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Call for proposals

“An Ocean of Solutions”

Wave 2

“Ocean and Climate” PPR

Closing date of the call for proposals

23/11/2023 at 11:00 am (CET)

Consultation page for the call for proposals

<https://anr.fr/ppr-ocean-2023>



Summary

The ocean covers 71% of our planet's 510 million km². It plays a crucial role in regulating the climate, it is an astounding living area and acts as a pool of biological, energy and mineral resources. It essentially contributes to human nutrition and health, and has always enabled communication between communities and the transport of goods across the planet: more than 30% of the world population lives in a coastline less than 100 km wide and at an altitude of less than 100 m, which puts great pressure on coastal and littoral ecosystems. This pressure is expected to grow, as population projections anticipate that the population living at an altitude below 10 m will increase from 680 million to over a billion in 2050. The ocean is at the heart of sustainable development, climate protection and biodiversity loss issues. It is essential for all humanity, as much for its residents as for the earth's inhabitants. For all these reasons, it must be preserved and, therefore, requires generating and sharing specific scientific knowledge, globally and locally, that can be easily transferred not only to structures responsible for its management and governance, but also to companies, civil society and the general public.

To this end, the French State has decided to mobilise €40 million within France 2030's "Priority Research Programmes" (PPR) initiative. This PPR, whose scientific steering was entrusted to the French National Centre for Scientific Research (CNRS) and Ifremer, aims to fund interdisciplinary, even transdisciplinary, ambitious and structuring research proposals in line with the priorities set out in the United Nations Decade of Ocean Science for Sustainable Development (2021-2030), to which France will greatly contribute. The French National Research Agency (ANR) is responsible for the selection, contracting and monitoring of the proposals to be presented for funding.

To achieve these objectives, this second call for proposals, launched under the Ocean & Climate PPR, has a budget of €9 million. Structured around 7 major challenges, it aims to help scientific communities tackle scientific questions, including issues in blue economy, geostrategy, integrated socio-ecosystem management, living organism and society welfare, social equity, commitment of the stakeholders and society as a whole.

Large-scale proposals involving research laboratories covering various disciplines are expected. The involvement of wide interdisciplinary communities, at the interface of Life Sciences, Environmental Sciences, Sciences of the Universe and Engineering Science, as well as society involvement, are key criteria. This involvement will be assessed with regards to the signed commitments (administrative and financial document and commitment letter included). The amount of aid requested must be between €1 and 1.5 million (the minimum amount is €500,000 for proposals with a major focus on challenge 7). Proposals should last 3 to 4 years.

Keywords

Ocean, overseas France, polar oceans, deep ocean, coastal ocean, integrated blue socio-ecosystem management, geostrategy, science-society relationships, mitigation of climate change and its impacts, societal adaptation, biodiversity conservation, pollution, exposome and health of marine organisms, sustainability, digital ocean, enhanced observatories.

Important dates

Closing date of the call for proposals

The submission dossier must absolutely be electronically submitted, including the documents signed by the legal representative of each partner before:

23/11/2023 AT 11:00 AM (CET)

at:

<https://france2030.agencerecherche.fr/ppr-ocean-vague2>

ANR Contacts

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PROGRAMME MANAGER: TARIK MEZIANE

Please read carefully and thoroughly this document as well as the instructions available on the submission website:

<https://france2030.agencerecherche.fr/ppr-ocean-vague2>

For any question regarding the call for proposals: ppr-ocean@anr.fr

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1. Background and objectives of the call for proposals

1.1. Background

France is in a particular position when it comes to the ocean: with a presence in most world seas and at every latitude (Atlantic Ocean, English Channel, North Sea, Mediterranean, Indian Ocean, Caribbean, Southern Ocean), with 11 million km² under national sovereignty or jurisdiction (including 97% located in overseas France), it is the second State, after the United States and well ahead of Australia, in terms of exclusive marine economic zone.

Therefore, the ocean raises major issues and responsibilities for France, in terms of preservation of ecosystems, resources (biological, mineral, energy), sustainability of the associated economic activities and social equity, but also in geostrategy, sovereignty and diplomacy.

In this respect, French research in Marine Sciences, in collaboration with regional and national stakeholders, essentially contributes to forecast ocean changes in line with current global change, to propose mitigation, adaptation and sustainable development solutions validated by science, by considering cultural diversity, and inform decision makers. The strategy proposed by the French higher education and research community is to rely on the skills developed in their laboratories to contribute to ocean knowledge and enable the transfer to decision makers, managers and companies, and foster the preservation of marine life and society adaptation to the deep changes in the ocean.

