## **PREFACE**

Valérie Verdier Chairperson and Chief Executive Officer French National Research Institute for Sustainable Development

Since the beginning of my term as Chair and CEO in 2020, the IRD has been committed to thoroughly exploring sustainability science, adopting a unifying, collective approach to our research topics and activities. In partnership with many academic communities and research institutions in countries in the Global South, including France's overseas territories, we have put sustainability science at the heart of our scientific policy. This strategic vision and commitment enable the IRD and its partners to continue producing essential knowledge which will help to further our understanding of the complex challenges involved in ensuring the Earth is a liveable place in the Anthropocene era, co-constructing solutions for a sustainable, desirable future.

Integrating sustainability science into our work has permitted us, in the space of a few years, to better align our research with the 2030 Agenda for sustainable development, and also to think even further ahead. We have strengthened our science diplomacy efforts and developed a reflexive approach to our professional practices (carbon footprint, equitable partnerships, science with and for society). This philosophical framework is essential to maximising the impact of our research, co-constructed with local people in all of our partner countries and territories. These objectives are now written into our 2021-2025 Contract of Objectives, Means and Performance (COMP), drafted in collaboration with our two supervising ministries.

Sustainability science can take any number of practical forms, something reflected in the work of our Knowledge Communities (Cosav), interdisciplinary and cross-sectoral platforms for collective intelligence founded in 2021. This collective dynamic has had a transformative effect on the way we work within the Institute and across the IRD universe, greatly contributing to the success of our missions and our efforts to hit the targets set out in the COMP and the recently updated strategic plan (POS). It is binding not only upon the IRD teams, but also our international partners.

In 2024, as our Institute celebrates 80 years of discoveries, innovations and scientific advances, it gives me great pleasure to introduce this third instalment in our *Sustainability Science* series. This volume brings together 32 articles by more than 70 authors, illustrating the breadth and the dynamism of our collective endeavours. The range of topics addressed herein is testament to the continuous evolution of our conceptual and methodological frameworks, and the extent to which sustainability science is now firmly rooted within our community.

This third tome, structured around the three pillars of "Understand," "Co-construct" and "Transform," demonstrates the depth and diversity of our projects. These admirably varied contributions come from young scientists and doctoral students, research support staff, researchers, and even directors of international joint laboratories, evidence that sustainability science is woven into the fabric of everything our Institute does, providing an invaluable intercultural perspective. The articles collected in this volume constitute a vital source of information for anybody keen to better understand the stakes of sustainability science, enriched by concrete examples and first-hand experience.

I would like to express my sincere gratitude to all of the authors and editors for their precious contributions to this collection. Together, we continue to strive for a vision of research which is rich in meaning, in solutions and in transformative capacities for societies which are more sustainable, more respectful of life and more protective of our planet.

## SUSTAINABILITY SCIENCE

## UNDERSTAND, CO-CONSTRUCT, TRANSFORM

Volume 3

Collective thinking coordinated by Olivier Dangles, Marie-Lise Sabrié and Claire Fréour

IRD Éditions

French National Research Institute for Sustainable Development
Marseille, 2024

Editorial coordinator: Corinne Lavagne Editorial preparation: Jasmine Portal-Cabanel Cover, design and layout: Charlotte Devanz

Cover photo: Rock painting, Cueva de las Manos, Argentina.

© IRD/O. Dangles - F. Nowicki/Une Autre Terre

Photo p. 14: Preparing tubes for saliva samples, Gabon

© IRD/P. Becquart

Photo p. 40: Health centre in hot conditions, Senegal

© IRD/A. Makosi, Mopga project

Photo p. 70: Launching a drone on Changri-Nup, Everest, Nepal.

© IRD-CNRS/S. Vergoz, Preshine expedition

Photo p. 92: Participatory exercise on the theme of erosion, Indonesia

© IRD/Rights reserved

Photo p. 106: Fabrication of a terra cotta jar, craft village, Vietnam

© IRD/J.-M. Borée

Photo p. 128: Child's drawing, Madagascar

© IRD/S. M. Carrière

Published under Creative Commons license CC-by-NC-ND 4.o, which may be accessed at the following address: https://creativecommons.org/licenses/by-nc-nd/4.o/deed.fr

This license authorizes distribution of the original work, provided that the authors and publishers are mentioned and a link is included to the CC By-NC-ND 4.0 license. The publication must not be modified and must be distributed in its entirety. No commercial use is permitted.



© IRD, 2024

ISBN PDF: 978-2-7099-3041-3