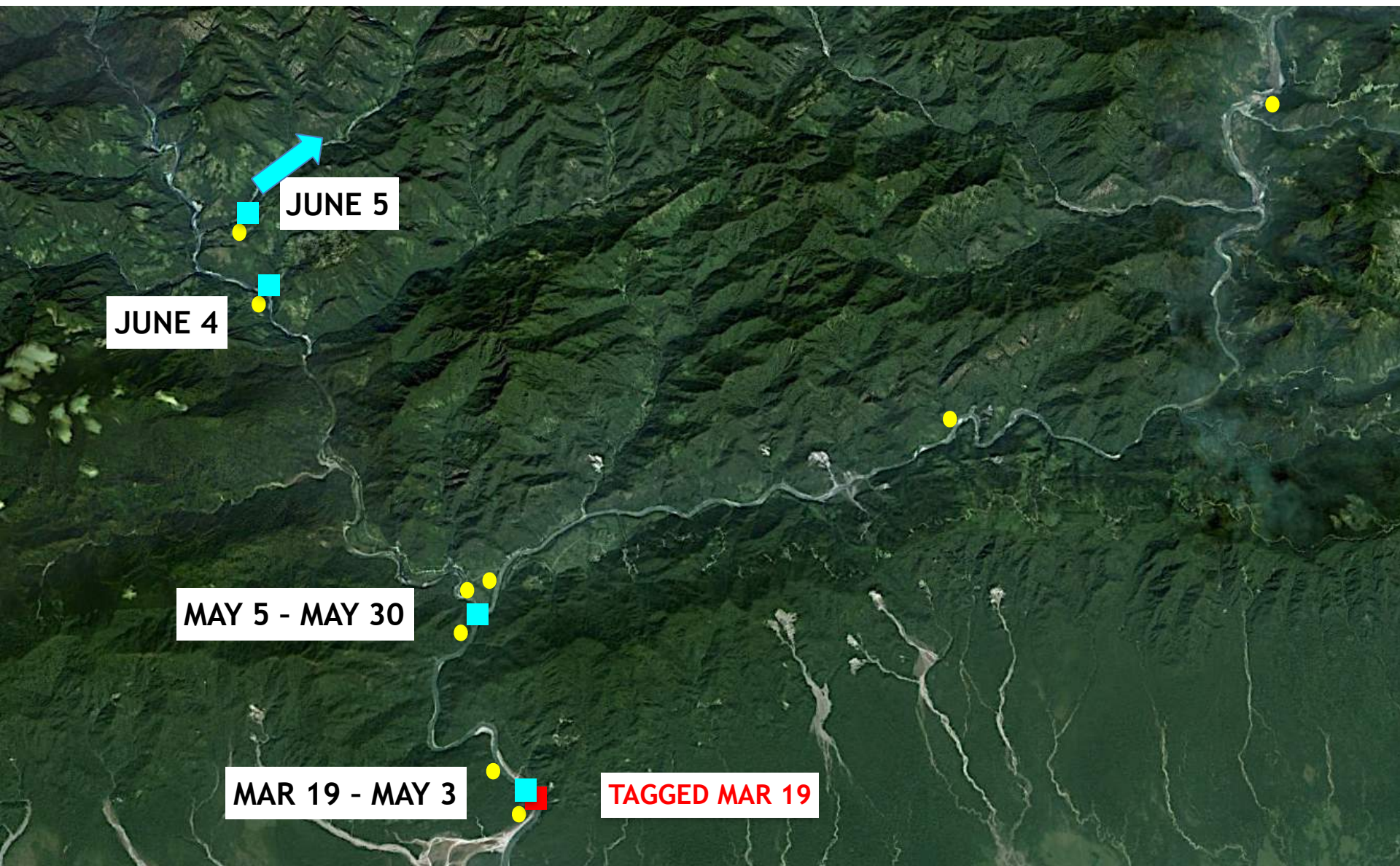


# FISH 720.4



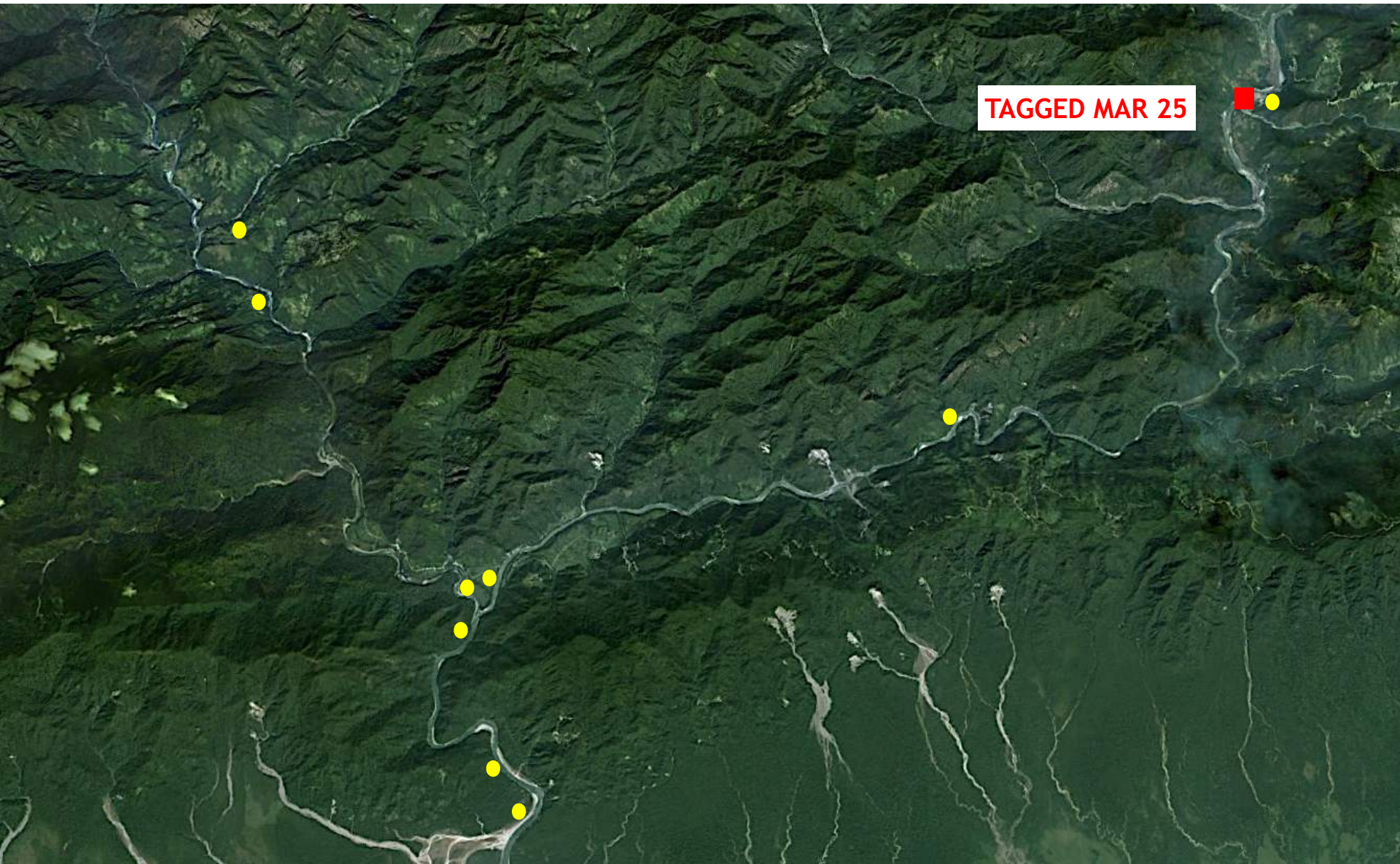


