

Impact of Severe Rains May 21 – 23, 2004

in the Dominican Republic and Haiti:

Tragedy and Miracles

**Report by the Dominican Disaster Mitigation Association
(ADMD), www.desastre.org**

By:

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The Dominican Disaster Mitigation Association (ADMD) would like to emphasize that the rainfall registered in the Dominican Republic and Haiti between May 21 – 23 caused critical and even catastrophic conditions in various locations. The details are published by the National Emergency Commission (NEC) on its website: www.comisiondeemergencia.com where the names of the most affected provinces and communities are listed along with the type and quantity of assistance items received and distributed. As of May 31, 2004 there were still a number of communities in the San Francisco de Macorís and Monte Plata regions **accesible only by helicopter**, where food and water had to be flown in and which had not received any attention from the media whose exclusive and inhumane coverage of the tragedy in Jimaní effectively zeroed the world's attention on one of several affected areas. The national and international community, offended and mortified by the images of human corpses in every state of disarray and decomposition, mobilized caravans and airplanes with relief items for Jimaní – unaware of the human drama in other affected areas. In fact, we are still discovering the impact of the 247.8 millimeters of rain that fell in Haiti in less than 24 hours creating severe flash flood conditions along the Soliette – Fonds Verrettes River (Río Blanco) before passing through Jimaní. A small retention structure two (2) meters high in Haiti – and a section of the Jimaní irrigation system of the same height - were surpassed by flood waters cresting ten (10) meters over the top and fifty (50) meters in width, representing a peak flood surge of over one thousand (1,000) cubic meters per second according to the report by the INDRHI Director (Dominican Institute of Hydrological Resources), Mr. Carrasco presented in the Emergency Operations Center (EOC) June 1, 2004. He added that the tragedy owed to an extreme event possible once in every century. Thus it is imperative that

the lessons learned through such loss be applied in order to avert further loss and destruction at a time when there may not remain a single inhabitant that remembers this event.



In spite of the extreme volume of this one hundred year flood which raced from an altitude of over one thousand (1,000) meters near the Haitian border down a path less than twenty-seven (27) kilometers in length to Lake Enriquillo in the Dominican Republic whose depth is reported to be forty (40) meters below sea level, violently dragging along countless 293 residents reported missing by Fonds Verrettes in Haiti in addition to approximately 900 Haitian nationals residing in the mountains bordering Jimaní **along with** the inhabitants of the Barrios "La 40," "El Tanque," "Sector Las 80," "Batey Bombita," "Sector Arroyo Blanco," and the Jimaní Cemetary, we bear witness to the miraculous testimony of those who survived the five-kilometer ordeal which began in La 40 and ended in Lake Enriquillo. One can only consider a miracle the fact that women and

children survived – with only minor cuts and bruises - such a torrent among tree trunks, man-sized boulders – some estimated to weigh between 5 and 8 tons, rocks, mud, zinc sheeting, appliances, and broken sections of concrete-block walls pulled into the current. This report was made possible thanks to the collaboration of Mr. Luis Sena, Director of Food for the Hungry in the Dominican Republic and President of the Dominican Disaster Mitigation Association (ADMD), who facilitated the visit to Jimaní on May 31, 2004. The pictures included in this article are a valuable contribution by Mr. Manuel Pérez, Director of CII-VIVIENDAS, who accompanied us in order to evaluate the temporary and permanent housing projects intended for the survivors.

In addition, the details regarding what occurred in Haiti are a privilege for which we are indebted to Mr. Daniel O'Neil, Director of the Pan American Development Foundation (PADF) who sent Ms. Herridge to accompany Mr. Steve Pratt – the PADF Emergency Management Consultant – from June 8 – 12 in meetings held in Port-Au-Prince with OCHA representatives – who facilitated their pictures of Fonds Verrettes and Mapou – Mr. Bernard Jayet and Mr. Bernard Gianoli; the Chief Technical Counsel to the UNDP, Mr. Michel Matera; the Director of the Haitian Ministry of Civil Protection (DPC), Madame

Jean Baptiste and her Assistant, Mr. Roosevelt Compre, the Governess of the Southeast Department of Haiti, Madame Margarite Martín and others. Mr. Joseph Felix, Regional Director of PADF's Our Border Project was our coordinator at all times and guided the visit to Fonds Verrettes where we met with the Local Civil Protection Committee (KPSL), which had been formed three months previously by the DCP with PADF materials. There was much praise for the KPSL's in Fonds Verrettes AND in Mapou from the DPC authorities and from the OCHA and UNDP specialists, congratulating PADF for its initiative in forming the KPSL's and stating that this work must continue.