In this context, the CNRS and Ifremer are entrusted with the scientific steering of the “Ocean & Climate” Priority Research Programme, including leading scientific communities likely to be concerned by this PPR. The French National Research Agency (ANR) is responsible for the selection, contracting and monitoring of the proposals to be presented for funding.

1.2. Objectives of the call for proposals

The 2023 “An ocean of solutions” call for proposals aims to fund interdisciplinary, ambitious and structuring research proposals focusing on the assessment and anticipation of human-induced global change impacting the oceans (climate change, changes and new uses, pollution, invasive species) and the identification of solutions to protect the ocean, preserve ecosystem services, and for sustainable and fair ocean uses. A wide range of ocean-based measures are also in place to mitigate climate change and the impacts on marine ecosystems. These measures and solutions are based on the prior knowledge of how the ocean and marine socio-ecosystems work. Therefore, one of the objectives of this call for proposals is to improve our knowledge on the processes governing ocean and marine socio-ecosystem dynamics to help identify the resources, pressures and solutions with a view to adapt and mitigate the impacts of global change and respect human populations.

Calling for transformative science, both in terms of approaches and results, the research supported by the PPR is extensive, bold and focused on the future. They will contribute both to improving basic ocean knowledge, in all its aspects, and identifying a range of potential innovative solutions in public policies, decision, management or government processes, or technological development and innovation. They must be interdisciplinary, including by integrating Social Sciences and Humanities. Preferably, they will be jointly developed and managed in close collaboration with stakeholders to foster the relevance and responsiveness of research, from the production of knowledge to the use of science to help find solutions, and, where appropriate, consider local knowledge. They will be committed to generational gender equality and diversity. They will be communicated in ways that broadly reach society, to arouse growing interest in the ocean and drive behavioural changes. The results generated under this PPR must support Open Science and be available for re-use.

The proposals backed by this PPR must support the transition from disciplinary ocean research (physics, biology, economy, etc.) towards integrative and interdisciplinary research capable of meeting the challenges of the United Nations Decade of Ocean Science for Sustainable Development (<https://www.oceandecade.org/>), European challenges (Green Deal, Mission Starfish) and societal and geostrategic French challenges.

A first call was launched in June 2021, its 6 selected projects were announced in Spring 2022.

2. Expected projects

2.1. Themes

These proposals must include four priority areas where major issues in climate change, multiple and unprecedented human induced pressures, preservation of biodiversity and ecosystem services, sustainable economy, sovereignty or diplomacy were identified: polar oceans, overseas France, the deep ocean and vulnerable metropolitan marine and coastal areas. It should be noted that, as this programme focuses on predicting human-induced global change impacting the oceans, it does not cover geosciences on tectonics or seismology, nor land-based coastal infrastructures (land-based facilities, harbours, estuary areas, etc.).

The Ocean & Climate PPR is structured around 7 major challenges:

Challenge 1: Predicting the impacts of climate change-related extreme weather events in overseas France to guide regional policies

Keywords: overseas France, intertropical zone, extreme weather events, climate, impacts, risks, societies, adaptation, crisis.

This challenge will be structured around three lines of research, resulting in a joint proposal development with local stakeholders in one or more overseas territories. It will focus on identifying and meeting sensitive issues to guide territorial public risk management policies:

Theme 1.1: Improving our knowledge of extreme weather events in overseas France (notably tropical storms and cyclones, coastal flooding episodes, marine heatwaves, droughts, extreme precipitation events) and our ability to predict their development at various timeframes (from the season to the end of the century). Large-scale climate plays a crucial role in these issues of wide regional impact.

Theme 1.2: Increasing the ability to predict the impacts of these events on overseas territories, using an interdisciplinary approach, particularly on marine ecosystems (biodiversity, functioning, vulnerability, resilience, ecosystem services), on the coastline under environmental, physical and human-induced constraints, and on dependent economies and societies. Conducting their regional and local study through exposure scenarios, in view of the vulnerability and adaptation capacity of the territories, and society development paths.

Theme 1.3: Identifying possible solutions highly likely to reduce the risk depending on territorial characteristics. Exploring, for instance, how ecosystem-based adaptation solutions are relevant. **Supporting local development stakeholders in these territories,** including those in higher education and research, in defining their training and management policies to address vulnerabilities, the impacts identified, and various adaptation scenarios.

Challenge 2: Intensifying research in polar oceans, which are undergoing major changes, and with major geostrategic issues

Keywords: polar oceans, climate, sea ice, biodiversity, ocean circulation, biogeochemistry, ecosystem services, pollution, land-sea continuum, socio-ecosystems, governance.

