

参考資料

1. 各国災害事例資料、各国基礎情報

(1) 各国災害事例資料

1) 2010年ハイチ地震災害

Item	Sub-item	Information	Data Source
Data on Hazard	Date and Time of Occurrence	4H53:10 PM, 12 January 2010.	USGS
	Magnitude (source)	M 7.0	USGS
	Epicenter	Leogane: 18.443°N, 72.571°W About 25 kilometers from southwest of P-A-P. Depth : From 10 to 13 kilometers	USGS
	Intensity of Shaking	" This earthquake produced violent shaking that can cause damage even to well-built buildings anywhere in the world"	USGS PDNA
	Ground Motion	A sliding movement of East-West has been observed, however local movements of subduction and a vertical movement about sixty centimeters have been recorded. It was a surface fault movement inducing landslides and soil liquefaction. Strong shake continued for 35 to 36 seconds.	USGS MCEER
	Tsunami (maximum height)	A tsunami about 3 meters has been observed on the south part of P.A.P	
Data on Damages	Major Affected Area	Three departments: West, Southeast, and Nippes were seriously affected. Particularly the metropolitan P-au-P area Was suffered enormous damage. 80% of the town Leogane where the epicenter is located was destroyed.	
	Human Damage	Dead: 230000 Injured: 100000 Homeless: 600000 Majority of the death is due to collapsed houses.	
	Damage of Buildings	Complete destruction : 105000 Damaged: 208000.	
	Infrastructure/Lifeline Damage	Road: - The Jacmel road was cut by landslides and damaged by soil liquefaction. Several streets through P-au-P were in the same situation. - The biggest commercial port was damaged. - All the Ministries and Public Administration have been destroyed. Electricity: The electric distribution lines completely destroyed within the Capital. Telephone: Only one of the four telephone companies worked after the earthquake.	
	Main Damage Cause	Extreme vulnerability of constructions: - Anchorage 90 degrees - 20 centimeters and more between the stirrups - Poor connection between the structural elements - Lack of ductility of the walls - Poor quality of concrete - High occupation density. - High instable soil.	

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	Characteristics of Damages (Physical/Social Aspects)	The earthquake destroyed completely and damaged a large number of buildings: schools, medical centers, all the government offices, residences. Almost all the old buildings with walls stone masonry around P-au-P were destroyed or severely damaged due to lack of ductility. Majority of the damages is due to the ground motion.	
	Direct Economic Loss	Total: 8 billion(\$US) Infrastructure, including housing: 57.2% Social: 19.4% Production sectors: 17% Education/culture: 6.1% Health: 6% Environment: 6.4% Water/Sanitation: 3% Food safety/nutrition: 4.2%	PDNA
	Lessons Learned	National government, local authorities should take their responsibilities. Every house must be built under a seismic code regulation.	
Emergency Response	Rescue activities	The first responders were local people, especially the marginalized, the unemployed usually lurking around public buildings. These unarmed saved what they could during the night. They removed several authorities under debris. But, the next day almost the whole world was at our bedside. In an indescribable mess, Dominicans, Americans, Canadians, French, Jamaicans, Cubans...came to our rescue. MTPTC began working to clear the most important streets to promote the rescue movement, evacuate the dead and remove people under debris.	
	Medical services	The Ministry of Public Health and the private health sector have responded quickly, saving what they could before we can get foreign aid. However, this national response has been very limited since the staff and the government facilities were seriously affected. So, 75% of Health services are delivered by the foreign staff. Medical attention was given everywhere, under tents and in some street corners. Many injured were transported to a US medical ship. The coordination between different staffs was very complicated. Thus it was very difficult to follow the Ministry of Public Health norms and guidelines.	
	Evacuation shelter	The issue of shelters looked like the more difficult. The earthquake made about six hundred thousands homeless increasing the number existed before. At the very beginning, almost everybody around the affected areas lived in open air. It was quite impossible to find enough plastics belts or tents to the relocated people. Therefore, some people built their shelters, using debris as wood, metal sheets and anything that they found. And two years later some people is still living in shelters made by them.	
	Food, water and other relief goods supply	Food: The issue of food was also very critical. After the earthquake, almost everyone was anxious for food. In first time humanitarian agencies tried to distribute food by helicopter. This experience was bad. Then they gave some cooking kit. And finally the food was distributed by the military. Water: Fortunately the infrastructure and staff of the national body in charge of water (DINEPA) were not affected. Therefore, they took action quickly asking to the private sector to join them in the distribution of water.	

