

Families' preparedness and empowerment: creating emergency plans to cope with seismic events



Foto Nóbrega, 1980

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PROJECT

Creating Emergency Plans

Families' preparedness for seismic events in the Azores



Foto Nóbrega, 1980

Geo-demographic and theoretical background

Major Goals

Main Features

Geo-demographic characteristics of The Azores

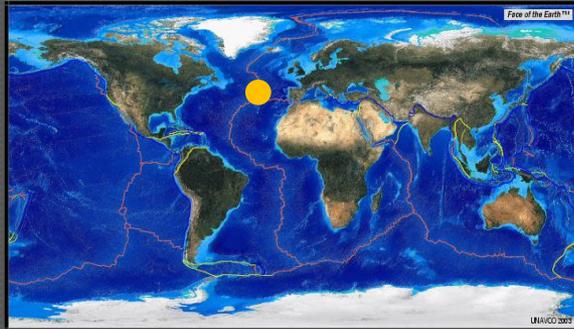


Nine islands

245,000 Inhabitants (approx.)

Area of 2,333 km², 2.6% of the national territory

(SREA, 2008)



located over a triple junction of tectonic plates:
the North American Plate, the Eurasian Plate and the African Plate.



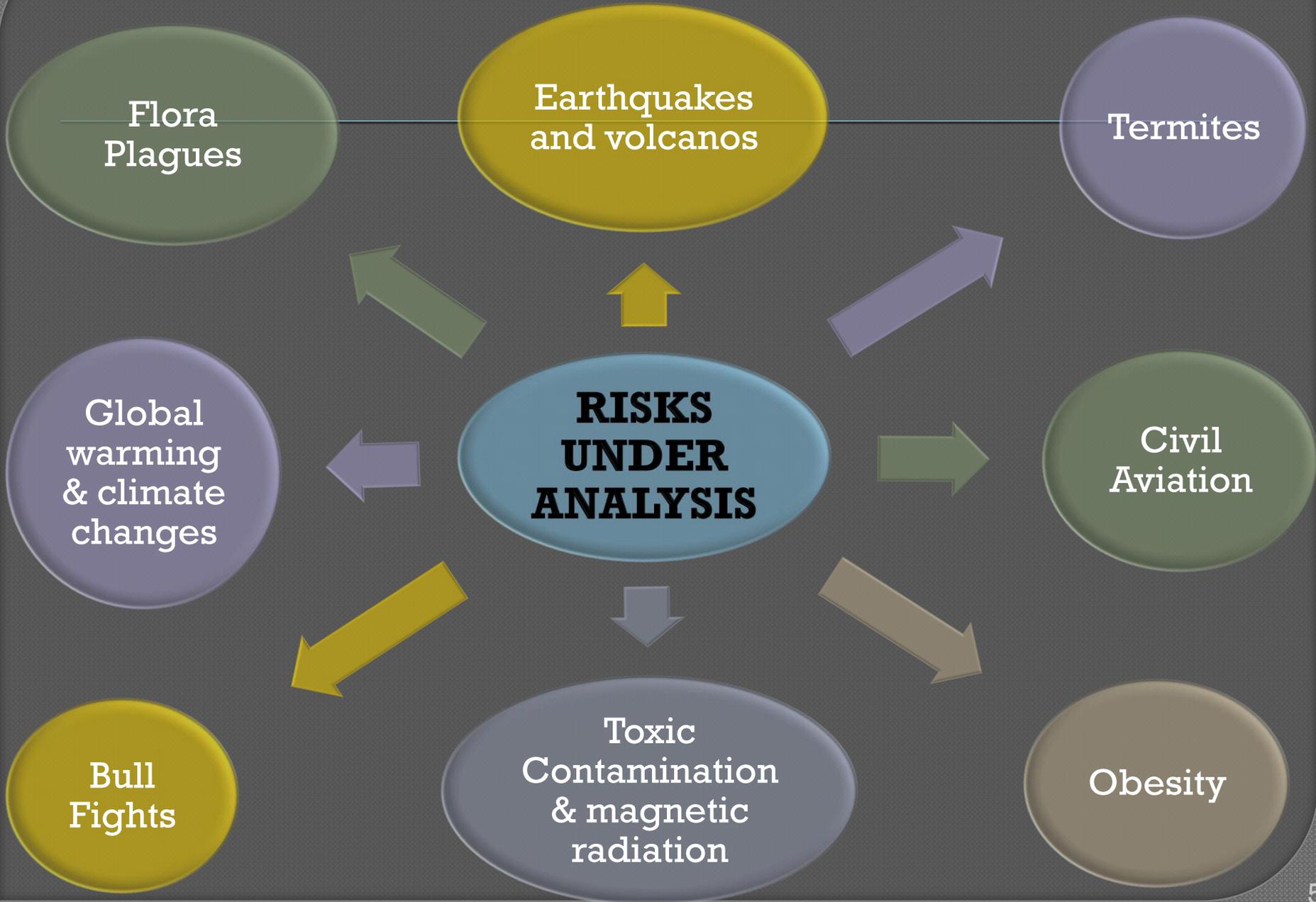
Throughout the archipelago's 6 centuries of history earthquakes and volcanic eruptions affected its central and eastern islands

Foto Nóbrega, 1980

What is the *scenario* of knowledge on seismic risk **perception** in the Azores?