In line with the Polar Strategic plan, this challenge will promote the elaboration of interdisciplinary scientific questions specific to polar oceans, including their interactions with the global scale, and in support of scenario building, to identify development pathways of changes in polar oceans, and the opportunities/risks associated with these pathways. It will consider the observation challenges and deficiencies inherent to these extreme environments. This means characterising the **environmental, economic, social, legal, strategic and political issues associated with polar ocean changes** (e.g., through environmental changes and the increasing demand for goods and services from polar ecosystems, development of human activity), and propose integrated approaches to the governance issues arising from this. It will focus on three main themes:

Theme 2.1: Characterising and predicting the physical changes of polar oceans in relation to climate change, the feedbacks and couplings with the other compartments of the earth system, including marine and terrestrial cryosphere, their connections with global oceanic and atmospheric scales, and their impacts on major biogeochemical cycles and marine primary production.

Theme 2.2: Characterising, predicting and anticipating the impact of regional and global change on biodiversity and the functioning of the polar oceans' coastal and high seas ecosystems, including the disappearance of ecosystem niches connected to the disappearance of the Arctic pack ice. Developing indicators that are relevant for evidencing these changes, and reference conditions. Analysing, through an integrative approach the physical, chemical and biological exposome, the health status of the organisms and polar diversity in a context of global change. In particular, characterising the nature and origin of current and emerging pollutants sources, their preferred paths and their future in the food web of the pelagic and benthic compartments, up to their impacts on local human populations.

Theme 2.3: Analysing Arctic Ocean values for coastal human populations and assessing the impacts of environmental changes on these populations, by considering social, cultural and economic transformations at work.

Challenge 3: Improving the protection and resilience of marine environments and the development of new integrative management approaches

Keywords: biodiversity, socio-ecosystems, marine protected areas, new uses, governance, evolution and dynamics, benefit-risk, resilience, restoration, sustainable management, mitigation.

This challenge aims to acquire knowledge to promote solutions and strategies aiming to protect marine environments. Proposals must rely on interdisciplinary research, bringing together, for example, researchers in Environmental Sciences, Ecology and Evolution Sciences, and Social Sciences and Humanities, and/or transdisciplinary research¹. Stakeholder involvement (e.g., NGOs, natural environment managers, economic actors) is encouraged. Four themes are proposed:

¹ According to the United Nation's Global Sustainable Development Report (2015), transdisciplinarity combines interdisciplinarity and participatory approaches. Therefore, it calls for the involvement of non-scientists, requires focusing on various communities and consider non-scientific knowledge (for instance, from local and Indigenous communities, user groups, the general public and non-governmental

Theme 3.1: Defining the conditions (ecological, environmental, social and/or political) necessary for the implementation of efficient strategies to protect and manage marine environments, including through Marine Protected Areas and Marine Parks. Proposals may rely on assessments from previous experiments to identify the constraints and benefits of the options implemented, and knowledge gaps. These assessments may include governance, contribution of stakeholders, monitoring means, the state and dynamics of biodiversity.

Theme 3.2: Improving the knowledge and assessing the potential of nature-based solutions and/or actions plans on biodiversity (e.g., restoration, assisted migration, new technologies) **to protect and preserve marine environments.** Proposals may rely on critical assessments or proofs of concepts based on theoretical, experimental and/or modelling approaches.

Theme 3.3: Acquiring knowledge on new uses at sea and the protection of marine diversity. These new uses are, for instance, connected to the development of sea infrastructures (e.g., harbours, wind turbines), the increasing urbanisation and the development of conservation actions (protection, restoration). Proposals must aim at determining the influence of these new uses on the dynamics and development of biodiversity and/or socio-ecosystems, including through the prism of their ecological and evolutionary effects (e.g., reef effects, refuge effects, connectivity changes) as well as socio-ecosystem transformations, by considering conflicts of use and new forms of governance. Proposals may also include the synergies vs. antagonisms between these new uses and other human induced pressures on biodiversity protection.

Theme 3.4: Proposing metrics and/or indicators to assess the impacts of the actions undertaken to preserve marine ecosystems **on biodiversity and socio-ecosystems.** This means defining and assessing these metrics and/or indicators through empirical and/or theoretical approaches and, regarding conservation actions, the efficiency and effectiveness of these actions for biodiversity. In addition, proposals may present strategies to monitor biodiversity dynamics (including, if possible, various genetic, taxonomic, functional, ecosystem components), its contributions to human societies and exerted pressures, at different time and space scales.

