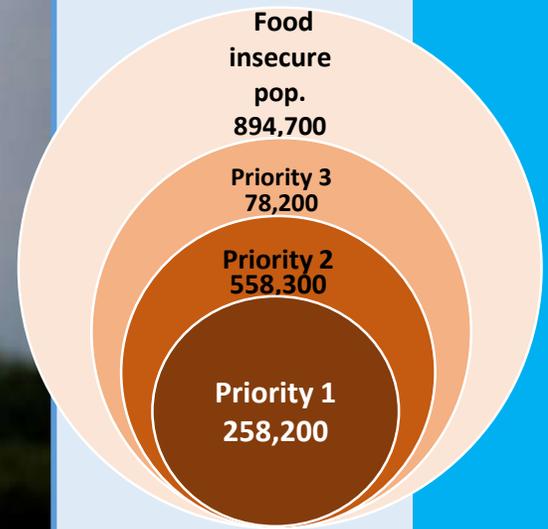




Key figures



63 Dead

10 Missing

12 Injured

66,921 families displaced

67 VDCs in 6 districts still inaccessible

Terai flood update and prioritization

18 August 2017

Update-4



vam
food security analysis

Tools and methods

Step-1: Satellite based inundation surface (area) was estimated through Sentinel-1 radar image obtained from ICIMOD. The digital satellite image was processed to eliminate forest area and permanent water bodies. The final satellite map was then overlaid with population density to estimate population residing in the inundated areas.

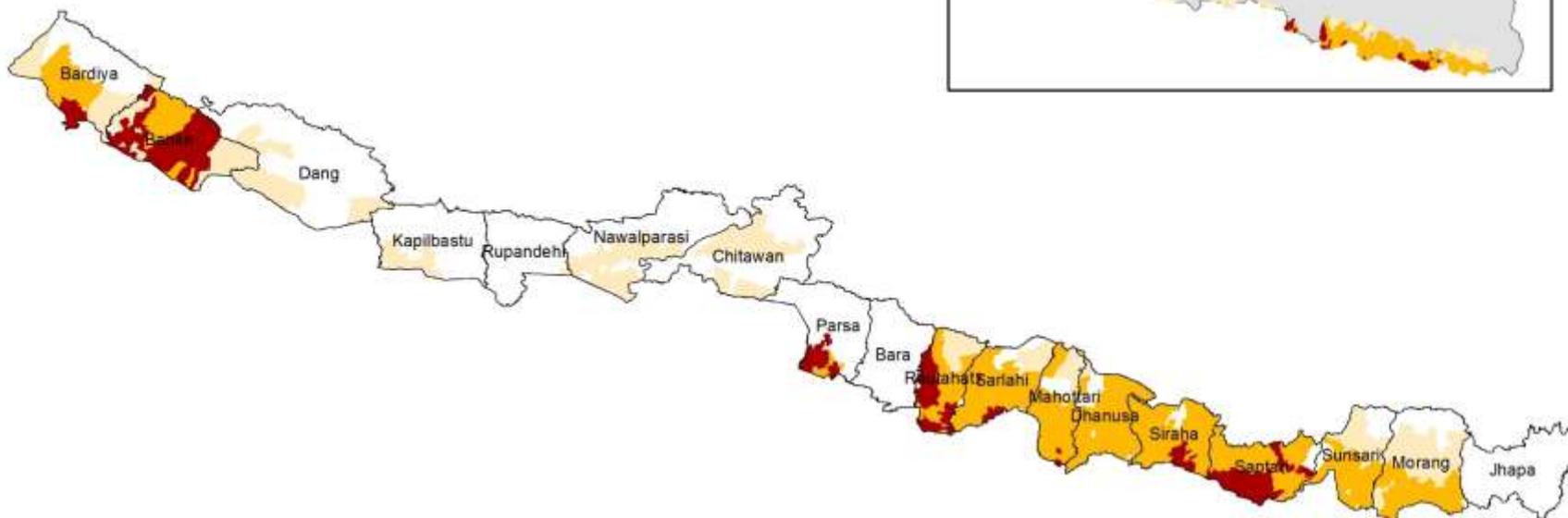
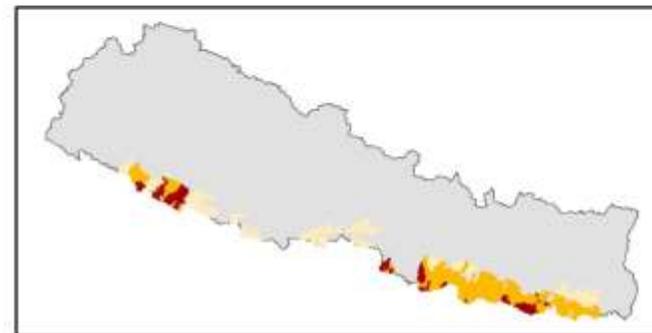
Step-2: Product from step 1 was triangulated through the information received from the field (NRCS, DDRC, WFP field staff and others). This formed the base map to proceed with further estimation.

Step-3: Wasting prevalence was overlaid on the base model received from step-2. This provided further refined information on acutely food insecure population by VDCs (where, how many) with severity (priority 1, 2, and 3 for food assistance).

Step-4: Food poverty prevalence was overlaid on the base model received from step-2. This provided the information on chronically food insecure population affected by flood.

