



16 Feb 2022

# TROPICAL CYCLONE BATSIRAI-22, PRELIMINARY SATELLITE-DERIVED ROAD DAMAGE ASSESSMENT,



Route : Ifanadiana – Ikongo District, Vatovavy Fitovinany Region

-  Status: Inundated and damaged roads observed
-  Further action(s): Continue monitoring

# MADAGASCAR



●--● Assessed road

■ District boundary

■ Region boundary

# IFANADIANA TOWN, VATOVAVY FITOVINANY REGION

No major damage to roads

Vatovavy  
Fitovinany  
Region



UNOSAT



Inundated  
agricultural area



Bridge  
not affected



Road  
not affected



30 m

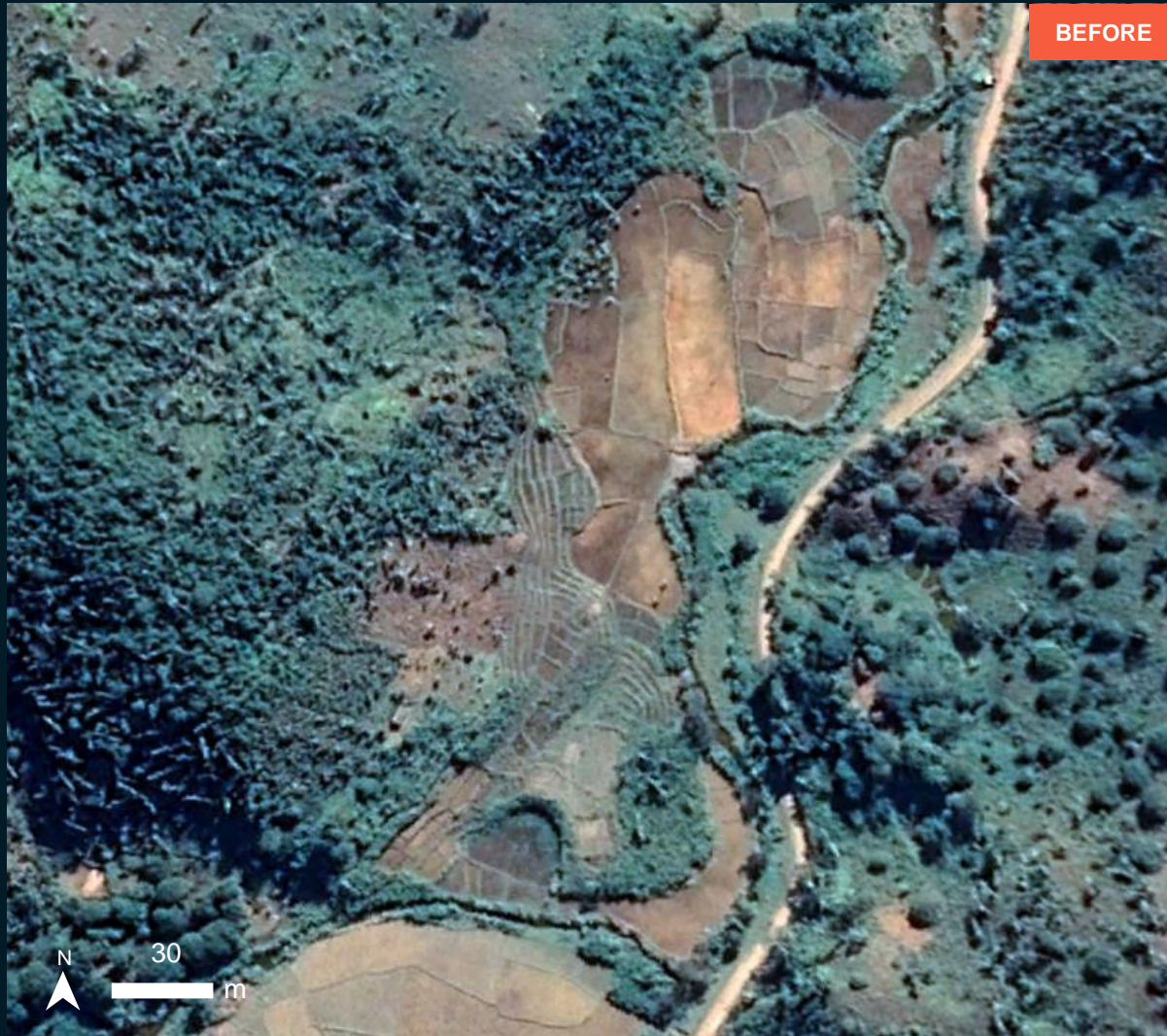
Pleiades image acquired on 16 February 2022  
Image Center : 47°38'16.18"E 21°18'13.289"S

