

# Report to the Scientific Committee on Ocean Research - Future Earth and The Ocean Knowledge Action Network

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## Highlights

This past year was a busy one for the Future Earth ocean networks. SOLAS and IMBeR International Project Offices moved to new country homes. The Future Earth Coast International Project Office in Germany also completed its term and the Ocean Knowledge Action Network enjoyed the first full year of its International Project Office in France. The year saw numerous remote, hybrid and in-person meetings in which Future Earth ocean networks were active and was highlighted by the UN Oceans Conference in June and the launch of the new Intergovernmental Panel on Ocean Change (IPOC). The year also included a half-day innovative session at the Ocean Sciences Meeting organized by the Ocean KAN and its partners. Over the course of the year, the Ocean Knowledge Action

Network welcomed 28 new partners including on-the ground partners, science networks, universities, UN Decade of Ocean Science Programs, and private sector partners.

## Updates from Future Earth

Future Earth is a network of scientists, researchers, and innovators designed to provide the knowledge needed to support transformations towards sustainability. Our focus on systems-based approaches seeks to deepen our understanding of complex Earth systems and human dynamics across different disciplines. We use this understanding to underpin evidence-based policies and strategies for sustainable development.

In the last year, four new Hubs (China, India, Taipei, and South Africa) joined the Future Earth Secretariat. Besides that, the Future Earth Assembly and the Future Earth Governing Council, which were first established in 2021, served their first year. The Future Earth Assembly Meeting will take place September 21-23 in Paris, with the aim of reflecting and designing cross-cutting activities and making recommendations to the Governing Council.

Future Earth furthermore co-organised several events, such as an official side event at UNFCCC COP26 in Glasgow, an open letter for the Stockholm+50 conference, and an official side event at the UN Ocean Conference. There is also a proposal for an official side event at UNFCCC COP27, in Sharm El-Sheikh in November this year. Apart from that, Future Earth successfully nominated five experts to the nexus and transformative change assessments of the IPBES.

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## Updates from the Ocean Knowledge Action Network

### Growing the Network

The Ocean KAN grew from an idea into a full-fledged global network with a community built in collaboration with our on-the ground partners throughout the world, global science and social science networks, endorsed science and network programmes of the UN Decade of Ocean Science for Sustainable Development, universities, and private sector partners making up the Inner Circle of the Ocean KAN community,

#### **Current Active Ocean KAN Collaborations**

##### On-the-Ground Affiliated Partners

Blue Economy Research Institute, University of Seychelles (Ocean KAN Seychelles)  
Academia Sinica - Taiwan (Ocean KAN Taipei)  
Federal University of Sao Paulo and Blue Ocean Panel (Ocean KAN Brazil)  
University of Ghana  
European Institute for Marine Studies (France)  
Nelson Mandela Univ (South Africa)  
University of the Western Cape (South Africa)  
Tula Foundation (Canada)

##### UN Ocean Decade Networking Programmes

SmartNet (ICES-PICES)  
Early Career Ocean Professionals Network  
Empowering Women in the Decade (in discussion, World Maritime Univ)

UN Ocean Decade Science and Action Programmes

Marine Life 2030  
Global Ecosystem of Ocean Solutions

Social and Transdisciplinary Science

Earth Systems Governance - Ocean Task Force  
Dartmouth College  
Marine Social Sciences Network  
APOLIMER (CNRS)  
European Institute for Marine Studies (Brest, France)  
Middlebury Institute for International Studies

International Science Networks

Future Earth (IMBeR, SOLAS, Future Earth Coasts, PAGES)  
World Climate Research Program  
Scientific Committee on Oceanic Research  
Ocean & Climate Platform  
Consortium for Ocean Leadership

Private Sector Partnerships

Acter.global  
Network Weaving Institute  
Moonjelly.io/Moonjelly Academy

## Convening Future Earth Networks

The Ocean KAN IPO and the Future Earth Global Hub Paris have begun co-hosting a series of regular meetings with the ocean-oriented global research networks of Future Earth. The goal of these meetings is to build trust and good working relationships among the Future Earth ocean team.

