

## Climate change and biodiversity assets

Climate change as a global challenge is a national (e.g. National Adaptation Plans), supranational and intergovernmental (e.g. European Union Climate Strategies and Targets) and international (e.g. SDG 13 “Take urgent action to combat climate change and its impacts”, United Nations Framework Convention on Climate Change – UNFCCC and the Paris Agreement – COP 21) concern. Institutions and civil society all play a role addressing this global challenge.

It is also fundamental to build bridges between research institutions, climate scientists and other actors (e.g. from science, society and policy), promoting their participation and finding innovative and inclusive strategies for planning and supporting decision-making on matters related to climate change.

The goal of this special issue is to present new studies on “Climate change and biodiversity assets” with challenging topics of relevance in the national and international arenas, together with analyses of the connections between biology and ecology of global change and economic, social and environmental impacts (adaptability of SES systems to climate change). It also aims to identify areas where more knowledge is needed and to recommend possible policy-related actions that could be pursued.

The objective is to publish original, high-quality articles that deepen our theoretical and practical understanding on this thematic. The contributions amassed on this special issue are:

“Building capacity on ecosystem-based adaptation strategy to cope with extreme events and sea-level rise on the Uruguayan coast” aims at showing a case study of ecosystem-based adaptation measures to increase coastal system’s resilience to extreme weather events and sea-level rise implemented at Kiyú (Uruguayan coast of the Rio de la Plata River estuary).

“Impacts of stratospheric aerosol geoengineering strategy on Caribbean coral reefs”, with modelled impacts of stratospheric aerosol geoengineering on coral reefs.

“Ecosystem services in adaptation projects in West Africa”, which assessed the role and place of ecosystem services in adaptation projects in West Africa, and their redesigning options to enhance community adaptation and mitigation capacities.

“Trends and perceptions of climate variability and change and impact on production of African indigenous vegetables in Kenya”, aims at identifying how farmers of African indigenous vegetables (AIVs) perceive climate variability and change in three different agroclimatic zones in Kenya and the differences in perceptions and historical trends.

“Effects of climate variability on crop income and indigenous adaptation strategies of households”, which examined the effect of climate variability on smallholders’ crop income and the determinants of indigenous adaptation strategies in three districts (Mieso, Goba-koricha and Doba) of West Hararge Zone of Ethiopia.

“Climate variability, perceptions of pastoralists and their adaptation strategies: implications for livestock system and diseases in Borana zone”, which analyses the degree of



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climate variability and its adverse impact on the livestock systems and the pros and cons of the coping mechanisms and forwarding ideas that can inform remedial interventions.

“Forest inventory and analysis in Gilgit-Baltistan: a contribution towards developing a forest inventory for all Pakistan”, which analyses the occurrence and distribution of different tree species in Gilgit-Baltistan, Pakistan, as a baseline for further inventories and estimates the biomass per species and plot. Furthermore, measures of forest biodiversity using established formulae for tree species diversity index, richness, evenness and accumulative curve are provided.

“Climate change in Colombia: a study to evaluate trends and perspectives for achieving sustainable development from society” aims at an understanding of the main ideas and concepts of climate change in five regions of the country by analysing attitudes and values, information habits, institutionalism and the social appropriation of science and technology.

These original articles pave the way to progress our understanding of the nexus “Climate change and biodiversity assets”.

Most papers are from the Global South. The Global South (collective name for emerging and developing nations) face great sustainability and climatic change challenges (e.g. poverty, environmental degradation, ethnic and regional conflicts, population’s displacements and disease). Solutions imply research collaboration and require international cooperation. This special issue is a humble contribution to this endeavour.

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