# IFANADIANA DISTRICT, VATOVAVY FITOVINANY REGION

Potentially affected road

Image center:  
47°36'58.795"E  
21°20'5.444"S

Vatovavy  
Fitovinany  
Region



Google Earth/ Aug 2019

Pléiades / 16 Feb. 2022

# IFANADIANA DISTRICT, VATOVAVY FITOVINANY REGION

Potentially affected road and bridge

Image center:  
47°36'52.284"E  
21°20'14.059"S

Vatovavy  
Fitovinany  
Region



Google Earth/ Aug 2019



Pléiades / 16 Feb. 2022

# IKONGO DISTRICT, VATOVAVY FITOVINANY REGION

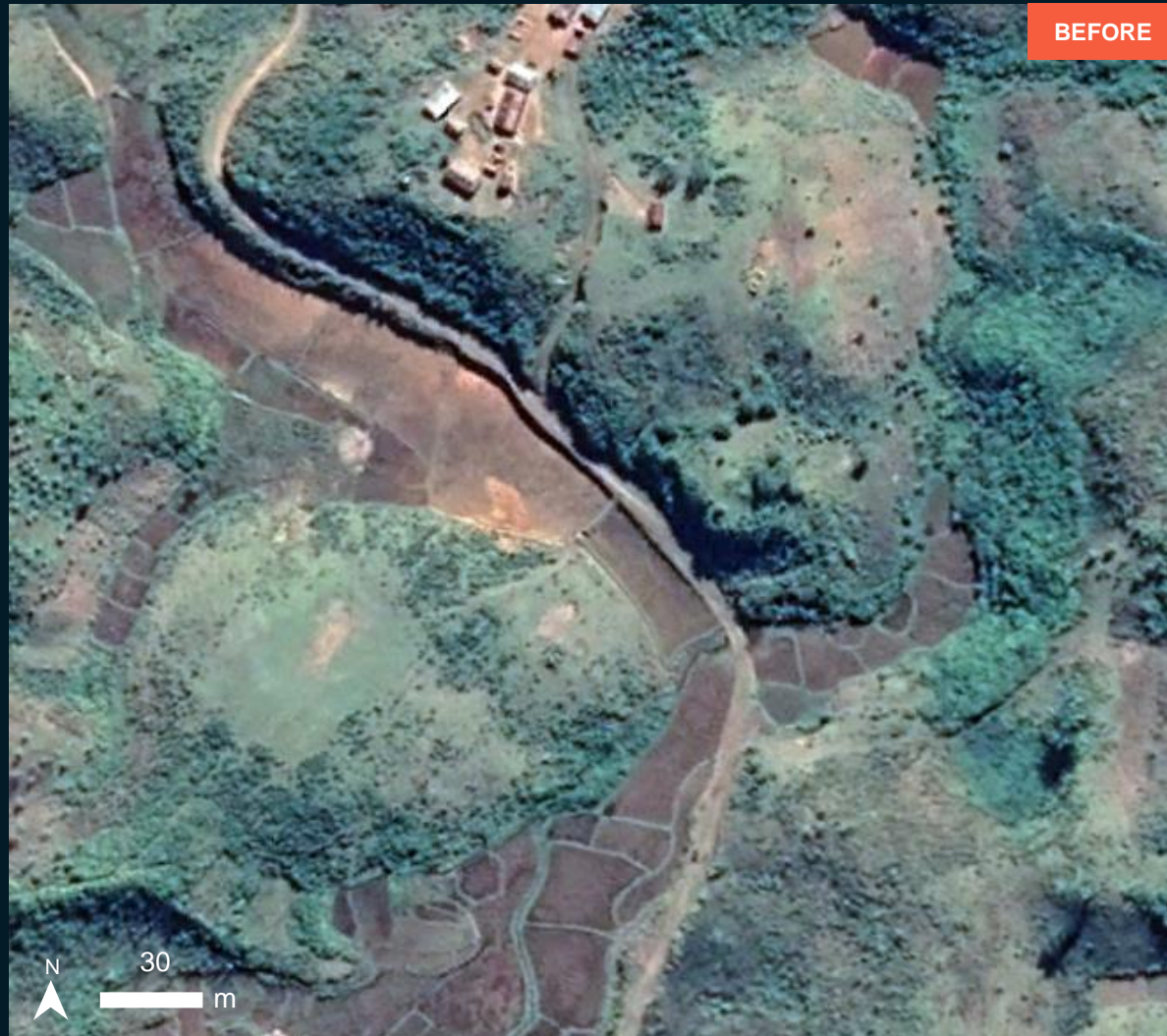
Image center:  
47°26'41.63"E  
21°55'59.258"S

