



Learning from experience: case studies of area-based planning in ABNJ



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List of acronyms and abbreviations

ABNJ	Areas Beyond National Jurisdiction
ABP	Area Based Planning
ACCOBAMS	Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and contiguous Atlantic area
AIS	Automatic Identification System
APEI	Areas of Particular Environmental Interest
ASMA	Antarctic Specially Managed Areas
ASPA	Antarctic Specially Protected Areas
ATS	Antarctic Treaty System
BBNJ	Biodiversity Beyond National Jurisdiction
CCAMLR	Convention on the Conservation of Antarctic Marine Living Resources
CCH	Cetacean Critical Habitat
CCZ	Clarion-Clipperton Zone
CLCS	Commission on the Limits of the Continental Shelf
CMM	Conservation and Management Measures
CMS	Compliance Monitoring System
CMS	Convention on Migratory Species
CPPS	Comisión Permanente del Pacífico Sur (Permanent Commission for the South Pacific)
CRTD	Costa Rica Thermal Dome
EBSA	Ecologically or Biologically Significant Marine Area
ECP	Eastern Central Pacific
ECS	Extended Continental Shelf
EEZ	Exclusive Economic Zone
ENSO	El Niño Southern Oscillation
FAO	Food and Agriculture Organization
FARI	Forum of Academic Research Institutions in the Western Indian Ocean
FRA	Fisheries Restricted Areas
GBIF	Global Biodiversity Information Facility
GEF	Global Environment Facility
GFCM	General Fisheries Commission for the Mediterranean
GOBI	Global Ocean Biodiversity Initiative
IATTC	Inter-American Tropical Tuna Commission
IBA	Important Bird and Biodiversity Area
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICES	International Council for the Exploration of the Sea
ICPC	International Cable Protection Committee
ILBI	International Legally binding Instrument
IMMA	Important Marine Mammal Area
IMO	International Maritime Organization
IOC-UNESCO	Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization
ISA	International Seabed Authority
ITTC	International Towing Tank Conference
IUCN	International Union for Conservation of Nature
IUU	Illegal, Unregulated and Unreported fishing

KBA	Key Biodiversity Area
MARPOL	International Convention for the Prevention of Pollution from Ships
MCSO	Mediterranean Commission on Sustainable Development
MMPA	IUCN Marine Mammal Protection Areas
MoU	Memorandum/Memoranda of Understanding
MPA	Marine Protected Area
MSP	Marine Spatial Planning
NEAFC	North-East Atlantic Fisheries Commission
NPFC	North Pacific Fisheries Commission
OBIS	Ocean Biogeographic Information System
ODYSSEA	Operating a Network of integrated Observatory Systems in the Mediterranean Sea
OECS	Other Effective Conservation Measures
OSPAR	Convention for the Protection of the Marine Environment of the North East Atlantic
PROG	Partnership for the Regional Ocean Governance
PSSA	Particularly Sensitive Sea Area
RFMO	Regional Fisheries Management Organisation
SAC	Scientific Advisory Committee on Fisheries
SDG	Sustainable Development Goal
SIBIMAP	Marine Litter Developing the Marine Biodiversity Information System
SIODFA	Southern Indian Ocean Deep Seas Fisheries Association
SIOFA	Southern Indian Ocean Fisheries Agreement
SOI	Southern Ocean Initiative
SPAMI	Specially Protected Areas of Mediterranean Importance
SPINCAM	Southeast Pacific data and information network in support to integrated coastal area management
SPRFMO	South Pacific Regional Fisheries Management Organization
SREP	South Pacific Regional Environmental Programme
TPEA	Transboundary Planning in the European Atlantic
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNEP-WCMC	United Nations Environment – World Conservation Monitoring Centre
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGA	United Nations General Assembly
VME	Vulnerable Marine Ecosystem
VMS	Vessel Monitoring System
WCPFC	Western and Central Pacific Fisheries Commission
WDC	Whale and Dolphin Conservation

Executive summary

Areas Beyond National Jurisdiction (ABNJ) cover 40% of the surface of the planet, and provide a wide range of marine ecosystem services that play a vital role in supporting human health, society and economy. The marine ecosystems and associated biodiversity and natural resources present in areas beyond national jurisdiction are diverse, including deep-sea habitats that are slow-growing and fragile. Previously, locations in areas beyond national jurisdiction were afforded some degree of protection from the impacts of human activities due to their remoteness and challenging conditions. Innovations in maritime technologies are however rapidly overcoming the challenges in accessing areas beyond national jurisdiction, thereby reducing the economic and geographical barriers to operating in these vast areas, which constitute 95% of the total volume of the ocean. With increasing access, the cumulative impact of human activities in areas beyond national jurisdiction has increased and has often been detrimental to the unique and valuable marine ecosystems, biodiversity and resources in these areas. To address increases in human activities and associated impacts— and to support the conservation and sustainable use of marine biodiversity and shared marine resources— in areas beyond national jurisdiction, cross-sectoral area-based planning measures are being discussed in the international policy arena.

This study has been undertaken as part of the Food and Agriculture Organization of the United Nations (FAO) and United Nations Environment Programme (UN Environment) jointly implemented Global Environment Facility (GEF) funded project entitled 'Sustainable fisheries management and biodiversity conservation of deep-sea living resources and ecosystems in Areas Beyond National Jurisdiction, known as the *ABNJ Deep Seas Project*. Recognising the importance of healthy, fully functioning marine ecosystems for marine biodiversity, food security, economic prosperity and sustainable livelihoods is a key pillar of the Areas Beyond National Jurisdiction Deep Seas Project. As a result, a number of analyses have been undertaken to inform the development of a methodology to support application of cross-sectoral area-based planning in areas beyond national jurisdiction by parties to Regional Seas Conventions and their Secretariat.

This report constitutes one such analysis and explores four case study regions in which area-based planning has occurred in areas beyond national jurisdiction:

- Eastern Central (EC) Pacific;
- Mediterranean;
- North East (NE) Atlantic; and
- Southern Ocean

The four case study regions demonstrate a variety of different contexts and methods for area-based planning in areas beyond national jurisdiction. Case study regions were identified based on the existence of advanced area-based planning tools and evidence of cross-sectoral coordination to undertake area-based planning.

The report identifies key lessons or findings from these regions under four themes: governance; area-based planning, data sharing and availability and communication, cooperation and coordination. Findings include:

- **Finding 1:** Area-based planning tools can be used to integrate contextual considerations of purpose, sector and scale.
- **Finding 2:** Area-based planning tools can be tailored to a region.
- **Finding 3:** Successful area-based planning tools are adaptable.
- **Finding 4:** The identification of data types, information and existing sources supports comprehensive area-based planning.
- **Finding 5:** Data gaps should be identified and addressed to support cross-sectoral area-based planning.
- **Finding 6:** Mechanisms for long-term data storage and exchange must be considered.
- **Finding 7:** Communication between relevant stakeholders is important to support area-based planning and can occur via a range of different mechanisms.
- **Finding 8:** Cooperation and coordination between organisations encourages action to address common issues.
- **Finding 9:** Stakeholder engagement is key to improving the effectiveness of governance arrangements.
- **Finding 10:** Structured regulatory regimes support governance.
- **Finding 11:** Gaps resulting from single sector governance frameworks can be overcome.

The key findings, concepts or models from the case study regions were explored to identify their relevance to the different contexts and characteristics of two Pilot Regions: the Western Indian Ocean and the Southeast Pacific. Potential actions to support cross-sectoral area-based planning in these regions are provided as points for potential discussion and consideration by Parties to the Regional Seas Conventions and Secretariats in these regions, however it is important to note that these actions are not prescriptive. This report is intended to provide inspiration as to how cross-sectoral area-based planning can be undertaken in areas beyond national jurisdiction, using the contexts of the two Pilot Regions as examples. It is recognised that the undertaking of area-based planning in areas beyond national jurisdiction is complex and that there are many valuable lessons to be learned from existing examples. As such, as these regional case studies evolve over time, additional key lessons could be identified and further analysis conducted in other regions in which area-based planning is being undertaken.

Résumé analytique

Les zones ne relevant pas de la juridiction nationale (ABNJ) représentent 40 % de la surface de la planète et les écosystèmes marins qu'elles abritent fournissent une large gamme de services qui jouent un rôle essentiel pour la santé, l'économie et les sociétés humaines. Ces zones accueillent une biodiversité, des ressources naturelles et des écosystèmes marins variés, tels que les habitats d'eaux profondes dont la croissance est lente et l'existence particulièrement fragile. Auparavant, l'isolement ainsi que les barrières et les obstacles caractérisant ces environnements constituaient une certaine protection contre les effets des activités humaines. Les innovations que connaissent actuellement les technologies maritimes viennent pallier à vitesse grand V les difficultés d'accès aux ABNJ, réduisant ainsi les obstacles économiques et géographiques à l'exploitation de ces vastes espaces, lesquels représentent 95 % du volume total des océans. Les effets cumulatifs des activités humaines sur ces zones, désormais plus accessibles, se sont accentués et représentent souvent des menaces pour la biodiversité, les ressources et les écosystèmes marins uniques et précieux qu'elles abritent. Afin de faire face à la multiplication des activités humaines et de leurs effets tout en encourageant la conservation et l'utilisation durable de la biodiversité marine et des ressources marines partagées dans les ABNJ, des mesures de planification intersectorielles par zone sont actuellement examinées sur la scène politique internationale.

Cette étude est menée dans le cadre du projet de gestion durable des pêches et de conservation de la biodiversité des ressources et écosystèmes d'eaux profondes dans les zones ne relevant pas de la juridiction nationale (connu sous le nom anglais de projet *ABNJ Deep Seas*), financé par le Fonds pour l'environnement mondial (FEM). Le projet est coordonné par l'Organisation des Nations Unies pour l'alimentation et l'agriculture (FAO) et mis en œuvre conjointement avec le Programme des Nations Unies pour l'environnement (PNUE). L'un des principaux objectifs de ce projet est de faire reconnaître le rôle joué par des écosystèmes marins sains et pleinement fonctionnels en matière de biodiversité marine, de sécurité alimentaire, de prospérité économique et de subsistance durable. De ce fait, les États parties aux conventions pour les mers régionales et les secrétariats de ces conventions ont mené des recherches afin de développer une méthodologie concernant l'application d'une planification intersectorielle par zone dans les ABNJ.

Ce rapport constitue l'une de ces analyses et se penche sur quatre études de cas régionales où la planification par zone a été mise en place dans des ABNJ :

- le Pacifique Centre-Est (CE) ;
- la Méditerranée ;
- l'Atlantique Nord-Est (NE) ; et
- l'océan Austral.

Ces quatre régions présentent des contextes variés et se sont appuyées sur différentes méthodes pour mettre en place une planification par zone dans les ABNJ. Les régions sur lesquelles ont porté les études de cas ont été choisies en fonction de deux critères : l'existence d'outils élaborés de planification par zone et celle d'une coordination intersectorielle visant à mettre en place ce type de planification.

Ce rapport met en lumière les principaux points ou constats établis dans ces régions autour de quatre domaines : la gouvernance, la planification par zone, le partage et la disponibilité des données ainsi que la communication, la coopération et la coordination. Ces constats sont les suivants :

- **Constat 1** : les outils de planification par zone peuvent être utilisés pour intégrer des éléments de contexte liés à l'objectif, au secteur et à l'échelle.
- **Constat 2** : les outils de planification par zone peuvent être adaptés aux spécificités d'une région.
- **Constat 3** : les outils de planification par zone efficaces sont ceux qui sont modulables.
- **Constat 4** : l'identification des types de données, des informations et des sources existantes joue en faveur d'une planification par zone efficace.
- **Constat 5** : il convient d'identifier et de combler les lacunes en matière de données pour appuyer la planification intersectorielle par zone.
- **Constat 6** : la mise en place de mécanismes durables de stockage et d'échange de données doit être envisagée.
- **Constat 7** : essentiel pour appuyer la planification par zone, le dialogue entre les parties prenantes compétentes passe par différents modes de communication.
- **Constat 8** : la coopération et la coordination entre les organisations incitent à prendre des mesures pour rechercher des solutions aux problèmes communs.
- **Constat 9** : la mobilisation des parties prenantes joue un rôle essentiel pour renforcer l'efficacité des dispositifs de gouvernance.
- **Constat 10** : des régimes réglementaires structurés permettent de renforcer la gouvernance.
- **Constat 11** : il est possible de pallier les lacunes résultant de cadres de gouvernance unisectoriels.

Les principaux constats, concepts ou modèles tirés des études de cas ont été examinés ; leur pertinence a été évaluée en fonction des différents contextes et caractéristiques des deux régions pilotes : la partie occidentale de l'océan Indien et le Pacifique Sud-Est. Des mesures susceptibles d'appuyer la planification intersectorielle par zone dans ces régions sont incluses sous la forme de points de discussion et de réflexion à l'intention des parties aux conventions pour les mers régionales et les secrétariats associés ; toutefois, il convient de noter qu'il ne s'agit pas de mesures prescriptives. Le présent rapport vise à décrire la mise en œuvre d'une planification intersectorielle par zone dans les ABNJ en s'appuyant sur les contextes des deux régions pilotes. Il est admis que l'adoption de cette approche est complexe et que l'on peut tirer de nombreux enseignements précieux des exemples existants. Ainsi, en observant l'évolution de ces études de cas régionales, il sera possible d'y puiser de nouveaux enseignements et de mener de nouvelles études dans d'autres régions où cette forme de planification est mise en œuvre.

Resumen

Las zonas situadas fuera de la jurisdicción nacional abarcan el 40% de la superficie del planeta y ofrecen un amplio rango de servicios de los ecosistemas marinos, los cuales tienen importantes repercusiones en la salud humana, la sociedad y la economía. Los ecosistemas marinos, al igual que su biodiversidad y recursos naturales, presentes en las zonas situadas fuera de la jurisdicción nacional son variados, así como los delicados hábitats de aguas profundas que crecen lentamente. Anteriormente, ciertas zonas situadas fuera de la jurisdicción nacional contaban con algún grado de protección frente a los efectos de la actividad humana, debido a su lejanía y a otras condiciones problemáticas. Sin embargo, el perfeccionamiento de las tecnologías marítimas supera rápidamente los problemas de acceso a las zonas situadas fuera de la jurisdicción nacional y derriba las barreras económicas y geográficas para que sea posible operar en estas extensas superficies, que abarcan el 95% del volumen total del océano. Debido a su creciente acceso, el efecto acumulativo de la actividad humana en las zonas situadas fuera de la jurisdicción nacional es cada vez mayor y a menudo perjudicial para los excepcionales y valiosos ecosistemas marinos, la biodiversidad y los recursos de estas zonas. A fin de hacer frente a las actividades humanas y sus efectos —así como apoyar la conservación y el uso sostenible de la biodiversidad marina y los recursos marinos compartidos— en las zonas situadas fuera de la jurisdicción nacional, en el ámbito de la política internacional se debate la aplicación de medidas de planificación intersectoriales y zonales.

Esta iniciativa se lleva a cabo como parte del proyecto financiado por el Fondo para el Medio Ambiente Mundial (FMAM) y ejecutado conjuntamente por la Organización de las Naciones Unidas para la Alimentación y la Agricultura (FAO) y ONU-Medio Ambiente. La iniciativa se llama «Programa Mundial de Ordenación Pesquera Sostenible y Conservación de la Biodiversidad en Zonas Situadas Fuera de la Jurisdicción Nacional», también conocida como el Proyecto sobre Aguas Profundas en Zonas Situadas Fuera de la Jurisdicción Nacional. Reconocer la importancia de los ecosistemas marinos saludables en pleno funcionamiento para la biodiversidad marina, la seguridad alimentaria, la prosperidad económica y los medios de subsistencia sostenibles es un pilar fundamental del Proyecto sobre Aguas Profundas en Zonas Situadas Fuera de la Jurisdicción Nacional. Por ello, se han llevado a cabo varios análisis para contribuir al desarrollo de una metodología que brinde apoyo a la aplicación de la planificación intersectorial y zonal en zonas situadas fuera de la jurisdicción nacional por las partes de los convenios sobre mares regionales y su Secretaría.

Este informe es uno de los análisis mencionados y explora cuatro regiones de estudios monográficos donde se llevó a cabo una planificación zonal en zonas situadas fuera de la jurisdicción nacional:

- el Pacífico Centrooriental;
- el Mediterráneo;
- el Atlántico Nororiental; y
- el Océano Antártico.

Las cuatro regiones examinadas en los estudios monográficos presentan distintos contextos y métodos de planificación zonal de las zonas situadas fuera de la jurisdicción nacional. A la hora de seleccionar estas regiones se tuvo en cuenta la existencia de herramientas avanzadas de planificación zonal e indicios de coordinación intersectorial para llevar a cabo esta planificación zonal.

En este informe se determinan cuáles son las lecciones o conclusiones clave obtenidas en el análisis de estas regiones, agrupadas en cuatro temas: gobernanza; planificación zonal; difusión y disponibilidad de información; y comunicación, cooperación y coordinación. Entre estas conclusiones, se encuentran las siguientes:

- **Conclusión 1:** Las herramientas de planificación zonal se pueden usar para integrar consideraciones contextuales de objetivo, sector y escala.
- **Conclusión 2:** Las herramientas de planificación zonal se pueden adaptar a una región en particular.
- **Conclusión 3:** Es posible adaptar herramientas exitosas de planificación zonal.
- **Conclusión 4:** La planificación zonal integral se apoya en la identificación de tipos de datos, información y fuentes existentes.
- **Conclusión 5:** Se han de identificar y subsanar las lagunas para dar apoyo a la planificación intersectorial zonal.
- **Conclusión 6:** Se deberán tener en cuenta mecanismos para el almacenamiento e intercambio de datos a largo plazo.
- **Conclusión 7:** La comunicación entre las partes interesadas relevantes es importante para dar apoyo a la planificación zonal y puede ocurrir mediante distintos mecanismos.
- **Conclusión 8:** La cooperación y coordinación entre organizaciones fomenta la elaboración de medidas para hacer frente a las cuestiones comunes.
- **Conclusión 9:** La participación de las partes interesadas es clave para mejorar la eficacia de los mecanismos de gobernanza.
- **Conclusión 10:** Los regímenes reglamentarios estructurados apoyan la gobernanza.
- **Conclusión 11:** Es posible solucionar las lagunas que surgen de los marcos de gobernanza de un solo sector.

Se exploraron las conclusiones clave, los conceptos o modelos de las regiones estudiadas a fin de identificar su relevancia en los distintos contextos y para las características de dos regiones piloto: el Océano Índico Occidental y el Pacífico Sudeste. Se proporcionan posibles medidas para dar apoyo a la planificación intersectorial zonal en estas regiones como puntos de posible deliberación y consideración por las partes de los convenios sobre mares regionales y las Secretarías pertinentes; no obstante, es importante señalar que estas medidas no son prescriptivas. Este informe tiene por objeto mostrar el camino hacia la aplicación de la planificación intersectorial zonal en las zonas situadas fuera de la jurisdicción nacional a través del ejemplo de las dos regiones piloto. Se reconoce que la planificación zonal en las zonas situadas fuera de la jurisdicción nacional es compleja y que hay muchas lecciones valiosas por aprender de los ejemplos existentes. A medida que evolucionan estos estudios regionales, se podrán identificar más lecciones clave y se podrá profundizar el análisis en otras regiones donde se lleve a cabo la planificación zonal.

يُحدّد التقرير الدروس الرئيسية المستفادة أو الاستنتاجات المستخلصة من هذه المناطق في إطار أربعة مواضيع: الحوكمة؛ والتخطيط القائم على أساس المناطق، وتقاسم البيانات ودرجة توافرها، والاتصالات والتعاون والتنسيق. وتشمل الاستنتاجات ما يلي:

- الاستنتاج 1: يمكن استخدام أدوات التخطيط القائم على أساس المناطق لإدماج الاعتبارات السياقية للغرض والقطاع والنطاق.
- الاستنتاج 2: يمكن تصميم أدوات التخطيط القائمة على أساس المناطق خصيصاً لتناسب منطقة بعينها.
- الاستنتاج 3: تتسم أدوات التخطيط الناجح القائمة على أساس المناطق بقابليتها للتكيف.
- الاستنتاج 4: يُسهّم تحديد أنواع البيانات والمعلومات والمصادر الموجودة في دعم التخطيط الشامل القائم على أساس المناطق.
- الاستنتاج 5: يجب تحديد ثغرات البيانات ومعالجتها لدعم التخطيط المشترك بين القطاعات والقائم على أساس المناطق.
- الاستنتاج 6: يجب النظر في آليات تخزين البيانات وتبادلها على المدى الطويل.
- الاستنتاج 7: يكتسب التواصل بين أصحاب المصلحة المعنيين أهمية كبيرة في دعم التخطيط القائم على أساس المناطق ويمكن أن يتم عبر مجموعة من الآليات المختلفة.
- الاستنتاج 8: يُشجّع التعاون والتنسيق بين المنظمات على اتخاذ إجراءات لمعالجة القضايا المشتركة.
- الاستنتاج 9: يُعد إشراك أصحاب المصلحة أمراً أساسياً لتحسين فاعلية ترتيبات الحوكمة.
- الاستنتاج 10: تُوفّر أنظمة القواعد التنظيمية المُنظمة الدعم اللازم للحوكمة.
- الاستنتاج 11: يمكن التغلب على الثغرات الناتجة عن أطر الحوكمة ذات القطاع الواحد.

بُذلت جهودٌ لاستكشاف الاستنتاجات أو المفاهيم أو النماذج الرئيسية المستمدة من مناطق دراسات الحالة الإفرادية من أجل تحديد صلتها بالسياقات والخصائص المختلفة لمنطقتين تجريبتين هما: المحيط الهندي الغربي وجنوب شرق المحيط الهادئ. ويجري تقديم الإجراءات المحتملة لدعم التخطيط المشترك بين القطاعات والقائم على أساس المناطق في هذه المناطق باعتبارها نقاطاً يمكن أن تُطرح للمناقشة لتنظر فيها الأطراف في اتفاقيات البحار الإقليمية والأمانات في هذه المناطق، ولكن من الأهمية بمكان أن نلاحظ أنّ هذه الإجراءات ليست إلزامية. ويتمثل الغرض من إصدار هذا التقرير في أن يكون مصدر إلهام لكيفية الاضطلاع بالتخطيط المشترك بين القطاعات والقائم على أساس المناطق في المناطق الواقعة خارج نطاق الولاية الوطنية، باستخدام سياقات المنطقتين التجريبتين بوصفها أمثلة. ومن المسلمّ به أنّ الاضطلاع بالتخطيط القائم على أساس المناطق في المناطق الواقعة خارج نطاق الولاية الوطنية أمرٌ يتسم بالتعقيد وأنّ هناك العديد من الدروس القيّمة التي يمكن استخلاصها من الأمثلة الموجودة. وعلى هذا النحو، ومع تطور هذه الدراسات الإفرادية الإقليمية على مر الزمن، يمكن استخلاص دروس رئيسية إضافية أخرى وإجراء مزيد من التحليل في مناطق أخرى يُستخدَم فيها التخطيط القائم على أساس المناطق.

