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## Flooding 2017 East Suriname

### Situation Analysis *23 February 2017*

#### I. Introduction

Since some weeks there have been relatively heavy rains in large parts of eastern Suriname, following a short dry season. Rainfall increased over the past two weeks with high peaks ranging from 84 to 189 mm. rainfall per day on 16 and 17 February 2017. This led to flooding of especially the Tapanahony and Marowijne rivers, partly or fully submerging various villages, their agricultural plots and other surrounding lands. The following areas are most affected:

- Region between Armina Falls and Pedrosungu Falls in the Marowijne River, known as the Paramaccan Region, affecting approx. 2000 persons
- Region between Pedrosungu Falls in the Tapanahony River and the East border of Suriname with Brazil, in the water basins of the Tapanahony and Lawa Rivers, known as Upper Tapanahony Region, affecting a population of approx. 3000 persons.

Although the situation is not as alarming as during the flood emergency situation of May/June 2006 or June 2008, it can still be concluded, based on the available information, that there is a relatively localized but still critical situation with far reaching impact on the local population. This will be further elaborated upon in following sections of this report.

#### II. Methodology

The following information sources and methods have been utilized in preparing the current report:

1. NCCR Situation Analysis of 18 February 2017 as reported to the Government of Suriname;
2. Observations and reports from: the Minister of Regional Development who was coincidentally visiting that area in those days; the District Commissioners and their local departments (*Bestuursdienst*) of the affected districts (Marowijne and Sipaliwini); local military posts; various other government ministries that have outposts in the districts including the Ministries of Education, Health, Agriculture and Social Affairs; the Medical Mission; and various NGOs;
3. Helicopter inspection flights over the affected areas;
4. Information received from inhabitants or visitors from the affected areas;
5. Analysis of daily field reports and updates, among others from the Meteorological Service and the Aviation Service.

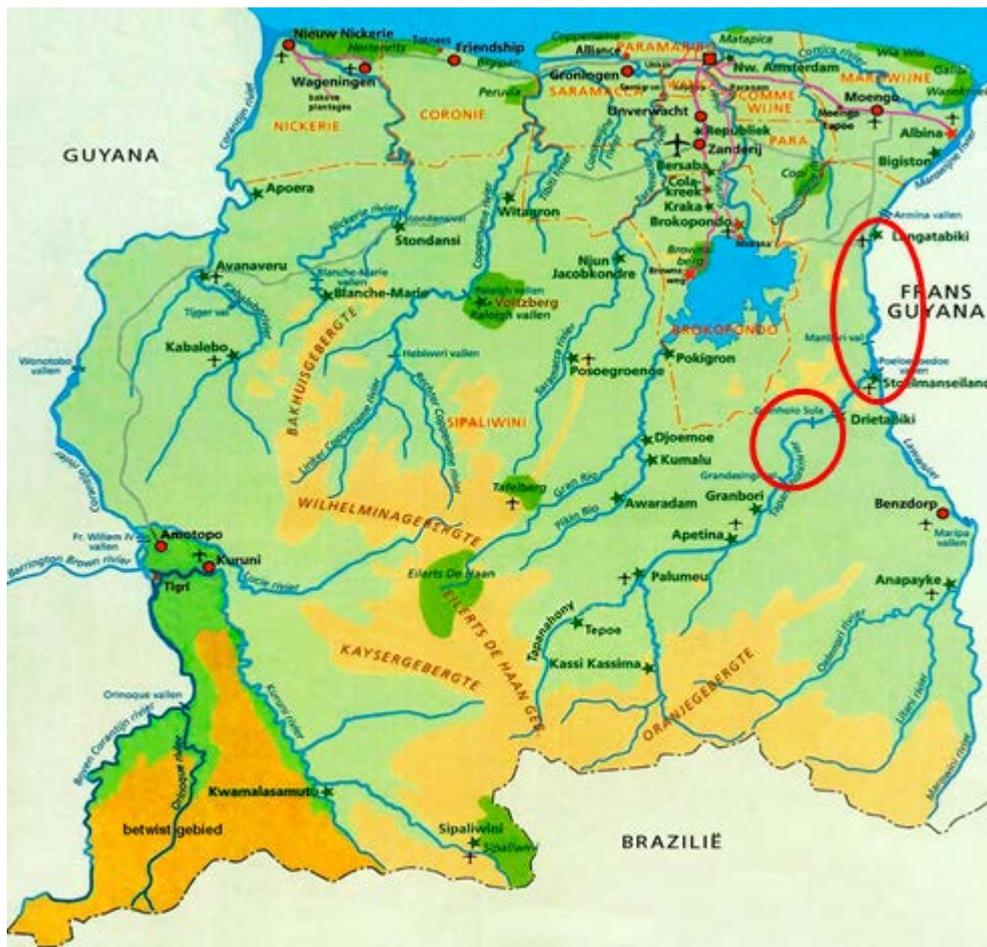
#### III. Current situation

### a. Affected areas

The areas affected are in the eastern part of Suriname, more in particular the Paramacca and Tapanahony Resorts in the district of Sipaliwini. In terms of human population, the following numbers have been affected to-date:

Area	Approximate total population	Percentage of (temporarily) displaced population	Areas mostly affected	Nr. of population heavily affected
Paramacca region	2,000	60%	Ampomatapu	1,200
Tapanahony region	3,000	30%	Loka Loka, Tabiki Ede, Nason	900
Lawa	3,800	0%	Diitabiki, Cottica aan de Lawa, Kawemhaken, Kumakapan, Granbori, Apetina, Palumeu, Tepu	
Total	8,800	24%		2,100

In total, almost 1300 families within the Paramacca and Tapanahony region are heavily affected. Many families were displaced and moved on their own initiative to higher grounds or to family in other villages,



but are currently returning to their homesteads.

## b. Damage by sector

- Stone buildings suffering water damage: Polyclinics, schools, shops, storage rooms, powerhouses, workshops, libraries, residential houses, tourist resorts, sawmills
- Wooden or forest material buildings suffering water damage: residential houses, temporary camps, tourist resorts, krutu osos (community halls), spiritual places
- Roads: walkways between villages
- Local ports/and harbors (*aanmeersteigers*): many local river ports in all villages
- Airstrips (situation can change daily depending on weather circumstances):
  - a. Functional: Apetina, Tepu, Palumeu
  - b. Restricted functional: Diitabiki, Poeketi
  - c. Not in operation: Amatopo, Langatabiki
- Telecommunication:
  - a. Telesur connected areas: Diitabiki Pamboko: functional
  - b. Two-way radios: Medical Mission, PAS, VIDS, VSG, ACT: all functional
  - c. Two-way radios via 120 Telesur: all functional
  - d. Cellular (mobile) connection: Langatabiki (GSM), Tepu (GSM): all functional.
- Electricity: Limited functionality due to non-availability of fuel for the energy generators
- Livestock:
  - a. Home-based poultry livestock affected in villages: 40%
  - b. Agricultural plots: 70%
  - c. Fishing: 40% (among others due to increased erosion)
- Household equipment (stoves, apparels, pots and pans etc.): 30%

## c. Effects on population

- Confirmed deaths: none
- Injured: none
- Displaced (temporarily): 2,100

## d. Classification

Based on the following criteria a classification of the situation in the various areas has been made:

- Threat to life
- Food situation
- Drinking water
- Shelter
- Health
- Education
- Economic activities

A classification, using these criteria, can be made of the situation as follows:

Normal	
Stable or early recovery	
Alert	
Strict monitoring	
Critical	
Chaos, emergency	

Status per 23 February 2017

Area	Threats to life	Food situation	Drinking water	Shelter	Health	Education	Economic activities		PHASE
Paramacca									Critical
Tapanahony									Critical
Lawa									Strict monitoring

#### IV. Projected evolution/Secondary threats

##### a. Key assumptions

A scenario analysis has been done and decided to go with the 'low intensity' scenario (the scenarios ranged from 'best case scenario' in which the rains would stop and the water level subsiding fast; to the 'worst case scenario' with continued heavy rainfall causing increasingly more villages to be submerged, with casualties). In this scenario, rains will continue but decreasing, causing the water to subside gradually over a period of approximately one week, while emergency assistance measures take place.

##### b. Specific threats:

- a. Seasonal/climate: Prolonged flooding and/or further flooding are not expected over the next weeks. Meteorological reports do not predict abnormal rainfall within the next few days. Prolonged submerged agricultural plots will however, lead to further threats to the food situation given the fact that the affected communities have a rather limited food security.
- b. Food security: The food security, including in the longer term, is significantly affected due to the fact that the normal agricultural crops of the villagers, such as cassava, napi and sweet potato, have been heavily affected by prolonged submerging of the land. Similarly, fish-catch is limited due to heavy erosion and pollution of the rivers.
- c. Population movements expected depending on further flooding. Many villagers are already returning back to their original houses. Organized evacuation (in addition to the spontaneous evacuation of community members to other families in their villages) is currently not considered
- d. Medical secondary threats: No secondary medical threats expected although health authorities including from the Medical Mission are carefully monitoring the situation, especially with regard to potential outbreaks of diarrheal diseases due to the flood water, which also flooded the sanitary provisions in the yards and garbage disposal sites nearby residential areas
- e. Education:
  - Marowijne river area: 5/5 schools functioning
  - Tapanahony river area: 8/3 schools functioning
- f. Psychosocial consequences: Disrupted social and family life; food insecurity
- g. Economic consequences:
  - Damaged tourism facilities
  - Reduced employment opportunities
  - Reduced supply services for tourists
  - Food supplies
  - Damaged micro enterprises (especially women entrepreneurs)
  - Damaged commercial agriculture and artisanal gold-mining facilities
- h. Limited functionality of roads and airstrips.