Challenge 4: Relying on sustainability science to benefit sustainably from the ocean's resources

Keywords: food resources, energy resources, sustainable uses, integrated management, ecosystem-based approach, adaptation, governance, ecosystem services

This challenge aims to include ecological, social, economic and political aspects on marine food and energy resources, in the context of global change. In line with France's position on deep mineral resources, the latter are excluded from the scope of this call. As for overseas France, the deep ocean and/or the metropolitan coastline, it will particularly focus on:

Theme 4.1: Developing the knowledge, tools and approaches to help identify and assess alternative and innovative strategies on the sustainable use of biological and/or energy resources that are economically viable, ecologically sustainable and socially fair. From an ecosystem perspective, proposals will estimate, in areas under European jurisdiction and beyond, the impacts of these activities on current or prospective resources, as well as biodiversity, marine habitats, other maritime activities and associated ecosystem services, and will help identify the methods and forms of governance capable of minimising these impacts and conflicts of use.

organisations) in the research process.

Theme 4.2: Developing knowledge to support an aquaculture (from plants to large predators) that is consistent with sustainable development objectives. The issues to be addressed are the identification of trade-offs and synergies, and the removal of obstacles so that aquaculture and other activities in coastal areas can coexist (e.g., pressures on natural stocks used as food, conflicts in the allocation of areas, environmental and societal impacts) through testing of new integrated aquaculture development strategies, and the scientific support of policies aiming to support such development.

Theme 4.3: Anticipating socio-ecosystem resilience by assessing the impacts of cumulative pressures (use of biological and energy resources combined with pollution, climate change or other pressures, etc.) on ecosystems, and environmental changes on maritime activities and societies, under different global change scenarios. In this context, modelling-based approaches (e.g., food web modelling, operational oceanography, bioeconomy modelling, social and spatial dynamics modelling, end-to-end modelling, etc.) and testing may be put forward to inform public policies. It will also be possible to present proposals aiming to identify the mechanisms capable of increasing the socio-ecological resilience at various time and/or space scales (e.g., epigenetics, adaptive process, functional connectivity, activity response and stakeholder vulnerability) and supporting adaptive management.

Challenge 5: Characterising the ocean exposome and its impacts to protect marine ecosystems

Keywords: climate and non-climate factors, chemical pollution, pathogens, impacts of multiple stressors, biological, ecological and biogeochemical effects, environmental regulation, ecosystem services, solutions

The purpose of this challenge is to develop an understanding of the multiple stress factors affecting both organisms and ecosystems. The stressors considered are overly broad: climate, chemical pollution and others. Impacts may affect biological and ecological processes, biodiversity loss, and have consequences on biogeochemical cycles and ecosystem services. The challenge particularly aims to identify common or specific health features of marine organisms and ecosystems, so that measures, including regulatory measures, can be better implemented to limit stressors and reduce their impacts. This challenge is divided into two complementary lines of action, the joint processing of which will help consider an exposure/effect continuum:

Theme 5.1: Developing concepts and methods to characterise multi-exposures (contaminants, pathogens, physical and climate stressors) of marine organisms with a view to understand the sources and processes controlling the combined impacts of these exposures on organisms and ecosystems.

Theme 5.2: Identifying risk factors for the health of marine organisms affecting ecosystems and ecosystem services, in the context of climate change and environmental pressure, to propose innovative methods and approaches capable of preventing and reducing pollution, regulation methods, monitoring methods, and ocean-based solutions.

Cross-disciplinary Challenge 6: Developing innovative, multidisciplinary, multi-parameter, multi-scale and multi-stakeholder observation and modelling programmes to support the challenges identified

Keywords: observation systems, digital twins, enhanced observatories, numerical modelling, artificial intelligence, large amount of data, model-data synergies.

This challenge aims to remove scientific, methodological and technological obstacles to international ocean observation and modelling programmes. To this end, proposals must specify their objectives and strategies for the national and European contribution and coordination of French expertise to this challenge. They must also demonstrate the relevance of their methodological and technological developments in line with at least one of the PPR's challenges 1 to 5. This cross-disciplinary challenge is structured around three main lines of action.

Theme 6.1: Proposing Proofs of Concepts contributing to the development of “enhanced” observatories: This area aims to promote an integrated observation of the ocean, in all its aspects (from physics, chemistry, biology and biodiversity to the environmental characterisation and economic and social aspects), to explore the functioning, potential and vulnerabilities of the most unknown areas and compartments. One of the objectives, although not the only one, is to demonstrate the contribution of innovative low-cost sensors, new observations and new integration technologies.

Theme 6.2: Removing the scientific, methodological and technological obstacles to a digital twin of the ocean², to improve our ability to observe, simulate, understand and forecast the ocean to guide sustainable development policies, particularly with regards to human-induced impacts, resource management, extreme weather events and climate scales. The issues addressed may focus on badly or un-resolved process modelling (e.g., small scale processes, extremes, physics-chemistry-biology-society interactions, biological diversity, evolution, processes at interfaces), contribution of big data, from high performance computing and AI to digital ocean modelling, model-data synergies, management of “cascades” of coupled models and, more generally, the capacity to incorporate various digital solutions within an interactive platform to test and validate scenarios with an impact on the ocean and marine environment.

