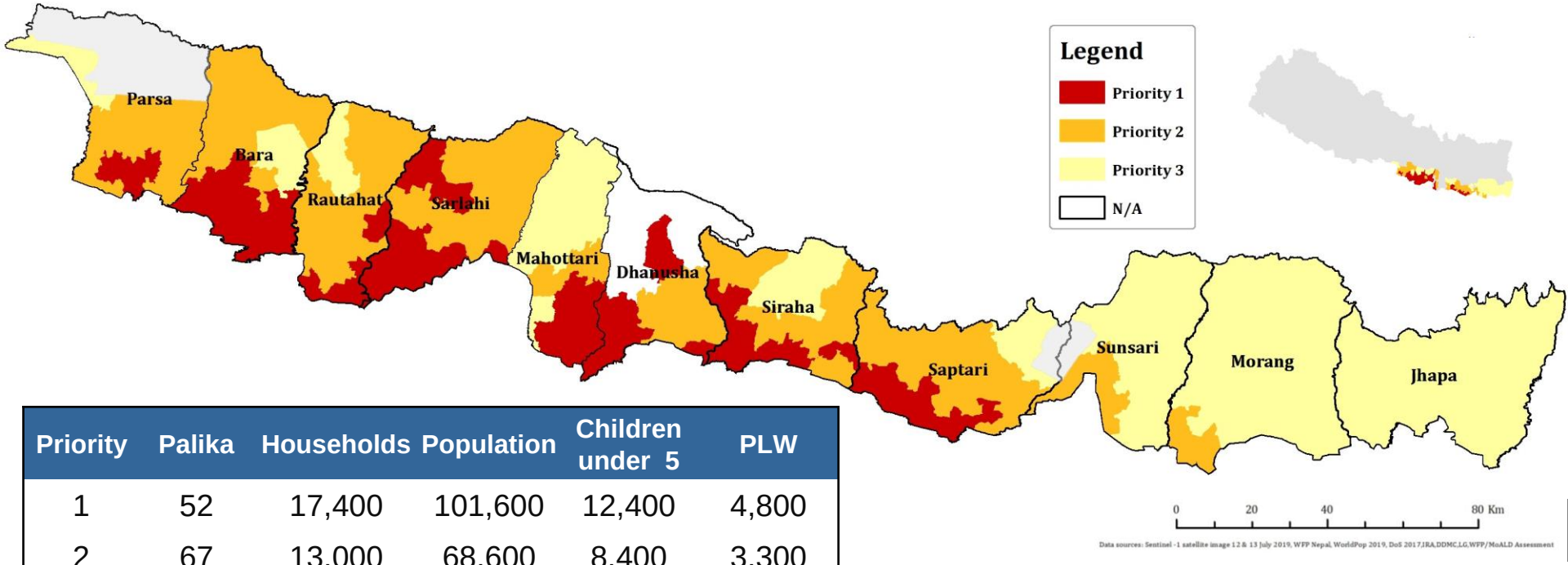
NEPAL

Flood | July 2019

72-hour assessment
Contents may change based on updated information

VERSION_1
23 July 2019

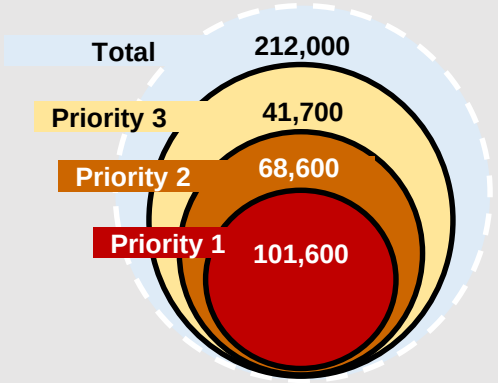


Priority	Palika	Households	Population	Children under 5	PLW
1	52	17,400	101,600	12,400	4,800
2	67	13,000	68,600	8,400	3,300
3	47	8,900	41,700	5,100	1,900
Total	**166**	**39,300**	**212,000**	**25,800**	**10,000**

Heavy rainfall on 11-12 July caused landslides and flooding in 32 Districts across Nepal. Flooding was most severe in 11 Terai districts of Provinces 1 and 2. A large loss of life and damages to assets, housing, water and sanitation infrastructure, food stocks, crop and livestock all have a significant impact on food security in the region.

An estimated 212,000 people's food security is significantly affected as a result of the flooding, of which 101,600 people, or 17,400 households, are deemed to be the most in need of assistance.

Priority Populations for Food Assistance



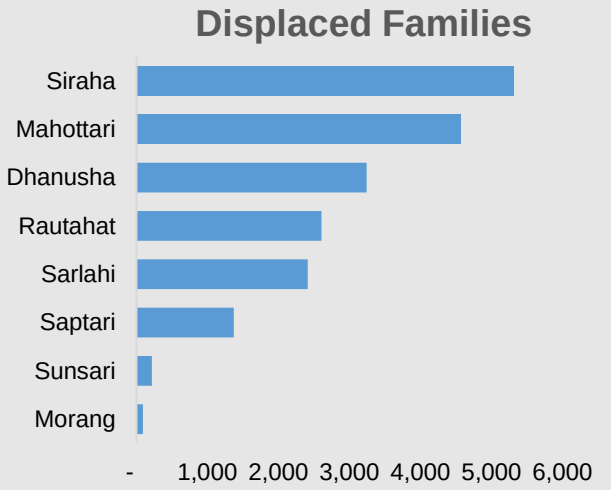
Overview

Shelter and Displacement

Immediately after the flood, many of the affected households initially took shelter on higher ground in schools, tents, community and public buildings, carrying few belongings with them. They are supported by local governments, security personnel, the Nepal Red Cross Society and local agencies. A total of 20,000 families have been displaced.

Displaced families are returning home in areas where flooding has receded. Households whose homes were destroyed or have become unliveable or those whose homes are still under water remain in temporary shelters.

Many families are still estimated to be displaced, are staying in temporary shelters, including about 5,326 (Siraha), 4,571 (Mahottari), 3,240 (Dhanusha), 2,600 (Rautahat), 2,413 (Sarlahi), 1,371 (Saptari), 218 (Sunsari), 92 (Morang).

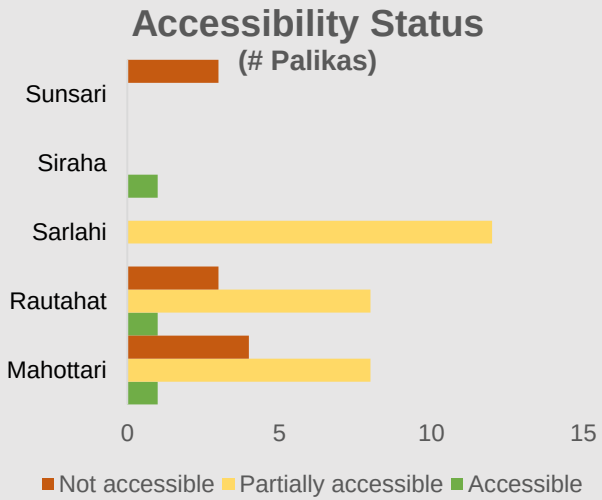


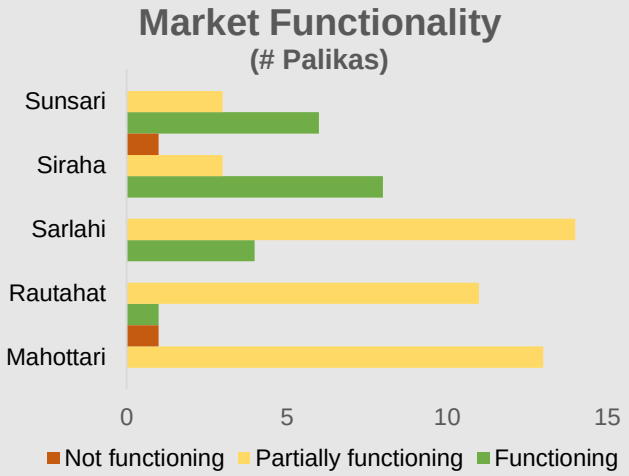
Source: DDRC, NRCS, NeKSAP

Accessibility and Markets

Road access remains problematic especially in Mahottari, Rautahat and Sarlahi Districts, with some 38 municipalities not accessible or only partially accessible.

In Mahottari a major bridge on the East-West highway was destroyed. Despite a diversion being constructed, the smooth flow of traffic is obstructed.





Several markets remain inundated to various degrees. Recent field indicate that 2 markets (Siraha and Mahottari) are not functioning. Partially functioning markets in these areas (44) may have partial shop closure, obstructions in the flow of goods, and limits to the quantity and type of available goods.
Field reports show vegetable prices increases of 100%

Nutrition and WASH

In the identified priority 1 Palikas the number of children and pregnant and lactating women (PLW) are as follows:

Children < 5	11,300
PLW	4,400

The treatment of Severe Acute Malnutrition (SAM) has been ongoing from all Outpatient Therapeutic Centres (OTC) and Nutrition Rehabilitation Homes (NRH) Province 2.

Tube-wells, the main sources of drinking water in the Terai, were almost all inundated during the flood. A large proportion of them appear contaminated: the water is turbid and unsafe to drink.

This affects high tube-well usage areas (Siraha) but also those unable to access shallow tube-wells in Dhanusha, Mahottari, Sarlahi and Rautahat. Those on higher ground and with access to shallow tube-wells are accessing clean water. Unicef and government are distributing purifiers (aqua tablets and Piyush), but quantity is limited.

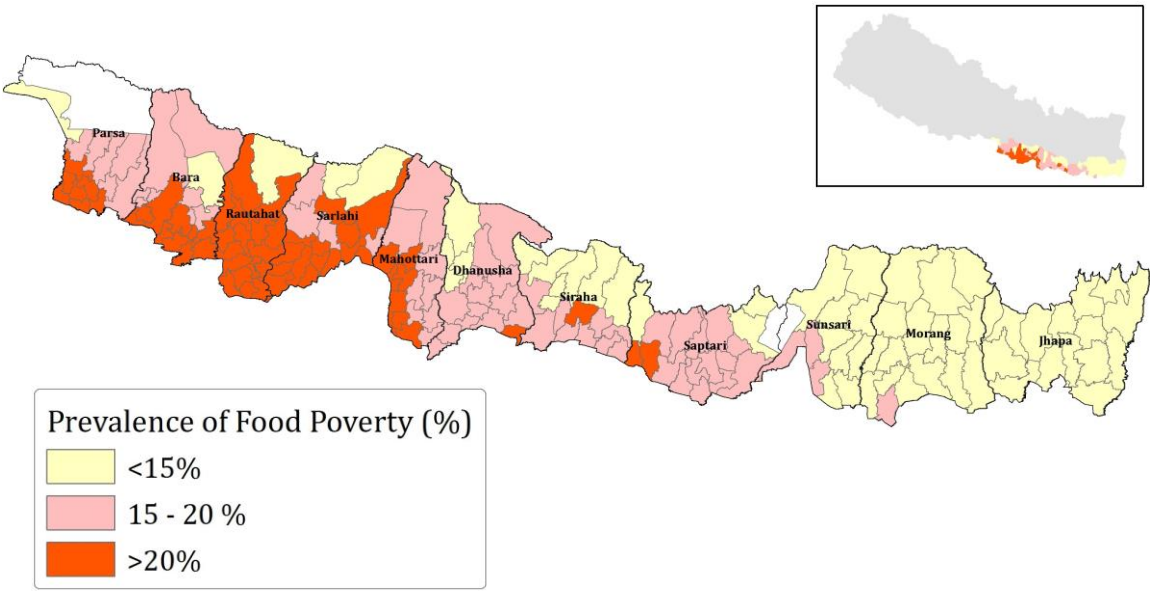
Overview

Food Security

Food stock and food assistance
Many households in flooded areas have lost food stock from the winter harvest (wheat), together with stored commodities such as rice, pulses and vegetables. Many people in the flood affected areas are now depending on relief food distributed by the government and I/NGOs, for the most part consisting of dry food goods.
Parsa, Bara, Rautahat, Sarlahi and Mahottari Districts have the highest estimated prevalence of food poverty (baseline data).

