



**HAL**  
open science

## **Actions towards seismic risk mitigation in Martinique, French Antilles.**

Jean-Christophe Audru, Bruno Capdeville, Jean-Jacques Salindre, N. Nérée,  
Éliane Mouly

► **To cite this version:**

Jean-Christophe Audru, Bruno Capdeville, Jean-Jacques Salindre, N. Nérée, Éliane Mouly. Actions towards seismic risk mitigation in Martinique, French Antilles.. 19th Carribean Geological Conference, Mar 2011, Le Gosier, Guadeloupe, France. pp.29, 81. hal-00662355

**HAL Id: hal-00662355**

**<https://brgm.hal.science/hal-00662355v1>**

Submitted on 9 Dec 2013

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



# Actions towards seismic risk mitigation in Martinique, French Antilles



J.C. Audru, B. Capdeville, J.J. Salindre, N. Nérée and É. Mouly



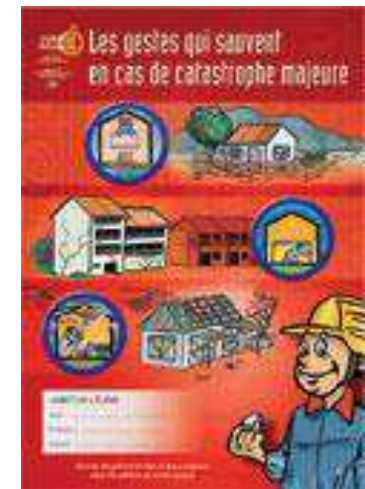
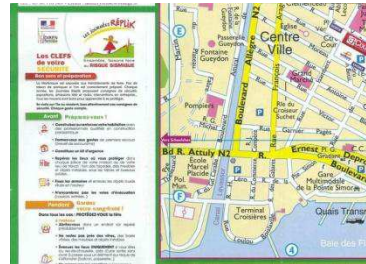
# The French Antilles National Earthquake Plan

- > Initiated in the French Antilles in 2007
- > To reduce the vulnerability of people and buildings
- > Budget ~100 M€ for Martinique actions
- > Actions dedicated to
  - public information and preparedness
  - professionals training courses
  - scientific knowledge
  - reinforcement and retrofit
- > The “Réplik” group of partners = public services, academy, regional and general council, foundations, experts, architects, mayors association, firemen, army, communication society, etc.



# Public information & preparedness

- > Annual information and preparedness campaign (all year + November)
- > Targets residents (adults, pupils) and tourists
  - Brochures, magnets, mouse pads, calendars, whistles, roadmaps, etc.
  - Exhibition stand at the annual Housing Fair (October)
  - Dedicated web site with a download area



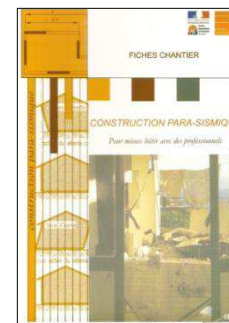
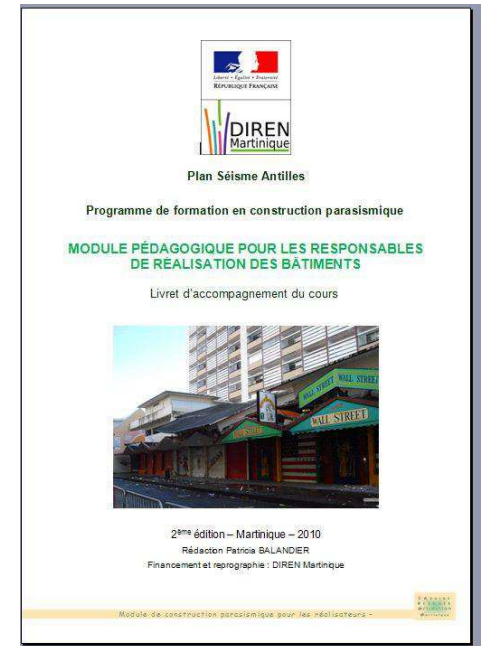
# Public information & preparedness

- > Painting and sculpture exhibition, theatre skits, newspaper ads
- > TV, cinema and radio spots
- > Expanded partnership : pharmacies, medical offices, insurance firms, post offices, petrol outlets, commercial centers, TV channels etc.