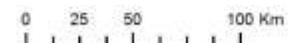
Priority Areas Based on Flood Affected Population and Prevalence of Wasting

(update as of 17 August 2017)



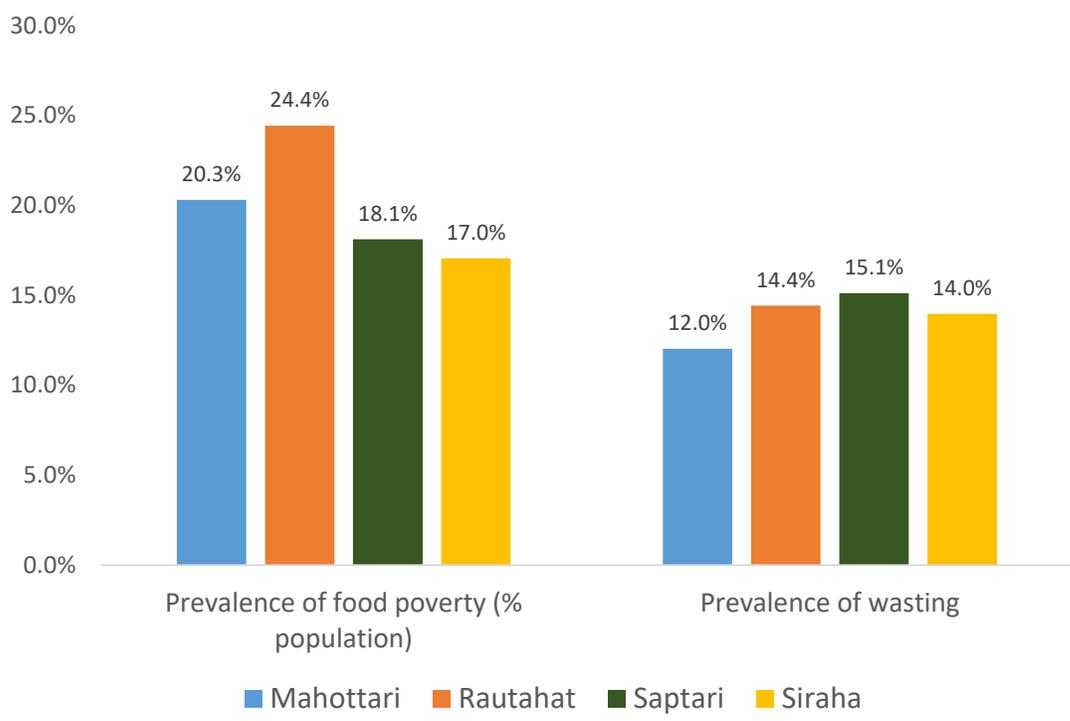
Priority area	
	Priority 1
	Priority 2
	Priority 3
	NA

Priority	VDCs	Households	Population
1	226	51,000	258,200
2	531	110,300	558,300
3	116	15,500	78,200
Total	873	176,800	894,700

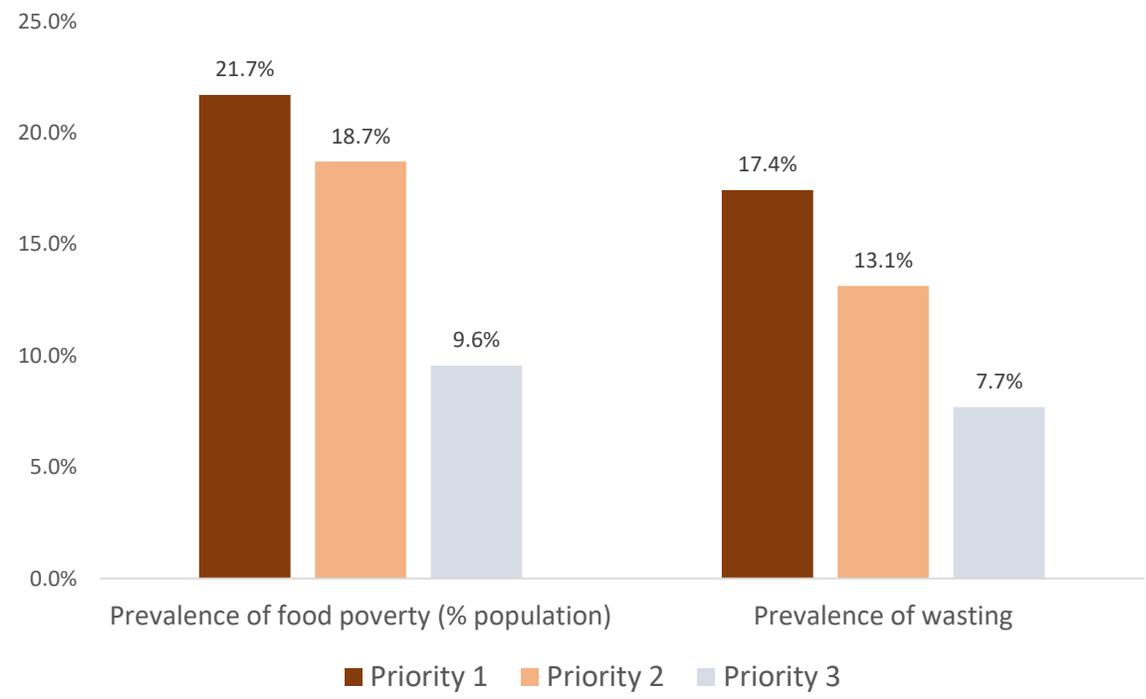


Data sources: Satellite image from ICIMOD acquired on 11-13 August 2017
SAE CBS, WB, WFP, UNICEF 2014

Priority Districts

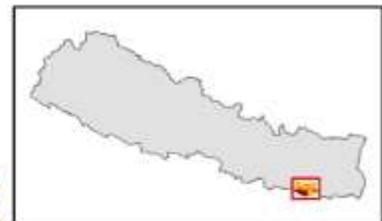


Priority Areas



Priority Areas Based on Flood Affected Population and Prevalence of Wasting in Saptari District

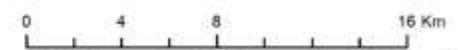
(update as of 17 August 2017)