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	Information and communication (Information to the disaster victims)	<p>The Ministry of Communication has used the private medias to inform the public about the government decisions in response to the damages left by the earthquake. The government held regularly some press conferences. So, the population could know the organization of the humanitarian assistance and arrangements to support them at the critical period.</p> <p>The issue of Communication, was very complicated for the first days:</p> <ul style="list-style-type: none"> - The main streets through the Capital have been cut with abandoned cars, debris of destroyed buildings and rubble from landslides. - Only one of the four telephone companies was available. <p>The international medias contributions were very significant: they stimulated immediate action by the international community to the Haitian people.</p>	
	Support from Private Companies		
	Support from abroad		
	Lessons Learned		
Recovery	Infrastructure/Lifeline	<p>Road and Streets:</p> <ul style="list-style-type: none"> - The road conducting to Jacmel was opened four days later and completely restored three months later. - The day after the earthquake, the main streets through P-a-P were partially cleaned to promote the rescue service. <p>Telephone:</p> <p>Electricity :</p>	
	Other services	<ul style="list-style-type: none"> - MENFP started with the scholar activities three month later. <p>MTPTC</p> <ul style="list-style-type: none"> - Has dredged rivers and drainage canals to cope the cyclonic season. - One week later, MTPTC began a vast campaign <p>Of assessment.</p> <ul style="list-style-type: none"> - 1862 builders worker are trained - 202 young engineers are trained to work in the field of quality control. - 17862 small and non- severely damaged houses have been repaired in the Leogane and P-a-P areas for the most vulnerable victims. 	
	Temporary House	<ul style="list-style-type: none"> - This issue of temporary house was very complicated. At the very beginning, some people have obtained some plastics belts; others received some tents or built their shelters with anything that they could find. - By the assessment, the government via MTPTC encouraged some people to return to the non-damaged houses two months later. 	
	Shelter		
	Disaster Waste	The total amount of the disaster waste is estimated at 10,000,000m ³ .	MTPTC
	Finance	<ul style="list-style-type: none"> - International Community - Private sector - NGOs - Ministries 	
	Support from Private Companies		
Support from Abroad			

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	Lessons Learned		
Reconstruction	Principles	Five priority principles: <ul style="list-style-type: none"> - Leadership and mutual accountability - Decentralization and equal growth - Commitment to modernization - Haitian-led - Independence for international aid. 	
	Key issues	<ul style="list-style-type: none"> - How to protect the people against natural disaster? - How to improve the quality of life in Haiti? - What we want to become 	
	Organizations	<ul style="list-style-type: none"> - Interim Commission for the Reconstruction of Haiti (ICRH). - Development agency - Multi-Donor Trust Fund (HRF). 	
	Finance	<ul style="list-style-type: none"> - International Community - Private sector - NGOs 	
	Support from Private Companies		
	Support from abroad		
	Reconstruction Schedule	<ul style="list-style-type: none"> - Governance. - Reducing vulnerability of the people and basic service - Economic growth - Infrastructure programs 	
	Key Target, featured strategies/approaches etc.	<p>By this action plan, they aim to restart rapidly economic, governmental and social activities, reduce the vulnerability of the country, and put Haiti on the path of development by:</p> <ul style="list-style-type: none"> - Including environmental aspects in all decisions and actions. - Integrating risk disaster management in all sectors and in all reconstruction activities. - Establishing an active employment policy: supporting micro-enterprises, strengthening vocational training, involving local firms and local labor and communities. - Undertaking the decentralization of the basic services. - Initiating a social safety net for the poorest. 	
	Economic Recovery	<ul style="list-style-type: none"> - Recovery in domestic production - Cultural production - Economic and financial systems - Creation of jobs 	
	Other Characteristics		
Lessons Learned			
References	Reports	<ul style="list-style-type: none"> - http://www.cirh.ht/files/pdf/cirh_plan - http://housingworgs.org/i/blog/Haiti_PDNA - http://www.refoundation.ht - http://www.haitireconstruction.org - http://www.usgs.gov/natural_hazards/ 	
	Data/photos		