Theme 6.3: Developing solutions to manage and process large amounts of multi-source ocean observation and modelling data and the associated socio-economic and geopolitical impacts, to encourage their use and the creation of new knowledge and services (operational oceanography, monitoring, forecasts, uncertainties, sea-use management, power play, etc.). This includes both scientific and technological obstacles to using heterogeneous and multi-source distributed marine data sources and solutions (e.g., AI), to extract new multi-modal representations of relevant ocean indicators and core ocean variables.

Cross-disciplinary Challenge 7: Sharing the discovery of the Ocean and associated societal issues with the general public

Keywords: education, training, sharing and joint issue development, scientific knowledge and methods, cultural science integration, science-art, scientific mediation, citizen involvement, participation, participatory science, ocean literacy, common good

The joint development of questions and sharing of scientific knowledge with society are at the heart of this challenge. It is essential to identify the connections to the ocean, develop ocean literacy and determine in what circumstances we can refer to a common good. To increase the public interest in the issues covered by the PPR, and to develop ocean literacy, initiatives may be proposed in conjunction with the research questions developed in challenges 1 to 5. Collaborative approaches, involving stakeholders to varying degrees in the development and implementation of research programmes, and those promoting a commitment from society stakeholders are encouraged. The

² A digital twin of the ocean refers to the digital representation of all components of interest in the ocean and their interactions, capable of incorporating the body of knowledge and data available to simulate or predict its development.

actions are subject to training, mediation, participatory and artistic approaches. **For all actions conducted in challenge 7, it is essential to build a reflective analysis of the efforts conducted (achieving the objectives in terms of target audiences, expected effects or not, scientific and public commitment, etc.) and proceed to their assessment. Assessment methods (*ex-ante*, *in itinere*, *ex post*) must be specified.**

Theme 7.1: The ocean as a common good: the foundations of ocean literacy

It is important to provide an overview and monitor the knowledge, social issue representation and expectations of society, with regards to the oceans, in all its diversity. Social, environmental, geographic and time-related aspects must be considered. A multidisciplinary analysis (legal, political, economic, philosophical, psychological, ecological, cultural, environmental) of the “Ocean, common good” concept, taking into account the French cultural diversity (mainland and overseas France), will be likely to inform ocean issues in the context of global change.

Theme 7.2: Connecting all citizens to the ocean by sharing knowledge and encouraging debates on issues. The ocean preservation and knowledge challenge concern all citizens, including those living far from the coast. Considering the diversity of French society, new ways to involve scientists and conduct mediations must be developed so that the ocean’s knowledge and challenges are genuinely appropriated. This requires an acculturation to science in all its diversity, the ability to develop a systemic approach and greater skills to enable debates. One of many examples could be to use France’s top-class oceanographic fleet as a vehicle to train and inform the general public through “floating schools”, exhibitions or conferences during stopovers. It is important to provide an overview and monitor the knowledge, social issue representation and expectations of society, with regards to the oceans, in all its diversity.

Theme 7.3: Strengthening scientific and social objectives in participatory research proposals (joint elaboration, development and implementation of the research proposal). In addition to the scientific benefits generated (e.g., the continuous observation on wide areas, identification of new research issues or the development of new research fields at science-society interfaces), collaborative research helps people learn more about science, scientific issues and results. The production of knowledge and rigorous and structured data, by the public or stakeholders, is possible through a collaboration between research teams and partners (user or professional associations, NGOs, holders of Indigenous knowledge, etc.).

Theme 7.4: Stimulating the ocean’s emotional aspect by connecting science and art. This area provides a different point of view on scientific issues and challenges facing society. The artistic creativity process invites citizens and young people to tackle complex issues. Beyond mediation, art-science collaborations contribute to the development of research questions and new data.

2.2. Main characteristics

This call for proposals is addressed to all scientific communities in a position to meet one or several of the 7 challenges. Under this second call, challenge 6 may only be considered as a minor challenge. Proposals must be original, based on sound science, present working hypotheses and innovative approaches, propose methodology or conceptual changes with regard to the state of the art. In addition, proposals must also demonstrate their ability to meet the challenges of the United Nations Decade of Ocean Science for Sustainable Development (2021-2030), meet societal challenges specific to France and the priority ocean areas of the PPR, and support public and decision-making ocean policies. These proposals must provide solutions within reasonable deadlines.

