

**CONSULTANCY TO ASSESS THE ACTIVITIES UNDER THE
PROJECT "MITIGATION OF THE CONSEQUENCES BROUGHT
ABOUT BY HURRICANES CHARLEY AND IVAN TO THE
AFFECTED POPULATION OF THE PROVINCES OF HAVANA CITY,
HAVANA AND PINAR DEL RIO"**

Section I: CONTEXT AND FINAL ASSESSMENT OF THE EMERGENCY PROJECT

The fundamental objective of this action was to support the return of the affected population to their homes, in coordination with the four Non-Governmental Organizations (NGO's) under contract by UNDP to implement the activities within the framework of the Thematic Group on Housing and Risk Management.

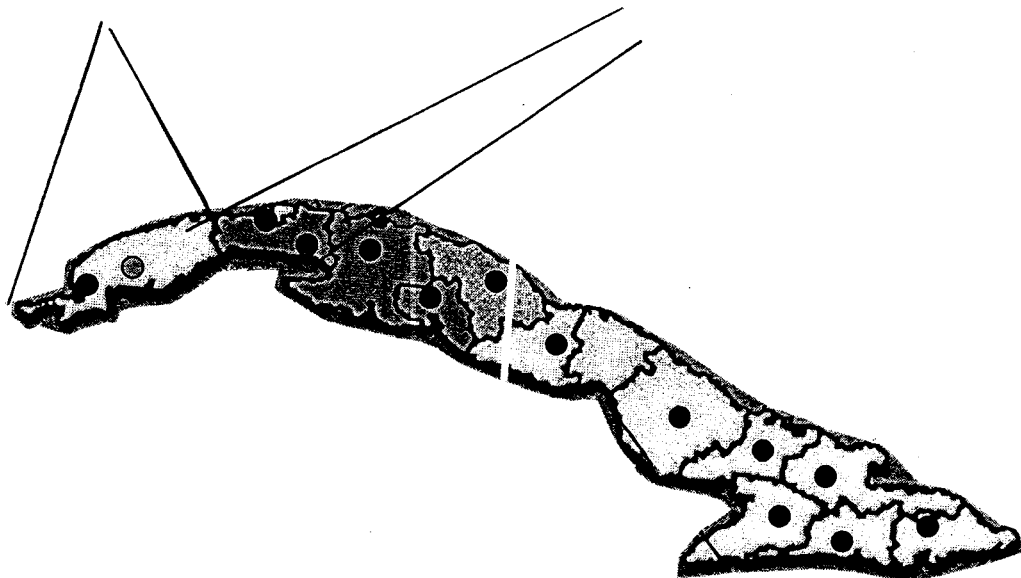
Chapter 1: BRIEF DESCRIPTION

In the year 2004, the westernmost region of Cuba was hit by two powerful hurricanes, Charley and Ivan. The former reached category 2-3 in the Saffir-Simpson scale. The latter, category 5, is the strongest to have affected Cuba in the last 50 years, and caused significant damage in the provinces of Pinar del Río, Havana City and Havana. The two hurricanes struck with a time difference between them of one month.

The municipalities

Hurricane Ivan

Hurricane Charley



The provinces that were most affected and that were beneficiaries to this project are the following, with their respective municipalities.

PROVINCES	MUNICIPALITIES
Pinar del Río	Sandino, Guane, Mantua, Minas de Matahambre
Havana City	Playa, Marianao, La Lisa
Havana	Bauta, Caimito, Guanajay, Artemisa, San José de las Lajas, Quivicán, Alquízar, Güira de Melena

Chapter 2: PROCESS It is important to note that UNDP was the facilitating channel in the logistic mechanism; we must also mention its relationship with the four implementing NGO's and with the National Housing Institute (*Instituto Nacional de la Vivienda*), with its provincial and municipal divisions, and previously with the Civil Defense.