Summer rice cultivation
July is in the lean season and also a peak period for the plantation of rice in the Terai. Rice plantation in the Terai accounts for 70% of the country, and is normally harvested in October/November. At the time of the flooding, the Ministry of Agriculture and Livestock Development estimates that 35% of rice plantation was completed in the Terai (July 16 report). As the inundation area covered a significant area of agricultural land and has still not receded in some areas, this is expected to negatively impact rice production, potentially posing additional food security concerns.

Prevalence of Food Poverty in Flood-affected Districts



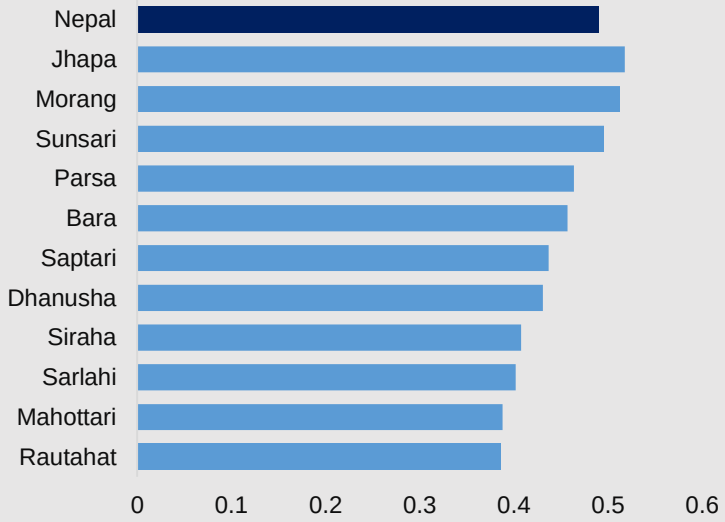
Resilience Profile

Most of the districts in Terai rate relatively low as measured by the Human Development Index (HDI): Rautahat, Mahottari, Saptari, Sarlahi, Siraha and Dhanusa are among the 25 districts in Nepal with the lowest HDI rating.

Population living in poverty
More than 20 percent of the population in Mahottari, Bara, Parsa, Rautahat, and Sarlahi live below the poverty line. The poorest will be hardest hit by the flood.

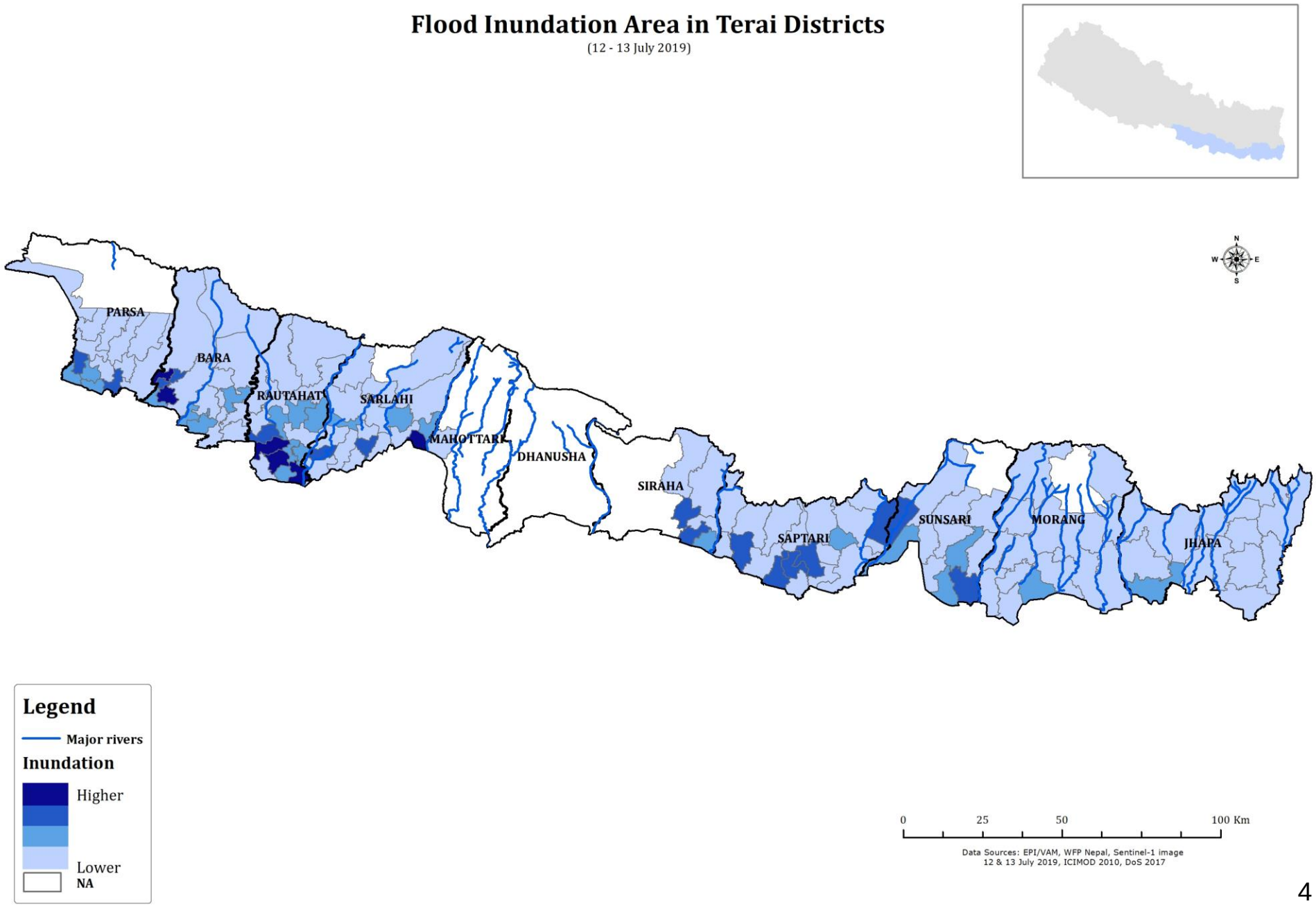
Housing conditions are poor
60-70 percent of households in Jhapa, Morang, Sunsari, Siraha, Saptari, Dhanusa, Mahottari, Sarlahi, and Rautahat; 50-60 percent in Bara and Parsa; live in poor housing structures unable to withstand flooding.

