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United Nations Development Programme

SYSTEMATIZATION OF THE DEBRIS MANAGEMENT PROGRAMME UNDP HAITI 2010 - 2012

DEBRIS MANAGEMENT: THE DOOR TO DEVELOPMENT

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ACRONYMS AND ABBREVIATIONS

CARMEN	Centres d'Appui pour la Réparation des Maisons Endommagées (Community Resource Centers for House Repairs)
CFP	Cash for Production
CFW	Cash for Work
CIAT	Comité Interministériel d'Aménagement du Territoire (Interministerial Committee for Land Planning)
CNIGS	Centre National d'Informations Géo-Spatiale (National Centre for Geo-Spatial Information)
DM-WG	Debris Management - Working Group
FAU	Fondation Architectes de l'Urgence (Emergency Architects Foundation)
IHSI	Institut Haïtien de Statistique et d'Informatique (Haitian Institute of Statistics and Information)
ILO	International Labor Organization
LI	Labor-Intensive
MTPTC	Ministère des Travaux Publics, Transports et Communications (Ministry of Public Works, Transport and Communications)
NGO	Non Governmental Organisation
PARDN	Plan d'Action pour le Relèvement et le Développement National d'Haïti (Action Plan for National Recovery and Development of Haiti)
UN	United Nations
UN-Habitat	United Nations Human Settlements Programme
UNDP	United Nations Development Programme
UNS	United Nations system
UNOPS	United Nations Office for Projects Service
WFP	World Food Programme
WG	Working Group

On January 12, 2010, an earthquake measuring 7.0 on the Richter scale struck Haiti and devastated the capital Port-au-Prince, and its peripheral municipalities (Delmas, Cité Soleil, Croix des Bouquets, Petionville, Tabarre, Carrefour), the Ouest department and the cities of Léogâne, Grand Goâve, Petit Goâve, Ganthier, Gressier, as well as the Sud-Est department and, in particular, the city of Jacmel. The earthquake killed more than 220,000 people and displaced more than 1.5 million people.

The building damage assessment, conducted between March 2010 and February 2011 by the Government of Haiti and the United Nations system, showed that more than 400,000 buildings were damaged or destroyed, of which approximately 218,000 could be occupied without repairs (green category), 105,000 were damaged but could be repaired (yellow category), and 80,000 were severely damaged and remained uninhabitable (red category).

The destruction of buildings and infrastructure generated a huge amount of debris, estimated at 10 million cubic meters, blocking streets and land in affected areas. In the absence of a national debris management strategy, debris could, thus, be cleared and disposed of in an uncontrolled manner, hindering relief, recovery and reconstruction activities.

Following the earthquake, the UN Integrated Strategic Framework (ISF) replaced the United Nations Development Assistance Framework, and defined strategic priorities for intervention in the country. The framework was adopted by all United Nations agencies and the United Nations Mission for Stabilization in Haiti (MINUSTAH), to contribute to the Action Plan for National Recovery and Development of Haiti (PARDN) developed by the Haitian Government, in consultation with all sectors of the country.

The priorities of the Action Plan aimed to address the immediate emergency, resume economic, governmental and social activities, reduce the country's vulnerability to natural disasters and re-launch Haiti on the path of development. Clearing the debris, demolishing potentially hazardous buildings and repairing damaged houses became the main means of encouraging the return and resettlement of displaced people to their areas of origin, the resumption of the productive cycle, the reconstruction of everyday life and the psychosocial recovery of affected populations. As such, debris management was one of the first steps towards rebuilding the country.

With this overarching objective, in February 2010, the United Nations Development Programme (UNDP) launched a joint labor-intensive Cash for Work programme (LI/CFW) in partnership with the World Food Programme (WFP) and the Government of Haiti, to initiate early interventions for debris and waste removal, clearing of roads and public squares, and dredging of drainage channels.

In response to the priorities identified by the Government of Haiti through the Interim Haiti Recovery Commission, UNDP decided to launch the implementation of a sustainable development and recovery-based debris management programme through the implementation of three specific projects, the first project in Léogâne, the epicentre of the earthquake, and two in Port-au-Prince (Debris I and Debris II).

These projects were intended to contribute to the rehabilitation of the most affected urban areas through the implementation of a debris management strategy, including debris planning, demolition, removal, transportation, reuse and recycling and rehabilitation of public spaces through recycled debris.

