PROYECTO: Fortalecimiento del Sistema de Alerta Temprana (SAT) hidrometeorológico de las cuencas Zaza y Agabama, para proteger la población y recursos económicos en zonas vulnerables a inundaciones de las provincias de Sancti Spíritus y Villa Clara, Cuba.

FORSAT

Fortalecimiento

Hidrometeorológico

del Sistema de Alerta Temprana

#### Bridgetown, 14/04 / 2016





Por una comunidad resiliente ante inundaciones

### Some history.... The beginnings of EWS in Cuba

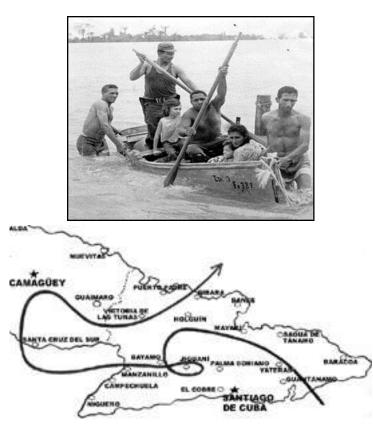
1963, hurricane Flora left over 1,000 people dead in Cuba

Improvement of the Civil Defense System, the Hydrology and Met Services and reduction of social vulnerabilities. Regulatory framework

After Flora, hurricanes through Cuba have left less than one hundred people dead

The Cuban EWS for hurricanes has become a reference of good practices for the WMO

The approach has changed from just warning of hazards and evacuating people to the management of risks at the local level

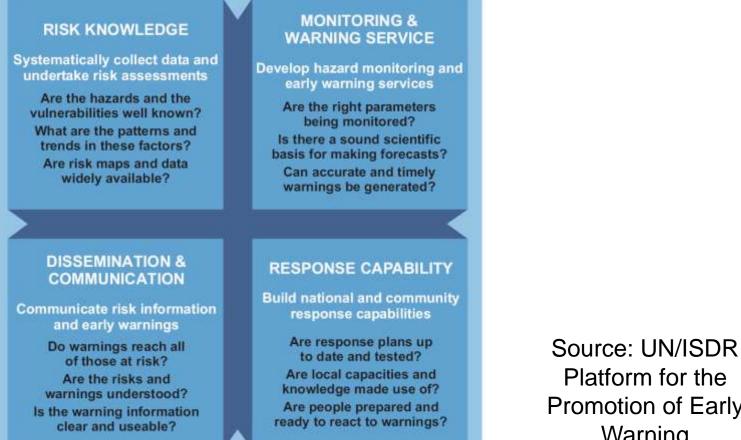






#### Por una comunidad resiliente anteinundaciones

#### Four elements of people-centered EWS



Platform for the Promotion of Early Warning























Por una comunidad resiliente ante inundaciones

## **Risk Reduction Management Centers and Early Warning Points**

Risk Reduction Management Centers (RRMCs):

Conducting assessments, helping local government in the disaster risk reduction processes, and supporting the Defense Council during disaster response

Early Warning Points (EWPs):

Helping the Defense Areas to inform and protect the population and providing the RRMCs with feedback









#### Por una comunidad resiliente ante inundaciones

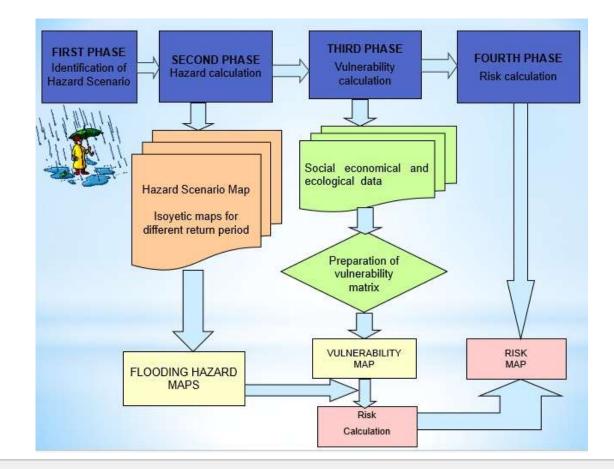
### **Risk Knowledge**

The hazard, vulnerability and risk assessments (HVR): an analysis tool for specialists and decision-makers for managing risk



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#### Por una comunidad resiliente ante inundaciones

### **Risk Knowledge and Response Capability**

The perception of the risk in the population is key to disaster reduction

Vulnerability and Capacity Assessment (VCA), a set of tools from the International Federation of Red Cross and Red Crescent Societies, allows the people to identify and understand the risks in their communities

Sharing the Hazard, Vulnerability and Risk Assessment findings (a vertical scientific approach) with the VCA ones (an horizontal communitarian approach) improve the Disaster Reduction Plan of the community

The children are encouraged to learn about risks and to engage with the Disaster Reduction Plan of their school and community







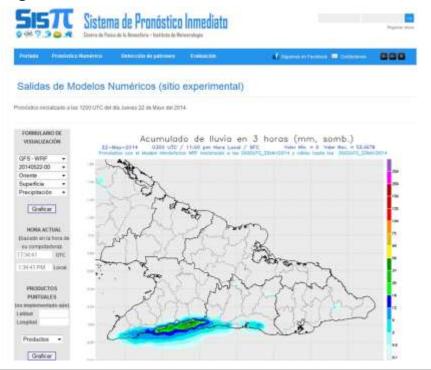


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## **Monitoring and Warning Services**

The use of low budget clusters running numerical models for now-casting improve the Met forecasting which coupled with hydrological analysis and historical hazard scenarios makes better hazard forecasting