After the purchase of the zinc and AVANTEC roofs, the four NGO's, on the basis of previous analyses, quantified the roofs with total or partial affectations as well as the beneficiaries. The roofs were transported to the corresponding provinces and distributed to the municipalities by the relevant NGO's, the organizations in the communities and the People's Councils (*Consejos Populares*) for their installation.

Seminars were conducted with the participation of municipal directors and technicians from the National Housing Institute, to explain what the various components of the roofs are and how to install them correctly. The four NGO's also participated:

CENTRO REGIONAL DE INTERVENCIÓN PARA LA COOPERACIÓN (CRIC)
MOVIMIENTO POR LA PAZ, EL DESARME Y LA LIBERTAD (MPDL)

ASOCIACIÓN NAVARRA NUEVO FUTURO (ANNF)

COMITATO INTERNAZIONALE PER LO SVILUPPO DEI POPULI (CISP)

The strategy of this Project was geared at giving a concrete response to the needs identified and at promoting the participation of women in the implementation of actions for the rehabilitation of their homes, supported at all times by relatives and neighbors.

The beneficiaries to this project are geographically distributed as follows:

Pinar del Río:	_____	336 people
Havana City:	_____	4871 people
Havana:	_____	1951 people

These 7158 affected people, whose houses suffered the total or partial loss of their roofs, were evacuated from their homes by the Civil Defense, and were lodged in shelters and in relatives' or neighbors' homes, where they will remain until the roofs are installed. This was coordinated with the National Housing Institute and the four implementing NGO's in the fifteen municipalities of the three provinces.

Throughout all its development and implementation, the project was periodically monitored by the UNDP, the four NGO's and the National Housing Institute in the respective municipalities.

Two types of roofing material were selected for the replacement of the roofs of the houses affected by hurricanes Charley and Ivan, according to their adaptability to the houses to be repaired.

Zinc roofing material was selected for the provinces of Pinar del Río and Havana. This type of roofing material, due to its characteristics, can endure the onslaught of hurricanes and other climate phenomena better than existing materials; also, it can be rapidly installed, thus permitting the quick return of the families affected to their homes.

The types of constructions existing in Havana City do not allow for the use of zinc roofing material; consequently, it was decided to use the AVANTEC technology, which consists in intermediate-level slabs and covers of lightened reinforced concrete in pre-cast slabs.

GENERAL DISTRIBUTION OF THE TYPES OF ROOFING MATERIAL

Type of roofing material	Provinces	Municipalities	NGO's
Zinc	Pinar del Río	Guane, Mantua, Sandino, Minas de Matahambre	CRIC
	Havana	Alquízar, Quivicán	MPDL
		Güira, Artemisa, San José de las Lajas	ANNF
		Bauta, Caimito, Guanajay	CISP
AVANTEC	Havana City	Lisa, Playa, Marianao	MPDL

The general distribution of the two types of roofing material was undertaken by the four NGO's in charge of the project and the municipal divisions of the National Housing Institute in each province. There were difficulties in the transportation of the containers and in their arrival in the respective municipalities for their delivery to the beneficiaries due to the passing of hurricane Wilma in October 2005, with strong winds, heavy rainfalls, and inland penetrations of the sea. Thus, there was a two-month delay in the receipt of the materials due to customs delays; therefore, distribution began in November.

Once the zinc roofing materials and their installation elements were received in the municipalities affected in the three provinces, the four implementing NGO's and the municipal divisions of the National Housing Institute immediately undertook their delivery to the beneficiaries, according to existing registration lists, thus completing the delivery of the said roofing materials.

Upon completion of this operation, the four NGO's and the technicians from the municipal divisions of the National Housing Institute in the fifteen municipalities affected in the three provinces undertook the installation of the roofs, with the participation of the beneficiaries, neighbors and members of the community. We must underscore the participation of women in the rehabilitation of their homes during all of the construction activity.

In the municipality of Sandino, in the province of Pinar del Río, a large part of the houses were totally repaired by groups of construction workers contributed by the government of Venezuela.