The disaster response evaluation and monitoring mission continued with meetings with USAID representatives from USAID, Mr. David Delgado; the American Embassy, Ms. Mary B. Marshall; the U.S. Congress, Miss Jessica Lewis, Mr. Paul Oostburg, and Mr. Ted Brennan in Jimaní. Later we participated in a coordination meeting with Mr. Tito Herasme, Governor of Jimaní, and a tour of the affected area with Mr. Janelis Matos, Mayor of Jimaní, and Mr. Donny Santana, the provincial Civil Defense Director. We verified that the mouth of the river bed upon exiting the mountains had previously been 15 meters wide and is now almost 100 at said point where we discovered (on June 11th) a human thigh that had belonged to an adolescent and Mr. Cesáreo Guillermo, the Dominican PADF Project Coordinator commented that the position of the toes indicated great pain. This silent testimony touched us profoundly.

Upon exiting Jimaní we measured the river bed's new girth of an unprecedented 900 meters in width.



In Barahona we met with specialists from the Pan American Health Organization (PAHO), Dr. Leonardo Hernández and Dr. Luis Manuel Santiago. The final portion of the mission included a trip to Pedernales and Anse-A-Pitres, Haiti to meet with the President of the Dominican Red Cross Chapter in Pedernales, Mr. Cruz Adan Heredia and with Mr. Fersone Peigne, President of the KPSL, the Red Cross Chapter and the Civil Protection Department Chapter in Anse-A-Pitres. They

reported up to 50% agricultural damages in Pedernales and the loss of livestock, boats, fishing traps and nets among other items on the Haitian side – to which the bridge across Pedernales River was also destroyed by the flash flood. Both local leaders pointed out that Pedernales and Anse-A-Pitres are in the river bed itself and thus exposed to total loss in a more extreme event. Mr. Gary Filipe, the PADF Project Coordinator in Anse-A-Pitres, accompanied our tour to document the four homes washed out by the flash flood in Anse-A-Pitres proper, while 140 were lost in the province and 121 were damaged.



What happened in Fonds Verrettes, Haiti? According to Judge Paul Cherise – who is also the President of the Fonds Verrettes KPSL (Komite de Pwoteccion Sivil Locale) – it rained hard on Friday, May 21st in the afternoon but Saturday was dry with a bold sun. Sunday morning, May 23rd there was fog and the rain began at noon, becoming a downpour by midnight. At 1 a.m. Monday, May 24th they began evacuating people to safety and managed to save many families. By 2 a.m. the river had grown to more than 2 meters and the rain continued to fall until 7 a.m., stopping only for half an hour at 4 a.m. The torrent swept away the center part of town, including formal buildings such as the Catholic Church, leaving no trace of its foundation. A total of 546 homes were lost, many of which had been built with cement block. By 10 a.m. an adult could cross on foot what was left of the current. This is not the first time this has happened (see 1998 picture of damages caused by Hurricane Georges), yet it is the most extreme event ever to occur and without a hurricane (the community members mentioned the lack of high winds). The flash flood left no trace of the destruction on the Haitian side, most of which was deposited between Jimaní and Enriquillo Lake – only a wide berm of rocks remains. We counted at least twelve (12) large tributaries which had created rock and gravel deltas entering the river bed.

