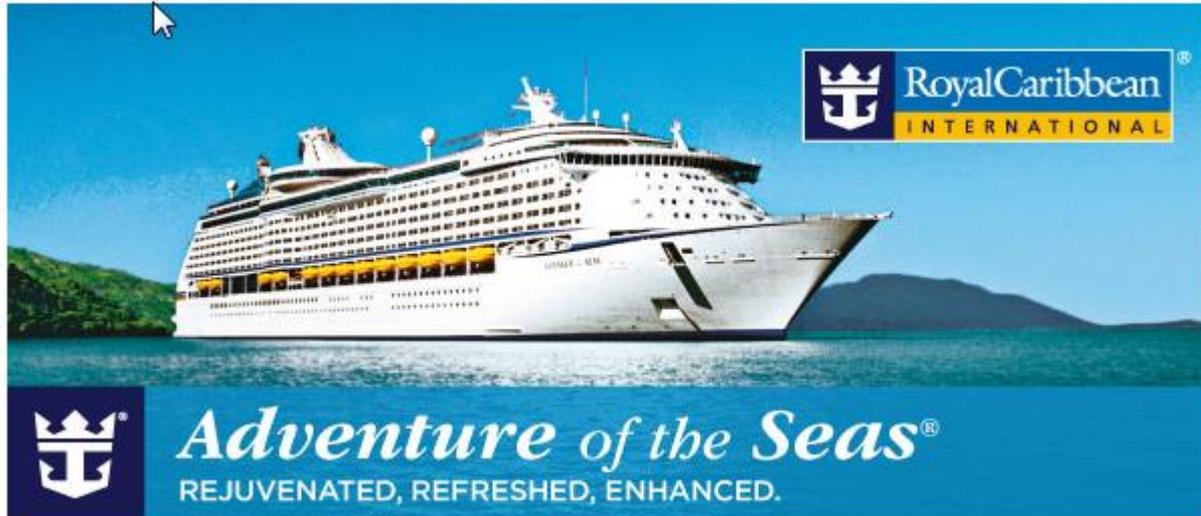


Disasters in the Caribbean

Kasia Mika
mika@kitlv.nl

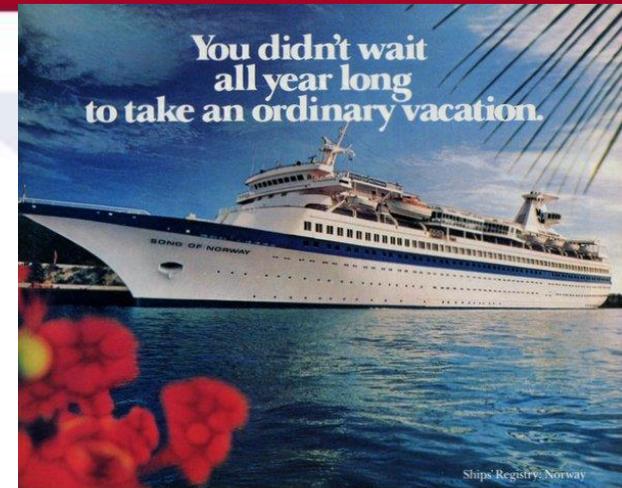


Caribbean: Paradise?



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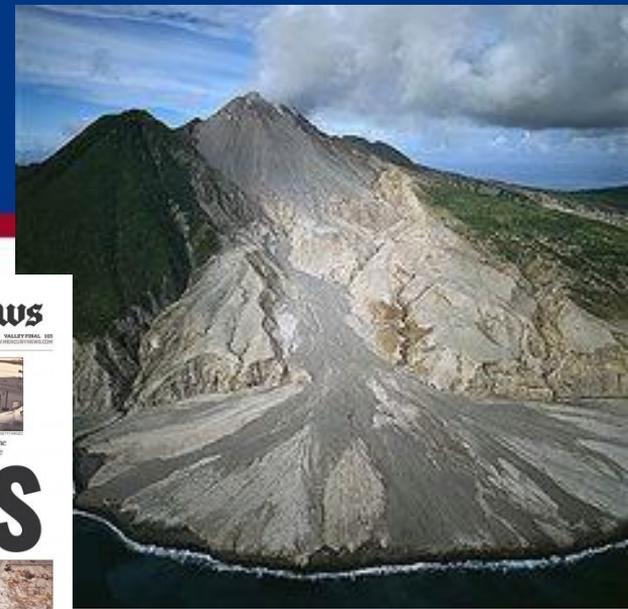
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Caribbean: Paradise (Lost)?