Vatovavy  
Fitovinany  
Region

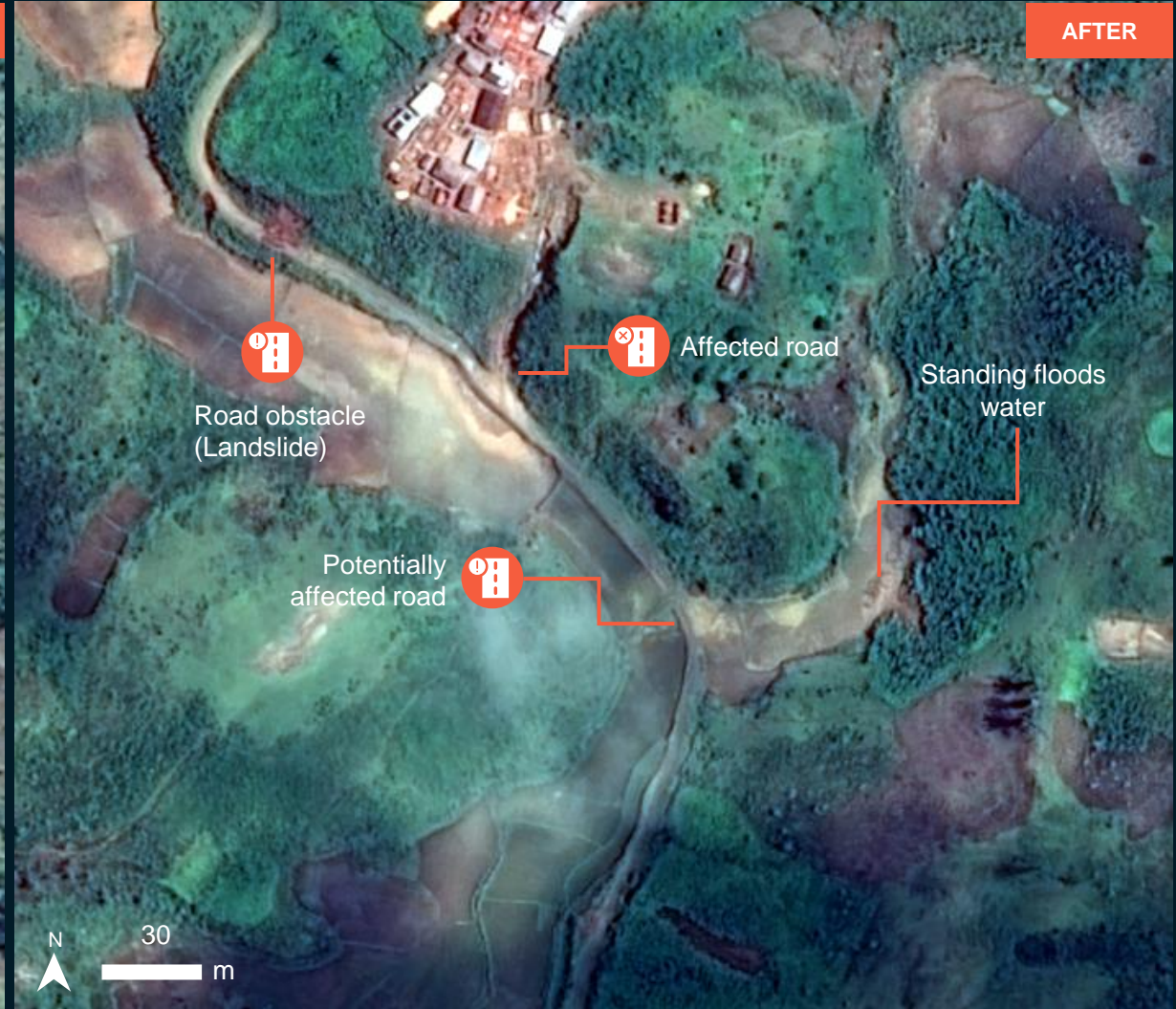


UNOSAT

## Affected road



BEFORE



AFTER

Road obstacle  
(Landslide)