In the Dominican Republic, before dawn on May 24th, in spite of the fact that it had not been raining in Jimaní – except for a little bit that Sunday evening – according to one of the victims interviewed from “La 40”, Mrs. Ketti Díaz, a violent torrent of water shot through the border’s mountain range and with great force leveled and erased entirely from existence the Barrios “La Cuarenta” (named after the forty houses originally built along the river’s edge), “El Tanque,” “Las 80,” “Batey Bombita,” and “Sector Arroyo Blanco” along with Jimaní’s Cemetery. Mrs. Díaz, her family and her neighborhood were swept all the way to the lagoon, which is how the locals refer to Lake Enriquillo. Miraculously she recovered

sufficiently from the beating by the debris-filled waters and walked back to her community to search for her loved ones. The same happened with her 13-year-old daughter Carolin but she still has not found her two and a half-year-old daughter, her seven-year-old son, or her sixty-year-old mother. Fortunately her husband was in Santo Domingo and was spared. However he will have to confront the dismaying image upon his return of a new river bed over a meter thick strewn with tree trunks and enormous boulders stretching from the mountains and forming a new exit from Jimaní along with the newly created international cemetery where the memory of Haitians and Dominicans now rest.



← Sra. Ketti Díaz & Sra. Manuela Nova

A similar versión was told by Mr. German Novas Matos, Supervisor of the School Food Program, which was ratified by Mrs. Manuela Nova, Matriarch of the numerous Nova family of which only a representative fraction remain since the river claimed more than one hundred (100) of her relatives. The section of the

Soliette-Fonds Verrettes River on the Dominican side is only fifteen percent (15%) of the watershed which begins in Haiti. The Nova family was also related to Jimaní's Mayor, Mr. Janelis Matos. According to those interviewed, the event didn't last more than two hours. Shortly afterward the only water to be seen traced lines of pain on faces of the survivors who tried to deal with the pain, impotence, frustration and wounds caused by the staggering losses suffered and the wounds sustained, in addition to the sobering observation that nothing of sentimental or monetary value remained to show for a lifetime of sacrifice and toil.

Entering Jimaní on Monday, May 31st vía La Descubierta we noted that the shore of Lake Enriquillo is stable, unaffected by the vast amount of water suddenly deposited by Blanco River (as the Soleil River is called on the Dominican side of the border region). In fact, Lake Enriquillo occupies the lowest point of a basin entirely surrounded by mountainous terrain and has endured an ever decreasing water level over the years thus generating little concern, except for the crocodiles which are now familiar with the taste of human flesh, having feasted on some of the flood victims. As to potential environmental damage to the lake due to contamination, specialists assert that the extremely high salinity level assures a natural elimination of any such elements.



Regarding the humanitarian assistance, administrative capacity was sorely lacking, judging by the clothing strewn along both sides of the highway from La Descubierta to Jimaní – which was severely eroded by the flood waters - and from Jimaní to Duverjé by those who went to Jimaní to take advantage of the chaos, discarding undesired garments all the way home. Additionally there were piles of clothing left in the streets throughout Jimaní. Looking at the waste I couldn't help but think of the time, effort and expense of

Dominicans nationwide, moved by the calamity, who went through their wardrobes collecting these items, braved traffic jams to take the clothing to a meeting point, and the cost of sending truckloads all the way to the Haitian border. Undoubtedly the learning curve for disaster response is still at the onset given the number of institutions that insisted on showing up in Jimaní and, upon being surrounded by a demanding crowd, tossed their goods into open arms without bothering to find out who the real victims were, much less locating the National Emergency Commission's command center to procure a listing of the affected families and carry out a fair distribution among the shelters where the victims sat in stunned silence as they nursed their wounds and realized that the probability of finding their missing loved ones alive dwindled.

