



**BUILDING AN ALL ATLANTIC  
OCEAN COMMUNITY**  
Implementing the Belém Statement



**Deliverable Name:** D7.4 - Proposed joint actions addressing  
Convergence and alignment of R&I Infrastructure Initiatives

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All AtlaNtic Cooperation for Ocean Research and innovation  
Coordination and Support Action

Supporting the Implementation of the Belém Statement

[www.AllAtlanticOcean.org](http://www.AllAtlanticOcean.org)

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## Executive Summary

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### Summary Box

Keywords: All-Atlantic Cooperation; Research Infrastructures; R&I alignment; RI baseline; RI gaps; R&I needs; R&I governance; R&I facilities; research vessels; underwater vehicles; *in situ* ocean data acquisition systems; marine data centres; marine land-based facilities; offshore facilities; marine experimental facilities; Open ocean-shelf/coastal interactions; marine Environmental monitoring; marine Observing devices sharing; Pelagic imaging;

### Abstract

The Belém Statement (BS) on Atlantic Ocean Research and Innovation Cooperation and the Coordination and Support Action supporting its implementation, the AANChOR project, aims at further boosting research and innovation cooperation in the South Atlantic, notably between the European Union, Brazil and South Africa. WP7 aims to contribute to the implementation of the goals of the BS in promoting and facilitating the convergence and the alignment of Research and Innovation (R&I) infrastructure initiatives with a strong infrastructure component by proposing concrete collaborative initiatives (joint actions) in this field among institutions in European countries, South Africa, Brazil, Argentina, Cabo Verde and in other countries bordering the Atlantic Ocean.

The present document includes a full characterization of the proposed joint action addressing the convergence and alignment of R&I infrastructure initiatives, entitled All-Atlantic marine research infrastructure network (AA-MARINET) that was developed by experts included in WP7 sub-multi-stakeholder platform. The experts interacted since November 2019 to October 2020 to develop the current Joint Action that replies to the defined strategic and operational objectives and the Key Performance Indicators for WP7 platform. The proposed joint action aims to create a long-term collaboration framework to promote and facilitate the convergence and the alignment of Atlantic Research and Innovation infrastructure initiatives. AA-MARINET will support the implementation of the Belém Statement, by providing a forum and tools to support the development of a transatlantic network of RI initiatives and promote Trans-National Access (TNA) and other methods for sharing infrastructures in the Atlantic area.

## Abbreviations and Acronyms

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AquaVitae	New species, processes and products contributing to increased production and improved sustainability in emerging low trophic, and existing low and high trophic aquaculture value chains in the Atlantic (EU funded project)
AORA-CSA	Atlantic Ocean Research Alliance Coordination and Support Action (EU funded project)
ARGO	Broad-scale global array of temperature/salinity profiling floats
AtlantOS	Optimizing and Enhancing the Integrated Atlantic Ocean Observing System (EU funded project)
AUV	Autonomous Underwater Vehicle
BCLME	Benguela Current Large Marine Ecosystem Programme
BS	Belém Statement
CEADO	Centro Argentino de Datos Oceanograficos
CG	Community Group
CSA	Coordination and Support Action
CVOO	Cape Verde Ocean Observatory
DMG	Development and Management Group
EMBRC-ERIC	European Marine Biological Resource Centre- European Research Infrastructure Consortium
ERIC	European Research Infrastructure Consortium
Eurofleets+	An alliance of European marine research infrastructure to meet the evolving needs of the research and industrial communities (EU funded project)
JERICO-S3	Joint European Research Infrastructure of Coastal Observatories: Science, Service, Sustainability (EU funded project)
GOOS	Global Ocean Observing System
KPI	Key Performance Indicators
MsP	Multi-stakeholder Platform
OCIMS	South Africa National Oceans and Coastal Information Management System
OFEG	Ocean Facilities Exchange Group
OTN	Ocean Tracking Network
PIRATA	Prediction and Research Moored Array in the Tropical Atlantic
PLOCAN	Oceanic Platform of the Canary Islands
RAPID	Rapid Climate Change programme
RI	Research Infrastructures
ROV	Remotely Operated underwater Vehicle
RV	Research Vessels
SeaDataCloud	Pan-European infrastructure for ocean & marine data management
SiMCosta	Sistema de Monitoramento da Costa Brasileira
SMCRI	Shallow Marine and Coastal Research Infrastructure
sMsP	Sub-Multi-stakeholder Platform
SO	Strategic Objective
TNA	Trans-National Access
UV	Underwater Vehicle
WP	Work Package

## 1. Introduction

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The Belém Statement<sup>1</sup> (BS) on Atlantic Ocean Research and Innovation Cooperation and the Coordination and Support Action supporting its implementation, the AANChOR project, aims at further boosting research and innovation cooperation in the South Atlantic, notably between the European Union, Brazil and South Africa through the identification and support to the first stages of implementation of new collaborative All-Atlantic activities. These collaborative activities intend to **stimulate scientific and technical cooperation development between South and North Atlantic regions** building upon other initiatives such as the Atlantic Ocean Research Alliance Support Action<sup>2</sup> (AORA-CSA) and the South-South Framework for Scientific and Technical Cooperation in the South and Tropical Atlantic and the Southern Oceans<sup>3</sup>.

In addition, the purpose of these initiatives (combined with other existing synergetic initiatives/activities) is to better understand the links between ocean and climate change, food and energy systems, the dynamics of the Atlantic Ocean (and its interconnected circulation systems from Antarctica to the Arctic) and, eventually, to promote and exploit business opportunities that may arise.

The AANChOR project have three specific objectives:

1. **Identify concrete joint actions** to support the implementation of the EU-Brazil-South Africa Belém Statement (WP2-WP7);
2. **Contribute to the implementation of the selected joint actions** (WP8);
3. **Define long term measures for sustainability of the cooperation** framework beyond the lifetime of the CSA (WP9, WP10).

AANChOR's Work Package 7 aims to contribute to the **implementation of the goals of the Belém Statement (BS) in promoting and facilitating the convergence and the alignment of Research and Innovation (R&I) initiatives with a strong infrastructure component** by proposing concrete collaborative initiatives (joint actions) in this field among institutions in European countries, South Africa, Brazil, Argentina, Cabo Verde and in other countries bordering the Atlantic Ocean within the six thematic areas identified in the BS (Climate Variability, Ocean Observation, Ocean Resources, Ocean Technology, Emerging Pollutants, Polar Research).

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<sup>1</sup> EU-Brazil-South Africa Belém Statement on Atlantic Research and Innovation Cooperation, July 2017.

<sup>2</sup> The AORA-CSA is tasked with the implementation of activities of the EU, Canada and USA Galway Statement and its Atlantic Ocean Research Alliance signed in May 2013. Essentially, the AORA-CSA provides scientific, technical and logistical support to the European Commission in developing and implementing trans-Atlantic marine research cooperation between the European Union, the United States of America and Canada.

<sup>3</sup> The South-South Framework for Scientific and Technical Cooperation in the South and Tropical Atlantic and the Southern Oceans constitutes a bilaterally agreed plan for scientific cooperation in marine and oceanic research between South Africa and Brazil to improve the knowledge of marine ecosystems and climate.

With the aim to propose concrete collaborative activities, WP7 implemented a dedicated sub-multi-stakeholder platform (sMsP) working on the alignment of Research and Innovation (R&I) initiatives with a strong infrastructure in scope of the All-Atlantic Ocean Research Multi-Stakeholder Platform implemented by AANChOR. The present deliverable includes the result of the work developed through the implementation of the above mentioned sMsP and presents the Joint Action (JA) submitted to the BS co-chairs for evaluation in October 2020. This JA was developed following more than 20 meetings and one-to-one interactions involving the sMsP members and other stakeholders and Atlantic partners (See D7.3) between November 2019 and November 2020. The development of the present JA was guided by the Strategic Objectives and Operational Objectives as well as the Key Performing Indicators defined for the sMsP on the alignment of Research and Innovation (R&I) initiatives (See D2.2<sup>4</sup>), the identification of existing initiatives in the area (See D7.1<sup>5</sup>) and the identification of gaps and needs (See D7.2<sup>6</sup>) in scope of this area of collaboration.

## 2. General Information of the Joint Action

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### 2.1 Characteristics of the pilot action

- Title of joint action: **All-Atlantic marine research infrastructure network (AA-MARINET)**
- Leader of joint action responsible for liaising with CSA AANChOR: AANChOR WP7 Manager (Florence Coroner, IFREMER)
- Co-Leader: AIR Centre (Atlantic International Research Centre): Jose Luiz Moutinho
- Countries that should be involved in the implementation of the Joint Action:

By its nature, the proposed joint action is based on the broad involvement of the countries in Europe, Africa, South America, North America that are presently engaged in the observation of the global Atlantic domain, with emphasis on the participation of BS signatory countries, Argentina and Cabo Verde.

- Stakeholders that should be involved in the implementation of the Joint Action:

The proposed joint action will directly benefit from the involvement of different initiatives that are presently responsible for the observations in the Atlantic domain, in general, and for the articulation of specific observing systems. These include, for example, EMSO-Link, EU Marine Robots, JERICO-RI, PIRATA, SAMOC/SAMBA, TRIATLAS, AtlantECO, EUROFLEETS+, ATLANTOS, OFEG (with particular emphasis for the recent initiative towards an OFEG-Atlantic promoted by AtlantOS, AORA an EMSO-Link) and programs such as Voluntary Observing Ship (VOS),

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<sup>4</sup> AANChOR. D2.2 – Baseline and joint actions characterization guidelines

<sup>5</sup> D7.1 - Baseline characterization of existing R&I Infrastructure initiatives

<sup>6</sup> D7.2 - Identification of major needs and gaps in Research and Innovation infrastructures initiatives

DBCP, ARGO and others. Institutional partners in the involved countries may also be involved in order to better reach a major dissemination of the activities and outcomes carried out under the Joint Action.

- Task leaders / Pilot Action leaders:
  - Web portal: João Vitorino (Instituto Hidrografico, Portugal)
  - Pilot action I/ITAPINA: Dr. Rainer Kiko (Sorbonne Université, France), Co-Lead Dr. Rubens Lopes (Instituto Oceanográfico da Universidade de São Paulo, Brazil) Co-Lead Dr. Margaux Noyon (Nelson Mandela University, Port Elizabeth, South Africa)
  - Pilot action AA-COASTNET: Dr. Laurent Delauney (IFREMER, France), Dr. Moacyr Araujo (Universidade Federal de Pernambuco - UFPE, Brazil), Dr. Gerardo Perillo (CONICET, Argentina)
  - Pilot action NMRI-PR: European Polar Board (EPB) and EU Polarnet (pending agreement)

## 2.2 Operational Objective(s)

- **SO1:** Support the development of a transatlantic network of RI initiatives promoting the convergence and the alignment of RIs in the key common areas of the BS.
- **SO2:** Promote Trans-National Access (TNA) to RIs in the Atlantic area.