Human Development Index

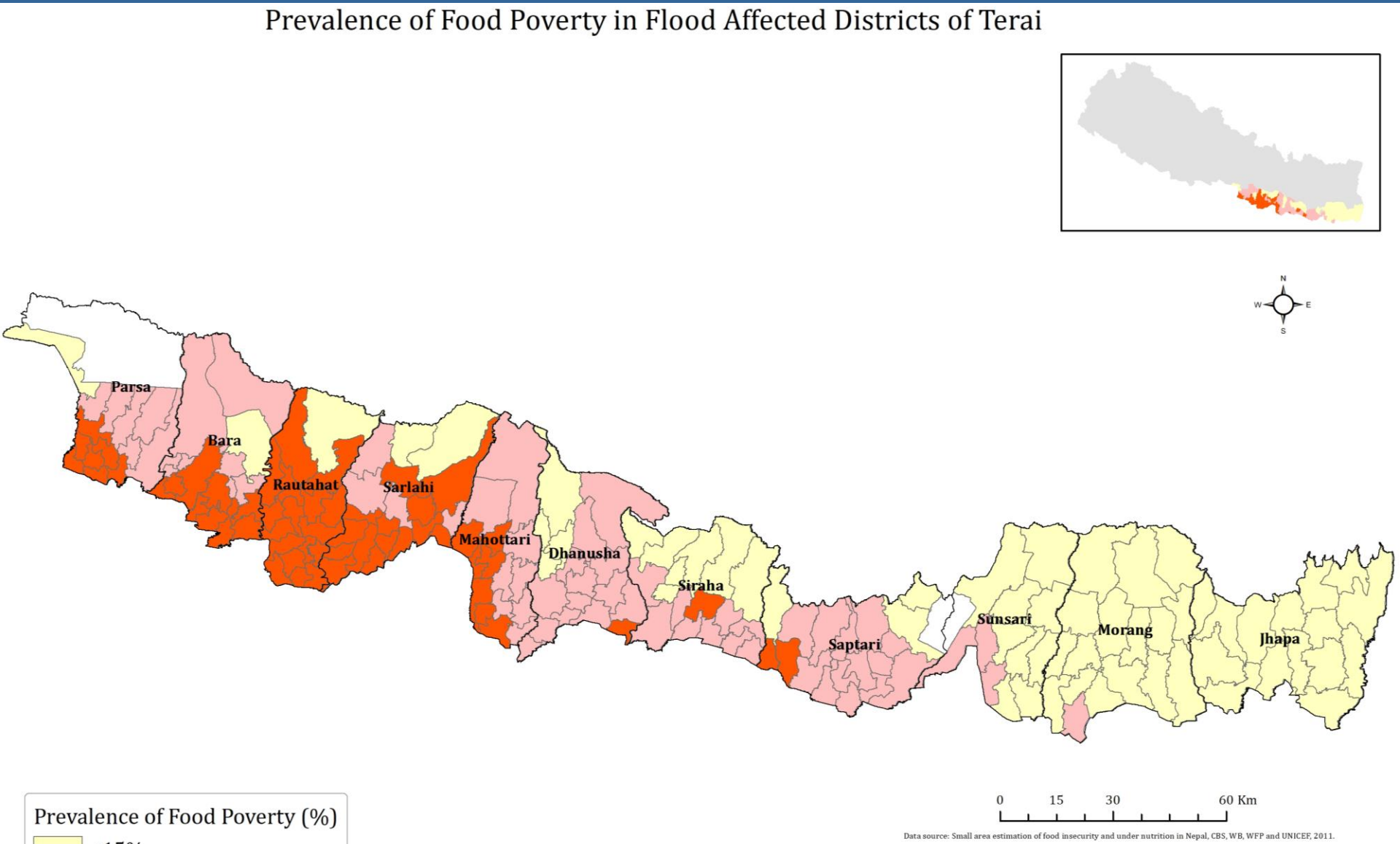


Source: NHDR 2014, CBS 2011

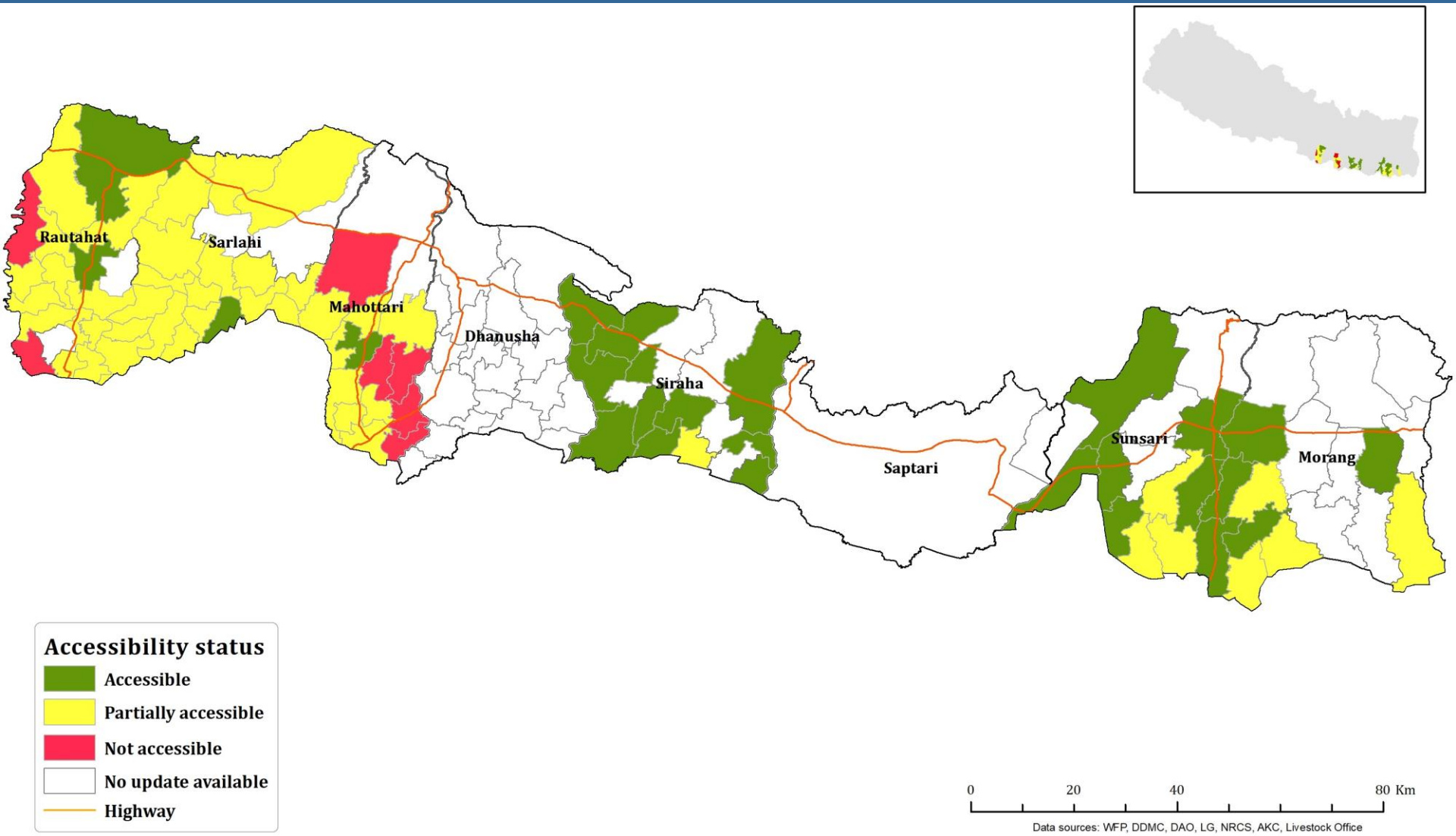
Inundation area (12-13 July)



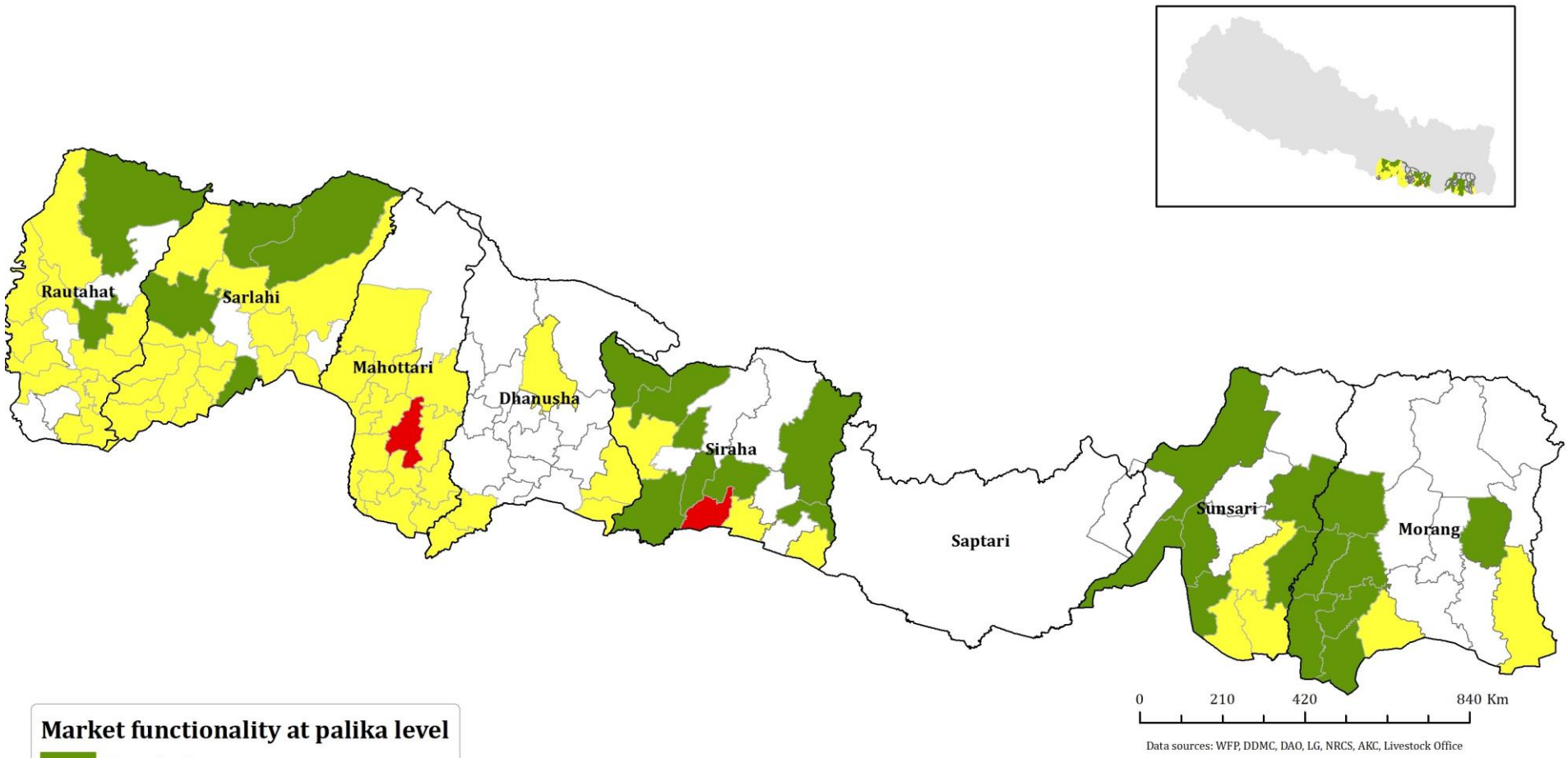
Food poverty prevalence



Vehicle accessibility (22 July)



Market functionality (22 July)



Methodology

WFP's 72-hour Approach

Initial estimations of area inundated were calculated by processing Sentinel-1 satellite images of 12-13 July. The inundation surface layer was then overlaid with settlement data to estimate the affected population. Priority population estimates were derived by overlaying the affected populations with small area estimates of food poverty at Municipality level (derived from the Small Area Estimation of Food Insecurity and Under-nutrition study, 2011), as well as with information from the Central Bureau of Statistics on types of building and building materials by municipality. Children under 5 years of age were identified among the targeted population.

The identification and ranking by areas and population of prioritization is based on cutoffs used, namely—above 20% prevalence of food poverty, above 70% of building materials classified as poor, to identify the highest priority population.

From these initial population estimates WFP undertook extensive ground verification and consultations with local government, I/NGOs and the Nepal Red Cross Society, to produce revised estimates of priority populations, based on which prior figures and areas of most need were updated as necessary.

More on WFP's 72-hour rapid assessment approach can be found at:

https://www.wfp.org/72-hours-emergency-assessment

Acknowledgement

Funding from the UK government has remained critical for supporting the capacity of the Nepal Food Security Monitoring system (NeKSAP), which was mobilized to produce this 72-hour assessment. NeKSAP is operated by the Ministry of Agricultural Development (MoAD) with the strategic guidance of the National Planning Commission (NPC). WFP provides technical assistance.

Situation updates received from the Nepal Red Cross Society (NRCS) were used to supplement this report, namely through estimates of population displacement, casualties and asset losses/damages.

Satellite images received from Sentinel-1 SAR (European Space Agency) were used to map the inundation surface in the flood-affected Terai districts.

WFP
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UKaid
from the British people

esa
European Space Agency
Agence spatiale européenne

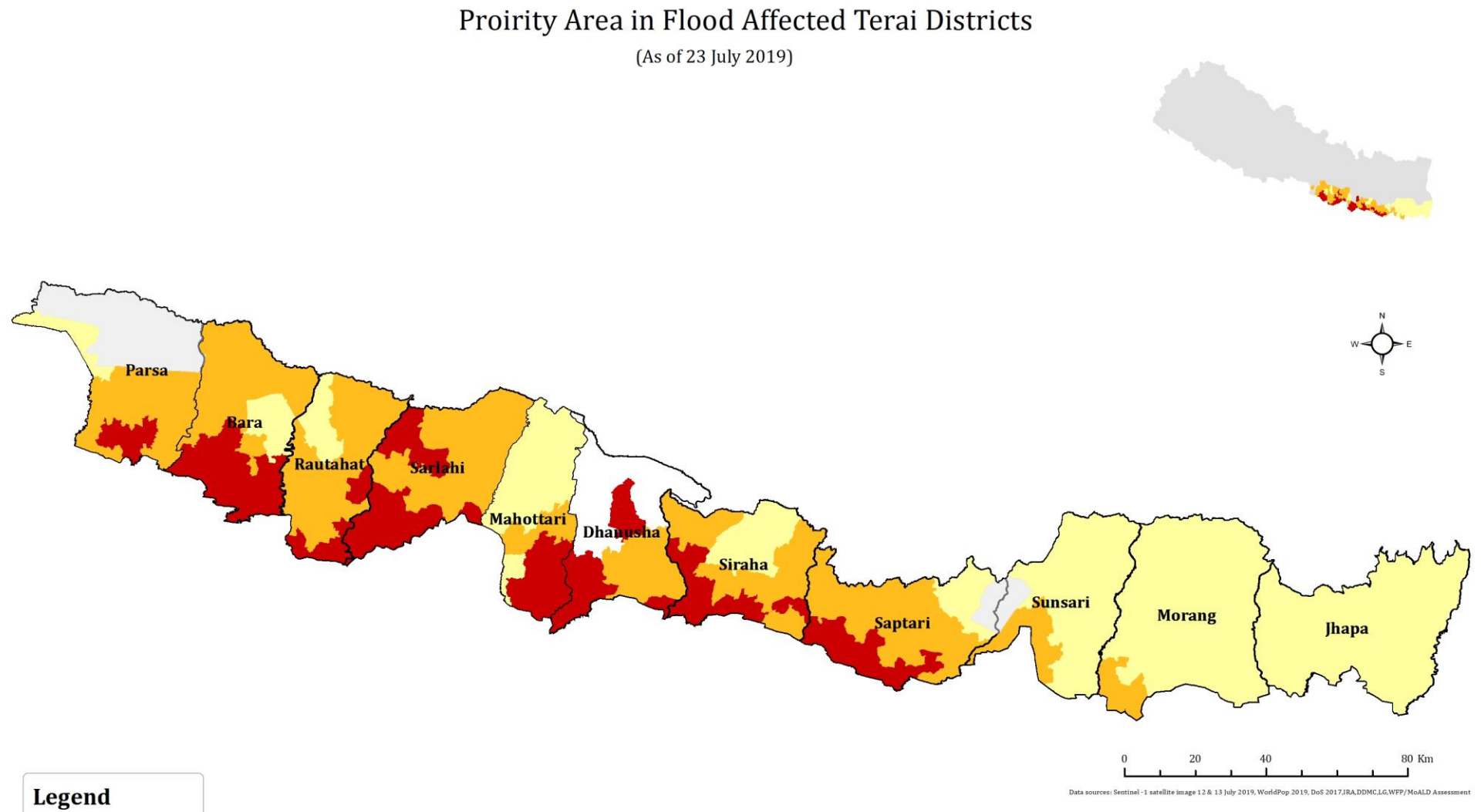
नेपाल खाद्य सुरक्षा अनुगमन प्रणाली
Nepal Khadhya Surakshya Anugaman Pranali (NeKSAP)
Nepal Food Security Monitoring System