What do we know about Azoreans preparedness to deal with seismic events?

Research on risk perception at the University of the Azores began in 2006



Results from a previous study ⁽¹⁾ - **Risk profile evaluation**
(*TOPOI METUS*, 2006-2009)

- ◎ **Uncontrollability**
- ◎ **Earthquakes are the most serious natural hazard in the Azores**

Result from a previous study (2) - **System' s vulnerability**
(*TOPOI METUS, 2006-2009*)

○ Who was more negatively affected?

- the most socially disadvantaged: aged and psychologically vulnerable persons
- the owners of/residents in vulnerable houses

○ Major losses:

- Lives
- Material - houses and property
- Patrimony (*e.g.* Historical buildings; churches)
- Psychological/emotional

Results from a previous study ⁽³⁾ – **Preparedness**

(TOPOI METUS, 2006-2009)

◎ What is done by authorities/entities (e.g. Government, Civil Protection, experts, schools)?

During and after a crisis: Ok; The Government does its share; things work because **people help each other**

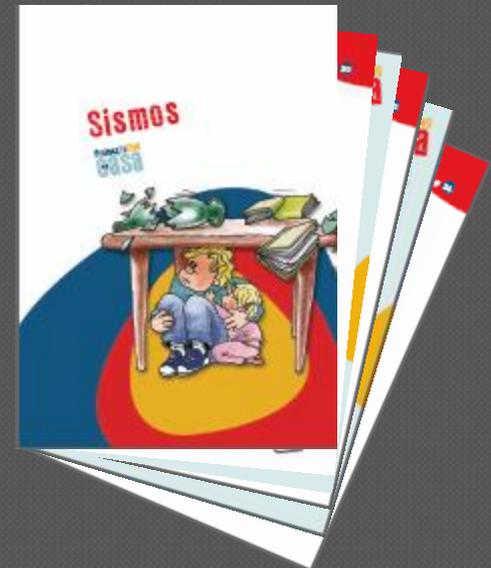
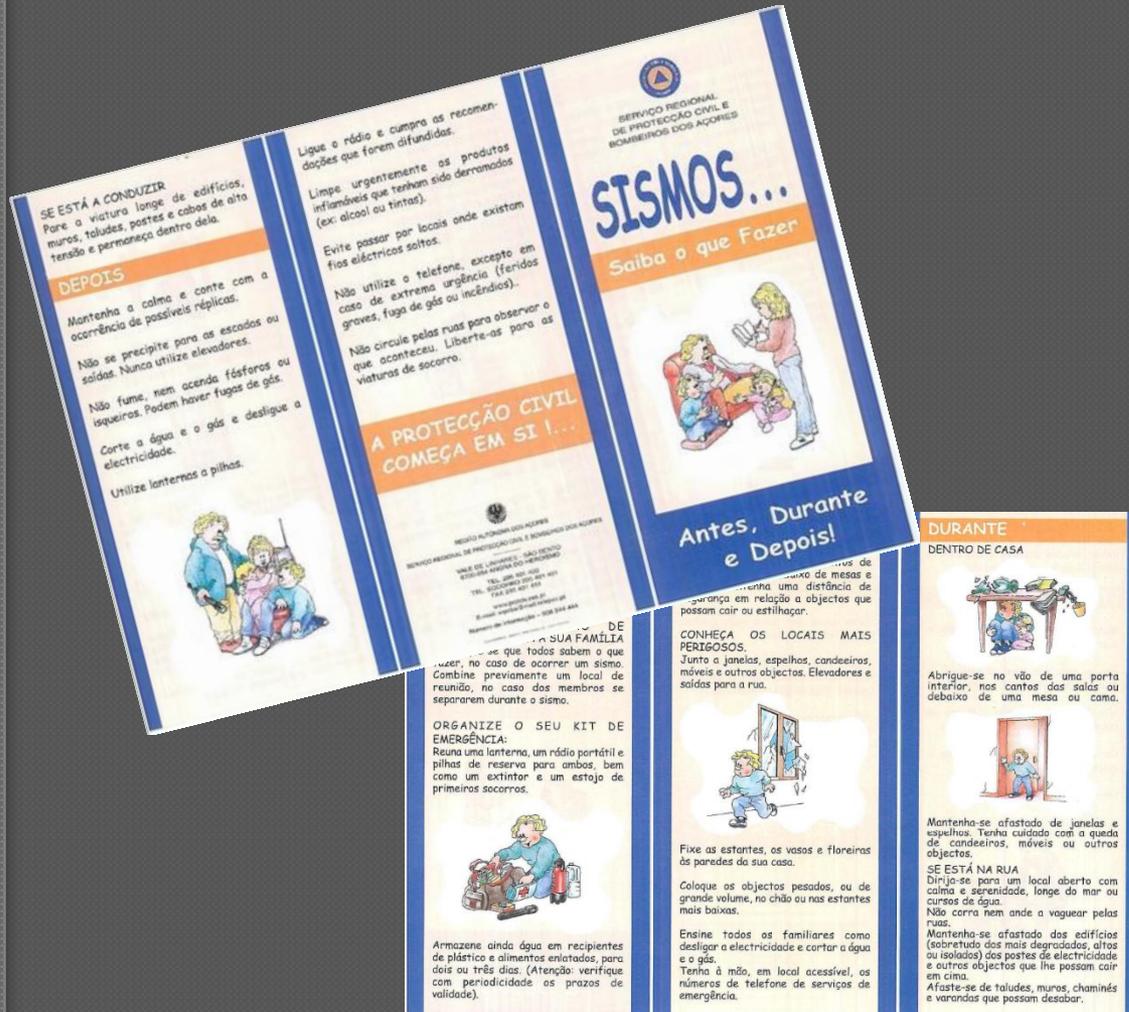
Before a crisis, to prepare citizens: Elementary Schools – some training
'Authorities' – **Nothing**