## 2.3 Key Performance Indicator(s)

- **KPI1:** Set up of a first Committee of the GIO (Group of Infrastructure Officers) which will be composed of the research infrastructures experts (and summary report of the first Committee meeting proposing the list of relevant Infrastructures needed to achieve the Belém Statement goals and combining the National and European operational Calendars and Fleet operation.). The managers will be leaders of national Atlantic Research Fleets involving ERVO (European Research Vessel Operator), IRSO (International Research Ship Operators) EUROFLEETS+ Coordinator, together with European Research Infrastructure Consortia (Euro-ARGO, EMSO-Link, etc.) and their counterparts from representatives of RI managers from Brazil, Cabo Verde, South Africa and Argentina.
- **KPI2:** Production of a Methodology Canvas defining how to realize co-sharing use and Transnational access of the identified research infrastructures.
- **KPI3:** Between 1 to 3 pilot actions - Pilot joint actions to be carried out demonstrating the interest of the Methodology Canvas.

## 2.4 Belém Statement thematic area(s) addressed

- Climate variability and ecosystem approaches;
- Ocean observation, forecasting and monitoring processes and systems;
- Food security, fisheries management, aquaculture and biodiversity;

- Oceans technology (including for observation and renewable marine energy);
- The effects of emerging pollutants;
- Polar research (especially interconnections between the Atlantic, the Southern Ocean and Antarctica).

## **2.5 Societal needs stated in the BS addressed**

- Better monitoring and forecasting activities
- Improved safety at sea
- Human health and well being
- Sustainable use of marine resources
- New and emerging technologies to service societal needs and new value chains
- Ocean-engaged citizens through enhanced ocean literacy activities.

## **2.6 Sub-Multi-stakeholder Platform**

- WP7 Convergence and Alignment of R&I Infrastructure Initiatives

## **2.7 Keywords in relation to the joint action**

- Research infrastructure
- Articulation of observations
- Open ocean-shelf/coastal interactions
- Environmental monitoring
- Observing devices sharing
- Pelagic imaging
- Best-practices
- Polar areas
- Web portal
- Plankton

# **3. Brief Description of the Joint Action**

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## **3.1 Summary of the joint action**

The proposed joint action is aiming at the creation of a long-term collaboration framework to promote and facilitate the convergence and the alignment of Atlantic Research and Innovation infrastructure initiatives. AA-MARINET will support the implementation of the Belém Statement, by providing a forum and tools to support the development of a transatlantic network of RI initiatives and promote Trans-National Access (TNA) and other methods for sharing infrastructures in the Atlantic area. The AIR Centre will mobilize and engage its vast, diverse and multidimensional network (governments, industry, researchers, universities, NGOs and civil society) on both sides of the Atlantic Ocean to guarantee not only the strong

participation of all relevant strategic stakeholders, but also the long-term sustainability and relevance of the AA-MARINET results and outcomes.

AA-MARINET activities will address, in the long-term, the 5 different types of marine research infrastructures that were identified<sup>7</sup> by the sub-Multi Stakeholders Platform (sMsP) “convergence and alignment of R&I infrastructures initiatives” to tackle the Belém Statement thematic areas (research vessels, in-situ data acquisition systems, marine data centres, marine land-based / offshore facilities for engineering, experimental facilities for biology and ecosystem studies) with a focus on infrastructures for observation under the seed funding period; In the long term, the JA will cover the 6 thematic areas identified in the Belém Statement, including polar research.

An overarching management structure, coordinated by the AIR Centre, a leading internationally distributed and collaborative network, will be composed with the Development and Management Group (DMG) and the Community Group (CG). DMG will oversee and evaluate activities of the network and will ensure involvement of the broad All-Atlantic ocean projects (AtlantOS, EuroSea, TRIATLAS, PIRATA, AtlantECO, i-Atlantic ...), with an ultimate objective of producing **guidelines for optimising the use and sharing of research infrastructures in the Atlantic**. The report will provide concrete recommendations to the Belém co-chairs and identify barriers and needs.

To promote the first level approach and engagement between partners, a **web portal, to unlock the potential for articulation of the observation activities conducted in the Atlantic basin**, will be developed. As a central tool of AA-MARINET, the web portal will be transversal to all types of observing systems and to all geographical domains and timescales, and it will provide information on ongoing/planned research activities at sea. The information provided will be used by scientists/RI operators/others to search for complementarities and/or cooperation opportunities. Under the seed funding period of the Joint Action, the web portal will be fully operational and tested at the level of the AANChOR community.

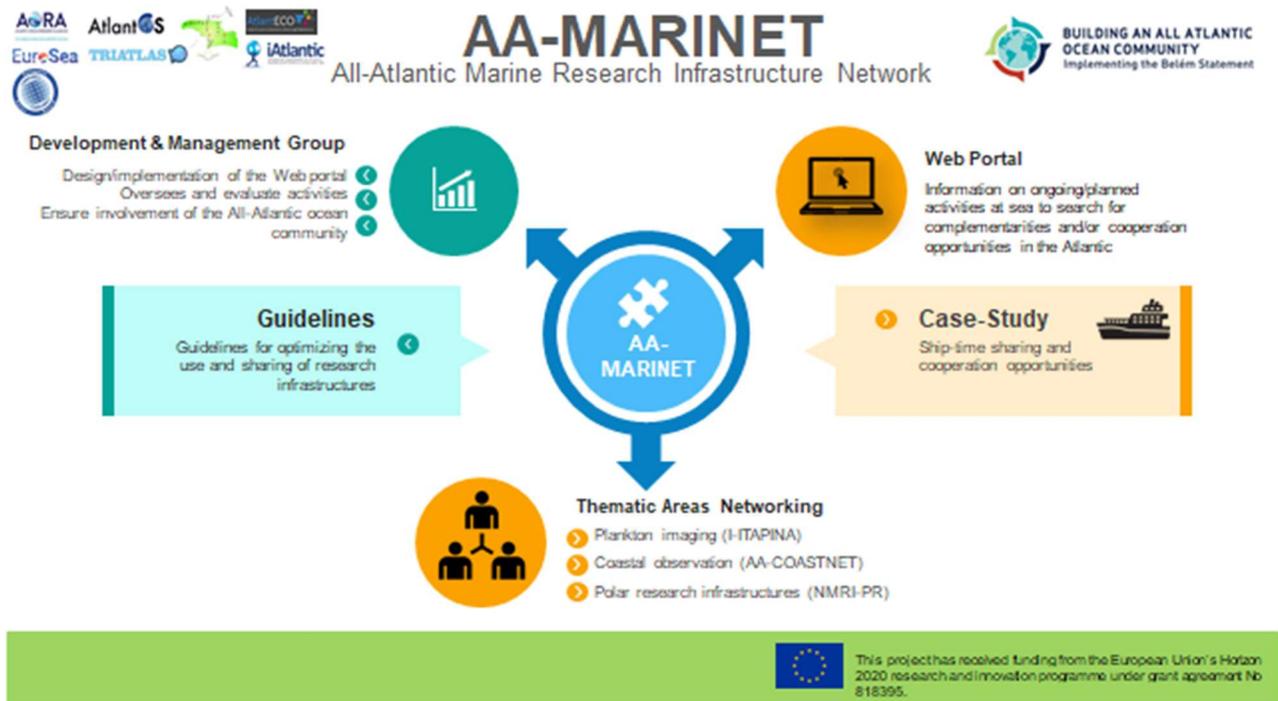
In order to promote the second level approach of cooperation, AA-MARINET will facilitate **thematic areas networking**, addressing specific needs of RI communities: Under the seed funding period of the Joint Action, three pilot actions will be initiated addressing thematic areas at different levels of maturity in terms of readiness for sharing-mechanisms: **plankton imaging (I/ITAPINA)**, **coastal observation (AA-COASTNET)** and **polar research (NMRI-PR)**. According to the identification of new opportunities for cooperation arising from the sharing of information via the web portal, other networking activities in other thematic areas will be implemented in the longer-term.

**In order to showcase a third level of alignment of RI, a case-study** will focus on the possibility to exchange ship-time and autonomous systems for monitoring and/or cooperation opportunities during planned cruises between research vessel operators from different

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<sup>7</sup> D7.1 AANChOR. 2020. Baseline characterization of existing R&I Infrastructure initiatives.

Atlantic countries following the OFEG and EUROFLEETS+ examples (<http://www.ofeg.org/>, <https://www.eurofleets.eu/>). This will provide the background knowledge to potentially expand this sharing mechanism to other areas and communities after the end of the joint action.



### 3.2 Objectives of the joint action

The Long-term objective AA-MARINET is to encourage and establish an effective process for *sharing RI* including implementation of Trans-National Access (TNA) mechanism. In order to do so, the web portal will provide a flexible platform for sharing information about planned observations and available capacities, highlighting spare capacity that other partners could use. In parallel, networking activities in thematic areas will explore **barriers and needs to implement efficient RI-sharing mechanism in some specific domain** (Coastal Observation, Polar Research, Pelagic Imaging) with the following objectives:

- AA-COASTNET will contribute to homogenize coastal/regional and offshore observations/systems to create the right conditions for sharing RI and develop standardized and fit for purpose accurate monitoring, modelling, planning, management and prediction capacities
- I/ITAPINA will promote the development of pelagic imaging towards operability which can be reached by the massive deployment of devices (e.g. UVP6 on ARGO floats, PlanktoScopes on 100s of sailing vessels and at coastal sites, regular transects with gliders and AUVs carrying imaging devices, equipment of all research vessels with standardized camera systems) and the development of the respective analysis

pipelines. It will propose activities to spread these tools, to provide transnational access to the respective hardware and to aggregate the resulting data.

- NMPRI will encourage and establish an effective process for Trans-National Access (TNA) in polar research infrastructures connecting research in both poles - Arctic and Antarctica.

In the short term, AA-MARINET will contribute to the long term objective by providing:

- A governance structure composed by the Development and Management Group and the Community Group
- A tool to support the identification of opportunities for articulation of observations (web portal)
- Guidelines on co-sharing use and Trans-National Access of RI in the Atlantic
- A case study on ship-time sharing to provide the background knowledge to potentially expand this sharing mechanism to other areas and communities after the end of the joint action.
- A “forum” to create necessary connections between specific Research Infrastructures operators/users from the Atlantic countries as a first step to optimise the use of infrastructures

A training related to the design and construction of low-cost sensors and platforms to be deployed along coastal areas will be implemented in the context of AA-COASTNET to demonstrate the ability of such transatlantic network, at long term, to exchange, share and increase capacity and capability.

### **3.3 Contribution to the implementation of the BS vision and goals**

Signatories of the Belém Statement (2017) intend to cooperate on marine research and innovation to increase “operational efficiencies by optimising the appropriate use and sharing of research infrastructures, and access to and management of data platforms.” AA-MARINET will provide the tool (website) and forum (AA-MARINET Community Group and networking on thematic areas) to reach this long-term goal. It will provide to the Atlantic partners a comprehensive view of the RIs (web portal) that are and will be in operation in the Atlantic domain and an environment that is optimized to support those partners in the search for collaborative actions (SO1: Support the development of a transatlantic network of RI initiatives promoting the convergence and the alignment of RIs in the key common areas of the Belém Statement).