ANNEX

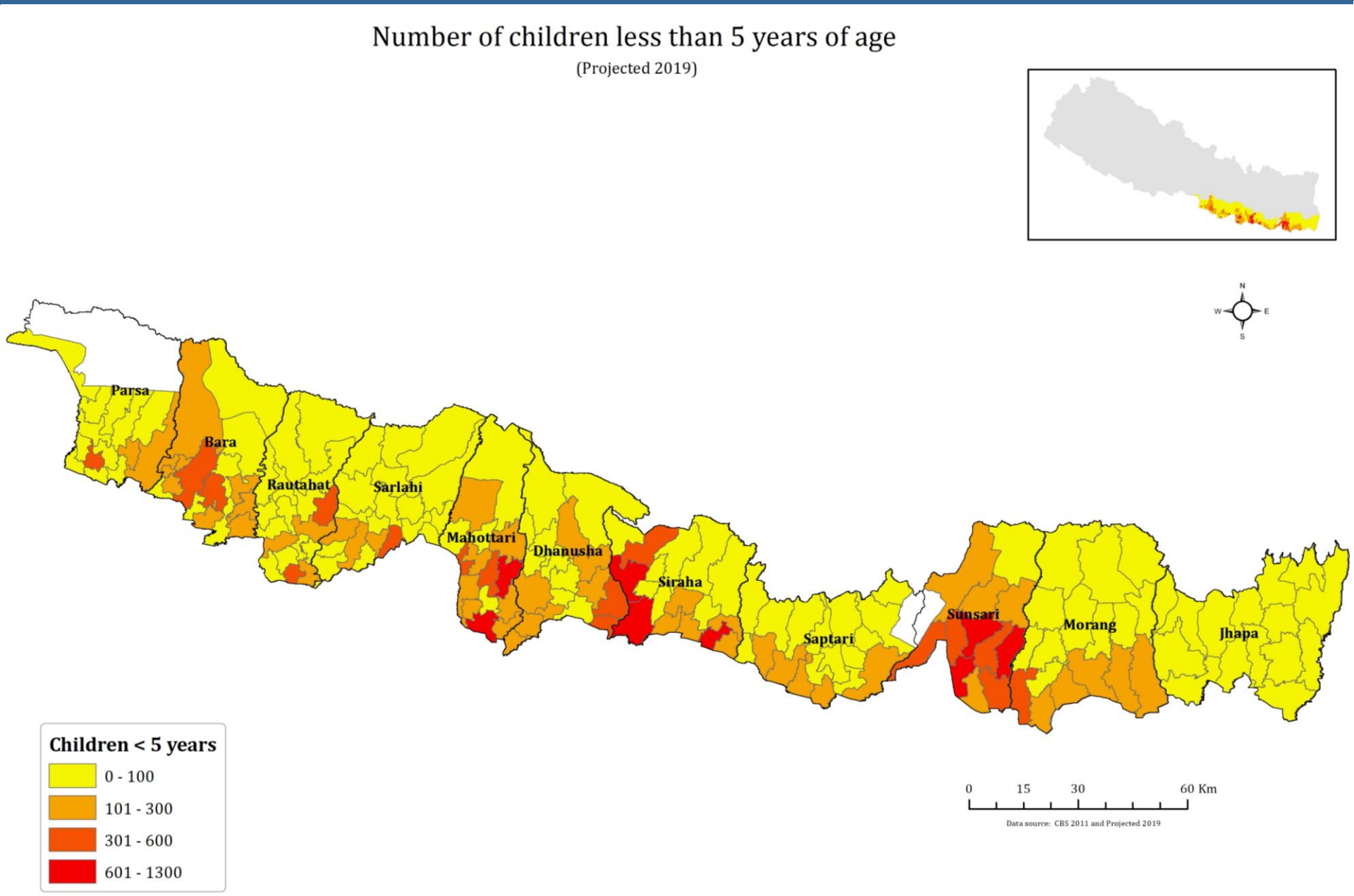
ANNEX 1 Priority Population

	Priority 1					Priority 2					Priority 3					Total				
District	Palika	Population	HHs	Children <5yrs	PLW	Palika	Population	HHs	Children <5yrs	PLW	Palika	Population	HHs	Children <5yrs	PLW	Population	HHs	Children <5yrs	PLW	Palika
Siraha	5	24,270	4,045	2,956	1,200	7	13,296	2,526	1,619	657						37,566	6,571	4,575	1,857	12
Mahottari	7	18,354	3,059	2,236	889	3	6,708	1,118	817	325	5	2,364	394	288	14	27,426	4,571	3,341	1,228	15
Bara	11	15,404	2,439	1,876	708	4	3,705	587	451	170	1	503	80	61	23	19,612	3,105	2,388	901	16
Sarlahi	8	10,722	1,949	1,306	500	10	1,341	244	163	63						12,063	2,193	1,469	563	18
Rautahat	5	10,121	2,023	1,233	465	13	6,451	1,287	786	296						16,572	3,310	2,019	761	18
Dhanusha	6	9,246	1,541	1,126	440	6	6,486	1,081	790	308						15,732	2,622	1,916	748	12
Parsa	4	7,506	1,199	914	337	9	5,608	896	683	252						13,115	2,095	1,597	589	13
Saptari	6	6,019	1,143	733	293	10	5,331	1,012	649	259	2	853	162	104	41	12,204	2,316	1,486	593	18
Sunsari						3	14,616	3,149	1,780	715	9	28,572	6,156	3,480	1,398	43,188	9,304	5,260	2,113	12
Morang						2	5,084	1,133	619	250	15	5,502	1,226	670	271	10,587	2,360	1,289	521	17
Jhapa											15	3,873	884	472	195	3,873	884	472	195	15
Total	**52**	**101,643**	**17,398**	**12,380**	**4,832**	**67**	**68,626**	**13,033**	**8,357**	**3,296**	**59**	**41,668**	**8,901**	**5,075**	**1,943**	**211,937**	**39,332**	**25,812**	**10,071**	**166**

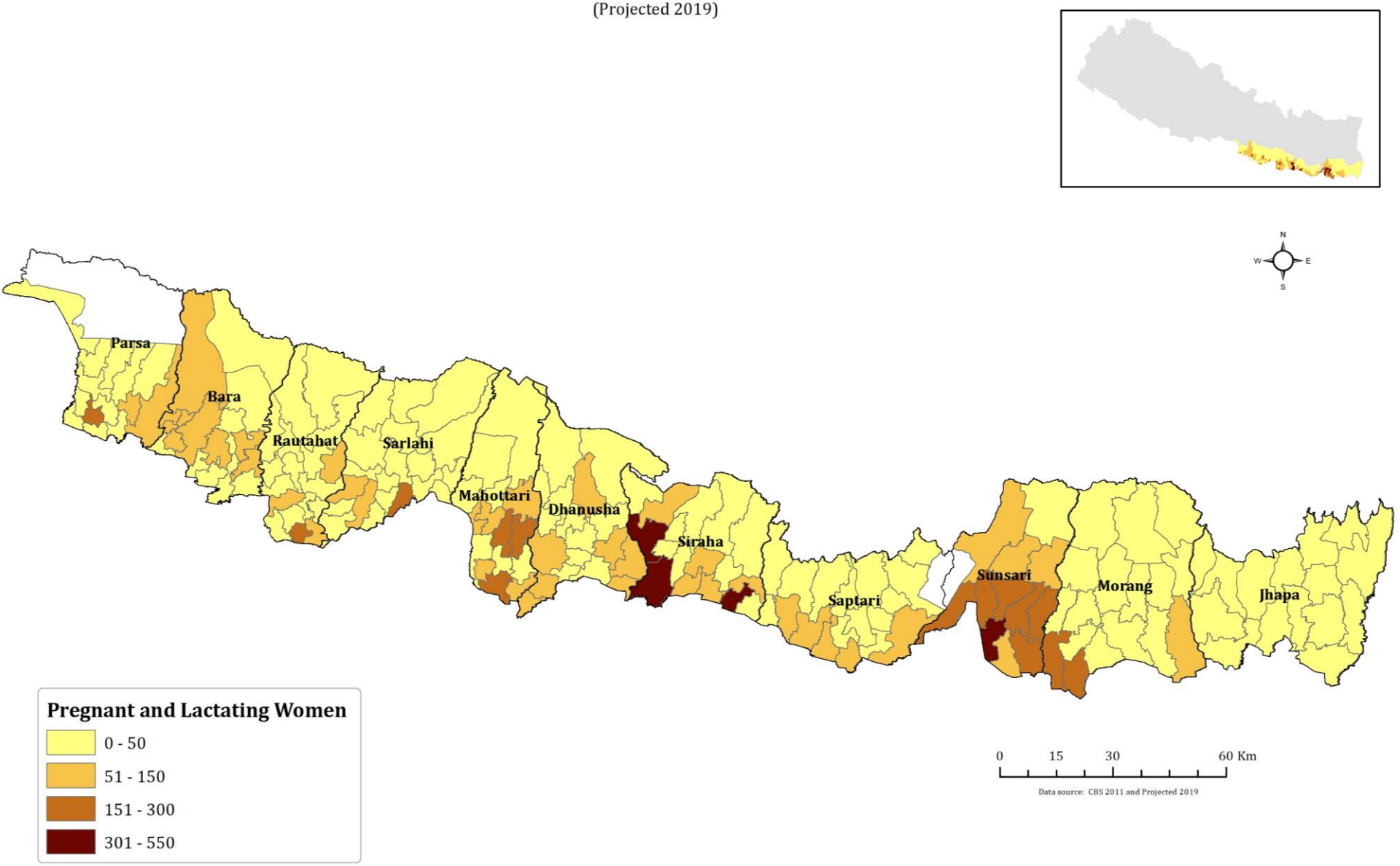
ANNEX 2 Priority areas (23 July)