San Jose Mercury News
Thursday, January 14, 2010

HEALTH Tolls: Streets buried with bodies, rescuers persevere
CHAOTIC SCENE Fear, anguish spread across Haiti's capital
RELIEF U.S. officials outline massive military response

HELPLESS

Rescuers search shattered nation; death toll likely in tens of thousands

WIDE MESS Quake survivors seek safety outdoors

Toddler's ride with a rogo man

RESEARCHER'S VISA

INDEX

THE DAILY Observer
"Let There Be Light"
Friday, August 16, 2015
\$3.00

Vol. 22 No. 198 St. John's, Antigua

ANTIGUA SPARED, DOMINICA RAVAGED

Read story on page 2

Erika's Devastation
Tropical Storm Erika caused widespread damage on the Caribbean island of Dominica, including claiming the lives of at least four people. The storm, which affected the "Nature Isle" on Thursday morning, brought up to 20 inches of rain causing floodwaters and landslides to wipe out almost everything in their path. (Photos from Facebook)

BREAKING NEWS 91.1FM / NEWS UPDATES www.antiguaobserver.com



Caribbean history-a history of disasters?



- Between 1900 and 2016, [Em-Dat](#) has listed 534 disasters in the Caribbean, 111 of these in Haiti.

[right click to open the hyperlinks]

- 11 earthquakes with the 2010 Haiti earthquake being the most deadly one.
 - 8 volcanic eruptions, the most deadly one being the eruption in Montserrat (1995-1997)
 - Storms (most frequent, ever more deadly): Matthew (2016); Sandy (2012) Ike (2008) Wilma (2005), Ivan (2004)....
-

Caribbean history-a history of disasters?



By the way, you don't have to have exhausted your brain and your eyes in interminable study at elite universities to understand that this region has a problem. One day, it's **a storm** that ushers the ocean and squalls of rain into your home, without asking your permission, uproots hundred-year-old mapou trees that, until then, had known how to resist the destructive power of men. Another day, **a volcano** spews its lava in your face. Then **an earthquake** comes like a thief at night and surprises you when you're sound asleep, shaking even a monumental fortress like an ordinary coconut tree.'

Louis-Philippe Dalember, *The Other Side of the Sea*, p.16.

Caribbean history-a history of disasters?



The region as a whole as inaugurated in a catastrophe.

My position on catastrophe, as you say, is, I'm so conscious of the enormity of slavery and the Middle Passage and I see that as an ongoing catastrophe. **So whatever happens in the world after that, like tsunamis in the Far East and India and Indonesia, and 9/11, and now New Orleans, to me these are all aspects of that same original explosion, which I constantly try to understand.**

Kamau Brathwaite, Poetics, Revelations, and Catastrophes: an [Interview with Kamau Brathwaite](#) (2005)

The earthquake of 1492....

- ‘[t]he first earthquake in our history is called Christopher Columbus’ [...] the country’s history since its independence is a sequence of earthquakes followed by regular aftershocks.’

Rodney Saint-Éloi, *Haiti, kenbe la!*, pp. 202, 215.

- 12th of January 2010 Haiti earthquake
 - Basic facts and figures
 - Historical context (overview)
 - Geographical-ecological context
 - hazards
 - disaster/catastrophe
 - vulnerability and recovery
-



Haiti: Basic Facts

- Capital: Port-au-Prince
- Population: 10,485,800
- Out of which almost 2.5 mln live in Port-au-Prince (2 470 762)
- Official Languages: French and Haitian Creole



Haiti's history: key dates

- **1492** - Christopher Columbus lands and names the island Hispaniola, or Little Spain.
 - **1791-1804** The Haitian Revolution
 - **1804** - Haiti becomes independent
 - **1915-1934** US Occupation of Haiti
 - **1934** - US withdraws troops from Haiti, but maintains fiscal control until 1947.
 - **1937** 'Parsley' Massacre (e.g. Edwidge Danticat's novel)
 - **1957-1985** François 'Papa Doc' (1971) and Jean-Claude 'Baby Doc' Duvalier dictatorships
 - **1990-1991** Jean-Bertrand Aristide
 - **1990** - Jean-Bertrand Aristide elected president in Haiti's first free and peaceful polls
 - **1990**: A popular priest, Jean-Bertrand Aristide, who inspired a political movement known as "Lavalas," won the election in 1990
 - **1991** - Aristide ousted in a coup led by Brigadier-General Raoul Cedras, triggering sanctions by the US and the Organisation of American States.
 - Between 1992 and 1994, the United States intervened with the United Nations to restore Aristide to power. In return, Aristide reluctantly promised to work with the United States and the International Monetary Fund to lower taxes on trade.
 - **1994** - Military regime relinquishes power in the face of an imminent US invasion; US forces oversee a transition to a civilian government; Aristide returns.
-