Interdisciplinary proposals (collaborations between Social Sciences and Humanities, Life Sciences, Environmental Sciences, Sciences of the Universe and Engineering Sciences) and/or transdisciplinary proposals are particularly expected. The relevance, consistency and complementarity of the teams and team networks must be considered. Applicants must provide core resources, equipment and skills compatible with the ambitious nature of the proposal submitted.

This means funding structuring proposals, providing solutions, involving (i) the sustainable mobilisation of networks of interdisciplinary collaborations within the scientific community and transdisciplinary collaborations with stakeholders and the general public from different backgrounds, (ii) the sharing and co-development of knowledge, tools and methods, (iii) with a positive synergistic impact on PPR objectives and the potential to generate other future projects.

Study areas must be clearly identified and correspond to the priority areas set out in the call for proposals.

The proposals presented must focus on one of the major challenges 1 to 5 and 7 of the call for proposals. The proposals with a major focus on challenge 7 must select a minor challenge among challenges 1 to 5.

As part of the major challenge selected, the proposal must respond to at least two themes. Proposals covering several challenges are encouraged, they must specify the major challenge and minor challenge(s) (1 theme minimum per minor challenge) selected.

Given the ambitious, innovative, interdisciplinary and transdisciplinary nature of the expected proposals, the budget for the proposals submitted may not be lower than €1 million, except for challenge 7 whose minimum amount is fixed at €500,000. The amount requested will be €1.5 million maximum.

Proposals should last 3 to 4 years.

Only new original proposals with no prior ANR funding, European funding or other donors, will be considered.

The principal investigator must be internationally recognized for his or her research. Under this call for proposals, the recruitment of a project manager is an eligible expenditure.

The principal investigator of a proposal funded under the previous “An ocean of solutions” call may submit a new proposal if the funded proposal is completed by the closing date of this call for proposals.

2.3. Partners

Proposals must involve, within their consortium, at least two higher education and research institutions (university, school, national research institution).

Partner institutions must demonstrate their ability to mobilise resources in order to conduct the proposals.

Pursuant to the Priority Research Programme Agreement signed between the French State and the French National Research Agency, only French higher education and research institutions (university, school, national research institution) may receive grants.

Partnerships with companies, public authorities, local and regional authorities and other stakeholders are encouraged, and the degree of commitment of these partners must be accurately described. However, they may only receive funding in the form of services to be included in the estimated budget. A consortium agreement covering privacy and intellectual property issues, etc. must be signed.

A single partner, appointed as the Coordinating institution, will conclude a contract with the ANR. The partner will be in charge of managing funding and may sign transfer agreements with its own Partner Institutions. All partner institutions must sign a Consortium agreement.

3. Review of proposals submitted

3.1. Selection process

An international independent selection panel will evaluate the proposals submitted (see § 3.2). If necessary, the panel may call upon external peer reviews and conduct a hearing with pre-selected project coordinators.

Following these deliberations, the panel will submit a report to the “Ocean & Climate” Education, Research and Innovation Ecosystems Committee (CEERI) including:

- 1°) the marks given to the proposals evaluated, in accordance with the criteria listed in § 3.3,
- 2°) the list of proposals recommended for funding by the panel, based on their quality, evaluated in accordance with the criteria listed in paragraph 3.3,
- 3°) the list of proposals which the panel proposes not to fund due to insufficient quality on at least one of the criteria listed in § 3.3.

Each proposal evaluated will be the subject of an argument justifying its position on one of the two lists. The panel may submit an opinion on the amount of funding requested.

Based on a proposal of the Higher Education, Research and Innovation Ecosystems Committee and an opinion of the French General Secretariat for Investment (SGPI), the Prime Minister will establish the list of selected proposals and the maximum amount allocated to each one.

Each proposal shall be the subject of a contract between the ANR and the project coordinating institution, detailing the mutual obligations of both parties. The ANR will report to the Higher Education, Research and Innovation Ecosystems Committee on the progress of the proposal.

The members of the evaluation panel and external peer reviewers called upon undertake to comply with the rules of ethics and scientific integrity set up by the ANR. The ANR's Code of Ethics and Scientific Integrity is available on its website. The ANR ensures strict compliance with the rules of confidentiality, the absence of personal connections between panel members or external peer reviewers and project coordinators, as well as the absence of conflicts of interest for panel members and external peer reviewers. If there is a duly noted breach, the ANR reserves the right to take any action it deems necessary to remedy the situation. The composition of the evaluation panel will be posted on the call for proposals publication website at the end of the selection process.

3.2. Acceptability criteria

IMPORTANT

The dossiers that do not meet the acceptability criteria will not be submitted to the panel and will in no way be eligible for funding.