# FISH 720.4



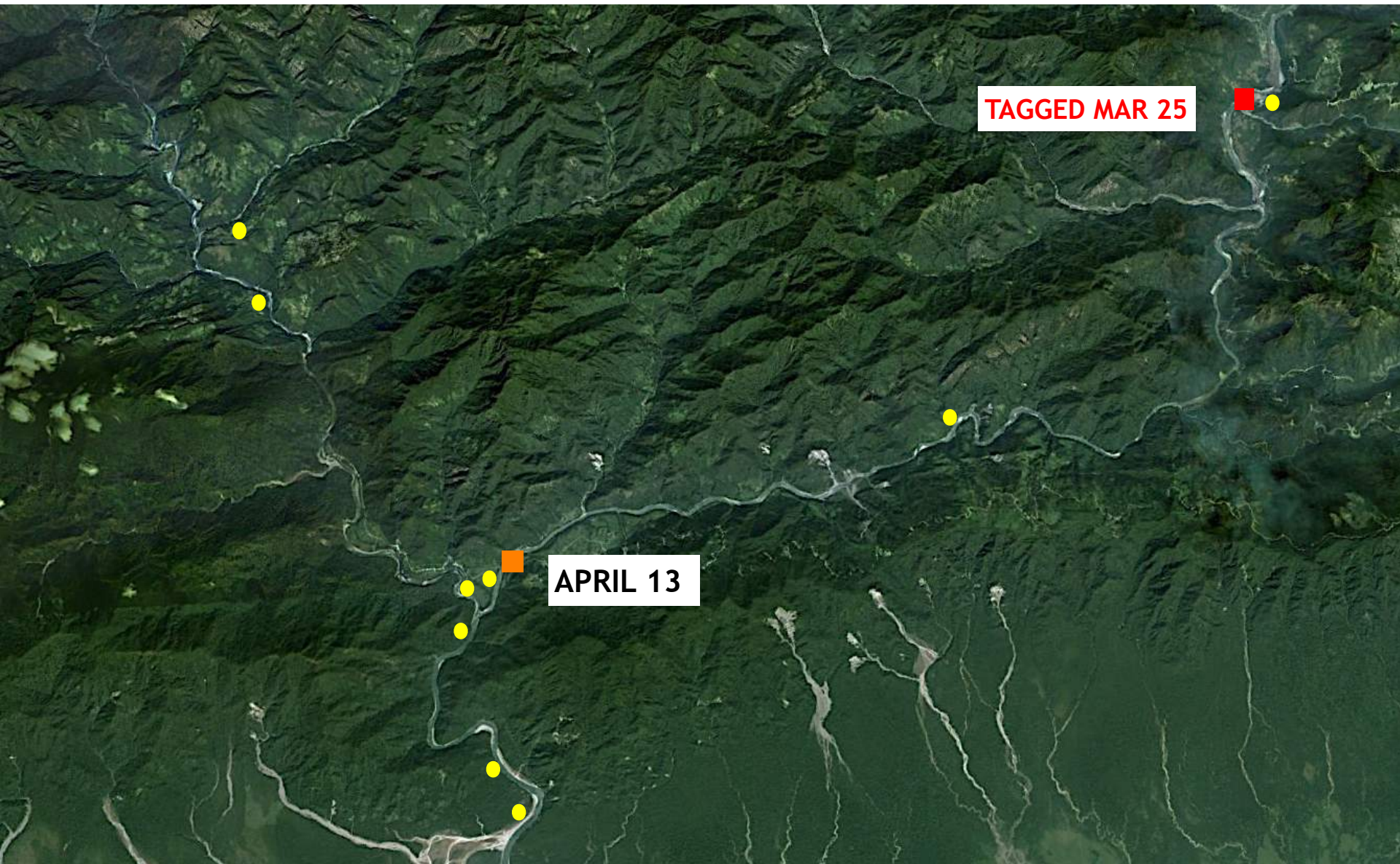


# FISH 760.5



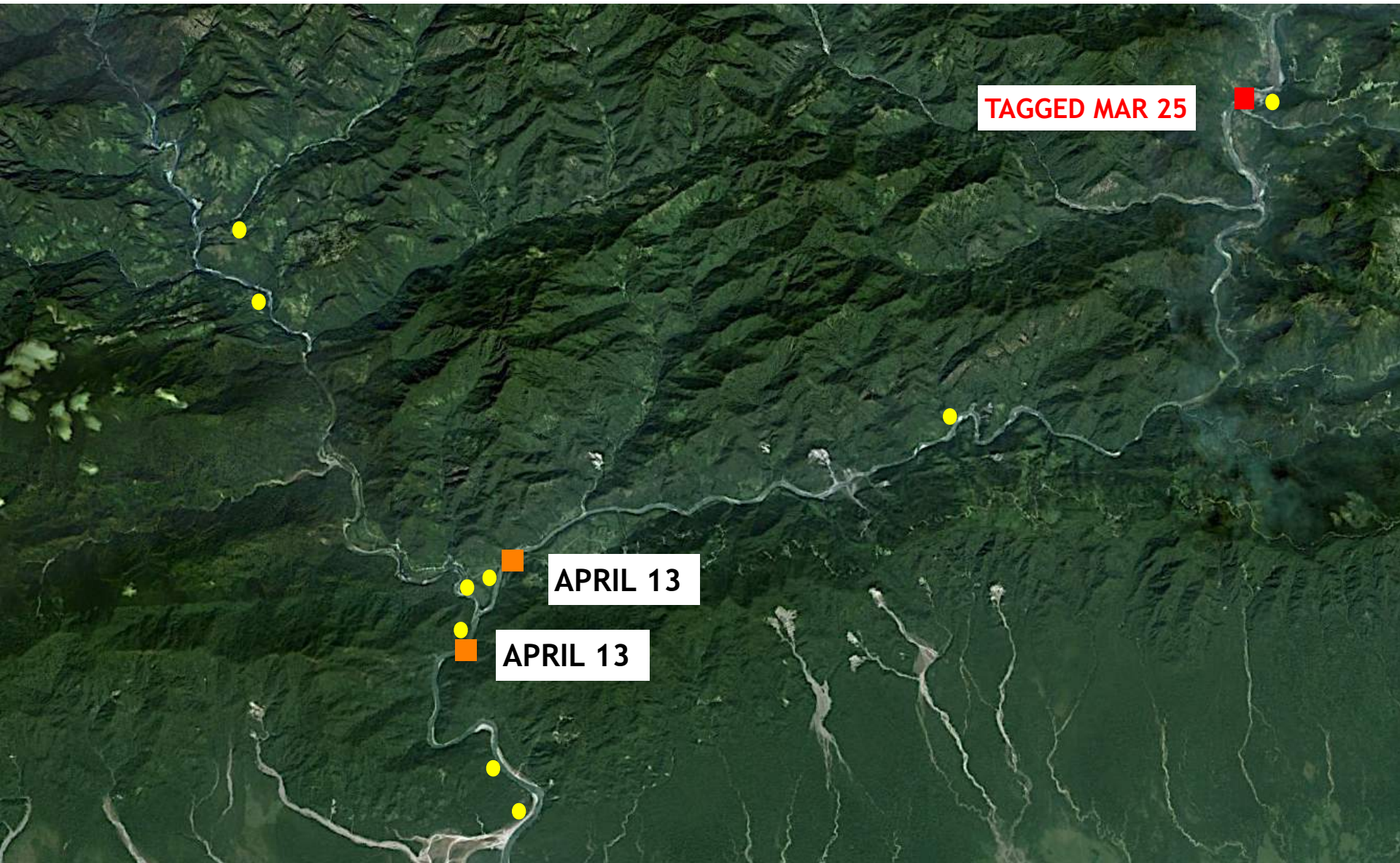


