SCIENCE, SOCIETY, POLITICS, AND THE MEDIA:

Joining efforts to manage the risk of termite infestation in the Azores

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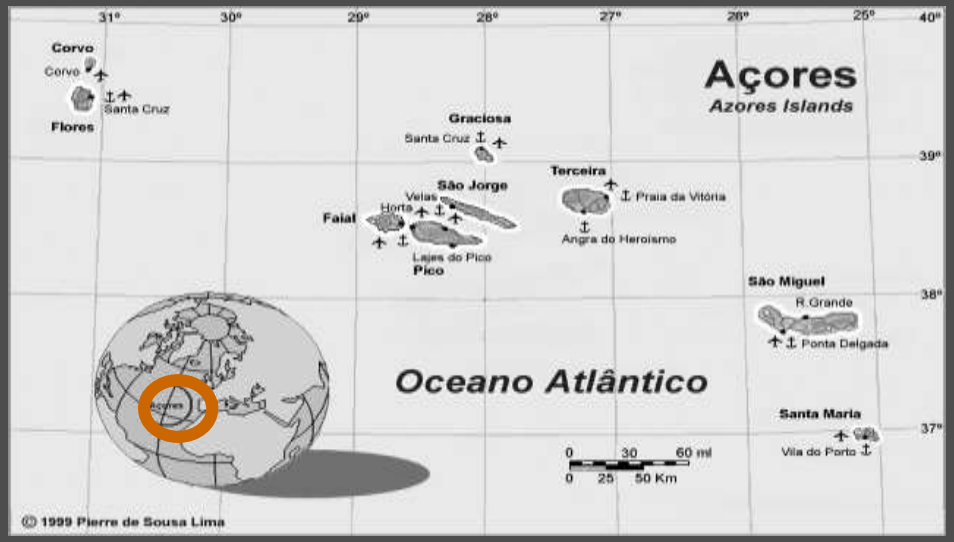
Risk Analysis:
The Science and the Art

SRA, Annual Meeting

Dec., 7-10, 2008
Boston
USA

WE COME FROM...


Açores
Azores Islands
Oceano Atlântico
Corvo
Corvo
Santa Cruz
Flores
Graciosa
Santa Cruz
São Jorge
Velas
Horta
Faial
Lajes do Pico
Pico
Terceira
Praia da Vitória
Angra do Heroísmo
São Miguel
R.Grande
Ponta Delgada
Santa Maria
Vila do Porto
0 30 60 mi
0 25 50 Km
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The Problem

T E R M I T E P E S T

Damages by *Cryptotermes brevis*

Research has been developed …

- ✓ To identify termite species and to characterize their biology;
- ✓ To search for their patterns of distribution and abundance in the Azores;
- ✓ To analyse the conditional local factors involved in the propagation of termites;
- ✓ To test several techniques of mitigation and of propagation control, in the lab and *in situ,* in order to evaluate their success in eliminating and repelling the infestation;
- ✓ To study comparatively various chemical and physical methods to treat infested furniture.

What did we know in the beginning...

- The situation has generalised to other islands, and is even more serious ;
- The infestation cannot be completely eradicated;
- The two types of wood typically used in building construction *(Cryptomeria japonica* and *Eucalyptus spp.)* are among the species more consumed by the *C. brevis;*
- Specific disinfestations' technology for *C. brevis* in Azores is inexistent;
- Some of the more efficient techniques of mitigation are very difficult to implement in Azores, due to their urban characteristics (e.g. fumigation).

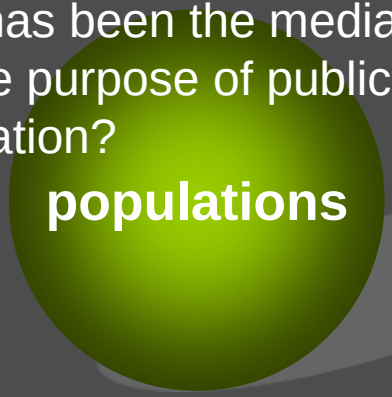
VULNERABILITY OF THE LOCAL SOCIOECONOMIC SYSTEM

INCREASE THE SERIOUSNESS OF THE IMPACT OF THE PEST

What information does the population has about termites?

What has been the media role and the purpose of public information?

Which contribution has Science given to risk governance?



SOCIAL RESPONSE TO RISK

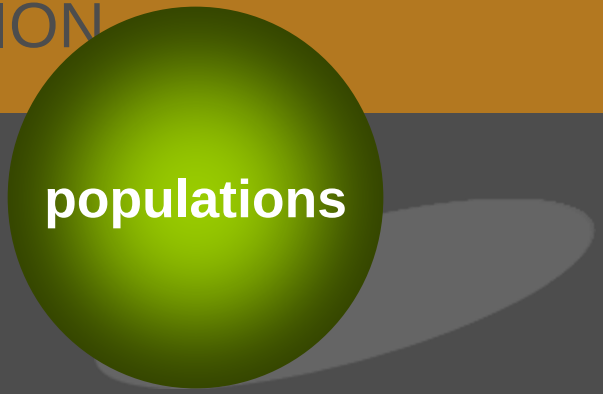
What kind of customs inspection?

