Population Exposure

Heavy Rains in Haiti

April 2017

Prepared by

UNITAR-UNOSAT

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UNOSAT Contact:
Email: unosat@unitar.org
T: +41 22 767 4020 (UNOSAT Operations)
24/7 hotline: +41 75 411 4998

Postal Address:
UNITAR – UNOSAT, IEH
Chemin des Anémones 11,
CH-1219, Genève, Suisse

Situation Overview

Extreme rains falling in Sud Department of Haiti, from the 20th to the 23rd of April, 2017, have resulted in flash floods. Many areas that are still recovering from the devastation left by Hurricane Matthew in October 2016 have been affected as well as some areas in Jamaica and Cuba.

According to the Directorate of Civil Protection (DCP) in Haiti, 2 fatalities occurred in Port-Salut and Camp Perrin. Due to the rise of waters on the coast and in places inside the towns, evacuations have carried out in Port Salut where around 5,000 households were reportedly affected and in Maniche, where around 50 families have been displaced in temporary shelters in the national schools of Melon and Dory. Severe flooding was also reported in the city of Les Cayes.

In the coastal zone, traffic is interrupted due to the collapse of the Port Salut Bridge that connects the rest of the coast and the affection of some sections of roads particularly at Arniquet, Port Salut, Port a Piment and Saint Jean du Sud. Damage to agricultural and livestock have been also reported over areas already previously affected by Hurricane Matthew early October 2016 (FloodList).

This report provides a population per precipitation accumulation zone analysis over Haiti. The analysis was conducted according to the estimated precipitation accumulation data derived from the Global Precipitation Measurement (GPM) dataset of the last five days (20th to the 24th of April, 2017) at a spatial resolution of approximately 10km. The population data was derived from WorldPop.

According to our analysis precipitation levels over the last five days reached over 280 mm, which exceeds average precipitation levels of 131.9 mm according to The World Bank Group. Approximately 600,000 people in Haiti may be exposed to over 250 mm of precipitation and 5,500,000 people may be exposed to precipitation anomalies, values of precipitation above 150 mm, over the last five days.

The Sud Department is the one most affected by the precipitations with approximately 300,000 people may be exposed to over 250 mm of precipitation, followed by the Sud-Est Department.

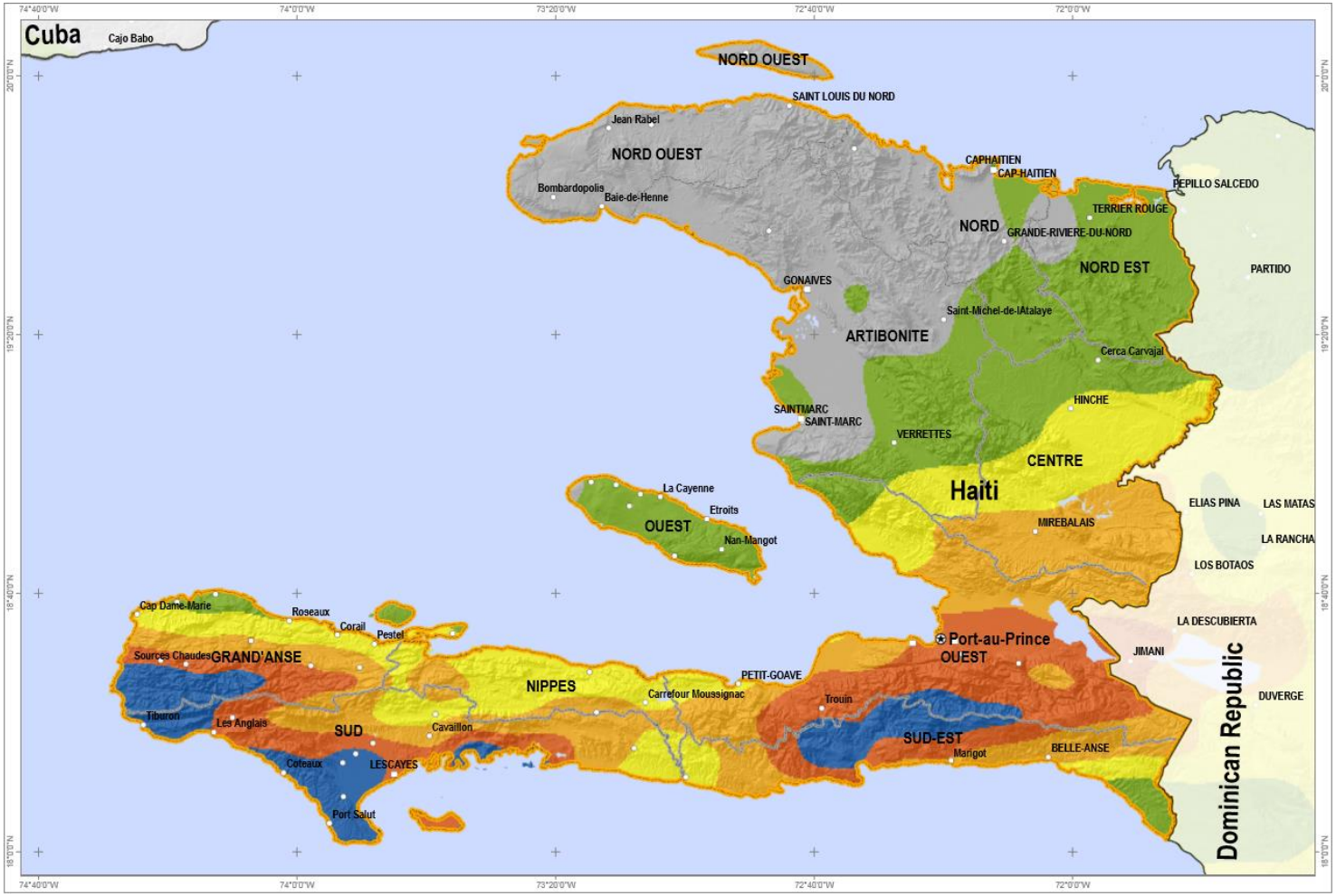
Population per Precipitation Accumulation Zone for Haiti

