





# CLIMATE CRISIS

## THE CREVICE OF THE PLANET

Monograph coordinated by Sérgio Henrique Faria and María José Sanz

**T**his monograph presents a collection of essays and perspectives on the multiple dimensions of the current climate crisis, characterised by the threat to the global environment and our social fabric posed by anthropogenic (human-induced) climate change.

The environmental impacts of human expansion and industrialization are so profound, diverse, and widespread that the Earth system science community has proposed a new geological epoch to describe it, called the *Anthropocene*. One of the most evident manifestations of the Anthropocene is precisely anthropogenic climate change, as expounded in this monograph by Alejandro Cearreta. Such impacts, however, are not the same everywhere and for everyone. It turns out that certain environments, economic activities, and social groups are particularly vulnerable to climate change. Nerea Bilbao and S. H. Faria investigate the complex case of high-mountain environments and communities, while the critical impacts of climate-change effects on citrus production are discussed by Damián Balfagón, Vicent Arbona, and Aurelio Gómez-Cadenas. Additionally, Marta Rivera-Ferre presents a fascinating analysis of the relation between climate change and gender inequality.

Social marginalisation is one of the dire symptoms of unfair socio-economic structures and power unbalance, which are amplified during critical situations like the current climate crisis. This amplification phenomenon became even more evident with the outbreak of the COVID-19 pandemic in 2020, which added fear and uncertainty to a global society already distressed by the climate crisis. In this vein, Carme Melo urges us to democratise the fight against climate-change, while Anil Markandya, Alexander Mueller, Jacob Salcone, Simi Thambi, and Salman Hussain examine the challenges and opportunities for economic recovery in a world plagued by pandemic and climate change.

We hope that these essays may help the readers to understand our options and the tools we need to cross the crevasse of climate change and head towards a more sustainable and egalitarian future.

**SÉRGIO HENRIQUE FARIA.** Ikerbasque Research Professor at the Basque Centre for Climate Change (BC3) and Ikerbasque, the Basque Foundation for Science (Spain). He is a physicist with a PhD from the Technical University of Darmstadt, Germany (2003). He is also the director of the low-temperature laboratory IzozaLab, leader of the Physical Basis research line, and director of the Cryosphere and Climate Modelling research groups at BC3. He is lead and contributing author to the *Sixth Assessment Report* (AR6) Working Group 1 (WGI), of the Intergovernmental Panel on Climate Change (IPCC) and editor of *Journal of Glaciology* (Cambridge University Press) and *Scientific Reports* (Nature Publishing Group). He has also participated in several expeditions to the most remote glaciers at the heart of Antarctica and Greenland. ✉ [sh.faria@bc3research.org](mailto:sh.faria@bc3research.org)

**MARÍA JOSÉ SANZ SÁNCHEZ.** Ikerbasque professor and director of the Basque Centre for Climate Change (BC3) (Spain). She was the director of the Air Pollutant Effects and the Carbon Cycle Programme at the Mediterranean Center for Environmental Studies (CEAM) in Valencia, while advising the Spanish Government on land use and forestry issues in the multilateral negotiations of the United Nations Framework Convention on Climate Change (UNFCCC), as well as the EU Commission and the US Environmental Protection Agency (US EPA). Member of the executive board of the UNFCCC Clean Development Mechanism (CDM). She served in the UNFCCC secretariat in Bonn and coordinated the UNREDD programme at FAO. She received the Nobel Peace Prize in 2007 as an author of the IPCC, with which she has collaborated since 2003 on several reports. She is also an advisor to the Green Climate Fund, the World Bank's BioCarbon Fund, CIFOR, FAO, and several developing countries' governments on forestry and land use issues. ✉ [mj.sanz@bc3research.org](mailto:mj.sanz@bc3research.org)

The artworks accompanying this monograph are created by Anna Moner and Sebastià Carratalà. The series revisits 19th-century mountaineering expeditions and invites us to reflect on the scars of the planet and our ability to stitch them up.

On the left, Anna Moner-Sebastià Carratalà. *White Glacier, Barre des Écrins, Alps (1888)*, by Vittorio Sella, 2021. Gouache on paper, tears, pins, and cotton thread, 16×21 cm.