Haiti's history: key dates

- **1995** - UN peacekeepers begin to replace US troops; Aristide supporters win parliamentary elections
 - Rene Preval, from Aristide's Lavalas party, is elected in December to replace Aristide as president.
 - **2000** November - Aristide elected president for a second non-consecutive term, amid allegations of irregularities
 - On 7 February **2001**, Jean-Bertrand Aristide returned once more to the National Palace as Haiti's elected president. His new term, however, was marred by controversy.
 - **2004** January-February - Celebrations marking 200 years of independence turn into uprising against President Aristide, who is forced into exile. An interim government takes over.
 - **2004** May - Severe floods in south, and in parts of neighbouring Dominican Republic, leave more than 2,000 dead or disappeared.
 - **2004** June - First UN peacekeepers arrive (MINUSTAH), to take over security duties from US-led force and to help flood survivors.
 - In **2004**, Aristide was overthrown by a paramilitary coup, an event that has since been hotly debated.
 - Aided by the United Nations, Aristide's successor, René Préval, restored peace, which was tested by the World Food Crisis in **2007**.
 - Then in **2010**, a devastating earthquake killed, injured, and displaced hundreds of thousands of people, exacerbating Haitian's dependence on the international community and NGOs.
-

Historical roots of contemporary challenges

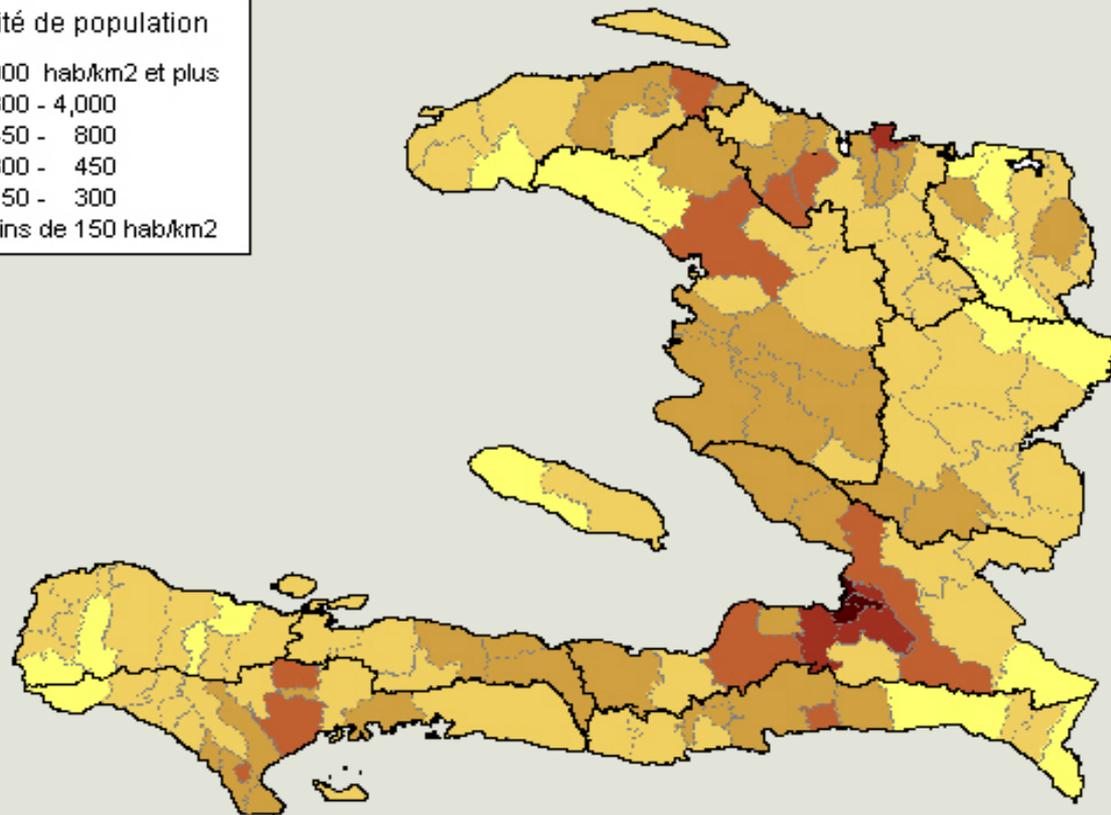
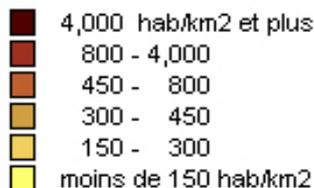
- weak, ‘failing’ state
- sovereignty
- role of external, international actors and non-governmental structures (NGOs; UN; World Bank...)
- assistance → interference → intervention ?