In addition, AA-MARINET will facilitate the identification of opportunities to use on-going/planned Trans-National Access (TNA) routes to RIs in the Atlantic area or of articulation between those TNA mechanisms (SO2: Promote Trans-National Access (TNA) to RIs in the Atlantic area), contributing to the BS vision to provide a platform for scientific and

technological cooperation. The guidelines on co-sharing use and Trans-National Access of RI in the Atlantic which will be produced on the basis of lessons learned from the 3 pilot actions and the case study will help to promote Trans-National Access (TNA) to RIs in the Atlantic area (SO2) by providing concrete recommendations to RI operators and identifying barriers and needs. In the meantime, the case study will showcase a concrete example of a sharing-mechanism (ship-time sharing and/or thematic coordination of scientific cruise) that can be implemented in the Atlantic on the long-term, building on the experience of existing project networks (i.e ATLANTOS, AORA, EUROFLEETS+, OFEG).

### **3.4 Connections to the BS thematic area(s)**

Marine research infrastructures which are being targeted by the Joint action are tools through which we can understand ocean processes. They provide the means to perform research to access the knowledge necessary to a sustainable development of sea-related activities and are transversal to all Belém Statement thematic areas. By providing a tool which is transversal to all types of observing systems and to all geographical domains and timescales AA-MARINET will mainly address the three thematic areas identified in the BS (« Climate variability », « Ocean observation », « Ocean resources »).

In addition, three pilot actions will address other BS thematic areas. In particular, I/ITAPINA will lead to a faster distribution of Oceans technology for plankton observation (« Ocean technology »). Technology is also addressed by the AA-COASTNET pilot action as initiatives like EEOS Technological Forum (EU) and The Alliance for Coastal Technology (USA) will be involved to support the identification of needs and gaps.

Finally, « Polar research » will be addressed in a dedicated pilot action, as well as through the case-study on ship-time sharing which will provide a concrete example of a sharing-mechanism (ship-time sharing and/or thematic coordination of scientific cruise) that can be implemented in the Atlantic on the long-term.

### **3.5 Connections to the societal needs identified in the BS**

By promoting the articulations and the exploration of complementarities between the different observation activities that take place in the Atlantic area, this joint action will contribute to increase the number of observations, both in space as well as in time, and to optimize the use of research infrastructures thus directly connecting to the Societal Need: "Better monitoring and forecasting activities".

By designing the web portal, as an environment particularly suited for the establishment of articulations and synergies in real-time and/or in an opportunistic basis and by opening this environment to communities outside the research community, this joint action directly contributes to extend the use of research infrastructures operating in the Atlantic (and of the observations collected by those infrastructures) to support mitigation actions during any

critical situation at sea. The articulation between operators of the research infrastructures and the operational community involved in the response to a crisis, should play a vital role in cases such as Search and Rescue operations or impact of extreme weather events – in which case, the present joint action, directly contributes to the Societal Need “Improved safety at sea” – or during oil-spill accidents or harmful algal blooms events – cases in which the joint action will directly connect to the Societal Need: “Human health and wellbeing”.

By promoting the development of synergies between the research community and the economic sectors, such as the sectors of fisheries, aquaculture or marine energy, and by improving the insight on the marine processes as a result of articulation of actions, the present joint action will also connect to the Societal Need: “Sustainable use of marine resources.”

### **3.6 Novelty in the approach used**

The Joint Action follows the opposite approach of the more conventional mechanisms for articulation, which progress from the sense of “community” to the definition of collaborative actions. Here the starting point is the establishment of links among partners of articulated actions, planned through the identification of potential synergies and collaborations in the web portal (as well as within networking activities). From the experiences of these actions a virtual room is provided to accommodate early stages of broader discussions about potential synergies. This process will create opportunities to expand more conventional approaches, namely by testing and developing new articulation frameworks that can then be integrated in the already existing communities. As previously mentioned, during the lifetime of the AANChOR project, a case study focusing on the articulated and shared use of vessels and autonomous vehicles (and given a particular emphasis to the South Atlantic area) will be developed to demonstrate the benefit of the proposed approach.

## **4. Overview of the Work Plan**

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### **4.1 Overall strategy and management structure**

In order to ensure long term sustainability of AA-MARINET, a specific task will be dedicated to the governance issue, with the set-up of the “Development & Management Group” (DMG) and “Community Group”. Both groups will be coordinated by the AIR Centre, a well-established organisation aiming to promote an integrative approach to space, climate, ocean and energy in the Atlantic, supported by emerging technological innovations and advances in data science, and through South-North and North-South cooperation.

The AIR Centre will mobilize and engage its vast, diverse and multidimensional network (governments, industry, researchers, universities, NGOs and civil society), on both sides of the Atlantic Ocean, to guarantee, not only the strong participation of all relevant strategic

stakeholders, but also the long-term sustainability and relevance of the AA-MARINET results and outcomes.

The “Development & Management Group” (DMG) is a small core group composed by 3 or 4 partners (operational level, representing, if possible, all Belém countries) that will be directly responsible to work on the design and implementation of the web portal and to manage the “Community Group”. The DMG, as an operational body, will also be involved in the management of the web portal in the long-term, after the end of the joint action supported, by AANChOR seed funding.

The Community Group (CG) is the broad group of operators of infrastructures and responsible for the observation actions that take place in the Atlantic area (e.g. AtlantOS, EMSO-Link, EUROFLEETS+, ARGO...). To keep the web portal manageable, the users in the Community Group should be at a decision level regarding the observation activity or infrastructure or regarding other associated actions. The precise definition of the profiles of these users will be conducted in Task1.

As highlighted in the summary of the joint action (2.1), AA-MARINET aims to ensure long term impact by addressing the different levels of engagement between partners and RI operators. It will promote the first level approach and engagement between partners with a web portal where the information provided will be used by scientists/RI operators/others to search for complementarities and/or cooperation opportunities. In order to promote the second level approach of cooperation, AA-MARINET will facilitate thematic areas networking, addressing specific needs of RI communities. Under the seed funding period of the Joint Action, three pilot actions will be initiated addressing thematic areas at different levels of maturity in terms of readiness for sharing-mechanisms: plankton imaging (I/ITAPINA), coastal observation (AA-COASTNET) and polar research (NMRI-PR). According to the identification of new opportunities for cooperation, arising from the sharing of information via the web portal, other networking activities, in other thematic areas, will be implemented in the longer-term. In order to showcase a third level of alignment of RI, a case-study will focus on the possibility to exchange ship-time and autonomous systems for monitoring to provide the background knowledge to potentially expand this sharing mechanism to other areas and communities after the end of the joint action.

## 4.2 Description of tasks, deliverables and time schedule

TASKS	POSSIBLE DELIVERABLES	FORESEEN TIME SCHEDULE (supposing that funding is made somehow available in due time)
<p><b>Task 1- Governance: Set up of the Development and Management Group (DMG) / Community Group (CG)</b></p> <p>Lead: AIR Centre / Instituto Hidrografico - Contributor: IFREMER</p>	<p>→ D1.1 Terms of Reference DMG / CG - Settlement of DMG/CG</p> <p>→ D1.2 Report from DMG on vision, structure, and implementation details of the web portal and strategy to communicate and engage users (incl. support to pilot actions)</p>	M1-M6
<p><b>Task 2-Design of web portal structure and implementation</b></p> <p>Lead: Instituto Hidrografico - Contributor: MePrO (Brazil) Dr. Fábio Nascimento</p>	<p>→ D2.2 Web portal fully operational (M6)</p>	M3-M12
<p><b>Task 3-Case study ship-time sharing and cooperation opportunities</b></p> <p>Lead: Instituto Hidrografico</p> <p>Contributor: Jose Moutinho, AIR Centre; Moacyr Araujo, Universidade Federal de Pernambuco; Vitor Ramos, Nuno Vieira and Pericles Silva, INDP /OSCM; Pascal Morin, IFREMER</p>	<p>→ D3.1 Collaborative observation actions:</p> <ul style="list-style-type: none"> <li>● Brazilian Amazon (2021),</li> <li>● Cabo Verde (2021)</li> <li>● Angola waters (2022)</li> <li>● North Atlantic France/Canada (tbc)</li> </ul> <p>→ D3.2 Report on Ship-time sharing and cooperation and policy recommendations (2022)</p>	M8-M18

<p><b>Task 4 - Assessment of web portal impact</b></p> <p>Lead: Instituto Hidrografico, AIR Centre</p>	D5. Impact Assessment report	M12-M18
<p><b>Task 5 - Drafting guidelines on RI sharing in the Atlantic</b></p> <p>Lead: AIR Centre</p> <p>Contributor: Moacyr Araujo, Universidade Federal de Pernambuco; Vitor Ramos, Nuno Vieira and Pericles Silva, INDP /OSCM; Pascal Morin, IFREMER</p>	D6. Guidelines on RI sharing	M18
<b>Task 6 Pilot actions for thematic areas networking</b>		
<b>Task 6.1 Imaging / Imagine the Atlantic - A plankton Imaging Network Approach (I/ITAPINA)</b>		
<p><b>6.1.1 Drafting of I/ITAPINA statutes (purpose of I/ITAPINA, membership conditions, code of conduct); will be conducted via online consultations</b></p> <p>Lead: Rainer Kiko, Sorbonne University</p>	D6.1.1 I/ITAPINA statutes communicated to members, online on AANCHOR website	M1-M3
<p><b>6.1.2 I/ITAPINA session (at ASLO Aquatic Sciences meeting) and workshop (after ASLO Aquatic Sciences meeting)</b></p> <p>Lead: Rainer Kiko, Sorbonne University - Contributors: Margaux Noyon, Nelson Mandela University, South Africa; Rubens M. Lopes;</p>	D6.1.2 Workshop report and I/ITAPINA roadmap (including activities to spread tools, to provide transnational access to the respective hardware and to aggregate the resulting data)	22 - 28 June 2021

Instituto Oceanográfico da Universidade de São Paulo, Brazil		
<b>Task 6.2 All Atlantic Coastal Observing and Technology Network (AA-COASTNET)</b>		
<b>6.2.1 AA-COASTNET workshop</b> (+virtual meetings to be defined)  Lead: JERICO S3, Laurent Delauney	→ D6.2.1 Creation of a network that is able to connect, align and maximize the coastal observation efforts already existing in both edges of the tropical and southern Atlantic. D6.2.2 Workshop and meeting Report including recommendations to optimise the use of resources and implementation of TNA / RI sharing  → D6.2.3 Endorsement as UN Decade as a focal point to Atlantic Coastal Observing communities contributing to the « Predicting Global Coastal Ocean : Toward a More Resilient Society »	M10
6.2.2 AA-COASTNET Trainings (5 days)  Lead: IADO, FURG	→ D6.2.4 Report / minutes of training, attendee list and training content.	tbd
<b>Taks 6.3 Network for Marine Research Infrastructures for Polar Research</b> ( <i>pending decision of EPB Executive Committee, EU PolarNet Management Board and relevant institutions in Brazil, South Africa and other relevant countries in the South Atlantic</i> )		
<b>6.3.1 Setting up of polar group with representatives from polar programmes and</b>	→ D6.3.1 list of network members and long-term objectives	M3

<p><b>managers, from the Arctic to the Antarctic</b></p> <p>Lead: INGV/EMSO (Laura Beranzoli); EU PolarNet 2</p> <p>Contributors: European Polar Board, RAPAL, INTERACT, COMNAP, FARO, SCAR/SOOS</p>		
<p><b>6.3.2 NMPRI 1 physical workshop</b> (number of preparatory virtual meetings to be defined)</p> <p>Lead: INGV/EMSO (Laura Beranzoli); EU PolarNet 2</p> <p>Contributors: European Polar Board, RAPAL, INTERACT, COMNAP, FARO, SCAR/SOOS</p>	<p>→ D6.3.2 Roadmap for enabling researchers and technicians long-term mutual access to polar stations (that can be extended to other types of Polar RIs)</p>	<p>M10</p>

### 4.3 Tasks and deliverables

#### **Task 1 Governance: Set up of the Development and Management Group (DMG) / Community Group (CG)**

**Lead:** AIR CentreE / Instituto Hidrografico

AIR Centre will lead the development of the terms of reference and facilitate contact with members of the Community Group. The terms of reference will describe tasks and composition of DMG and CG. Virtual meetings will be set-up and online networking tools will be set-up accordingly with the support of AANChOR WP7 manager (IFREMER).