Which specific legislation was produced in mitigation and propagation control?

What institutional means exist for propagation control and risk mitigation?

What policies are officially undertaken?

The vulnerability to the risk increases even more due to
… the precariousness of the SOCIAL RESPONSE and to
... the weak PUBLIC PARTICIPATION



- City complains:
  - weak adhesion of citizens to initiatives of public information;
  - small number of inspections requested by citizens;

- Researchers complains and attributions:
  - weak impact of researchers' recommendations and efforts near the target populations …
  - citizens: ignorant and didn't care…

The Project

T E R M I P A R

Citizen Participation in the Control of Termite Infestation in the Azores

C H A R A C T E R I Z A T I O N

SOCIAL RESPONSE TO RISK
Management procedures and social participation dynamics

- POLITICS
- SCIENCE
- TECHNICAL ADMINISTRATION

RISK PROFILES
and underlying conceptions

- SCIENTIFIC ASSESSMENT
- PUBLIC PERCEPTION
- PUBLIC MEDIA PERCEPTION

RISK COMMUNICATION DETERMINANTS

- PUBLIC TRUST AND RESPONSIBILITY ATTRIBUTION
- MESSAGE LEGITIMATION AND ATTRACTABILITY

I N T E R V E N T I O N

RISK COMMUNICATION PLANNING

- GOALS SELECTION
- TARGET GROUPS SELECTION
- STRATEGIES SELECTION
- ELABORATION OF ACTION PLANS

RISK COMMUNICATION MANAGEMENT

- IMPLEMENTATION OF ACTION PLANS
- SUPERVISION AND REGULATION OF ACTION PLANS
- ANALYSIS OF THE IMPLEMENTED ENVIRONMENTAL RISK COMMUNICATION STRATEGIES

EVALUATION OF THE IMPACT OF RISK PROFILES

Project's Future Direction

METHODS AND PROCEDURES

Characteristics common to all analyses :

- Period of incidence: last 5 years (2003-2007);
- Materials' criteria of inclusion : all kinds of material regarding the drywood termite;
- Data analysis: Descriptive Interpretive Analysis
  Mixed category system (a priori e a posteriori)

- SCIENTIFIC KNOWLEDGE
- POLITICAL DECISION
- PUBLIC INFORMATION

METHODS AND PROCEDINGS

- PERSPECTIVE of CITIZENS
  - Stratified sample by:
    - Islands risk seriousness: S. Miguel (N=12); Terceira (N=12);
    - Area: affected (N=16); not affected (N=8);
    - Infestation of building: infested (N=8); not infested (N=16);
  - Total Participants – 24
  - Data production:
    - Individual – ave. duration 55 minutes
    - Undirected Interview
    - Semi-structured: conceptual dimensions :
      - Source of risk characterization
      - Risk profile evaluation
      - Systems' vulnerability evaluation
      - Representations of risk management practices, in the scope of public information and public intervention
  - Data analysis: - Descriptive Interpretative Analysis

- Impossible to eradicated but should be controlled;
- Current situation uncontrolled;
- *"Nobody listens to us":* Government and citizens don't follow recommendations.

How is a given risk understood by the different parts involved in the situation?

media

populations

researchers

RISK CONTROLABILITY AND MANAGEMENT

- Uncontrollable or slightly controllable due to:
  - Powerlessness and/or lack of action:
    - To CONTROL the problem requires:
      - Making citizens and political entities RESPONSIBLE for the problem;
      - Each one becoming RESPONSIBLE for managing and controlling the problem;
      - PARTICIPATION AND JOINING EFFORTS to solve the problem is seen as not feasible, taking into consideration the Portuguese culture!

- It is not a public problem and can be controlled by citizens;
- Don't take care of the problem or 'push it' towards other entities (i.e. the Government/s: the city government)

decision makers

How do they estimate the possibility o eradicating and/or controlling the term

- Decision makers: don't show the political will to manage the problem;
- Citizens: ignorant, passive, and careless.

Which entities are recognized as resources to deal with the problem and how trustful are they?

media

populations

researchers

RESOURCES AND TRUST ON THE RISK GOVERNANCE

decision makers

technicians

- Doubtful about the researchers risk evaluation:
  - They are exaggerated;
  - The history of other biological risks shows that they anticipate worse social impacts than they end up being

Which mutual representations are there among decision-makers, researchers, and citizens?

- The resources identified are:
  - The university
  - Local Government
  - The media
  - Pest control companies
  - The Government
- Bust trust in the intervention of each resource justified differently.

While there is a snowball effect in progress, there is an increase in the intensity and extension of the problem

an ostrich effect in the governance of termite pest…
… due to powerlessness,
… due to strategic lack of action,
… due to a well-known lack of mutual understanding of stakeholders

Thank you

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