To Learn More: [Haiti Support Group Briefings](#) and [Haiti: An Island Luminous \(History\)](#)

- Haiti ([Google Maps](#)): fault lines; mountainous
 - [Population density](#) and distribution: urban context of the earthquake
-

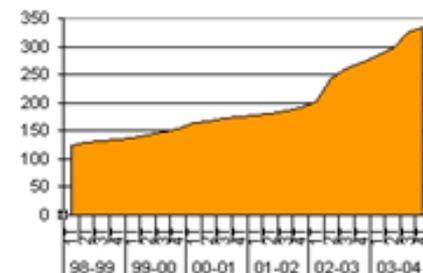
Haiti en chiffres

Densité de population

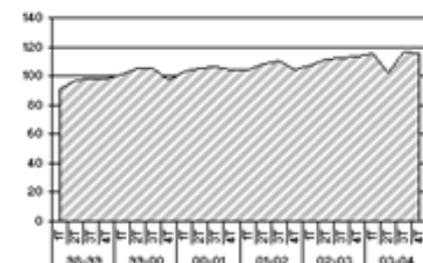


Recensement général de la population et de l'habitat 2003

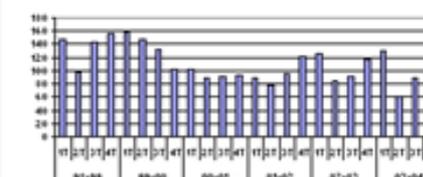
Prix à la consommation



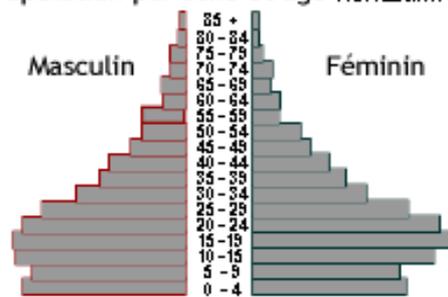
Production Industrielle



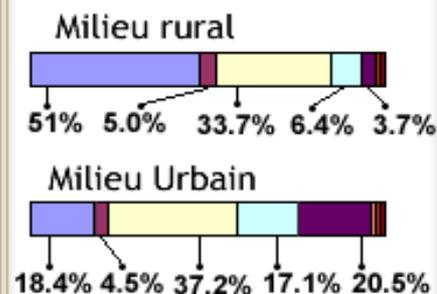
Production énergétique



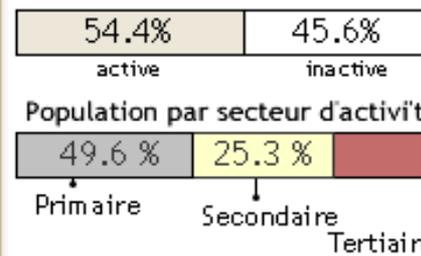
Population par sexe et age Réf: Estim. 2010