The first meeting took place in April 2022, with IPO representatives from Future Earth Coasts, IMBeR, SOLAS, PAGES, and Ocean KAN. The second meeting was held on 7 July 2022 and was centred around a discussion on the format of virtual and hybrid open science meetings. The meeting was attended by co-chairs and IPO members of all aforementioned networks, as well as the Earth System Governance – Ocean Task Force. Seeing the great interest in this topic, the Ocean KAN has now started a learning circle on “rethinking remote conferences” with members of Future Earth marine networks and the Ocean KAN’s inner circle.

## Creating a New Platform for Global Networking

The Ocean KAN has partnered with Acter.global to co-design a light-touch online platform that the KAN can use to communicate across the network, to facilitate Ocean KAN Working Groups, and to schedule events. The platform allows Ocean KAN community members to store documents wherever they feel most comfortable while using the Acter platform as a central hub for all Ocean KAN activities. Our participation in the co-design of this platform is generously supported by a grant from SCOR (€1,000) and also SOLAS (€1,000).

## Marine Life 2030

The Ocean KAN IPO is leading the recruitment of volunteer leaders to take on leadership roles within the Marine Life 2030 Decade Programme. Towards that end, the Ocean KAN IPO has hosted a number of online meetings, webinars and networking events including:

- Co-hosting the [Marine Biodiversity Observation Network's Networking Friday's Event](#)
- An onboarding event co-hosted with the [Marine Social Sciences Network](#)
- An onboarding event co-hosted with Ocean KAN steering committee member Thomas Lamy (IRD) for French researchers
- Series of networking and informational events for the “Co-Designing Marine Life Science” community of practice

The Ocean KAN IPO and its inner-circle partners at Acter.global have prepared a proposal and submitted a letter of intent to the Velux Foundation to support the development of a co-designed networks working space called the Ocean KANopy – €402k over 3 years.

## Building the Ocean KAN/Moonjelly Academy Network

Ocean KAN IPO leads the Anti-Colonial Practices Working Group at Moonjelly Academy.

- Published: [Old Colonial Tendencies Stand in the Way of a Healthy Ocean](#) by Katherine Short, Linda Ntsiful, and Claudia Baron with an Editor's Note by Linwood Pendleton

Ocean KAN IPO leads the web3 and Science Working Group at Moonjelly Academy

- Published: [To Save the Ocean, web3 Needs More Scientists](#) by Linwood Pendleton and Annie Brett, World Economic Forum
- Presented: [Ocean Data Factory - Blockchain and Science](#) - exploring how blockchain-enabled organizations could work for scientific networks. Linwood Pendleton with Anne-Marie Swan of the Blockchain for Good Alliance

Ocean KAN IPO Leads the Rethinking Ocean Impact Working Group at Moonjelly Academy

- Published an explainer video about how impact NFTs could promote ocean data collection and sharing.
- WG includes:
  - Chris Meyer - Smithsonian Institution
  - Frank Muller-Karger - University of South Florida
  - Ward Appeltans - Ocean Biogeographic Information System
  - Guillermo Ortuño Crespo - Stockholm Resilience Centre (Science Advisory Board for Moonjelly Academy)
  - Richard Pyle - Bishop Museum (Science Advisory Board for Moonjelly Academy)
  - Neil Davies - UC-Berkely, Gump Research Station, Moorea
  - Kate Wing - Ocean Data Advisor, WEF and Friends of Ocean Action
  - Amy Trice - Director of Ocean Planning, Ocean Conservancy

## Publications

- Gerhardinger, Leopoldo Cavaleri, Eike Holzkämper, Mariana Martins de Andrade, Marina Ribeiro Corrêa, and Alexander Turra. "[Envisioning ocean governability transformations through network-based marine spatial planning](#)" *Maritime Studies Journal* (January 2022)
  - This research has benefited highly from the networked knowledge-to-action collaborations between PainelMar, the Ocean KAN (see acknowledgements) and other organizations (Brazilian Ocean Horizon program - [www.painelmar.com.br](http://www.painelmar.com.br))
- Editor for two ICES JMS Series: (1) *Food for Thought* and (2) *From the Front Lines*, both about "Co-designing science for the ocean we want - approaches for implementation and metrics of success"
  - 10 submissions received so far
  - Published so far:
    - Food for Thought:
      - Co-production of knowledge and strategies to support climate resilient fisheries**  
[Katherine E Mills](#), [Derek Armitage](#), [Jacob G Eurich](#), [Kristin M Kleisner](#), [Gretta T Pecl](#), [Kanae Tokunaga](#)  
<https://doi.org/10.1093/icesjms/fsac110>
      - Marine Life 2030: building global knowledge of marine life for local action in the Ocean Decade**  
[Frank E Muller-Karger](#), [Gabrielle Canonico](#), [Claudia Baron Aguilar](#), [Nicholas J Bax](#), [Ward Appeltans](#), [Kristen Yarincik](#), [Venus Leopardas](#), [Isabel Sousa-Pinto](#), [Masahiro Nakaoka](#), [Akkeshi Aikappu](#), [Jonatha Giddens](#), [Emma Heslop](#), [Enrique Montes](#), [J Emmett Duffy](#)  
<https://doi.org/10.1093/icesjms/fsac084>
    - From the Front Lines:
      - The good, the bad, and the ugly: reflections on co-designing science for impact between the Global South and Global North**  
[Shauna L Mahajan](#), [Estradivari](#), [Lenice Ojwang](#), [Gabby N Ahmadia](#)  
<https://doi.org/10.1093/icesjms/fsac115>