Priority area

- Priority 1
- Priority 2
- Priority 3
- NA

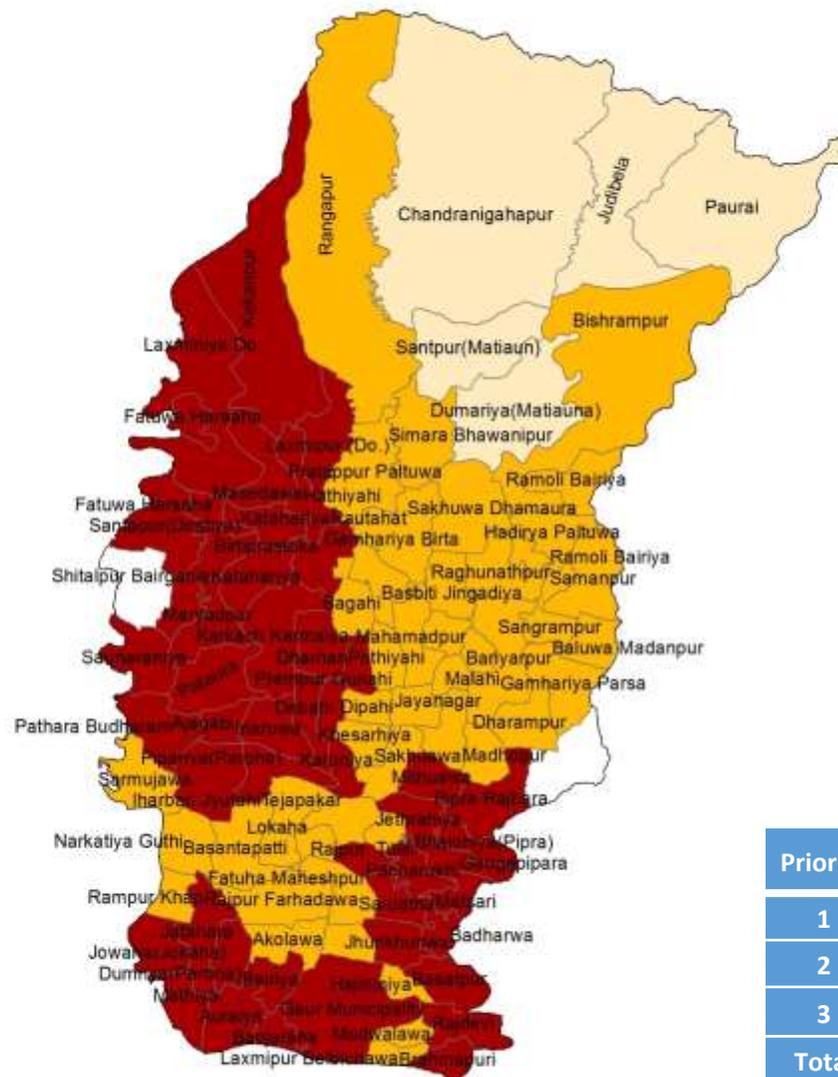
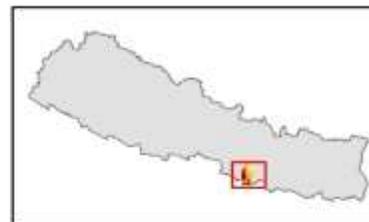
Priority	VDCs	Households	Population
1	53	12,300	62,100
2	62	11,800	59,800
3	-		
Total	115	24,100	121,900



Data sources: Satellite image from ICIMOD acquired on 11-13 August 2017
SAE CBS, WB, WFP, UNICEF 2014

Priority Areas Based on Flood Affected Population and Prevalence of Wasting in Rautahat District

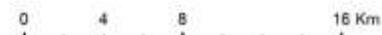
(update as of 17 August 2017)



Priority area

- Priority 1
- Priority 2
- Priority 3
- NA

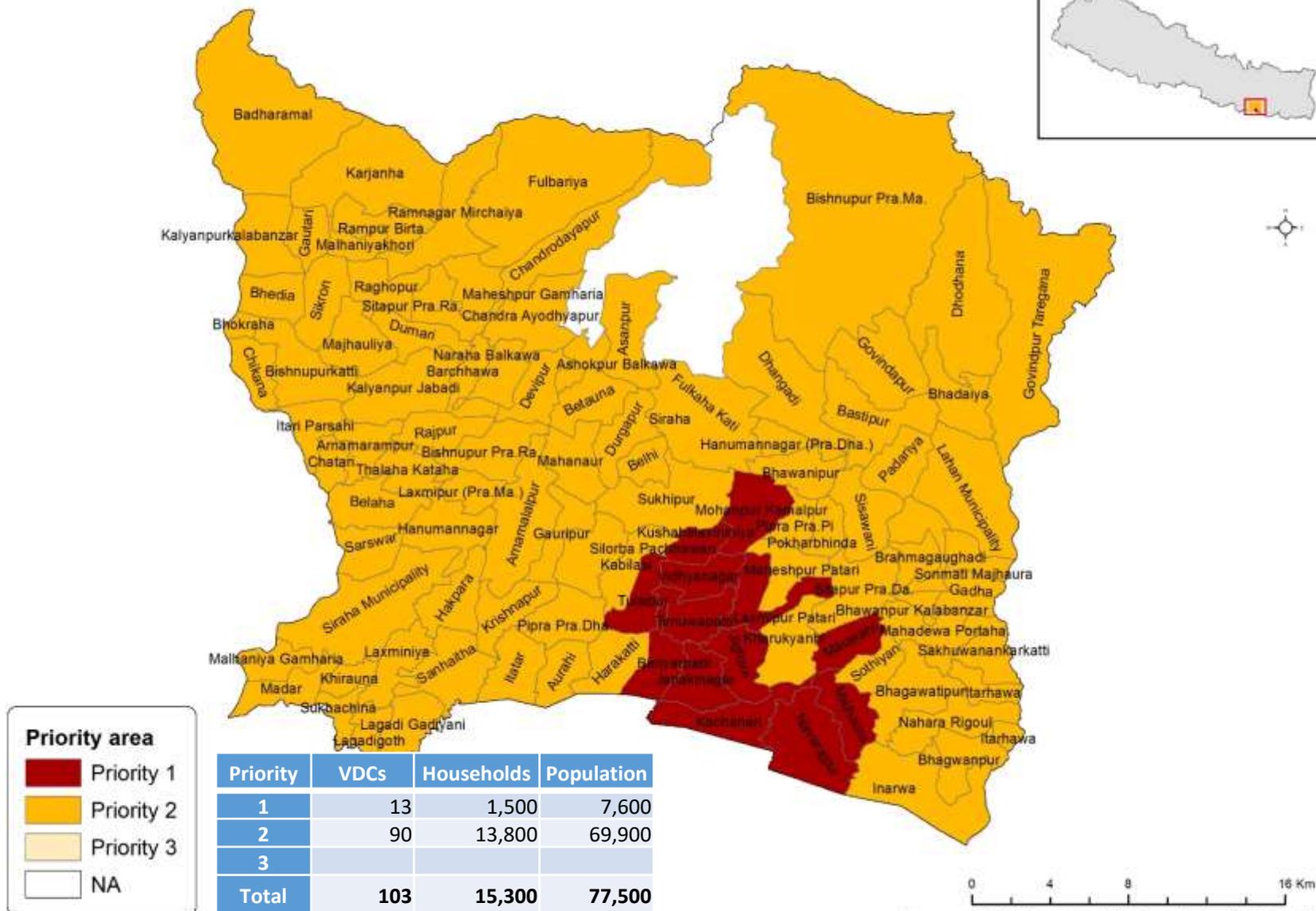
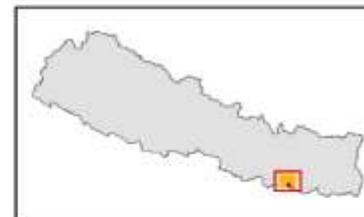
Priority	VDCs	Households	Population
1	46	15,500	78,200
2	44	16,100	81,400
3	5	3,400	17,000
Total	95	35,000	176,600