At the end of a line behind a truck where cereal was being thrown to a crowd near an unfinished INVI housing project – abandoned years ago – we spoke with Mrs. Ketti Díaz and Mrs. Manuela Nova who confirmed that many of the survivors from “La 40” now occupied these dwellings overlooking the lake on the Haitian side. They stated that to that very day, May 31st, no local or national official had visited them. However, OXFAM has provided portable latrines, water tanks, potable water and cooked meals. They did not have electricity, appliances, cookware, chairs or other basic items much less a way to refrigerate perishable items. Those suffering from post-traumatic stress were still in need of attention. On June 2nd, Mr. Claudio Doñé, Director of World Vision International in the Dominican Republic, confirmed that his NGO, in collaboration with Plan International were concluding the training sessions conducted by INDESUI under the direction of Dr. Nelson Moreno Ceballos to prepare the facilitators of the program designed to attend to children suffering from the traumatic loss of their families, friends and belongings. This same program was implemented with great success in the San Juan de la Maguana, Azua and Barahona provinces sponsored by Plan International via INDESUI in the wake of Hurricane Georges in 1998. The shock was so overwhelming that many children remained speechless for more than two months. INDESUI trained the school teachers to identify and classify each student's affliction, apply a methodology to provide them with vocabulary and a means to express their pain through activities and skits allowing them to release their pent up suffering. Plan International and Dr. Moreno later edited several publications (Asistencia Psicológica a los Niños Víctimas de Desastres – Psychological Assistance to Children Victimized by Disasters, and Aprendo sobre mis Sentimientos – Learning about my Feelings) describing this critical program which Dr. Moreno was later invited to

replicate in the Central American countries ravaged by Hurricane Mitch. I was quite relieved to hear that this excellent methodology was already being implemented in Jimaní. However, I was still disquieted by the lack of assistance for other communities, due primarily to the lack of media coverage – much like the Mesopotamia community in San Juan de la Maguana destroyed by Hurricane Georges which was also ignored by the media which concentrated its attention on Tamayo. It is distressing to know that there are families that have lost their homes in the San Francisco de Macorís, Monte Plata and other areas, even more so because the media do not report on their condition and needs.

What should be done about the media? We suggest that the networks cover the entire story under the direction and with the authorization of the National Emergency Commission regarding what can and cannot be disseminated. The insensitive and sensational coverage of images of cadavers must be prohibited. The National Emergency Commission provides a regularly updated report on its website: www.comisiondeemergencia.com which should be included in all coverage to guarantee that information regarding **all affected communities**, the needs in every impacted area and details regarding the location of the distribution centers where the victims receive humanitarian assistance. Why don't the networks take a guide from the Civil Defense who is familiar with the affected zone(s), needs the opportunity to gather information and can advise reporters regarding the images and data that are permitted for national and international media? The government could even consider a fine for networks daring to air and/or print inappropriate coverage and use the proceeds to finance prevention and mitigation programs in high risk areas. This would be an effective way to raise awareness regarding the mortifying impact on the population sensitive to their lack of respect for human dignity. Also, from an economic angle, given that the hourly charge for helicopter service to isolated areas is currently US\$1,000 it is indeed crucial to include local and national authorities on fact finding missions and to deliver humanitarian assistance.

Aside from the newsworthiness of what has occurred, why don't the networks and/or newspapers provide a community service by facilitating digital cameras – to the Civil Defense volunteers if they don't have staff available – to take pictures of the faces of the victims and facilitate these images exclusively to the relatives that arrive in search of their loved ones? They can also promote the Pan American Health Organization (PADHO) and the World Health Organization's (WHO) recommendations regarding the appropriate treatment of cadavers:

<http://www.desastre.org/home/data/pdf/risk/esp/OPS%20Manejo%20de%20Cadaveres.pdf>

which are NOT sources of disease unless buried close to rivers, streams or wells and whose odor can be alleviated with an application of cal viva. All institutions involved in the response must be educated regarding the minimum standards for humanitarian assistance developed by the SPHERE PROJECT:

<http://www.desastre.org/home/data/pdf/risk/esp/ESFERA%20-%20Estandares%20Minimos%20de%20Albergue.pdf>

Note: The links above are in Spanish.

One cannot overemphasize the fact that vaccinations immediately following a disaster never are an appropriate investment of time and resources given that most require several doses over a period of weeks or months to yield any effect.