◎ What is done by the person him/herself?

A sense of not needing more information to be better prepared, to become more resilient to crisis and crisis impacts

There is not a 'culture of precaution'

There are pamphlets and a chapter in a manual available on the internet about preparing to and dealing with earthquakes.



perceived and actual preparedness

(e.g. Basolo et al., 2009)

- ⦿ Individuals have an high level of confidence in local government to manage a disaster;
- ⦿ Exposure to more preparedness information sources were associated with a higher level of perceived preparedness;

psychological predictors of preparedness for an earthquake (Spittall et al., 2008)

- ◎ People (in general) take more survival actions than mitigation actions
- ◎ Individuals who are more risk-taking tend to take more survival actions, and individuals psychologically categorized as having an internal locus of control make more mitigation actions.
- ◎ Home ownership influence preparedness – individuals who own a home take more mitigation actions.

high-school students motivation for preparedness (Shawn, 2003)

- students learn about earthquakes in school and seem to be aware of its risks.
- however, only 25% performs risk reduction actions.

variables influencing risk perception (Wachtendorf & Sheng, 2002).

- ◉ Women are more likely to perceive risks (with serious physical injuries) than man
- ◉ Older people are more vulnerable to disasters impacts, however, as age increases, serious risk perception decreases
- ◉ Emotional distress was the most consistent predictor of risk perception for earthquake outcomes (individuals who had earthquake experiences)

Risk Governance Model (IRGC)

Risk Characteristics and their Implications for Risk Management

Knowledge Characterization	Management strategy	Appropriate Instruments	Stakeholder participation
<p>Uncertainty-induced risk problems (<i>e.g.</i> earthquakes)</p>	<p>Resilience-focused (risk absorbing system)</p>	<p>→ <u>Improving capability to cope with surprises</u></p> <ul style="list-style-type: none">* Diversity of means to accomplish desired benefits* Avoiding high vulnerability* Allowing for flexible responses* Preparedness for adaptation	<p>Reflective discourse</p>

Project

Creating emergency plans

Families' preparedness for seismic events in the Azores

Major Goal

Observe and understand the ways in which families create a familiar emergency plan to face an earthquake

Also

Which factors are associated to that process?

- **Sense of Community** (McMillan & Chavis, 1986)
- **Home ownership** (Spittall, *et al*, 2008)
- **Robustness of the building** (Spittall, *et al*, 2008)
- **Place identity and place attachment** (Davidson & Cotter, 1991)
- **Religious engagement** (Bourg, D., 1997)
- **Political ideology** (Bourg, D., 1997)
- **Public engagement** (Cass, 2006)

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Underlying ideas:

- Difficulty to openly communicate about frightening issues, even when they represent serious risk for individuals and communities.
- Such difficulty may persist, or increase, in situations where children are involved.
- Incapacity to talk about potential harmful events may affect the way people anticipate and prepare for those situations

Project's Phases

- Selection of families
- First Contact
- Family Emergency Plan Development
- Interview
- Publicizing the Emergency Plans

Selection of families

Criteria

- ⦿ Existence of dependent individuals in the family
- ⦿ Heterogeneity – residential area – Neighborhood

Type



Localia



Demographic



The first contact

- Briefing about the project;
- Informed consent;
- Questionnaire:
 - Socio demographic data
 - Sense of Community (SCI-2)
 - Home ownership
 - Robustness of the building
 - Place identity and place attachment
 - Religious engagement
 - Political orientation
 - Civic participation

The Interview

Major Dimensions

1. Risk Perception

risk profile

social vulnerability evaluation

risk management

trust

2. Preparedness practices in the family

e.g. what is done to protect family members? Who takes the lead in these matters?

