

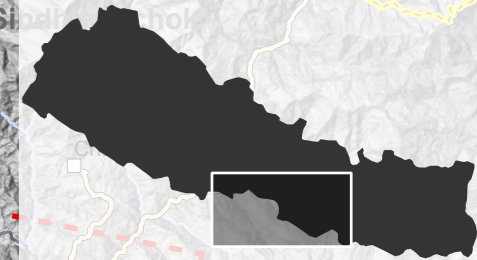
# NEPAL

## PROVINCE 2, LUMBINI, GANDAKI, AND BAGMATI PROVINCES

IMAGERY ANALYSIS: 03/07/2021 PUBLISHED 05/07/2021 V1.

ANALYZED AREA: 17,000km<sup>2</sup>  
 OBSERVED FLOODS: 830km<sup>2</sup>  
 POPULATION POTENTIALLY EXPOSED: 1,070,000

Province	District	Analyzed area (km <sup>2</sup> )	Flood Extent as of 2 July 2021 (km <sup>2</sup> )	Population in AOI	Population Potentially Exposed to Floods	Population Potentially Exposed (%)
Bagmati	Chitawan	2,242	81	697,390	40,120	6%
	Makawanpur	2,444	8	445,420	3,500	1%
	Sindhuli	680	3	77,960	610	1%
<b>Sub-total</b>		<b>5,366</b>	<b>92</b>	<b>1,220,770</b>	<b>44,230</b>	<b>4%</b>
Gandaki	Nawalparasi East	1,428	32	349,230	9,940	3%
	Syangja	606	2	149,610	680	<1%
	Tanahu	886	3	127,760	770	1%
<b>Sub-total</b>		<b>2,920</b>	<b>37</b>	<b>626,600</b>	<b>11,390</b>	<b>2%</b>
Lumbini	Nawalparasi West	728	96	386,840	64,060	17%
	Palpa	1,438	3	252,030	830	<1%
	Rupandehi	1,215	114	1,011,080	148,800	15%
<b>Sub-total</b>		<b>3,381</b>	<b>213</b>	<b>1,649,950</b>	<b>213,690</b>	<b>13%</b>
Province 2	Bara	1,273	140	831,460	148,190	18%
	Parsa	1,407	101	1,987,550	385,910	19%
	Rautahat	1,038	192	844,980	221,500	26%
	Sarlahi	1,155	52	879,850	48,010	5%
<b>Sub-total</b>		<b>4,873</b>	<b>485</b>	<b>4,543,840</b>	<b>803,610</b>	<b>18%</b>
<b>Total</b>		<b>16,539</b>	<b>827</b>	<b>8,041,160</b>	<b>1,072,920</b>	<b>13%</b>



**Satellite detected water extent over Province 2, Lumbini, Gandaki, and Bagmati provinces, Nepal as of 3 of July 2021.**