Data sources: Satellite image from ICIMOD acquired on 11-13 August 2017
SAE CBS, WB, WFP, UNICEF 2014

Priority Areas Based on Flood Affected Population and Prevalence of Wasting in Siraha District

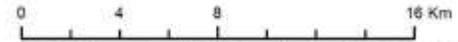
(update as of 17 August 2017)



Priority area

- Priority 1
- Priority 2
- Priority 3
- NA

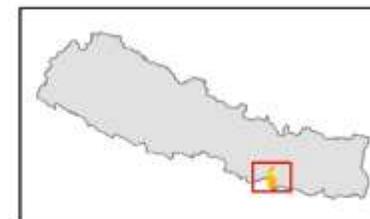
Priority	VDCs	Households	Population
1	13	1,500	7,600
2	90	13,800	69,900
3			
Total	103	15,300	77,500



Data sources: Satellite image from ICIMOD acquired on 11-13 August 2017
SAE CBS, WB, WFP, UNICEF 2014

Priority Areas Based on Flood Affected Population and Prevalence of Wasting in Mahottari District

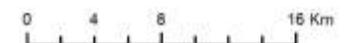
(update as of 17 August 2017)



Priority area

- Priority 1
- Priority 2
- Priority 3
- NA

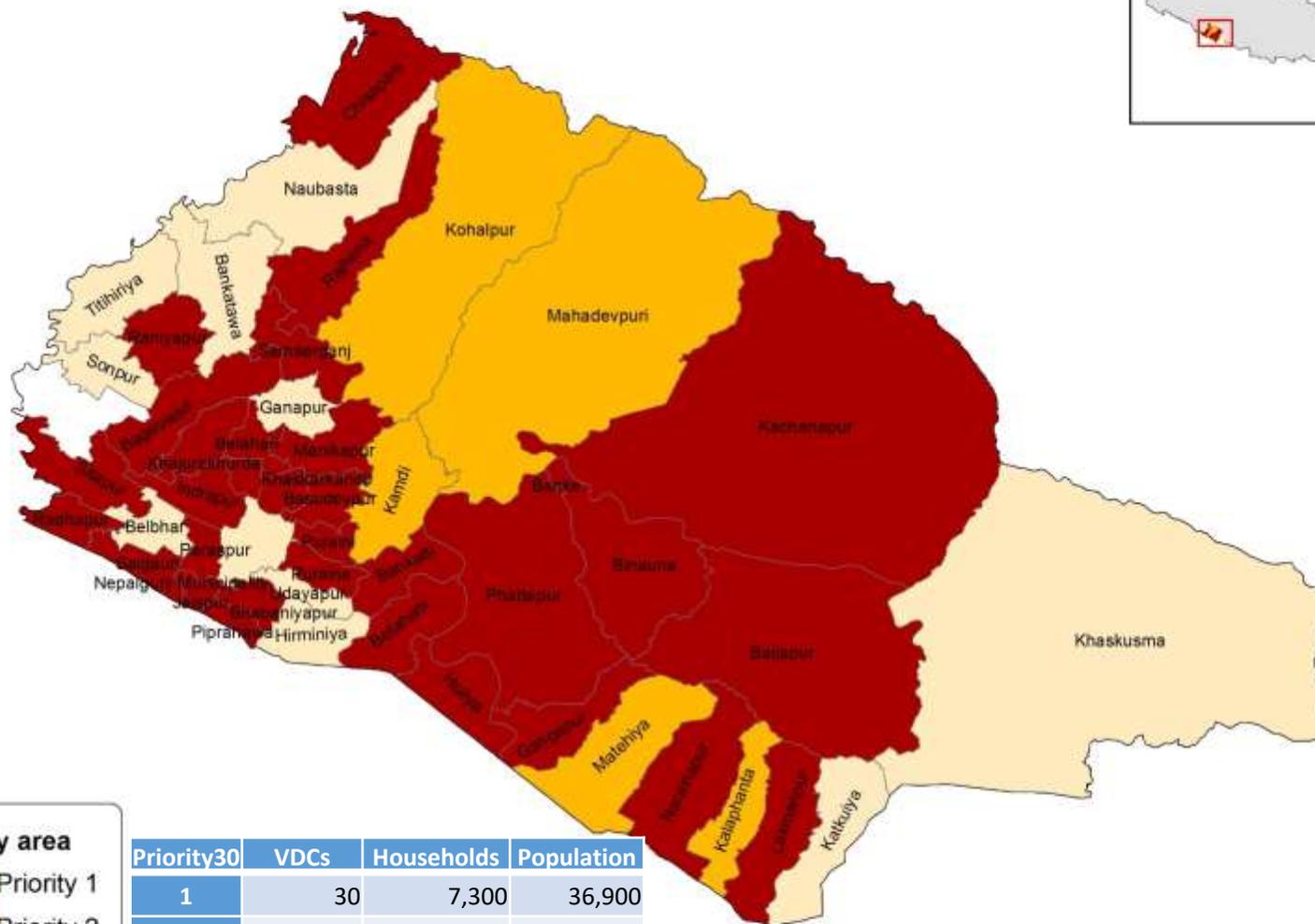
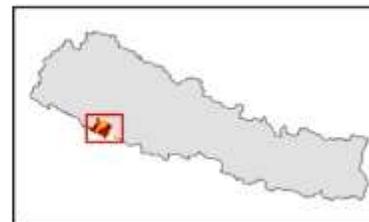
Priority	VDCs	Households	Population
1	3	800	3,900
2	64	16,700	84,700
3	5	400	2,100
Total	72	17,900	90,700