The “Development & Management Group” (DMG), is a small core, composed by 3-4 partners that will be directly responsible to work on the design and implementation of the web portal, to interact with the “Community Group” gathering the engagement of the different partners and stakeholders and getting the feedbacks from this group regarding the design and operation of the portal. The DMG will also be involved in the management of the web portal after the end of the joint action directly supported by AANChOR seed funding.

Strategy for engaging partners to the Community Group, to be implemented by the AIR Centre/IH (task 2 leader):

- (i) Definition of the global strategy to be adopted for interaction with potential users, with the identification of particular aspects to be adopted to specific groups (e.g. All Atlantic community, general research community, industry, operational community);
- (ii) Engagement of strategic stakeholders with the objective of implementing an inclusive and iterative process for effective consultation and involvement of key potential end-users in the definition and delivery of the Web portal;
- (iii) Definition of the strategy to be implemented in the web portal dot maintaining users updated about observation activities and potential for articulation both in the global Atlantic domain, as well as, in specific geographical areas of interest to each user;
- (iv) Interaction with the All Atlantic community to present the final version of web portal structure and available functionalities and to identify potential partners to engage in the Community Group.
- (v) Guarantee constant feedback from key end-users to constantly update the Web portal.

The strategy for attracting and engaging users to become part of the Community Group, will be defined based on the specific nature of the web portal that this joint action aims to implement. The web portal is not aimed to be a dissemination environment. The dissemination of the results achieved by collaborative actions, that may be established using the web portal, will not be presented there, but instead will be directed to the involved groups/organisms in the actions and eventually will be available at projects web portals or institutions websites.

AIR Centre, as coordinator of DMG and CG, will ensure long term impact and sustainability of the AA-MARINET.

- D1.1 Terms of Reference DMG / CG - Settlement of DMG/CG
- D1.2 Report from DMG on vision, structure, and implementation details of the web portal and strategy to communicate and engage users (incl. support to pilot actions)

### **Taks 2 -Tool: Design and implementation of web portal**

**Lead:** Instituto Hidrografico

**Contributor:** COPPE/UFRJ (Brazil) Dr. Fábio Nascimento

This task is to be conducted by the Development & Management Group in close contact with the targeted partners that will be involved in the Community Group. It will focus on the definition of the structure of the web portal to meet the different requirements indicated above. This will comprise, among other aspects:

Implementation of the web portal (M3-M6):

- (i) Selection of the partner that will host and manage the web portal;

- (ii) Establishment of contacts with the managers of the [allatlanticocean.org](http://allatlanticocean.org) web site and first identification of requirements for interconnections with that website;
- (iii) Identification of user needs
- (iv) Definition of the profile of the service to be acquired for implementation of the web portal and launch of the tender for acquisition of services.

Structure of the web portal (M3-M6):

- (i) Definition of the contents for the web portal and navigation resources, taking in account the different areas of interest of the users;
- (ii) Identification of the most suitable visualization environment to be used, in order to provide to users a direct view of the existent possibilities for articulation;
- (iii) Insertion of the area for sharing experiences and extend discussion of articulation mechanisms, including the case study devoted to ships and autonomous vehicles articulation.

A first raw definition of all these aspects will be developed by the DMG during M1 and after disseminated to the All Atlantic community for comments and suggestions during M2. Partners in the All Atlantic community will be asked to indicate other potentially important contacts at national level that could contribute to improve the structure of the web portal (e.g. stakeholders, such as operational centers and Maritime Authorities). The final structure will then be worked during M3 by the DMG and elements from the company contracted to implement the physical web portal.

→ D2.2 Web portal fully operational (M6)

### **Task 3-Case study ship-time sharing and cooperation opportunities**

**Lead:** Instituto Hidrografico

**Contributor:** Moacyr Araujo, Universidade Federal de Pernambuco; Vitor Ramos, Nuno Vieira and Pericles Silva, INDP /OSCM; Pascal Morin, IFREMER

Two collaborative actions will be implemented with the objective of providing the background knowledge to potentially expand this sharing mechanism to other areas and communities after the end of the joint action; As a preparatory work, an excel table will be created with information about the time windows, vessels, equipment's involved, possibilities for integrating elements from other teams onboard, possibilities of operating equipment from other teams onboard, articulation with other systems crossing the area and many more.

As a second step, task leader (IH) will characterise the collaborative activities which will be part of the case-study and inform DMG.

Collaborative activities to be included in the AA-MARINET Case study will focus on one or two objectives:

- To barter ship-time and major marine equipment whenever they are not available on a national basis at a certain period of time or in a geographic region;
- To exchange expertise of technological knowledge, by using the equipment and technicians of partners;

Currently, before submission of the present joint action the following collaborative activities at sea are foreseen (D3.1):

→ **Action 1:** Sep-Dec 2021, geographical area: Cabo Verde

A collaborative activity bringing together research vessels from Cabo Verde, Portugal, France and Germany and with the participation of Brazil and Angola (tbc) is presently being articulated. The action can be developed along the period from April to December 2021 and will focus on two main research subjects. The first will be dedicated to the understanding of the forcing of oceanography conditions in the Cabo Verde Archipelago associated with (a) the complex general circulation of this regional area; (b) the influences from the African continent, in particular with the large Cape Blanc upwelling filament. The second subject will be dedicated to map the coastal bathymetry. The first part of the collaborative action will take place in April-May 2021, profiting from the R/V Meteor survey conducted by GEOMAR in the area. The second part of the action will be conducted in September-December 2021 and will possibly benefit from the presence of 3 research vessels in the area. A Portuguese hydrographic ship (NRP Almirante Gago Coutinho or NRP D. Carlos I, still to be defined) with a team from Instituto Hidrográfico will conduct a 2-3 weeks survey covering the complete Cabo Verde Archipelago. This survey will be closely articulated with the observations conducted by a research vessel from Cabo Verde (IMAR/OSCM) and with the observations conducted by the R/V Antea from IRD (France) that will operate in the area in September-October 2021. The articulated mission can characterize the main oceanographic features of the area by conducting ongoing measurements, profiles with CTDs, and water sampling at selected depths for characterization of the main chemical and biological aspects.

→ **Action 2:** Sep-Dec 2022: geographical areas: Angola, Cabo Verde

A collaborative action can be implemented, benefiting from the potential presence of a Portuguese hydrographic ship (NRP Almirante Gago Coutinho or NRP D. Carlos I, still to be defined) conducting a survey in these areas in September-December 2022 with a team from Instituto Hidrográfico onboard. The different contacts and articulation for this action are being developed.

→ **Action 3:** joint cruises at the Brazilian Amazonian waters in 2021: N-Amazon cruise (Brazil-Germany, April-May, R/V Meteor), and AmazomiX cruise (Brazil-France, September-October, R/V Antea).

→ **Action 4:** North Atlantic France/Canada: ship-time sharing agreement

Agreed collaborative activities / scientific cruise at sea should take place under the seed funding period (September 2023 at the latest).

Following the implementation of scientific cruises, the DMG (AIR Centre), task 3 leader (IH) and contributors, will draft a report based on the case-study and cooperation activities conducted under the seed funding period, highlighting needs for the long-term implementation of a ship-time sharing mechanism in the Atlantic. Virtual meetings will be organised accordingly, and online collaborative tools will be used for this task.

The report will also build on the work on ship-time sharing conducted by EUROFLEETS + and OFEG with North Atlantic countries. As highlighted in Atlantos D6.6, *an "OFEG Atlantic" technically (NERC/NSF Barter arrangement), yet not formally, exists and should be further promoted to the community and further publicised – formally, in order to make the access more visible and the access process clearer.* AA-MARINET D3.2 report will specifically focus on the possibility to implement an All-Atlantic forum to consider barter exchange and co-operation opportunities.

The report will be submitted to the Belém co-chairs, and broadly disseminated using Community Group and AANChOR Communications channels.

→ D3.2 Report on Ship-time sharing and cooperation and policy recommendations (2022)

#### **Task 4 - Assessment of web portal impact (DMG)**

**Lead:** Instituto Hidrografico

**Contributor:** MePrO (Brazil) Dr. Fábio Nascimento

This task will be developed by the DMG in close articulation with the Community Group (CG). It will involve the assessment of the interactions of users with the webpage, the identification of the different levels of involvement and the different functionalities used and the gathering of feedback from users of the CG regarding the eventual articulation actions that may have been established by the use of the web portal. It will also implement the indicators of impacts defined in 5.3.

→ Deliverable D4 (M18): Impact assessment report describing the use of the web portal from months 7 to 19, the results in terms of eventual articulation activities that this portal helped to establish and the lessons learned and directions for future improvement. Includes indicators of impacts.

#### **Task 5 - Drafting guidelines on RI sharing in the Atlantic**

**Lead:** AIR Centre

**Contributor:** Community Group (see task 1)

This task will be subject to 3 virtual meetings to reach its final objective: to produce guidelines for optimising the use and sharing of research infrastructures in the Atlantic.

- Virtual meeting 1: Kick-off meeting task 5 (Development and Management Group Meeting): Mapping of existing studies (AORA, ATLANTOS) and experience to take into consideration. Agree on a methodology to reach this task final objective.
- Virtual meeting 2: Lessons learned AA-MARINET activities. Partners involved in task 3 and task 6 will be invited to share experience / lessons learned.
- Virtual meeting 3: Development of guidelines

Cooperation with RICH, the European Network of National Contact Points (NCPs) for Research Infrastructures in Horizon 2020, will be considered in this context. RICH works in collaboration with projects/networks that specifically focus on International Cooperation activities, investigates the needs/interests of existing EU RIs for international partnerships. The final report will provide concrete recommendations to the Belém co-chairs and identify barriers and needs.

The guidelines will be submitted to the Belém co-chairs, and broadly disseminated using Community Group and AANCHOR Communications channels.