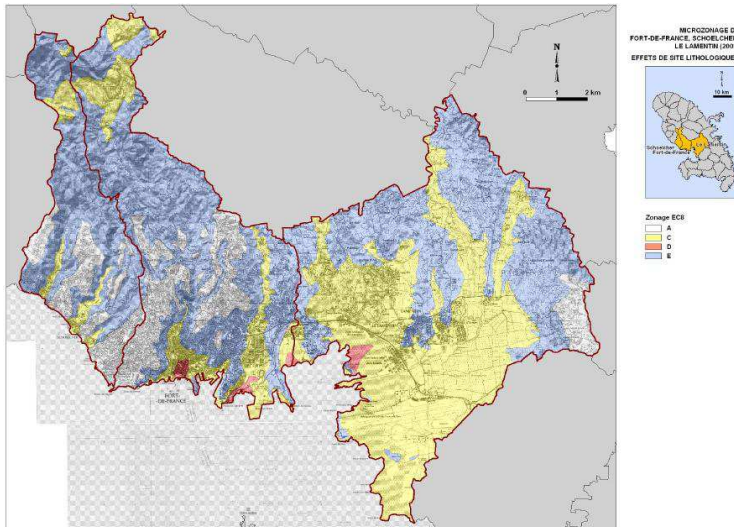
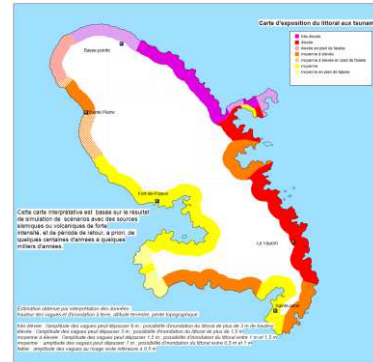
# Specific information to employees and to construction professionals

- > Conferences for employees during working hours, “Do and don’t” flyers adapted to the industrial purposes (6000 people since 2008)
- > Training courses for construction professionals, technical brochures, building codes, seismic reports



# Scientific information to experts, mayors and local councils

- > Microzonations maps
- > Tsunami hazard maps (at regional scale) for all French islands
- > Caribbean experience sharing with the SeismCaRe symposium (20 countries from C. Am + Caribbean)

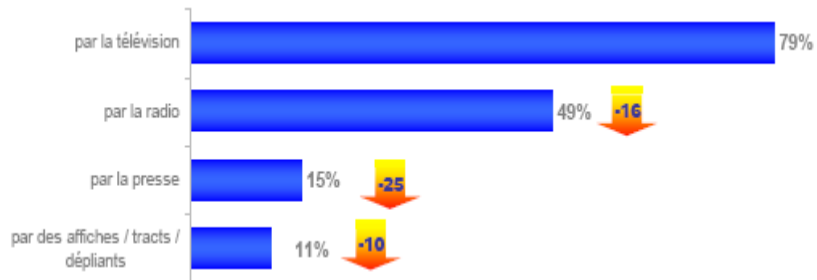


# Evaluation of prep. Actions (survey Dec. 2010)

> 74% have heard of preparedness actions



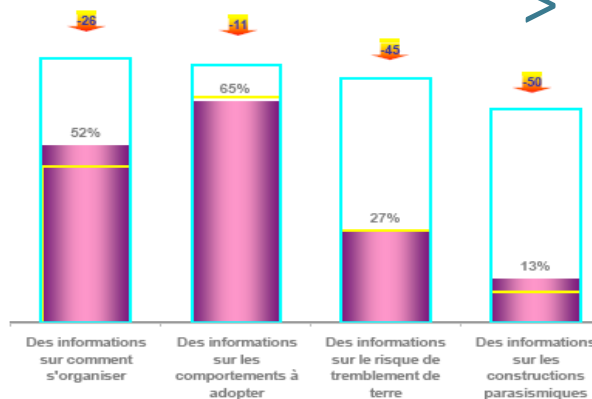
> TV and then radio remain the main dissemination channels



> 72% have not followed the preparedness actions



> Up to 65% know what to do but this is less than in 2009 (back to 2007 level)





