

Surviving on a land strip: communities fighting coastal erosion and lagoon flooding in Pueblo Viejo (Colombia)

Bruno Haghebaert, Netherlands Red Cross



Deltas in Times of
Climate Change
Rotterdam 2010
Connecting world science and deltas

Project Area



SURAMÉRICA



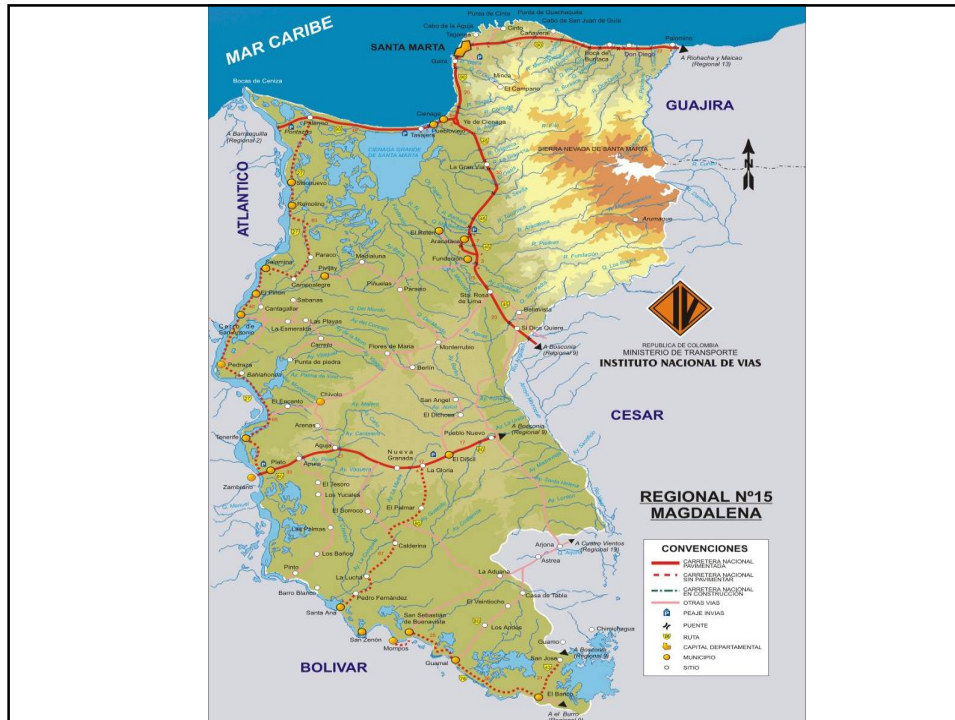
COLOMBIA



MAGDALENA



PUEBLO VIEJO



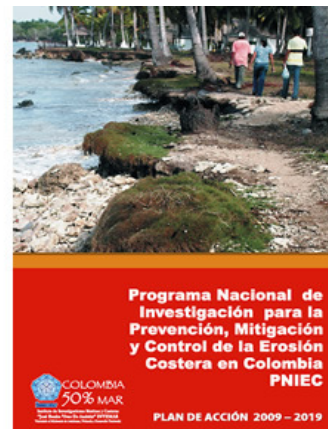
Pueblo Viejo community

- Fishermen
- Population: 1863
- Small land strip 200 – 300 meters wide
- Maximum altitude 2 meters
- Heavily affected by coastal erosion, possibly as a result of climate change
- Also exposed to sedimentation/flood-ing from the lagoon
- Expected to be totally submerged by 2030 (Invemar)

