

## ***BELIZE: HURRICANE KEITH***

*16 October 2000*

*appeal no. 29/2000*

*situation report no. 1*

*period covered: 7 - 15 October 2000*

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*On 6 October a preliminary appeal was issued for Belize: Hurricane Keith. This is now confirmed as a full appeal. The major concerns are the serious conditions resulting from water inundation and the consequent problems with destroyed wells, polluted water sources and attendant health issues. The Belize Red Cross Society, (BRCS) supported by the Federation, is actively involved in assessments and distribution of assistance to affected communities, particularly those who are isolated by the flood waters in rural areas. As the waters recede in the coming weeks, re-evaluation of these problems will become possible and activity and budget revisions will be made accordingly.*

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### ***The context***

Tropical Storm Keith crossed from the Caribbean on Friday 29 September, developing into a Category 4 hurricane, dropping huge amounts of rain and causing significant flood damage across Belize and the Yucatan Peninsula in Mexico. The Belize government declared a state of emergency on Monday 2 October and requested international assistance. Effects of the hurricane also caused flooding in Nicaragua, Panama, Costa Rica, El Salvador and Venezuela. The Belize Red Cross Society and the Federation initially identified approximately 10,000 people in rural Belize as the most vulnerable who are suffering from the effects of Keith and the subsequent flooding. This represents 4% of the total population. Government figures estimate that 100,000 people, or 40% of the population, will be affected overall, particularly as a result of the growing health hazards. While in absolute terms the total number affected is relatively small, in a country with 240,000 people, the impact is significant.

## *Latest events*

The Belize government's National Emergency Management Organisation (NEMO) released a preliminary damage and needs assessment report on Wednesday 11 October, estimating the direct cost of the damage at Belize dollars 523 million (USD 261.5 million). The agricultural and tourism sectors have been particularly affected. It is clear from reports received from additional assessment missions carried out by the National Society that the situation in the flooded agricultural areas in the Rio Hondo, Belize river and New River basins remains serious. Continuous heavy rain is aggravating the ground conditions and adding to the rising flood waters. Much of the northern part of the country resembles a lake with houses feet deep in water and submerged wells, resulting in respiratory diseases and skin infections which are on the increase. There is extensive damage to infrastructure and tens of thousands of persons, most of them dependent on subsistence and commercial agriculture, are displaced. The continuous flooding of the districts of Corozal, Belize and Orange Walk and the contamination of the water supply have increased the risk of vectors and outbreaks of communicable diseases.

### *Flood Situation*

The districts of Orange Walk, Belize and Corozal are suffering from extensive flooding which continues to increase and therefore seriously threatens the safety of the local communities along the banks of the Belize River, New River and Rio Hondo. These areas are also the most productive, hence losses in agriculture estimated at USD 38 million.

Belize River valley:

- The initial crest has reached Flowers Bank creating a long lasting maximum level.
- Water has risen to the level of the clinic in centre of Crooked Tree and is still rising.
- In many places the water level is at the 6.3m mark, a rise of 5.8m above normal, surpassing previously recorded high water levels.
- It appears that the Belize River system is now overflowing north into the New River.

Orange Walk district:

- Flooding of the New River was unexpected and is creating difficulties for towns in Orange Walk including Guinea Grass, Caledonia, and San Sebastian; the main road at Tower Hill bridge is also flooded and only large vehicles can pass.
- The Rio Hondo continues to rise north (downstream) of Blue Creek.
- The villages of San Antonio, San Roman and Santa Cruz on Albion Island are cut off.
- The approach road to the Albion Island area, 6 miles in length, has an estimated 3 miles under water.
- The town of Douglas is flooded with road access possible only as far as the eastern edge of town.
- Concerns have been expressed that Rio Bravo and Booth's river floodwaters have yet to enter the Rio Hondo.

**Damage Assessments to date**

**References: Belize Government/BRCS/Federation/ American RC/OCHA/PAHO field reports**

<b>DISTRICT</b>	<b>LOCATION</b>	<b>ASSESSMENT REPORT</b>
<b>Corozal</b>	District Reports	23 villages affected (1,200 people) and in need of food and support. BRCS branch volunteers operating in countryside. BRCS/Federation/Amcross damage assessments carried out. Needs and damage assessments were carried out in the district in co-ordination with Federation delegates. Reports of diarrhoea, coughs, colds and food poisoning; first aid supplies provided. People are leaving the shelters.
	Sartenja	Limited damage and some minor health concerns.
	Chunox	52 homeless, cases of respiratory infections in children. Well contaminated - people are using rainwater for drinking water.
	Little Belize	Roads are flooded, cases of respiratory infections in children.
	Progreso	Some flooding and crop damage and respiratory infections
	Copper Bank	Flooding, boats damaged and cases of respiratory infections.
	San Victor	Flooded areas and well contamination.
	Santa Clara	Homes and land flooded and water continuing to rise.
	San Román/San Antonio/Santa Cruz	Wells contaminated, water rising Douglas town evacuated.
<b>Cayo</b>	District Reports	4 shelters accommodating over 1,000 persons, 1,400 meals for 2 days, first aid assistance provided.
	Belmopan	28 Red Cross volunteers working in 9 of the 18 shelters, housing 3,800 persons. People are leaving shelters. Distribution of 260 meals, first aid assistance provided.
<b>Orange Walk</b>		Total of 1,900 persons evacuated from villages (NEMO) Treatment administered for fever, upper respiratory tract infections, diarrhoea and ear infections Blankets / medication distributed Blue Creek reports severe flooding with major agricultural damage Louisiana and San Roman water is rising rapidly.
<b>San Pedro, Ambergris Caye and Cay Caulker</b>		Full details still coming in but extensive structural damage (up to 90%) No electricity or phone service available BRCS now en route to San Pedro.
<b>Belize City and Belize district</b>		Detailed registration of numbers in shelters under way. Extensive house flooding and damage Flooding on two major city highways .