The following table provides a population per precipitation accumulation zone analysis over Haiti according to the estimated precipitation accumulation data derived from the Global Precipitation Measurement (GPM) dataset at a spatial resolution of approximately 10km. The precipitation data was recorded over the last five days from the 20th to the 24th of April, 2017. The population of the **Sud Department** is the **most exposed** to precipitation values above **250mm**.

Department	Prec ≤ 50 mm	50 < Prec ≤ 100 mm	100 < Prec ≤ 150 mm	150 < Prec ≤ 200 mm	200 < Prec ≤ 250 mm	Prec > 250 mm	Grand Total
Artibonite	1,237,692	321,660	61,818	688			1,621,858
Centre		171,556	216,006	289,766			677,327
Grande Anse		106,440	74,774	121,955	38,934	83,985	426,088
Nippes		18,117	183,511	106,543			308,171
Nord	674,706	356,609					1,031,316
Nord Est	26,836	340,336					367,172
Nord Ouest	663,213						663,213
Ouest	10	96,815	345,162	635,581	3,152,112	26,937	4,256,618
Sud			58,755	148,265	204,299	292,221	703,540
Sud-Est		21,014	70,851	144,128	157,890	184,830	578,713
Grand Total	**2,602,457**	**1,432,548**	**1,010,876**	**1,446,926**	**3,553,235**	**587,974**	**10,634,016**

The population exposure, summarized by Department, has been calculated using a 100 m resolution WorldPoP dataset.

This is a preliminary analysis & has not yet been validated in the field. Download the complete excel table of the population per precipitation Accumulation zones here.



Sources: *Administrative Levels - CNIGS, Population Data- WorldPop, Precipitation data: NASA*
Analysis: *UNITAR-UNOSAT (25/04/2017)*

The map is available to download here.

Population per Anomalous Precipitation Accumulation Zone for Sud Department, Haiti

The following table provides a population per anomalous precipitation accumulation zone analysis over Sud Department, Haiti, according to the estimated precipitation accumulation data derived from the Global Precipitation Measurement (GPM) dataset at a spatial resolution of approximately 10km and the average precipitation level of ~ 130 mm registered for the month of April according to The Wolrd Bank Group. The precipitation data was recorded over the last five days from the 20th to the 24th of April, 2017. Inside the Sud Department, the **most exposed communes** to precipitation anomalies, considering values of precipitation above **130 mm,** are: *Les Cayes, Aquin, Torbeck, St. Louis du Sud and Camp Perrin.*

Department / Commune	~130 < Prec ≤ 200 mm	200 < Prec ≤ 250 mm	Prec > 250 mm	Grand Total
Sud	**207,512**	**203,807**	**292,221**	**703,540**
Aquin	76,841	12,843	3,616	93,300
Arniquet			26,261	26,261
Camp Perrin	33,559	804	6,156	40,518
Cavaillon	29,848	14,007	8	43,863
Chantal	5,640	10,182	14,926	30,747
Chardonnieres	7,426	4,185	11,031	22,641
Coteaux	13	256	18,692	18,961
Ile A Vache		13,421	293	13,714
Les Anglais		6,123	20,790	26,914
Les Cayes	13,289	123,456	7,996	144,741
Maniche	21,692			21,692
Port-a-Piment	3,497	96	13,389	16,982
Port-Salut			16,959	16,959
Roche-A-Bateau		1,284	15,083	16,367
St. Jean du Sud			22,760	22,760
St. Louis du Sud	9,529	7,895	40,350	57,774
Tiburon			20,865	20,865
Torbeck	6,180	9,255	53,046	68,481