		Total	Parcial		
Provinces	Municipalities	Houses		People	NGO's
Pinar del Río	Guane	30	97	648	CRIC
	Mantua	18	42	333	CRIC
	Sandino	0	77	385	CRIC
	Minas de Matahambre	27	90	585	CRIC
Havana City	La Lisa	27	-	172	MPDL
	Playa	13	-	74	MPDL
	Marianao	16	-	90	MPDL
Havana	Alquízar	57	53	660	MPDL
	Quivicán	79	67	846	MPDL
	Güira	34	115	834	ANNF
	San José de las Lajas	12	67	434	ANNF
	Artemisa	25	110	475	ANNF
	Bauta	37	60	638	CISP
	Caimito	10	100	543	CISP
	Guanajay	38	53	441	CISP
TOTALS		423	931	7158	

Section II: FINAL ASSESSMENT

In order to assess the installation of total or partial roofs on the houses affected by hurricanes Charley and Ivan in the provinces of Pinar del Río, Havana City and Havana, fifteen municipalities were visited in order to verify and assess their installation, with the representatives of the four NGO's (CRIC, MPDL, ANNF and CISP), the heads of division and the technicians from the National Housing Institute (INV) and the consultant from UNDP.

The receipt of the roofing materials was verified jointly with the four NGO's in the three provinces affected; after this, the stockpiling and distribution of the materials was verified at the municipal divisions of the National Housing Institute on the basis of the records of their delivery to the beneficiaries.

Once the delivery and the receipt of the roofing materials were verified in the three provinces, the consultant physically checked this *in situ* in the fifteen municipalities affected, by means of a sampling of total or partial roofs and by interviewing beneficiaries. The proper installation of the roofs was also verified.

All of the construction process of installation of total or partial roofs in all the municipalities was undertaken by the beneficiaries affected; in the cases of elderly people living alone or of physically handicapped beneficiaries, it was undertaken with the cooperation of relatives and of neighbors from the community.

The main objective was to verify the correct installation of the zinc or AVANTEC slabs roofs, in consonance with the original plan.

At the houses that were visited, it was noted that the roofs were correctly installed in keeping with the original project and with a proper use of all their components. In other cases, it was of interest to notice the solutions contributed by the beneficiaries in the reinforcements, according to the characteristics of the walls (blocks and cement, or wood), and the joints of the construction itself with the fastening of the roofs.

In the case of totally affected houses, where the construction of a new one was necessary, in the majority of the cases the affected population received shelter in temporary facilities near their homes. In the case of partially affected houses, the affected persons stayed in parts of the affected spaces, and others in shelters of the Civil Defense habilitated to this effect or with relatives or neighbors until the construction actions (floors, walls, foundations, windows) could be completed.

The affected persons who had returned to their homes were asked about the new roofs and about the ones they had before the hurricane. All those interviewed expressed that the new roofs are fresh in times of heat, and that they provide for an agreeable temperature in times of colder weather.

LESSONS LEARNED

The facilitating channel of the UNDP Division for Crisis Prevention and Recovery (*Dirección de Prevención de Crisis y Recuperación*) (DPCR) has been productive in mobilizing and contracting the four NGO's for the implementation of the activities in the project.

It is of interest to point out that, with the strategy for the recovery of houses --the fact that all of the work of installation of roofs was undertaken by the beneficiaries themselves together with members of their community--, this project allowed for a quick return of the affected persons to their homes, with the entailing result that the women and the families could return to normal living conditions. It also gave a concrete response to the needs identified, and promoted an active participation in the implementation of actions for the rehabilitation of activities.

RECOMMENDATIONS

--We believe that in future projects a consultant should be present since the purchase of the roofs; the consultant should monitor and give advice on their distribution and installation.

--This type of project must be executed in one year, ensuring previously all the coordination with the UN Agency, BCPR, NGOs and National Authorities. One of the difficulties is the different settlement location and the long distance among them.

--It is necessary the housing authorities maintain a detailed control of the damaged houses, which will facilitated the NGOs work in the distribution of affected people.



