



Registrierte Programme, Projekte und Contributions im Rahmen der UN-Ozeandekade (Stand: Oktober 2023)

| Projektname | Art von Dekaden-Aktion | Koordinierendes Institut | | | Laufzeit | | |
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| Global Ocean Oxygen Decade - GOOD | Programme | GEOMAR Helmholtz Center for Ocean Research Kiel and Kiel University | Germany | Oxygen dissolved in seawater supports the largest ecosystems on the planet. It is alarming that the ocean is losing oxygen, termed ocean deoxygenation, at a rapid rate, primarily due to global warming by anthropogenic greenhouse gas emissions, and pollution by nutrients and organic wastes particularly in coastal waters. The Decade Programme will raise global awareness about ocean deoxygenation, provide knowledge for action and develop mitigation and adaptation strategies and solutions to ensure continued provision of ecosystem services, and minimize impacts on the ocean economy through local, regional, and global efforts, including transdisciplinary research, innovative outreach, and ocean education and literacy. | 01.05.2021-31.12.2030 | CHALLENGE 2: Protect and restore ecosystems and biodiversity CHALLENGE 3: Sustainably feed the global population CHALLENGE 5: Unlock ocean-based solutions to climate change CHALLENGE 8: Create a digital representation of the Ocean CHALLENGE 9: Skills, knowledge and technology for all | Andreas Oschlies; Kirsten Isensee; Marilaure Gregoire; Paul Morris |



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| Digital Twins of the Ocean - DITTO | Programme | GEOMAR Helmholtz Center for Ocean Research Kiel and Kiel University | Germany | DITTO will establish and advance a digital framework on which all marine data, modelling and simulation along with AI algorithms and specialized tools including best practice will enable shared capacity to access, manipulate, analyse and visualise marine information. It will enable users and partners to create ocean related development scenarios addressing issues such as energy, mining, fisheries, tourism and nature-based solutions. Digital-Twins can quantify benefits and environmental change and provide powerful visualizations. DITTO will empower ocean professionals including scientific users to create their own local or topical digital-twins-of-their-ocean issue by using standard workflows. | 01.07.2021- 30.06.2026 | Alle 10 Challenges | Martin Visbeck |
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| ARTPORT_WE ARE OCEAN Global Program | Project | ARTPORT_making waves | Germany | ARTPORT_WE ARE OCEAN is a transdisciplinary art project implying multiple stakeholders (artists, students, scientists, policy makers, teachers, curators, activists) worldwide to raise awareness and engage in dialogue about the environmental condition of the ocean and the role humans play in its current and future state. The program started in 2019 and will engage with numerous countries until 2030 to work particularly with young and underprivileged people around the question of how we interact with the ocean and how interdependent humans and the ocean are. The overall goal is to raise scientific and political awareness through the arts, particularly among young people. | 17.01.2021-31.12.2030 | CHALLENGE 10: Change humanity's relationship with the ocean | Anne-Marie Melster |
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| Ocean Knowledge Base | Project | German Ocean Foundation | Germany | In a joint effort "Springer Nature, the "German Ocean Foundation, the "German Society for Marine Research and the "VBIO - Verband Biologie, Biowissenschaften & Biomedizin in Deutschland" would like to establish a project where we try to reach out to non-scientists like political decision makers, journalists, and the public and help them find, easily access and recombine the information they need from Springer Nature as a publisher. | 01.01.2022-31.12.2030 | CHALLENGE 9: Skills, knowledge and technology for all | Frank Schweikert |