Data sources: Satellite image from ICIMOD acquired on 11-13 August 2017
SAE CBS, WB, WFP, UNICEF 2014

Priority Areas Based on Flood Affected Population and Prevalence of Wasting in Banke District

(update as of 17 August 2017)



Priority area

- Priority 1
- Priority 2
- Priority 3
- NA

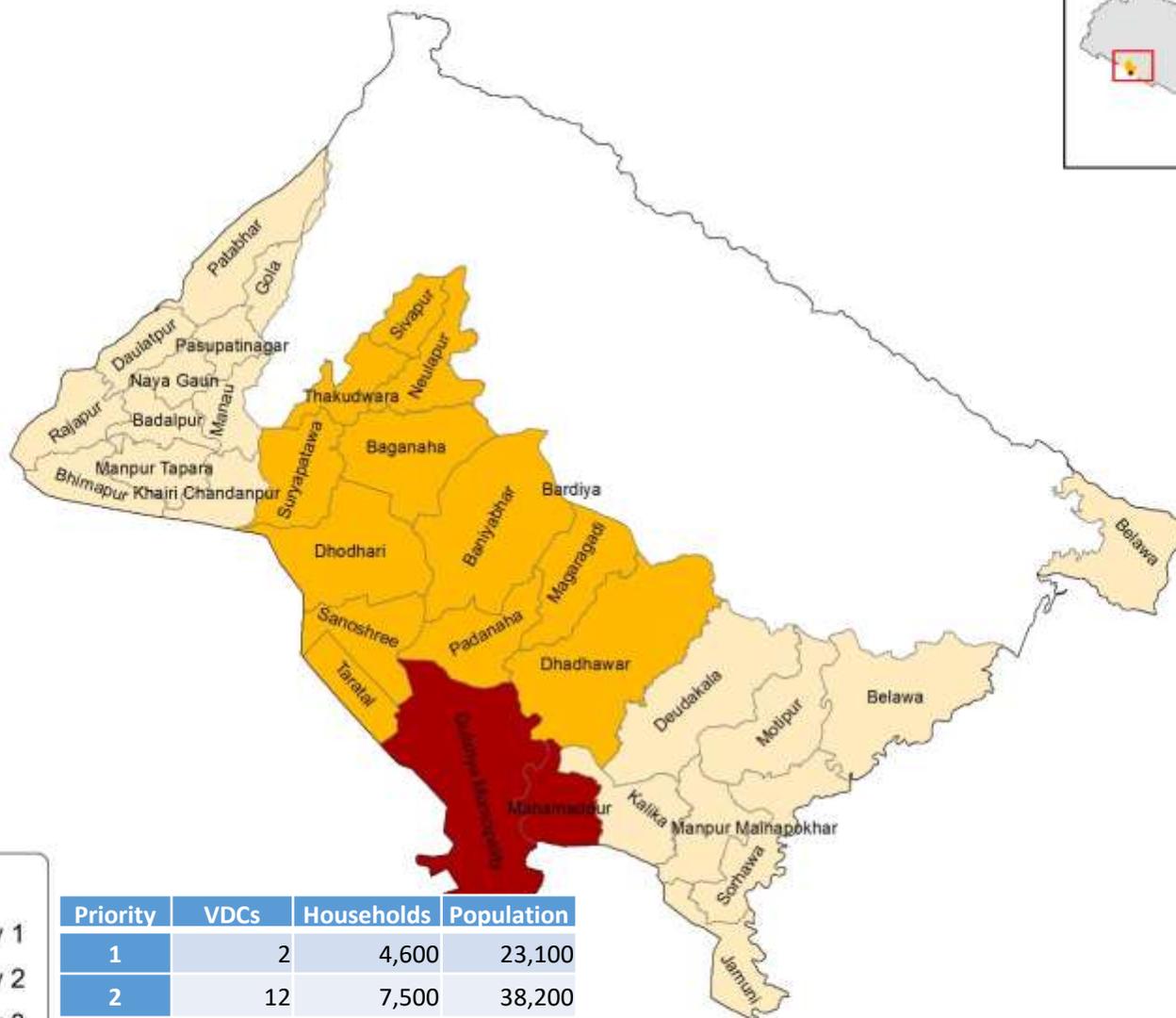
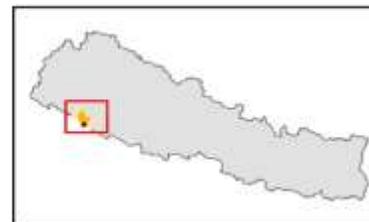
Priority	30	VDCs	Households	Population
1		30	7,300	36,900
2		5	1,400	7,300
3		11	800	3,800
Total		46	9,500	48,000