## ***Red Cross/Red Crescent action***

The Belize Red Cross Society requested immediate assistance from the Regional Delegations in Santo Domingo and Guatemala. A five person Federation Regional Intervention Team (RIT) was despatched and arrived in Belize on 2 October. An American Red Cross team also reached Belize to provide support to the relief operation. Further joint assessment missions with these two teams and the BRCS have been underway to clarify the situation in the more remote areas.

### *Belize District*

The Belize Red Cross has accepted the responsibility for co-ordinating all food distributions in Belize district and four remote and isolated villages in Orange Walk district. The BRCS will be involved in providing food and supplies for approximately 25 villages for periods ranging from 2 weeks to three months as the flood subsides. The following has been achieved:

- Food distribution to 8 communities in Belize River valley was carried out with the assistance of Federation delegates.
- The BRCS president, accompanied by national executive committee (NEC) members and Federation delegates visited Crooked Tree area. Approximately 1,000 residents' houses have been completely flooded, leaving them isolated. This community will need distributions of food and water as soon as possible, together with medical and psycho social support..
- The Federation water and sanitation delegate, together with the BRCS and MSF representatives, visited Belize River communities with the Ministry of Health team on 10 October.

### *Orange Walk*

- Orange Walk branch is distributing food to Rio Hondo communities and providing support to evacuees in homes and shelters in Orange Walk.
- The BRCS headquarters is providing support to the branch for procurement and distribution.
- Federation delegates visited the Corazal area on the lower Rio Hondo. Reports state that rains continue and the situation is deteriorating.
- The Orange Walk branch of the BRCS is providing support to evacuees and to communities of Guinea Grass and Santa Marta. Packing of relief supplies and distribution have continued throughout the week. Volunteers have also come forward from the boy scouts. Reports indicate an almost total crop loss in Mennonite communities in Blue Creek and that farmers are beginning to slaughter cattle. These communities have indicated that they will need preferential loans once the flooding has subsided.
- The Deputy Prime Minister, NEMO and the BRCS/Federation/American Red Cross team made a temporary assessment of the situation and the needs in the evacuated village of Douglas and in the isolated villages San Antonio, San Roman and Santa Cruz along the Rio Hondo.
- Douglas is reported to have been totally evacuated and families are housed in neighbouring communities. Access to Douglas from the edge of the town is by boat only.
- Access to San Antonio, San Roman and Santa Cruz is by wooden boats with outboards since the road is flooded. San Antonio bridge is completely submerged.
- In San Antonio the water has risen to the police station. The chairman of the village council reports that residents are suffering from rashes, skin disease and respiratory ailments. A Ministry of Health inspector was present in the village conducting water tests and warning villagers of the hazards of using the flood water. He reported well contamination in San Antonio and Santa Cruz and NEMO is seeking a solution via a new water source in San Antonio, as well as distributing Chlorox.

- Santa Cruz has a rain water catchment system that is being threatened by rising water and will need an alternative water source in the near future.
- All residents and officials report that this flood far surpasses previous floods and that water will not recede for over a month. Sugar Cane, rice and other subsistence crops (corn, vegetables) are completely inundated. Residents noted the need for agricultural support after the flood.

### **Drinking water**

There are serious concerns regarding both current and future safe drinking water supplies. Each community has a slightly different situation. While there is overall contamination of wells throughout the flooded areas, certain communities such as San Antonio, have access to alternative sources as a result of topography. Other communities such as San Román have water catchment systems. The solutions will need to be provided to each community on a case by case basis and, given the widely dispersed population, this will be a complex task. In communities where reliance is on the river and on wells there will be a need for distribution of water. Census figures will be given to NEMO by the village councils, taking into consideration the number of flooded houses, persons evacuated and persons in need of support.