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| Beyond One Ocean Health | Project | Center for Ocean and Society, Kiel Marine Science, Kiel University | Germany | <p>The decade project Beyond One Ocean Health advances and integrates a range of concepts recognising the impacts of global environmental change on: (i) the health of ecosystems, (ii) non-human organisms and (iii) humans with an emphasis on the ocean domain. We envisage building on common framings such as ‘Environmental justice’, ‘Ecohealth’, ‘Planetary Health’ or ‘One Health’ (e.g. Buse et al, 2018; Blenckner et al. 2021) perspectives into the Ocean Decade. Thus the Beyond One Ocean Health perspective includes issues related to: health and disease in the ocean, ocean-mediated human disease, ocean-related prevention, healing including physical and spiritual well-being concepts, moral and justice of interventions with environmental health outcomes, understanding and living within planetary limits. Most perspectives have in common the desire to safeguard, restore or build regimes under which modern civilisation can flourish.</p> | 01.03.2022-31.12.2025 | <p>CHALLENGE 1: Understand and beat marine pollution CHALLENGE 8: Create a digital representation of the Ocean CHALLENGE 10: Change humanity’s relationship with the ocean</p> | Marie-Catherine Riekhof |
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| <p>Aleutian Trench Biodiversity Studies (AleutBio)</p> | <p>Project</p> | <p>Senckenberg Research Institute and Natural History Museum</p> | <p>Germany</p> | <p>The AleutBio expedition aims to shed light on the distribution of marine organisms and contribute to the understanding of changes in biodiversity and its distribution in the North Pacific, the gateway to the Arctic. Thus, in addition to biogeochemical studies, the goal of the AleutBio Expedition SO293 is to analyze seafloor organisms of all sizes (protists, meio-, macro- and megafauna) in the eastern Bering Sea as well as in the Abyssal and Hadal areas of the eastern Aleutian Trench. We plan to describe biodiversity, highlight biogeographic relationships, and examine species connectivity with those from the Arctic Ocean and Kuril-Kamchatka Trench in times of rapid climate change. Bathymetric mapping will be used to explore the bottom topography to define the most appropriate location for instrument deployment. We will analyze the seafloor topography (bathymetry), biogeochemistry, and microbiology, as well as the systematic composition, species diversity, and biogeography from protists to meio-, macro-, and megafauna in the Aleutian Trench, and investigate the evolution of selected species.</p> | <p>01.01.2022-03.09.2024</p> | <p>CHALLENGE 1: Understand and beat marine pollution; CHALLENGE 2: Protect and restore ecosystems and biodiversity</p> | <p>Angelika Brandt</p> |
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| <p>Call for Proposals of the MeerWissen Initiative for African-German marine research partnerships</p> | <p>Contribution</p> | <p>German Federal Ministry for Economic Cooperation and Development (BMZ)</p> | <p>Germany</p> | <p>This contribution is an open call to support partnership projects through the MeerWissen Initiative that contribute to strengthening the knowledge base for marine and coastal Nature-based Solutions (NbS) in Africa. This call explicitly supports a two-phased approach by funding a co-design phase prior to implementation of the joint two-year research project. All projects within the MeerWissen Initiative are contributing to a transformation in science by strengthening capacities in marine research, stimulating dialogue and knowledge transfer from science to policy uptake, and by fostering digital solutions and innovation. This call for proposals will select projects that demonstrate a shared belief in the power of close collaboration of marine research with decision makers at policy and management level to provide tailored, up-to-date, and accurate science-based information to effectively protect and manage marine resources – i.e. the science we need, for the ocean we want.</p> | <p>10.08.2021-02.28.2025</p> | <p>Alle 10 Challenges</p> | <p>Barbara Lang; Alexandra van Hoek</p> |
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| IceDivA | Project | Senckenberg am Meer, German Center for Marine Biodiversity Research | Germany | <p>By sampling Northwest and Northeast Atlantic deep-sea basins, IceDivA aims to extend the previous Northeast Atlantic deep-sea program, IceAGE, also linking with the South Atlantic deep-sea programme DIVA (Latitudinal Gradients in BioDiversity in the deep Atlantic) and those in the Southern Ocean. This will provide pan-Atlantic deep-sea samples to investigate topics regarding species richness and evolution. To map the species diversity, and answer questions on the connectivity of deep-sea fauna along latitudinal gradients in the pan-Atlantic Ocean, we will sample in 3,000 m to 5,500 m water depths bridging the Atlantic knowledge gap between prior expeditions. The faunal analysis will follow an integrative approach, combining modern genomic methods with traditional, morphological taxonomy. Via cooperative data/sample sharing we will support the BMBF project PLASTISEA as well as the EU projects iAtlantic and HOTMIC.</p> | 08.01.2021-15.01.2024 | <p>CHALLENGE 1: Understand and beat marine pollution CHALLENGE 2: Protect and restore ecosystems and biodiversity CHALLENGE 7: Expand the Global Ocean Observing System</p> | Saskia Brix |
