



Socioeconomic value of environment preservation at the EU level

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Making the Mediterranean a clean, healthy and productive sea



Why environment is important for economics?

Just some figures from the **COM(2020) 380 final - EU Biodiversity Strategy for 2030 | Bringing nature back into our lives**

*“Over **half of global GDP** depends on nature and the services it provides, with three key economic sectors – construction, agriculture, and food and drink – all highly dependent on it”*





The concept of Natural Capital

According to OECD “Natural capital are **natural assets in their role of providing natural resource inputs and environmental services for economic production**”.





The concept of Natural Capital

OECD definition clarifies that: “Natural capital is generally considered to comprise three principal categories: **natural resource stocks, land and ecosystems**. All are considered essential to the **long-term sustainability** of development for their provision of “**functions**” to the economy, as well as to mankind outside the economy and other living beings”.



The notion of Ecosystem Services

The concepts of nature's services (Westman, 1977) or ecosystem services (Ehrlich and Ehrlich, 1981) refer to the benefits that ecosystems generate for the society and to raise awareness for biodiversity conservation. Costanza et al. (1997) estimated the monetary value of 17 ecosystem services to range from US\$16–54 trillion per year



The notion of Ecosystem Services



Source: WWF, 2016 (adapted from Millennium Ecosystem Assessment, 2005)

The notion of Nature based Solutions

Nature-based Solutions (NbS) are defined by IUCN as “actions to **protect, sustainably manage, and restore** natural or modified ecosystems, that **address societal challenges effectively and adaptively**, simultaneously providing **human well-being and biodiversity benefits**”.





Why environment is important for economics?

[...] protecting coastal wetlands could save the insurance industry around €50 billion annually through reducing flood damage losses. The overall benefit/cost ratio of an effective global programme for the conservation of remaining wild nature worldwide is estimated to be at least 100 to 1





The economic impact of Climate Change

- A recent EEA briefing “Economic losses and fatalities from weather- and climate-related events in Europe” outlines the **economic impact of extreme weather events and climate-related hazards**
- The analysis considers events like **heatwaves, heavy precipitation and droughts in the period 1980-2020** in terms of damaged/lost **assets and infrastructure** and impact on **human health** (morbidity and mortality).
- These events are expected **to increase due to climate change** in the next decades, although adaptation policies and measures could reduce the impact
- The EEA briefing indicates that over the past 40 years, extreme weather events and climate-related hazards led to between **85 000 and 145 000 human fatalities across Europe**



The economic impact of Climate Change

The report indicates that:

- In absolute terms, the **highest economic losses** in the period 1980-2020 were registered in **Germany followed by France then Italy**.
- The **highest losses per capita** were recorded in Switzerland, Slovenia and France, and **the highest losses per area** were in Switzerland, Germany and Italy (based on CATDAT data).
- Around **23 % of total losses were insured**, although this also varied considerably among countries, from 1 % in Romania and Lithuania to 56 % in Denmark and 55 % in the Netherlands (based on CATDAT data).
- More than 85% of the fatalities in the period was due to **heatwaves**. The heatwave of 2003 caused between 50 and 75% of all fatalities from weather and climate-related events over the last four decades. After 2003, severe heatwaves happened, but the adaptation measures adopted were able to reduce related fatalities

The economic impact of Climate Change

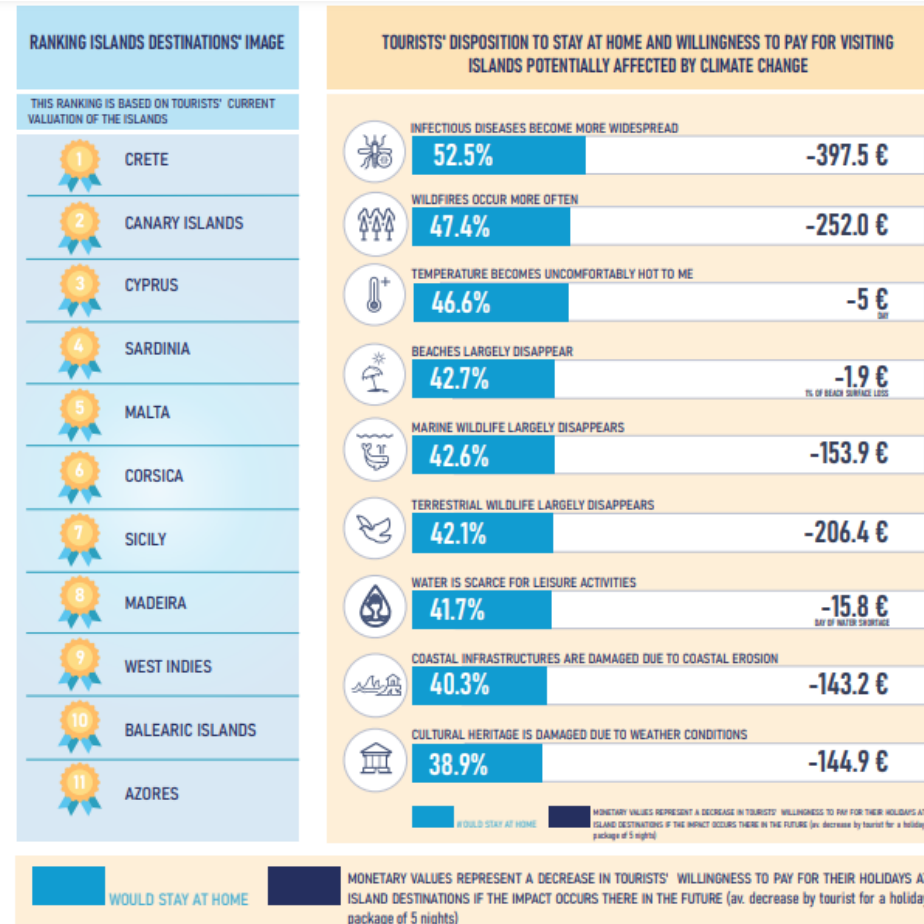


Figure 10.22. Tourists' preferences for islands destinations and behavioural response to climate change risks.
 Source: SOCLIMPACT Deliverable Report - D5.5. Report on market and non-market costs of Climate Change and benefits of climate actions for Europe.

Socio-economic consequences of climate related water scarcity in Med countries



Increasing water scarcity and conflicts between users



- Reduction in quantity and quality of food production
- Decrease in oil, wine and cow milk production
- Increase in production of «tropical varieties»



- Decrease in the number of the tourists
- High concurrence of North Europe coasts



- Decrease in the production of hydroelectric energy

- Reduction in GDP



- Increase in unemployment



- Increasing cost of food



- Increasing cost of energy



Will we become climate refugees?

Making the Mediterranean a clean, healthy and productive sea



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*Thank
you for
the
attention!*