### **Health**

A rapid health assessment report from the Ministry of Health, with support from the Pan American Health Organisation (PAHO), was made available on Friday 13 October. The main conclusions are that the islands and cayes along the coast are not at high risk. The biggest challenge remains inland given the extensive flooding and isolation of rural communities as an estimated 55,182 people, 20% of the total population, are at high risk of outbreaks of disease, particularly the 13,460 persons isolated by contaminated water masses in the rural areas of the Orange Walk, Belize and Corozal districts. Pit latrines and wells have been flooded creating immediate and long term health hazards. Safe drinking water is a critical issue, and there is a high risk of water and vector borne diseases: dengue fever, typhoid, malaria, cholera, gastro-enteritis, leptospirosis, chagas and hepatitis A - already endemic in the country. A particular concern is the possibility of outbreaks of haemorrhagic dengue fever which has been present in El Salvador and has been reported on the Belize border recently. The health care system in Belize is unprepared to address an eventual outbreak. Cases of vomiting, diarrhoea, food poisoning and minor injuries are increasing daily, particular amongst children, as those affected deal with the rising flood waters.

## ***Outstanding needs***

**Funds/In kind:** early interest in response to the appeal has come from the American Red Cross through the relief team, together with contributions from the American, Spanish, Icelandic and German Red Cross Societies. The British, Swiss, Norwegian and Swedish Red Cross Societies and ECHO are reviewing support. There is an urgent need to confirm potential contributions.

## ***External relations - Government/UN/NGOs/Media***

NEMO called all local NGOs to a co-ordination meeting on Thursday 12 October, and suggested that the Belize Red Cross assume responsibility for co-ordinating food assistance in Belize district. The Belize Red Cross/Federation team is co-ordinating measures with the national water and sanitation authorities, and a co-ordination meeting with the Ministry of Health is planned on Monday 16 October. The Federation team co-ordinated an informal meeting of international NGOs including MSF, OXFAM and the CRS, and also met with PAHO.

## *Contributions*

See Annex 1 for details.

A Disaster Relief Emergency Fund (DREF) contribution of CHF 120,000 was released. The Spanish Red Cross contributed USD 30,000 directly to the National Society in support of the appeal.

The American Red Cross has contributed USD 28,500 to the Belize Red Cross Society to support the relief operation, together with 4,080 family hygiene kits for 8,160 people. In partnership with the Latter Day Saints (LDS), the American Red Cross is mobilising, 2,700 family food packages worth approximately USD 60,000 and a donation of USD 30,000 has been provided from the LDS for local procurement of family relief items.

## *Conclusion*

Continuous heavy rain has compounded problems caused by hurricane Keith. Health and water supply problems are considered serious and final analysis of the damage will depend on the speed with which the flood waters fall. Given the small population of the country, this is a major disaster for Belize. The Federation is well positioned to render assistance and donors are asked to continue to support the Red Cross action to come to the aid of the most vulnerable affected by the floods.

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**This and other reports on Federation operations are available on the Federation's website: <http://www.ifrc.org>**

<b>Hurricane Keith: Belize</b>						ANNEX 1
<b>APPEAL No. 29/2000</b>		<b>PLEDGES RECEIVED</b>			10/16/00	
DONOR	CATEGORY	QUANTITY	UNIT	VALUE CHF	DATE	COMMENT
<b>CASH</b>						
REQUESTED IN APPEAL CHF ----->				<b>2,022,472</b>		<b>TOTAL COVERAGE 17.5%</b>
AMERICAN - RC		28,500	USD	50,544	16.10.00	DIRECT CONTRIBUTION TO BELIZE RC
AMERICAN - RC		7,500	USD	13,301	16.10.00	IRT TEAM ASSISTANCE, DIRECT TO BELIZE RC
AMERICAN - PRIVATE (LDS)		30,000	USD	53,205	16.10.00	DIRECT CONTRIBUTION TO BELIZE RC
ICELANDIC - RC		200,000	ISK	4,235	11.10.00	
SPANISH - RC		30,000	USD	53,205	06.10.00	DONATION DIRECT TO BELIZE RC
<b>SUB/TOTAL RECEIVED IN CASH</b>				174,490	CHF	8.6%
<b>KIND AND SERVICES (INCLUDING PERSONNEL)</b>						
DONOR	CATEGORY	QUANTITY	UNIT	VALUE CHF	DATE	COMMENT
AMERICAN - RC		81,000	USD	143,653	16.10.00	2'700 FOOD PARCELS AND 4'080 HYGIENE KITS, DIRECT DONATION TO BELIZE RC
NORWAY RC	DELEGATE			10,000	10/13/00	HEALTH DELEGATE
SPAIN RC	DELEGATE			15,000	10/13/00	RELIEF DELEGATE
SWEDEN RC	DELEGATE			10,000	10/13/00	TEAM LEADER
<b>SUB/TOTAL RECEIVED IN KIND/SERVICES</b>				178,653	CHF	8.8%
<b>ADDITIONAL TO APPEAL BUDGET</b>						
DONOR	CATEGORY	QUANTITY	UNIT	VALUE CHF	DATE	COMMENT
<b>SUB/TOTAL RECEIVED</b>				0	CHF	
<b>THE FOLLOWING PROJECTS ARE LINKED TO THIS APPEAL:</b>						