ANNEX 2 Children under 5 years

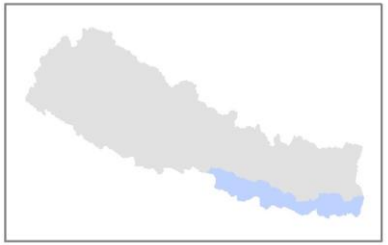


ANNEX 4 Pregnant and lactating women

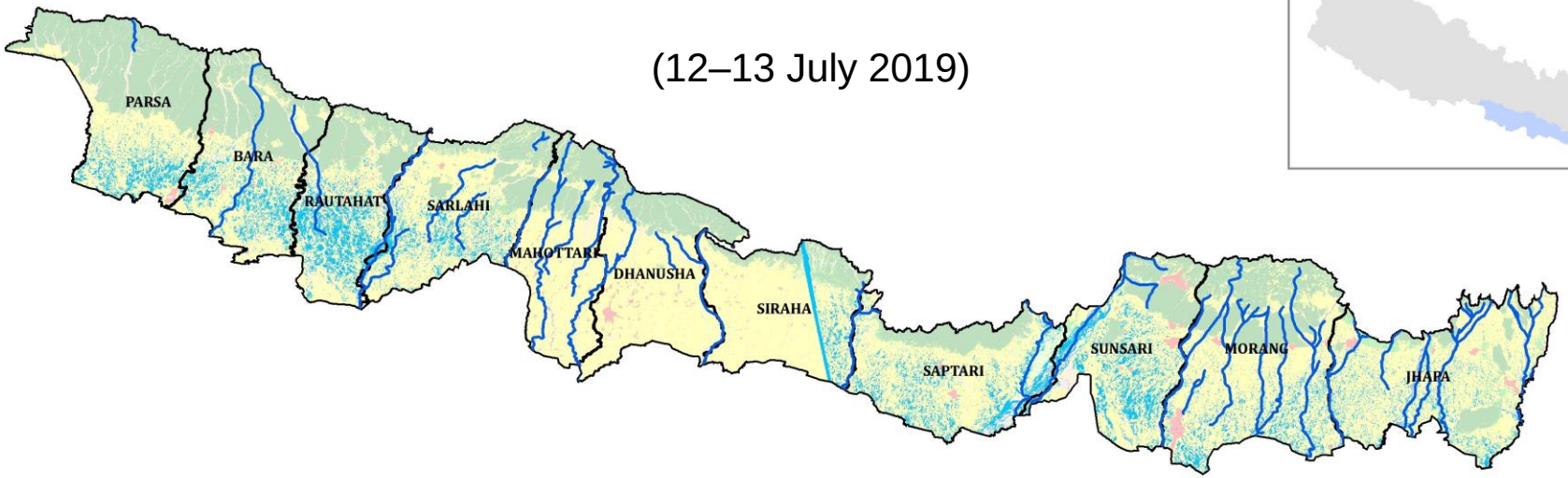


ANNEX 5 Inundation Area

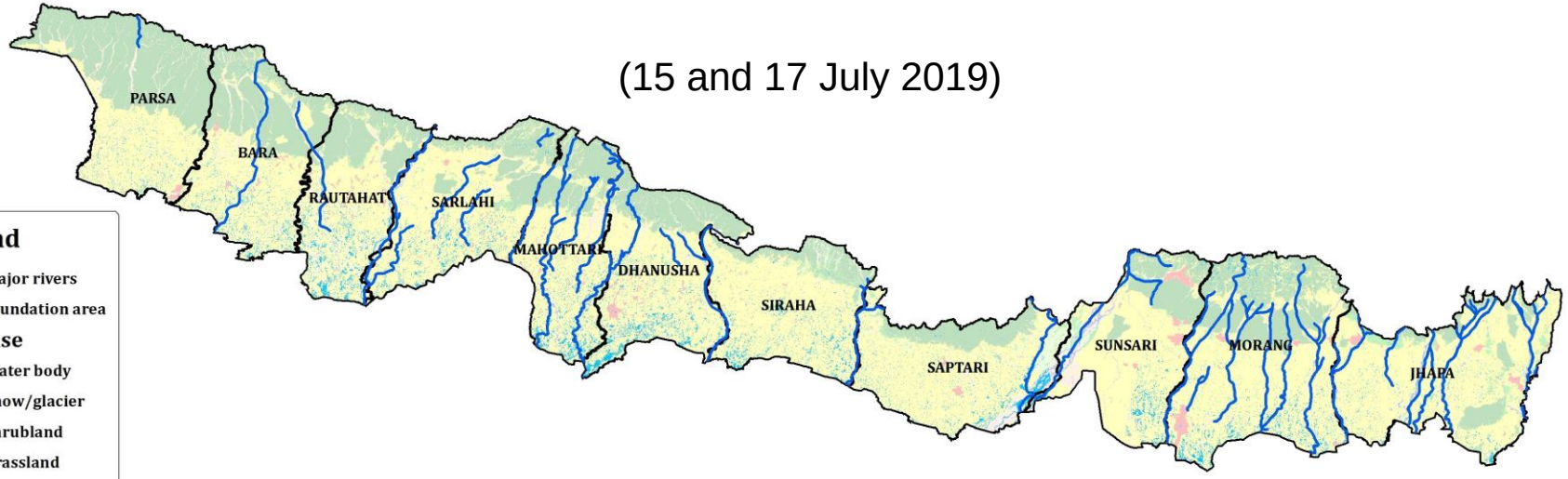
Flood Inundation Area

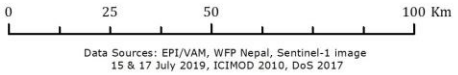


(12–13 July 2019)



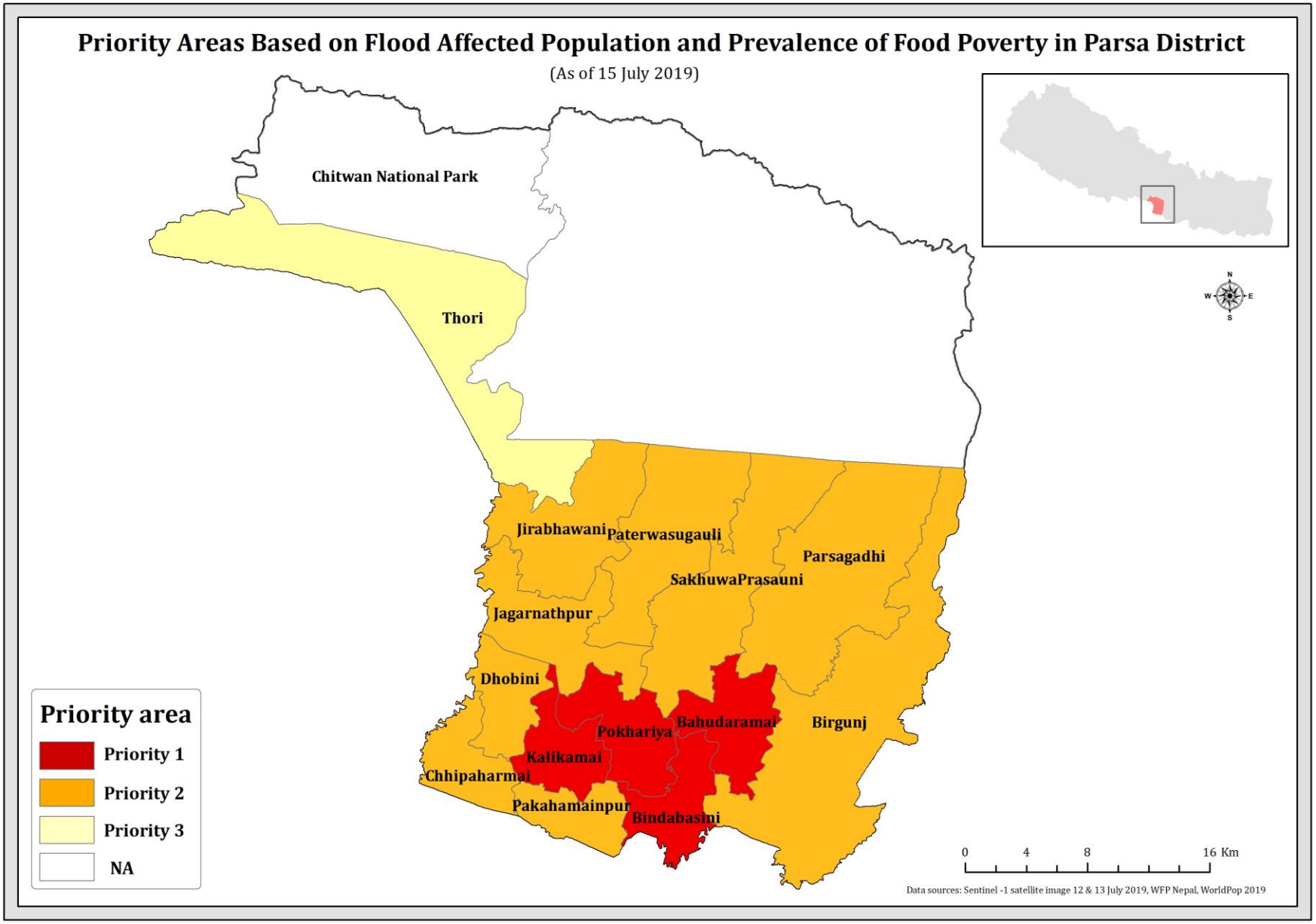
(15 and 17 July 2019)





Data Sources: EPI/VAM, WFP Nepal, Sentinel-1 image
15 & 17 July 2019, ICIMOD 2010, DoS 2017

ANNEX 6.a Parsa (15 July)