The Debris Projects (Debris I and Debris II) benefitted from the strategic integration of the United Nations system, with the involvement of several agencies that played specific roles: the United Nations Human Settlements Programme (UN-Habitat) responsible for social mobilization, community participation and the preparation of neighborhood restructuring plans; the International Labor Organization (ILO) responsible for job creation through the reuse of recyclable debris and the reactivation of the local economy through the creation and support for small and micro-enterprises; and UNDP responsible for demolition, debris removal, neighborhood rehabilitation and the general coordination of the intervention, including a participatory approach and in partnership with UNOPS, central and local governments, local and international NGOs, the private sector, and more importantly, the Haitian population.

Debris management should not be viewed as a set of mechanical cleaning actions, but rather as an open door to encourage the rebuilding of the social fabric, promote job creation and initiate the sustainable development of affected populations.

Therefore, this systematization accounts for the human development process undertaken by debris management projects implemented in Haiti.

Debris management thus became a strategic point of entry into damaged areas through programmes that stimulated the local economy and job creation, becoming the basis for sustainable development.

The chaotic situation from the outset and the limited literature on assistance programmes in urban contexts, such as debris management, made the implementation of this programme a challenging but also exciting experience for UNDP.

This document is intended to share key lessons learned and propose practical recommendations for the implementation of new debris management programmes, for both UNDP and all humanitarian actors.

Sophie de Caen
UNDP Senior Country Director

Conditions determined by physical, social, economic or environmental factors or processes increase the susceptibility of a community to the impact of hazards. United Nations - International Strategy for Disaster Reduction.

The extent of the damage caused by a disaster in an urban area is directly related to structural (socio-economic, socio-cultural, technical and institutional) and economic vulnerabilities. Often responsible for the magnitude of the disaster, these vulnerabilities slow recovery and hinder reconstruction and development efforts.

In Haiti, the generation of debris is directly related to this context:

- Rapid urbanization and population growth have propelled the development of vulnerable neighborhoods (slums) in the most exposed areas.

- The lack of urban planning and land insecurity prompted the uncontrolled construction of precarious housing that did not meet basic planning and safety standards.

- The illegal and informal occupation of land encouraged irregular construction methods - often based on the model of progressive construction, i.e., adding a floor after another without ensuring proper foundations -, with poor quality materials and the use of inappropriate construction techniques. Non-compliance or lack of building standards and building maintenance are one of the main causes for the collapse of houses and buildings, generating a huge amount of debris in the streets and lots of Haitian cities.

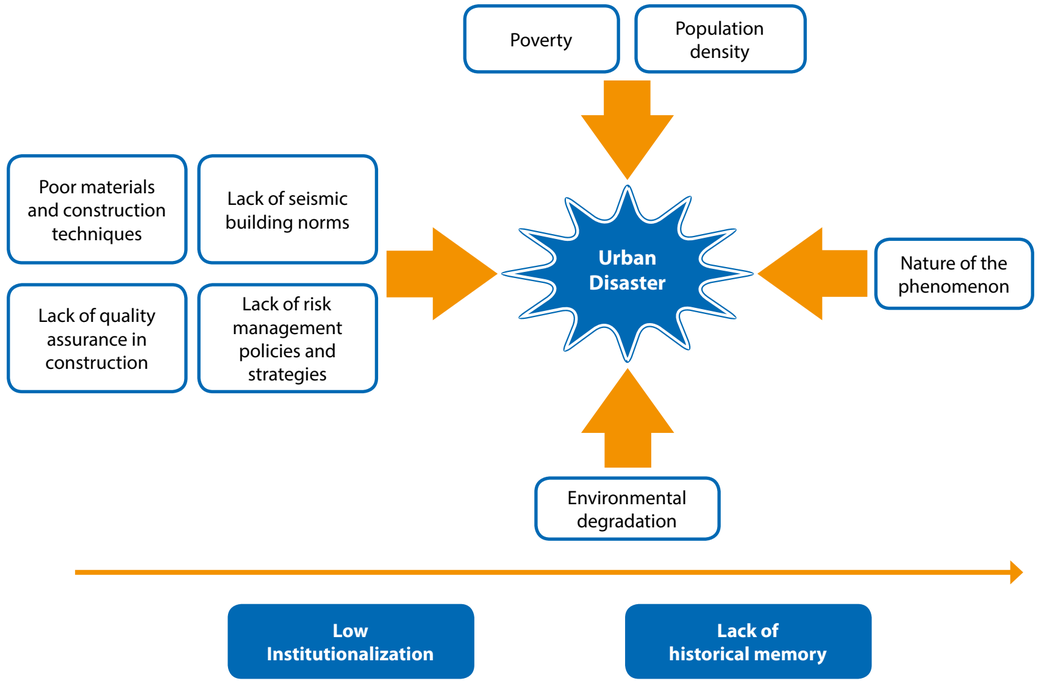
- The adoption of construction models that are more responsive and resistant to most recurrent natural hazards, such as hurricanes, heavy rains, winds or tornadoes, generated serious vulnerabilities compared to other latent but less predictable hazards such as earthquakes.