Above all, for radio and television stations with a nationwide signal it is indispensable that each community have a receptive device. The stations can pledge, for hurricane season, frequent repetition of meteorological bulletins. The communities can organize volunteers – high school students who must complete sixty hours of community service in order to graduate – that can take turns monitoring the broadcasts authorized by the National Emergency Commission. Given that many communities do not have electricity, others are subjected to constant blackouts and countless others simply cannot afford to purchase batteries, solar powered and/or mechanical transistor radios are necessary in every high-risk community – which could even be programmed by the sponsor to receive only the donor station's signal. Of course the border communities must be able to communicate with one another by radio, especially those sharing the same watershed (river, reservoir, etc.) – with Artibonito being a high priority – to assure that any observation by volunteer patrols can activate a simple early warning system. The same is valid for all communities downstream from dams, whose representatives must establish contact with the staff in charge on each shift and obtain the details – previously authorized by the National Emergency Commission – regarding the condition of the facility and the instructions regarding the appropriate evacuation of the community. The evacuation routes and the estimated flood levels should be marked and well known by community members.



What should be done with the river? The river must be channeled, the base of the bridge and the water tower must be repaired and each work completed including protective structures to prevent further damage in future events. The community and the authorities must understand that even though a riverbed may remain dry for many years, every so often – perhaps every 25, 50, or 100 years or more – extreme precipitation may occur sending ferocious torrents of water, temporarily in some cases, destroying vast areas

to the dismay of residents who may never have seen such a show of natural force. Communities downstream also suffer the consequences, sometimes even days later such as in Pedro Justo Carrión in San Pedro de Macorís. This fact underlines the importance of radio communication between communities, especially since most of them are outside of the telecommunication grid.

We reminded every group that received us that, according to information disseminated by Mr. Antonio Cocco, an expert Dominican Meteorologist, a hurricane can easily bring 800 millimeters of water in 24 hours, over three times the amount of precipitation that just destroyed Fonds Verrettes, Mapou and Jimaní, with significant damage in Pedernales, Anse-A-Pitres the Yuna River watershed (especially San Francisco de Macorís, Monte Plata and Nagua). The 2004 Hurricane Season has already begun and we must keep in

mind that the research conducted by Dr. William Gray at Colorado University reveals that the Northern Atlantic Ocean periodically increases in temperature by half a degree Celcius which affects the climate throughout the hemisphere and generates hurricane seasons more active than normal. Each time this warming occurs it can last from 25 to 50 years and we are currently involved in this phenomenon which began in 1995 – which explains why the Haitian community members said that they had witnessed three floods since the 1990's. In conclusion, the Hispaniola Island – home to Haiti and the Dominican Republic – needs to develop a prevention and communication capacity in order to prevent repeated tragic losses this hurricane season and in the decades to come, which we know will be more active than usual.



What should be done with the temporary and permanent housing for the survivors? Even though the housing proposed is slated as temporary, and thus an authorization is given to quickly built simple wooden housing units, each only a meter or so in distance from the surrounding units, without first installing a potable water and drainage system or other necessary services, said projects almost always later acquire a permanent status and suffer unsanitary conditions. For this reason the

authorities involved must follow up and guarantee the access of each new project to basic services in order to avoid creating more problems for those who have just endured so much. All housing and infrastructure must take into consideration every single natural hazard to ensure a viable design. The Dominican Republic, in its entirety, is exposed to hurricanes, tropical storms, flooding, lightning and electrical storms, landslides, tornadoes, earthquakes, fires, hail, and tsunamis on every coast – notwithstanding its well documented volcanic history. Thus, regarding housing, every unit must be located a safe distance away from flood prone areas, and where slopes are conducive to landslides. Every structure must include a reinforced foundation resistant to erosion, columns and tie beams to interconnect the walls, and sufficient anchoring for the roof – preferably in four directions whose gables are no more than twelve (12) inches in length – in order to withstand all probable phenomena. A bathroom should be included for each unit given that latrines, especially those with underground septic wells, often contaminate the community when the community is flooded.

The Dominican Disaster Mitigation Association (Asociación Dominicana de Mitigación de Desastres, ADMD) was motivated to present this special report to emphasize the need to include disaster mitigation in every initiative, especially during the response phase, and invites you to visit our website: www.desastre.org for more information regarding our organization, its activities and accomplishments.