19 Apr. 2022

PRELIMINARY SATELLITE-DERIVED FLOOD AND LANDSLIDE ASSESSMENT

Leyte and Southern Leyte Provinces, Philippines

Status: Extensive damage to structures and road including agricultural area observed

Further action(s): Continue monitoring
PHILIPPINES

AREA OF INTEREST

PROVINCE BOUNDARY

AOI 1
AOI 2
AOI 3
AOI 4
FLOODS OVER PHILIPPINES

Legend
- Region boundary
- Province boundary
- River
- Cloud mask
- Area of interest
- Minimum floodwater extent
- Maximum floodwater extent

5-day VIIRS composite
[13 to 17 Apr. 2022]
AOI1-1 NEAR BUNGA VILLAGE, CITY OF BAYBAY, LEYTE PROVINCE, REGION VIII

Extensive damage to Bunga village and road

Pleiades image acquired on 14 Apr. 2022
Image Center: 124°46'53.874"E 10°47'3.645"N

See inset for close view
AOI1-1 BUNGA VILLAGE, CITY OF BAYBAY, LEYTE PROVINCE, REGION VIII

Washed away structures caused by the landslide

WorldView-2/ 24 May. 2020

Pleiades / 14 Apr. 2022
AOI1-2 CITY OF BAYBAY, LEYTE PROVINCE, REGION VIII

Riverbanks erosion along the rivers

Before: WorldView-2 / 24 May. 2020

After: Pleiades / 14 Apr. 2022

Image center: 124°46'22.657"E
10°47'52.705"N

Road with no visible damage
Bridge with no visible damage

Hilapnitan
Hilapnitan

Riverbanks erosion
Riverbanks erosion
AOI1-3 CITY OF BAYBAY, LEYTE PROVINCE, REGION VIII

Riverbanks erosion and potentially affected structures along the rivers

**BEFORE**

- Washed away area
- Road with no visible damage
- Affected area
- Potentially affected structures

**AFTER**

- Potentially affected structures
- Bridge with no visible damage

WorldView-2/24 May. 2020  
Pleiades/14 Apr. 2022
Riverbanks erosion and potentially affected structures along the rivers

**Before**

WorldView-2/ 24 May. 2020

**After**

Pleiades / 14 Apr. 2022
AOI2-1 SANTA FE VILLAGE, ABUYOG MUNICIPALITY, LEYTE PROVINCE, REGION VIII

Inundated school and inundated structures

WorldView-2/ 29 Jul. 2021

Pleiades / 17 Apr. 2022
AO12-2 TINALI-AN VILLAGE, ABUYOG MUNICIPALITY, LEYTE PROVINCE, REGION VIII

Flood waters in agricultural area and Potentially affected structures

WorldView-2/ 29 Jul. 2021

Pleiades / 17 Apr. 2022

Image center:
125°0'3.255"E
10°42'34.661"N
AOI2-3 MAYA AND PONGO VILLAGES, MACARTHUR MUNICIPALITY,LEYTE PROVINCE, REGION VIII

Flood waters in agricultural areas and Inundated structures

WorldView-2 / 29 Jul. 2021

Pleiades / 17 Apr. 2022
AOI2-4 MAYA AND PONGON VILLAGES, JAVIER MUNICIPALITY, LEYTE PROVINCE, REGION VIII

Flood waters in agricultural area

WorldView-2 / 29 Jul. 2021

Pleiades / 17 Apr. 2022
Extensive damage to Kantagnos village, road and affected agricultural area.
AOI3-1 KANTAGNOS VILLAGE, CITY OF BAYBAY, LEYTE PROVINCE, REGION VIII

Washed away settlement by landslide
AOI3-2 PAMOTOSAN VILLAGE, CITY OF BAYBAY, LEYTE PROVINCE, REGION VIII