Affected road

Standing floods  
water

Potentially  
affected road

Google Earth/ July 2019

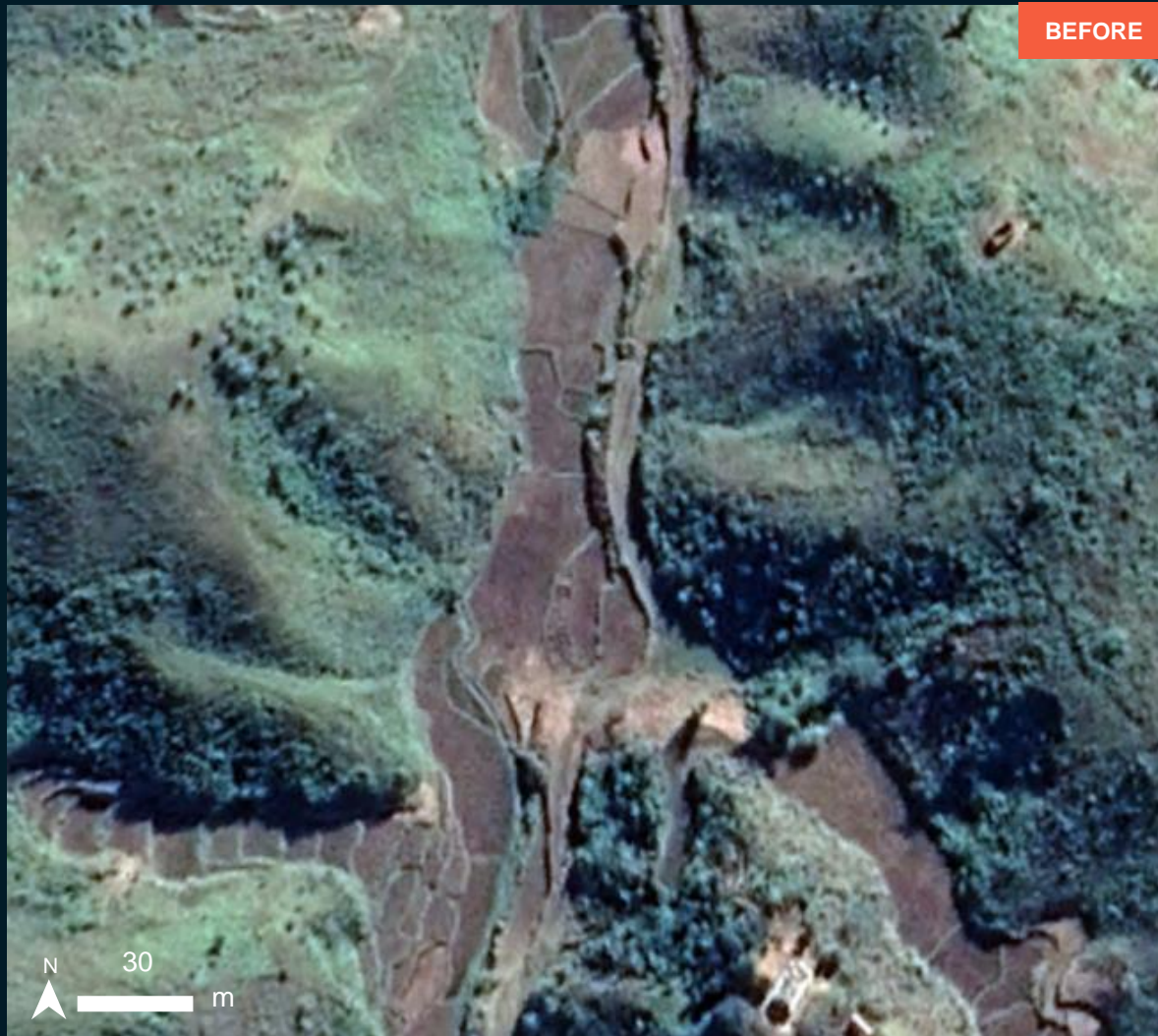
Pléiades / 16 Feb. 2022

# IKONGO DISTRICT, VATOVAVY FITOVINANY REGION

Road affected by landslides

Image center:  
47°26'38.17"E  
21°56'16.34"S

Vatovavy  
Fitovinany  
Region



Google Earth/ 1 July 2019



Pléiades / 16 Feb. 2022

# IKONGO DISTRICT, VATOVAVY FITOVINANY REGION

## Riverbank erosion and landslides

Image center:  
47°27'30.708"E  
21°57'19.746"S

Vatovavy  
Fitovinany  
Region



ESRI basemap/ WorldView-2/ 7 Sep 2020



Pléiades / 16 Feb. 2022



# IKONGO DISTRICT, VATOVAVY FITOVINANY REGION

Road affected by landslides

Image center:  
47°27'15.66"E  
21°59'53.186"S

Vatovavy  
Fitovinany  
Region



ESRI basemap/ WorldView-3/ 10 Aug 2020

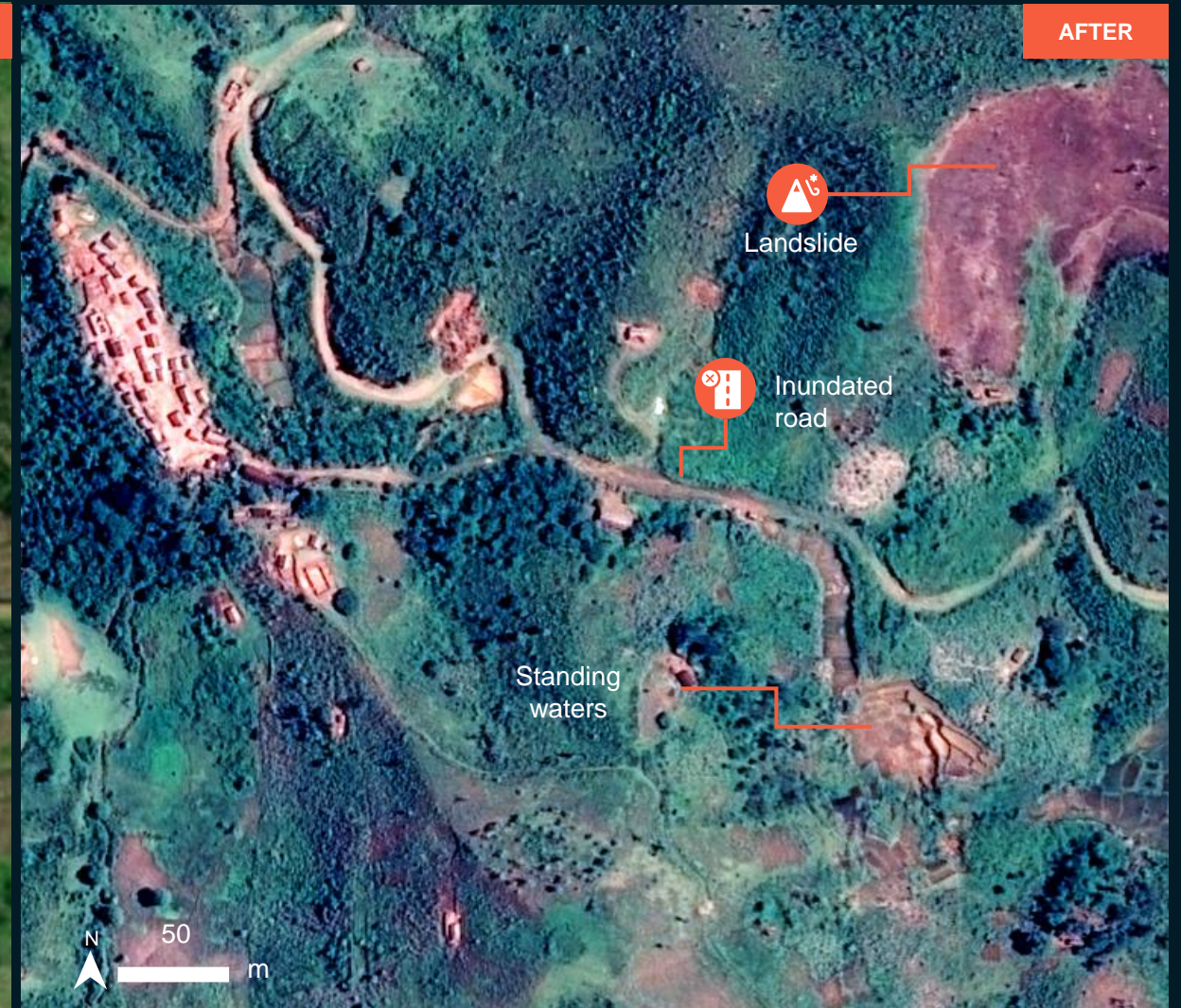
Pléiades / 16 Feb. 2022