### **Task 6 Pilot actions for thematic areas networking**

#### **Task 6.1 Imaging / Imagine the Atlantic - A plankton Imaging Network Approach (I/ITAPINA)**

##### **Task 6.1.1. Drafting of I/ITAPINA statutes**

**Lead:** Rainer Kiko, Sorbonne University

**Contributors:** all I/ITAPINA network members (TRIATLAS, AtlantECO, SCOR WG154/155, Tara, Plankton Planet, i Atlantic, AWA, SMCRI/SAEON)

Within this task, the statutes for the I/ITAPINA network will be developed via an online consultation process. The statutes will regulate membership rules (which generally should be very open for scientists involved in pelagic imaging and stakeholders), the code of conduct and will formulate common goals that members should adhere to. Fast sharing of data according to the F.A.I.R. principles (<https://www.go-fair.org/fair-principles/>) will be described as one of the major goals of the network. Another major goal, will be the free exchange of information and knowledge about pelagic imaging and image analysis. The deliverable for this task will be the publication of the statutes on the AANCHOR and AA-MARINET websites.

→ D6.1.1 I/ITAPINA statutes communicated to members, online on AANCHOR website

### **Task 6.1.2 I/ITAPINA session and workshop**

**Lead:** Rainer Kiko, Sorbonne University, France

**Contributors:** Margaux Noyon, Nelson Mandela University, South Africa; Rubens M. Lopes; Instituto Oceanográfico da Universidade de São Paulo, Brazil

I/ITAPINA leaders (Kiko, Noyon, Lopes) have applied for a session at ASLO Aquatic Sciences Meeting 2021, during which the latest scientific and technological developments in pelagic imaging will be presented. The I/ITAPINA workshop will take place directly after the ASLO Aquatic Sciences meeting in June 2021, to continue discussions on pelagic imaging trends and needs and to reduce travel necessities. This will be the major networking event of the pilot action that will be attended by delegates from Africa, South America, Europe and North America (on site and online participation will be enabled). It will consist of a general session, break out sessions (for different user groups) and a final session to gather feedback from breakout sessions and discussion of further actions. Roadmap drafting for the distributed Pelagic Imaging Network (coastal observatories, open ocean surveys and citizen science) will be started at the end of the workshop by the three node leaders (Rainer Kiko, Margaux Noyon and Rubens M. Lopes) and additional invitees. The roadmap will be finished by online consultation and will be published as a deliverable on the website of I/ITAPINA by the end of September 2021.

- D6.1.2 Workshop report and I/ITAPINA roadmap (including activities to spread tools, to provide transnational access to the respective hardware and to aggregate the resulting data.)

### **Task 6.2 All-Atlantic Coastal Observing and Technology Network (AA-COASTNET)**

#### **Task 6.2.1 - AA-COASTNET Workshop**

**Lead:** Laurent Delauney, IFREMER/JERICO-S3

**Contributor:** Moacyr Araujo, Universidade Federal de Pernambuco

Other contributors: SMCRI (South Africa); SiMCosta (Brazil); PNBoia (Brazil); PROPAO (Ivory Coast, West Africa); PLOCAN (Spain); JERICO-S3; French National Research Institute for Sustainable Development (IRD); CNRS - FRANCE; CRODT, centre de recherche océanographique de Dakar Thiaroye, Saliou Faye (Senegal), AtlantOS PROGRAM.

The AA-COASTNET Workshop will be organised back-to-back with the high-level conference “All Atlantic RI for a Sustainable Ocean”, to be held in Portugal, on 3-4 June 2021 (to be confirmed). This AA-COASTNET workshop will be the backbone of the pilot Action to connect people from the Belém and Galway countries and define the pillars of the long term All Atlantic COASTal observing and technology NETwork. The workshop will address the identified topics that are of prime interest for coastal observing systems to share, gaps, pros and cons in every country of the Belém and Galway statements in order to emulate an All-Atlantic synergy for

coastal observation. It will address the need for integration of different observing systems and technologies, best practices methodologies and procedures, metrology concepts and the integration/intercomparison of the existing regional data acquisition methodologies, trying to maximize the synergy between oceanography, engineering and metrology, for those regional initiatives. The short- and long-term objectives of the workshop are to improve the coordination and alignment of programmes/initiatives and projects between South and North Atlantic regions.

As well, the workshop will make the point on how to increase the competitiveness of the Atlantic blue economy by developing new technologies to service societal needs and new value chains (subtopics A, B & C). The workshop will establish a long-term strategy for the consolidation of education and training networks including more ocean-engaged citizens and communities. Finally, the workshop will start the elaboration of Task 4 dedicated to the Prospective for a long term transatlantic coastal network.

AA-COASTNET will become a focal point to Atlantic Coastal Observing communities contributing to the « Predicting Global Coastal Ocean: Toward a More Resilient Society » initiative, in the context of the UN Ocean Decade (<https://www.coastspredict.org/draftprogramme-document/>). In order to do so, it will connect existing coastal observing initiatives (e.g., SMCRI in South Africa, PROP AO in West Africa, CVOO in Cabo Verde, PLOCAN in Canary, SiMCosta, PNBoia and MePrO in Brazil, EMAC/IADO in Argentina, and JERICO-RI in Europe) with a view to optimise the use of resources of these systems based on common guidelines.

The AA-COASTNET training about low cost and do it yourself sensors is typically a good opportunity for every country performing coastal monitoring. Indeed, in some countries it can help to develop an affordable and self-maintenance small monitoring infrastructure, and in some other countries it can help to develop citizen science coastal activities as well as educational activities for technology students.

AA-COASTNET pilot action will carefully follow the UN Ocean Decade implementation plan and will apply for endorsement by the UN Ocean Decade.

The three AA-COASTNET deliverables will be managed by the pilot action leader and co-leaders. A collaborative tool will be used, e.g. google doc. A table of contents will be first established by the task 6.2 leader/co-leader and reviewed by the pilot action participants. If needed chapters will be assigned to specific joint action participants when not assigned to the JA leader or co-leader. The document first draft will be reviewed by the JA participants and then finalized by the JA Leader-co-leader.

- D6.2.1 Creation of a network that is able to connect, align and maximize the coastal observation efforts already existing in both edges of the tropical and southern Atlantic.
- D6.2.2 Workshop and meeting Report including recommendations to optimise the use of resources and implementation of TNA / RI sharing

- D6.2.3 Endorsement by UN Decade as a focal point to Atlantic Coastal Observing communities contributing to the « Predicting Global Coastal Ocean : Toward a More Resilient Society »

### **Task 6.2.2 - AA-COASTNET Training**

**Lead:** Dr Gerardo M. E. Perillo (CONICET, Argentina) & Carlos Garcia (Universidade Federal do Rio Grande; Universidade Federal de Santa Catarina)

Ecosystem monitoring requires reliable information about all variables necessary to analyse the health and evolution of the system in both space and time. This needs a number of instrumented platforms distributed according to the ecosystem characteristics and conditions. Even for small ecosystems, the cost of installation, and posterior maintenance of the network increases exponentially with the number of stations and sensors. For research groups with low budgets buying commercial platforms and sensors could be prohibitive, especially if the sensors must be imported. Besides that, even the sensor of the highest quality subject to the environment may deteriorate or stop working, and the time to repair or replace it becomes crucial otherwise the time series of observations will have data gaps that may even affect the total monitoring effort.

Within the last 15 years the Instituto Argentino de Oceanografía (IADO) started a program to design, develop and build its own sensors and platforms. Today there are more than 30 active stations and buoys in lakes, rivers and in the coast of the country and in Uruguay and Portugal. All stations have direct communication with the server at IADO (<https://emac.iadoconicet.gob.ar/2019>). All sensors are at least one order of magnitude cheaper than commercial ones and provide comparable capacity and resistance. However, the most significant advantage is that once a sensor is about to fail, it can be replaced for another in store, reducing to a minimum the data gap. Furthermore, the fact that the equipment is cheap, allows with the same budget, the possibility to have more than one station for ecosystem broadening the spatial monitoring.

Because the IADO has already all set up for the course, the initial course will be organized there. Future courses can be implemented at different places involved. FURG (Brazil) will bring commercial equipment to compare and calibrate with the sensors built by the students.

The idea of the workshop is to create network connectivity by training people that then will be able to train new people. The attendees will build low cost sensors and will deploy them in situ. The Data F.A.I.R. principles will be addressed in a data session to ensure people know "how to" upload the data to a recognized data repository and distributor that follows F.A.I.R. practices.

### **Task 6.3 Network of Marine Research Infrastructures for Polar Research (NMRI-PR)**

**Task 6.3.1 Set-up the Network of Marine Research Infrastructures for Polar Research (NMRI-PR)** - Setting up of an All-Atlantic polar group with representatives from polar programmes and polar managers, from the Arctic to the Antarctica (*Task 6.3.1 / 6.3.2 pending decision of EPB Executive Committee, EU PolarNet Management Board and relevant institutions in Brazil, South Africa and other relevant countries in the South Atlantic*)

**Lead:** INGV/EMSO (Laura Beranzoli); EU PolarNet 2

**Contributors:** European Polar Board, RAPAL, INTERACT, COMNAP, FARO, SCAR/SOOS

This task will kick-off the settlement of an All-Atlantic polar research infrastructure network which in the long-term will be taken over by the EU-PolarNet2 network which will implement the polar component of the Belém Statement. As a first step, a group of representatives of relevant polar institutions managing and programming polar research activities in Arctic and Antarctic regions will be set up. In order to do so, the task leaders (INGV/EU Polar-Net 2) will organise virtual meetings with key partners.

→ D4.3.1 list of network members and long-term objectives

**6.3.2 Roadmap for implementation of TNA in polar stations** (focus on the Antarctica peninsula)

**Lead:** INGV/EMSO (Laura Beranzoli); EU PolarNet 2 (pending approval)

**Contributors:** European Polar Board, RAPAL, INTERACT, COMNAP, FARO, SCAR/SOOS

As a first contribution to the long-term objective of the Polar Research in WP7 Joint Action, the barriers limiting or preventing the access to the polar facilities (focus on the Antarctica peninsula) and the necessary measures for increasing the access, will be identified for one particular type of polar facilities, the polar stations (supporting marine science).

The pilot action will build on the extensive work conducted by the EPB Working Group on possibilities for a common system/mechanism for infrastructure<sup>8</sup> access as well as best practices in the Arctic, with the potential contribution of INTERACT (International Network for Terrestrial Research and Monitoring in the Arctic). In particular, the pilot action will also exploit the INTERACT transnational access programme which launches annual calls for scientific project/experiments proposals. A panel of reviewers selects the best proposals and recommends for implementation to the Arctic stations, which in turn have the final say on their capability to hosting researchers. INTERACT's experience in running this system for access to stations is positive, and helps to harmonise access requirements and practices. The

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<sup>8</sup>[http://www.europeanpolarboard.org/fileadmin/user\\_upload/FINAL\\_report\\_Plovdiv\\_works\\_hop\\_2Oct.pdf](http://www.europeanpolarboard.org/fileadmin/user_upload/FINAL_report_Plovdiv_works_hop_2Oct.pdf)

system also enables a certain level of standardisation, while also making space for station-specific budgets and requirements. Additional experience can be offered by ARICE project (end December 2021) aimed at coordinating better access to available icebreakers. The ARICE project is based on EUROFLEETS, an earlier project coordinating access to European research vessels in all regions (including the Arctic), which has recently been funded for its third phase as EUROFLEETS+.