Damaged road

Before: 17 Apr. 2022

Image center:
124°51'34.582"E
10°38'48.441"N

After: 20 Apr. 2019

ESRI Basemap/ WorldView-2/ 20 Apr. 2019

Pleides / 17 Apr. 2022
AOI3-3 CITY OF BAYBAY, LEYTE PROVINCE, REGION VIII

Potentially damaged structures

BEFORE

AFTER

ESRI Basemap / WorldView-2 / 20 Apr. 2019

Pleiades / 17 Apr. 2022
AOI3-4 CITY OF BAYBAY, LEYTE PROVINCE, REGION VIII

No visible damaged

Image center:
124°48'0.057"E
10°40'43.194"N

ESRI Basemap/ WorldView-2/ 20 Apr. 2019

Pleiades / 17 Apr. 2022
AOI4-1 MAHAPLAG MUNICIPALITY, LEYTE PROVINCE, REGION VIII

Potentially damaged structures

Before

Pleiades / 16 Apr. 2022

Image center:
124°58'0.26"E
10°31'31.239"N

After

ESRI Basemap/ WorldView-2/ 11 Jul. 2014

LAWIS

Affected area

LAWIS

Potentially damaged structures

Bridge with no visible damage

Pleiades / 16 Apr. 2022
AOI4-2 SOGOD MUNICIPALITY, SOUTHERNLEYE PROVINCE, REGION VIII

Damaged road and riverbanks erosion
SUMMARY OF FINDINGS

City of Baybay, Leyte Province
- No major floods observed in Baybay city, City of Baybay, Leyte Province, Region VIII observed as of 17 Apr. 2022;
- Landslides in Banga and Kantagnos villages, City of Baybay, Leyte Province, Region VIII as of 14 and 17 Apr. 2022;
- 20 structures near Banga village are heavily damaged and/or destroyed as of 14 Apr. 2022;
- 83 structures in Kantagnos village are heavily damaged and/or destroyed as of 17 Apr. 2022;
- Riverbanks erosion and potentially affected structures along the rivers in City of Baybay, Leyte Province, Region VIII observed as of 14 Apr. 2022;
- Damaged road in Pamotosan Village, City Of Baybay, Leyte Province, Region VIII observed as of 17 Apr. 2022;
- Potentially damaged structures observed in City of Baybay, Leyte Province, Region VIII as of 17 Apr. 2022

Javier, Macarthur, Abuyog Municipalities, Leyte Province
- Inundated Sta. Fe Elementary School and inundated structures in Abuyog Municipalities, Leyte Province, Region VIII observed as of 17 Apr. 2022;
- Affected agricultural land in Javier, Macarthur, Abuyog Municipalities, Leyte Province, Region VIII observed as of 17 Apr. 2022;
- Affected road and affected structures by floods in Macarthur and Abuyog Municipalities, Leyte Province, Region VIII observed as of 17 Apr. 2022;

Mahaplag Municipality, Leyte Province
- Potentially damaged structures along the river In Mahaplag Municipality, Leyte Province, Region VIII observed as of 16 Apr. 2022;

Sogod Municipality, Southern Leyte Province
- Damaged road and Riverbanks erosion along the Subangdaku River In Sogod Municipality, Southern Leyte Province, Region VIII observed as of 16 Apr. 2022
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Data sources:

(1) Satellite Image (Post-event)
Satellite: Pleiades
Imagery Date: 14, 16, and 17 April 2022
Resolution: 50 cm
Copyright: © CNES (2022), Distribution Airbus DS
Source: Airbus DS

(2) Satellite Image (Pre-event)
Satellite: WorldView-2
Imagery Date: 24 May 2020
Resolution: 50 cm
Copyright: © DigitalGlobe, Inc. (2020)
Source: USGS
Satellite: WorldView-2
Imagery Date: 29 Jul. 2021
Resolution: 50 cm
Copyright: © DigitalGlobe, Inc. (2021)
Source: USGS

(3) Ancillary data
Administrative boundaries: National Mapping and Resource Information Authority (NAMRIA), Philippines Statistics Authority (PSA)
Populate place: OSM
River data: OSM
Analysis: United Nations Satellite Centre (UNOSAT)
Production: United Nations Satellite Centre (UNOSAT)