Data sources: Satellite image from ICIMOD acquired on 11-13 August 2017
SAE CBS, WB, WFP, UNICEF 2014

Priority Areas Based on Flood Affected Population and Prevalence of Wasting in Bardiya District

(update as of 17 August 2017)



Priority area

- Priority 1
- Priority 2
- Priority 3
- NA

Priority	VDCs	Households	Population
1	2	4,600	23,100
2	12	7,500	38,200
3	18	1,300	6,300
Total	32	13,400	67,600

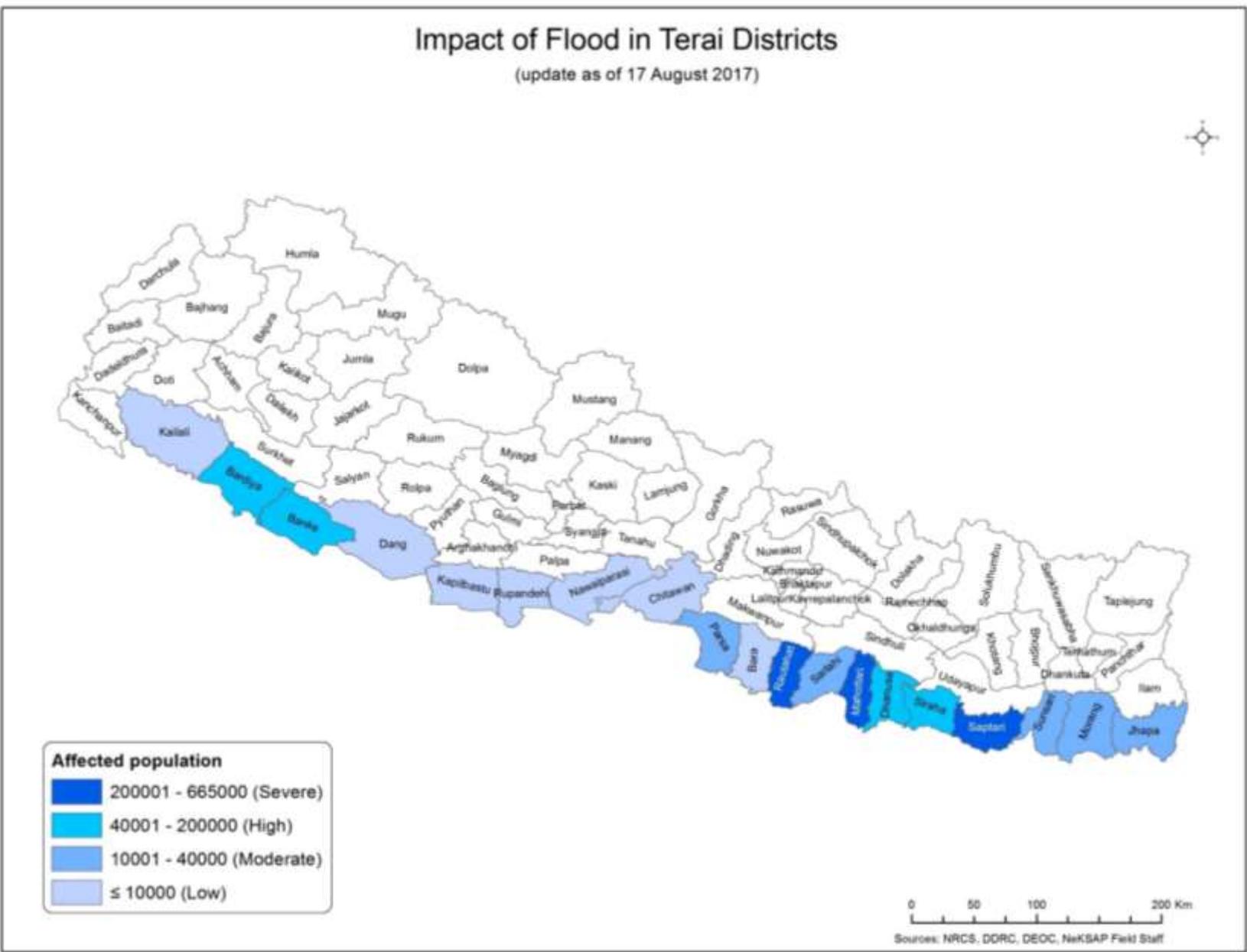


Data sources: Satellite image from ICIMOD acquired on 11-13 August 2017
SAE CBS, WB, WFP, UNICEF 2014

Annexes

Annex-1

Extent and severity of flood impact reported from the field



Annex-2

Casualties and damages of houses in flood affected *Terai* districts

SN	Districts	People			Houses damaged	
		Dead	Missing	Injured	Fully	Partially
1	Jhapa	12	3		521	1,166
2	Morang	9				
3	Sunsari	9			2,500	
4	Saptari	2				
5	Banke	3			262	5,900
6	Bardiya	3	1	4	2,173	8,962
7	Dang	5	1	2	174	305
8	Siraha				2,120	9280
9	Sarlahi	3	1		50	
10	Bara	2	1		7	
11	Rupandehi	1			13	
12	Kailali				251	107
13	Mahottari	4			347	3100
14	Chitwan				59	
15	Parsa	3	2	6		
16	Rautahat	4	1			
17	Kapilvastu					46
18	Nawalparasi				17	
19	Dhanusha	3			185	5
	Total	63	10	12	8,679	28,871

Source: NRCS, as of 17 August 2017; 17:00hrs

Displaced families

SN	District	Displaced families
1	Jhapa	1,169
2	Morang	2,751
3	Saptari	26,325
4	Siraha	2,170
5	Dhanusha	1,748
6	Sarlahi	260
7	Mahottari	3,142
8	Rautahat	20,000
9	Bara	1,508
10	Parsa	550
11	Chitwan	41
12	Dang	372
13	Banke	278
14	Bardiya	4,388
15	Kailali	2,219
Total		66,921