موجز تنفيذي

تُغطّي المناطق الواقعة خارج نطاق الولاية الوطنية نحو 40% من سطح الكوكب، وتوفّر مجموعةً واسعةً من خدمات النظم الإيكولوجية البحرية التي تُؤدّي دوراً حيوياً في دعم صحة الإنسان والمجتمع والاقتصاد. وتتسمّ النظم الإيكولوجية البحرية وما يرتبط بها من تنوع بيولوجي وموارد طبيعية في المناطق الواقعة خارج نطاق الولاية الوطنية بالتنوع الشديد، بما في ذلك موائل أعماق البحار التي تتسم ببطء النمو والهشاشة. وقد كانت المواقع في المناطق الواقعة خارج نطاق الولاية الوطنية تتمتع سابقاً بقدرٍ من الحماية من آثار الأنشطة البشرية بسبب موقعها النائي وظروفها الصعبة. غير أنّ الابتكارات في مجال التكنولوجيات البحرية أصبحت تتغلب بسرعة على التحديات التي تواجه الوصول إلى المناطق الواقعة خارج نطاق الولاية الوطنية، الأمر الذي يحد من العوائق الاقتصادية والجغرافية التي تحول دون العمل في هذه المناطق الشاسعة، التي تشكل 95 في المائة من إجمالي حجم المحيطات. ومع زيادة إمكانية الوصول، ازداد الأثر التراكمي للأنشطة البشرية في المناطق الواقعة خارج نطاق الولاية الوطنية وكثيراً ما أضرت بالنظم الإيكولوجية البحرية الفريدة من نوعها وذات القيمة الكبيرة، وكذلك التنوع البيولوجي والموارد المتوفرة في هذه المناطق. ولمعالجة الزيادات في الأنشطة البشرية والآثار المرتبطة بها - ولدعم حفظ التنوع البيولوجي البحري والموارد البحرية المشتركة واستغلالها على نحوٍ مستدام - في المناطق الواقعة خارج نطاق الولاية الوطنية، تجري على الساحة السياسية الدولية مناقشات بشأن تطبيق تدابير التخطيط المشترك بين القطاعات والقائم على أساس المناطق.

وقد أُجريت هذه الدراسة كجزءٍ من مشروع مرفق البيئة العالمية الممول والمنفذ بصورةٍ مشتركة بين منظمة الأغذية والزراعة وبرنامج الأمم المتحدة للبيئة تحت عنوان "الإدارة المستدامة لمصائد الأسماك وحفظ التنوع البيولوجي للموارد الحية في المياه العميقة الواقعة خارج نطاق الولاية الوطنية". ويُعد الاعتراف بأهمية النظم الإيكولوجية البحرية السليمة والعاملة بالكامل للتنوع البيولوجي البحري والأمن الغذائي والازدهار الاقتصادي وسبل العيش المستدامة ركيزةً رئيسيةً في مشروع الإدارة المستدامة لمصائد الأسماك وحفظ التنوع البيولوجي للموارد الحية في المياه العميقة الواقعة خارج نطاق الولاية الوطنية. ونتيجةً لذلك، أُجريت مجموعة من التحليلات للاسترشاد بها في وضع منهجية لدعم تطبيق التخطيط المشترك بين القطاعات والقائم على أساس المناطق في المناطق الواقعة خارج نطاق الولاية الوطنية من جانب الأطراف الموقّعة على اتفاقيات البحار الإقليمية وأماناتها.

يُشكّل هذا التقرير واحداً من تلك التحليلات ويعمل على استكشاف أربع مناطق لدراسة الحالات الفردية التي جرى فيها التخطيط القائم على أساس المناطق في المناطق الواقعة خارج نطاق الولاية الوطنية:

■ المنطقة الشرقية الوسطى من المحيط الهادئ؛

■ البحر الأبيض المتوسط؛

■ شمال شرق المحيط الأطلسي؛ و

■ المحيط الجنوبي

تُظهر مناطق دراسات الحالات الفردية الأربع مجموعةً متنوعةً من السياقات والأساليب المختلفة للتخطيط القائم على أساس المناطق في المناطق الواقعة خارج نطاق الولاية الوطنية. وقد حُدّدت مناطق دراسات الحالات الفردية استناداً إلى وجود أدوات تخطيط متقدّمة قائمة على أساس المناطق والأدلة على التنسيق الشامل لعدة قطاعات من أجل الاضطلاع بالتخطيط القائم على أساس المناطق.

Пояснительная записка

Районы, находящиеся за пределами действия национальной юрисдикции (ABNJ), охватывают 40% поверхности планеты и обеспечивают существование широкого круга морских экосистем, которые играют жизненно важную роль в поддержке здоровья человека, сохранении населения и экономики. Биологическое разнообразие морских экосистем и природных ресурсов, присутствующих в районах за пределами действия национальной юрисдикции, включает глубоководных обитателей, которые отличаются медленным ростом и уязвимостью. Ранее отдаленность и затруднительные условия в этих районах за пределами действия национальной юрисдикции отчасти защищали их от влияния деятельности человека. Тем не менее, развитие морских технологий позволило быстро получать доступ в районы, находящиеся за пределами действия национальной юрисдикции, тем самым преодолевая экономические и географические барьеры для хозяйственной деятельности в этих обширных регионах, составляющих 95% суммарного объема океана. По мере увеличения доступа кумулятивный эффект от деятельности человека в районах за пределами действия национальной юрисдикции увеличивался и часто наносил вред уникальным и ценным морским экосистемам, биологическому разнообразию и ресурсам в этих регионах. Чтобы повышать деятельность человека и связанное с ней влияние — и одновременно сохранять и устойчиво использовать морское биологическое разнообразие и совместные морские ресурсы — в районах за пределами действия национальной юрисдикции, в международной политике обсуждаются меры межведомственного зонального планирования.

Данное исследование проводилось в рамках совместного проекта Организации ООН по вопросам продовольствия и сельского хозяйства (ФАО) и финансируемого ФАО/Комитетом ООН по окружающей среде Глобального экологического фонда (GEF) под названием «Устойчивое рыболовство и сохранение биологического разнообразия глубоководных живых ресурсов и экосистем в районах за пределами действия национальной юрисдикции», известного также как **Глубоководный морской проект ABNJ**. Признание важности здоровых, полнофункциональных морских экосистем для морского биологического разнообразия, безопасности пищи, экономического процветания и устойчивой жизнедеятельности является краеугольным камнем Глубоководного морского проекта для районов за пределами действия национальной юрисдикции. В результате был проведен ряд анализов, развивающих методологию для обоснования применения межведомственного зонального планирования в районах за пределами действия национальной юрисдикции сторонами Конвенций по региональным морям и их секретариатами.

В этот отчет включен один такой анализ по изучению четырех регионов, в которых проводили зональное планирование в районах за пределами действия национальной юрисдикции:

- Восточно-центральный регион (ВЦ) Тихого океана;
- Средиземноморье;
- Северо-восточный регион (СВ) Атлантики; и
- Антарктический океан

Четыре региона демонстрируют разнообразие отличающихся контекстов и методов зонального планирования в районах за пределами действия национальной юрисдикции. Исследуемые регионы описывали на основе существования продвинутых инструментов зонального планирования и наличия межведомственной координации для проведения зонального планирования.

В отчете выделены ключевые вопросы и выводы по этим регионам, объединенные в четыре темы: управление, зональное планирование, совместное использование данных и их доступность, а также коммуникации, сотрудничество и координация. Выводы включают:

- **Вывод 1:** инструменты зонального планирования можно использовать для интеграции контекстных соображений в плане целей, исследуемых секторов и масштаба.
- **Вывод 2:** инструменты зонального планирования можно адаптировать к региону.
- **Вывод 3:** успешные инструменты зонального планирования можно модифицировать.
- **Вывод 4:** всестороннему зональному планированию способствует выявление типов данных, информации и ее существующих источников.
- **Вывод 5:** для поддержки межведомственного зонального планирования необходимо выявлять и изучать пробелы в данных.
- **Вывод 6:** нужно рассматривать механизмы долгосрочного хранения и обмена данных.
- **Вывод 7:** для поддержки зонального планирования важна коммуникация между соответствующими заинтересованными лицами, которая может осуществляться различными способами.
- **Вывод 8:** сотрудничество и координация между организациями стимулирует изучение общих проблем.
- **Вывод 9:** ключевым фактором для улучшения эффективности системы управления является привлечение заинтересованного лица.
- **Вывод 10:** управление поддерживает структурированная нормативная база.
- **Вывод 11:** промежутки, возникающие между системами управления отдельных секторов, могут быть преодолены.

Ключевые признаки, концепции и модели, выявленные для этих регионов, изучали для определения их значимости в контекстах и характеристиках двух других пилотных регионов: западной части Индийского океана и юго-восточной части Тихого океана. Потенциальные действия для поддержки межведомственного зонального планирования в этих регионах представлены в виде пунктов для потенциального обсуждения и рассмотрения сторонами Конвенций по региональным морям и их секретариатами в этих регионах, тем не менее, важно отметить, что эти действия не являются обязательными. Этот отчет должен стать примером того, каким образом межведомственное зональное планирование можно применять в районах за пределами действия национальной юрисдикции, используя контексты двух пилотных регионов в качестве образца. Общеизвестно, что применение зонального планирования в районах за пределами действия национальной юрисдикции является сложным, и что существует много ценных выводов, которые необходимо извлечь из имеющихся примеров. Кроме того, поскольку исследование этих регионов продолжается, могут быть выявлены дополнительные ключевые выводы, которые будут способствовать дополнительному анализу в других регионах, в которых проводится зональное планирование.

执行摘要

国家管辖范围以外区域（ABNJ）覆盖地球表面的40%，提供了广泛的海洋生态系统服务，在支持人类健康、社会和经济方面发挥着至关重要的作用。国家管辖范围以外区域拥有多种多样的海洋生态系统以及相关的生物多样性和自然资源，其中包括生长缓慢而脆弱的深海栖息地。以前，国家管辖范围以外区域的地点由于其偏远位置和困难的条件而获得了一定程度的保护，免受人类活动的影响。然而，海洋技术的创新正在迅速克服进入国家管辖范围以外区域的挑战，从而减少了在这些广阔区域作业的经济和地理障碍，这些区域占海洋总体积的95%。随着进入机会的增加，国家管辖范围以外区域内人类活动的累积影响也已增加，并且经常对这些区域独特而有价值的海洋生态系统、生物多样性和资源造成损害。为了应对国家管辖范围以外地区的人类活动和相关影响的增加，支持海洋生物多样性和共享海洋资源的保护和可持续利用，国际政策领域正在讨论跨部门区域规划措施。

这项研究是粮农组织（FAO）和联合国（UN）粮农组织/联合国环境署共同实施的名为“国家管辖范围以外区域可持续渔业管理和深海生物多样性保护”的项目的一部分，该项目由全球环境基金（GEF）资助，又名“国家管辖范围以外区域深海项目”。认识到健康、功能完善的海洋生态系统对海洋生物多样性、粮食安全、经济繁荣和可持续生计的重要性，是国家管辖范围以外区域深海项目的一个重要支柱。因此进行了一些分析，以为制定方法提供依据，支持区域海洋公约缔约方及其秘书处国家管辖范围以外区域实施跨部门的区域规划。

本报告即是此类分析的一个代表，探讨了四个案例研究区域，在这些区域的国家管辖范围以外区域进行了区域规划：

- 太平洋中东部（EC）；
- 地中海；
- 东北大西洋（NE）；
- 南大洋

这四个案例研究区域展示了在国家管辖范围以外区域进行区域规划的各种不同背景和方法。根据先进的区域规划工具和跨部门协调实施区域规划的证据确定了案例研究区域。

报告确定了这些区域在以下四个主题下的主要经验教训或发现：治理；区域规划、数据共享和可用性以及沟通、合作和协调。调查结果包括：

- 发现1：区域规划工具可用于集成目的、部门和规模的相关环境考虑。
- 发现2：可以为区域定制区域规划工具。
- 发现3：成功的区域规划工具具有适应性。
- 发现4：确定数据类型、信息和现有来源可支持区域综合规划。
- 发现5：应确定并解决数据差距，以支持跨部门的区域规划。
- 发现6：必须考虑建立长期数据存储和交换机制。
- 发现7：相关利益攸关方之间的沟通对于支持区域规划很重要，沟通可以通过一系列不同的机制进行。
- 发现8：组织间的合作和协调鼓励采取行动解决共同问题。
- 发现9：利益攸关方的参与是提高治理安排有效性的关键。
- 发现10：结构化的监管制度支持治理。
- 发现11：单一部门治理框架造成的差距是可以克服的。

对案例研究区域的主要发现、概念或模型进行了探讨，以确定它们与两个试点区域（西印度洋和东南太平洋）的不同背景和特征的相关性。在这些区域为支持跨部门区域规划而可能采取的行动是区域海洋公约缔约方和秘书处可能讨论和审议的要点，但必须注意，这些行动并非规定性的。本报告旨在以两个试点区域的背景为例，就如何在国家管辖范围以外区域进行跨部门区域规划提供启示。人们承认在国家管辖范围以外区域进行区域规划是复杂的，从现有的案例中可以学到许多宝贵的经验。因此，随着这些区域案例研究的不断发展，能够确定更多的重要的经验教训，并在正在进行区域规划的其他区域进行进一步分析。

1 Introduction

The aim of this report is to explore selected regions in which area-based planning has occurred in Areas Beyond National Jurisdiction (ABNJ) and to identify lessons that can be learned from these regions. In particular, looking at which concepts or models from case study regions could be applicable in the Western Indian Ocean and the Southeast Pacific.

This study has been undertaken as part of the Food and Agriculture Organization of the United Nations (FAO) and United Nations Environment Programme (UN Environment) jointly implemented Global Environment Facility (GEF) funded project entitled 'Sustainable fisheries management and biodiversity conservation of deep-sea living resources and ecosystems in Areas Beyond National Jurisdiction (ABNJ)', known as the *ABNJ Deep Seas Project*. This study has been undertaken in recognition of the importance of healthy, fully functioning marine ecosystems for marine biodiversity, food security, economic prosperity and sustainable livelihoods. Therefore, it examines how area-based planning tools could be applied in ABNJ to support these objectives in two project Pilot Regions: the Western Indian Ocean and the South East Pacific.

The study examines the state of area-based planning in four case study regions in ABNJ:

- Eastern Central (EC) Pacific;
- Mediterranean;
- North East (NE) Atlantic; and
- Southern Ocean.

The four case study regions demonstrate a variety of different contexts and methods for area-based planning in ABNJ. The regions were identified based on the existence of advanced area-based planning tools and evidence of cross-sectoral coordination to undertake area-based planning.

Drawing from the four case study regions, this study provides lessons learned that may be applicable elsewhere in the world. The study explores key factors supporting and influencing the application of area-based planning tools in these regions. For example, existing governance frameworks, available data and information, and mechanisms for cross-sectoral area-based planning. Key findings have been identified, based on expert opinion as to why, where and how a specific tool may be suitable or unsuitable for use in a particular context. The relevance of these findings has been examined for the two Pilot Regions.

Discussions are ongoing around Other Effective Conservation Measures (OECMs). Some of the area-based planning measures identified in the case study areas have the potential to play an important role in contributing to global targets, such as Aichi Biodiversity Target 11 and Sustainable Development Goal (SDG) 14, Target 14.5, as OECMs. ABNJ cover 43% of the ocean and therefore will contain important biodiversity features. The actions of those currently identifying area-based measures in this space should be considered in the OECM context, allowing them to contribute towards global goals.

1.1 What is area-based planning?

Area-based planning is a generic concept that describes the process of identifying and agreeing spatially-explicit measures to appropriately manage human activities to meet specific objectives. A range of area-based planning tools exist, which can be used for planning and management of marine activities both within and beyond national jurisdiction. For example, Marine Spatial Planning (MSP) provides an operational framework for analysing and allocating the distribution of human activities in time and space to achieve particular objectives. As such, other area-based planning tools, with explicit management measures can be applied as part of this framework, depending on the objectives. The type of tool required will be context-specific.¹

Area-based planning tools can be applied for planning purposes only, whereby they do not have associated management measures. For example, Key Biodiversity Areas (KBA), Important Bird and Biodiversity Areas (IBA)², Important Marine Mammal Areas (IMMA)³ or Ecologically or Biologically Significant Marine Areas (EBSA)⁴. The tools can be used to identify important areas for biodiversity and can be used to inform future planning activities.

Area-based planning tools with associated management measures are referred to as ‘**Area-Based Management Tools**’ (ABMTs). For example, Areas of Particular Environmental Interest (APEIs), designated by the International Seabed Authority (ISA); Particularly Sensitive Sea Areas (PSSAs), designated by the International Maritime Organization (IMO); Vulnerable Marine Ecosystem (VME) closures implemented by Regional Fisheries Management Organisations (RFMO), with guidance from the Food and Agriculture Organisation of the United Nations (FAO), as well as Marine Protected Areas (MPAs)⁵. These tools are applied to implement management measures to achieve a particular objective.

In this study, the term ‘area-based planning tools’ is used to encompass both types of tool.

Table 1 provides an overview of the area-based planning tools discussed in this study, noting their respective global organisation and current geographical application. This table does not refer to the applicability of tools, rather their current implementation within the case study regions. It is important to recognise that all of the tools listed in the table could be applied within different regions, beyond the case study regions explored, if required.

Table 1: Area-based planning tools, their respective implementing organisation and current geographical application.

Case study	Mediterranean		EC Pacific		NE Atlantic		Southern Ocean
	ABNJ	National Jurisdiction	ABNJ	EEZ	ABNJ	EEZ	ABNJ
Area-based management tool (supporting organisation)							
APEIs (ISA)							
PSSAs (IMO)							
VMEs (RFMO/FAO)							
Area-based planning tool (supporting organisation)							
EBSAs (CBD)							
IBAs (Birdlife)							
KBAs (KBA Alliance)							
IMMAs							

¹ For more information on area-based planning tools, please see p.32 of [UNEP-WCMC \(2017\)](#) and [UNEP-WCMC \(2018\)](#).

² <https://www.birdlife.org/worldwide/programmes/sites-habitats-ibas-and-kbas>

³ Important Marine Mammal Areas are described as “discrete portions of habitat, important to marine mammal species that have the potential to be delineated and managed for conservation”. IMMAs have been formally acknowledged in [Resolution 12.13](#) of the Convention on Migratory Species (CMS), which requests Parties to identify such areas. For example, in the Mediterranean, a number of expert workshops have been hosted to identify such areas.

⁴ EBSAs are “geographically or oceanographically discrete areas that provide important services to one or more species/ populations of an ecosystem or to the ecosystem as a whole, compared to other surrounding areas or areas of similar ecological characteristics, or otherwise meet the [EBSA] criteria.” (CBD, 2012)

⁵ Further information on each of these area-based tools can be found at https://wcmc.io/ABNJ_toolsreview

1.2 Global governance context of ABNJ

1.2.1 UNCLOS and the delimitation of national jurisdictions

The United Nations Convention on the Law of the Sea (UNCLOS) is the overarching legislative framework for ocean governance, seeking to balance the rights and duties of States in various maritime zones. It defines the 'Territorial Sea', 'Exclusive Economic Zone' (EEZ), the 'High Seas' and 'the Area'.

In summary, marine areas within 12 nautical miles (nm) of a Coastal State's coastline are considered its Territorial Sea.⁶ The EEZ is the area beyond and adjacent to the territorial sea up to 200 nm from a Coastal State's baseline.⁷ In both the Territorial Sea and EEZ, Coastal States have the mandate to establish and enforce national laws to manage their marine resources.⁸ Marine areas beyond the limits of EEZs are considered to be 'Areas Beyond National Jurisdiction' (ABNJ), consisting of the High Seas and the 'Area'. Where Coastal States have claimed extended continental shelves, they can extend national jurisdiction to the seabed beyond 200nm, see section 1.2.2 for more details. The High Seas are considered to be "all parts of the sea that are not included in the exclusive economic zone, in the territorial sea or in the internal waters of a State, or in the archipelagic waters of an archipelagic State".⁹ The 'Area' is the "seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction".¹⁰

The EEZ of a country comes with rights for exploring and exploiting, but also responsibilities for conserving and managing the natural resources, whether living or non-living (Article 56 UNCLOS). The EEZ is not automatically in existence, but must be declared by the country in question. For example, within the Mediterranean, many countries have not yet chosen to claim their full EEZ, and therefore the waters beyond each country's claimed territorial sea (12 nautical miles in most cases) are high seas. The Mediterranean is therefore often managed as a basin, for example for fisheries. For more information, see the introduction to the Mediterranean case study in Annex 2.

1.2.2 Extended Continental Shelf Claims

It is possible for a Coastal State to claim part of the seabed beyond 200nm as part of its national jurisdiction, where the seabed forms part of an Extended Continental Shelf (ECS). It is important to note that the water column superjacent to the seabed of the ECS continues to comprise the High Seas. In order to facilitate claims, the Commission on the Limits of the Continental Shelf (CLCS) was set up under UNCLOS Article 76. The Commission is charged with the implementation of UNCLOS in respect of the establishment of the outer limits of the continental shelf beyond 200 nautical miles.¹¹ States whose continental shelf extends beyond 200 nm must make an ECS submission, containing technical and scientific data supporting the claim, to the CLCS. The CLCS will then assess the submission and make recommendations regarding the ECS limit, which are final and legally binding. The process of making ECS claims is ongoing, and is progressively reducing the extent of the Area.