- 1) The submission dossier must be filed in full on the ANR submission website before the call for proposals closing date and time. Moreover, the financial and administrative document including the commitment letters and the commitment letters must be signed by each Partner Institution, scanned and filed on the ANR submission website at the time and date listed in page 4.
- 2) The scientific project document must follow the template available on the call for proposals website and be submitted under unprotected PDF
- 3) The proposal will last 3 to 4 years.

- 4) The amount of aid requested should be at least €1 million for all proposals, except those with a major focus on challenge 7, whose minimum amount is €500,000; the amount of aid requested is €1.5 million maximum.
- 5) A single principal investigator can only be responsible for one project. The principal investigator of a proposal funded under the previous “An ocean of solutions” call may submit a new proposal if the funded proposal is completed by the closing date of this call for proposals.
- 6) The Coordinating Institution must be a higher education and research institution.
- 7) Proposals must involve, within their consortium, at least two French higher education and research institutions (university, school, national research institution).
- 8) The proposals presented must focus on one of the major challenges 1 to 5 and 7 of the call for proposals. Challenge 6 may only be considered as a minor challenge. Proposals with a major focus on challenge 7 must select a minor challenge among challenges 1 to 5. As part of the major challenge selected, the proposal must respond to at least two research areas. Proposals covering several challenges are encouraged, they must specify the major challenge and minor challenge(s) (1 research area minimum per minor challenge) selected.
- 9) Proposals that could cause significant environmental harm are excluded (application of the DNSH – Do No Significant Harm – principle) by virtue of Article 17 of the European taxonomy regulation.

3.3. Evaluation criteria

External peer reviewers and members of the selection panel are called upon to review project proposals according to the evaluation criteria below, grouped into three main categories.

1. Scientific excellence and ambition:

- Innovative nature, ambition, originality, methodological or conceptual breakthrough of the proposal with respect to the state of the art
- Relevance of joint inter- and transdisciplinary development approaches
- Relevance of the proposal in view of the challenges and geographic area studied

2. Quality of the consortium, governance and resources mobilised:

- Quality and inter-disciplinary complementarity of the scientific consortium with regard to the objectives of the proposal,
- Quality of the principal investigator of the proposal: ability to coordinate multidisciplinary and ambitious consortia, academic background, international recognition,
- Relevance and efficiency of the governance (steering, organisation, coordination, introduction of Advisory Boards, etc.)
- *Feasibility: Adequacy between the human and financial resources mobilised compared to the targets, relevance of the schedule, risk management*
- *Structuring of a national scientific community, improving the leadership in the context of a European and international scientific context*
- *Gender balance in terms of involvement and responsibilities, and age balance in terms of involvement*

3. Impacts and outcomes of the proposal:

- **Economic and societal impacts, contribution to the development of solutions in response to the challenges in the priority areas of the PPR**
- **Relevance of the resources deployed to ensure that stakeholders and society take ownership of the knowledge and issues at stake**
- *Proposal of tools and approaches to support public and decision-making policies*
- *Strategy for the scientific and technological exploitation of the results and tools, commitment to FAIR and Open Science principles*
- *Implementation of tools to assess the proposal's impacts and outcomes*

4. General provisions for funding

4.1. Funding

The initiative funded under the Priority Research Programme is of an exceptional nature and differs from recurrent funding from academic or research institutions.

The funding granted provides additional resources intended for new actions. They can be used to launch innovative research proposals and to fund, for instance, the purchase of equipment as well as expenditure on staff specifically assigned to this proposal and all operating costs.

Eligible expenses are specified in the financial regulation on the allocation of grants. Financial support will be provided in the form of a grant, whose disbursement is made by the ANR for the project coordinating institution, according to the timetable set out in the agreement, over the duration of the project. Only higher education and research institutions with corporate personality can benefit from such support. For-profit higher education and research institutions and companies may act as partner institution, but will not receive funding under this call for proposals.

4.2. Consortium agreements

Partnership-based funded proposals must enter into a Consortium Agreement (within 12 months from the notification of the funding agreement) specifying the rights and obligations of each partner institution involved in the proposal. This agreement specifies:

- the breakdown of the financial allocation, tasks and deliverables between the different partners, as well as the human and financial resources mobilised by the latter,
- the scientific, technical and financial terms to access the resources shared between the partners,
- the terms to exploit the results achieved at the end of the research and share their intellectual and industrial property,

The Consortium Agreement must demonstrate that, for proposals including one or more partners such as an association or a company, said partners do not benefit from indirect funding.

