

Case Study 6a: The Azores.

Small islands are defined as a land area with less than 10.000 km² with a population under 500.000 inhabitants (Beller *et al.*, 2004 *fide* Calado et al, 2013). Although Small Islands can present many different aspects, they share many common features that serve to increase their vulnerability to projected impacts of climate change (IPCC, 2001). The Azores Archipelago is a Portuguese Autonomous Region since 1976 and has its own political and administrative statutes (Law No. 39/80, changed by Laws No. 9/87 and No. 61/98, and a new version of Law No. 2/2009), and government agencies which have the authority to create regional legislation, as well as to adapt national legislation to region-specific needs, including those related to climate change (Vergílio & Calado, 2014).

As their population, agricultural land and infrastructure tend to be concentrated in the coastal zone, the most significant and immediate consequences of climate change for these regions are related to changes in sea levels, rainfall regimes, soil moisture budgets, and prevailing winds (speed and direction) and short-term variations in regional and local patterns of wave action. These effects can cause significant and profound effects on their economies and living conditions. Taking in to account all these features the Azores archipelago is a good example to represent these regions constrains.

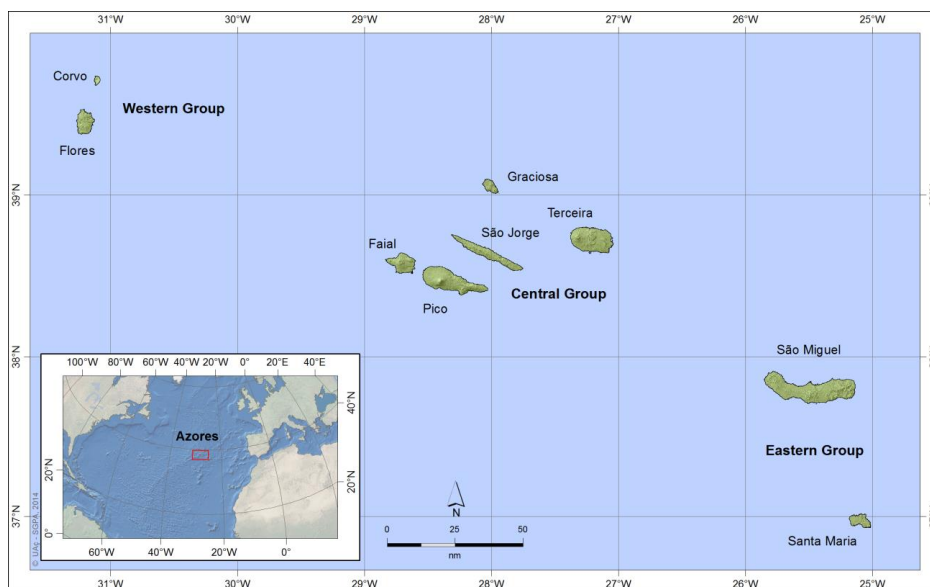


Figure 1: Location of the Azores Archipelago (Source: University of the Azores, 2010).

The Azores are already experience some effects of climate change, reflected mainly in an increase of the irregularity of the rainfall annual system and its interannual variability, an increment of the average temperatures (Brito de Azevedo, 2007) and a prevision of a possible rise in the ocean level.

The geographical dispersion and extreme isolation of these islands transform them in a more vulnerable environment than the continental territories. This scenario can result in several human and technical problems that will reach very significant proportions, like erosion problems, coastal flooding, an increase in the intensity of storms, in the degradation of the water quality and costal hydro resources, in the viability and integrity of ports and their infrastructures, and also biodiversity and fisheries, agriculture and human health, amongst other aspects (Oliveira, 2012).

Being an Outermost EU Region, the Azores are also an excellent "tester" for more specific EU policies and initiatives. Therefore the case study will consider the biophysical aspects of Adaptation and also the economic, social and political dimensions.

References:

Brito de Azevedo, J. (2007). "Alterações Climáticas já se fazem sentir nos Açores". Environment Interview. in *Correio dos Açores Journal*. pp. 22-23.

Calado, H., Braga, A., Moniz, F., Gil, A. & Vergílio, M. (2013). "Spatial Planning and Resource Use in the Azores". *Mitigation and Adaptation of Strategies for Global Change Journal*. DOI 10.1007/s11027-013-9519-2.

IPCC (2001). "Small Island States," Chapter 17 of: Intergovernmental Panel on Climate Change (IPCC). *Climate Change 2001: Impacts, Adaptation and Vulnerability*. Cambridge: University Press.

Oliveira, R. (2012). "Climate Change: Regions are leading the way". Conference "The Road to Rio: Regions Building the Green Economy". Geneva Internacional Conference Center.

Vergílio, M. & Calado, H. (2014). The concept of the Portuguese National Ecological Reserve: constraints and impossibilities in the Azores Archipelago, *Journal of Environmental Planning and Management*, DOI: [10.1080/09640568.2014.907134](https://doi.org/10.1080/09640568.2014.907134)