1.2.3 UNCLOS Provisions

UNCLOS as a framework convention also includes provisions to address a number of different maritime activities, including fishing, shipping, mining, laying of cables and pipelines, marine scientific research and marine environmental protection. Under the conditions established by UNCLOS, and other rules of international law, all coastal and land-locked States can exercise the freedom of the High Seas,¹² which comprise, *inter alia*:

- The freedom of navigation;
- The freedom of overflight;
- The freedom to lay submarine cables and pipelines;
- The freedom to construct artificial islands and other installations permitted under international law;
- The freedom of fishing; and
- The freedom of scientific research

⁶ Articles 2 and 3 UNCLOS

⁷ Article 57 UNCLOS

⁸ Article 55 UNCLOS

⁹ Article 86 UNCLOS

¹⁰ Article 1 UNCLOS

¹¹ http://www.un.org/depts/los/clcs_new/commission_purpose.htm

¹² Article 87 UNCLOS

Obligations associated with this freedom include a **general obligation of states to protect and preserve the marine environment**,¹³ for example through global or regional cooperation to formulate and elaborate international rules, standards or recommended practices for the protection of the marine environment.¹⁴ Further information can be found at UNEP-WCMC (2017).¹⁵

UNCLOS provisions are complemented by two existing implementing agreements:

- The 1994 Agreement relating to the implementation of Part XI ('the Area') was adopted to elaborate on Part XI of UNCLOS.
- The 1995 Agreement relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks ('UN Fish Stocks Agreement')

1.2.4 A new Agreement for ABNJ (the BBNJ Process)

Further to the existing agreements mentioned above, a new implementing agreement under UNCLOS is being negotiated under the auspices of the United Nations. The agreement will focus on the **conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction** (BBNJ).¹⁶ The challenge of ensuring that marine biodiversity is effectively conserved in ABNJ has been part of extensive discussions for nearly 15 years. In 2015, the Biodiversity Beyond National Jurisdiction (BBNJ) Working Group¹⁷ provided recommendations (A/69/780*) to develop a new legally-binding instrument for the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, with a particular focus on four overarching issues, the 'package':

1. Marine Genetic Resources (including issues of benefit sharing)
2. Area Based Management Tools (including Marine Protected Areas)
3. Environmental Impact Assessments; and
4. Capacity building and the transfer of marine technology.

Since 2015, four Preparatory Committee meetings have been held to explore and provide recommendations to the General Assembly on the elements of a draft text for a new instrument. On 24 December 2017, the UNGA adopted Resolution 79/249 to convene and intergovernmental conference to "*consider the recommendations of the Preparatory Committee and to elaborate the text of an international legally binding instrument*" under UNCLOS (A/RES/79/249). The conference will occur over four sessions between 2018 and 2020. The discussion is therefore moving forward to a new phase, which began in September 2018 with the first of the four sessions, the last of which will be in early 2020. The progress towards the new instrument will be referred to in the document as the *BBNJ Process*.

The BBNJ Process specifically uses the term 'area-based management tool'. In this document we use the term 'area-based planning tool' to encompass a wider variety of approaches (as discussed above). It should be noted that planning could be an initial step towards management but is not always the case, particularly if it is concluded, through a planning process, that no management measures are required.

¹³ Article 192 UNCLOS, and included in Part XII on Protection and Preservation of the Marine Environment

¹⁴ Article 197 UNCLOS

¹⁵ <https://www.unep-wcmc.org/resources-and-data/governance-of-abnj>

¹⁶ <https://www.un.org/pqa/72/2018/04/16/bbnj/>

¹⁷ 'Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction' established in 2004 by UN General Assembly (A/RES/59/24)

2 Methodology

This study takes an inductive approach. The study begins by examining the state of area-based planning in ABNJ in four case study regions:

- Eastern Central (EC) Pacific;
- Mediterranean;
- North East (NE) Atlantic; and
- Southern Ocean.

The case study regions demonstrate a variety of contexts and methods for area-based planning in ABNJ. Key lessons, in relation to supporting and influencing factors, are subsequently identified from existing experiences, and the relevance of these findings to the two Pilot Regions proposed. This is illustrated in the pathway below.



In more detail, the approach involved five steps:

1. Scoping study

A scoping study of area-based planning globally was undertaken in order to **identify the four case study regions**. An inventory of area-based planning was created following a scoping review of the organisations working in ABNJ and where planning activities had taken place in ABNJ. Following this, four case study areas were chosen to reflect a variety of global locations, governance models and application of area-based planning methodology;

2. Analytical framework

Following the scoping study, an analytical framework was developed and applied to examine the four case study regions in detail. The Analytical Framework (This review of four case studies of area-based planning in areas beyond national jurisdiction (ABNJ) has highlighted eleven key findings from these regions, including conditions that enable area-based planning in areas beyond national jurisdiction. These findings have been explored, identifying specific characteristics of area-based planning (*in bold*) and their relevance to two Pilot Regions as part of the ABNJ Deep Seas Project: the Western Indian Ocean and the South East Pacific.

In areas beyond national jurisdiction, area-based planning is currently being undertaken by sectoral organisations, responsible for managing fishing and seabed mining. For instance, these organisations have developed area-based planning tools, **tailored** to their specific sectoral contexts and objectives, for example to mitigate their impact on the marine environment (Section 3.1.2). However, a major challenge to the application of area-based planning measures in ABNJ is that, in most cases, sectoral area-based measures are only binding upon their respective sectors and may therefore be undermined by the activities of another sector. Whilst these tools often aim to address the specific needs of their respective sector, issues of common concern amongst different sectors often exist. As such, coordination between different sectors or intergovernmental organisations is needed to facilitate the alignment of sectoral area-based planning tools to provide overlapping or **complementary measures** to address these issues and increase the value added by area-based planning in a particular area or region. The findings provide an illustration of different mechanisms for cross sectoral **communication, cooperation and coordination** which is of particular value when considering how this could occur in the future. To date, regional approaches have played an important role in facilitating planning, and there are a number of positive aspects to consider when developing the new ILBI, particularly, in the context of cross-sectoral area based planning.

Another key factor in the success of an area-based measure is its application in line with the **scale** of an activity and its associated impacts. For instance, large-scale issues, such as pollution from international shipping, may require a large-scale, area-based solution (Section 3.1.1), and large scale planning has been undertaken by the International Seabed Authority in relation to mining in the Clarion Clipperton Zone (Eastern Central Pacific Case Study). In addition, a number of sector-specific area-based measures can be **flexible** in their design and thus can be adapted as and when new information becomes available. Furthermore, the implications of a changing climate and increasing human activities in areas beyond national jurisdiction, including the occurrence of Illegal, Unregulated and Unreported (IUU) fishing, may require **adaptive** management of area-based planning measures (Section 3.1.3). Adaptation of area-based measures may also be driven by changes in sectoral or international priorities and objectives. For example, discussions surrounding Other Effective Conservation Area-based Measures (OECMs) have highlighted the role of area-based planning measures in contributing to global targets, such as Aichi Biodiversity Target 11; Sustainable Development Goal (SDG) 14, Target 14.5; and, international priorities identified in the ongoing international Biodiversity Beyond National Jurisdiction discussions.

Annex 1 was developed to determine why, where and how area-based planning has been undertaken in ABNJ, and to identify key lessons which may be relevant in other parts of the world. The framework combines tool-specific and organisation-specific questions. The primary focus was on organisations with a mandate for area-based planning, in particular looking at how they are interacting with each case study area. Thus, the framing of the report is on how area-based planning can be undertaken in ABNJ, and if cross-sectoral considerations are currently taken into account. The questions in the analytical framework guided the analysis of each case study. Following the development of detailed inventories from the analytical framework for each of the case study regions, the information was grouped under four overarching themes described below. These four themes drew out the information from the case-study areas in a way that aim to provide helpful findings applicable to other areas.

■ **Area-based planning tools**

The case study regions illustrate a range of area-based planning tools. In each area, the application of the tools was examined to identify why they were applied, their success, and their applicability to other regions, specifically the two pilot regions.

■ **Governance**

This study seeks to expand upon the basic information in the inventory by considering area-based planning tool governance. It is recognised that the governance context for ABNJ may change as a result of the on-going negotiations towards a legally binding instrument on the conservation and sustainable use of BBNJ. In each case study region, existing governance frameworks, organisations with mandates relating to area-based planning tools and the enforcement mechanisms for area-based measures were examined.

■ **Data and information**

Data and information has been highlighted as a key element for area-based planning in various international dialogues. For example, discussions in the *BBNJ process* have emphasised the importance of research and data requirements to inform area-based planning. In this study, the analysis primarily focuses on how data is used by an area-based planning tool, existing data exchange mechanisms and what approaches existing organisations have used to overcome gaps in data.

■ **Communication, cooperation and coordination**

Finally, a theme, entitled communication, cooperation and coordination is explored. Here the study examines practical considerations, including stakeholder participation (e.g. how the interests of developing countries are considered, the level of international support for the tool etc.), integration of different sectoral needs and how sector-specific tools could be used collectively to achieve a common goal (from a single sector perspective) and funding. Such considerations are identified as important elements in the Transboundary Planning in the European Atlantic (TPEA) Good Practice Guide for Marine Spatial Planning¹⁸ and the IOC-UNESCO MSP Guidance.¹⁹

¹⁸ <https://www.msp-platform.eu/projects/transboundary-planning-european-atlantic>

¹⁹ <http://msp.ioc-unesco.org/about/msp-at-unesco/>

3. Expert evaluation

Each of the case studies was evaluated by area-based planning experts to determine key factors which support or influence the application of area-based planning tools in ABNJ. Where possible, case studies were reviewed and verified by experts from each region.

4. Comparative analysis

A comparative analysis of the key supporting or influencing factors for area-based planning from each case study region was undertaken. Key findings or lessons relating to the different concepts and models used for area-based planning, as well as any influencing factors, were derived from the analysis.

5. Appraisal

Key findings were explored to identify their relevance to the different contexts and characteristics of the two Pilot Regions: the South East Pacific and Western Indian Ocean. Following the examination of the relevance of the key findings to each Pilot Region, a number of suggested actions were provided as potential points for discussion at the regional scale. They are not prescriptive, and it is not expected that every suggestion would be discussed or applied in both regions.



3 Key findings

3.1 Area-Based Planning Tools

Summary

Finding 1: Area-based planning tools can be used to integrate contextual considerations of purpose, sector and scale.

Finding 2: Area-based planning tools can be tailored to a region.

Finding 3: Successful area-based planning tools are adaptable.

A wide range of area-based planning tools exist, each with different characteristics. For example, the objectives a tool is being used to deliver, the sector to which a tool is relevant and the scale at which a tool can be applied. These characteristics support or influence the applicability of a tool in a particular context. There are dedicated, on-going discussions relating specifically to area-based management tools in the *BBNJ process*. The outcomes of this process may influence future area-based planning.

3.1.1 Finding 1: Area-Based Planning Tools can be used to integrate contextual considerations of purpose, sector and scale.

■ Area-based planning tools can operate at wide-ranging scales and have different focuses.

For example, tools can target benthic marine or seabed features, features of the water column, or a particular activity that has a potential impact in a specific area. For example, on the Portuguese Extended Continental Shelf (ECS), which extends below an area of High Seas, coordination was required to deliver a protected area that covered the two different types of jurisdiction. Coordination between Portugal and the Regional Seas Convention for the North Atlantic (OSPAR), led to the application of protected seabed areas and marine protected areas for the adjacent water column, respectively.²⁰ This is an example of where three-dimensional area-based planning has been undertaken.

■ Many sectors have developed area-based planning tools tailored to their specific context.

Sectors undertaking activities in the marine realm operate at a variety of scales and often have different aims and objectives for area-based planning. As a result, sectoral area-based planning is often tailored to the depths at which they are operating. For example, where they are undertaking activities on the seabed, sectors may employ area-based planning tools to mitigate adverse impacts on the benthic environment. For example, Vulnerable Marine Ecosystems (VMEs), supported by guidance from the FAO and implemented by Regional Fisheries Management Organisations, protect specific benthic features that are considered to be vulnerable to bottom fishing. APEIs are “no-mining” zones that aim to provide sea floor protection from the impacts of seabed mining (Figure 1). However, instead of targeting specific features, as is the case with VMEs, APEIs will protect a representative subset of all seabed ecosystems identified within the regions in which seabed mining occurs.

²⁰ O’Leary, B.C., Brown, R.L., Johnson, D.E., von Nordheim, H., Ardron, J., and Packeiser, T. (2012). The first network of marine protected areas (MPAs) in the high seas: The process, the challenges and where next. *Marine Policy* 36: 598-605, Elsevier Science

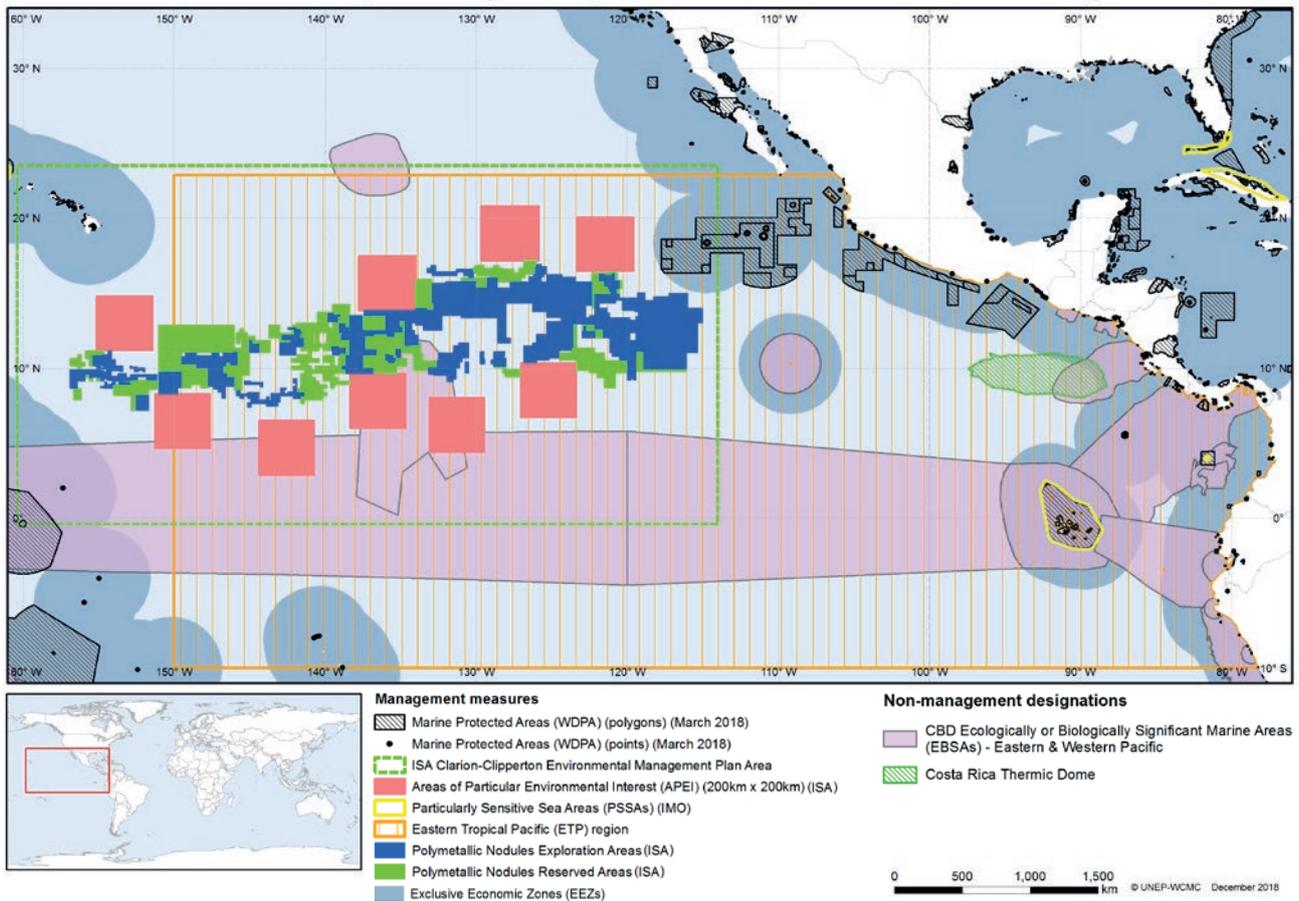


Figure 1: Map showing the locations of APEIs designated by ISA in the Central Eastern Pacific. APEIs have been specifically tailored to protect biodiversity and ecosystem structure and functioning from the potential impacts of deep-sea mining. APEI designations are also large-scale to ensure they are representative of the full range of habitats in the area (see finding 2). The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Global coastline and political boundaries data (1:1,000,000 scale) from the UN Boundaries dataset, UN Cartographic Section, 2016. See A3 for map layer citations.

One of the major challenges for the application of area-based planning tools in ABNJ is that in most cases area-based measures are sector-specific, because they have been introduced by sectoral organisations, and therefore are not binding upon other sectors. As such, sector-specific area-based measures may not be considered in the activities of another sector, also in part because such activities fall outside the scope of some organisations' mandates. For example, intergovernmental organisations such as the International Maritime Organization (IMO) and the International Seabed Authority (ISA) have been established by treaties to address a particular issue, international shipping and seabed mining, respectively. However, coordination between different sectors or intergovernmental organisations operating in the same area can facilitate cross-sectoral consideration of area-based planning tools.

Single sector tools can be aligned to provide complimentary measures across sectors in a specific area.

This is illustrated in the North East Atlantic Case Study Region, in which a collective arrangement between OSPAR and NEAFC facilitates cross-sectoral cooperation and coordination in area-based planning in ABNJ. A potential mechanism for different sectoral area-based planning tools to be more widely recognised and integrated across sectors is via State party inter-agency/ministry coordination. This is particularly true in instances where States are members of multiple intergovernmental organisations and have the power to support cross-sectoral integration across the range of sectoral considerations these organisations represent. Mechanisms for greater integration between sectors would be valuable for effective area-based planning across marine users, including national coordination between ministries responsible for engaging with the different aspects of ABNJ.

■ Activities that have the potential to have a wider impact on a large area may benefit from large-scale tools.

In the case of international shipping, the IMO has various area-based planning tools that can be applied on different scales. Examples include, the basin-wide MARPOL Special Area in the Mediterranean, which implements regulations relating to the prevention of oil and garbage pollution from shipping across the Mediterranean basin,²¹ and the IMO polar code, which applies to the entire Antarctic Treaty System (ATS) area.²² Such large-scale area-based planning tools are easier to implement in defined geographic areas, with readily enforceable bounds (i.e. defined by a Convention or coastal boundaries).

Another tool developed by the IMO is Particularly Sensitive Sea Areas (PSSAs),²³ which can be legally applied both within and beyond the limits of national jurisdiction.²⁴ Each PSSA has specific Associated Protective Measures, which are tailored to the area in question. For example, the Galapagos PSSA (Ecuador) includes an 'Area to be Avoided', two traffic separation schemes and mandatory ship reporting. Many of the hazards associated with shipping relate to the proximity to the coast and shipping density in restricted waters. The aim of the PSSA is to protect the unique and natural Galapagos Islands from shipping damage following a number of incidents which could have caused significant damage and an assessment of potential risk in the future.²⁵ Shipping impacts, such as pollution, ship strikes and underwater noise, have the potential to affect the ecosystems and species in ABNJ. To date, there are sixteen PSSAs designated within national jurisdictions around the world, however, there are no PSSAs located in ABNJ because of the challenges with enforcing the measures.

Pilot Region Relevance

In the two Pilot Regions, the drivers behind area-based planning are currently sectoral and resource-based.

The ABNJ Deep Seas Project is focused on sustainable fisheries and biodiversity conservation, and as a result, key findings for the pilot region are framed in this context.

Some area-based planning tools are already applied in both Pilot Regions, however, formal coordination mechanisms across sectors and organisations may need to be developed. There is the potential for area-based planning tool designation to go further. For example, in particular, the **fisheries** sector has made substantial progress.

In the Western Indian Ocean, access to bottom fisheries is regulated throughout the entire Southern Indian Ocean Fisheries Agreement (SIOFA) area. Conservation and management measures include a Compliance Monitoring Scheme (CMS), Vessel Monitoring System (VMS), port inspections, gear restrictions and bottom fishing impact assessments.²⁶

In the South East Pacific region, South Pacific Regional Fisheries Management Organization (SPRFMO) manages large-scale, access-restricted areas. Conservation management measures include bottom fishing measures, vessel monitoring and measures for specific fish stocks, for example for the Chilean jack Mackerel.²⁷

In addition to fisheries management, area-based planning relating to **exploration for deep seabed minerals is progressing.**

In the Indian Ocean, ISA has entered into a total of four contracts for exploration of polymetallic sulphides and one contract for the exploration of polymetallic nodules. The ISA is advancing in the development of regional environmental management plans in the Area, including in the Indian Ocean where there are currently exploration contracts. Although the boundary of this planning area is yet to be defined, the focus will be the Indian Ocean triple junction ridge and the nodule-bearing province.²⁸

In the South East Pacific, there are currently no mining operations planned. Presently, contract areas for mineral exploration (polymetallic nodules) are found in the Eastern Central Pacific Clarion Clipperton Zone, to the north of the CPPS area. However, it may be beneficial to understand more about marine connectivity to assess if there is any potential reason to take into account this mining area in marine planning for the South East region.

In the two Pilot Regions, neither Regional Seas Organisation has a mandate for environmental protection in their respective ABNJ. Current priorities in both Pilot Regions relate to area-based planning within national jurisdiction.

Biodiversity identification processes have been undertaken within both regions. EBSAs,²⁹ KBAs and IBAs³⁰ have been described in both Pilot Regions, following expert workshops in each region.

3.1.2 Finding 2: Area-Based Planning Tools can be tailored to a region.

■ The concept/design of many area-based planning tools provides an underpinning framework to guide area-based measures and is flexible enough to be tailored.

Many regions therefore have specific interpretations of area-based planning tools in order to meet their needs and objectives. One such example is the ability of Regional Fisheries Management Organisations (RFMOs) to apply regionally-relevant fisheries area-based measures, for instance, Haddock Boxes established in the Northeast Atlantic³¹ by NEAFC. In the Mediterranean region, various area-based planning tools have also been tailored to meet specific needs. These include: the VME concept, which has been tailored to create Fisheries Restricted Areas (FRAs)³² in line with regional fisheries needs; and Marine Protected Areas, tailored to provide bespoke area-based measures known as Specially Protected Areas of Mediterranean Importance (SPAMIs).³³ These SPAMIs have been applied both within and beyond national jurisdiction.

Similarly, in the Southern Ocean, Marine Protected Areas have been tailored in line with the goals of the Antarctic Treaty. (Figure 2) These are known as 'Antarctic Specially Protected Areas' (ASPA) and are designated under the Antarctic Treaty as areas "to protect outstanding environmental, scientific, historic, aesthetic or wilderness values".³⁴ These areas are to be kept without human interference, enabling future comparison with other areas.³⁵ Another type of Antarctic-specific designation, is the 'Antarctic Specially Managed Areas' (ASMA). These tools are used to assist the planning and coordination of human activities, and to reduce the likelihood of potential conflicts between such activities.²⁸ They are intended to improve cooperation between parties operating in close proximity, whilst simultaneously minimising the environmental impacts of human activities.

Potential Actions

- Identify what area-based planning activities are currently occurring in the two pilot regions (this work is being undertaken as part of the ABNJ Deep Seas Project). Existing area-based planning tools within each Pilot Region are identified in UNEP-WCMC (2017).
- Explore connectivity and cumulative impacts assessment for both Pilot Regions to understand the potential risks to biodiversity in ABNJ. (This work is currently being undertaken as part of the ABNJ Deep Seas Project).
- Understanding what the existing biodiversity identification processes have found and identifying what the relevance is for the coastal states, would be valuable. Such work would link directly to the ongoing *BBNJ Process*.