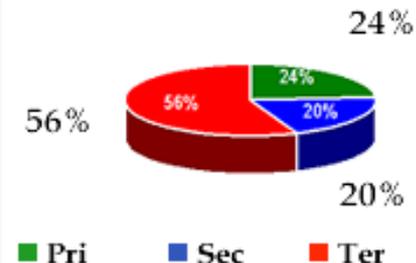
Education



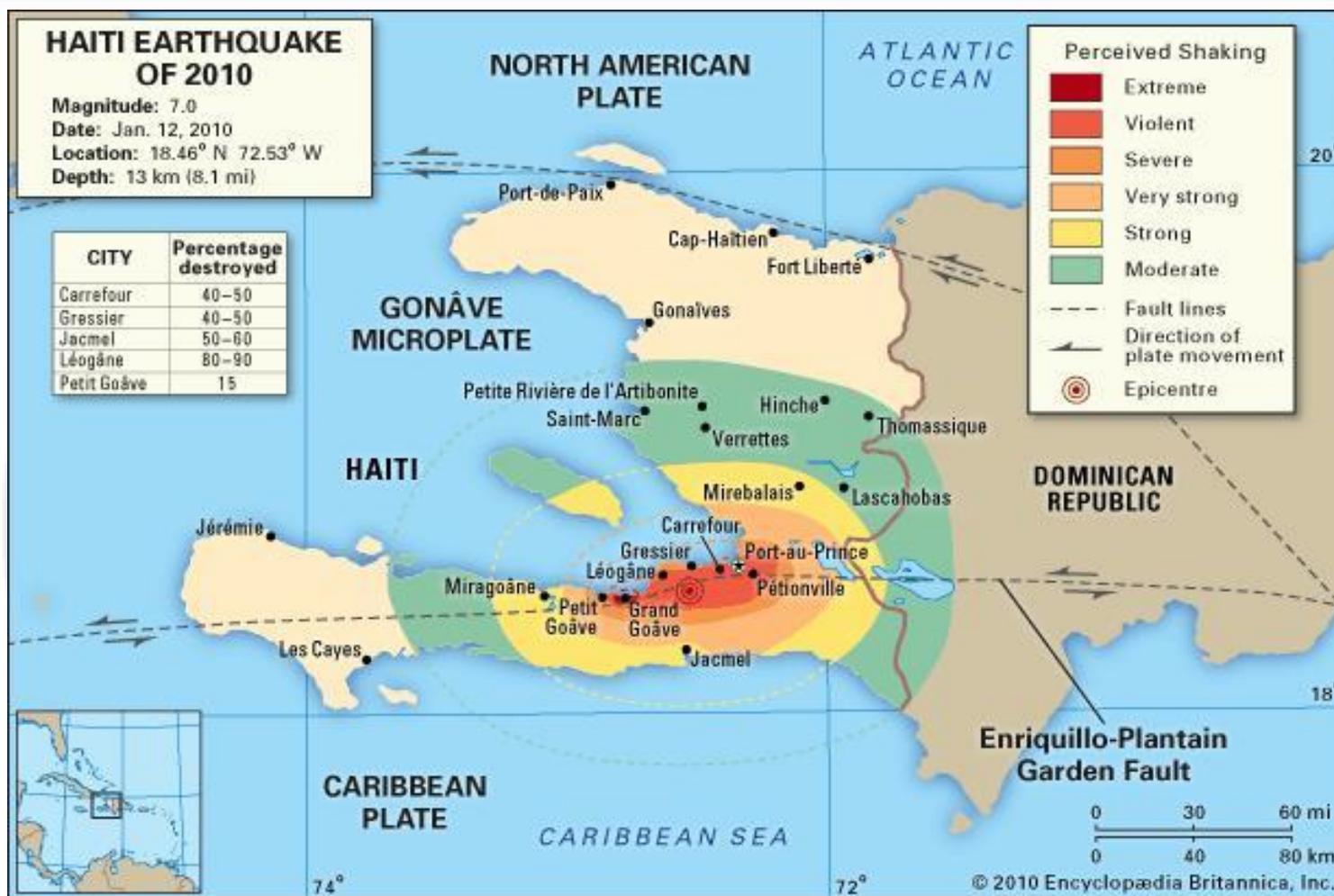
Population Active / Inactive (15 ans et plus)



Répartition Produit Intérieur Brut Réf: comptes économiques 2009







12 January 2010 Earthquake

- 12 January 2010. 4.53 pm local time magnitude 7.0
 - 217,000 killed
 - Others give a much higher figure, claiming that approximately 300,000 people were killed directly in the earthquake and that another 300,000 were wounded.
 - over a million homeless
-

- It is estimated that the disaster levelled over 80 percent of the capital; 80-90% of Léogane was destroyed.
- Almost every concrete structure in the town collapsed ([map](#)). Some figures suggest that the 2010 earthquake left behind between 19-40 million m³ of debris ([debris density map](#)).

