Limon, Cartago, Heredia and Alajuela Provinces, Costa Rica

30 July 2021

PRELIMINARY SATELLITE-DERIVED FLOOD ASSESSMENT

Limon, Cartago, Heredia and Alajuela Provinces, Costa Rica

Status: Several areas impacted by flooding including agricultural areas and road infrastructure. Increased water levels also observed along rivers.

Further action(s): continue monitoring
FLOODS OVER COSTA RICA

Legend
- Province boundary
- International boundary
- Area of interest
- Cloud mask
- Reference water
- Satellite detected water as of 29 July 2021 [Joint ABI/VIIRS]

Background: ESRI Basemap

Satellite detected water as of 29 July 2021

AOI 1, Talamanca
AOI 2, Limon City
AOI 3, Matina Canton
AOI 4, Turrialba
AOI 5, Sarapiqui
AOI 6, Los Chiles
AOI 1: Talamanca District, Limon Province

Flood tracks along the Sixaola river observed

Sentinel-2 / 19 June 2021

Sentinel-2 / 29 July 2021
AOI 2: Limon City, Limon District, Limon Province

Flooding and potentially affected structures observed

Sentinel-2 / 19 June 2021

Sentinel-2 / 29 July 2021

Increased water along the irrigation canal

Potentially affected structures

Evidence of drainage
AOI 3: Matina Canton, Limon District, Limon Province

Increased water levels and potentially inundated road and cropland observed.
AOI 4: Turrialba, Turrialba District, Cartago Province

Potential soil erosion and increased water including inundated structures observed

Sentinel-2 / 19 June 2021

Sentinel-2 / 29 July 2021
AOI 5: Sarapiqui District, Heredia Province

Increased water levels along the Sarapiqui river observed

Sentinel-2 / 19 June 2021

Sentinel-2 / 29 July 2021
AOI 6: Los Chiles town, Los Chiles District, Alajuela Province

Flooods along the Frio river close to the town and inundated agricultural areas observed

Sentinel-2 / 13 January 2021

Sentinel-2 / 29 July 2021
SUMMARY OF FINDINGS

• Flood tracks along the Sixaola river observed (AOI1) Talamanca District, Limon Province as of 29 July 2021;

• Floods and potentially affected structures observed (AOI2) Limon City, Limon District, Limon Province as of 29 July 2021;

• Increased water levels and potentially inundated road and cropland observed (AOI3) Matina Canton, Limon District, Limon Province as of 29 July 2021;

• Potential soil erosion and increased water including inundated structures observed (AOI4) Turrialba, Turrialba District, Cartago Province as of 29 July 2021;

• Increased water levels along the Sarapiqui river observed (AOI5) Sarapiqui District, Heredia Province as of 29 July 2021;

• Floods along the Frio river close to the town and inundated agricultural areas observed (AOI6) Los Chiles town, Los Chiles District, Alajuela Province as of 29 July 2021;
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Data sources:

(1) Satellite Image (Post-event)
Sentinel-2 / 29 July 2021 at 16:05 UTC
Copyright: Contains modified Copernicus Sentinel Data [2021]
Source: ESA

GOES-16/ABI, Suomi-NPP and NOAA-20/VIIRS / 29 July 2021
Copyright: NOAA/Suomi NPP
Source: NOAA and GEOS Rebroadcast (GRB)

(2) Satellite Image (Pre-event)
Sentinel-2 / 13 January 2021 at 16:06 UTC, 19 June 2021 at UTC,
And 24 June 2021 at 16:05 UTC
Copyright: Contains modified Copernicus Sentinel Data [2021]
Source: ESA

(3) Ancillary data
Administrative boundaries: OCHA, HDX
Populated places: OpenStreetMap
Analysis: UNITAR-UNOSAT
Production: UNITAR-UNOSAT
UNOSAT, United Nations Institute for Training and Research (UNITAR)
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