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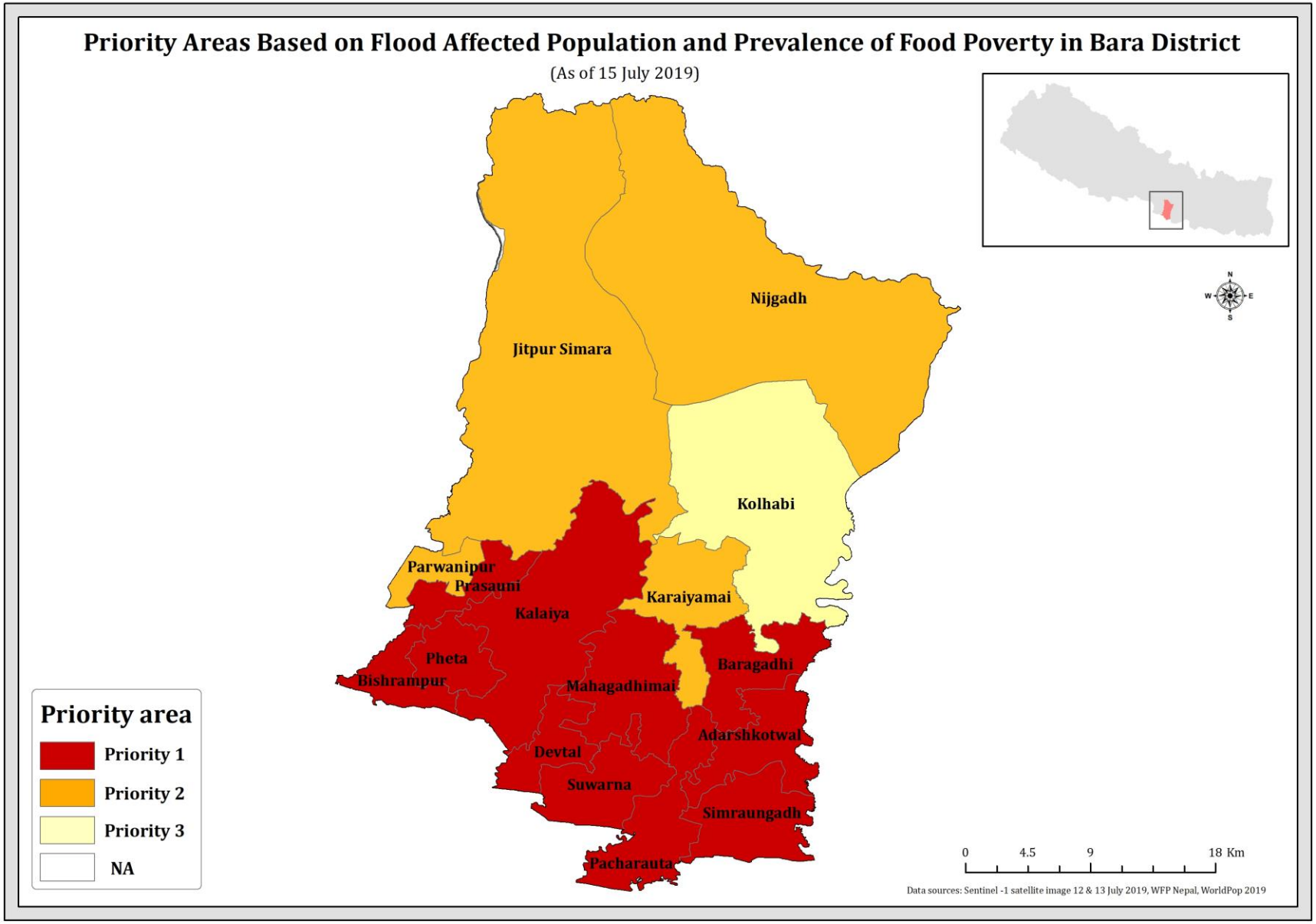
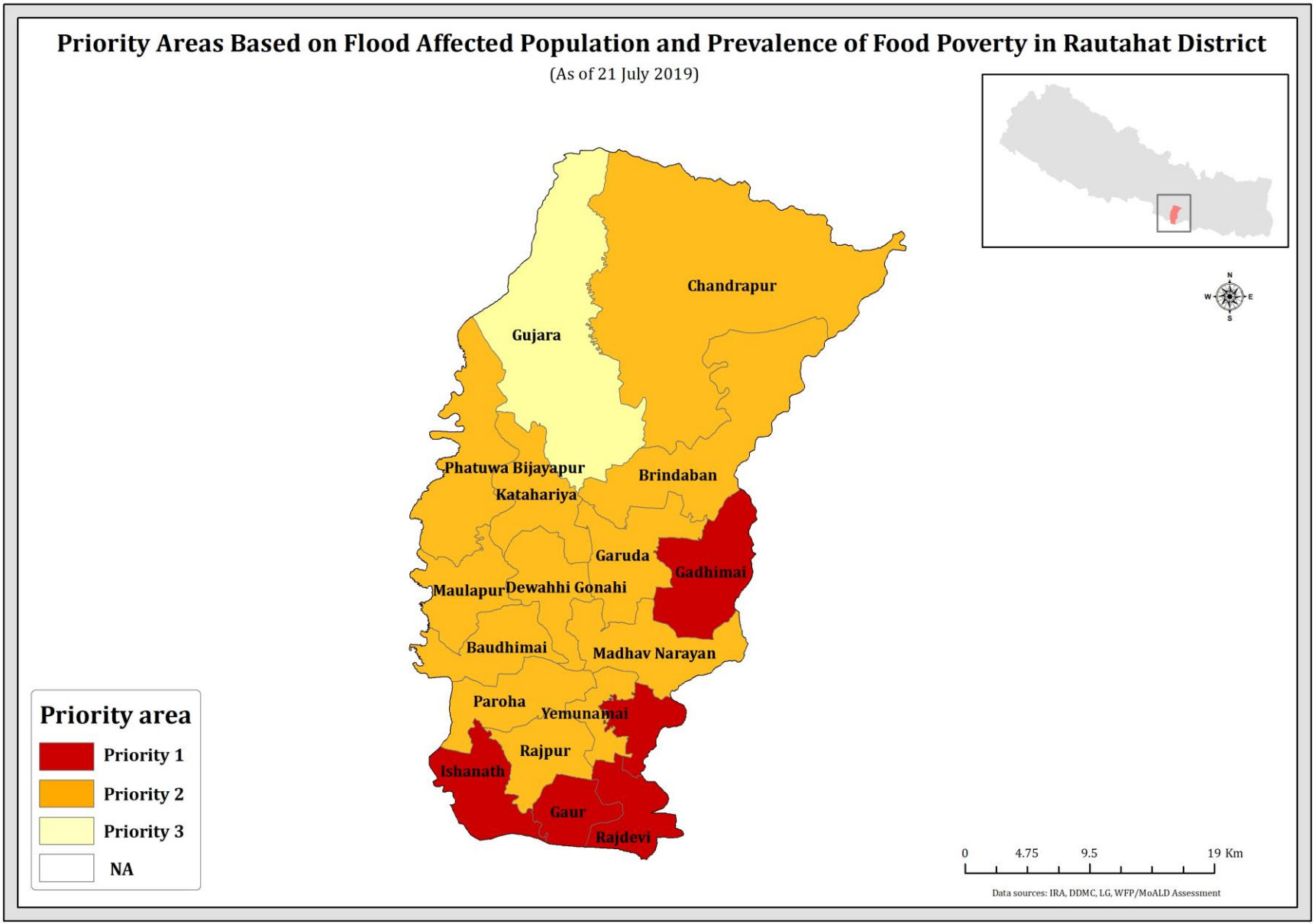
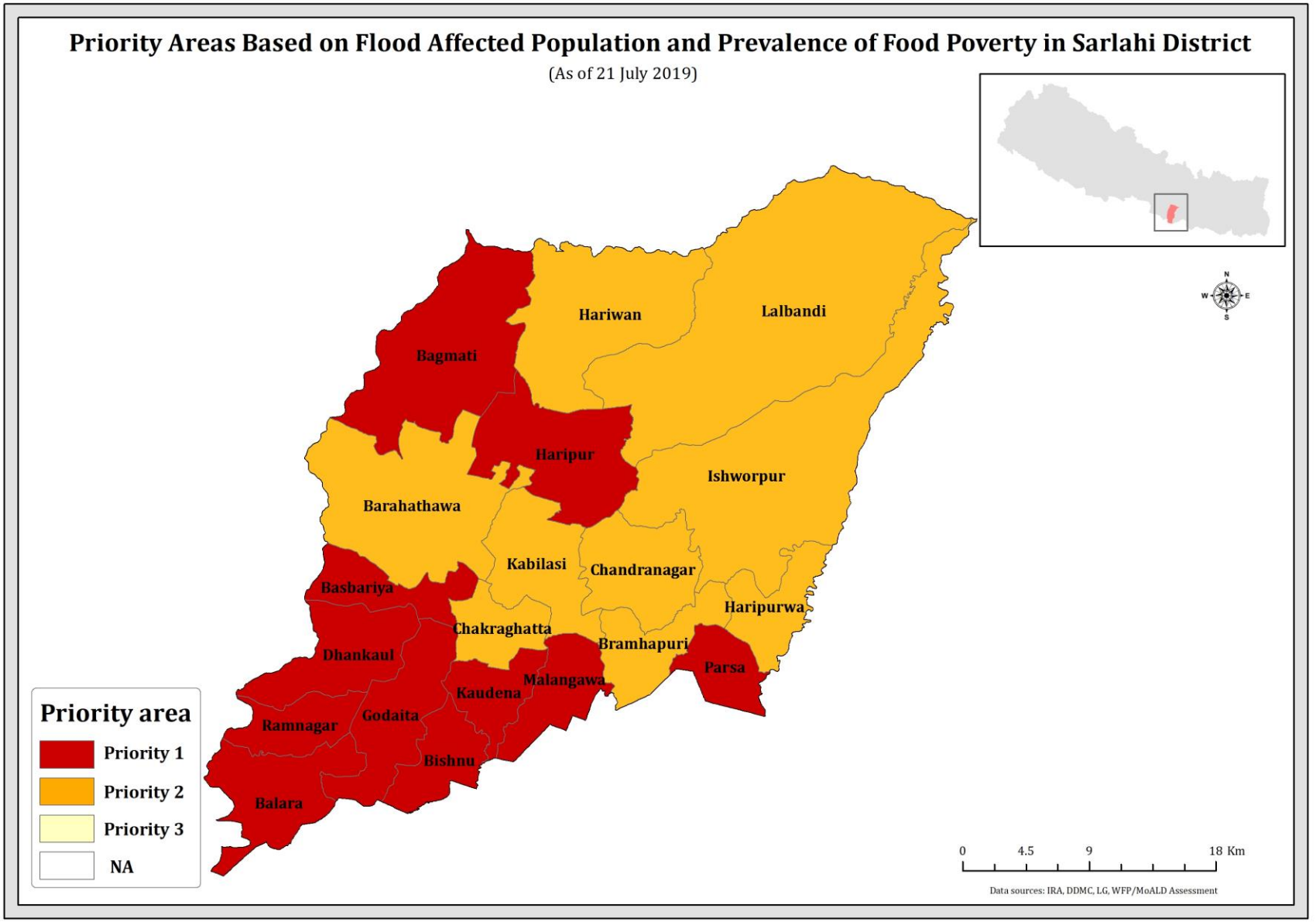


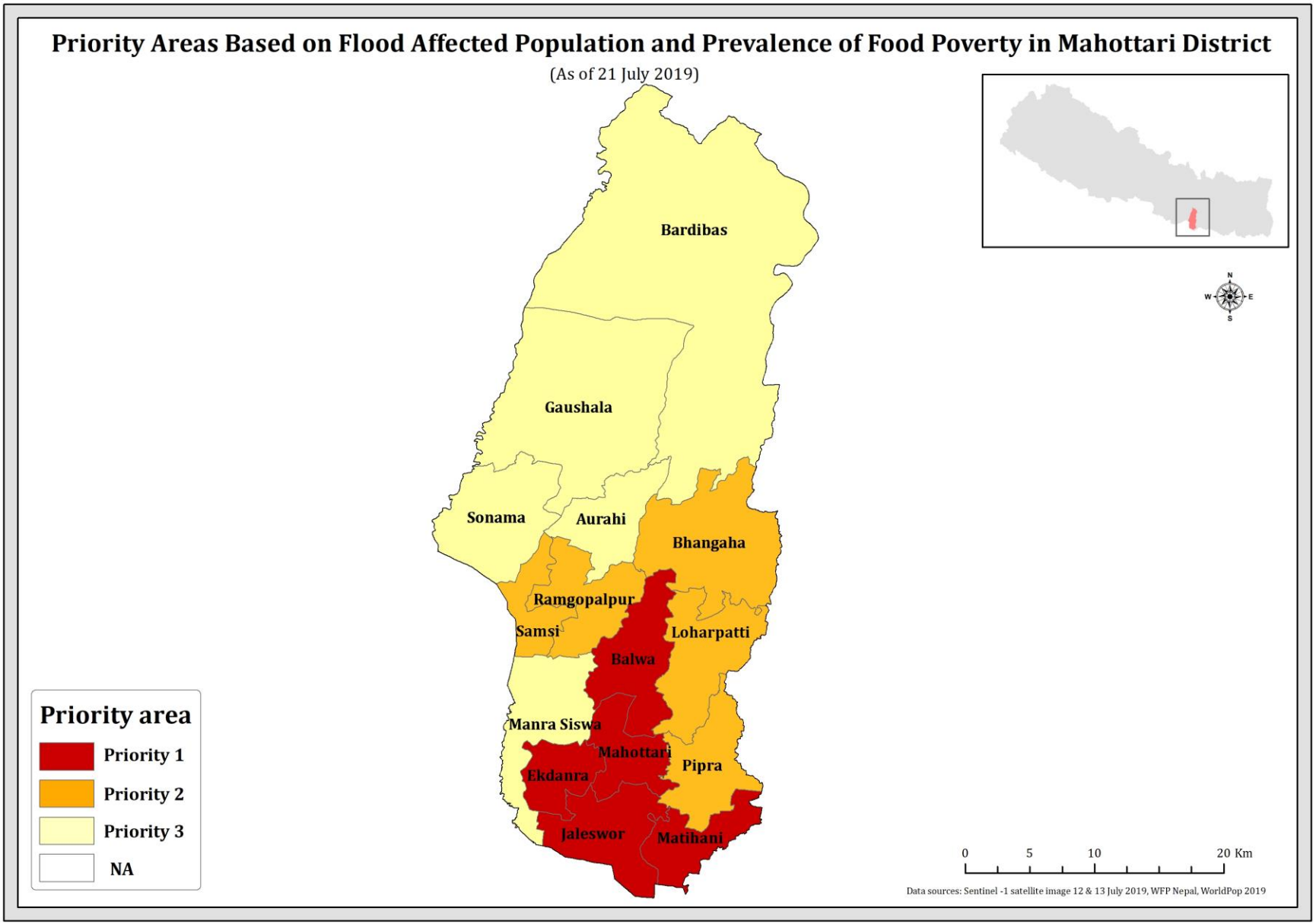
ANNEX 6.c Rautahat (21 July)