4.3. Open Science

As part of the ANR's contribution to the promotion and implementation of Open Science, and in line with the French National Plan for Open Science (NPOS) and International Plan S, recipients of the France 2030 grant undertake to ensure immediate open access to peer-reviewed scientific publications and to adopt, for research data, a FAIR (Findable, Accessible, Interoperable, Reusable) approach in line

with the “as open as possible and as closed as necessary” principle. Thus, all scientific publications from proposals funded within the framework of this plan will be available in open access, under the Creative Commons CC-BY license or equivalent, using one of the three following methods:

- publication in a natively open access journal,
- publication in a subscription journal that is part of a transformative agreement or transformative journal³,
- publication in a subscription journal. The publisher’s version or the manuscript accepted for publication will be deposited in the Open archive HAL by its authors, under a CC-BY license, implementing the Rights Retention Strategy (RRS), according to the terms specified in the Special Conditions of the Funding Decision or Agreement.

Furthermore, the Coordinating Institution undertakes to ensure that the full version of these scientific publications (version approved for publication or publisher’s version) is deposited in the national Open archive HAL, no later than the time of publication, and to mention the ANR reference of the research project from which they result.

The ANR encourages the deposit of pre-prints in open platforms or archives, and to privilege permanent or unique login details (e.g., DOI or HAL Id). In addition, the ANR recommends that priority be given to publications in natively open access journals or books⁴.

Finally, the Coordinating Institution agrees to provide, within 6 months after the start of the project, a first version of the Data Management Plan (DMP), under the terms and conditions set out in the Grant Agreement.

4.4. State aid

The aid granted under this call for proposals is subject to the European regulation on State aid (Articles 107, 108 and 109 of the Treaty on the Functioning of the European Union and related texts) insofar as it qualifies as State aid. Therefore, such funding must comply with the European regulation on State Aid and fall within the Commission Regulation (EU) No. 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty.

5. Terms of submission

5.1. Content of the submission dossier

The submission dossier shall include all the elements necessary for the scientific and technical evaluation of the proposal. It must be deposited before the closing of the call for proposals, whose date and time are listed in page 4.

IMPORTANT

No additional element will be accepted after the closing for the submission of the call for proposals, whose date and time are listed in page 4.

³ Definition of a [transformative agreement](https://www.coalition-s.org/faq-theme/publication-fees-costs-prices-business-models/) or [transformative journal](https://www.coalition-s.org/faq-theme/publication-fees-costs-prices-business-models/) : <https://www.coalition-s.org/faq-theme/publication-fees-costs-prices-business-models/>

⁴ The DOAJ website (<https://doaj.org/>) lists peer-reviewed open access scientific journals. The same applies to the DOAB website (<https://www.doabooks.org/>) but with monographs.

The documents are to be deposited on the submission website whose address is listed in page 4. To access this service, opening an account first is required (username and password). It is recommended to register as soon as possible to obtain those elements.

The full submission dossier consists of three fully completed documents:

- **the “scientific document”, of 25 pages maximum, written in English, which includes a description of the proposed project, under the format provided, with an appended list of scientific publications made in the last 3 years by the researchers/teams proposing the project,**
- **the “administrative and financial document”, which includes the administrative and budgetary description of the proposal,**

The elements of the submission dossier (administrative and financial document in Excel format, scientific document in Word format) will be available on the publication page of this call for proposals (see the URL on page 4).

5.2. Submission procedure

The documents of this submission dossier are to be sent by the principal investigator:

Only IN ELECTRONIC FORMAT:

- before the closing date of this call for proposals, listed in page 4,
- on the submission website, as recommended in paragraph 5.1.

Prior registration on the submission website is required to submit a proposal.

Only the electronic version of the submission documents available on the submission website when this call for proposals closes will be considered for assessment.

An ACKNOWLEDGEMENT OF RECEIPT, in electronic format, will be sent to the principal investigator once the documents are submitted.

NB: The signature of the commitment letters included in the administrative and financial document certifies that proposal partners agree to submit the proposal in compliance with the conditions described in the administrative and financial document as well as the scientific document and its potential appendices.

5.3. Submission advice

It is strongly advised to:

- open an account on the submission website at the earliest,
- not wait until the deadline for submission of proposals to enter data online and upload files (please note that the submission deadline must be respected),
- check that the documents submitted in the dedicated areas under the headings “submission documents” and “signed documents” are complete and consistent with the expected elements. The submission dossier and the filing of signed documents can only be approved by the principal investigator if all the documents have been uploaded,
- regularly consult the programme’s dedicated website at the address listed in page 1, which includes up-to-date information on its operation,

- contact, if necessary, the correspondents by email at the address listed in page 4 of this document.

Subject to publication in the Official Journal of the French Republic



GOVERNEMENT



Contacts

Information about the administrative process (compiling the application, online procedures, aid rate) may be obtained from the ANR at:

ppr-ocean@anr.fr