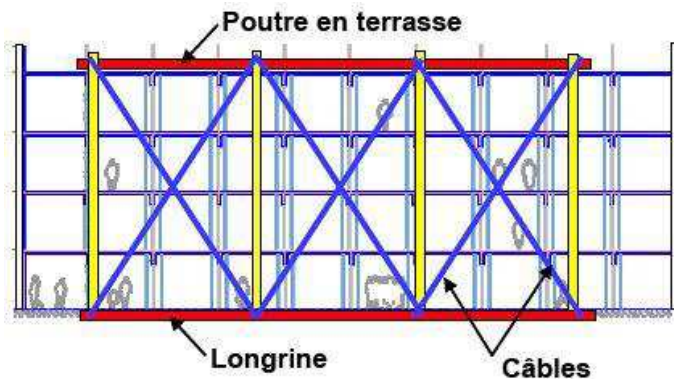
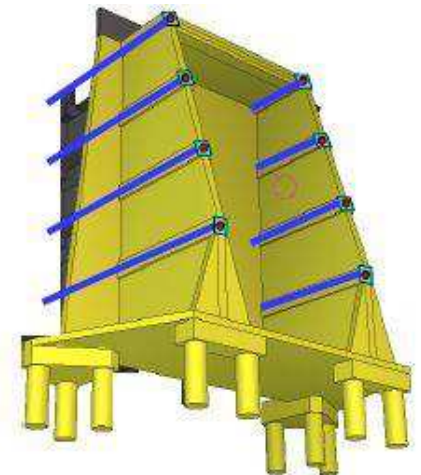
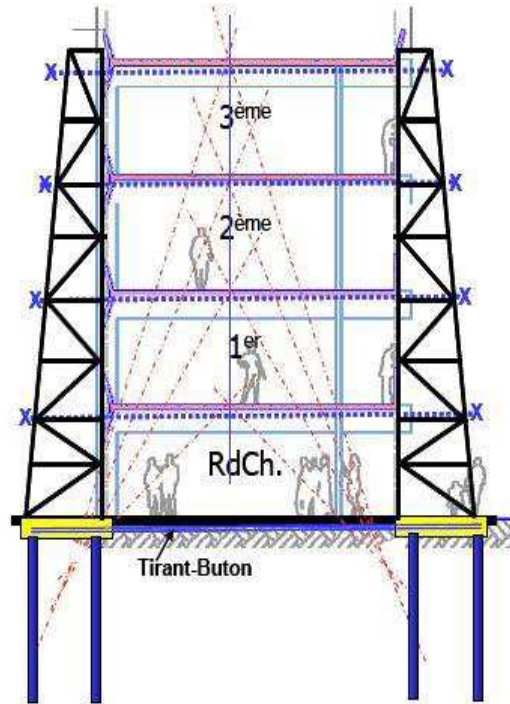
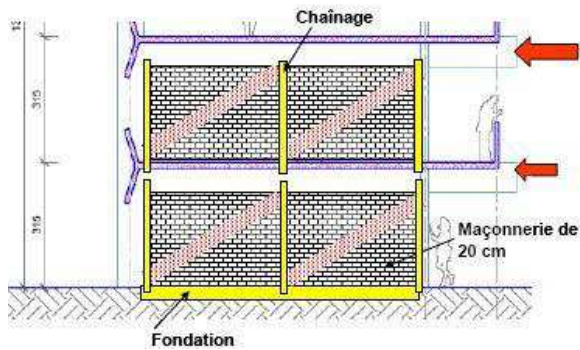
# Diagnosis of schools

- > **General seismic diagnosis of all primary schools and kindergartens Martinique (schools belong to municipalities in France)**
- > **A classification into 3 groups:**
  - G1: Earthquake resistant, possibly with some minor work to be performed
  - G2 : The retrofit/strengthening is fiscally sustainable
  - G3 : Reconstruction fiscally better than retrofit/strengthening
- > **Current diagnosis of private schools**



# Reinforcement & retrofit solutions

- > Solutions adapted to local schools, to local technical possibilities



# Reinforcement & retrofit projects

- > To day, reinforcement and reconstruction of 31 schools for 71 M€
- > These are all subsidized operations (~ 80%): FPRNM (Special Natural Hazard Fund), FEDER (Europe), Government, Regional and General councils, ...
- > To expand asap!



# So what's up in 2011 to avoid this ...



# Topic for 2011

- "I built my house in the state of the art"
- More training sessions for const. professionals
- More retrofit projects
- Diagnosis of government buildings
- New seismic codes applicable from next May
- Updating of the Réplik internet site
- New Réplik information



**Thank you for your attention and ... pa moli !**