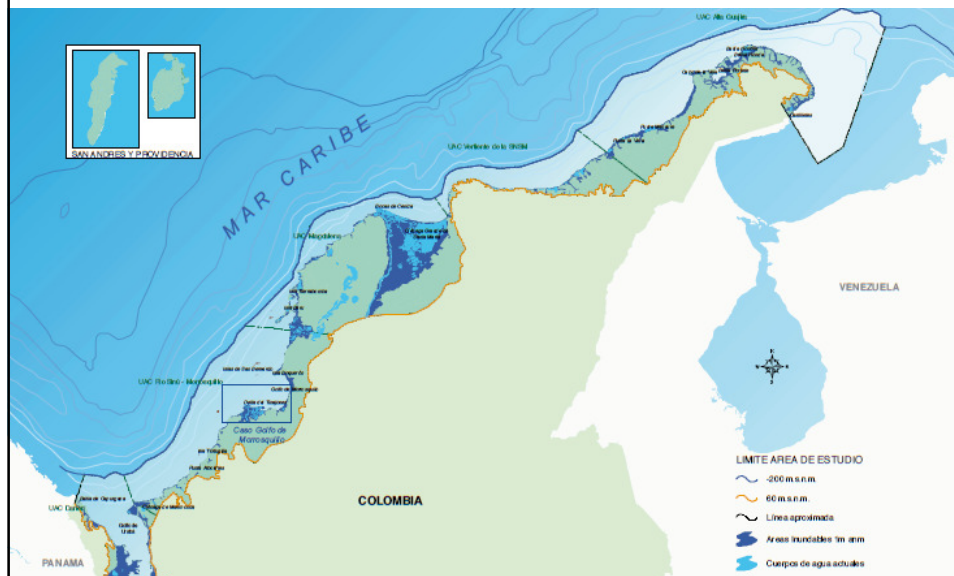


Involving scientific partners

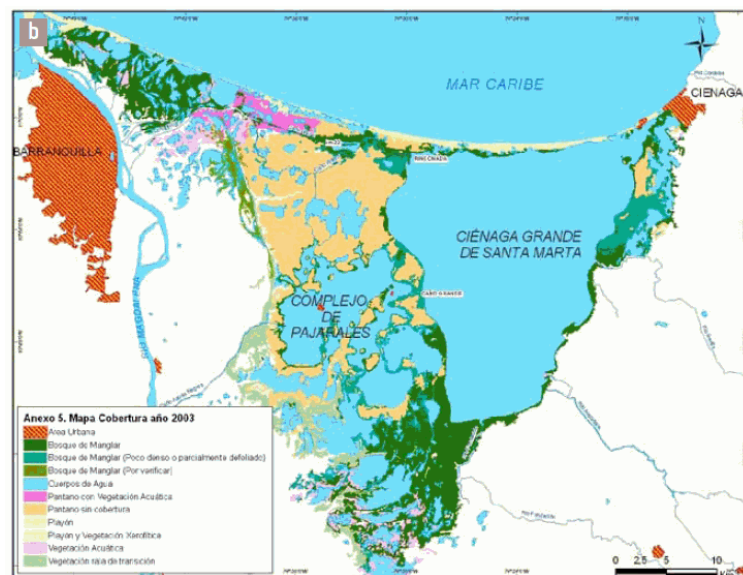
- Collaboration with **INVEMAR** *Instituto de Investigaciones Marinas y Costeras*
- Key research institute on ocean & coastal environment and ecosystems in Colombia
- Supported by the Netherlands Ministry of Foreign Affairs and collaborating with Free University of Amsterdam
- Provided guidance on selection of project areas, land use, hazard exposure...