HAITI

Port-au-Prince

Catalogue of observed damaged buildings the 13th of January 2010

Location Diagrams



Legend

- Damage**
- Observed damaged building
 - Press reported damaged public building
 - Obvious / widespread
 - Evident but sporadic
 - Scarce or non visible
 - Area not analysed
 - Major road
 - Secondary road
 - Other road

Interpretation

A major earthquake of magnitude 7.0 hit Haiti on the 12th of January 2010 at 21:53 (GMT), 16:53 (local time). This map locates presumed badly damaged buildings (4 346) as observed in GeoEye imagery acquired the 13th of January 2010 in the city of Port-au-Prince. It also shows a building damage assessment realised on the basis of the number of damaged buildings per square kilometer. The results of this mapping should be used with precaution, exhaustivity is not guaranteed.

Cartographic information

0 250 500
m

Local projection : UTM Zone 18 North - Datum: WGS 84
Geographic projection : Lat/Lon (DMS), Datum: WGS 84
Scale : 1:7 500 for A1 prints

Data sources

Observed damaged buildings are derived from GeoEye image (50 cm) acquired the 13th of January 2010
© SERTIT 2010

Roads are derived from GEOSIS ESRI world imagery metric data © DLR 2010

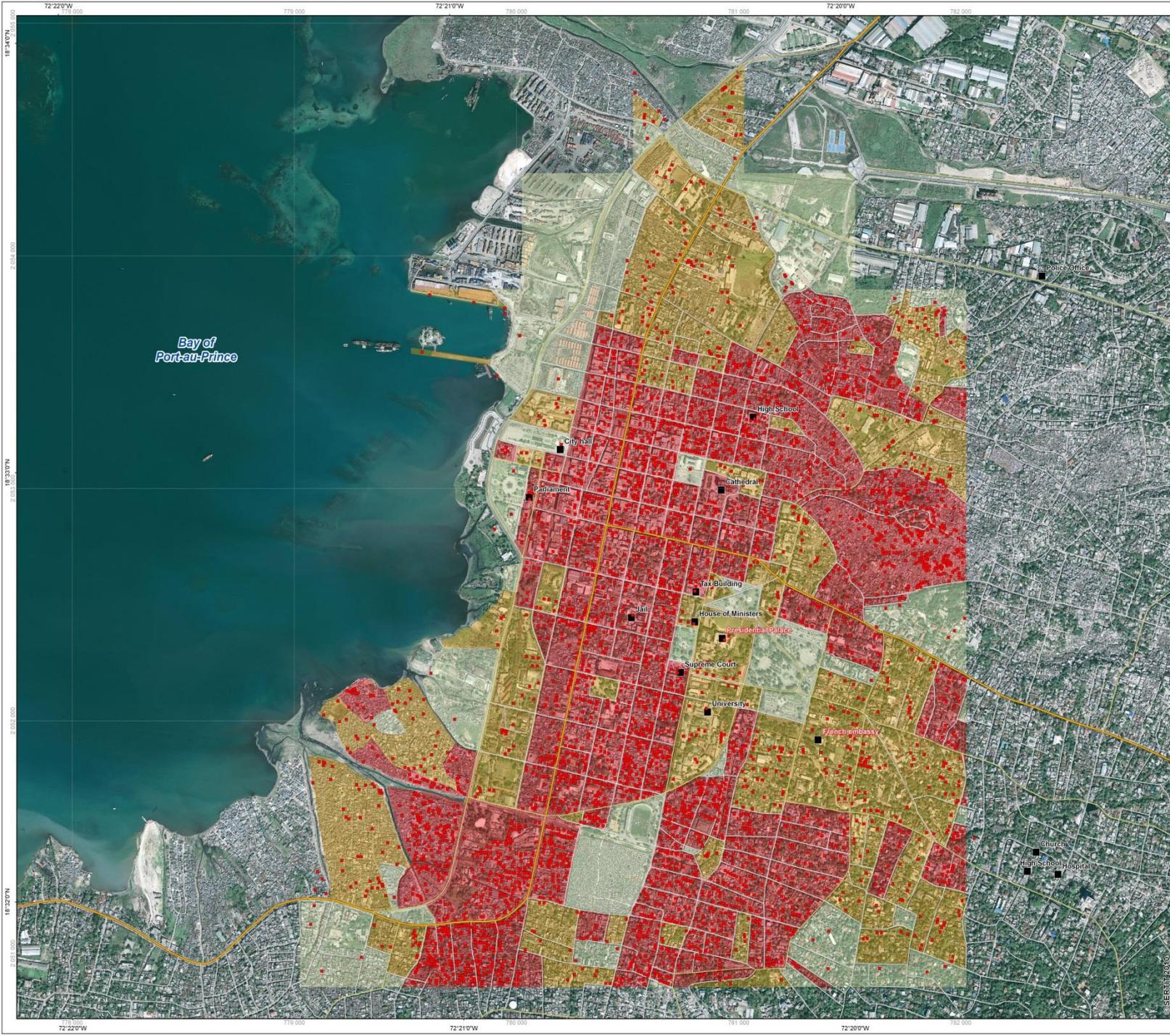
Background imagery GeoEye-1 (50 cm) acquired the 13th of January 2010 © GeoEye 2010, Courtesy of GeoEye, Inc.