# FISH 760.5



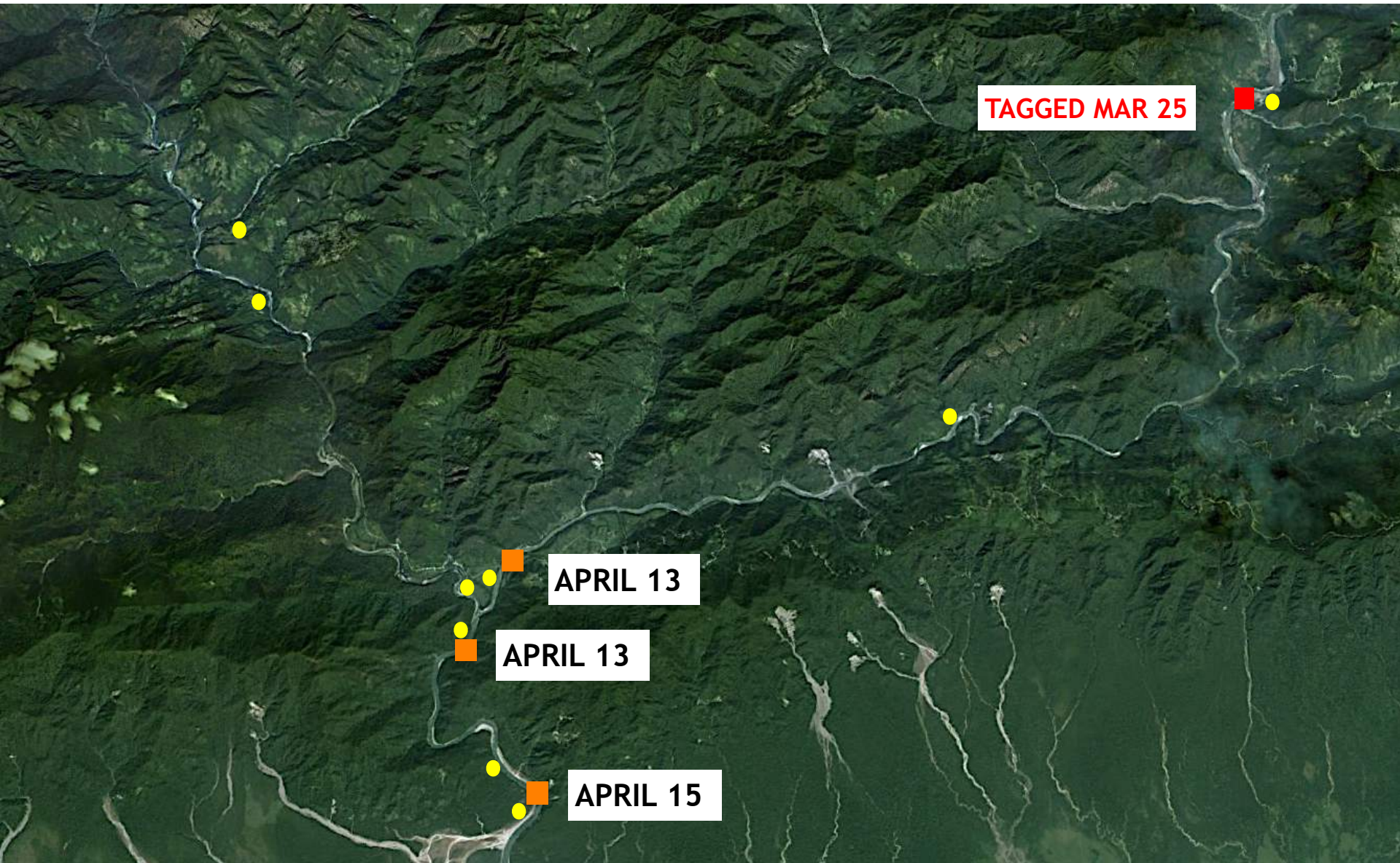


# FISH 760.5



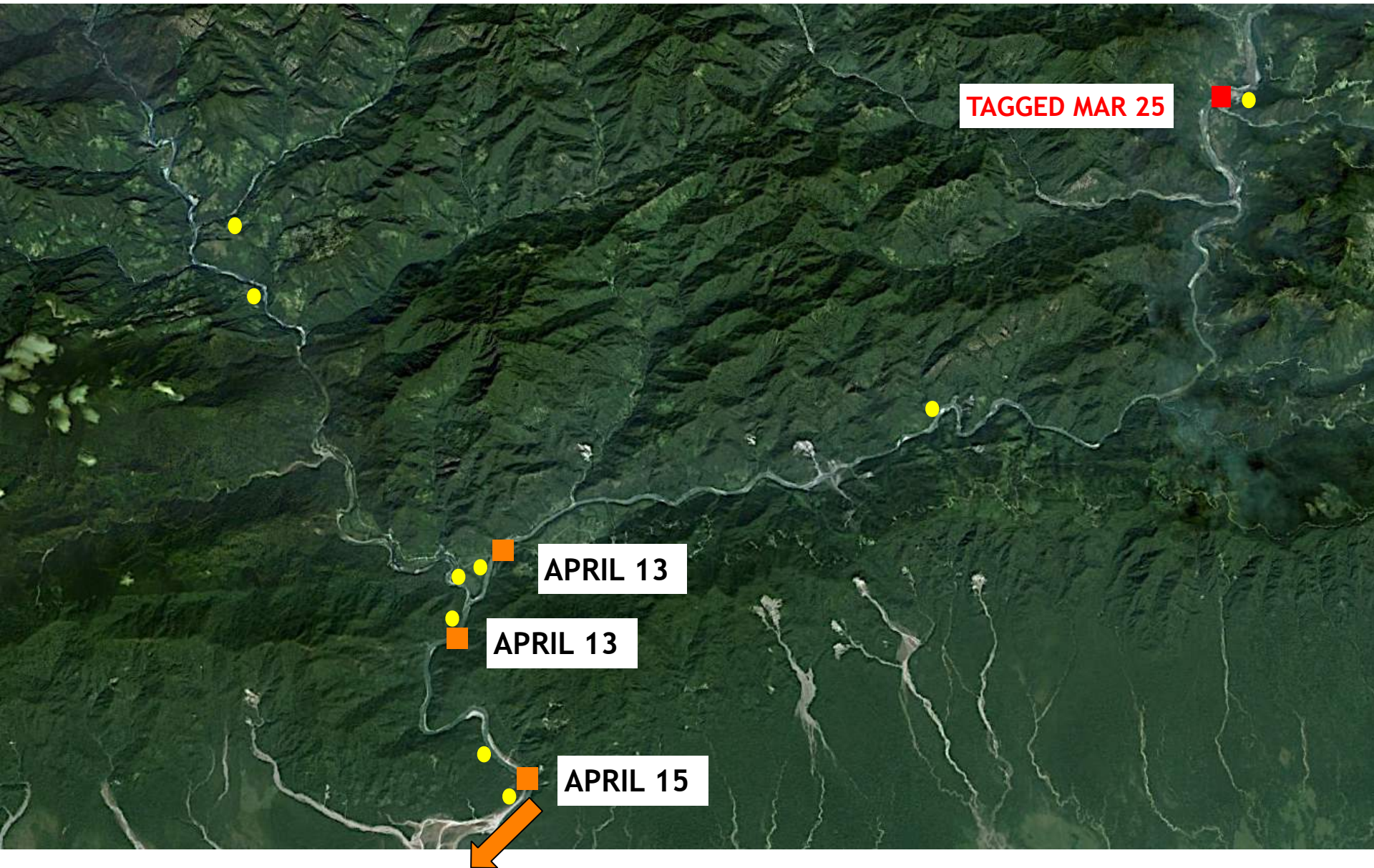


# FISH 760.5





# FISH 760.5





# NOT BORING...





# NEXT STEPS

## RETURNING IN FALL

- > CHECKING ON OUR FISH
- > TAG MORE FISH
- > ADJUST IMPROVE RECEIVER STATIONS / ADD MORE
- > FOCUS ON TRIBUTARY USE





# THANK YOU



[www.fishconserve.org](http://www.fishconserve.org)



fishconserve