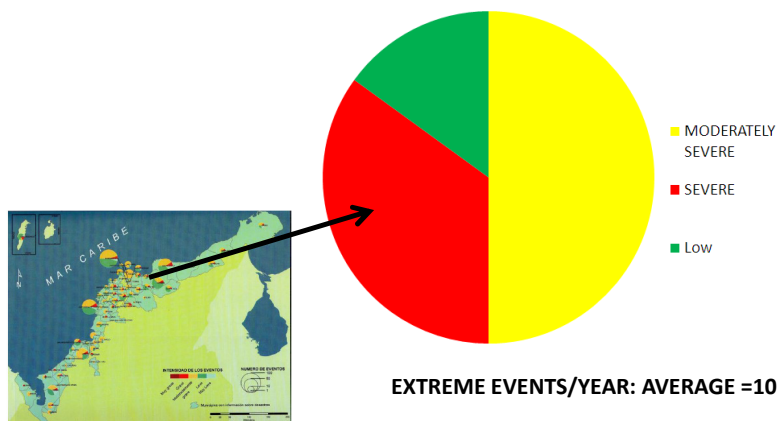
EXPOSURE OF COLOMBIA'S CARIBBEAN COAST TO SEA LEVEL RISE



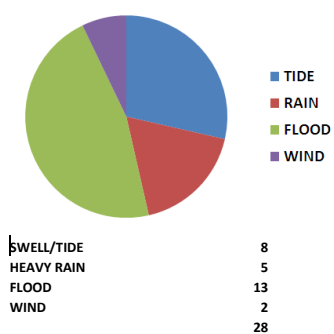
OVERVIEW OF LAND USE IN CIENAGA AREA



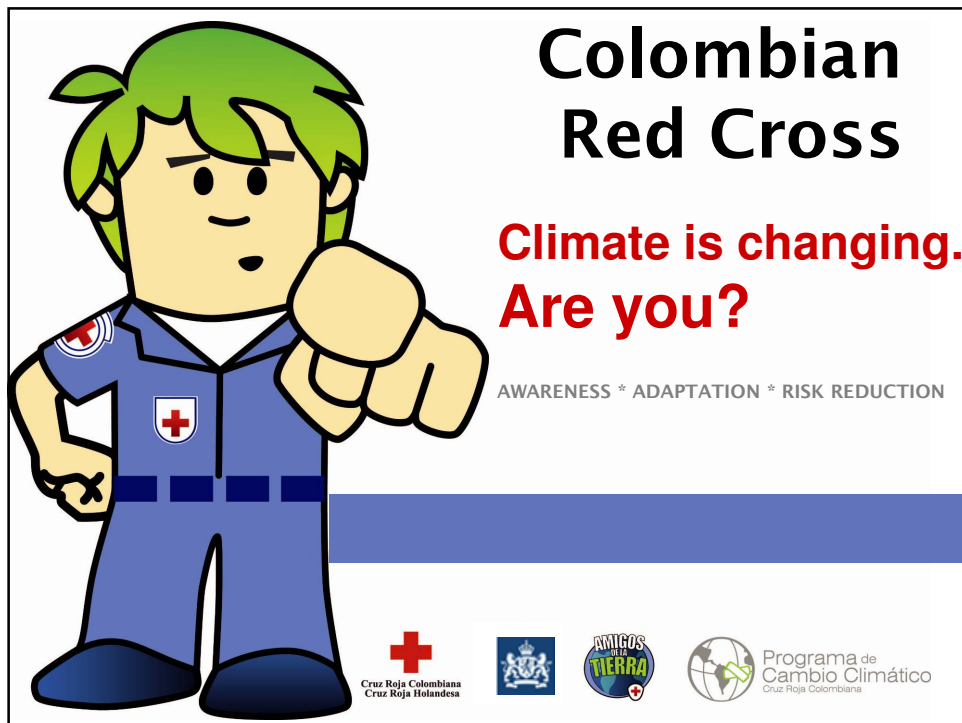
EXTREME WEATHER EVENTS FREQUENCY AND INTENSITY



HAZARD STATISTICS 2010 in Pueblo Viejo



EXTREME EVENTS = 28



ACTIVITIES

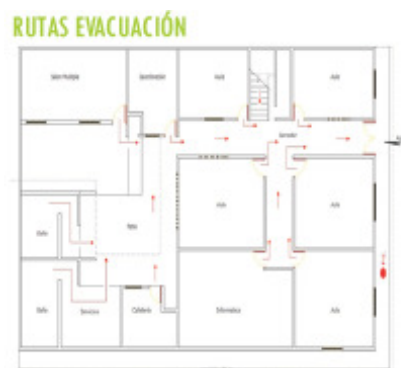
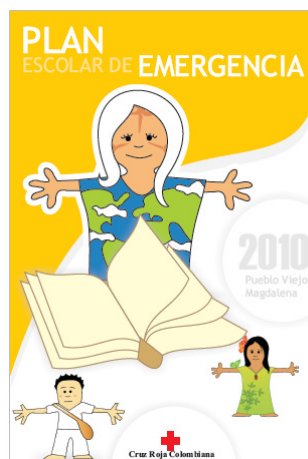
1. Awareness raising on Climate Change and Disaster Risk Reduction



2. Capacity building on disaster response



Disaster preparedness training with school teachers and children



3. Health

- Sensitization and treatment of respiratory infections and diarrhea



4. Solid waste management



5. Early warning systems



Vulnerability mapping

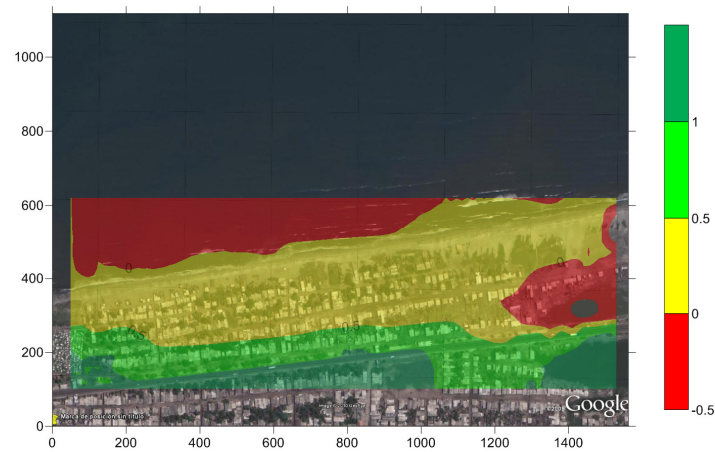
Tabla 8 Población de las comunidades

Comunidad	0- 2 años	2-5 años	5-12 años	12 años	18-60 años	60-70 años	Mayores de 70
La Gloria	69	83	128	120	365	37	8
Nuevo horizonte	66	43	133	110	294	26	11
La Playa	25	32	64	52	178	5	14

Tabla 9 Población vulnerable

Comunidad	embarazadas	Discapacitados
La Gloria	1	4
Nuevo Horizonte	7	6
La Playa	2	0

Early warning systems



Evacuation route





RAIN GAUGE



TIDE GAUGE

6. Micro-adaptation project: water storage above flood level



BEFORE



AFTER

Connecting science and practice: lessons learned and challenges

	Knowledge centres	Community level practitioners
Language	Highly technical	Need for translation into day-to-day language
Approach	Technocentric/structural solutions	Combination of soft – and hardware
	Complexity of issues	Need for simplification
Scale	Regions, departments, districts	Community, households
Product	Output: study, reports	Process is key. Participation
Target group	Depends on who commissions study	Most vulnerable

Bridging the gap

- Need for regular dialogue
- Joint training and workshops
- Joint project visits
- Promoting participatory research
- Other ideas????