²¹ <http://www.imo.org/en/OurWork/Environment/SpecialAreasUnderMARPOL/Pages/Default.aspx>

²² <http://www.imo.org/en/MediaCentre/HotTopics/polar/Pages/default.aspx>

²³ Roberts J, Chircop A, Prio S (2010) Area-based Management on the High Seas: Possible Application of the IMO's Particularly Sensitive Area Concept. *The International Journal of Marine and Coastal Law* 25: 483-522

²⁴ International Maritime Organization (IMO). 2005. Resolution A.982(24) Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas.

²⁵ <http://www.imo.org/en/KnowledgeCentre/IndexofIMOResolutions/Marine-Environment-Protection-Committee-%28MEPC%29/Documents/MEPC.135%2853%29.pdf>

²⁶ <https://www.apsoi.org/>

²⁷ <https://www.sprfmo.int/measures/>

²⁸ Preliminary strategy for the development of regional environmental management plans for the Area <https://ran-s3.s3.amazonaws.com/isa.org.jm/s3fs-public/files/documents/isa24-c3-e.pdf>

²⁹ <https://www.cbd.int/ebsa/>

³⁰ <http://www.keybiodiversityareas.org/site/mapsearch>

³¹ https://www.neafc.org/system/files/Rec_05_Rockall_haddock-for-2018.pdf

³² <http://www.fao.org/gfcm/data/map-fisheries-restricted-areas/en/>

³³ <http://www.rac-spa.org/spami>

³⁴ https://www.ats.aq/e/ep_protected.htm

³⁵ https://www.ats.aq/documents/recatt/Att004_e.pdf

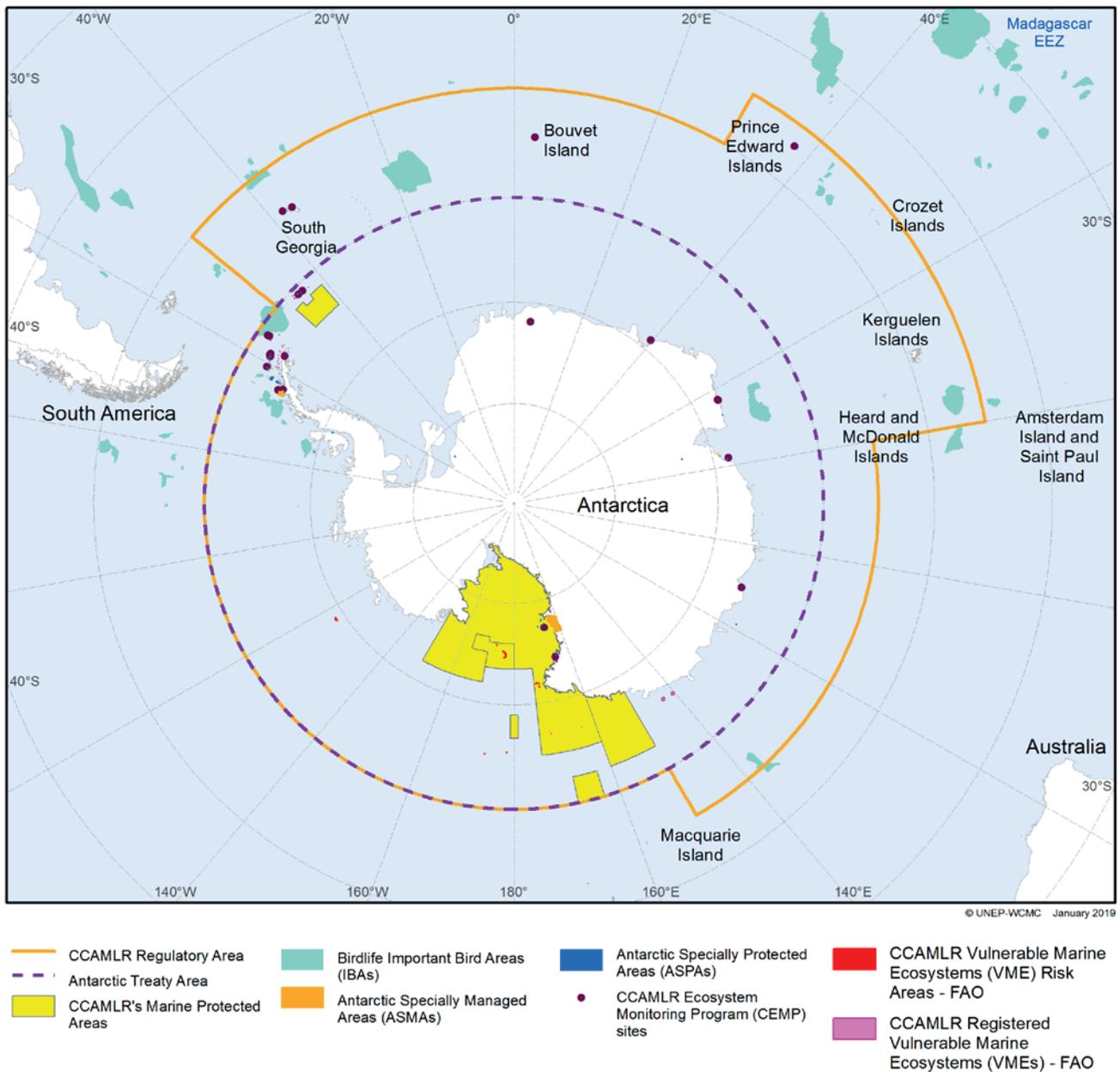


Figure 2: Area-based planning tools implemented in the Antarctic region. In addition to MPAs and VMEs, specifically tailored tools such as ASMAs and ASPAs have been developed to assist the planning and coordination of human activities, and to reduce the potential for conflict between such activities.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Global coastline and political boundaries data (1:1,000,000 scale) from the UN Boundaries dataset, UN Cartographic Section, 2016. See A3 for map layer citations.

Currently, nine Areas of Particular Environmental Interest (APEI) have been identified on the basis of robust scientific criteria to mitigate potential adverse impacts of deep seabed mining in the Central Eastern Pacific Region in the Clarion-Clipperton Fracture zone. Established by the ISA, APEIs are large-scale and are created through a Regional Environmental Management Plan process which allows them to be specifically tailored to the region in which they are applied (Figure 1).³⁶ At this stage, they have only been designated in the Clarion Clipperton Zone area, but there are plans to develop additional regional environmental plans in other areas where there are currently exploration contracts proposed.³⁷

³⁶ <https://www.isa.org.jm/environmental-management-plan-clarion-clipperton-zone>

³⁷ See ISA council resolution on the preliminary strategy for the development of regional environmental management plans for the Area. <https://www.isa.org.jm/sites/default/files/files/documents/isba24-c3-e.pdf>

■ Regional interpretations of area-based planning tools can increase applicability

As demonstrated above, many area-based planning tools are flexible in their design. A practical advantage of such flexibility is the ability to take into account region-specific nuances and to ensure a tool supports the objectives of the region. However, the existence of many different interpretations of a particular tool may result in complexities relating to terminology and classification, awareness of measures, duplication of effort and capacity limitations. When establishing a new regionally-tailored measure, it is therefore important to consider any complexities that may arise, and to ensure that the tool's purpose and relationship with existing measures is clearly and simply communicated.

Pilot Region Relevance

It should be recognised that within the Pilot Regions, there is **potential to tailor area-based planning tools** to meet the specific characteristics of the region, if required in the future.

To illustrate this, in the Western Indian Ocean, Benthic Protected Areas were applied to the seabed by the Southern Indian Ocean Deep Seas Fishers Association (SIODFA) in the absence of a RFMO. SIODFA is an association of deep-sea fishing companies operating in Indian Ocean ABNJ, which, recognising the need to conserve and sustainably manage the deep seabed, has implemented voluntary Benthic Protected Areas, which are closed to bottom trawling. In 2012, a RFMO for the Western Indian Ocean was established – Southern Indian Ocean Fisheries Agreement (SIOFA). The benthic protected areas, established by SIODFA, are presently being assessed for their potential to be VMEs under the RFMO.

Potential Actions

- The results of this study indicate that area-based planning tools can be adapted and flexible at the regional scale. Therefore, for both Pilot Regions it should be recognised that it is possible to tailor area-based planning to the regional context where necessary.

3.1.3 Finding 3: Successful area-based planning tools are adaptable.

■ Tool flexibility and the option for adaptive management is useful where information or data is limited, of particular relevance for ABNJ.

The adaptation of planning to new data allows action where limited data is available at the start of a process. Where the aim of a tool is to protect processes or features which are fixed in space, area-based planning tool boundaries are applied to encompass these. Such boundaries may be adjusted as and when new information becomes available, for example, the extent of a specific feature. Such flexibility is especially relevant to ABNJ, in which significant data and information gaps currently exist, but with improvements in technology and access, more data is likely to be available in the future.

Area-based planning tools that are spatially flexible include VME closures. Specifically, within the North East Atlantic, an algorithm based on VME indicator species has been applied by the International Council for the Exploration of the Sea (ICES) to determine the likelihood of encountering a VMEs.³⁸ The boundaries of a designated VME closure can be spatially adjusted if more information is obtained.³⁹

Features that are stable in time but move in space may require an area-based planning tool that is able to respond to these movements, for example oceanographic features. The Costa Rica Thermal Dome (CRTD) (a complex oceanographic phenomena) is an example of a persistent ecosystem feature which moves through the High Seas and EEZs of Central American countries.⁴⁰ Such a feature illustrates the need for dynamic ocean management⁴¹ that considers the need for effective cooperation between the public, private actors and the international community.

³⁸ <http://extwprlegs1.fao.org/docs/pdf/mul165665.pdf> / http://ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2013/WGDEC/wgdec_2013.pdf

³⁹ http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/Special_requests/nea.fc.2017.11.pdf

⁴⁰ J.A. Jiménez, The Thermal Dome of Costa Rica: an oasis of productivity off the Pacific coast of Central America, MarViva Foundation, San José, Costa Rica, 2017, p. 106 <http://www.marviva.net/en/library/marine-spatial-planning/thermal-dome-costa-rica-oasis-productivity-pacific-coast-central>

⁴¹ Maxwell *et al.* (2015). Dynamic Ocean Management: Defining and conceptualising real-time management of the ocean. *Marine Policy*, 58, 42-50 <https://doi.org/10.1016/j.marpol.2015.03.014>

The location of MPAs tend to be spatially fixed and the process of MPA designation in the High Seas is often complex. As such, a simple mechanism through which the boundaries of a High Seas MPA can be easily adjusted is not always clear or may not exist. However, in order for tools to be responsive to future change, such as those resulting from climate change, their design should be adaptable, for example, adaptive management is a key attribute of Marine Spatial Planning.⁴² Adaptability such as this may facilitate increases in ecosystem resilience to changes and support the inclusion of areas which may be considered ecosystem refugia in the future.⁴³ The effects of climate change are starting to be noticed in a variety of regions, including the NE Atlantic where some fish species are starting to change their ranges.⁴⁴

Pilot Region Relevance

In light of emerging marine uses, and a changing climate, it is likely that future area-based planning processes across the globe will need to incorporate spatial and temporal flexibility.

Such flexibility would allow for the continued protection of changing features or habitats. For example, ABNJ contains features of biodiversity importance that move with oceanic currents. In addition, as more data is gathered it would be beneficial to use new scientific evidence to adapt existing area-based management measures or tools to ensure they can adequately deliver against their objectives. In both pilot regions, there is the potential for the effects of a changing climate to be felt, as a global issue. In addition, any area based planning should be able to take into account changing needs of both the people and biodiversity.

Potential Actions

- If any area-based planning is undertaken, recognition of the fact that adaptive processes should be built into the planning cycle allows any designation of measures to respond to changing situation including climate change or the creation of new data on the feature.

⁴² UN Environment (2018). *The Contributions of Marine and Coastal Area-Based Management Approaches to Sustainable Development Goals and Targets*. UN Regional Seas Reports and Studies No. 205

⁴³ Johnson, D., Adelaide Ferreira, M., & Kenchington, E. (2018). Climate change is likely to severely limit the effectiveness of deep-sea ABMTs in the North Atlantic. *Marine Policy*, 87, 111–122. <https://doi.org/10.1016/J.MARPOL.2017.09.034>

⁴⁴ <https://onlinelibrary.wiley.com/doi/full/10.1111/gcb.12513>

3.2 Data sharing and availability

To undertake area-based planning, various types of data and information are required to inform the development of comprehensive and targeted area-based measures. In ABNJ, due to their vast size and remoteness, there is often a paucity of available biodiversity data for the deep pelagic ocean to inform area-based planning.⁴⁵ There is greater availability of oceanographic data on physical features, currents and bathymetry, however this is often sparse, with different resolutions in different regions. For example, only 10-15% of the global seafloor has been mapped to approximately 100 m resolution.⁴⁶ Key challenges in using data to inform area-based planning not only include data paucity, but also the selection of appropriate data, the identification of where gaps in data exist and how they are addressed, and the determination of long-term data storage and exchange mechanisms. The findings below, provide a starting point in overcoming some of these challenges.

Summary

Finding 4: The identification of the types of data required, and existing sources of data and information, supports area-based planning

Finding 5: Data gaps should be identified and addressed to support cross-sectoral area-based planning

Finding 6: Mechanisms for long-term data storage and exchange must be considered

3.2.1 *Finding 4: The identification of data types, information and existing sources supports comprehensive area-based planning*

■ There are many different types, formats and resolutions of data that can be used to inform area-based planning processes in ABNJ.

Typical data available includes: **scientific data**, collected by scientific institutions; **data from industry**, such as fishery VME reports or mining contractors' baseline studies; **data and information on human activities**, such as Vessel Monitoring System (VMS) data on fishing vessels, Automatic Identification System (AIS) shipping data, or the location of submarine telecommunications cables; and **socially or culturally derived data**, such as traditional knowledge. To undertake comprehensive area-based planning, data on human activities, and their **cumulative impacts** on the marine environment over time,⁴⁷ including new and emerging ocean uses, is required. For example, the emerging Blue Economy sectors relating to bioprospecting, geoengineering and open-ocean aquaculture. As noted above, biodiversity data for ABNJ is limited. In recognition of these data gaps, discussions during the BBNJ process have explored the potential for a clearing-house mechanism to facilitate the exchange of data and information relevant to the conservation and sustainable use of biodiversity in areas beyond national jurisdiction.^{48, 49} In particular, such a mechanism has been identified as an issue that is relevant to all elements of the 'package' and as such, could facilitate the sharing of information on marine genetic resources, as well as area-based management tools and environmental impact assessments.

Area-based planning processes should aim to identify existing sources of data, collected by different actors operating in ABNJ, which can be used to support the process.

For example, selected data and information collected within the North East Atlantic region and its use is supported by ICES. ICES is a global organization that develops science and management advice as requested by member countries and international organizations and commissions to support sustainable ocean use. NEAFC relies on ICES to provide scientific advice, derived from best-available scientific information, to inform its policy decisions. In addition to NEAFC, the ICES supports two regional seas conventions and one other RFMO. This demonstrates where existing sources of information and data, and their holding organisations, can be used to provide considerable efficiencies in supporting area-based planning in ABNJ. This example emphasises the important role independent, peer-reviewed sources of information can play in supporting area-based planning decisions.

⁴⁵ Webb, T. J., Vanden Berghe, E., & O'Dor, R. (2010). Biodiversity's Big Wet Secret: The Global Distribution of Marine Biological Records Reveals Chronic Under-Exploration of the Deep Pelagic Ocean. *PLoS ONE*, 5(8), e10223. <https://doi.org/10.1371/journal.pone.0010223> <https://doi.org/10.1371/journal.pone.0010223>

⁴⁶ <http://moocs.southampton.ac.uk/oceans/2014/10/04/mapping-the-deep-and-the-real-story-behind-the-95-unexplored-oceans/> <http://moocs.southampton.ac.uk/oceans/2014/10/04/mapping-the-deep-and-the-real-story-behind-the-95-unexplored-oceans/>

⁴⁷ Halpern, B. S., Frazier, M., Potapenko, J., Casey, K. S., Koenig, K., Longo, C., Walbridge, S. (2015). Spatial and temporal changes in cumulative human impacts on the world's ocean. *Nature Communications*, 6(1), 7615. <https://doi.org/10.1038/ncomms8615>

⁴⁸ http://www.un.org/ga/search/view_doc.asp?symbol=A/AC.287/2017/PC.4/2

⁴⁹ <http://undocs.org/en/A/CONF.232/2018/7>

■ The types of data and information necessary to support area-based planning in ABNJ are often dependent on the drivers for area-based planning.

Drivers may include: an organisational **mandate or responsibility**, such as biodiversity conservation; the **presence of potential resources**, such as deep seabed minerals near a hydrothermal vent; the **protection of ecosystems**, such as seamounts or cold coral reefs from specific activities; or a combination of these. For example, in the Eastern Central Pacific region, the primary driver behind area-based planning efforts is the presence of potential seabed mineral resources. Under UNCLOS, the International Seabed Authority (ISA) is the organization through which States Parties to the Convention shall, in accordance with the regime for the seabed and ocean floor and subsoil thereof beyond the limits of national jurisdiction (the Area) established in Part XI of UNCLOS, organize and control activities in the Area, particularly with a view to administering the resources of the Area,⁵⁰ including taking necessary measures in accordance with UNCLOS with respect to activities in the Area to ensure effective protection for the marine environment from harmful effects which may arise from such activities.⁵¹ Therefore, another key driver behind area-based planning in this region originates from the mandate of the existing competent authority, and its decision to implement a regional environmental management plan for the Clarion-Clipperton Zone.⁵² To support environmental management, in mineral exploration, contractors are required to collect baseline environmental data within their contract areas. ISA Recommendation ISBA/19/LTC/8 states that contracts for mining exploration in the Area require contractors to gather oceanographic and environmental baseline data and to establish baselines against which to assess the likely effects of its programme of activities under the plan of work for exploration on the marine environment.⁵³ Organisations with a mandate that includes ecosystem conservation, such as fisheries management bodies and Regional Seas Organisations, generally follow an ecosystem approach. This approach requires the collection and collation of best available scientific information about the ecosystem, including both physical and biological information. CCAMLR is working on development of an ecosystem approach, and has been evaluating management strategies.⁵⁴ Data is an important part of this process, as is understanding how to act in the absence of data. Information from sources such as observer programmes can support data, and provide advice where routine independent research is too expensive.⁵⁵

An example in which there are numerous area-based designations and descriptions is in the Mediterranean. Multiple organisations have identified areas for different purposes (Figure 3).

⁵⁰ Article 156(1) and 157(1) the United Nations Convention on the Law of the Sea (UNCLOS).

⁵¹ UNCLOS Articles 145

⁵² Decision of the Council relating to an environmental management plan of the Clarion-Clipperton Zone, Document ISBA/18/C/22, 26 July 2012

⁵³ Biodiversity data is currently being collected and collated into an Atlas of Abyssal Megafauna Morphotypes of the Clarion-Clipperton Zone <https://www.isa.org.im/biodiversity-0>

⁵⁴ <https://www.ccamlr.org/en/organisation/ecosystem-approach>

⁵⁵ http://www.un.org/depts/los/consultative_process/documents/7_constable.pdf

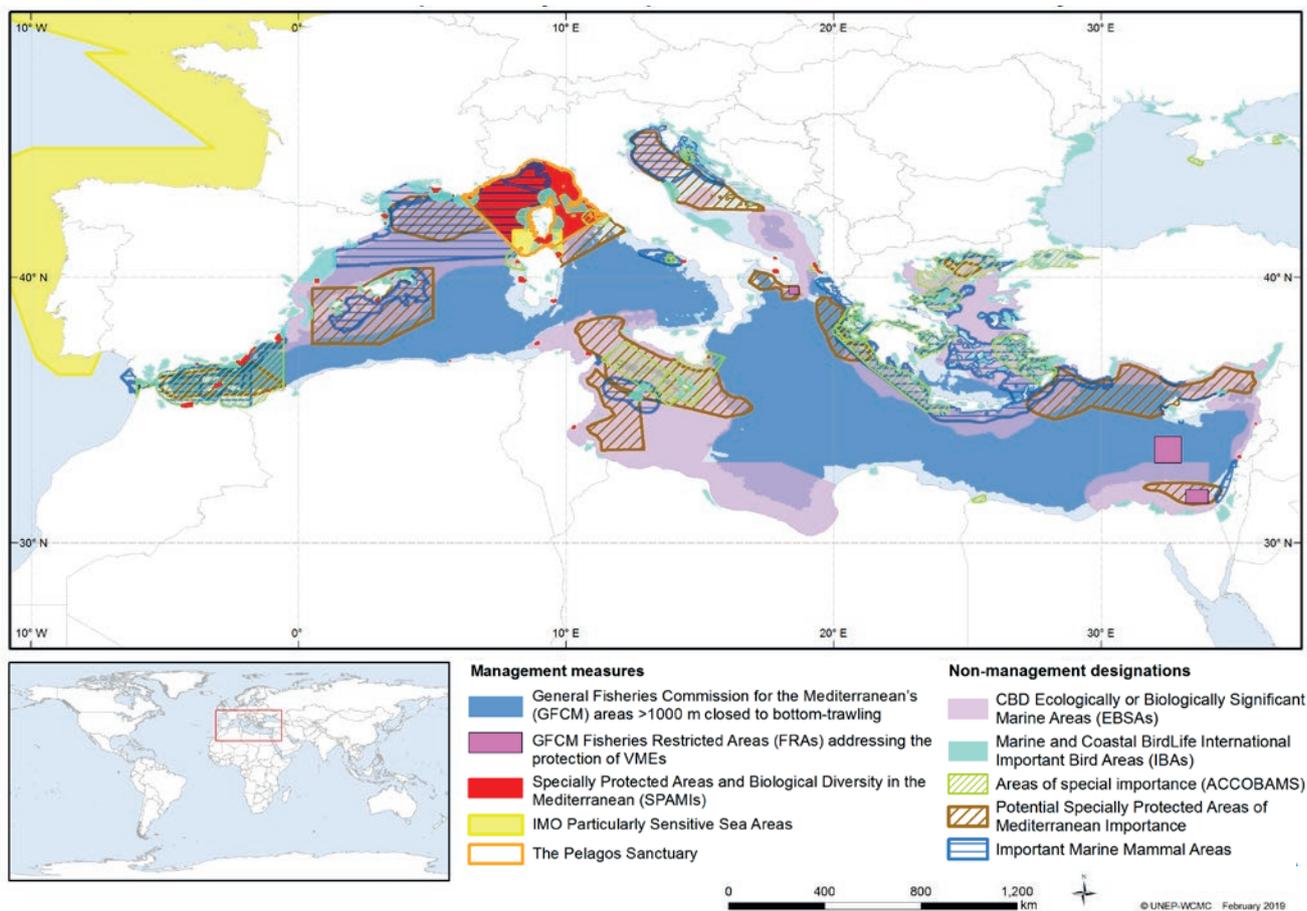


Figure 3: There are many different types of area-based designation in the Mediterranean. A selection of these are illustrated, including sectoral measures relating to environmental conservation, fishing and shipping. As a result, it may be valuable to have mechanisms to ensure communication between all those involved.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Global coastline and political boundaries data (1:1,000,000 scale) from the UN Boundaries dataset, UN Cartographic Section, 2016. See A3 for map layer citations.