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| ORCHESTRA | Project | Alfred-Wegener-Institut Helmholtz-Zentrum für Polar-und Meeresforschung | Germany | <p>The main aim of ORCHESTRA is to answer the questions that arise from the impacts of underwater noise on invertebrates. We will tackle this challenge through a combination of field surveys, laboratory and field experiments in a cross-basin comparative approach. We will investigate the effects of continuous AUN (Anthropogenic Underwater Noise) on the physiology, growth, reproduction, feeding, intraspecific communication, predator avoidance and mortality of key invertebrate species in multistressor laboratory setups. Further, we will evaluate the potential ensuing cascading effects on the function of those species in the ecosystem. In addition, we will assess the validity of the results obtained in the laboratory and complement them by using a combination of sampling and experimental studies in the field at different distances to continuous boat and OWF noise sources.</p> | NA | CHALLENGE 1: Understand and beat marine pollution | Maarten Boersma |
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| <p>Mangroves as Nature-based Solutions to Coastal Hazards in Eastern Ghana (MANCOGA)</p> | <p>Project</p> | <p>Helmholtz-Zentrum Hereon, GmbH; Department of Marine and Fisheries Sciences, University of Ghana; Institute of Environment and Sanitation Studies, University of Ghana</p> | <p>Germany; Ghana</p> | <p>MANCOGA will use mangroves to develop a robust and participatory Nature-based Solution (NbS) to hazards such as climate change, flooding, coastal erosion and pollution in Ghana. It will also cover aspects of blue carbon, ocean acidification and biodiversity loss. The ultimate aim is increasing community resilience and affluence. MANCOGA will develop a decision support system building on existing structures and incorporating state-of-the-art technology, including the development of a Digital Twin.</p> | <p>NA</p> | <p>CHALLENGE 6: Increase community resilience to ocean hazards CHALLENGE 10: Change humanity's relationship with the ocean</p> | <p>Holger Brix, Edem Mahu and Kwasi Appeaning Addo</p> |
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| <p>Oceanographic and Ecological data for Nature-based coastal protection in Tunisia (ORIENTATE-TN)</p> | <p>Project</p> | <p>Alfred-Wegener-Institut, Helmholtz-Zentrum für Polar- und Meeresforschung (AWI) and University of Sfax (US)</p> | <p>Germany; Tunisia</p> | <p>The overall objective is to provide sustainable, cost-effective data and an ecologically sound alternative to facilitate the adaptive governance of erosion risk in Tunisia’s most vulnerable coastal areas. The project will be carried out through a living lab approach involves cost-effective intertidal seagrass transplantation. Pilot sites will be used to monitor if this Nature-based solution approach could protect the coastline against further erosion processes. This project aims to serve as a blueprint for other beaches and coastal areas in Tunisia.</p> | <p>NA</p> | <p>NA</p> | <p>Karen Wiltshire, Eva-Maria Brodte, Lobna Boudaya and Lassad Neifar</p> |
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| <p>Participatory Modeling for Nature-based Solutions in the WIO-Region (PaMoNBS)</p> | <p>Project</p> | <p>Leibniz Centre for Tropical Marine Research (ZMT); Institute of Marine Sciences (IMS) University of Dar es Salaam</p> | <p>Germany; Tanzania; Madagascar</p> | <p>PaMo-NBS will provide policy makers with decision support tools to improve the implementation and planning of nature-based solutions and to identify needs and scenarios of an optimised use of local ecosystems for and with local communities in the Western Indian Ocean region. The primary outcome of this project will be the development of a decision support system that will give local decision makers the opportunity to engage coastal communities. The project aims to produce both a framework for local policy makers and coastal communities to develop a shared understanding of the role of the interconnected socio-ecological systems in providing NbS as well as concrete examples of pilot studies.</p> | <p>NA</p> | <p>CHALLENGE 1: Understand and beat marine pollution</p> | <p>Hauke Reuter</p> |