## Meetings and Conferences

### 1. Ocean Sciences Meeting

The Ocean KAN and its IPO hosted a half-day innovative session at the Ocean Sciences Meeting intended to build trust and establish working relationships to support the co-design of ocean science for sustainable development. The session was held with the assistance of the Consortium for Ocean Leadership (USA).

- Plenary Session
  - [Four plenary talks](#) were presented representing case studies in the co-design of science with speakers from CNRS-France, Stanford UNiversity, and Nelson Mandela University.

- Panel Session
  - The innovative half-day session included an online panel session hosted on Monday, February 28th, with 12 panelists from selected Programmes of the UN Decade of Ocean Science (Marine Life 2030, Deep Ocean Observing Systems, Ocean Biomolecular Observing System, Global Ecosystem for Ocean Solutions, SMARTNET, Early Career Ocean Professionals Network, and Empowering Women in the Decade of Ocean Science). The session was open, but was built around invited scientists and stakeholders from the Ocean KAN partners in California, Brazil, Ghana, South Africa, Seychelles, and Taipei.
  - In all, 105 participants were part of the overall half-day innovative session (including hub events in Brazil and California), of which approximately 65 attended the panel session
  - An [internal resource page](#) was created for the session, where participants could watch the plenary talks, find information about the UN Decade programmes and hub events, and view one another's introduction videos and bios
- On-the-Ground Hubs
  - The innovative session featured the first two on-the-ground meetings between Ocean KAN partners and representatives from the Ocean Decade.
    - Brazil Hub:
      - Theme: An ocean of change – fisherwomen and climatic events
      - 15-17 February 2022 (three afternoons), online
      - Co-hosts: PainelMar and the Federal University of São Paulo (UNIFESP), led by [Ronaldo Christofolletti](#), [Leandra Gonçalves](#), [Ivan Martins](#), [Adayse Bossolani da Guarda](#), [Leopoldo Cavaleri Gerhardinger](#)
      - Number of attendees: ~30
    - California Hub:
      - Theme: Climate-ready fisheries knowledge, science, and management
      - 7 March 2022 (2h), hybrid
      - Co-hosts: Ocean Conservancy (US), Tula Foundation (Canada) and SmartNet, led by [Anna Zivian](#), [Steven Bograd](#), [Kathryn Sheps](#), and [Rebecca Martone](#)
      - Number of attendees: ~25

## 2. Sea and the City - Monaco 2022



Ocean KAN IPO Executive Director (Linwood Pendleton) and Ocean KAN Co-Chair (Anna Zivian) moderated sessions at the joint event hosted by Prince Albert II Foundation, the Ocean Climate Platform, and Stimson Center.

Panelists included Hans Otto Portner (IPCC co-author), Tanya Rudolph (CEO Enviromer, Robert Nicholls (Dir. of the Tyndall Center for Climate Change), and Awa Bossou Drame (University College London) for Panel 1 (Linwood), and Raphael Bille (Tour du Valat), Pauli Merriman (WWF), Samantha Box (Coastal Partners), and Kate Strahan (ICLEI Africa) for Panel 3 (Anna).