In the absence of available data, area-based planning may be applied under a precautionary approach, which allows for action to protect the environment in the case of scientific uncertainty.

Such is the case in the North East Atlantic region, in which both NEAFC and OSPAR have applied the precautionary approach where data or scientific information is uncertain, unreliable or inadequate. CCAMLR also applies the precautionary approach, which it is part of its management principle. Designation of the East Antarctic and the Ross Sea MPAs, demonstrates CCAMLR's commitment to the precautionary principle.⁵⁶

⁵⁶ https://www.asoc.org/storage/documents/CCAMLR-SM-IIBG06_AOA_Briefing_2_Applying_the_Precautionary_Principle_to_Marine_Reserves_and_Marine_Protected_Areas.pdf

3.2.2 **Finding 5: Data gaps should be identified and addressed to support cross-sectoral area-based planning**

■ **Global biodiversity datasets and data on human pressures are currently lacking.**

Despite the efforts of large international projects, such as the decade-long Census of Marine Life,⁵⁷ the spatial coverage and resolution of global biodiversity datasets remains lower than their counterparts on environmental properties. Additionally, datasets on human pressures in ABNJ are also limited. For example, Mar Viva have highlighted the difficulty in acquiring socioeconomic data and information on human activities in the Eastern Central Pacific.⁵⁸ However, area-based planning tools may still be used in data-poor scenarios. Tools may be applied under the **precautionary approach** and later supported by ground-truthed assessments, as is the case for many VME closed areas applied by NEAFC.⁵⁹ Some work has been done by Halpern *et al.* to identify cumulative impacts globally which is a helpful first step in understanding the pressures on the marine environment.⁶⁰

■ **Data gaps can be addressed using syntheses of existing data**

Before data gaps can be addressed, they need to be identified. Syntheses of existing data are often undertaken and the resulting products used to identify data gaps which need to be addressed to support area-based planning. An example of this approach is Mar Viva's Costa Rica Thermal Dome (CRTD) Initiative, which is seeking support to address data gaps. The initiative aims to develop an Atlas of CRTD species' spatial and temporal distributions⁶¹ to identify and subsequently bridge biodiversity data gaps for this regional phenomenon. Following data gap identification, various options can be explored to address them. Some data gaps can be bridged using **modelling techniques**. For example, ICES has used **predictive habitat modelling** to identify where VMEs may occur in the North East Atlantic.⁶² Predictive habitat modelling for VMEs has enabled the NEAFC to take appropriate conservation measures, which can be reviewed when further data is collected. **Habitat suitability models** may also contribute to regional planning for the deep-sea mining industry.

Other large-scale, international projects, such as the GEF-ABNJ Deep Seas Project, have the potential to help identify available data and information to support area based planning in ABNJ. Such projects can also provide recommendations or guidance on future data needs and management requirements, for example through the convening of regional data collection or management workshops to build capacity. In the Mediterranean, workshops comprised of regional experts, have been successfully convened to collate regional knowledge and data and to identify areas of importance for specific species, including Ecologically or Biologically Significant Marine Areas (EBSA), Important Bird and Biodiversity Areas (IBA) (BirdLife) and Important Marine Mammal Areas (IMMA).

■ **In some cases, data gaps may only be successfully bridged via the collection of new data and information.**

In ABNJ, data collection is costly in terms of finance, capacity and time, and should therefore target priority areas to make the most effective use of resources. The establishment of partnerships and coordination between sectors and/or international organisations operating in ABNJ may offer a cost-effective solution for the collection of new data to support area-based planning. For example, the ECOVUL/ARPA Interdisciplinary Project on interactions between deep-water bottom trawl fisheries and their supporting ecosystems on the Hatton Bank fishing area, has contributed data which has been used to inform the application of area-based measures relating to VMEs in the North-East Atlantic.⁶³

⁵⁷ <http://www.coml.org/>

⁵⁸ Jimenez, J.A. (2017). *The Thermal Dome of Costa Rica: An oasis of productivity off the Pacific Coast of Central America*. MarViva Foundation, San Jose, Costa Rica, 106 pp.

⁵⁹ <http://www.fao.org/3/a-i5952e.pdf>

⁶⁰ Halpern, B.S., Frazier, M., Potapenko, J., Casey, K.S., Koenig, K., Longo, C., Lowndes, J.S., Rockwood, R.C., Selig, E.R., Selkoe, K. a. *et al.* 2015. Spatial and temporal changes in cumulative human impacts on the world's ocean. *Nature Communications*, 6(May): 7615.

⁶¹ http://gobi.org/projects/iki_wp3_crtcd/

⁶² <http://www.ices.dk/marine-data/data-portals/Pages/vulnerable-marine-ecosystems.aspx>

⁶³ http://www.un.org/depts/los/reference_files/Presentations/PPT/Segment1/PDM.pdf

■ Not all apparent data gaps reflect an absence of data, rather issues of data accessibility.

Data access restrictions may arise due to commercial confidentiality regulations, or perhaps the concern that the data could be misinterpreted. Many marine sectors are re-assessing what is considered confidential data. As such, data from the fishing industry is becoming more widely available and accessible, including Automatic Identification System (AIS) data and products derived from it, such as Global Fishing Watch.⁶⁴ The ISA is also in the process of developing a database of publically-available environmental information collected by the exploration contractors and other stakeholders in ABNJ. A recent side event at the first Intergovernmental Conference on an international legally binding instrument on BBNJ demonstrated the new ISA portal although some data is likely to remain confidential to contractors.

Pilot Region Relevance

Data gaps remain a challenge regionally and globally: It was recognised that for the Western Indian Ocean and South East Pacific regions, there are also significant data gaps in ABNJ.

In the **Western Indian Ocean** there are complex issues surrounding the multiple industries and countries that would need to be involved with data sharing in the Indian Ocean. A first step is to identify what sectoral data exists and if biodiversity data is included.

In the **South East Pacific** there are currently fewer activities occurring, reducing the number of sectors that need to engage with each other at this time. A first step is to identify what sectoral data exists and if biodiversity data is included. Connectivity within the South East Pacific is also something that could be explored to identify where there may be particular links for biodiversity or for the flow of possible stressors to the environment. Habitat suitability modelling have been used in this region for five species of large cetaceans with data available from SIBIMAP, an on-line biodiversity system hosted by CPPS. This exercise included EEZ and ABNJ.⁶⁵

Potential Actions

- In any future plans for data collection or data sharing infrastructure, capacity development and relationship building, should be included in the process where possible.
- It is recognised that data gaps exist. Capacity development at a regional scale to understand existing data repositories would be beneficial. Ensuring increased capacity would allow regional experts to learn from and support global data repositories, some of which have regional nodes: such as OBIS and GBIF, or global metadata repositories such as Ocean+ Data.
- Expanding access to existing and future data could be a mechanism to improve understanding in ABNJ. Therefore, where governments or sectors hold data, making it available for scientific process should be considered. Where new data is collected, government parties to processes should consider advocating options for open access. Overall, transparency and clarity over the existence of data should be championed.

3.2.3 **Finding 6: Mechanisms for long-term data storage and exchange must be considered**

■ Global datasets provide an excellent resource to support area-based planning in ABNJ.

However, due to the nature of global datasets, they are inherently very large and can be difficult to navigate and identify the required information. For example, the Ocean Biogeographic Information System, OBIS. The identification of— and access to— global datasets can also be challenging, as many datasets are not stored in global repositories, rather they are held by individual sectors, with limited mechanisms for integrating and exchanging data across sectors. Current data repositories vary from region to region. For example, CCAMLR data are all contained within a single repository,⁶⁶ and data for the North-East Atlantic Region are held by various sectoral organisations. Locating appropriate data, for example to support regional workshops, and integrating different datasets to support cross-sectoral area-based planning processes in ABNJ can therefore present a serious technical challenge.

⁶⁴ <http://globalfishingwatch.org/>

⁶⁵ www.sibimap.net.

⁶⁶ <https://www.ccamlr.org/en/data/ccamlr-data>

■ **The majority of existing datasets available for ABNJ are subject to varying degrees of accessibility, ranging from institutional access only, to full public access.**

For example, in the case of the ISA article 14 of Annex III to the United Nations Convention of the Law of the Sea indicates that data necessary for the formulation of rules and regulations as well as procedures concerning the protection of the marine environment are not considered proprietary. This position is reiterated in part IV of all regulations for exploration of Polymetallic nodules, sulphides and cobalt crusts.⁶⁷ ISA also provides access to a series of maps on its website. Another regional data portal, in this case the CCAMLR data portal, is used as the primary source for managing spatial data. Some data are freely available to member countries, and some are publically available.⁶⁸ This data is then used to inform scientific and policy decisions in the Southern Ocean Region. In the Mediterranean, the ODYSSEA project aims to bring all data for the Mediterranean marine environment together into one single public portal. However, this portal is still in development.⁶⁹ Other public data portals do already exist, such as the ICES data viewing portal, which is used to display some, but not all, information for specific regions.⁷⁰ Independent organisations such as ICES, can act as scientific hubs and provide multiple different sectoral organisations with support, i.e. in area-based planning. Such approaches can therefore provide resource efficiencies and also support scientific exchange between the different sectors. Both RFMOs and Regional Seas Organisations use ICES support.

■ **Regional data hubs could provide a mechanism for long-term, centralised data storage.**

Regional Seas Organisations can be strong candidates for hosting centralised data repositories in their Secretariats and/or Regional Activity Centres. However, there are a number of logistical challenges associated with being the host organisation. Maintaining data is expensive and repositories require sufficient funding and dedicated personnel for the task. Data are not static; for repositories to support area-based planning they need to be constantly updated to incorporate new data. Data also need to be standardised and agreement is needed to enable application and comparability (for example metadata protocols). For datasets to be interpreted, they may need to be processed, requiring funding and technical expertise. Standardisation of data, especially satellite data, can be very resource intensive. High capital investment in data standardisation and processing can lead to countries or organisations being reluctant to share their data products. There also needs to be a good (often formalised) working relationship between stakeholders and the host organisation for sectors to trust that their data will be handled according to their terms of use and shared responsibly.

Pilot Region Relevance

Data management and sharing options in the pilot regions are not fully developed for ABNJ globally and there are few regional data portals.

In the **South East Pacific** the SPINCAM project “Southeast Pacific data and information network in support to integrated coastal area management” places CPPS ahead of Regional Seas Organisations in other parts of the world in terms of data infrastructure, with data sharing between the countries in the region (Chile, Colombia, Ecuador, Panama, Peru) being a key component in the development of the project. The SPINCAM portal contains data and information relevant to the coastal zone, including wetlands and other key coastal-marine ecosystems, and currently there is only one layer on adjacent ABNJ on ocean substrate. For data within ABNJ, CPPS and other regions are largely reliant on global data layers and broad fishing statistics.⁷¹

For the **Western Indian Ocean** it is recognised that a centralised data portal would be valuable. The Nairobi Convention is in the process of developing a Clearinghouse mechanism which should go some way to supporting their needs.⁷²

Globally it would be valuable to have a mechanism to share sectoral specific management approaches through a single central data sharing portal enabling sectors to more easily understand what others are doing in the same area.

Potential Actions

- Where regional data portals exist, consider their ability to hold ABNJ relevant data. Where data storage and sharing infrastructures exist (global or regional), consider their ability to hold ABNJ-relevant data.

⁶⁷ ISBA 19/c/17, ISBA 16/A/12/Rev.1,

⁶⁸ <https://www.ccamlr.org/en/data/access-and-use-ccamlr-data>

⁶⁹ <http://odysseaplatform.eu/>

⁷⁰ <http://gis.ices.dk/sf/>

⁷¹ http://wcmc.io/ABNJ_portalpaper_cpp

⁷² http://wcmc.io/ABNJ_portalpaper_wio

3.3 Communication, Cooperation and Coordination

The success of area-based planning in ABNJ ultimately depends on building a framework of trust between the organisations operating in these areas. The establishment of such a framework involves working through three different stages of engagement: communication, cooperation, and then coordination. In this study, cooperation and coordination have been distinguished: **cooperation** involves the division of a task among parties, so that each party is responsible for a portion of the issue being addressed; **coordination** involves the mutual engagement of multiple parties to coordinate efforts to solve a problem together and achieve a common goal (definitions adapted from Roschelle and Teasley 1995).⁷³

Across ABNJ, in different regions there is a varying utilisation of communication, cooperation and coordination. There is also significant regional variation in the mechanisms put in place to develop organisational relationships and trust. Initiatives to foster communication, cooperation and coordination may be instigated by a leading or expert organisation in a particular subject or issue. Alternatively, relationship-building initiatives can generate impetus on a particular topic, such as occurred between the organisations of NEAFC and OSPAR with respect to the conservation of vulnerable marine areas. Therefore, to facilitate long-term success of area-based planning, a structure to guide the development of frameworks of trust between organisations is important.

Summary

Finding 7: Communication is important to support area-based planning and can occur via a range of different mechanisms

Finding 8: Cooperation and coordination between organisations encourages action to address common issues

3.3.1 *Finding 7: Communication between relevant stakeholders is important to support area-based planning and can occur via a range of different mechanisms.*

■ **Sectoral communication can be enhanced by strong governance links, established by regional scale area-based planning processes.**

In the Mediterranean region the UNEP/MAP Barcelona Convention system provides a legal and institutional framework that brings together the Mediterranean countries to achieve the vision of a healthy Mediterranean with marine and coastal ecosystems that are productive and biologically diverse contributing to sustainable development for the benefit of present and future generations. This framework provides also a platform to enhance communication between Mediterranean countries. For UNEP-MAP and other Regional Seas Organisations, communication between states and other stakeholders, including NGOs, is required. For example, the initial objectives of the Mediterranean Action Plan approved in 1975 under the UNEP Regional Seas Programme, were to assist the Mediterranean Governments to assess and control pollution, as well as to formulate their national marine environmental policies. Furthermore, the governments were to improve their capacities to identify better options for development and sound decision bases for the allocation of resources. In 1995, in the aftermath of the Rio Summit, the Contracting Parties of the Barcelona Convention decided to revise the MAP and the Convention. MAP Phase II was designed, taking into consideration the achievements and shortcomings of the MAP, particularly in the context of developments of environmental protection policies at the international level. Other processes in the region that enhance communication between countries are the European Union and the Arab League.

⁷³ Roschelle, J. and Teasley, S.D. 1995. *The Construction of Shared Knowledge in Collaborative Problem Solving*. In: O'Malley, C. (Ed.). *Computer Supported Collaborative Learning*. Springer Berlin Heidelberg, Berlin, Heidelberg. 69–97.

Pilot Region Relevance

Communication across multiple sectors and nations offers multiple challenges to area-based planning. Communication can occur at the national level, where states are sending representatives to the meetings of multiple international conventions. For example, a single state may be a party to the IMO, ISA and the RFMO, all of which have ABNJ competency, and the local Regional Seas Organisation who also may have an ABNJ mandate. Much of the agreement on area-based planning will be reached at these annual meetings. Starting or enhancing communication through informal or formal mechanisms at the national level, can facilitate future coordination. Regional communication can be supported through regional Conventions or Action Plans.

Potential Actions

- To facilitate long-term success of area-based planning, a structure to guide the development of frameworks of trust between organisations is important.
- Where not already in existence, consider setting up informal or formal national level meetings between focal points of various ABNJ relevant conventions to deliver a strong national voice across all relevant sectoral forums.
- At a regional and global scale, take advantage of existing meetings (such as international meetings or project meetings) and set up informal and potentially formal meetings to discuss issues of common concern and facilitate identification of mutually beneficial opportunities.

■ **Communication between scientists can also support cross-regional action.**

For example, ICES hosts joint working groups, one of which is looking at eels, a species whose lifecycle crosses oceans. The working group involves scientists from North Atlantic, North Sea, Baltic, Mediterranean and North African areas and also links with scientists from North America, Asia and Australasia to provide annual stock assessment.⁷⁴

In the Eastern Central Pacific case study region, area-based planning has been undertaken by the International Seabed Authority for the Clarion-Clipperton Zone— an area in which few regional organisations operate. For example, the mandates of deep-sea RFMOs – South Pacific Regional Fisheries Management Organisation (SPRFMO) and North Pacific Fisheries Commission (NPFCC) – do not extend over the entire Clarion-Clipperton Zone management area, nor is there an active Regional Seas Organisation. As a result, there are potentially a more limited number of stakeholders in this area to engage with in comparison to other regions.

■ **Formal communication between organisations operating in ABNJ can be achieved through the establishment of Memoranda of Understanding (MoU).**

Examples include, MoU between adjacent organisations managing fisheries, such as SPRFMO and CCAMLR. Mechanisms of communication between organisations is particularly important where there is a potential or actual geographic overlap of activities. Under the current UNCLOS framework, there is a system governing the accommodation of activities in the Area and in the marine environment and in exercising the relevant high seas freedoms by requiring States to pay reciprocal due regard for the activities and the interests of other States in their exercise of the freedom of the high seas.⁷⁵ There is the potential for activities in ABNJ to overlap, and this will likely become more of an issue as there is increased access and interest in ABNJ. For example, increased telecommunication may require additional cables to be installed across the seabed. The seabed is also an area where mining contract areas exist. To address the reciprocal due regard obligation, the ISA and the International Cable Protection Committee (ICPC) have signed an MoU,⁷⁶ which facilitates and encourages communication between the two organisations.

⁷⁴ <http://www.ices.dk/community/groups/Pages/WGEEL.aspx>

⁷⁵ UNCLOS (1982). United Nations Convention on the Law of the Sea. Article 87, Freedom of the High Seas.

⁷⁶ The ICPC is an expert-based forum through which expertise and evidence-based information to guide planning, maintenance and protection of cable systems is provided.

Johnson, D.E. (2017) Submarine Cable Considerations for Area-based Planning in ABNJ with reference to two on-going international seabed authority processes, 95-113 in Legal Status of Submarine Cables, Pipelines and ABNJ, Karan, H., Aksoy, S. and Var Turk, K. (eds) Ankara University, Research Center of the Sea and Maritime Law. Pub. No. 1

Pilot Region Relevance

Communication between secretariats can also be an efficient way to understand the activities of other sectors. State parties to a regional agreement can facilitate this process through providing the Secretariat of the regional or international organisations the mandate to engage with other relevant regional or international organisations. Subsequent formalisation through MoUs can then be discussed and agreed where appropriate through the annual meetings. Recognition and sensitivity to political differences can be overcome with more informal approaches such as roadmaps or action plans, rather than forcing an initial approach via more formal mechanisms.

The General Secretary of CPPS and ITTC has already a MoU in place and it is expected that in January 2019 the MoU between CPPS and SPRFMO will be signed.

Potential Actions

- Review Secretariat responsibilities for communication and consider opportunities for enabling Secretariats to communicate on ABNJ matters where appropriate.

■ A range of informal communication mechanisms are also currently employed by organisations operating in ABNJ.

Informal communication mechanisms have been established to encourage regional communication, for example the Sustainable Ocean Initiative (SOI) global dialogues.⁷⁷ The SOI Global Dialogues are aiming to enhance communication between regional institutions from different sectors. Another example is the Partnership for Regional Ocean Governance (PROG) that is working towards a cross-sectoral and cross-boundary multi-stakeholder platform for regional ocean governance.⁷⁸ An alternative informal mechanism would be where scientists are either shared by regional organisations, or attend meetings for both. For the North East Atlantic, the scientific advice is provided to both OSPAR and NEAFC by ICES. Therefore, there is potential for informal communication between scientists advising both organisations. Another informal mechanism is the convening of shared thematic meetings. Such meetings are convened in relation to a particular theme or issue, which is relevant to multiple organisations.

3.3.2 *Finding 8: Cooperation and coordination between organisations encourages action to address common issues*

■ Memoranda of Understanding (MoUs) between organisations can facilitate cooperation and proactive action.

One MoU of particular significance to pursuing cooperation is that between UNEP/MAP and GFCM. It includes the integrated maritime policy within its areas of cooperation, with a special emphasis on marine and coastal spatial planning. Such cooperation is in line with the UN General Assembly annual resolutions regarding enhanced cooperation between Regional Seas Conventions and RFMOs, as well as supporting SDG 14. This coordination in particular has resulted in many achievements for area-based planning, including:

- Harmonisation of criteria for identifying SPAMIs and FRAs, in particular those located partially or wholly in the High Seas (for example, recent FRAs declared in the Sicily Channel and Adriatic Sea are within Priority Areas for the declaration of SPAMIs in the Open Seas); and
- Implementation of the Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs to Achieve Aichi Target 11 in the Mediterranean⁷⁹

⁷⁷ <https://www.cbd.int/soi/>

⁷⁸ <https://www.prog-ocean.org/our-work/prog-marine-regions-forum/>

⁷⁹ http://www.rac-spa.org/sites/default/files/action_plans/fdr_en.pdf

Pilot Region Relevance

Coordination and cooperation between organisations applying different area-based planning tools has not yet been formalised in many cases within each Pilot Region. Therefore, multiple sectors may apply their respective area-based planning tools in the same area without being aware of the operations of another sector. This could result in overlapping designations. The development of cooperation and coordination mechanisms may facilitate cross-sectoral consideration of area-based planning tools within the Pilot Regions.

Cooperation in the Mediterranean is ongoing, for example through bilateral MoUs between UNEP/MAP and organizations such as FAO/GFCM, ACCOBAMS and IUCN. Furthermore, there are discussions on the preparation of a Joint Cooperation Strategy between Secretariats on Spatial-based Protection Management Measures for Marine Biodiversity. Such type of process can be something for other regions to consider.

Ensuring that the Regional Seas Organisation and the RFMO have the appropriate mandate from their member states to work together, and also the rationale and mandate to join in a Joint Cooperation Strategy with other relevant organizations are very useful steps. For example, UNEP/MAP, also plays a key role in bringing countries together and in building capacity of Mediterranean countries, particularly through its Regional Activity Centres, each of which is hosted by a different Contracting Party.⁸⁰

Potential Actions

- Enhance collaboration between Regional Seas and Regional Fisheries Management Organizations
- Consider a Joint Cooperation Strategy on area-based planning for the region at a regional level.
- Identify if there are any relevant regional hubs that could facilitate national level dialogues on ABNJ.