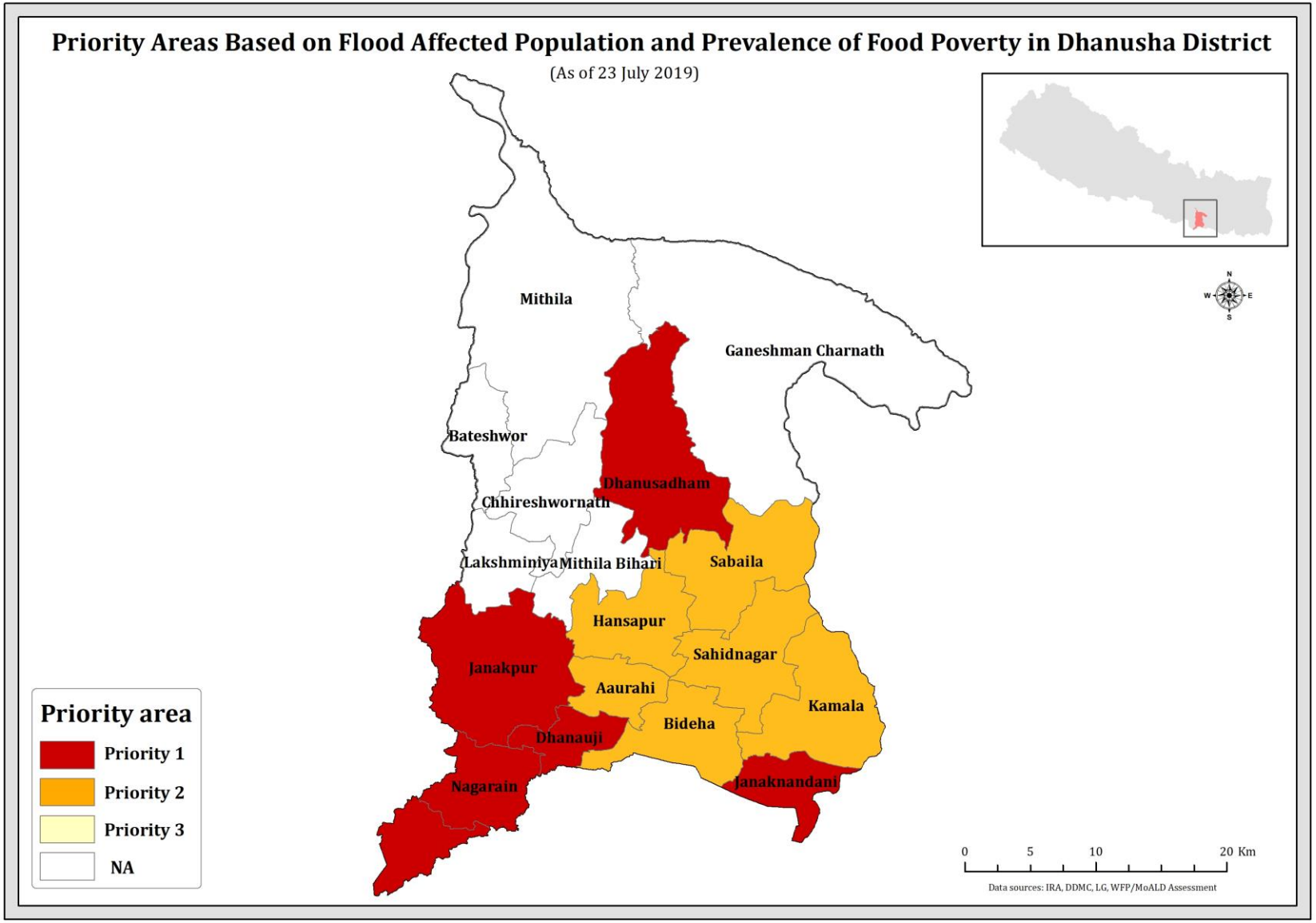
ANNEX 6.d Sarlahi (21 July)



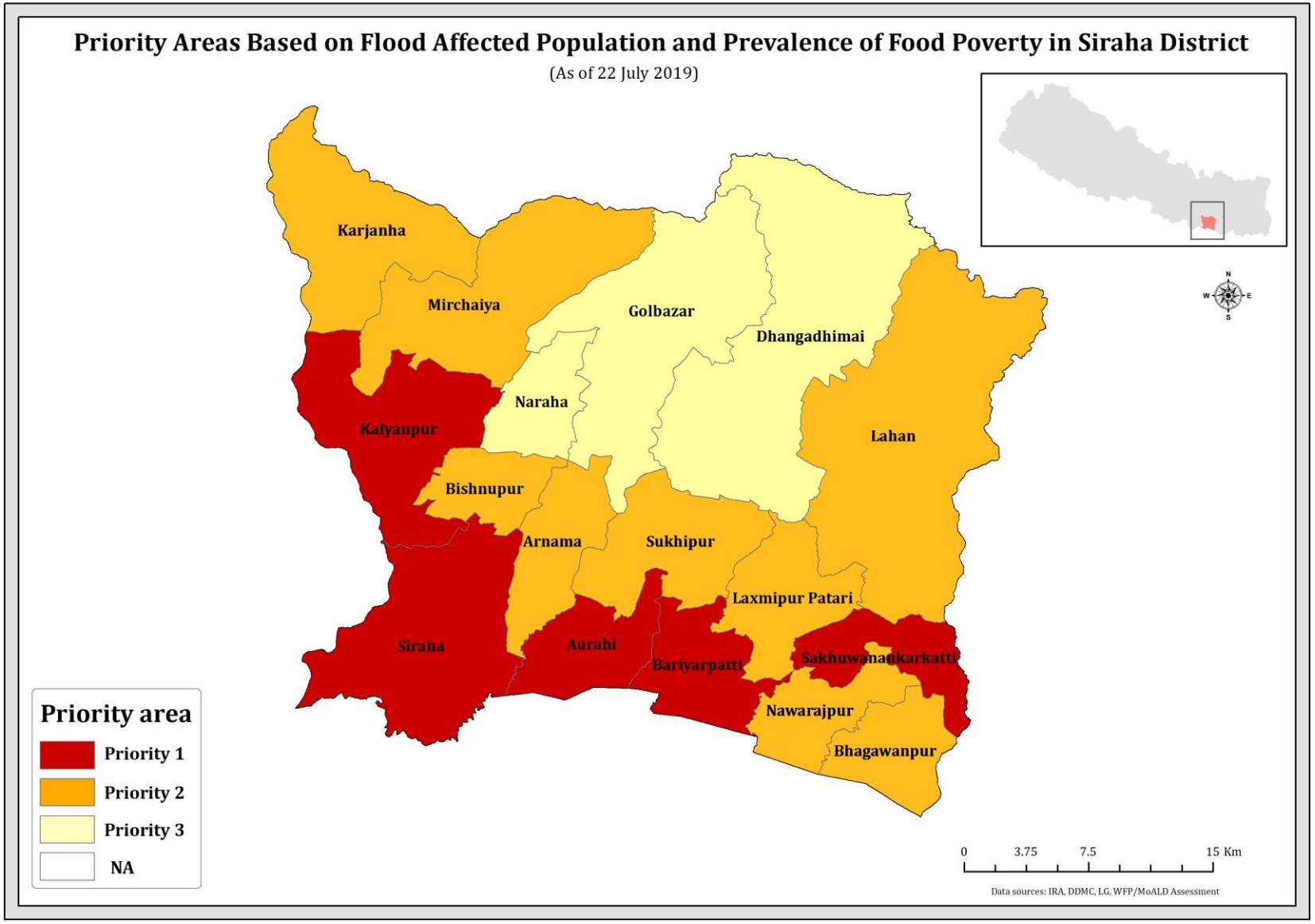
ANNEX 6.e Mahottari (21 July)



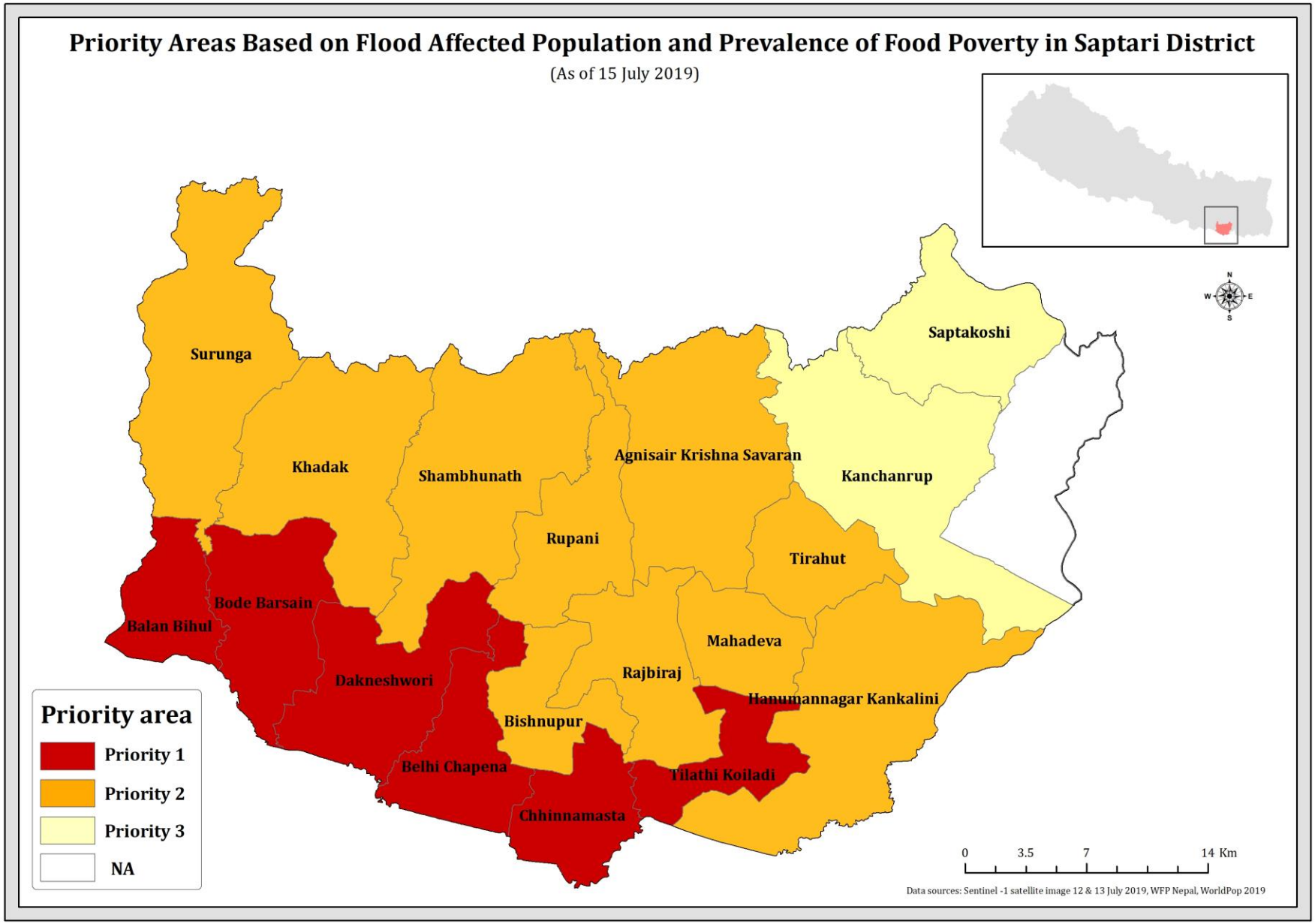
ANNEX 6.f Dhanusha (23 July)