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| <p>Nature based Solutions for Mitigation of Watershed pollution: Cross-habitat facilitation by coastal seagrass meadows (SOMWAT)</p> | <p>Project</p> | <p>Helmholtz Institute for Functional Marine Biodiversity at the University of Oldenburg (HIFMB-UOL), Institute of Marine Sciences (IMS) University of Dar es Salaam, Tanzania; Institute for Coastal and Marine Research (CMR) Nelson Mandela University, South Africa</p> | <p>Germany; Tanzania; South Africa</p> | <p>The overall goal of this collaborative project is to assess the status of tropical (Tanzania) and temperate (South Africa) seagrass-reef ecotones and more specifically the role of seagrass meadows for reducing watershed pollution through nutrient, pollutant and pathogen removal for natural reef habitats and aquaculture, thereby improving livelihoods of local communities. The project aims to assess the strength of biogeochemical connectivity between seagrass and adjacent reef habitats under different environmental conditions. Both field surveys and experiments will help to unravel underlying mechanisms through which seagrasses can enhance water quality and thereby benefit local communities that rely on healthy reef-communities for food production and tourism</p> | <p>NA</p> | <p>CHALLENGE 5: Unlock ocean-based solutions to climate change</p> | <p>Prof. Peter Schupp, Leonard Chauka and Janine Adams</p> |
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| <p>Protection and sustainable use of marine areas (sustainMare)</p> | <p>Project</p> | <p>Helmholtz-Zentrum Hereon / Institute of Coastal Systems - Analysis and Modeling</p> | <p>Germany</p> | <p>The DAM research mission “sustainMare” analyses and classifies the use of and the pressures on marine spaces in such a way, that a scientifically sound basis is created for decisions by politics, authorities and the economy. A broad-based transdisciplinary research approach is chosen. More than 250 researchers in two pilot projects and five research networks are investigating the ecological, economic and social impacts of human use and pollution in North and Baltic Sea with a specific focus on the German Exclusive Economic Zone and German coastal waters. The provision of concrete options for action and consistent implementation of measures for knowledge transfer and data provision are intended to ensure the subsequent use of the results in politics and society. The aim of the research mission is to develop options for sustainable use of marine resources and ecosystem services that will support the achievement of the EUs target of a Good Environmental Status (GES).</p> | <p>01.01.2021-30.11.2024</p> | <p>CHALLENGE 4: Develop a sustainable and equitable ocean economy</p> | <p>Corinna Schrum</p> |
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| C-SCOPE in Action | Project | Federal Maritime and Hydrographic Agency (BSH) | Germany | <p>C-SCOPE (https://c-scope.geomar.de/), the joint project this Decade Project is based on, aims to enhance marine carbon observation, by 1. Using Ship-of-Opportunity (SOOP) lines to measure the CO2 uptake capacities 2. Connecting BGC-Argo and surface measurements of SOOP lines to explore synergies for better observational data products. 3. Assessing the structural dimension of marine CO2 observations and their implications in order to develop a concept for Open Ocean Science. The Decade Project C-SCOPE in Action incorporates the ongoing work and goes beyond it, in its time frame and objectives. In particular it aims to sustainably maintain the above mentioned observation systems, to contribute with the obtained findings to the ocean carbon community, in particular the Global Ocean Acidification Observing Network (GOA-ON) and the affiliated Ocean Decade programme Ocean Acidification research for Sustainability (OARS) and to strengthen the interoperability between the databases.</p> | 01.01.2021-31.12.2025 | <p>CHALLENGE 5: Unlock ocean-based solutions to climate change CHALLENGE 7: Expand the Global Ocean Observing System CHALLENGE 9: Skills, knowledge and technology for all</p> | Matthias Wunsch |
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| Marine carbon sinks in decarbonisation pathways (CDRMare) | Project | <p>GEOMAR Helmholtz Centre for Ocean Research Kiel; Leibniz Institute for Baltic Research Warnemünde (IOW); MARUM - Center for Marine Environmental Sciences. University of Bremen; Leibniz Centre for Tropical Marine Research (ZMT)</p> | Germany | <p>To support pathways to mitigate the increasingly drastic consequences of human-made climate change & to achieve the Paris Agreement goals, the removal of atmospheric CO2 is an important measure alongside massive CO2 emission reductions. The research mission CDRmare (https://cdrmare.de/en/) investigates whether and to what extent the ocean, its habitats & ecosystems can play a significant role in removing and storing CO2 from the atmosphere. It also considers linkages with & impacts on the marine environment, Earth system, and society, as well as monitoring approaches in a changing environment. The research mission will establish relevant assessment criteria and, in the long term, strategies towards the sustainable use of marine carbon storage & removal at national, regional to global scales, in close dialogue with stakeholders. CDRmare outcomes can be used e.g. for knowledge exchange, capacity development activities and co-designed solution roadmaps that will be developed under GEOS.