This task will be implemented from 2021 (depending on evaluation from the Belém co-chairs) to 30 September 2022 (end of the AANChOR project) and will use whenever possible seed funds from the AANChOR project as well as any other resources that could be made available from the above-mentioned projects. It will involve:

Governmental level meetings: Kick-off meeting and subsequent (number to be confirmed) meetings. Discussion of barriers, needs and conditions to increase accessibility to polar stations. Discussions should focus on the issue of sharing of calendars and funding calendars.

- Research community level meetings: Kick off meeting and subsequent meetings (number to be confirmed). Discussion on common research topics to implement mutual access to polar stations.
- The physical workshop will be organised back-to-back with a relevant event, still to be agreed with European Polar Board. Options include: Arctic Science Summit Week 2021, 20 to 26 March 2021, Lisbon, Portugal (organized by FCT, Ciência Viva, AIR Centre, the Portuguese Arctic Community and by IASC and partners) - <https://assw2021.pt/>; 3rd Arctic Science Ministerial, 08-09 May 2021, Tokyo, Japan - <https://www.arcus.org/events/arctic-calendar/30095>;

→ D6.3.2 Roadmap for enabling researchers and technicians' long-term mutual access to polar stations (that can be extended to other types of Polar RIs)

## 5. Other Needs (Including Funding)

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### 5.1 Possible needs to implement tasks

#### Task 2 - Design of web portal structure and implementation

- AANChOR seed funding: Acquisition of Services (company to build web portal): 20 kEuros
- In-kind contribution: Costs of IH personnel involved in this task to be supported by IH: 1kEuro
- Other requirements: This task will require an informatic infrastructure to host the web portal and a team of specialized personnel to conduct the day to day management of the web portal, to implement eventual modifications if required and to assure the

articulation with the [allatlanticocean.org](http://allatlanticocean.org) web site. The leader of this task, Instituto Hidrográfico, will assure the fulfilment of these requirements by an in-kind contribution that will be maintained during the period of implementation of the initiative and in the long-term operation of the web portal after the end of AANChOR seed funding.

- Other requirements: Articulation within AANChOR CSA / political level to promote initial stage of engagement of All Atlantic partners as partners of the Community Group and following stage in the identification of national contact points for new partners

### **Task 3 - Case study ship-time sharing and cooperation opportunities**

- AANChOR seed funding: NONE
- In-kind contribution: Costs of personnel involved in this task to be supported by partners: 1kEuro
- Other requirements: Articulation within AANChOR to promote initial stage of engagement of All Atlantic partners as partners of the Community Group and following stage in the identification of national contact points for new partners
- Additional funding from other sources is needed to ensure at least one presential/physical 2-3 days meeting between representatives of each country involved in the joint IH cruises (Portugal, Brazil, Cabo Verde, Angola and France). The meeting could take place at the IH in Lisbon in 2021, for example.

### **Task 4: Assessment of web portal impact**

- AANChOR seed funding: NONE
- In-kind contribution: Costs of IH personnel involved in this task to be supported by IH: 1 kEuro (M10-18) + 1 kEuro per year (long-term operation of the web portal)

### **Task 6.1.1 Drafting of I/ITAPINA statutes (purpose of I/ITAPINA, membership conditions, code of conduct); will be conducted via online consultations**

- AANChOR seed funding: NONE
- in kind contribution: content development by members (ca. 50 hours of work)

### **Task 6.1.2 I/ITAPINA session (at ASLO Aquatic Sciences meeting) and workshop (after ASLO Aquatic Sciences meeting)**

- AANCHOR Seed funding: 25 000 Euro total for travel and accomodation of 10 participants

- In kind contributions: all participants of the workshop are asked to provide in-kind contributions to travel or accommodation to enable efficient use of resources, workshop participation by the members (at least 480 hours of work; excluding online participants; In kind contribution will be realized through the participation of the leads and network members in the mentioned activities. Funding to join the workshop should be solicited also from other sources.

#### **Task 6.2.1 AA-COASTNET workshop (and virtual meetings to be defined)**

- AANCHOR Seed funding: 25 000 Euro total for travel and accommodation of 10 participants
- Political support from the AANCHOR coordination and Belém co-chairs is necessary to ensure involvement of partners, in particular SMCRI (South Africa)
- Taks leaders should also ensure support from the AtlantOS PROGRAM

#### **Task 6.2.2 AA-COASTNET Trainings (5 days)**

- AANCHOR Seed funding: 15 000 for Travel and accommodation for 5 attendees that will participate in the full creation of low-cost sensors and to deploy them in situ.
- Additional Funding: Additional funding should be chased, as for example in the Triatlas WP.10 activities, i.e., CANEMS where budget Funding for Students could be obtained. <https://triatlas.w.uib.no/canems/> The

#### **Taks 6.3 NMPRI Pilot action**

- AANCHOR Seed funding: 15 000€ for travel and accommodation of 5 stakeholders and selected speakers (European and non-European experts)
- Other participants to physical meeting to be funded by own organisation
- political support (Belém countries) needed to involve the broad artic/ Antarctica community

## 5.2 Seed funding from the AANCHOR project

TASKS	TYPE OF EXPENSE (please include as much detail as possible so it can be easily judge as an eligible cost)	INSTITUTION RESPONSIBLE FOR THE EXPENSE (= Institution that will pay the expense ), COUNTRY	AMOUNT (EUR)
Task No. 1: Design of web portal structure and implementation	Acquisition of Services (contract a company to build a web portal)	Instituto Hidrografico, Portugal	20 000
	<b>TOTAL</b>		<b>20 000</b>
Task No. 2: Workshop "All Atlantic COASTal observing and technology NETWORK"	Travel for ~10 stakeholders and selected speakers (european and non-european experts). Organized by travel agency.	IFREMER	15 000
	Accommodation for ~10 stakeholders and selected speakers (european and non-european experts) ... organized by hotel		10 000
	<b>TOTAL</b>		<b>25 000</b>
Task No. 3: AA-COASTNET Training	Travel and accommodation for 5 attendees that will participate in the full creation of lowcost sensors and to deploy them insitu.	IADD - FURG	15 000
	<b>TOTAL</b>		<b>15 000</b>
Task No. 4: One workshop "I/TAPINA"	Travel for ~10 stakeholders and selected speakers (european and non-european experts). Organized by travel agency.	Sorbonne University	15 000
	Accommodation for ~10 stakeholders and selected speakers (european and non-european experts) ... organized by hotel		10 000
	<b>TOTAL</b>		<b>25 000</b>
Task No. 4: POLAR RI	Travel and accommodation for ~5 stakeholders and selected speakers (european and non-european experts) ... organized by hotel	European Polar Board (pending approval)	15 000
	<b>TOTAL</b>		<b>15 000</b>
<b>TOTAL SEED FUNDING REQUEST</b>			<b>100 000</b>

## 6. Impacts and Risks

### 6.1 Expected outputs

- To provide a better overview of 'large' and 'expensive' equipment, their technical specifications, and their availability;
- To promote coordination of large marine investments.
- A consolidated network dedicated to All Atlantic Coastal Observation among the Belém (and Galway) statement countries

- Cross-linking of different projects and stakeholders at a thematic level: TRIATLAS, iAtlantic, AtlantEco, WWW.PIC, SAEON, SOCCO, AWA, SCOR WGs 150, 154 and 155 and many other projects

## 6.2 Expected direct and indirect impacts

The joint action will have a direct impact on the better articulation infrastructure related activities in the global Atlantic area thus increasing the opportunities to observe the Atlantic space and to collect complementary measurements.

Environmental impact: Contribute to gather rapid support “in the field” to help operational centres involved in the management of crises at sea. This will mitigate the potentially large impacts to the environment associated with those crises;

Business / Economic impact: Optimized use of ocean observing infrastructures operating in the Atlantic and by creating a mechanism for rapid establishment of cooperative actions leading to increase the number of observations conducted on an opportunistic basis. Provide a rapid response to problems with observing systems at sea through a direct impact on the reduction of the global financial effort allocated to the observation;

Research Impact: The increase in the amount and complementarity of observations that will become available as the result of the articulation actions promoted by this action is expected to contribute in a significant way to an overall improvement in the understanding of the Atlantic domain in its different aspects.

## 6.3 Measures and indicators

- Number of new articulation of observation / transatlantic cooperation implemented after being identified on the web portal or resulting from the workshops on thematic areas (pelagic imaging, coastal, polar)
- Number of stakeholders engaged in thematic areas networking
- Publication of the roadmaps from the thematic areas networking (roadmap for a Distributed Pelagic Imaging Network, roadmap for Polar stations sharing) and the citation of this roadmap in grant applications and other forward-looking actions to establish the AA-MARINET Joint action.
- An increase in shared publications among Africa, South America and Europe/North America and mentioning of AA-MARINET in the acknowledgement in respective articles.

#### **6.4 Transatlantic benefit and added value**

AA-MARINET will connect existing observation networks which is fundamental to a sustainable management of the entire Atlantic. The Atlantic Ocean is a connected system and ecosystem dynamics off the coast of Africa or South America might have long term impacts on the entire Atlantic. The same principle applies to Arctic and Antarctica ecosystem dynamics.

The proposed joint action aims to establish a long term mechanism to improve the articulation of observations and the alignment of infrastructures operating in the All Atlantic space. By exploiting all the potential of the World Wide Web, this joint action aims not only to reach and engage a broad community that is dispersed all around the Atlantic, but also to maintain this engagement well after the end of the joint action funding framework. By opening a communication channel between very different communities along the Atlantic which are driven by many different motivations, but share in common their engagement in the observation of this large oceanic area, the present joint action has the potential to trigger the emergence of new (and unsuspected) possibilities of cooperation. By speeding and easing the identification and establishment of cooperative actions, it will contribute to promote an optimization of resources and reduction of costs associated with the observations of the Atlantic conditions while, at the same time, can reinforce the spirit of sharing a Common Mission.

By simplifying the communication, bringing together a community through a “hands on job” approach, the present joint action can easily reveal opportunities and fragilities triggering a more in depth reflection that may lead to a new expansion and to reinforcement of existent communities or to new organizational frameworks. By adopting as central principle in its vision the assumption that all observations matter when ones seek to understand and predict a vast and complex environment such as the Atlantic the present joint action will take as equal the different initiatives of observation, disregarding their “dimension on the ground” but instead searching to take the most value from the existent capacities and from the potential of complementarity. This can not only trigger collaborative strategies aiming at the development of capacities and the implementation of harmonization procedures but will also contribute to build a sense of symmetric effort in what regards the All Atlantic observation.

#### **6.5 Possible risks and/or bottlenecks**

The global COVID-19 epidemic is the major risk for some of the AA-MARINET activities, as it might lead to increased prices for travel or might preclude some or even all members to travel. This would affect the workshops and the participation of network members in relevant meetings. However, the workshops will be organized as on-site and online events, which will allow members from countries with travel restrictions but also members who could not participate due to other reasons (e.g. restricted funding) to join.