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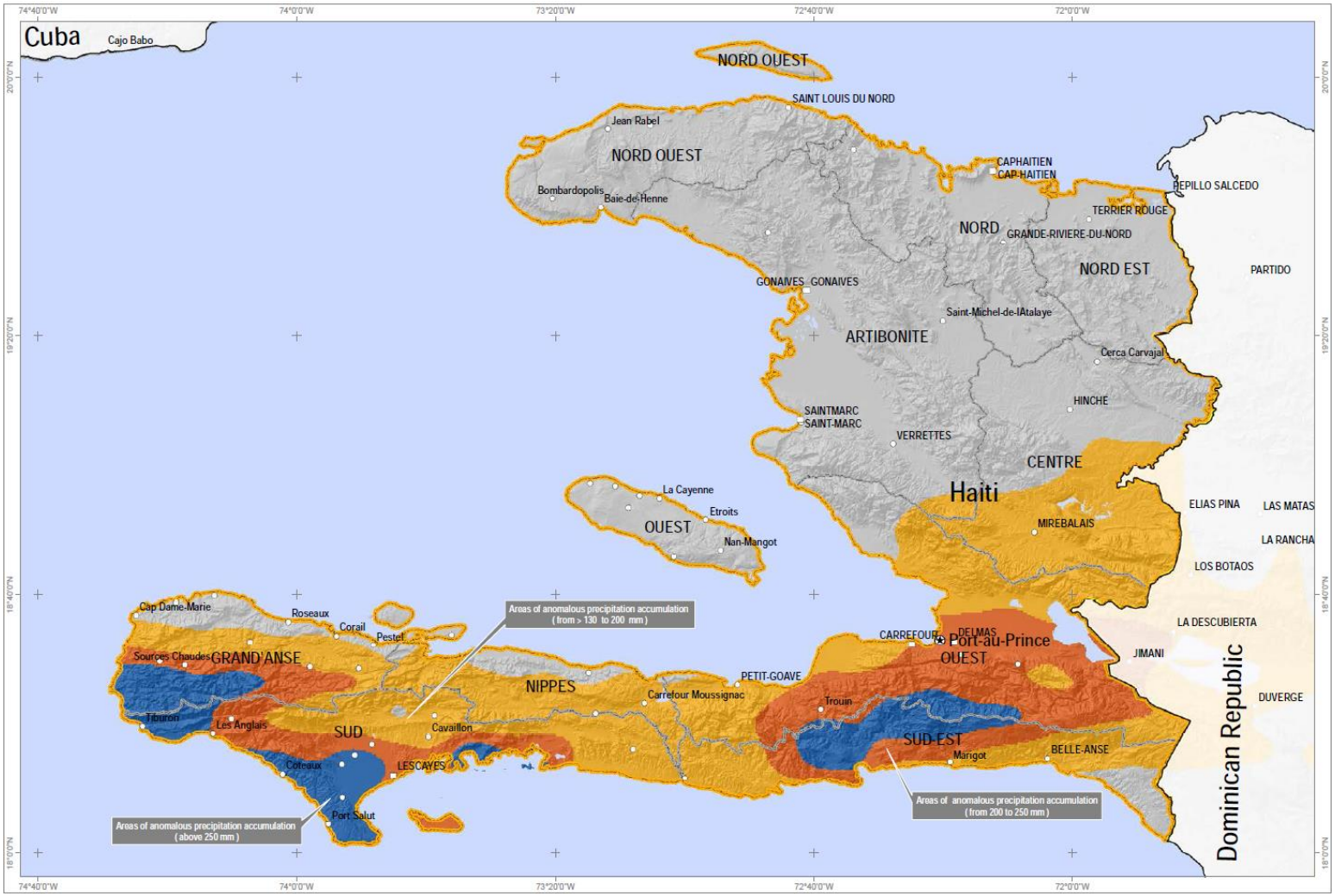

***Sources*:** Administrative Levels: OCHA, WFP / Precipitation data: NASA / Spatial demographic data: WorldPop (2015)
Analysis: UNITAR-UNOSAT (25/04/2017)

The map is available to download here

The analysis has not been verified in the field yet; please send your comments and feedback to unosat@unitar.org.

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