### "Pathways" at the heart of a transdisciplinary community of practices

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### Background

If humanity is to achieve the Sustainable Development Goals (SDGs), there is a need to identify clear pathways towards a just and equitable society within the limits of the Earth system. These pathways need to take many different aspects into account: environmental limits, the sustainability of dietary patterns, the potential for technological and social innovation and diffusion, the need for strong governance bodies, etc. In this context, there is a clear need to build innovative and transdisciplinary research projects. It is only by including these aspects that they can provide the best solutions to global challenges.

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Further reading https://www.belmontforum.org/cras/#pathways2020

#### **Pathways to Sustainability**

As an international partnership to fund research on environmental change, the Belmont Forum is taking the lead through Collaborative Research Actions (CRAs). The Pathways to Sustainability CRA and its first call for projects launched in July 2020 supports a collaborative research network of around 13 projects lasting one to two years. These projects focus on qualitative and/ or quantitative approaches to developing transformation pathways for socio-ecological systems in support of sustainable development. In a break with traditional calls for projects that directly fund the research activities of established (and supposedly already operational) consortia, the Pathways to Sustainability initiative intends to allocate specific funding for the initial (and crucial) co-construction phase of research projects, so as to optimise their future transformative capacity. The initiative challenges its participants to consider all important interactions between the SDGs and to address cross-cutting issues among at least three explicitly identified SDGs. Project applicants are free to choose which interactions to explore depending on the research fields and questions involved, with a view to providing knowledge to help understand, mitigate and adapt to global environmental change.

### A high level of transdisciplinarity

According to the terms of the Belmont Forum calls for projects, a transdisciplinary project must be developed and implemented jointly by

experts representing as a minimum the natural sciences, social sciences and humanities, and stakeholders. The stakeholders must be clearly named and have been involved in developing the project concept. The definition of stakeholders is unusually broad and includes - but is not limited to - academics, government agencies, funding bodies and development partners, the private sector, non-governmental organisations, traditional authorities, neighbourhood associations, civil society organisations, faith-based organisations, think tanks, the media and parliamentary committees. Of the 154 partners in the 13 projects funded by the Pathways to Sustainability call for projects, 51 are non-academic organisations, mostly government agencies, but also NGOs and private-sector organisations. Six projects involving IRD researchers and their partners in the Global South, also financed by an IRD seed fund, were successful.

## At the root of community of practice

Despite their diverse focus (urban, agriculture, small-scale fisheries, zoonoses, air quality, governance, etc.), these six IRD-coordinated projects, along with the other projects involving French researchers, form a community of practice centred around on developing pathways to sustainability. With six projects focused on Africa and four interregional projects that involve African fieldwork, Africa will play an important role in this process. To support, strengthen and expand this community, several joint meetings and shared support materials will be used over the course of these projects (webinars, training, newsletters, workshops, syntheses, etc.). These discussions will provide the means by which science engages with societal stakeholders to achieve the desired transformation, from the understanding of the problem to the design, implementation and monitoring of practical pathways and solutions.

### The six winning projects coordinated by IRD

COVPATH • Coviability Path, a new framework to sustainably link mankind and biosphere – Olivier Barrière (UMR Espace Dev, Montpellier) ODD 2, 3, 13, 15, 17

Fish2Sustainability • Enhancing the contribution of small-scale fisheries to the sustainable development goals – Rodolphe Devillers (UMR Espace Dev, Montpellier) ODD 14, 1, 8, 2, 5

**PACPATH** • *Pacific Ocean Pathways in support of sustainable development: an integrated approach* – Alexandre Ganachaud (UMR Legos, Toulouse) ODD 14, 13, 15

PREMISS • Partnership for Research to Enhance Methodologies In Sustainability Science – Alexis Drogoul (UMI Ummisco, Paris) ODD 9, 6, 13, 15

SCARIA • Towards sustainable community-based mitigation of rodent issues in African cities – Gauthier Dobigny (UMR CBGP, Montpellier) ODD 2, 3, 4, 11

**SUSTAINDAM** • Sustainable management and planning of hydropower generation in West Africa under climate change and land use/land cover dynamics – Arona Diedhiou (UMR IGE, Grenoble) ODD 13, 6, 7, 15, 17

# SUSTAINABILITY SCIENCE

### UNDERSTAND, CO-CONSTRUCT, TRANSFORM

Collective thinking coordinated by Olivier Dangles and Claire Fréour

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