■ **Coordination represents a step beyond communication or cooperation, where organisations, departments or individuals actively work together to address a particular issue of common concern.**

In the context of cross-sectoral planning, coordination could include ensuring that there is joint work between two different sectoral organisations, or parts of an organisation, on an issue of common concern. **An illustration of initial steps towards coordination between organisations** comes from the 'collective arrangement' between OSPAR and NEAFC which allows for cross-sectoral area-based planning through the designation of VMEs and MPAs in the same areas (Figure 4: Management areas in the North East Atlantic Case study region. A collective arrangement supports coordination between NEAFC and OSPAR resulting in overlapping designations.). The primary aim of the collective arrangement is to become a forum composed of all competent entities in order to work on addressing the management of human activities in this region. The collective arrangement therefore aims to "*facilitate cooperation and coordination on area based management between legally competent authorities, promoting the exchange of information on each other's activities and achievements and taking into consideration all conservation and management measures taken in relation to the North-East Atlantic*".⁸¹ In this sense, the collective arrangement moves towards coordination, and aims to go beyond bilateral cooperation between the current active sectors of environment and fisheries organisations, and other international organisations such as the International Seabed Authority (ISA), the International Maritime Organization (IMO) and the International Commission for the Conservation of Atlantic Tunas (ICCAT) are invited to join.⁸² The main aspect that this arrangement does not cover is joint management, as this is where the mandate of the two organisations currently involved diverges.⁸³ OSPAR's primary focus is biodiversity and pollution, and it has no management competencies on fisheries, which is the competency of NEAFC.

⁸⁰ <http://web.unep.org/unepmap/who-we-are/institutional-framework/secretariat/map-components>

⁸¹ <https://www.neafc.org/collective-arrangement>

⁸² <https://www.ospar.org/about/international-cooperation/collective-arrangement>

⁸³ http://www.un.org/Depts/los/biodiversityworkinggroup/Regional_seas_programmes_ABNJ.pdf

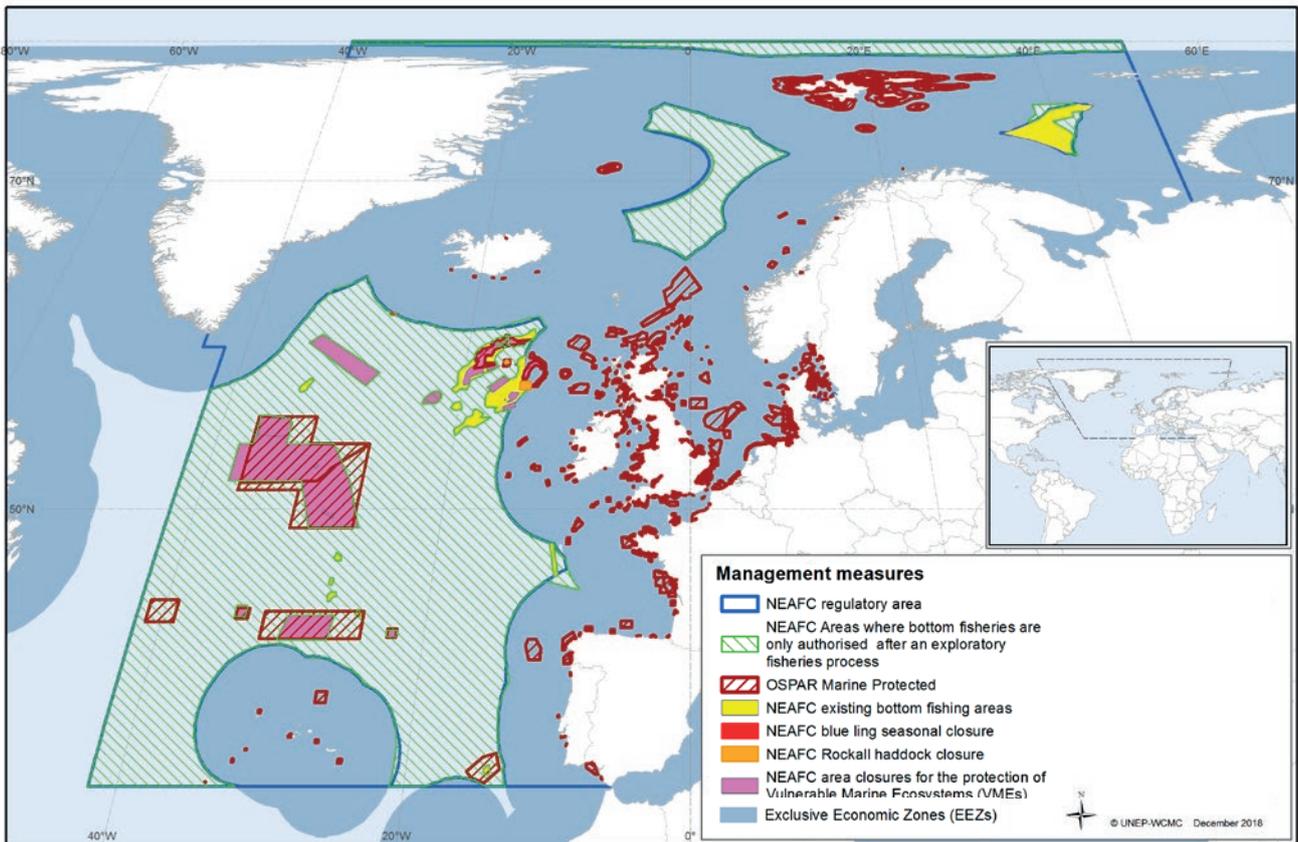


Figure 4: Management areas in the North East Atlantic Case study region. A collective arrangement supports coordination between NEAFC and OSPAR resulting in overlapping designations.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Global coastline and political boundaries data (1:1,000,000 scale) from the UN Boundaries dataset, UN Cartographic Section, 2016. See A3 for map layer citations.

An example of **coordination between countries** is the designation of the Pelagos Sanctuary, established under a Tripartite Agreement signed in 1999 by France, Italy and Monaco and included in 2001 in the SPAMI List (see the Mediterranean section of Annex 2 and the Pelagos Sanctuary history for more information).⁸⁴

In the Southern Ocean Region, a strong governance framework and decision-making process, as well as a mechanism for CCAMLR States Parties to communicate and collaborate, all encourage and enhance coordination in the region. CCAMLR is an organisation with aspects of both an RFMO and a Regional Seas Organisation, although it is not described specifically as either of these. In terms of cross-sectoral coordination in the Southern Ocean, **CCAMLR provides an illustration of how environmental and fishery concerns can be combined and addressed within one organisation.** CCAMLR's designation of both MPAs and VMEs represents an example of successful area-based planning within ABNJ. CCAMLR aims to maximise its transparency and seek broad input into decision-making. It does this through a number of different strategies, including regular updates of its website⁸⁵ and cooperation with a number of organisations including through participation as observers.⁸⁶

⁸⁴ <https://www.sanctuaire-pelagos.org/en/about-us/history>

⁸⁵ <https://www.ccamlr.org/en/organisation/transparency>

⁸⁶ <https://www.ccamlr.org/en/organisation/cooperation-others>

Pilot Region Relevance

Coordination between organisations needs a focus on a particular issue, and a number of organisations with interests in that issue. Regionally, within the Pilot regions, considerations in the future could take account of the mechanisms set up in the Northeast Atlantic and the Southern Ocean as inspiration for formal mechanisms. As occurs with CCAMLR, CPPS also constitutes a combined platform dealing with different issues, including fisheries, oceanography, environment and policy, for Southeast Pacific countries.

Potential Actions

- Consider reviewing issues of common concern between organisations. A starting point may be to consider any common issues between the RFMO and relevant regional seas organisation.
- Defining or identifying potential areas of coordination between organisations with whom MoUs have already been signed. Examples of possible areas of coordination may include data exchange, joint training activities, etc.).

3.4 Governance

The existing governance landscape within ABNJ is complex and largely sector-based, reflecting the diversity of activities, sectors and stakeholders involved. From the four case study regions, key findings have been identified in relation to coordination, stakeholder engagement and clear governance mechanisms.

For more information about coordination and the state of governance in the pilot regions, please see the accompanying report on “*Governance of areas beyond national jurisdiction for biodiversity conservation and sustainable use: Institutional arrangements and cross-sectoral coordination in the Western Indian Ocean and South East Pacific.*”⁸⁷

Summary

Finding 9: Stakeholder engagement is key to improving the effectiveness of governance arrangements

Finding 10: Structured regulatory regimes support governance

Finding 11: Gaps resulting from single sector governance frameworks can be overcome

3.4.1 **Finding 9: Stakeholder engagement is key to improving the effectiveness of governance arrangements**

Stakeholder interests can be captured and fully considered through a comprehensive engagement process.

In ABNJ, there are a wide range of potential stakeholders, each with different interests. For example, industry, governments, civil society, scientists and resource managers. It can however be difficult to identify all relevant stakeholders and to determine how stakeholder interests can be represented. Thus, a **comprehensive engagement process** is required to fully consider all stakeholder interests. Engagement processes can facilitate the sharing of information that would otherwise not be available and improve understanding and transparency of common stakeholder interests and concerns. The involvement of stakeholders is therefore essential in lending legitimacy to— and stakeholder support for— ABNJ governance arrangements.

Outcomes of stakeholder engagement processes are most fruitful where **stakeholder interests can be aligned to achieve a common goal**. For example, in the Southern Ocean region, efforts for area-based planning for the purposes of sustainable resource use will be supported by existing stakeholder agreements. Namely, a fisheries agreement to restrict krill fishing, and voluntary guidelines relating to the carrying capacities of certain areas, which have been produced by the tourist industry.⁸⁸ Both agreements aim to support sustainable use of their respective sectoral resources, thus supporting wider area-based planning goals for the region.

Opportunities for collaborative engagement arrangements exist where institutional competencies and processes overlap.

Stakeholders operating within the same geographical area, may each have established engagement processes within their operations in order to consult and consider the myriad needs in that particular area. In instances where institutions have complementary competencies and their engagement processes overlap, there are opportunities to simplify engagement through arrangements to collaborate (for example, Memoranda of Understanding (MoU)). Many Regional Seas Conventions and Regional Fisheries Management Organisations have established such arrangements. In the Mediterranean, a Memorandum of Understanding, signed in 2012, formalises the cooperation between UNEP/MAP and FAO/GFCM. Furthermore, in the North East Atlantic, a Memorandum of Understanding formalises Observer status between OSPAR and NEAFC. This allows each respective organisation to participate in, and actively contribute towards, meetings of the collaborating organisation,⁸⁹ thus informing regional policy development.

⁸⁷ UNEP-WCMC (2017). *Governance of areas beyond national jurisdiction for biodiversity conservation and sustainable use: Institutional arrangements and cross-sectoral cooperation in the Western Indian Ocean and the South East Pacific*. Cambridge (UK): UN Environment World Conservation Monitoring Centre. 120 pp. <https://wcmc.io/ABNJInstitutionalArrangements>

⁸⁸ <https://www.bas.ac.uk/about/antarctica/tourism/>

⁸⁹ <https://www.ospar.org/organisation/observers>

In the Mediterranean Sea, as well as in the North-East Atlantic Ocean and the Baltic Sea, the European Union MSP Platform is an example of a mechanism for stakeholder engagement for planning within national jurisdiction.⁹⁰ In contrast, in the Eastern Central Pacific, the absence of a currently active Regional Seas Convention has potentially made it more challenging to undertake stakeholder engagement in area-based planning for the purposes of environmental conservation and sustainable use.

■ **There are existing sectoral institutions which can provide a mechanism to engage sector-specific stakeholders**

As an example, the ISA, in accordance with its rules, regulations and procedures has a particular responsibility in relation to the planning of exploration mining activities. In 2018, ISA has issued a revised draft regulation on exploitation. In this connection, at the 24th session, in the council meetings in 2018, all stakeholders were invited to submit their comments on the revised draft regulations with a deadline of 30 September 2018. A total of 42 submissions have been received (a breakdown of these submissions are as follows - 1 African group; 21 Member States; 6 ISA Contractors; 2 International organizations; 3 Industry and other associations; 1 environmental NGOs; 3 Academic and scientific entities; 5 Private persons). However, it is currently unclear how stakeholders may be able to highlight their interest in future activities.

Different **stakeholder groups** may therefore have different **roles** within, and expectations from, area-based planning processes. For example, specific stakeholders may provide information, and/or may be involved in the decision-making process for developing area-based planning tools, whilst others may be more interested in the outcomes and products from the governance process (e.g. regulations and guidance).

Pilot Region Relevance

Sectoral coordination has not yet been finalised in either region, though cooperating agreements, such as MoUs are in discussion. For example, in the South East Pacific, SPRFMO already has MoUs in place with CCAMLR and the Secretariat for the Agreement on the Conservation of Albatrosses and Petrels (ACAP). CPPS has MoUs with, for example UNESCO⁹¹ and other regional organisation such as the South Pacific Regional Environmental Programme (SPREP), the regional Sea organisation in the western Pacific and also the adjacent Tuna RFMO.⁹² The role of such MoUs is to encourage and facilitate cooperation to address a particular issue, whilst recognising that the MoU itself is a mechanism to affect change and action beyond signing the agreement is required for it to achieve mutually agreed objectives and change.

In the Western Indian Ocean, the Nairobi Convention is developing MoUs with a variety of organisations, although these are yet to be finalised. The Nairobi Convention does support a number of expert working groups, for example the Forum of Academic Research Institutions in the Western Indian Ocean (FARI), in order to strengthen science to policy communication in this area. SIOFA is a relatively new RFMO and has not yet entered into any formal MoUs.

In both pilot regions some potential planning activities are being driven by a variety of forces. Currently there are more proposed activities in the Indian Ocean with a variety of concession blocks that have been leased by the ISA. In addition, the newly formed RFMO, SIOFA is developing. In the South East Pacific, there are currently no mining activities, and the deep sea fisheries activities are more concentrated towards the western side of SPRFMO's area of competence.

Ultimately, the enabling conditions for successful governance of ABNJ in these regions are likely to be political will, resources and functioning organisations to undertake activities. There may be relevance of exploring where the common interests of the relevant organisations and their associated state parties, overlap.

Potential Actions:

- Exploring the benefits of obtaining observer status within relevant global organizations (including associated resource implications). The development of cooperation agreements could be explored to address issues such as information exchange and participation on relevant joint activities.
- Be aware of stakeholder engagement processes run by International or Regional Bodies to ensure that, where relevant, the regional organisations are able to participate.
- Develop new, or strengthen existing, coordinating mechanisms with organisations where there are areas of common interest, and explore the full range of issues for mutual consideration.

⁹⁰ <https://www.msp-platform.eu/faq/stakeholder-involvement>

⁹¹ <http://unesdoc.unesco.org/images/0012/001299/129955e.pdf>

⁹² Wcmc.io/ABNJInstitutionalArrangements

3.4.2 Finding 10: Structured regulatory regimes support governance

A regulatory framework aims to ensure that ocean space is used responsibly with dedicated pathways for conducting area-based planning to address particular issues. Regulatory and governance gaps, as defined by Gjerde *et al.* (2008)⁹³ are:

“Regulatory gaps: *substantive and/or geographical gaps in the international legal framework, i.e. issues which are currently unregulated or insufficiently regulated at a global, regional or sub-regional level.*”

“Governance gaps: *gaps in the international institutional framework, including the absence of institutions or mechanisms at a global, regional or sub-regional level and inconsistent mandates of existing organizations and mechanisms*”

Existence of an organisation with the planning mandate and a structured regulatory framework can support area-based planning. It helps to identify how activities can be carried out and often guides stakeholder engagement processes. In the Southern Ocean, the highly structured regulatory frameworks set up under the Antarctic Treaty System. The Treaty System makes recommendations to countries and organisations operating in the region regarding a number of matters, including environmental protection, scientific cooperation, management of tourism and information exchange. Part of the Treaty System is the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR),⁹⁴ which was established in 1980 in response to concern about the Antarctic ecosystem.

Clarity in cross-sectoral engagement is also valuable. In the UNCLOS, the due regard obligation is one that has been established for States in articles 87 and 147 of the Convention. In the ISA's Draft Regulations on Exploitation of Mineral Resources in the Area, Draft regulation 13, section 4 (d) suggests that the Commission will determine if the contractors proposed Plan of Work includes provision for exploration activities to be carried out with *“reasonable regard for other activities in the Marine Environment, including, but not limited to, navigation, the laying of submarine cables and pipelines, fishing and marine scientific research”*.⁹⁵ This provides some clarity and visibility of the sectors that mining contractors may need to engage with.

Developing mechanisms to facilitate coordination between sectors can support area-based planning. In the Southern Ocean and the North East Atlantic there are currently mechanisms, established within the regulatory frameworks, to facilitate communication between different interests. Within the Southern Ocean, The Antarctic Treaty designates Antarctica as *“a natural reserve, devoted to peace and science”*.⁹⁶ That it has been continuously upheld since it entered into force in 1961, and membership continues to grow, makes it an example of successful international cooperation to protect and preserve a shared area and resource. In terms of cross-sectoral coordination in the Southern Ocean, CCAMLR provides an illustration of how environmental and fishery concerns can be combined and addressed within a single organisation.

⁹³ Gjerde, KM, Dotinga H, Hart S, Molenaar EJ, Reyfuse R, Warner R. 2008 Regulatory and governance gaps in the international regime for the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction. ICUN, Gland. <https://portals.iucn.org/library/sites/library/files/documents/eplp-ms-1.pdf>

⁹⁴ Information on CCAMLR and its links to the Antarctic Treaty: https://www.ccamlr.org/en/system/files/e-linkages_1.pdf

⁹⁵ <https://www.isa.org.jm/document/isba24ltcwp1rev1>

⁹⁶ <https://www.ats.aq/e/ep.htm>

3.4.3 **Finding 11: Gaps resulting from single sector governance frameworks can be overcome**

In ABNJ, the existing governance frameworks are predominantly sector-specific and operate under different institutional arrangements. Sectoral institutions govern their area of operation in line with institutional mandates, objectives and competencies. These often differ between sectors and some institutions may also have overlapping geographical mandates. These complexities can make it difficult to identify area-based planning priorities and can lead to inconsistencies in the degree of protection or planning an area is subject to. The lack of an overarching framework for cross-sectoral governance is a particular challenge in ABNJ.⁹⁷ There are some solutions to these challenges that can be seen from different parts of the world.

■ **Existing institutions can set up systems for coordination of sectoral planning and management**

Governance arrangements can be coordinated in order to overcome the challenges of single sector planning. In the North East Atlantic case study region, a collective arrangement⁹⁸ has been established as a mechanism to improve **cooperation and coordination** of competent international organisations in selected ABNJ. Its aim is to include a range of sectors, including the ISA and IMO, though NEAFC and OSPAR are the initial participants. The arrangement recognises the overlap of existing OSPAR and NEAFC area-based planning tools, High Seas MPAs and VMEs respectively. As such, it aims to provide a multilateral forum to encourage the exchange of information on sectoral activities, discussion on common interests and concerns, and consideration of all conservation and management measures. Under this arrangement, NEAFC and OSPAR cooperate to maintain, review and update a joint record of management measures and anticipate future common concerns.

In the Southern Ocean, the Antarctic Treaty System provides an **overarching framework** to consolidate different governance arrangements for regulating human activities in the region.⁹⁹ Such a framework promotes cooperation between different sectors operating in the region and facilitates the application of a variety of area-based planning tools which are considerate of different sectoral needs. These area-based planning tools are binding on all actors in the area.

A new implementing agreement could support better cross-sectoral coordination. There are hopes that the new implementing agreement created for the conservation and sustainable use of BBNJ could provide mechanisms to overcome current governance and coordination gaps resulting from single sector management approaches in ABNJ.^{100,101} The potential for improved coordination and cooperation has been noted throughout recent BBNJ discussions. For example, the report from the Preparatory Committee highlights elements of a draft text where there is general consensus, one of which is the recognition of the need to enhance cooperation and coordination for the conservation and sustainable use of marine biological diversity in ABNJ, also noting the potential to set the enhancement of international cooperation and coordination as an additional objective of a new agreement.¹⁰² These points were reiterated in September 2018, during the first Intergovernmental Conference on a new agreement for BBNJ in September. During the conference, it was highlighted that any processes established under the new agreement, for example, the establishment of a new function or body to conduct area-based planning, or a new process to designate area-based management tools, should be mutually supportive and collaborative in working towards the overall goals of the instrument.¹⁰³ These points will be discussed further throughout the remaining three sessions of the Intergovernmental Conference, due to take place in 2019 and 2020.

⁹⁷ <https://www.iddri.org/sites/default/files/PDF/Publications/Catalogue%20iddri/Etude/20180830-The%20long%20and%20winding%20road.pdf>

⁹⁸ <https://www.ospar.org/documents?v=35111>

⁹⁹ There are four legal agreements governing Antarctica under the ATS: the Antarctic Treaty, The Agreed Measures for the conservation of Antarctic Flora and Fauna (1964), the Convention for the Conservation of Antarctic Seals (1972), and Convention on the Conservation of Antarctic Marine Living Resources (1980)

¹⁰⁰ https://www.iucn.org/sites/dev/files/content/documents/iucn_bbnj_recommendation_paper_draft_21_aug_2018_3.pdf

¹⁰¹ <https://www.iddri.org/sites/default/files/PDF/Publications/Catalogue%20iddri/Etude/20180830-The%20long%20and%20winding%20road.pdf>

¹⁰² http://www.un.org/ga/search/view_doc.asp?symbol=A/AC.287/2017/PC.4/2

¹⁰³ <http://undocs.org/en/A/CONF.232/2018/7>

Pilot Region Relevance

As can be seen from the case studies, it is possible for a variety of types of organisation to have a mandate within ABNJ. These mandates relate to either the overarching framework of UNCLOS or to regional organisations, which can establish binding mechanisms.

In each of the Pilot Regions, the geographical mandate of the existing deep-sea RFMOs, the South Pacific Fisheries Management Organisation (SPRFMO) in the South East Pacific and the South Indian Ocean Fisheries Agreement (SIOFA) in the Western Indian Ocean, include ABNJ. There are also a number of other RFMOs in each region which manage different fisheries, for example there is a Tuna RFMO in both regions. The Regional Seas Organisations, the Permanent Commission for the South Pacific (CPPS) and the Nairobi Convention in the Western Indian Ocean, have adjacent geographical mandates in Exclusive Economic Zones. Currently, neither of the Regional Sea Organisations have a mandate in ABNJ, though each has given consideration to ABNJ and would be a valuable stakeholder to engage on appropriate topics in line with their mandates for biodiversity conservation.

In order to undertake a cross-sectoral planning process, some type of coordinating mechanism or framework would be beneficial. A key aspect for strengthened coordination include ensuring a clear objective and identification of the relevant stakeholders.

In both Pilot Regions, an RFMO exists, which can coordinate with the Regional Seas Organisations where relevant, for example to work together on issues of common concern. Such issues could be examined as a transboundary feature across the EEZ boundary, for which the Regional Sea Organisation mandate within national jurisdiction could support the ABNJ mandate of the RFMO.