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PIÑAR del Río

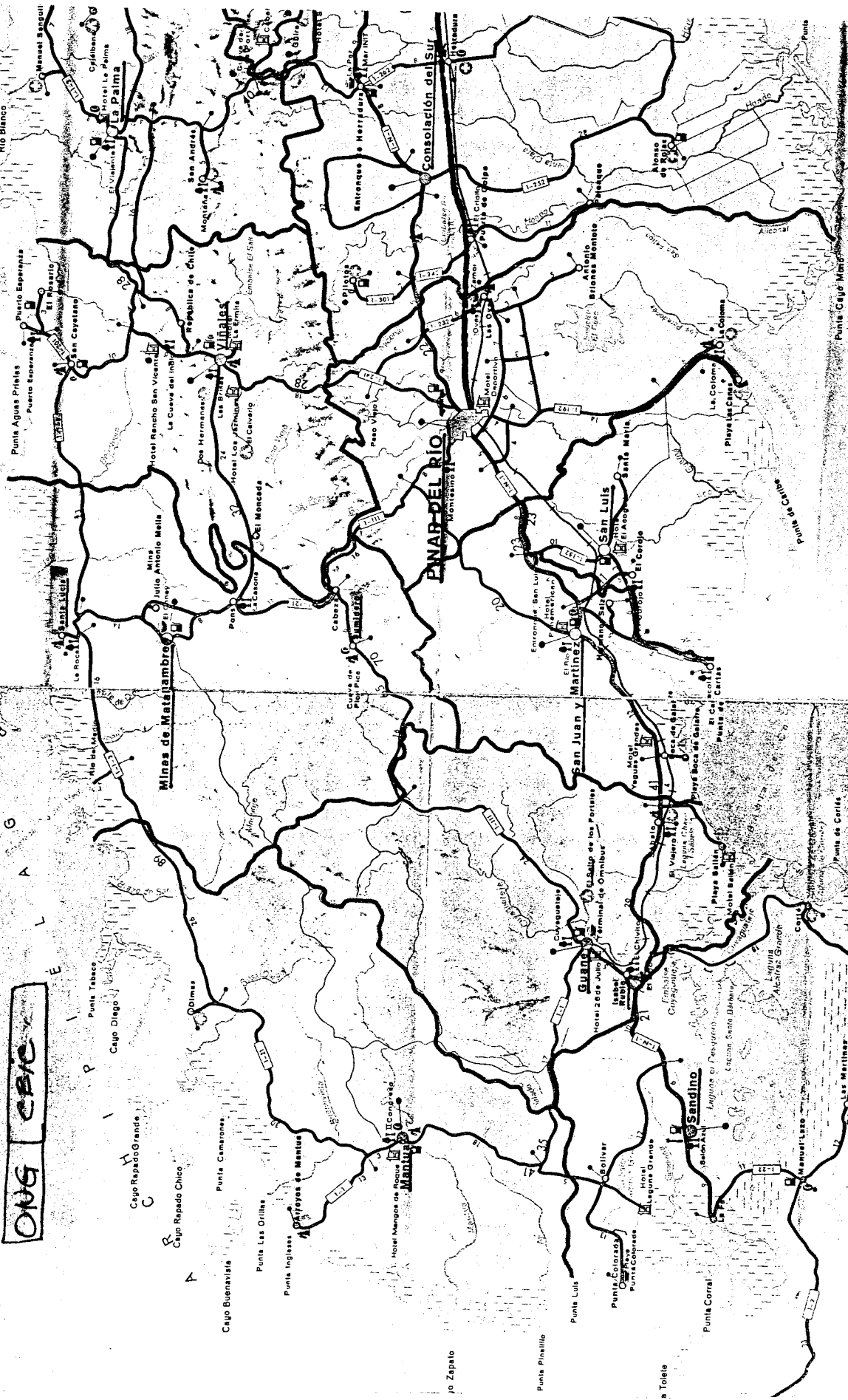
ONG CBIC

LOS COLORADOS

CO

LAGO

DE



jo Zapato

Punta Pinilla

a Tolle

Cabo Francés