Inaccessible VDCs

SN	District	Inaccessible VDCs
1	Banke	9
2	Dhanusa	16
3	Kailali	1
4	Mahottari	13
5	Rautahat	22
6	Saptari	6
Total		67

Annex-3

Livelihoods, food security and nutrition

- **Chronic food insecurity** is higher with proportion of population at chronically level 2 and more at 50 percent; highest in far-western terai- at 82 percent
- **Stunting rates** are already high to very high : 29 to 42 percent (Figure 1)
- **Wasting rates** are also high to very high: 8- 26 percent (Figure 2)
- Cereal based agriculture, remittance and wage employment (especially in the industrial sector) are the major sources of livelihoods. Average landholding size ranges from 0.6 to 0.9 ha.
- Grain basket of the county. Wheat was recently harvested (in May). Hence, flood has swept away household food stock as well as market stocks. Next round of major crop harvest in November.
- MoAD has estimated **standing crop loss** at **USD 83 million**. Initial estimate suggest food stock damage worth USD 1.2 million in the eastern terai districts.

Rice stock in NFC warehouse located at Jhapa, Morang, Siraha, Dhanusa, Parsa, Rupandehi, Banke, Bardiya, Dhangadi, Surkhet, Kaski and Kathmandu is reported at **21,500 mt.** (As of 13 August, 2017)

Figure 1: Prevalence of stunting (% children < 5)

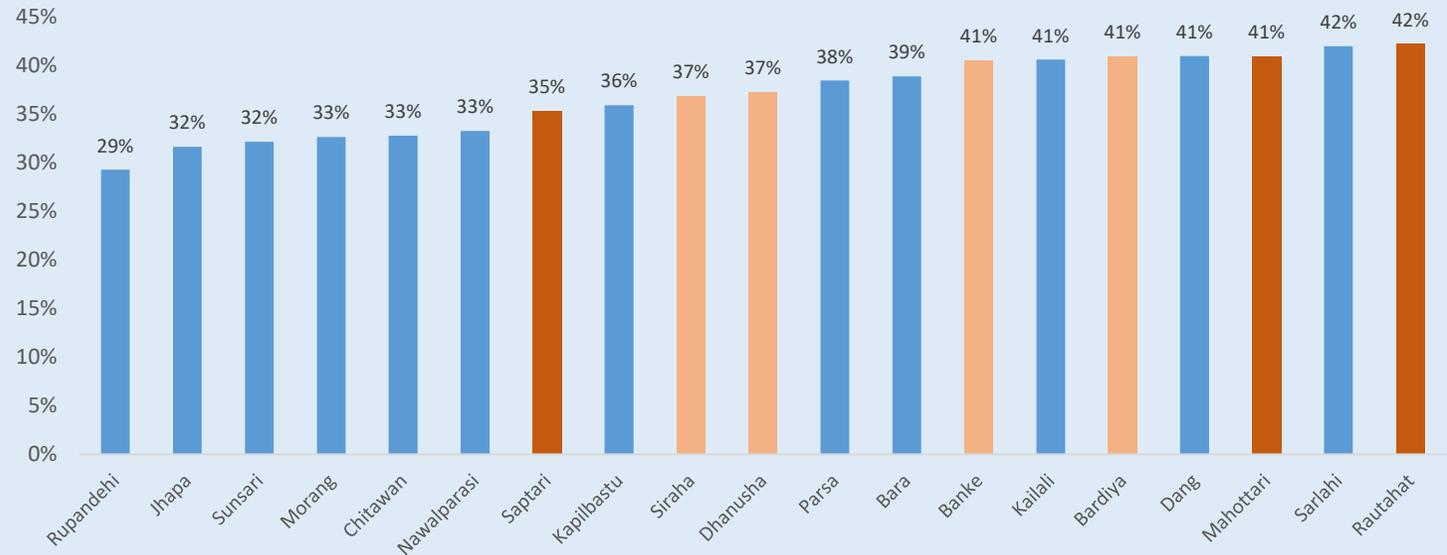
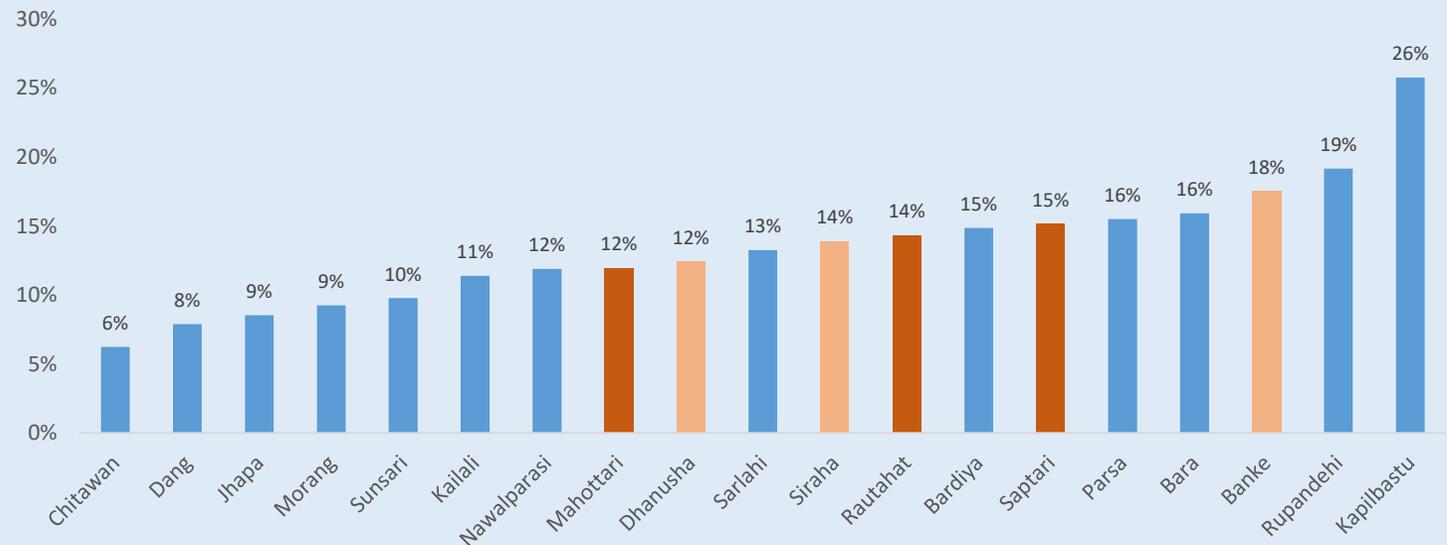