3. The Family Emergency Plan

what was done, how, and why

who headed the process, who was involved

what kind of communication

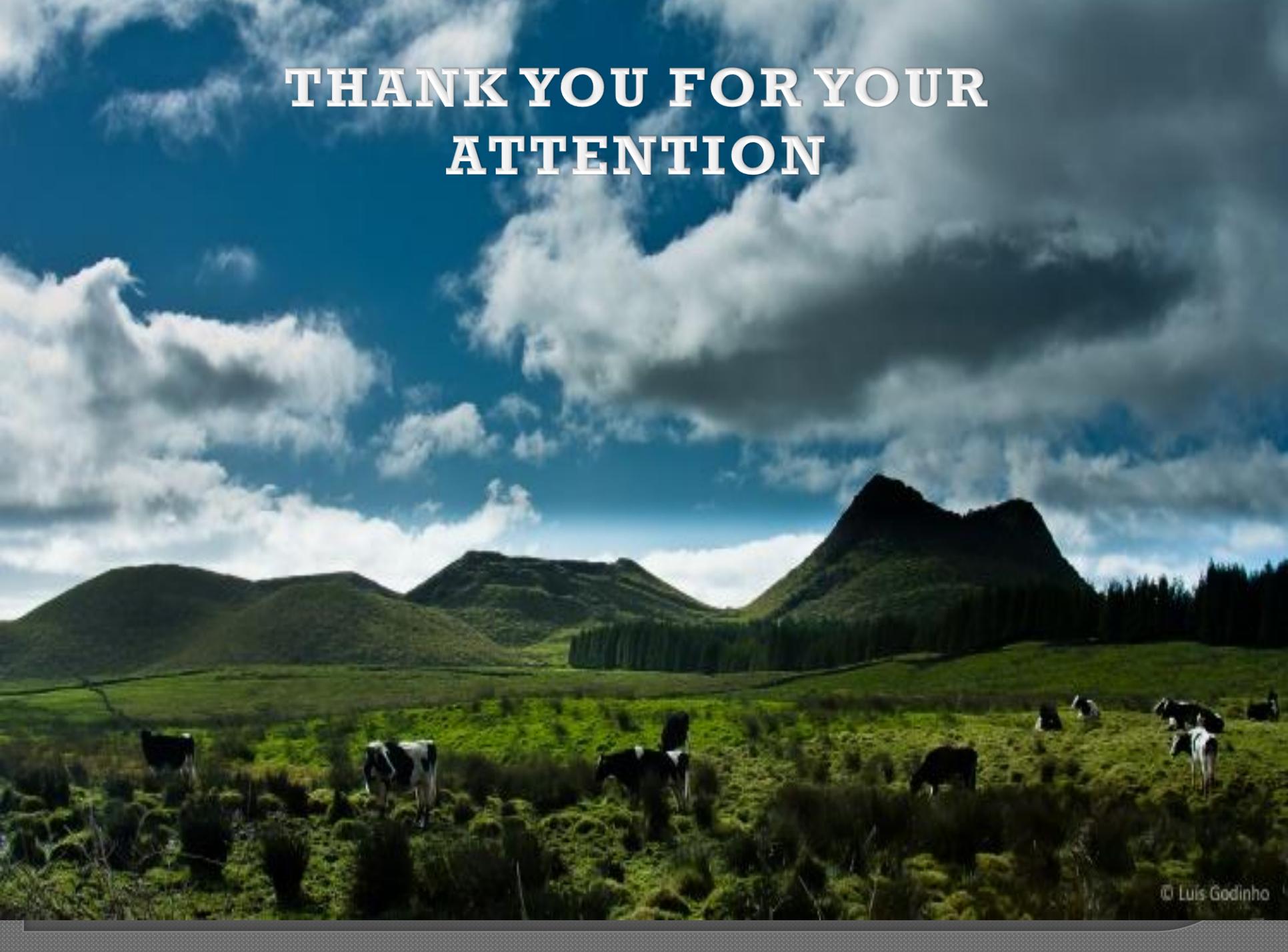
Publicizing the Emergency Plan

a negotiated process

Later and optional

- Emergency Plan feedback
- 'Preparedness Tutorial' *in loco*

**THANK YOU FOR YOUR
ATTENTION**



References

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