CLIMATE CHANGE AND VULNERABILITY OF COASTAL DESTINATIONS. AN APPROACH TO POLICIES AND RESPONSES IN THE MEDITERRANEAN SPANISH COAST.

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1 Introduction

1.1 Tourism in Spain: a key economic sector

11% GDP

11.8% employed population

3rd world destination in 2013

60.6 millions of international tourists
1 Introduction

1.2 Main features of tourism in Spain

- Principal product: sun, sand and sea tourism in the Mediterranean coast.
- Highly specialized on sun, sand and sea resources.
- Mass tourism.
- Both high spatial concentration and litoralization.
- Seasonality.
- Tourism development related to housing market interests and often to a lack of planning.
1 Introduction

1.2 Main features of tourism in Spain

- Principal product: sun, sand and sea tourism in the Mediterranean coast.
- Highly specialized on sun, sand and sea resources.
- Mass tourism.
- Both high spatial and temporal concentration.
- Litoralization and seasonality.
- Tourism development related to housing market interests and often to a lack of planning.

All of them put into a question its sustainability...

...BUT ALSO DYNAMICS OF GLOBAL CHANGE!!
1 Introduction

1.3 Tourism and climate change

- Climate is one of the most important resources for sun, sand and sea tourism.
  
  → **Global warming** may modify demand distribution (time & space).

- Beaches are another key attraction for tourists.
  
  → **Sea level rise** might affect coastline services and infrastructures.

- But tourism contribute to GHG emissions increase...

  ...so tourism not only **suffers** negative impacts of climate change, but also generate them. (Conferences Djerba 2003 & Davos 2007)

This relationship takes action in two ways:

1) Mitigate tourism influence on climate change.
2) Adapt tourism activity to new scenarios.

→ The relevance of these strategies will determinate destination’s vulnerability.
2 What is vulnerability?

- “Vulnerability to climate change is the degree to which systems are susceptible to, and unable to cope with, adverse impacts”
  
  IPCC 4th Assessment.

- Vulnerability is evaluated in several ways.
  
  (Calgaro et al., 2013; Scott et al., 2012; Moreno, 2009; Füsel, 2007)

Actually, there is no consensus about the concept neither about its determinants...
...so the conceptualization has to be adjusted to the concrete study scope and goals.
2 What is vulnerability?

The concept might depend on:

- The **subject** which is considered → Coastal destination vulnerable.

- The **threats** that cause vulnerability. → Climate change

- These **threats’ characteristics**. → Complexity and global dimension, frequency, intensity, probability...

- **Specific determinants** to the subject that condition vulnerability degree. → Exposition, sensitivity, physical conditions, resources availability...

- **External determinants** which also condition vulnerability degree. → Dynamics of global change such as economy, new emergent destinations...

Determine adaptation & mitigation capacity

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3 Why to assess vulnerability through Policies Analysis?

- We assume that: Decision making → Adaptation & mitigation → Vulnerability

- Adaptation and mitigation capacity depends on decision making...

...and decision making is determined by factors that at the same time condition vulnerability such as:

  - Information about threats characteristics
  - Decision makers training, as well as physical, economical or social constrictions (subject specific determinants)
  - Dynamics and variables of global change as external determinants of the subject.

→ Hence, decision making is able to show vulnerability characteristics.

→ We have to select decision making indicators: Public policies

→ Tool: Policies Analysis techniques
3 Why to asses vulnerability through Policies Analysis?

Tourism plans as indicators (Santos & Saladié, 2013; Velasco, 2004):

- Tourism plans set up several ideas and cultural values that conduct and justify the whole actions implemented in this activity sector.

- Plans show policy makers perceptions about tourism context. What is considered as a problem, as well as its magnitude and potential solutions.

- Plans must guarantee a wide consensus from stakeholders in order to be implemented successfully. It requires both public and private participation processes.

- Plans include: objectives and tools and resources to achieve them.

→ By analyzing tourism plans’ contents, we can determinate how decision makers take into account, or not, climate change issue.

Santos, R. & Saladié, O. Climate change and vulnerability of coastal destinations. An approach to policies and responses in the Mediterranean Spanish coast.
4 An approach to Spanish tourism plans and climate change

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Plan 1215

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According to the last tourism plans’ contents, it is clearly accepted that tourism generates negative impacts in the environment, as well as \textit{environment} determines \textit{tourism} activity.

Both documents indentify \textit{climate} as a tourism \textit{resource} besides of \textit{attraction} for demand.

\textbf{Plan 2020} gathers \textbf{10 references} about climate change -8 in PTEH2020 document and 2 in PTE0812-, however in \textbf{Plan 1215} there is \textbf{no one}, it has just 3 mentions about climate as a resource.

\textbf{Plan 2020} recognizes that \textit{climate change will disturb tourism} activity, indeed it have to be taken into account by strategic planning and to adopt \textit{adaptation} and \textit{mitigation} measures.

Most of measures are related to \textit{mitigation} and there are no actions focus on adaptation to new scenarios of climate change.
4 An approach to Spanish tourism plans and climate change

- In spite of their positive effects to cope with climate change, these are just indirect mitigation effects (they are focus on other economic purposes). Most of them are linked to energy efficiency or to reduce CO2 emissions.

- In Plan 1215 those measures are motivated by reputation and brand image, as well as costs reduction. The point of view of this document about sustainability is much more economic than in the previous one (Plan 2020).

- Both documents are concerned about negative symptoms of tourism activity such as seasonality, spatial concentration, high urbanization in coastal territories, limited planning tools. Although all of them are related to climate issues (temperatures increase, sea level rise and displacement of coastline) there is no intervention planned in order to deal with these matters.
4 An approach to Spanish tourism plans and climate change

- Even though the importance of the balance between climate and tourism, there is not any section focus on climate or climate change, there are just few comments along the text.

- In fact, it could be considered that the last plan (Plan 1215) sets back the previous plan (Plan 2020) contents about adaptation and mitigation to climate change.
5 Conclusions

1. Tourism is a key sector in Spanish economy. Specially, sun, sand and sea tourism.

2. The sustainability of this model is questioned not only because its characteristics, but also because of dynamics of global change, such as climate change.

3. Sustainability depends on vulnerability, which is related, among others aspects, with adaptation and mitigation capacity.

4. Adaptation and mitigation success is linked to decision making relevance.

5. It is possible to evaluate decision making contents (indicator) by using Policies Analysis techniques (tool).
5 Conclusions

6. Last tourism plans in Spain reveal that:

- **Climate change** and its implications for tourism are **not taking enough into account** by decision makers.

- Neither climate change intensification by tourism activity.

- **None** of these plans have an **specific section** focus on this matter.

- As a result of some strategies there are **indirect mitigation effects**, by the way most of them are **argued on economic aspects**.

- It could be pointed out that **Plan 1215 sets back** the previous plan considerations.

7. In consequence, tourism plans contents, as decision making indicator, bring into light a **high vulnerability of Spanish coastal destinations to climate change**. Even higher, if we consider that the importance of this issue decreases markedly in the last tourism plan (Plan 1215).
5 Conclusions

8. All of these conclusions point out that to guarantee tourism and destinations sustainability, future research should go deep into information and techniques about climate change and tourism vulnerability, in order to increase decision makers awareness and to obtain better planning tools.
Thanks for your attention!

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