Other thematic layers & toponymy © SERTIT 2010, GIST, ESRI

Framework

The products elaborated for this Rapid Mapping Activity are realised to the best of our ability, with in a very short time frame, during a crisis/urgence, optimising the material available. All geographic information has limitations due to the scale, resolution, date and interpretation of the original source materials. No liability concerning the content or the use thereof is assumed by the producer.

Map produced the 18th of January 2010 by SERTIT
© SERTIT 2010
sertit@cerm.u-strasbg.fr
http://sertit.u-strasbg.fr



Earthquake: Global Response

- In 2010, \$4 191 000 000 was promised to Haiti to aid the country in the reconstruction process. ([Diagram of overall aid 2010-12](#); in French)
 - The American Red Cross alone raised \$486 million
 - The Netherlands raised over €111 million for humanitarian aid and reconstruction.
 - Global celebrities involved too.. (Brad Pitt, Sean Penn....)
 - The Interim Haiti Recovery Commission created to coordinate (Bill Clinton)
 - Priority: Clearing+Housing but....
-

Earthquake: Actual 'Achievements'

Grand plans but...

- **October-2010** UN-caused cholera outbreak has claimed over 10 thousand lives so far and afflicted another 844,670, and has also spread to other Caribbean countries.
 - **September 2013** only 7,500 new homes had been built and 27,000 repaired
 - **October 2014** 9,032 new homes built by international reconstruction efforts
 - By **2015**, estimates suggest that the number of individuals living in informal settlements on outskirts of Port-au-Prince, not counted in official displaced population, according to Haitian government: 300,000
-

Earthquake: Actual 'Achievements'

Almost three years after the earthquake:

- \$9.04 billion has been disbursed by both public and private donors.
- Bilateral and multilateral donors have disbursed \$6.04 billion, which is 47.8% of the \$12.62 pledged in humanitarian and recovery funding.
- Of the \$6.04 billion from bilaterals and multilaterals, **only 9.5% (\$579 million) was channeled to the Government of Haiti (GOH) using country systems. 0.6% (\$36.2 million) was channeled to Haitian NGOs and businesses.**

See: [Julie Watz](#) and ([U.S. Aid spending in Haiti](#))

Disaster Relief: a disaster of its own?

Haiti's disaster relief 'became a disaster of its own.'

Jake Johnston, 'Outsourcing Haiti', [*The Boston Review*](#), 16 January 2014

Is every earthquake a disaster?

- 27th of February 2010 Chile earthquake: despite having a magnitude of 8.8, killed only 723 people with a further 25 going missing.
 - In September 2010 an earthquake of similar magnitude as the Haitian one struck just outside of Canterbury, New Zealand. There were no casualties.
 - [The Earthquake Track : Caribbean](#)
-

- Dictionary of Human Geography:
‘natural hazard’: An event or phenomenon with **the potential to cause serious harm**, including loss of human life and damage to human-environmental systems, and which originates in the natural environment (see [hazard](#)). They are distinguished from technological hazards such as accidents at nuclear reactors. **The actual effect of geological, meteorological, and hydrological factors is always contingent upon social factors.** For this reason, the term ‘environmental hazard’ is now more common.

Castree, Noel, Rob Kitchin, and Alisdair Rogers. "natural hazard." *A Dictionary of Human Geography*. : Oxford University Press, 2013. Oxford Reference. 2013. Date Accessed 21 Mar. 2017 <<http://www.oxfordreference.com/view/10.1093/acref/9780199599868.001.0001/acref-9780199599868-e-1251>>.