</p> | 08.01.2021-31.07.2024 | <p>CHALLENGE 4: Develop a sustainable and equitable ocean economy CHALLENGE 5: Unlock ocean-based solutions to climate change CHALLENGE 9: Skills, knowledge and technology for all</p> | Andreas Oschlies |
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| <p>RV Polarstern and Heincke with Ocean Decade Logo</p> | <p>Contribution</p> | <p>Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research</p> | <p>Germany</p> | <p>Our research vessels are always in service for the investigation of climate topics mainly in the Arctic and the Antarctic regions. A well-known Expedition of the Polarstern was the MOSAiC Expedition, the largest polar expedition in history – the ship spent a year drifting through the Arctic Ocean. Our smaller research vessels like the ‘Heincke’ are on expeditions within the northern part of the earth, mainly in the North or Baltic Sea. Within many research projects we contribute to the challenges of the Ocean Decade. Many Scientists of our institute are involved and with our research vessels we also provide important research infrastructure in many regions of this world – even for international scientists. We are an official Network Partner of the Ocean Decade in Germany.</p> | <p>05.01.2023-12.01.2030</p> | <p>CHALLENGE 2: Protect and restore ecosystems and biodiversity; CHALLENGE 4: Develop a sustainable and equitable ocean economy; CHALLENGE 5: Unlock ocean-based solutions to climate change</p> | <p>Antje Boetius</p> |
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| Coastal Pollution Toolbox | Project | Helmholtz- Zentrum Hereon | Germany | <p>The key scientific theme is knowledge transfer of scientific findings: The CPT serves as knowledge hub and information platform for decision-makers and scientists to obtain information services for action. Tools provides a showcase that addresses the challenge of marine and coastal pollution in temperate and polar coastal zones. The CPT will deliver predictive capacities. services and products for marine and coastal systems. Some products will link field data with complex models and applications with visualisation allowing for forecasting and prediction. The activity is open for pilot areas (PredictOnTime). This allows to improve decision-making in a cost-effective manner. A co-development framework will ensure the science basis for actionable knowledge. The “box of tools” is intended to be co-developed with stakeholders and users using contemporary trans-disciplinary methods. This facilitates interest and use by a range of coastal and marine decision-makers.</p> | 03.01.2023- 31.12.2027 | <p>CHALLENGE 1: Understand and beat marine pollution; CHALLENGE 2: Protect and restore ecosystems and biodiversity; CHALLENGE 3: Sustainably feed the global population</p> | Ralf Ebinghaus |
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| Preventing ocean plastic in rivers | Contribution | Plastic Fischer | Germany | <p>Plastic Fischer tackles ocean plastic pollution already in rivers and collects, sorts, and manages the non-organic material in order to protect marine biodiversity. The “3L Initiative” uses locally-built, low-tech and low-cost solutions to efficiently stop River Plastic and creates jobs for the local communities to carry out the reliable end-to-end services that ensure a safe processing of the collected plastic. The used technology can be built from locally available material anywhere in the world and is easy to manufacture and maintain. Besides the waste collection, Plastic Fischer organizes awareness campaigns together with schools and volunteers to create sensitivity for the consequences of plastic pollution and the benefits of proper waste management. The social enterprise has ambitions to scale across India and Indonesia, create hundreds of jobs for underserved communities and protect the oceans from thousands of tons of plastic.</p> | 04.01.2021-31.12.2030 | CHALLENGE 1: Understand and beat marine pollution | Karsten Hirsch |
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