Potential Actions

- The Regional Sea Organisations in each of the Pilot Regions could decide to extend their mandate into ABNJ if this was appropriate. The benefits of extending their mandate relate to engagement in stakeholder processes and potential activities, binding upon their members, for the purposes of fulfilling their mandate of biodiversity conservation. These benefits should be set against any additional costs and capacity needs.
- Increasing interaction between the different stakeholders both formally and informally is a potential place to start with identifying the collaboration and planning needs.
- Engaging in the *BBNJ process*, through identifying mechanisms to be represented as countries, regions or through the existing groups will help the national voice be heard and shape the future Implementing Agreement. Missing the opportunity to shape this agreement will potentially result in one which does not reflect the perspectives of those unable to engage.

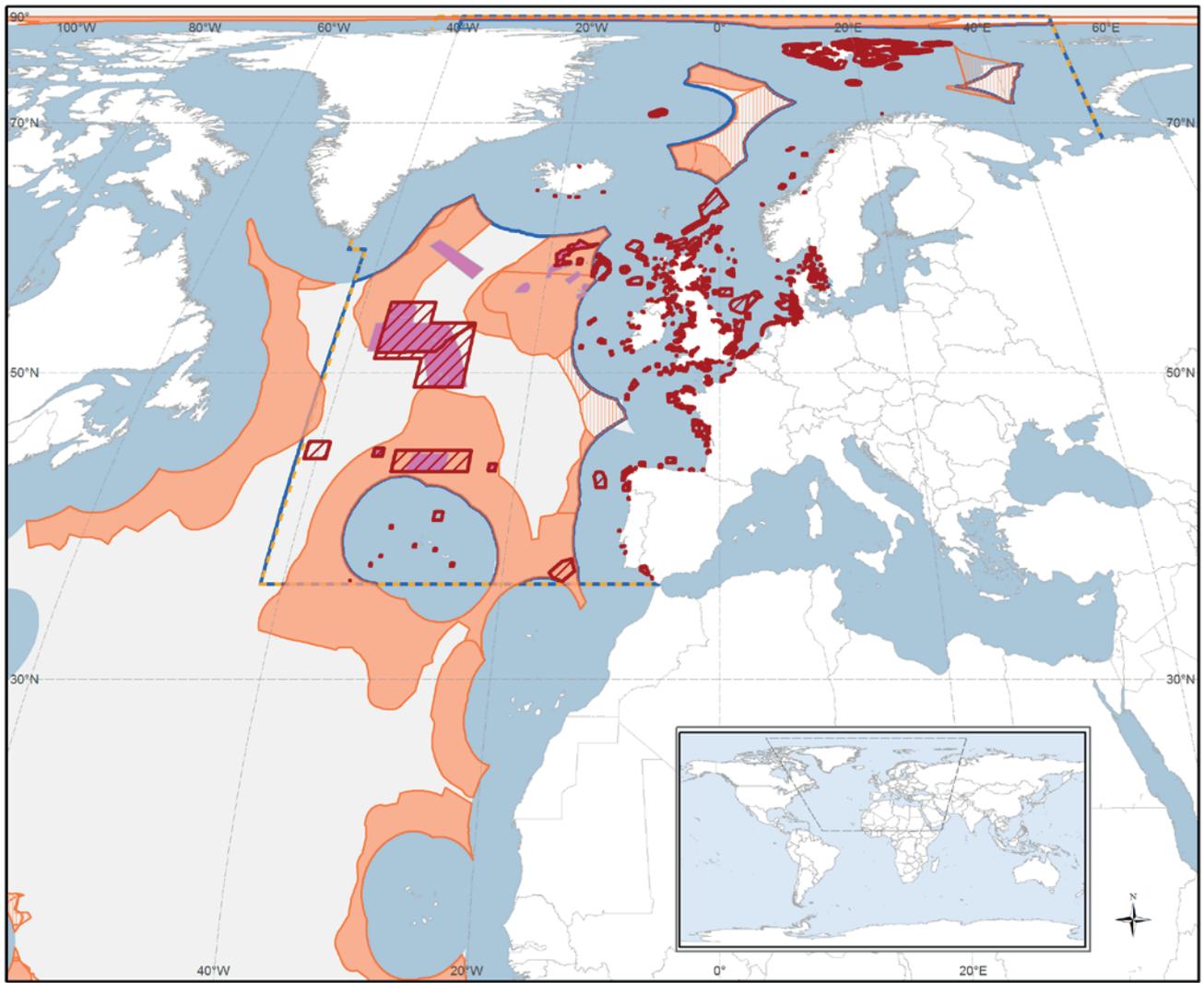
■ Governance is facilitated by clear boundaries and mandates of participating organisations

Clear boundaries, which define the extent of a management or planning area, such as those applied in the various case studies, have been found to support governance arrangements. The Regional Environmental Management Plan in the Eastern Central Pacific clearly defines the area in which the ISA undertook a regional spatial planning process. For all the regional organisations in the case studies, a clear mandate boundary has been established, enabling spatial planning and decisions to be made. In addition to the boundary, the associated mandate for the activity concerned, such as the work focus and aims, has also been established.

■ 3-Dimensional complexity exists when it comes to planning in ABNJ and solutions exist

There are extended continental shelf submissions in the North East Atlantic. Experience indicates that ECS submissions take a long time to resolve, and that this uncertainty can have implications for area-based planning. Once the claim has been confirmed, the result can be that there is a situation of overlapping jurisdictions. The water column is in the high seas whereas the seabed is now under national jurisdiction. However, there are mechanisms for coordination and resolution of the overlapping jurisdictional complexity that the extended continental shelf results in. Biodiversity conservation measures were achieved in the North East Atlantic in exactly this situation (Figure 5). Portugal designated a protected area on its extended continental shelf, over which OSPAR designated the water-column, resulting in a comprehensive mechanism for biodiversity conservation.¹⁰⁴ Additionally, NEAFC also has a VME designated in the same space providing protection of the seabed from bottom fishing.

¹⁰⁴ https://www.researchgate.net/publication/263008039_Marine_Protected_Areas_the_case_of_the_extended_continental_shelf



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Collaborations

Extended Continental Shelf (ECS) Submissions status:

- Submission
- Revised Submission
- Recommendations

- Vulnerable Marine Ecosystems
- North-East Atlantic Fisheries Commission (NEAFC) regulatory area

- OSPAR Maritime Area
- OSPAR Marine Protected Areas

Figure 5: An example of area-based planning tool alignment in the North East Atlantic Case Study Region. A collective arrangement between OSPAR and NEAFC facilitates cross-sectoral cooperation and coordination in area-based planning in ABNJ and has resulted in OSPAR MPAs overlapping with NEAFC VMEs. Portugal's continental shelf has a national-level MPA on the seabed, which compliments MPAs implemented by OSPAR in the water column above.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Global coastline and political boundaries data (1:1,000,000 scale) from the UN Boundaries dataset, UN Cartographic Section, 2016. See A3 for map layer citations.

Pilot Region Relevance

In the Eastern Central Pacific, there are currently no extended continental shelf claim submissions, although there are areas of extended continental shelf adjacent to the Ecuadorian EEZ. Ecuador is planning on submitting a presentation of the limits of the continental shelf to the Commission before 2022.¹⁰⁵

In the Western Indian Ocean, there is a joint management area between Mauritius and the Seychelles of an area of continental shelf adjacent to the EEZs of the two countries. Planning in this space provides an opportunity for resource management and biodiversity values to be integrated, and can learn from the experiences of the North East Atlantic where appropriate.

Potential Actions

- Where uncertainty exists for boundaries relating to mandates, both spatially and the topics on which an organisation can work, clarification of these would potentially support greater engagement in regional processes.
- In both Pilot Regions, where extended continental shelf submissions are formally agreed, the experience of the North East Atlantic might provide some useful inspiration of vertical coordination which may be needed. Coordination at the national level between ministries involved in fishing, environment and mining could be important, particularly to consider if any overlapping activities are planned.

¹⁰⁵ <https://www.cancilleria.gob.ec/en/ecuador-and-argentina-cooperate-to-achieve-the-extension-of-the-ecuadorian-continental-shelf-beyond-200-nautical-miles/#>

4 Concluding remarks and ways forward

This review of four case studies of area-based planning in areas beyond national jurisdiction (ABNJ) has highlighted eleven key findings from these regions, including conditions that enable area-based planning in areas beyond national jurisdiction. These findings have been explored, identifying specific characteristics of area-based planning (*in bold*) and their relevance to two Pilot Regions as part of the ABNJ Deep Seas Project: the Western Indian Ocean and the South East Pacific.

In areas beyond national jurisdiction, area-based planning is currently being undertaken by sectoral organisations, responsible for managing fishing and seabed mining. For instance, these organisations have developed area-based planning tools, **tailored** to their specific sectoral contexts and objectives, for example to mitigate their impact on the marine environment (Section 3.1.2). However, a major challenge to the application of area-based planning measures in ABNJ is that, in most cases, sectoral area-based measures are only binding upon their respective sectors and may therefore be undermined by the activities of another sector. Whilst these tools often aim to address the specific needs of their respective sector, issues of common concern amongst different sectors often exist. As such, coordination between different sectors or intergovernmental organisations is needed to facilitate the alignment of sectoral area-based planning tools to provide overlapping or **complementary measures** to address these issues and increase the value added by area-based planning in a particular area or region. The findings provide an illustration of different mechanisms for cross sectoral **communication, cooperation and coordination** which is of particular value when considering how this could occur in the future. To date, regional approaches have played an important role in facilitating planning, and there are a number of positive aspects to consider when developing the new ILBI, particularly, in the context of cross-sectoral area based planning.

Another key factor in the success of an area-based measure is its application in line with the **scale** of an activity and its associated impacts. For instance, large-scale issues, such as pollution from international shipping, may require a large-scale, area-based solution (Section 3.1.1), and large scale planning has been undertaken by the International Seabed Authority in relation to mining in the Clarion Clipperton Zone (Eastern Central Pacific Case Study). In addition, a number of sector-specific area-based measures can be **flexible** in their design and thus can be adapted as and when new information becomes available. Furthermore, the implications of a changing climate and increasing human activities in areas beyond national jurisdiction, including the occurrence of Illegal, Unregulated and Unreported (IUU) fishing, may require **adaptive** management of area-based planning measures (Section 3.1.3). Adaptation of area-based measures may also be driven by changes in sectoral or international priorities and objectives. For example, discussions surrounding Other Effective Conservation Area-based Measures (OECMs) have highlighted the role of area-based planning measures in contributing to global targets, such as Aichi Biodiversity Target 11; Sustainable Development Goal (SDG) 14, Target 14.5; and, international priorities identified in the ongoing international Biodiversity Beyond National Jurisdiction discussions.



A1 Analytical framework

These questions guided the analysis of each case study. In some cases, it was not possible to find information on each of the aspects of the analysis. Following the development of detailed inventories from the analytical framework (Table 2) for each of the case study regions, the information was grouped under four overarching themes; Area-based planning tools, Governance, Data sharing and availability and finally, Communication, Cooperation and Coordination. These four themes successfully drew out the information from the case-study areas in a way that could provide helpful findings to other parts of the world.

Table 2: Analytical framework for assessing area-based planning processes in case study regions and the identification of key findings.

ABP Tool Type	Inventory analysis	Key issues analysis	Tool specific Questions	Organisational analysis
For each ABP tool type (e.g. MPAs, VMEs)	Coverage	Ecosystem-based approach	Systematic conception Consistent application Precautionary approach	Dedicated ABP expert group Review of progress (periodic) against targets
	Information quality	Data exchange mechanisms	Baseline Data gaps Data sets used Data availability Data sharing	Analysis of strengths and weaknesses of information management system
	Governance	Mechanisms Cross-sectoral involvement of authorities Comprehensiveness	Consensual process Formal or informal Adaptive? Interaction methods Interaction frequency Interaction continuum	High-level policies - Convention texts, Decisions, Agreements, Mapping of strategic cycle – programmes of work Integration of ABP within strategy and priorities Performance evaluation (external appraisal) MoUs in place with other organisations
	Potential for ABP	Means of stakeholder participation	Involvement Inclusiveness Influence	Transparency Feedback mechanisms to stakeholders
		Integration between EEZ and ABNJ; Function	EEZ tools available Exploratory workshops	Comparative advantages of region National / regional ABP
		Enforcement of ABP: Operational	MCS system Effectiveness / barriers	Gap analysis of current capacity. Speed of action/ response
		Sustainable funding; Long-term management	Sources of funding Project / contributions / Trust Fund	Means to apply additional resources



A2 Supplementary case study information

■ Eastern Central Pacific case study: key features

Areas beyond national jurisdiction – key jurisdictional and ecological features

The Eastern Central Pacific (ECP) is the area of ocean lying off the west coast of Central America and northwest of South America. The environmental governance of the areas beyond national jurisdiction, hereafter ABNJ, characterised by the existence of (a) few regional organisations, and (b) a large area for which deep sea mining exploration contracts have been allocated. No legal boundaries describe this region but for the purposes of this case study the northern and southern borders of the area have been defined as latitudes 30° north and 10° south. The eastern border is defined by the Exclusive Economic Zones (EEZs) of Mexico, Guatemala, El Salvador, Nicaragua, Costa Rica, Panama, Ecuador, Colombia and Peru. To the south, the border meets the Ecuadorian EEZ surrounding the Galapagos Islands and the French EEZ surrounding Clipperton Island. To the west, the border meets the EEZs of the Hawaiian Islands (USA) and Kiribati. The western limit of the ECP is usually established around 150° west.

This area includes the Clarion Clipperton Zone (CCZ), a heterogeneous abyssal plain spanning 4.5 million square km and an area as wide as the continental United States. The seabed of the CCZ is soft red clay with a very low particle deposition rates (few mm per 1000 years), punctuated by trillions of fist-sized polymetallic nodules. The nodules vary in size between a few centimetres to the size of a fist. Each nodule is a tiny hotspot for biodiversity as they are the only hard surfaces in the soft red clay (secondary substrate for sessile fauna) and an attractive habitat for the many organisms living at these depths, including sponges. Foraminifers are the predominant taxonomic group, metazoans and rhizopod protozoans are common inhabitants of nodule surfaces. Free living fauna associated with the nodules are shrimps, brittle stars, fish and octopods. Each nodule also contains attractive prospects for mining companies: metal deposits including copper, cobalt, zinc, manganese and nickel.¹⁰⁶

The International Seabed Authority (ISA) plays a significant role in the governance of the region. It has granted licenses for 16 areas within the CCZ to be explored for the extraction of polymetallic nodules.¹⁰⁷ In addition to seabed mining, some of the busiest shipping lanes in the world pass through the region, and shipping traffic recently increased with the completion of the Panama Canal Expansion Project. The case study region partly overlaps with the FAO Eastern Central Pacific Major Fishing Area,¹⁰⁸ which has a significant fisheries presence, with fisheries production mostly coming from pelagic species followed by squid, shrimp and coastal demersal fishes (FAO, 2011).¹⁰⁹ The case study area is also currently a gap in coverage of Regional Fisheries Management Organisations (RFMOs), in an area where there are no significant high seas fisheries for non-highly migratory species fisheries. This is discussed in further detail below.

¹⁰⁶ For more information on the challenges faced in the CCZ, see this fact sheet from the Pew Charitable Trusts: http://www.pewtrusts.org/-/media/assets/2017/12/sea_the_clarion_clipperton_zone.pdf

¹⁰⁷ License areas are shown in Figure 1 above.

¹⁰⁸ <http://www.fao.org/fishery/area/Area77/en>

¹⁰⁹ <http://www.fao.org/docrep/019/i3507t/i3507t.pdf>

The ocean system within this region is heavily influenced by the North Equatorial Counter Current and the El Niño-Southern Oscillation (ENSO) – a large-scale climate phenomenon. ENSO causes variations in sea surface temperature and ocean circulation which result in wide-scale ecological disturbances¹¹⁰ across the region on a roughly two to seven-year cycle. At roughly 4,000 – 5,000 metres depth, the seabed of the region is dominated by numerous submarine fracture zones¹¹¹ (long and narrow chains of submarine mountains), two of which constitute the Clarion-Clipperton Zone which is characterised by numerous seamounts and flat-floored valleys covered in seabed polymetallic nodules. Deep-sea ecosystems support slow-growing, species such as Orange Roughy and seabed megafaunal species¹¹² such as sponges, anemones, sea stars and corals.

Governance organisations and ABP tools

A list of competent organisations operating in the Eastern Central Pacific region are presented in Table 3 below. The table also lists the types of area-based planning tools that such organisations implement. The geographical extent of organisations areas of competency is shown in Figure 6. General information about the mandates of international organisations can be found in UNEP-WCMC (2017).¹¹³

Regional organisations	ABP tools in the Eastern Central Pacific
Comisión Permanente del Pacífico Sur/Permanent Commission of the South Pacific (<i>Regional Sea Organisation</i>)	None, though there is only a small overlap between the mandate of CPPS and the case study region
The Antigua Convention (<i>Regional Sea Organisation for the North East Pacific</i>)	None, as the Convention has not yet entered into force.
Western and Central Pacific Fisheries Commission (WCPFC) (<i>Regional Fisheries Management Organisation</i>)	Vulnerable Marine Ecosystems (VMEs)
North Pacific Fisheries Commission (NPFCC) (<i>Regional Fisheries Management Organisation</i>)	Vulnerable Marine Ecosystems (VMEs); bottom fishing measures
Inter-American Tropical Tuna Commission (IATTC) (<i>Regional Fisheries Management Organisation</i>)	Fisheries closures
South Pacific Regional Fisheries Management Organisation (SPRFMO) (<i>Regional Fisheries Management Organisation</i>)	Bottom fishing measures; exploratory fishing protocols; gear restrictions (including gillnets) and by-catch measures
MarViva (<i>a regional Non-Governmental Organisation</i>)	
International organisations	
International Seabed Authority (ISA)	Clarion-Clipperton Environmental Management Plan Area; Areas of Particular Environmental Interest (APEIs)
Convention on Biological Diversity (CBD)	Ecologically or Biologically Significant Marine Areas (EBSAs)

Table 3: Regional and international organisations with ABP tools in the Eastern Central Pacific.

For information about the mandates of international organisations, please refer to this study¹¹⁴ on “Institutional arrangements and cross-sectoral cooperation in the Western Indian Ocean and South East Pacific”.

¹¹⁰ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4996977/pdf/ncomms12571.pdf>

¹¹¹ <https://www.britannica.com/science/submarine-fracture-zone>

¹¹² <https://www.nature.com/articles/srep30492>

¹¹³ <https://www.unep-wcmc.org/resources-and-data/governance-of-abnj>

¹¹⁴ <https://www.unep-wcmc.org/resources-and-data/governance-of-abnj>

Regional Sea Organisation #1: The Permanent Commission for the South Pacific (CPPS)

The CPPS mandate does not cover specific actions in ABNJ in the case study region. It only covers the territorial seas and EEZs of the member countries (Chile, Colombia, Ecuador and Peru), including their Pacific islands. CPPS is also the Executive Secretariat of the Lima Convention of which Panama is also Party. However, its mandate gives CPPS the possibility to explore opportunities in ABNJ if this is of interest to the member states.

In order to extend their mandate to ABNJ, CPPS Member States signed a Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific, referred to as the 'Galapagos Agreement' in 2000, although this has yet to enter into force. In 2012, CPPS countries signed the "Compromiso de Galápagos para el Siglo XXI" (Galapagos Commitment for the 21st Century), which again commits to extending CPPS's geographical mandate towards the Pacific Basin and demonstrates the willingness of CPPS countries to act in a coordinated manner with the international community, in the conservation of biodiversity of marine ecosystems in areas beyond national jurisdiction, in accordance with international law (Workshop Report, Item 3, paragraph 8).

Regional Sea Organisation #2: The Antigua Convention (North East Pacific)

The North East Pacific Regional Seas programme was signed in 2002 and has been ratified by the Governments of Guatemala and Panama, but has not yet entered into force. More information can be found on the regional seas website.¹¹⁵

Regional Fisheries Management Organisation #1: Western and Central Pacific Fisheries Commission (WCPFC)

The coverage of the WCPFC extends across the Western and Central Pacific, and overlaps with the eastern edges of this case study area. The WCPFC establishes conservation and management measures (CMM) for highly migratory fish populations in the Pacific including marlin, swordfish and some tuna species (albacore, skipjack and yellowfin). It has three area-based fisheries management tools which fall within this ABNJ study area, which are fisheries closures, vessel monitoring systems and seabird mitigation measures for vessels.¹¹⁶

Regional Fisheries Management Organisation #2: North Pacific Fisheries Commission (NPFC)

The NPFC is a new non-tuna Regional Fisheries Management Organisation, established in 2015 with the entry into force of the Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean. Its coverage overlaps the northwest corner of this case study area. Its coverage does not extend south to meet or overlap with the coverage of SPRFMO, leaving a coverage gap where there are not currently any significant high seas fisheries. If this gap were filled, high seas coverage would border the EEZs of Central American States which are not parties to the NPFC. In 2017, measures to regulate bottom fisheries and protect Vulnerable Marine Ecosystems in the Northeast Pacific were adopted.¹¹⁷

Regional Fisheries Management Organisation #3: Inter-American Tropical Tuna Commission (IATTC)

The IATTC also contributes to area-based planning in the case study region. It has a mandate for conservation and management of tuna fisheries across the whole Pacific region. It implements seasonal closures (IATTC resolution C-17-02) of fisheries within this case study area.¹¹⁸

¹¹⁵ <https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/regional-seas-programmes/north-east-0>

¹¹⁶ CMM 2009-02, CMM 2014-02 and CMM 2015-03 at the following link for more information: <https://www.wcpfc.int/folder/conservation-and-management-measures-and-resolutions2>

¹¹⁷ <https://www.npfc.int/active-conservation-and-management-measures>

¹¹⁸ Resolution C 17 02 - Tuna conservation in the EPO 2018-2020 and amendment to Res <https://www.iattc.org/ResolutionsActiveENG.htm>

Regional Fisheries Management Organisation #4: South Pacific Regional Fisheries Management Organisation (SPRFMO)

The coverage of SPRFMO overlaps with the southern edge of the case study area. As this RFMO focuses on the South Pacific, it does not extend far north beyond the equator. In the Eastern Pacific, the Convention Area extends to two degrees north to bring the high seas boundary into alignment with the Colombian EEZ. In the Western Pacific, the Convention Area extends to ten degrees north to encompass the high seas around Kiribati and the Marshall Islands, as well as two high seas enclaves: one to the west of the Marshall Islands, and another to the south of the Federated States of Micronesia.