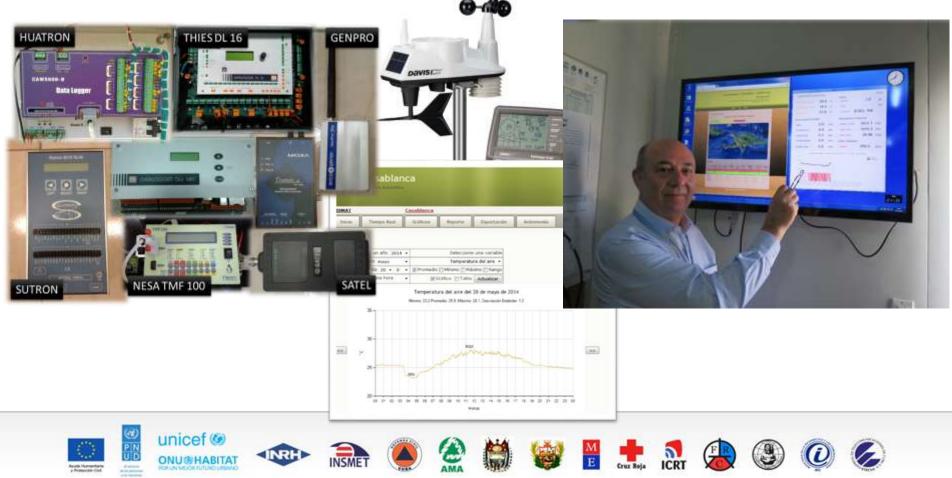




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#### **Monitoring and Warning Services**

Development of a software (SISMAT) to handle AWS from different vendors and communication technologies. Installation of low budget AWS at Early Warning Points

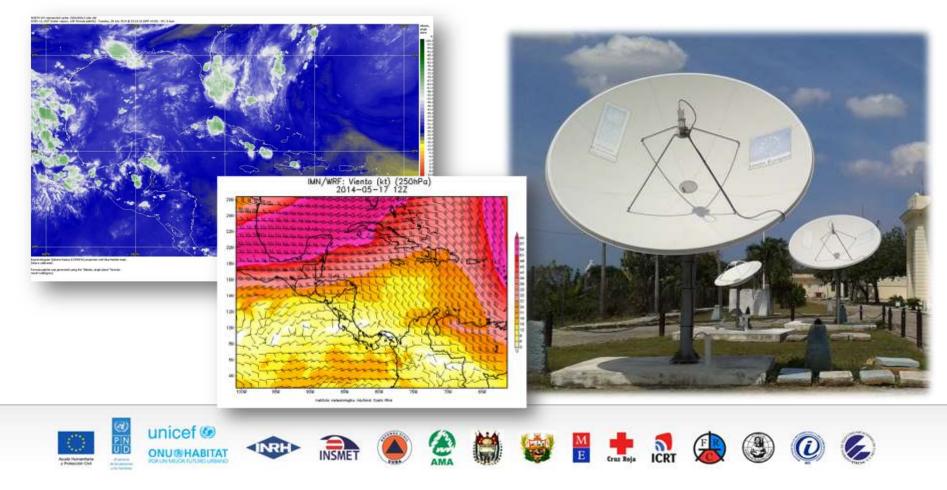




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## **Monitoring and Warning Services**

Use of low budget satellite receiving systems (LRIT, GeonetCast, EumetSat) and development of a software tool to catalogue and distribute images and products

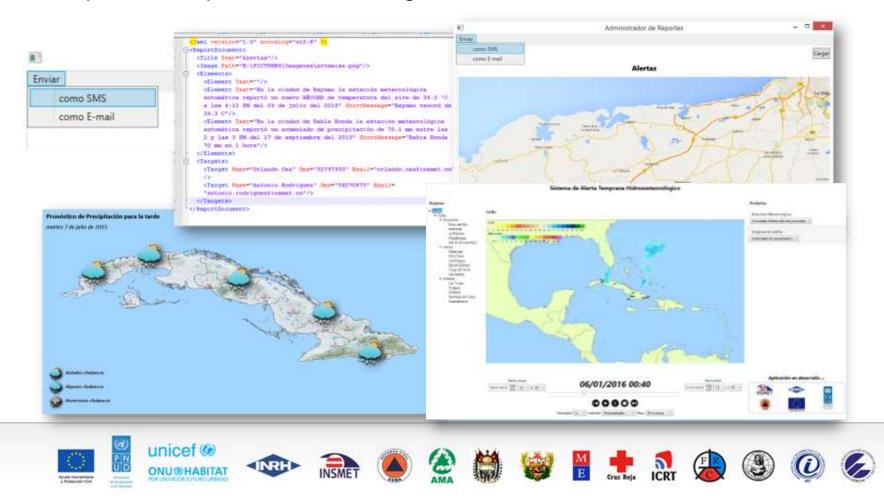




#### Por una comunidad resiliente ante inundaciones

#### **Dissemination & Communication**

Development of a platform to exchange information between the actors of the EWS





#### Por una comunidad resiliente ante inundaciones

#### **Dissemination & Communication**

In Cuba, the public met information comes only from one authorized source and the communication and dissemination of warnings are regulated

The Met has developed a low budget weather presentation system for TV broadcasting

In Cuba, where electricity is supplied to most of the population, the media play a key role in spreading warnings

In isolated communities, the Early Warning Points and Radio Amateurs help the Defense Area to the dissemination of warnings and provide the RRMCs with feedback







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Fortalecimiento del Sistema de Alerta Temprana Hidrometeorológico

# **THANK YOU**