Haiti: exposure to hazards

- Hispaniola is located directly on the path of tropical storms and is consequently exposed to flooding, heavy rainfalls, landslides.
 - At least four major faults in Haiti—the Enriquillo-Plantain Garden Fault, the Septentrional Fault, the Trans-Haitian Fault, and the Léogâne Fault—pose a continuous threat to the island's population.
 - Haiti's capital located near or directly over two active fault systems.
-

‘Not every windstorm, earth-tremor, or rush of water is a catastrophe. A catastrophe is known by its works; that is to say, by the occurrence of disaster. It is the collapse of the cultural protections that constitute the disaster proper,’ so the inability of a community to deal with the event with the resources it has.

Lowell Juillard Carr, ‘Disaster and the Sequence-Pattern Concept of Social Change’, *The American Journal of Sociology*, 38 (1932), 207-218, p.211

‘[a] disaster can be defined as **a combination of factors** of a political, social, economic and environmental nature which work to undermine the ability of a system to cope with new stresses.

The interaction of these factors, which are generally long-term in nature, **creates the conditions for disaster.**’

Disasters are ‘a **continuing process** of extreme manifestation of the day to day situation.’

James Lewis, ‘Some Aspects of Disaster Research’, *Disasters* 1 (1977), 241-244. p. 243

[N]atural disasters, despite the adjective, are not “natural.” Although no single person or action may be to blame, death and destruction **result from human acts of omission**—not tying down the rafters allows a hurricane to blow away the roof—**and commission**—building in flood-prone areas. Those acts could be prevented, often at little additional expense.

United Nations and the World Bank, United Nations and the World Bank, 'Natural Hazards, Unnatural Disasters: The Economics of Effective Prevention', (2010)
<http://www.gfdrr.org/sites/gfdrr.org/files/nhud/files/NHUD-Report_Full.pdf> (p. 23).

The ‘unnatural’ 2010 earthquake

Haiti earthquake as a ‘*kriz konjonkti*—a conjunctural crisis,’ that is ‘**the intersection** of neoliberalism and foreign control, together with the complicity of Haiti’s elite and government.’

Schuller and Morales, ‘Haiti’s Vulnerability to Disasters’, in *Tectonic Shifts: Haiti Since the Earthquake* , pp. 11-13 (p.12).

2010: a 500-year earthquake?

- disasters are ‘less the result of geophysical extremes (earthquakes, hurricanes, droughts, etc.) and more as *functions of ongoing social orders*, human-environment relations, and historical structural processes’ [my italic].
- What Haiti experienced on January 12 was in some respects, ‘the culmination of its own more than **500-year earthquake**’

Oliver-Smith, in *Tectonic Shifts*, p. 22

Vulnerability: Multidimensional

- Routine exposure to natural hazards like the earthquake is only one dimension of this vulnerability, and is ‘typically a product of physical location and the characteristics of the surrounding built and natural environment.’
 - Exposure is an external dimension of vulnerability.
 - Consequently, development decisions creating and perpetuating vulnerability are the root causes of disasters, not environmental phenomena which sometimes become hazardous.
-

Vulnerability: Created and Sustained

‘Vulnerability refers to the propensity to be harmed, in this case by a hazard, and to be unable to deal with that harm alongside the social processes creating and **maintaining that propensity.**

Vulnerability encompasses human decisions, values, governance, attitudes, and behavior forming situations in which hazards could potentially cause harm.’

Kelman et al., ‘Learning from the history of disaster vulnerability and resilience research and practice for climate change.’ (2016), p.130.

- Post-disaster recovery has often been defined as going back to the normal, to the pre-disaster state.
- However, it is precisely the everyday ‘normal’, defined by long-term vulnerability processes that increases risks and creates disasters, determining the scale of their impact on individuals and communities.

See, for example: *Interpretations of Calamity From the Viewpoint of Human Ecology*, ed. by K. Hewitt (1983)

- As such, development-related attempts to **decrease vulnerability**, if they are to offer long-term and sustainable solutions, **need to be rooted in the particularity and specificity of the local context.**
 - The return to the pre-earthquake 'normal' conditions is not possible, nor should it be wished for.
-

Recovery: How and Where?

- Two scenarios: (note the differences between them)
 - *L'Architectes de l'urgence*
 - The Mennonite Central Committee:
-

- *Renewal* rather than *recovery*, i.e. an improvement rooted in collective histories and memories, not just a return to the original pre-disaster state that made the disaster possible in the first place.

Happy Endings?

“I don’t need a miracle. [...] I don’t need to be better than anyone else. **I just need a chance to gather up my wishes, to write my own ending, in which everything is the way it’s supposed to be.**”

Laura Wagner, *Hold Tight, Don’t Let Go*, p.242

Thank you!