- The type, magnitude and location of the hazard are also directly linked to the extent of the damage.

In Haiti, the large migration from rural to urban areas observed since 1986 had harmful consequences on the housing of thousands of low-income families, leading to a high-density population settlement in the metropolitan areas and slums of Port-au-Prince, where marginal constructions were erected on informal, unfit and at high risk spaces.

Hurricane Hazel, which struck Haiti in 1954, caused a rapid change in the traditional building techniques of the country. Wooden houses and light buildings, more resilient and less dangerous against earthquakes but more hazardous in the face of hurricanes, were replaced by concrete houses and buildings that became death traps for thousands of people during the January 2010 earthquake.

Figure 1. The main causes of debris generation in Haiti



In Haiti, the return of families to their neighborhoods of origin was one of the main priorities of the government and a central aspect of its post-earthquake action plan. The UN Integrated Strategic Framework, developed to support the government, contributed to the definition and implementation of a comprehensive debris management strategy, based on participatory approaches and the engagement of communities, considering debris management as an entry point at the neighborhood level as well as a resource for reconstruction programmes.

It can take several months for a debris management programme to be properly defined in a crisis situation. Consequently, the programme must generally be formulated and planned based on assumptions and preliminary values or data to be reviewed and readjusted as the information evolves.

UNDP began to implement a massive debris removal programme in the immediate aftermath of the earthquake, with the goal of cleaning the streets and main roads of the affected areas and promoting labor-intensive work under the Cash for Work modality to inject rapid economic resources into neighborhoods and promote their economic and social revival.

Subsequently, the implementation of successive pilot projects (Debris Léogâne, Debris I and Debris II), allowed for the progressive application of an integrated approach to debris management, including new aspects such as the revitalization the local economy through the creation of labor-intensive jobs under Cash for Production schemes and the promotion of micro and small

Habitat. A multidisciplinary and complementary design resulting from the participation of various agencies enabled the definition of roles and procedures of each partner, from the outset even prior to undertaking joint programming in more detail.

These programmes were developed in partnership with the Ministry of Public Works, Transport and Communications (MTPTC) and the target municipalities, and had the operational support of national and international NGOs with longstanding experience in Haiti.

The lessons learned through the initial projects contributed significantly to improving the design and implementation of new projects.

II- UNDP RESPONSE TO DEBRIS MANAGEMENT IN HAITI

Figure 2. Development of the joint debris management programme

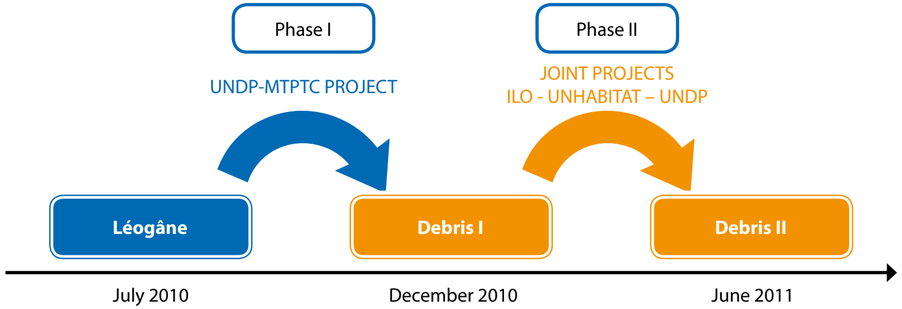


Table 1. Information of the three debris management projects

	LÉOGÂNE	DEBRIS I	DEBRIS II
Implementation period	July 2010 - December 2012	December 2010 - December 2012	June 2011- December 2012
Budget	USD 11 million	USD 16.9 million	USD 25 million
Volume of debris cleared	300 000 m^3	162 000 m^3	625 000 m^3
Intervention area	Communal sections of 1st Dessources, 3rd Petite Rivière, 3rd Grande Rivière.	Carrefour Feuilles, Saint Gérard, Lélio, Sanatorium, Desprez and Morne à Tuf.	Bel Air, Fort National, Turgeau, Pétionville, Delmas, Carrefour.
Key Partners	MTPTC City of Léogâne Community-based organizations and national and international NGOs.	MTPTC, Port-au-Prince Mayor's office, City of Pétionville Mayor's office, UNDP, UN-HABITAT, ILO, UNOPS. Community-based organizations and national and international NGOs.	