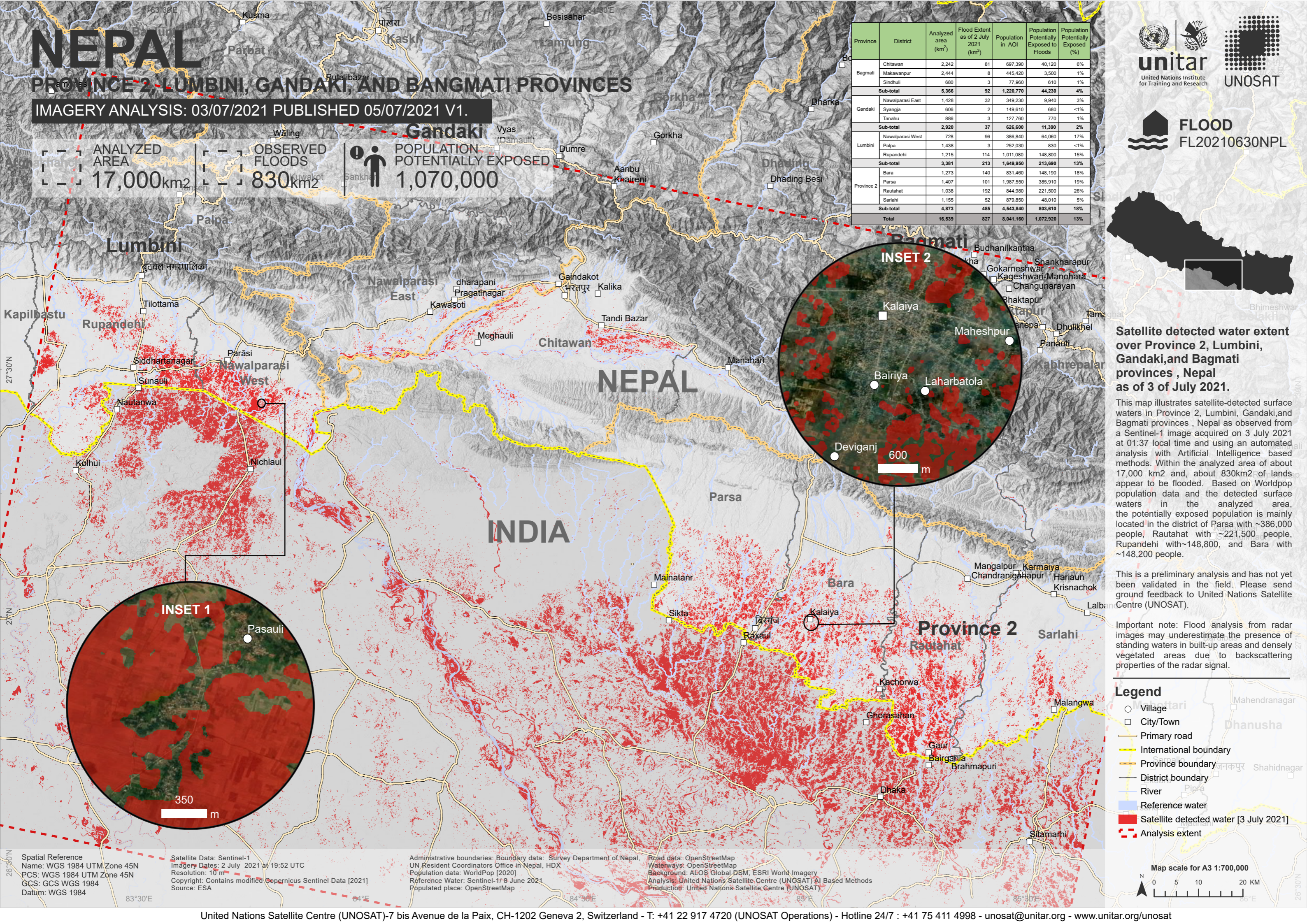
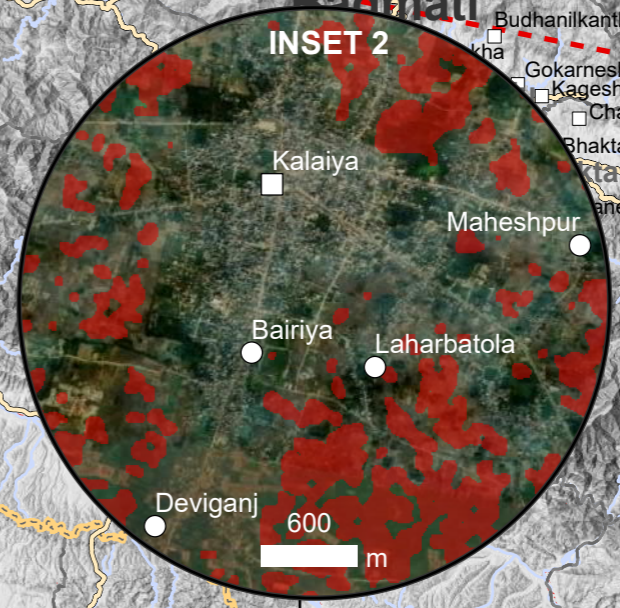
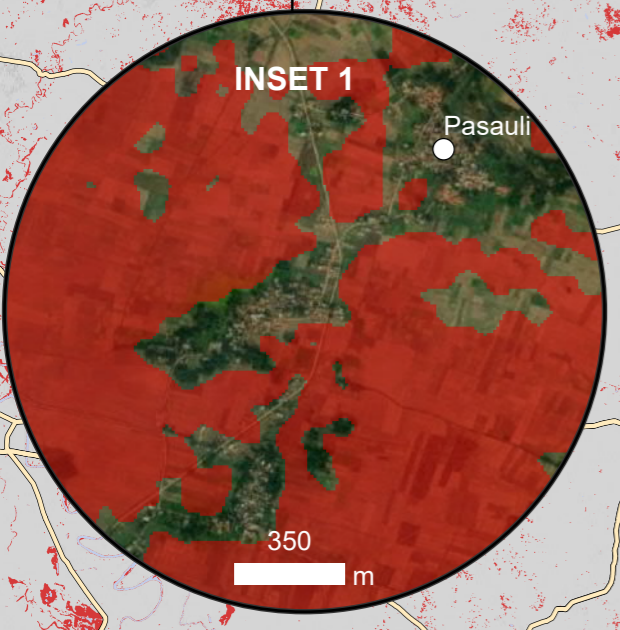
This map illustrates satellite-detected surface waters in Province 2, Lumbini, Gandaki, and Bagmati provinces, Nepal as observed from a Sentinel-1 image acquired on 3 July 2021 at 01:37 local time and using an automated analysis with Artificial Intelligence based methods. Within the analyzed area of about 17,000 km<sup>2</sup> and, about 830km<sup>2</sup> of lands appear to be flooded. Based on Worldpop population data and the detected surface waters in the analyzed area, the potentially exposed population is mainly located in the district of Parsa with ~386,000 people, Rautahat with ~221,500 people, Rupandehi with ~148,800, and Bara with ~148,200 people.

This is a preliminary analysis and has not yet been validated in the field. Please send ground feedback to United Nations Satellite Centre (UNOSAT).

Important note: Flood analysis from radar images may underestimate the presence of standing waters in built-up areas and densely vegetated areas due to backscattering properties of the radar signal.

**Legend**

- Village
- City/Town
- Primary road
- International boundary
- Province boundary
- District boundary
- River
- Reference water
- Satellite detected water [3 July 2021]
- Analysis extent



Spatial Reference  
 Name: WGS 1984 UTM Zone 45N  
 PCS: WGS 1984 UTM Zone 45N  
 GCS: GCS WGS 1984  
 Datum: WGS 1984

Satellite Data: Sentinel-1  
 Imagery Dates: 2 July 2021 at 19:52 UTC  
 Resolution: 10 m  
 Copyright: Contains modified Copernicus Sentinel Data [2021]  
 Source: ESA

Administrative boundaries: Boundary data: Survey Department of Nepal, UN Resident Coordinators Office in Nepal, HDX  
 Population data: WorldPop [2020]  
 Reference Water: Sentinel-1/8 June 2021  
 Populated place: OpenStreetMap

Road data: OpenStreetMap  
 Waterways: OpenStreetMap  
 Background: ALOS Global DSM, ESRI World Imagery  
 Analysis: United Nations Satellite Centre (UNOSAT) AI Based Methods  
 Production: United Nations Satellite Centre (UNOSAT)