## V. NATIONAL RESPONSE

### *a. Organization*

Authority responsible for overall direction: Ministerial monitoring team, established by President of Suriname, consisting of the Ministers of: Regional Development (lead minister), Health, Defense, Trade and Industry, and Education, where needed supported by the Ministers of Foreign Affairs and Natural Resources. The coordinating structure for all relief operations is the *Nationaal Coördinatie Centrum voor Rampenbeheersing* (NCCR; National Coordination Center for Disaster Control), operating from the NCCR Crisis Center. The Crisis Center works in close cooperation with the District Commissioners of the Paramacca and Tapanahony Ressorts. Coordinating meetings are held daily with all main coordinating and support organizations.

Focal point for international assistance: Ministry of Foreign Affairs. Focal point for media relations: Cabinet of the President.

### *b. Administrative measures*

Affected areas have not been announced as 'Disaster Areas' but continuous monitoring systems are in place. The President will, however, call upon international assistance if deemed necessary.

### *c. Operations*

Spontaneous evacuations have taken place in various villages, particularly in Ampomatapu, Loka Loka, Tabiki Ede and Nason. Many villages are awaiting emergency goods including tarpaulins, water storage tanks and food. Assessment operations are ongoing by NCCR and the District Commissioners, in coordination with the National Army, Medical Mission, traditional authorities and other actors. No 'search and rescue' actions planned.

Distribution of emergency food and water supplies has started since 20 February by NCCR and the Ministry of Regional Development/District Commissioners. Transport is done by boat and difficult because of the bad condition (due to continued rainfall) of airstrips and absence of roads to the affected areas. Air transport is restricted due to unavailability of landing strips which have been submerged. Water transport is available using boats of local inhabitants.

Relief items: The assessment of relief needs continues to be undertaken. The NCCR has been assigned for receiving relief funds and relief items. Allocation of emergency funds is done by the NCCR. Media relations are handled centrally by the Cabinet of the President.

### *d. Constraints*

- Lack of immediate funds in particular for food, water, sanitation, emergency housing, transport, communication
- Lack of local skilled and knowledgeable expertise for early recovery and rehabilitation planning (including corresponding assessments) and coordination
- Significant cultural and traditional customs and beliefs to be taken into account
- Lack of measurement equipment, satellite imaging and (hydrological) models

## VI. COUNTRY LEVEL EMERGENCY ASSISTANCE

### *a. Resources mobilized/contributed locally*

The Government has established an Emergency Fund for “*Operatie Hey Watra*” (Operation High Waters) in the amount of SRD 750,000 (approximately USD 100,000), to be overseen by the Ministers of Regional Development and Trade and Industry, and NCCR. Various private sector companies have offered assistance, including mining multinationals (Suralco, Newmont, IamGold), the Suriname Chamber of Commerce (KKF), fuel and other companies.

### *b. Coordination*

- The Government has established a Coordination Team composed of the Ministers of: Regional Development (Team Leader), Defense, Trade and Industry, Health and Education. The Coordination Team takes policy decisions and is the link with the President, Vice-President and the rest of the Government.
- Overall operational coordination of the crisis response is with the Nationaal Coördinatie Centrum voor Rampenbeheersing (NCCR, National Coordination Center for Disaster Control). The NCCR is in continuous coordination with the District Commissioners, National Army and other services, and has daily coordination contacts, either through formal meetings or by telephone, with involved actors.

### *c. Constraints*

- None (yet), depending on the assessment of severity and need for international assistance.

## VII. REQUIREMENTS FOR INTERNATIONAL ASSISTANCE

### *a. Government requests*

No government request has been made to-date to request international (financial) assistance.

### *b. Priority needs*

- Immediate funds in particular for:
  - Food
  - Water
  - Repair materials for damaged houses
  - Transport/fuel (locally)
  - Health and sanitation facilities
  - Cleaning materials
  - Transport of emergency supplies to the affected areas
- Skilled personnel in the coordination center
- Local expertise for coordination and information distribution and for early recovery and rehabilitation planning (including corresponding assessments)

### *c. Assistance/items that are not needed*

- Unknown food items

- Odd or old clothing
- Disaster tourists

## **VIII. CHANNELS FOR DELIVERY OF INTERNATIONAL AID**

### *a. Cash contributions*

Cash contributions can be provided to:

- Operatie Hey Watra - Bank account details:

### *b. In-kind contributions*

- Food and water: inleveren bij: KKF
- Clothing: inleveren bij:
- Foreign donations: inleveren bij:
- Volunteers: aanmelden bij:
- Storage facilities: inleveren bij:

## **IX. INTERNATIONAL PLEDGES AND CONTRIBUTIONS**

- None, so far.

## **X. OTHER INFORMATION**

### *a. Emergency center contact*

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### *b. Expected date of next report*

Monday 27 February 2017