## 3. One Ocean Summit

[The Blue Economy - How to respond to the issues and challenges to its development](#)

## 4. Consortium for Ocean Leadership's Marine Life Coordination Workshop

Ocean KAN IPO staff and co-chair Anna Zivian participated and presented at the COL Marine Life coordination workshop in support of the UN Decade of Ocean Science. The workshop was designed to bring together key Decade biodiversity programmes to help better coordinate their activities.

## 5. Future Earth Pathways

Ocean KAN contributed to the [Future Earth Pathways Forum](#), under the theme "Navigating pathways towards more sustainable and just ocean governance". Presented by Leopoldo Cavaleri Gerhardinger (Ocean KAN Steering Committee member). May 24, 2022.

## 6. PAGES Open Science Meeting

The Ocean KAN IPO hosted a special session at the PAGES Open Science Meeting in May 2022. The session was co-convened by members of the PAGES Scientific Steering Committee and the PAGES Early-Career Network and featured two panelists who shared their experience in the co-design of science and knowledge co-creation. There were two main objectives of the session: (1) To discuss how paleoscientists can get involved in the UN Ocean Decade and talk about the co-design of science with stakeholders, and (2) to explore ways in which PAGES and the Ocean KAN can strengthen their collaboration in the future.

## 7. Climate Change, Oceans, and New Ways of Thinking

Presented remotely at the USA Consulate in Brazil about how the Ocean Knowledge Action Network is working in Brazil to better connect people working to study and manage marine ecosystems and their services. June 8, 2022

## 8. United Nations Ocean Conference

Bridging Shades of Blue - an invited statement to the International Science Council with authorship from the Ocean KAN International Project Office, delivered by Leopoldo Cavaleri Gerhardinger (steering committee member).

- [Recording of Leopoldo Cavaleri Gerhardinger's presentation](#)

Side event, sponsored by Future Earth with support from the Ocean KAN IPO and Ocean KAN represented by Anna Zivian, Alice Newton, and others. This event included the launch of the new Intergovernmental Panel on Ocean Change (IPOC).

- [Recording of Ocean KAN presentation](#)

## 9. WIOMSA - Western Indian Ocean Marine Science Association

### **WIOMSA Special Session for Early Career Scientists: Scientific Storytelling Approaches**

The Ocean KAN IPO is supporting its partners the Ocean KAN - Seychelles (Sylvanna Anta, University of Seychelles) and the WIOMSA Early Career Science Network (Riaan Cedras, University of the Western Cape and Frank Mirobo, WIOMSA) to help young scientists to communicate their science and scientific needs using videos. The Ocean KAN IPO and one of its Global Sustainability Scholars are helping five early career scientists (selected from a WIOMSA-wide call for proposals) to conceive of, design, plan, create, and edit their videos to be presented at the WIOMSA Annual Meeting to be held in January.

### **WIOMSA Annual Meeting Joint Presentation**

The Ocean KAN facilitate this joint presentation proposal for the WIOMSA October Symposium (\* = Ocean KAN partners)



Title: An Example of an Initiation of Participatory Process to Build a Common Knowledge at a Regional Scale for the Indian Ocean Oceanic Basin

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## Students hosted

1. The Ocean KAN IPO was awarded four Global Sustainability Scholars that will work with the Ocean KAN IPO in its Sorbonne offices during the summers of 2022 and 2023. These students are sponsored by Future Earth Global Hub USA, are funded by the US National Science Foundation, and come from universities across America. All of the students are highly motivated and were chosen through a competitive process. All students are also members of social and demographic groups that are underrepresented in sustainability sciences.
2. Dartmouth College is providing an undergraduate intern to work with the Ocean KAN IPO and Moonjelly Academy to research the environmental footprint of web3 technologies as applied to funding ocean science and conservation.

## Recorded Webinars and Podcasts

### Webinars

- [Keynote address](#) for “1st Future Earth Taipei Ocean Working Group Symposium: Ocean Environment and Climate Change” on The Co-Design of Ocean Science to Meet Climate Challenges (November 16, 2021)
- Created [video](#) for SOLAS annual meeting
- Presented the Ocean KAN at the Marine Biodiversity Observation Network’s Networking Fridays (November 12, 2021)

## Podcasts

- [Investing for Impact - IUCN](#) Appeared with representatives from the Global Environmental Facility, and UN Environment Program's Finance Initiative to discuss the future of funding for ocean conservation and science.
- [Planet of the Klimates](#) - podcast where we discuss the role of digital technologies in the future of ocean science and funding.