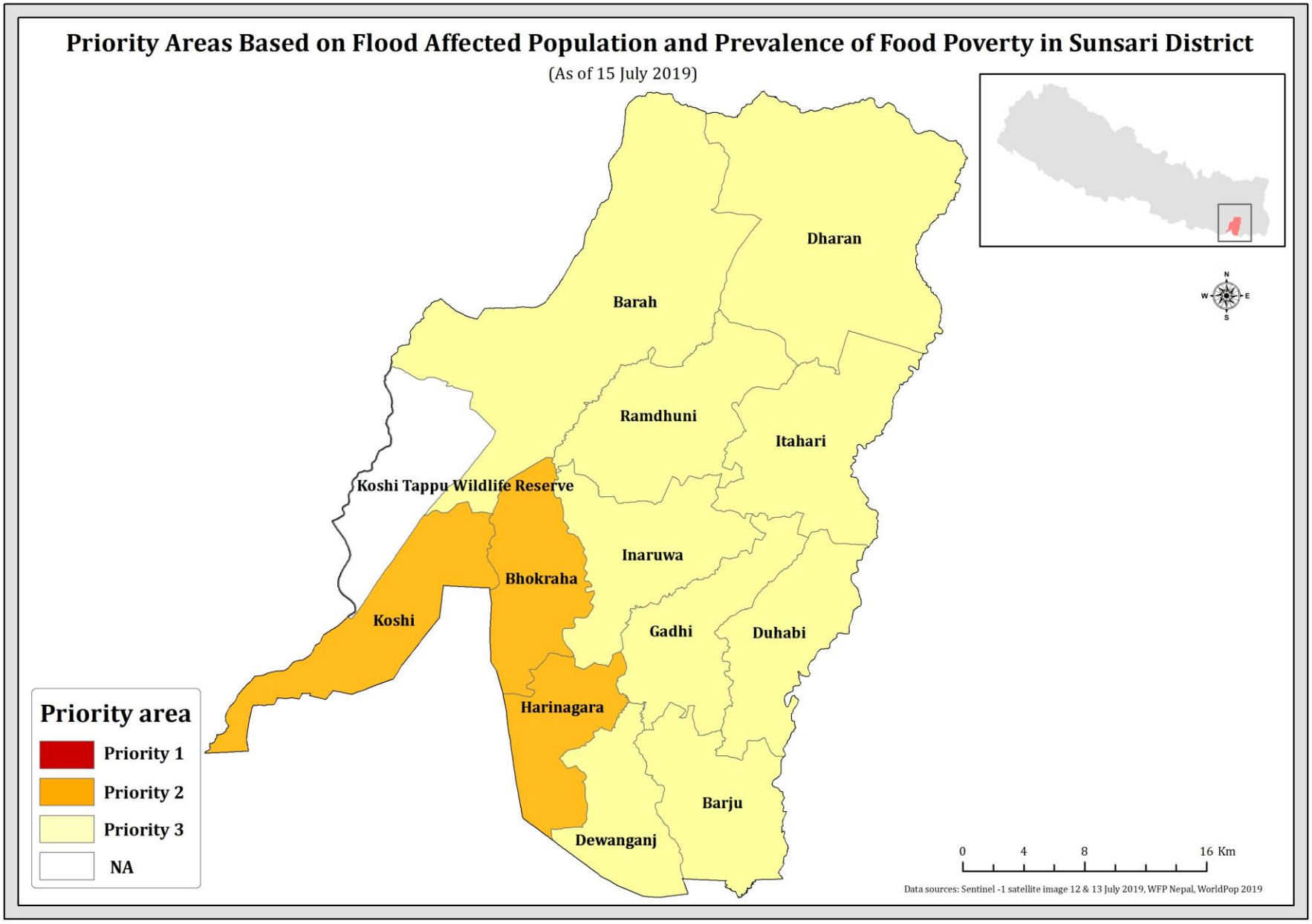
ANNEX 6.g Siraha (22 July)



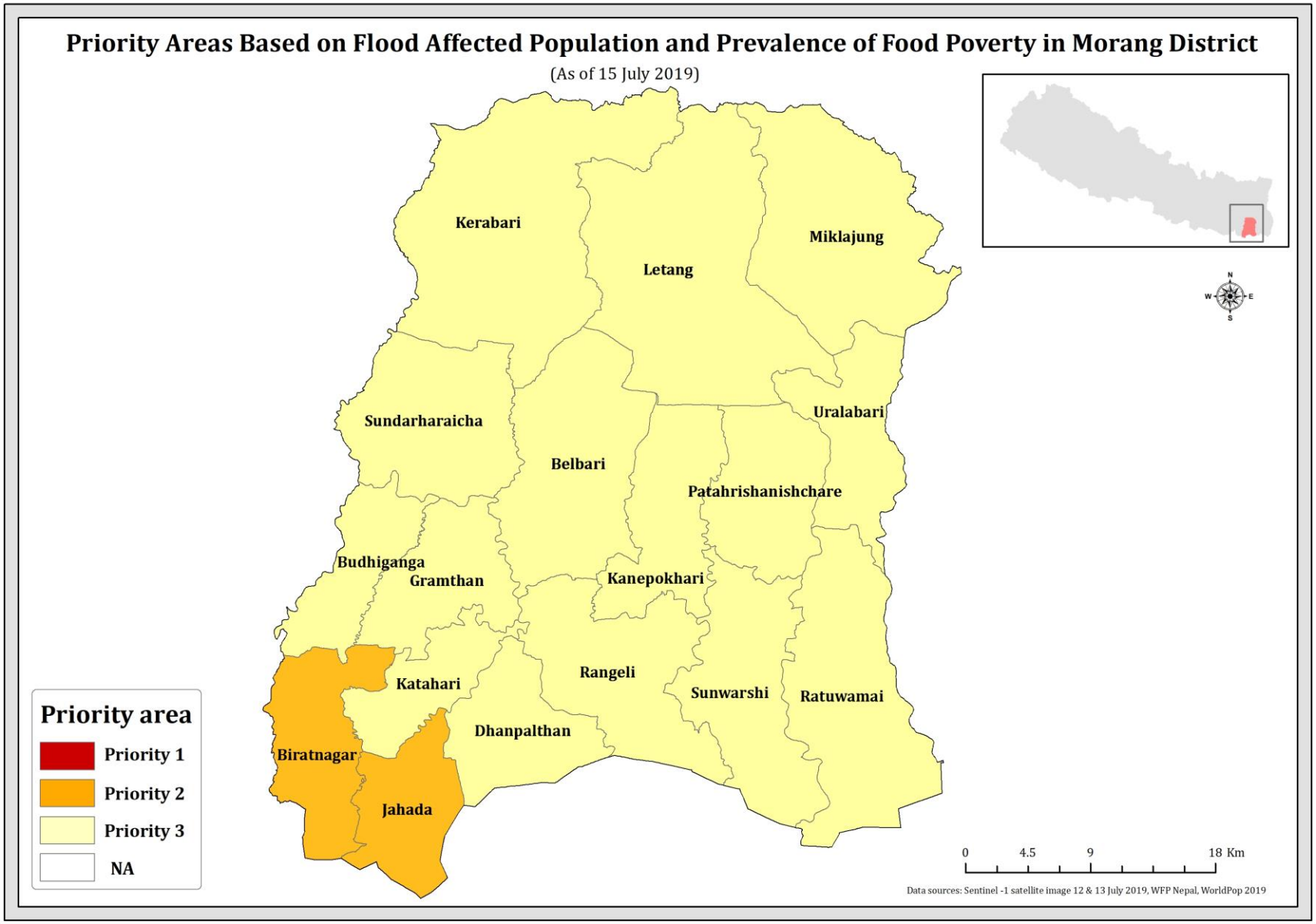
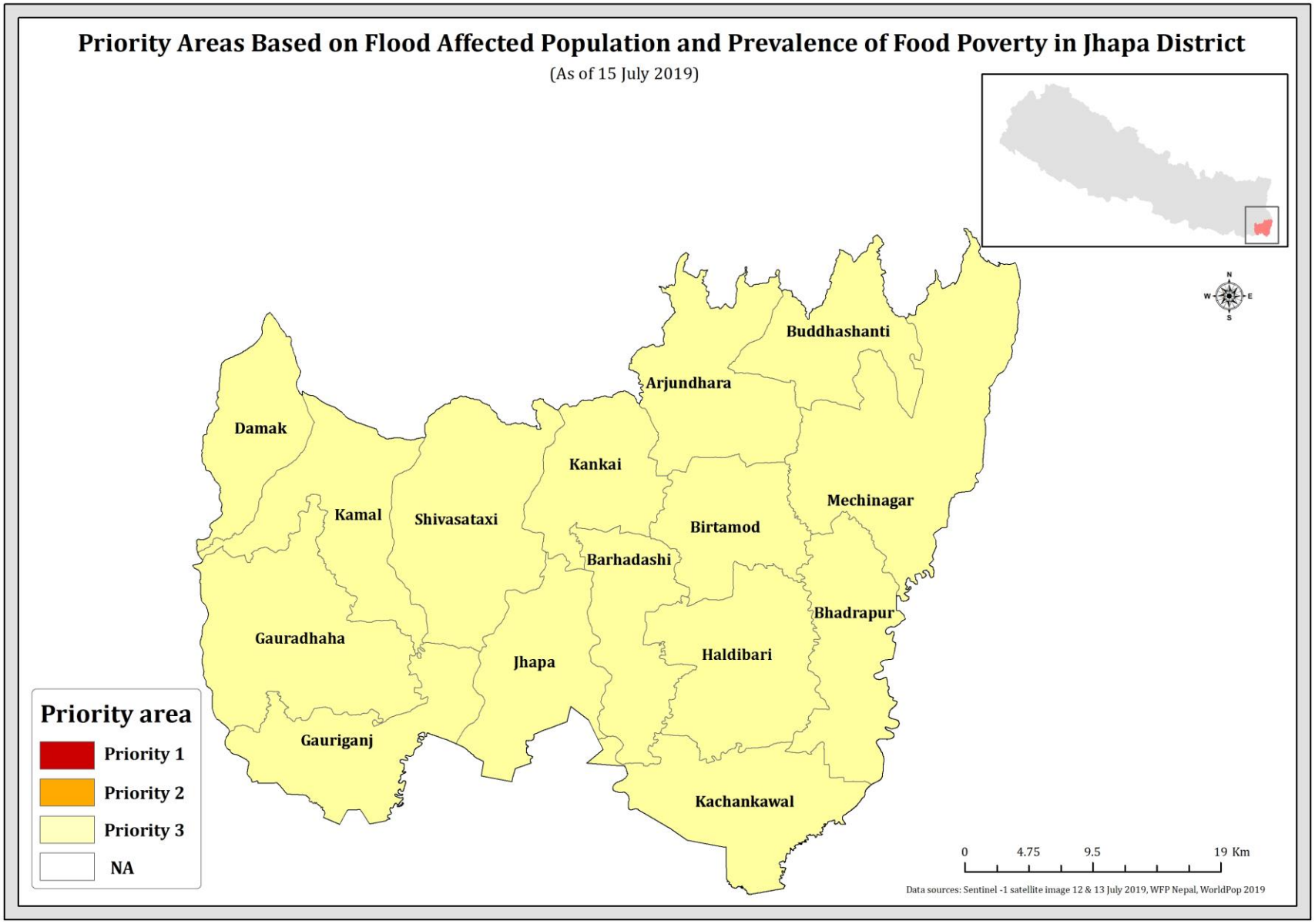
ANNEX 6.h Saptari (15 July)



ANNEX 6.i Sunsari (15 July)



ANNEX 6.j Morang (15 July)



ANNEX 6.j Jhapa (15 July)