Contingency plans will be foreseen along the implementation of the joint action in order to adapt to possible risks and bottlenecks which may hamper the implementation of all those activities which are not remote-based.

## ANNEX I: SEED FUNDING APPLICATION FORM

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This document has been produced to be an Annex for the Joint Action Characterization and needs to be filled in case the joint action requests funds for some of its tasks, activities or missions, generally referred to as **activity**.

### o GENERAL INFORMATION

#### 1. Joint action:

- Title of the Joint Action: AA-MARINET
- Duration of the joint action: 2021 to 30/09/2023

#### 2. Information for each of the funded activity

*Summary table of funded activity/ies of the joint action*

Title	Leader/Institution of the activity (if applicable)	Other partners involved	Duration of the activity	Total requested Budget
<b>Activity 1</b> webportal / acquisition of services	Instituto Hidrográfico	FURG - Federal University of Rio Grande, Brazil	1 year	20000
<b>Activity 2</b> I/ITAPINA session (at ASLO Aquatic Sciences meeting) and workshop (after ASLO meeting)	Sorbonne university	Nelson Mandela University, South Africa; Universidade de São Paulo, Brazil	2021-2023	25000
<b>Activity 3</b> workshop AA COASTNET	Ifremer	Universidade Federal de Pernambuco	2021-2023	25000
<b>Activity 4</b> training AA-COASTNET	IADO	FURG, Brazil	5 days	15000

<b>Activity 5</b> workshop NMRI-PR (Polar RI)	INGV	EUPOLARNet2	2021-2023	15000
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### **3. Identification of the leader/partners of activity receiving funds (3.1., 3.2, 3.3... add as necessary)**

#### **3.1 Activity 1 webportal / acquisition of services**

- Name: Joao Vitorino
- Organisation: Instituto Hidrográfico
- Country: Portugal

#### **3.2 Activity 2 I/ITAPINA session (at ASLO Aquatic Sciences meeting) and workshop (after ASLO meeting)**

- Name: Rainer Kiko
- Organisation: Sorbonne University
- Country: France

#### **3.3 Activity 3 workshop AA COASTNET**

- Name: Laurent Delauney JERICO S3/IFREMER
- Organisation: IFREMER
- Country: France

#### **3.4 Activity 4 AA-COASTNET Training**

- Name: Gerardo Perillo
- Organisation: IADO - FURG
- Country: Argentina

#### **3.5 Activity 5 workshop NMRI-PR (Polar RI)**

- Name: Laura Beranzoli
- Organisation: INGV/EMSO
- Country: Italy

Each organization receiving funds will liaise directly with PLOCAN.

#### 4. Description of each activity

##### 4A Webportal: acquisition of services

###### 4A.1 Summary

This activity is related to the technical implementation of the web portal which will provide information on ongoing/planned activities at sea.

###### 4A.2 Objectives

This activity is related to the acquisition of Services (company to build web portal): 20 kEuros

4A.3 Contribution of the activity to the Joint Action; specifically how it contributes to the implementation of the BS thematic area/s and societal needs

This activity will allow the creation of the central tool of AA-MARINET, a web portal which will be transversal to all types of observing systems and to all geographical domains and timescales to provide information on ongoing/planned activities at sea.

4A.4 Contribution of the activity to the Joint Action; Specifically how it contributes to the implementation of the sub-multi stakeholder platform's strategic and operational objectives (KPIs) and the identified gaps and needs

This activity will allow the creation of the central tool of AA-MARINET, a web portal which will be transversal to all types of observing systems and to all geographical domains and timescales to provide information on ongoing/planned activities at sea.

###### 4A.5 Deliverables/outputs foreseen in the activity

→ D2.2 Web portal fully operational (M12)

4A.6 Indicate why AANCHOR CSA should fund this activity instead of being funded by the participating countries alone

This tool will be used in the long-term after the seed funding period.

4A.7 Indicate if the activity has received previous funding from the European Commission (Yes/No). If yes please describe.

No

##### 4B Activity 2 I/ITAPINA session (at ASLO Aquatic Sciences meeting) and workshop (after ASLO meeting)

###### 4B.1 Summary

This workshop will be the major networking event of the pilot action that will be attended by delegates from Africa, South America, Europe and North America (on site and online participation will be enabled). It will consist of a general session at the beginning, break out

sessions for different user groups and a final session to gather feedback from breakout sessions and discussion of further actions.

#### 4B.2 Objectives

The objective is to fund travel and accommodation of delegates from Africa, South America, Europe and North America to attend the ASLO meeting and the specific I/ITAPINA workshop to be held after the ASLO meeting (on site and online participation will be enabled).

#### 4B.3 Contribution of the activity to the Joint Action; specifically how it contributes to the implementation of the BS thematic area/s and societal needs

Roadmap drafting for the distributed Pelagic Imaging Network (coastal observatories, open ocean surveys and citizen science) will be started at the end of the workshop by the three node leaders (Rainer Kiko, Margaux Noyon and Rubens M. Lopes) and further invited colleagues.

#### 4B.4 Contribution of the activity to the Joint Action; Specifically how it contributes to the implementation of the sub-multi stakeholder platform's strategic and operational objectives (KPIs) and the identified gaps and needs

The key output of the Workshop will be the I/ITAPINA roadmap including activities to spread tools, to provide transnational access to the respective hardware and to aggregate the resulting data.

#### 4B.5 Deliverables/outputs foreseen in the activity

- D6.1.2 Workshop report and I/ITAPINA roadmap (including activities to spread tools, to provide transnational access to the respective hardware and to aggregate the resulting data.)

### **4C Activity 3 workshop AA COASTNET**

#### 4C.1 Summary

This activity will be the backbone of the AA-COASTNET pilot Action aiming to connect people from the Belém and Galway countries and define the pillars of the long term All Atlantic COASTal observIng and technology NETwork.

#### 4C.2 Objectives

The workshops' objective is to create connectivity between existing coastal observing initiatives (e.g., SMCRI in South Africa, PROPAO in West Africa, CVOO in Cabo Verde, PLOCAN in Canary, SiMCosta, PNBoia and MePrO in Brazil, EMAC/IADO in Argentina, and JERICO-RI in Europe).

#### 4C.3 Contribution of the activity to the Joint Action; specifically how it contributes to the implementation of the BS thematic area/s and societal needs

The workshop will address the identified topics that are of prime interest for coastal observing systems to share, gaps, pros and cons in every country of the Belém and Galway statement in order to emulate an All Atlantic synergy for coastal observation. It will address the need for integration of different observing systems and technologies, best practices methodologies and procedures, metrology concepts and the integration/intercomparison of the existing regional data acquisition methodologies, trying to maximize the synergy between oceanography, engineering and metrology, for those regional initiatives.

AA-COASTNET will also become a focus point to Atlantic Coastal Observing communities contributing to the « Predicting Global Coastal Ocean : Toward a More Resilient Society » initiative, in the context of the Ocean UN Decade (<https://www.coastspredict.org/draftprogramme-document/>).

#### 4C.4 Contribution of the activity to the Joint Action; Specifically how it contributes to the implementation of the sub-multi stakeholder platform's strategic and operational objectives (KPIs) and the identified gaps and needs

In the context of AA-MARINET, this activity will connect existing coastal observing initiatives (e.g., SMCRI in South Africa, PROPAO in West Africa, CVOO in Cabo Verde, PLOCAN in Canary, SiMCosta, PNBoia and MePrO in Brazil, EMAC/IADO in Argentina, and JERICO-RI in Europe) with a view to optimise the use of resources of these systems based on common guidelines.

#### 4C.5 Deliverables/outputs foreseen in the activity

- D6.2.1 Creation of a network that is able to connect, align and maximize the coastal observation efforts already existing in both edges of the tropical and southern Atlantic.
- D6.2.2 Workshop and meeting Report including recommendations to optimise the use of resources and implementation of TNA / RI sharing
- D6.2.3 Endorsement as UN Decade as a focus point to Atlantic Coastal Observing communities contributing to the « Predicting Global Coastal Ocean: Toward a More Resilient Society »

### **4D Activity 4 AA-COASTNET Training**

#### 4D.1 Summary

This activity will allow the funding of travel and accommodation for 5 attendees to a training course provided by IADO (Argentina). The attendees will build low cost sensors and will deploy them in situ. The Data F.A.I.R. principles will be addressed in a data session to ensure people know "how to" upload the data to a recognized data repository and distributor that follows F.A.I.R. practices.

#### 4D.2 Objectives

Activity will fund travel and accommodation for 5 attendees from Belém Countries to a training course on low cost sensors building and deployment. The training course on the design and construction of low-cost sensors and platforms will demonstrate the ability of the AA-COASTNET transatlantic network, at long term, to exchange, share and increase capacity and capability. The objective is also to promote new ways of training, contributing to WP5 objectives.

#### 4D.3 Contribution of the activity to the Joint Action; Specifically how it contributes to the implementation of the BS thematic area/s and societal needs

This activity will increase capability to develop and maintain coastal observing systems for Atlantic research groups with low budgets for which buying commercial platforms and sensors could be prohibitive, especially if the sensors must be imported.

#### 4D.4 Contribution of the activity to the Joint Action; Specifically how it contributes to the implementation of the sub-multi stakeholder platform's strategic and operational objectives (KPIs) and the identified gaps and needs

The training course on the design and construction of low-cost sensors and platforms will demonstrate the ability of the AA-COASTNET transatlantic network, at long term, to exchange, share and increase capacity and capability. The objective is also to promote new ways of training, contributing to WP3 objectives.

#### 4D.5 Deliverables/outputs foreseen in the activity

Based on the experience of building IADO's EMAC low cost sensors, the students that will be trained will be able to design and develop and deploy their own sensors and platforms at their individual institutions. Furthermore, they could become further teachers for new technical personnel both at their own country and neighbouring ones. The long-term vision is that the original seed of the proposed course could be a way to spread low cost technology that will allow to develop a wide network of monitoring stations covering the whole Atlantic Ocean.

### **4E workshop NMRI-PR (Polar RI)**

#### 4E.1 Summary

The physical workshop will gather Polar Group with representatives of Arctic and Antarctica programmes, polar infrastructures managers and operators in order to focus on barriers limiting or preventing the access to the polar facilities and the necessary measures for increasing the access will be identified for one particular type of polar facilities, the polar stations (supporting marine science).

#### 4E.2 Objectives

The workshop will conclude a series of virtual meetings addressing the objectives mentioned above: identifying barriers limiting or preventing the access to the polar facilities and the necessary measures for increasing the access

4E.3 Contribution of the activity to the Joint Action; specifically how it contributes to the implementation of the BS thematic area/s and societal needs

The final workshop will allow the delivery of a roadmap for enabling researchers and technicians long-term mutual access to polar stations (that can be extended to other types of RIs) , including sharing of polar stations calendars and funding calendars, and a broad range of research topics.