# IKONGO DISTRICT, VATOVAVY FITOVINANY REGION

## Inundated road

Image center:  
47°27'19.736"E  
22°0'18.531"S

Vatovavy  
Fitovinany  
Region



ESRI basemap/ WorldView-3/ 10 Aug 2020

Pléiades / 16 Feb. 2022

# IKONGO DISTRICT, VATOVAVY FITOVINANY REGION

Inundated settlement

Image center:  
47°25'32.726"E  
22°0'19.512"S

Vatovavy  
Fitovinany  
Region



ESRI basemap/ WorldView-3/ 10 Aug 2020



Pléiades / 16 Feb. 2022

# SUMMARY OF FINDINGS

---

- No visible damage to the road in Ifanadiana town, Vatovavy Fitovinany Region as of 16 February 2022;
- Potentially damaged road and bridge observed in Ifanadiana district as of 16 February 2022;
- Affected roads by floods and landslides in Ikongo district, Vatovavy Fitovinany Region observed as of 16 February 2022;
- Riverbank erosion and landslides along the Sandrananta river, Ikongo district, Vatovavy Fitovinany Region observed as of 16 February 2022;
- Inundated settlement in the Ikongo district (Vatovavy Fitovinany) was observed as of 16 February 2022.

# COPYRIGHTS AND SOURCES

## Data sources:

### (1) Satellite Image (Post-event)

Satellite : Pleiades

Imagery Date : 16 February 2022

Resolution : 50 cm

Copyright : ©CNES (2022), distribution Airbus D&S

Source : Airbus DS

### (2) Satellite Image (Pre-event)

Google Earth

ESRI based map

### (3) Ancillary data

Administrative boundaries: Madagascar National Disaster Management Office (BNGRC)

Analysis: United Nations Satellite Centre (UNOSAT)

Production: United Nations Satellite Centre (UNOSAT)

 **@UNOSAT**

 **@UNITAR.unosat**



**UNOSAT**, United Nations Institute for Training  
and Research (UNITAR)  
7 bis, Avenue de la Paix, CH-1202 Geneva 2,  
Switzerland

T +41 22 917 4720  
E [unosat@unitar.org](mailto:unosat@unitar.org)  
[www.unosat.org](http://www.unosat.org)