Figure 2: Prevalence of wasting (% children < 5)



Annex-4

Resilience profile

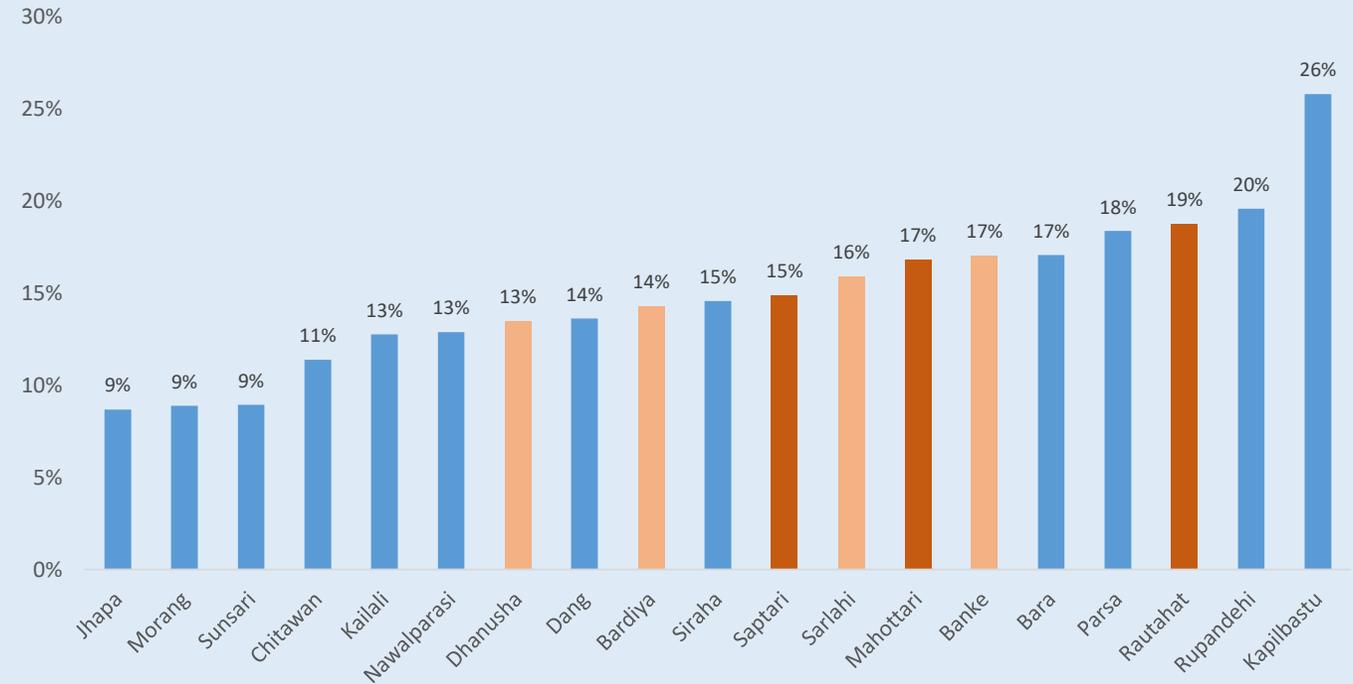
- Most of the districts are low in Human Development Index: **Rautahat, Mahottari, Saptari**, Sarlahi, **Siraha** and **Dhanusa** among the lowest 25 in terms of HDI
- Population living in poverty: more than 20 percent in Kailali, Kapilvastu, **Mahottari**, Bara, Bardiya, Dang, Parsa, **Rauthat**, and Sarlahi
- Housing structures are poor:
 - 60-70 percent in Jhapa, Morang, Sunsari, **Siraha, Saptari, Dhanusa, Mahottari**, Sarlahi, and **Rautahat**;
 - 50-60 percent in Bara and Parsa; and
 - 20-40 percent in Nawalparasi, **Banke, Bardiya** and Dang.
- Illiteracy among population >5 years is high:
 - More than 50 percent in **Mahottari**, Sarlahi and **Rautahat**;
 - 30-50 percent in Sunsari, **Saptari**, Siraha, Dhanusa, Bara, Parsa, Kapilvastu, **Banke, Bardiya**, and Kailali

Annex-5

WaSH

- More than 70 percent households use tube well/bored hole for drinking water
- Open defecation widely practiced in the flood affected areas:
 - Eastern terai- 43 percent
 - Central terai- 58 percent
 - Western terai- 30 percent
 - Mid-western terai- 19 percent
 - Far-western terai- 27 percent

Figure 3: Prevalence of diarrhoea (% children < 5)



Annex-6

District	Crop loss (NPR)
Parsa	276,100,000
Bara	2,325,400,000
Rautahat	464,800,000
Sarlahi	1,104,100,000
Dhanusa	944,800,000
Mahottari	1,394,200,000
Jhapa	123,200,000
Morang	322,500,000
Sunsari	336,900,000
Saptari	182,700,000
Siraha	478,200,000
Dang	14,700,000
Banke	119,100,000
Bardiya	245,100,000
Kailali	79,200,000
Rupandehi	6,700,000
Nawalparasi	19,300,000
Chitwan	22,200,000
Total (NPR)	8,459,200,000
Total (USD)	~ 83 million

Table 2: Standing crop loss in flood affected districts (Source: MoAD, 16 Aug)