4E.4 Contribution of the activity to the Joint Action; Specifically how it contributes to the implementation of the sub-multi stakeholder platform's strategic and operational objectives (KPIs) and the identified gaps and needs

The workshop will contribute to set-up an effective Polar Group with representatives of Arctic and Antarctic research programmes, including infrastructures managers and operators with high experience on issues related to the access of researchers and technicians to the polar infrastructures and facilities.

4E.5 Deliverables/outputs foreseen in the activity

- delivery of a roadmap for enabling researchers and technicians long-term mutual access to polar stations (that can be extended to other types of Polar RIs)

## 5. Financial overview: Requested budget & in kind contribution

5.1 Fill in the tables below:

- *Partner's organizations requesting seed funding (€):*

	REQUESTED FUNDING					
Organisation Name	Plane & Public transport	Accommodation	Subsistence	Materials	Other	Total Requested Funding
Instituto Hidrográfico					acquisition of services	20 000
COASTNET workshop	15000	10000				25000
IADO	7500	3750	3750			15000

Sorbonne University	15000	5000	5000			25000
NMRI-PR	7500	3750	3750			15000

- **Partners' organization own funding (€):**

Partners own funding will mainly be human resources as well as travel and accommodation for the participation of experts to workshops whenever required.

## 6. Impacts

**6.1. Indicate the expected impacts of this activity on the associated joint action, specifying how the seed funding impacts Atlantic cooperation on Ocean issues**

Expected impact is explained under "4. Description of each activity".

**6.2. Describe the expected outputs and how the funding activity results will be disseminated (e.g. by means of workshops, conferences or other tools)**

The AIR Centre will mobilize and engage its vast, diverse and multidimensional network (governments, industry, researchers, universities, NGOs and civil society) on both sides of the Atlantic Ocean to guarantee not only the strong participation of all relevant strategic stakeholders, but also the long-term sustainability and relevance of the AA-MARINET results and outcomes. It will strongly support dissemination of results and outcomes of AA-MARINET.

## 7 Other Requests

**7.1 Please provide a letter of commitment from each participating organisation;**

Please find the letters below



**BUILDING AN ALL ATLANTIC  
OCEAN COMMUNITY**  
Implementing the Belém Statement

**AANCHOR WP7 Manager**  
Florence Coroner  
1625 route de Sainte Anne  
CS 10070 Plouzané - FRANCE  
E-mail: [florence.coroner@ifremer.fr](mailto:florence.coroner@ifremer.fr)

21 October 2020

### Letter of Commitment

#### **“All-Atlantic marine research infrastructure network” Joint Action (AA-MARINET)**

Dear Mrs Coroner,

As CEO of the Atlantic International Research Centre (AIR Centre), I hereby certify our interest in participating as Partner Organisation in the Joint Action AA-MARINET “All Atlantic Marine Research Infrastructure Network”.

We believe that the creation of a long-term collaboration framework to promote and facilitate the convergence and the alignment of Research and Innovation infrastructure initiatives is essential to support the implementation of the Belém Statement.

With this letter AIR Centre confirms its commitment to fully support the AA-MARINET implementation in terms of human and other resources in accordance with the proposal.

Sincerely,

*Miguel Belló Mora*  
CEO, AIR Centre



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Implementing the Belém Statement

**AANCHOR WP7 Manager**  
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E-mail: [florence.coronet@ifrcmer.fr](mailto:florence.coronet@ifrcmer.fr)

October 22<sup>nd</sup>, 2020

**Letter of Commitment**

**"All-Atlantic marine research infrastructure network" Joint Action (AA-MARINET)**

Dear Mrs Coronet,

As President of Sorbonne Université, I hereby certify our interest in participating as Partner Organisation in the Joint Action AA-MARINET "All Atlantic Marine Research Infrastructure Network".

We believe that the creation of a long term collaboration framework to promote and facilitate the convergence and the alignment of Research and Innovation infrastructure Initiatives is essential to support the implementation of the Belém Statement.

With this letter Sorbonne Université confirms its commitment to fully support the AA-MARINET implementation in terms of human and other resources in accordance with the proposal.

Sincerely,

Jean CHAMBAZ

President of Sorbonne Université

  
Sorbonne Université  
Président par délégation  
**Bruno Leclercq**  
Directeur adjoint du SAIC



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[Thandi.mgwebi@mandela.ac.za](mailto:Thandi.mgwebi@mandela.ac.za)

Date: 26 October 2020

AANCHOR WP7 Manager  
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#### LETTER OF INSTITUTIONAL SUPPORT

##### **“All-Atlantic marine research infrastructure network” Joint Action (AA-MARINET)**

Dear Mrs Coroner,

This letter serves as confirmation of institutional support for the AA-MARINET. We strongly support the submission for Interdisciplinary Research Networks to address research and engagement capacity and build collaborative associations to foster ocean science research. In 2017, we launched an Ocean Sciences Campus to assist with the roll out of Operation Phakisa; an initiative to accelerate the National Development Plan by unlocking the economic potential of South Africa's oceans with a focus on the blue economy. This is the first Ocean Sciences campus in South Africa and is sure to become the leading marine and maritime sciences institution on the African continent. Our institution is an ideal for this research network that will be coordinated by our Institute for Coastal and Marine Research that has been conducting high quality research with local and global impact since the 1980s.

We believe that the creation of a long-term collaboration framework to promote and facilitate the convergence and the alignment of Research and Innovation infrastructure initiatives is essential to support the implementation of the Belém Statement. Within this framework, we support the plankton imaging pilot action, IITAPINA, which will promote the development of pelagic imaging towards operability which can



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28/10/2020

**Letter of Commitment**

**“All-Atlantic marine research infrastructure network” Joint Action (AA-MARINET)**

Dear Mrs Coroner,

As Director of the Oceanographic Institute of the University of São Paulo (IOUSP), Brazil, I hereby certify our interest in participating as Partner Organisation in the Joint Action AA-MARINET “All Atlantic Marine Research Infrastructure Network”.

We believe that the creation of a long-term collaboration framework to promote and facilitate the convergence and the alignment of Research and Innovation infrastructure initiatives is essential to support the implementation of the Belém Statement.

With this letter IOUSP confirms its commitment to fully support the AA-MARINET implementation in terms of human and other resources in accordance with the proposal.

Sincerely,

Prof. Dr. Elizabeth S. Braga G. Saraiva  
Diretora - IOUSP



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Implementing the Belém Statement

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*Recife, October 21<sup>st</sup> 2020.*

**Letter of Commitment**

**"All-Atlantic marine research infrastructure network" Joint Action (AA-MARINET)**

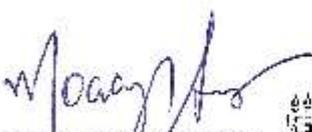
Dear Mrs Coroner,

As Vice-Rector of the Universidade Federal de Pernambuco - UFPE, I hereby certify our interest in participating as Partner Organisation in the Joint Action AA-MARINET "All Atlantic Marine Research Infrastructure Network".

We believe that the creation of a long-term collaboration framework to promote and facilitate the convergence and the alignment of Research and Innovation infrastructure initiatives is essential to support the implementation of the Belém Statement.

With this letter UFPE confirms its commitment to fully support the AA-MARINET implementation in terms of human and other resources in accordance with the proposal.

Sincerely,

  
Moacyr Cunha de Araújo Filho  
Vice reitor UFPE  
+55.81.21268001



Prof. Moacyr Cunha de Araújo Filho  
Vice-Reitor/UFPE



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Implementing the Belém Statement

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E-mail: [florence.coroner@ifremer.fr](mailto:florence.coroner@ifremer.fr)

*October, 26 2020*

**Letter of Commitment**

**“All-Atlantic marine research infrastructure network” Joint Action (AA-MARINET)**

Dear Mrs Coroner,

As Coordinator of the Brazilian Coastal Monitoring System (SiMCosta) at Federal University of Rio Grande (FURG), I hereby certify our interest in participating as Partner Organisation in the Joint Action AA-MARINET “All Atlantic Marine Research Infrastructure Network”.

We believe that the creation of a long-term collaboration framework to promote and facilitate the convergence and the alignment of Research and Innovation infrastructure initiatives is essential to support the implementation of the Belém Statement.

With this letter SiMCosta/FURG confirms its commitment to fully support the AA-MARINET implementation in terms of human and other resources in accordance with the proposal.

Sincerely,

Prof. Carlos A. E. Garcia  
Coordinator  
Brazilian Coastal Monitoring System  
FURG



**BUILDING AN ALL ATLANTIC  
OCEAN COMMUNITY**  
Implementing the Belém Statement

**AANCHOR WP7 Manager**  
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*October 28<sup>th</sup>, 2020*

### Letter of Commitment

#### **“All-Atlantic marine research infrastructure network” Joint Action (AA-MARINET)**

Dear Mrs Coroner,

As President of IMar (SEA INSTITUTE), I hereby certify our interest in participating as Partner Organisation in the Joint Action AA-MARINET “All Atlantic Marine Research Infrastructure Network”.

We believe that the creation of a long-term collaboration framework to promote and facilitate the convergence and the alignment of Research and Innovation infrastructure initiatives is essential to support the implementation of the Belém Statement.

With this letter, IMar confirms its commitment to fully support the AA-MARINET implementation in terms of human and other resources in accordance with the proposal.

Sincerely,

The President,

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/ Malik Duarte Lopes /



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*Rio de Janeiro, October 27<sup>th</sup>, 2020.*

### Letter of Commitment

#### **“All-Atlantic marine research infrastructure network” Joint Action (AA-MARINET)**

Dear Mrs Coroner,

As Director for Technology and Innovation of COPPE - Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering at the Federal University of Rio de Janeiro, I hereby certify our interest in participating as Partner Organisation in the Joint Action AA-MARINET “All Atlantic Marine Research Infrastructure Network”.

We believe that the creation of a long-term collaboration framework to promote and facilitate the convergence and the alignment of Research and Innovation infrastructure initiatives is essential to support the implementation of the Belém Statement.

With this letter COPPE confirms its commitment to fully support the AA-MARINET implementation in terms of human and other resources in accordance with the proposal.

Sincerely,

Angela Maria Cohen Uller  
Director for Technology and Innovation  
Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering  
Federal University of Rio de Janeiro



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27 October 2020

**Letter of Commitment**

**“All-Atlantic marine research infrastructure network” Joint Action (AA-MARINET)**

Dear Mrs Coroner,

As GENERAL DIRECTOR of INSTITUTO HIDROGRÁFICO, I hereby certify our interest in participating as Partner Organisation in the Joint Action AA-MARINET “All Atlantic Marine Research Infrastructure Network”.

We believe that the creation of a long-term collaboration framework to promote and facilitate the convergence and the alignment of Research and Innovation infrastructure initiatives is essential to support the implementation of the Belém Statement.

With this letter INSTITUTO HIDROGRÁFICO confirms its commitment to fully support the AA-MARINET implementation in terms of human and other resources in accordance with the proposal.

Sincerely,





## **BUILDING AN ALL ATLANTIC OCEAN COMMUNITY**

Implementing the Belém Statement

### **All Atlantic Ocean Contact Details**

AANChOR - All AtlanTic Cooperation for Ocean Research and innovation Coordination and Support Action

Supporting the Implementation of the Belém Statement

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