In 2014, SPRFMO adopted measures¹¹⁹ to promote the sustainable management of bottom fisheries and to protect the marine ecosystems in which these resources occur. The measures include target stocks and non-target species taken as by-catch in these fisheries. In addition, these measures encourage member state cooperation to identify, map and circulate information on areas where VMEs are known or likely to occur. In 2018, measures were superseded by CMM 03-2018.¹²⁰

The MarViva Foundation

This regional non-governmental organisation operates in selected areas of the Eastern Tropical Pacific and is active in the case study ABNJ. MarViva collaborates with the International Union for Conservation of Nature (IUCN), Mission Blue, the Global Ocean Biodiversity Initiative (GOBI) and Whale and Dolphin Conservation (WDC) to manage the Costa Rica Thermal Dome (CRTD) Initiative. This initiative focuses on the marine biodiversity hotspot associated with the Costa Rica Dome ocean upwelling off the western coast of Central America. It is working with key regional authorities to develop a sustainable regional governance model for ABNJ in the CRTD, though there are not yet any area-based planning tools in place.

The International Seabed Authority (ISA)

Deep seabed mineral exploration of all the activities in the Eastern Central Pacific, has the highest number of associated area-based planning tools. As part of an Environmental Management Plan¹²¹ nine Areas of Particular Environmental Interest (APEIs), each 400 by 400km wide, have been designated by the ISA.¹²² The total area covers almost 1.5 million square km,¹²³ around one-sixth of the area of the CCZ and roughly equivalent to the size of Mongolia. The ISA has granted exploration contracts to 16 contractors¹²⁴ in the CCZ for exploration of polymetallic nodules. Both the APEIs and the contract areas cover only the seabed.

Convention on Biological Diversity (CBD)

The CBD has described ten Ecologically or Biologically Significant Marine Areas (EBSAs) within the case study area. This was the result of a 2012 CBD regional workshop¹²⁵ for the Eastern Tropical and Temperate Pacific. These EBSAs are not associated with any management measures.

International Maritime Organisation (IMO)

The IMO has two designated Particularly Sensitive Sea Areas (PSSAs) in the region, one covering the Galapagos archipelago and one covering the waters around Malpelo Island, off the coast of Colombia. However, neither of these are located within ABNJ.

¹¹⁹ <https://www.sprfmo.int/assets/Meetings/Meetings-2013-plus/Commission-Meetings/2nd-Commission-Meeting-2014-Manta-Ecuador/Annex-M-CMM-2.03-CMM-for-Bottom-Fishing.pdf>

¹²⁰ <https://www.sprfmo.int/assets/Fisheries/Conservation-and-Management-Measures/2018-CMMs/CMM-03-2018-Bottom-Fishing-8March2018.pdf>

¹²¹ ISBA/17/LTC/7: Environmental Management Plan for the Clarion-Clipperton Zone <https://www.isa.org.jm/environmental-management-plan-clarion-clipperton-zone>

¹²² For information about the rationale behind the recommended areas, see this presentation from the 2007 expert workshop which recommended the areas: <https://www.isa.org.jm/files/documents/EN/Workshops/2010/Pres/SMITH.pdf>

¹²³ <https://worldoceanreview.com/en/wor-3/environment-and-law/international-commitments/3/>

¹²⁴ https://www.isa.org.jm/deep-seabed-minerals-contractors?qt-contractors_tabs_alt=0#qt-contractors_tabs_alt

¹²⁵ <https://www.cbd.int/doc/meetings/mar/ebsa-ettp-01/official/ebsa-ettp-01-04-en.pdf>

Regional coordination

In the Eastern Central Pacific, a number of individual regional and international organisations are implementing area-based planning measures which regulate the activities of their individual industries, from deep sea mineral exploration to tuna fisheries. However, there is little communication between the various competent authorities. In addition, some developing states have limited capacity, which affects their ability to comply with ABP measures. This is compounded by the absence of an active Regional Sea organisation which fully covers the area, as well as the coverage of deep sea RFMO boundaries not fully meeting, leaving a gap around this area.

Some organisations in the region do have Memorandums of Understanding (MoUs) in place, in particular between the various Regional Fisheries Management Organisations (RFMOs). The Inter-American Tropical Tuna Commission (IATTC) has an MOU with the Permanent Commission of the South Pacific (CPPS). It also has a number of agreements with the Western Central Pacific Fisheries Commission (WCPFC), including for data exchange. Coordination between these and other RFMOs could be strengthened in order to facilitate more joined-up approaches to both research and management.

A dedicated initiative to encourage cross-sectoral coordination in the region comes from the MarViva Foundation. Since 2012, it has promoted cross-sectoral coordination towards sustainable management of the Costa Rica Thermal Dome (CRTD). This area has great socioeconomic and ecological value in the region and various key players are prepared to commit to it:

- The Convention on Biological Diversity have designated part of it as an EBSA
- The Central American Commission on Environment and Development have recognised its importance and included it in the Regional Environmental Strategy 2015-2020
- Mission Blue have recognised it as a Hope Spot, calling for conservation of the area
- UNESCO included it as one of five illustrative areas of potential Outstanding Universal Value in the High Seas (Freestone *et al.*, 2016)¹²⁶

The high-profile nature of Costa Rica Thermal Dome initiative represents an opportunity to bring together key players in the region, to work towards a governance scheme for the area.

¹²⁶ <http://whc.unesco.org/en/highseas/>

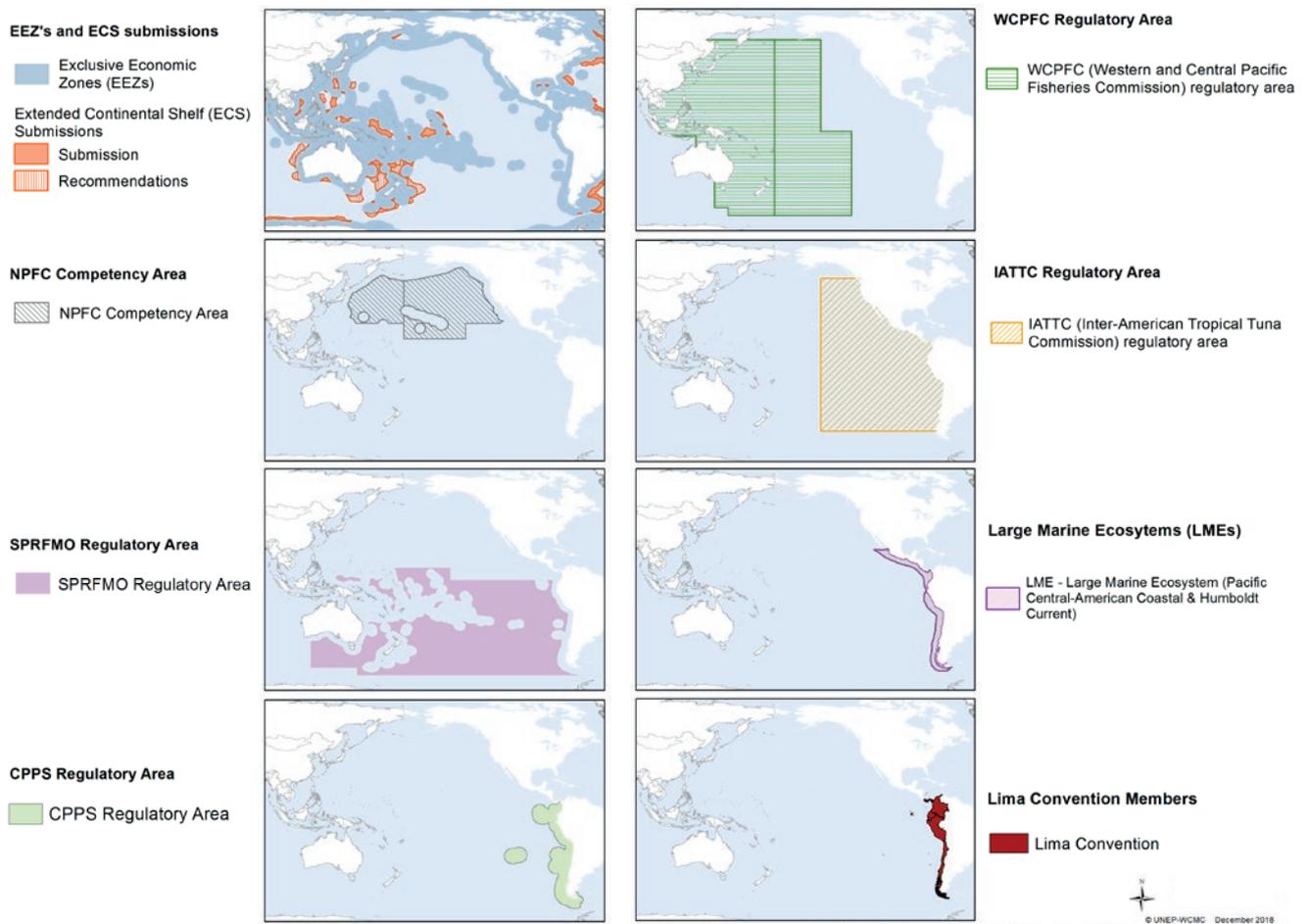


Figure 6: **A)** Extended continental shelf submissions in the Eastern Central Pacific region; **B)** Geographical extent of competency and regulatory areas of NPFC, **C)** SPRFMO, **D)** CPPS, **E)** WCPFC, **F)** IATTC; **G)** Geographical extent of Pacific Central-American Coastal and Humboldt Current; **H)** Member countries to the Lima Convention. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Global coastline and political boundaries data (1:1,000,000 scale) from the UN Boundaries dataset, UN Cartographic Section, 2016. See A3 for map layer citations.

■ Mediterranean case study: key features

Areas beyond national jurisdiction

Key jurisdictional and ecological features: The Mediterranean is characterised by being a semi-enclosed sea surrounded by 21 countries, with only a narrow connection via the Strait of Gibraltar to the Atlantic Ocean, to the Black Sea by the Straits of Dardanelles and Bosphorus, and to the Red Sea by the artificial Suez Canal. It is split into two basins, roughly of equal size, connected by the Strait of Sicily. The Adriatic and the Aegean represent two generally shallower areas of water. Movement of water between the Mediterranean and the Atlantic is anti-estuarine, with a net entrance of shallow water from the Atlantic to the Mediterranean through the Strait of Gibraltar, resulting in a nutrient-poor state. The Mediterranean Basin represents a global biodiversity hotspot¹²⁷ (as described by Conservation International and the Critical Ecosystem Partnership Fund), particularly for the diversity of vascular plants and marine species (UNEP-MAP-SPA/RAC 2010),¹²⁸ including the endangered Mediterranean monk seal.¹²⁹

The Mediterranean therefore represents a mosaic of unclaimed and claimed EEZs as well as different types of Protection Zones (Wright *et al.* 2015),¹³⁰ with the majority of the Mediterranean effectively considered as High Seas and all of the Mediterranean seabed falling under national jurisdiction. The complex geo-political structures and delimitations of maritime borders still to be settled can complicate the ability of countries to claim rights beyond their territorial waters. However, a desire of most States to preserve basin-wide access to fisheries, or the implication of the greater responsibility for resources and the environmental responsibility that comes with jurisdictional rights, also contribute to the reluctance of States to make claims of their full EEZ (Suárez de Vivero, 2009).¹³¹

The Mediterranean Sea region can best be described in terms of its position as a crossroads, both geographically, politically, socio-culturally and economically. The political backdrop of the Mediterranean means that regional measures must take into account the interaction of different levels of political organisation, from the European Union, to regional intergovernmental organisations (Arab Maghreb Union, Arab League, Union for the Mediterranean), to the national level of the 21 riparian states surrounding the Mediterranean basin, 11 of which are in Europe, five are in Africa and five in Asia.

Governance organisations and Area Based Planning (ABP) tools

Competent organisations operating in the Mediterranean region, and the types of area-based planning tools that they implement are presented in Table 4 below and the geographical extent of their areas of competency in Figure 7. General information about the mandates of international organisations can be found in UNEP-WCMC (2017).¹³²

¹²⁷ <https://www.cepf.net/our-work/biodiversity-hotspots/mediterranean-basin/>

¹²⁸ http://www.rac-spa.org/sites/default/files/doc_cop/biodiversity.pdf

¹²⁹ <https://www.iucnredlist.org/species/13653/117647375>

¹³⁰ <https://www.sciencedirect.com/science/article/pii/S0308597X15001955?via%3Dihub>

¹³¹ [http://www.europarl.europa.eu/thinktank/en/document.html?reference=IPOL-PECH_ET\(2009\)431602](http://www.europarl.europa.eu/thinktank/en/document.html?reference=IPOL-PECH_ET(2009)431602)

¹³² <https://www.unep-wcmc.org/resources-and-data/governance-of-abnj>

Table 4: Regional and international organisations with ABP tools in the Mediterranean

Regional organisations	ABP tools in the Mediterranean
The Barcelona Convention for the Protection of the Marine Environment and Coastal Region of the Mediterranean (Regional Sea Organisation)	Specially Protected Areas Specially Protected Areas of Mediterranean Importance (SPAMIs)
General Fisheries Commission for the Mediterranean (GFCM) (Regional Fisheries Management Organisation)	Fisheries Restricted Areas (FRAs)
International Commission for the Conservation of Atlantic Tuna (ICCAT) (Regional Fisheries Management Organisation)	Binding landing quotas in the management area, notably for the cases of zero quota seasons or periods
Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Areas (ACCOBAMS)	Cetacean Critical Habitat areas
International organisations	
Convention on Biological Diversity (CBD)	Ecologically and Biologically Significant Marine Areas (EBSAs)
International Maritime Organisation (IMO)	Special Areas and emission control areas under MARPOL; routing, vessel traffic services and reporting under SOLAS; and Particularly Sensitive Sea Areas (PSSAs)
FAO	Deep-sea Fisheries Guidelines on Vulnerable Marine Ecosystems (VMEs)
Birdlife International	Important Bird and Biodiversity Areas (IBAs)
IUCN Marine Mammal Protected Areas Task Force	Important Marine Mammal Areas (IMMAs) ¹³³

Regional Sea Organisation: The Barcelona Convention

The Mediterranean is characterised by its long history of willingness to adopt sustainability principles: it was the first region to adopt a Sea Action Plan – the Mediterranean Action Plan – in 1975 under the UNEP Regional Seas Programme (UNEP-MAP). The MAP endorsed the preparation of a framework convention for the protection of the marine environment of the Mediterranean Sea against pollution, the Barcelona Convention¹³⁴ and its related protocols which were progressively developed. This later evolved into the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean. In 1995 the Barcelona Convention was amended to establish an institutionally unique subsidiary organ, the Mediterranean Commission on Sustainable Development (MCSDD), and in 2016 its Contracting Parties adopted the Mediterranean Strategy for Sustainable Development 2016-2025.

The Barcelona Convention has seven protocols, one of which is the Specially Protected Areas and Biological Diversity in the Mediterranean Protocol (SPA/BD).^{135, 136} In order to promote cooperation in the management and conservation of natural areas, as well as in the protection of threatened species and their habitats, the Protocol provides for the establishment of Specially Protected Areas (SPAs) and Specially Protected Areas of Mediterranean Importance (SPAMIs). Only SPAMIs can be established on the high seas, as Article 9.1(b) expressly stipulates: “SPAMIs may be established (...) in (...) (b) zones partly or wholly on the high seas”.

Criteria: Annex I to the SPA/BD Protocol establishes Common Criteria for the Choice of Protected Marine and Coastal areas that Could be Included in the SPAMI List. All areas eligible for inclusion in the SPAMIs List must be awarded a legal status guaranteeing their effective long-term protection (Section C.1) and must have a management body (Section D.6), a management plan (Section D.7) and a monitoring programme (Section D.8).

The SPAMI List may include sites which: (1) are of importance for conserving the components of biological diversity in the Mediterranean; (2) contain ecosystems specific to the Mediterranean area or the habitats of endangered species; (3) are of special interest at the scientific, aesthetic, cultural or educational levels (Article 8(2)). In more detail, the following criteria should be used in evaluating the Mediterranean interest of an area: “uniqueness”, “natural representativeness”, “diversity”, “naturalness”, “presence of habitats that are critical to endangered, threatened or endemic species”, and “cultural representativeness” (Section B.2). This adds to a number of factors to be also considered as favourable for the inclusion of the site in the SPAMI List (Section B.3).

¹³³ <https://www.marinemammalhabitat.org/imma-eatlas/>

¹³⁴ For information on the history of the UNEP-MAP <http://web.unep.org/unepmap/who-we-are/mediterranean-action-plan>

¹³⁵ <http://www.rac-spa.org/protocol>

¹³⁶ <http://www.rac-spa.org/protocol>

Designation Process: The procedure for establishing SPAMIs is established in Article 9 of the Protocol, providing that the proposal for inclusion is submitted by two or more neighbouring Parties concerned if the area is situated, partly or wholly, on the high seas, and by the neighbouring Parties concerned in areas where the limits of national sovereignty or jurisdiction have not yet been defined.

For proposing an area situated, partly or wholly, on the high sea or in areas where the limits of national sovereignty or jurisdiction have not yet been defined, the neighbouring Parties concerned shall consult each other with a view to ensuring the consistency of the proposed protection and management measures, as well as the means for their implementation. The Parties concerned provide a joint presentation report, whose format was adopted in 2001 by the Contracting Parties to the Barcelona Convention, containing information on the area's geographical location, its physical and ecological characteristics, its legal status, its management plans and the means for their implementation, as well as a statement justifying its Mediterranean importance. After the consideration of the proposals by the technical bodies of the MAP system, the decision to include the proposed area in the SPAMI List is taken by the Meeting of the Contracting Parties of the Barcelona Convention and its Protocols.

Implementation: In accordance with Article 8 (3) of the SPA/BD Protocol, all the Parties agree “to comply with the measures applicable to the SPAMIs and not to authorize nor undertake any activities that might be contrary to the objectives for which the SPAMIs were established”. Moreover, in accordance with the provisions of the Article 9(5), all the Parties undertake to observe the rules laid down in the proposal for the protection and conservation of the area. These provisions make the protection, planning and management measures adopted for the SPAMI binding on all the Parties to the SPA/BD Protocol.

Only one, the Pelagos¹³⁷ Sanctuary, out of 35 SPAMIs contains High Seas within its boundary (53%) when established in 1999. Since then, France has established its EEZ and Italy its Ecological Protection Zone and the sanctuary now contains a smaller area of High Seas.

A SPAMI on the high seas: The Pelagos Sanctuary

The Pelagos Sanctuary for Mediterranean Marine Mammals was established under a Tripartite Agreement signed in 1999 by France, Italy and Monaco and included in 2001 in the SPAMI List. The Agreement provides the legal and institutional framework for France, Italy and Monaco to jointly develop coordinated measures to protect cetaceans and their habitats from all sources of disturbance ranging from pollution to accidental capture.

The Pelagos Sanctuary covers the Tyrrhenian-Corsican-Provençal Basin, including the coastal waters and pelagic domain of the area, has a surface of 87.500 km² and is characterised by extremely rich pelagic life, marked by the presence of pelagic mammals.

The management plan of the Pelagos Sanctuary is in place since 2004 and its implementation rests on the Tripartite Steering Committee, a joint management body made up by France, Italy and Monaco. A review of the Pelagos Sanctuary has been recently conducted within the framework of the Procedure for the Revision of the Areas included in the SPAMI List. In line with this procedure, a Technical Advisory Commission has assessed for the Pelagos Sanctuary the degree of conformity with the Common Criteria set in Annex I to the SPA/BD Protocol, concluding that the “Pelagos Sanctuary still fulfils the criteria, which are mandatory for the inclusion of an area in the SPAMI List, and with the relevant criteria defined in the SPA/BD Protocol”, and recommending that “cooperation and harmonization (...) might be enhanced”.

¹³⁷ http://www.rac-spa.org/sites/default/files/doc_spamis/spamis/25_pelagos.pdf

Regional Fisheries Management Organisation: General Fisheries Commission for the Mediterranean (GFCM)

The GFCM's primary ABP tool is fisheries restricted areas (FRA).¹³⁸ These are a *geographically defined area in which all or certain fishing activities are temporarily or permanently banned or restricted in order to: i) improve the exploitation and conservation of harvested living aquatic resources and/or ii) protect specific marine ecosystems*. Three out of eight FRAs, shown in red in Figure 3, where fishing with towed dredges and trawl nets is permanently prohibited, are either entirely or partially within the High Seas. These FRAs are equivalent to Vulnerable Marine Ecosystems (VMEs)¹³⁹ and protect sensitive deep-sea habitats. In addition, in 2005 the GFCM prohibited the use of towed dredges and trawl nets in all waters deeper than 1000 metres, designated as a deep-water FRA in 2016. Any GFCM stakeholder, including NGOs, the private sector and scientists, can propose an FRA by filling out an ad-hoc form on the GFCM's website. FRA proposals are reviewed and evaluated based on scientific and technical advice through the GFCM Scientific Advisory Committee on Fisheries (SAC)¹⁴⁰ and its subsidiary bodies.

Regional Fisheries Management Organisation: the International Commission for the Conservation of Atlantic Tuna (ICCAT)

Like the CBD, ICCAT is an international organisation that has a mandate, or area of competence, in the whole of the Mediterranean. It should be noted that ICCAT's area of competence also extends far beyond the Mediterranean and also covers the entire Atlantic Ocean. Decisions taken at ICCAT official meetings are also adopted by the GFCM at Mediterranean level. The GFCM and ICCAT have developed, though not yet signed, a Memorandum of Understanding to strengthen cooperation between the two organisations.

Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)

ACCOBAMS is a legal agreement¹⁴¹ under the Bonn Convention for the Conservation of Migratory Species of Wild Animals (CMS) and resulted from a consultation between a number of Conventions including CMS and the Barcelona Convention. It requires member states to implement conservation plans for cetaceans and to take necessary measures to eliminate any deliberate taking of cetaceans. It can propose areas of Cetacean Critical Habitat¹⁴² (CCH) but does not have the mandate to implement MPAs. CCH areas are being identified using a threat management approach which combines an inventory of human activities with the distribution of cetacean populations.

The ACCOBAMS Sub Regional Coordination Unit for the Mediterranean is the SPA/RAC, which manages in a coordinated manner a UN Environment Regional Cetaceans Action plan for the Mediterranean.

ACCOBAMS also has a Memorandum of Understanding¹⁴³ with the Pelagos Agreement for the protection of cetaceans, to formalise their partnership and harmonise the efforts of member states towards the protection of cetaceans.

Convention on Biological Diversity (CBD)

In the Mediterranean, 17 Ecologically or Biologically Significant Marine Areas (EBSAs) have been identified. Of these, the CBD has listed 15 in its Repository,¹⁴⁴ out of which 10 extend over both national jurisdiction and the High Seas (Bax *et al.* 2015).¹⁴⁵ These were described by a regional workshop¹⁴⁶ jointly held in 2014 by the CBD and UNEP/MAP through SPA/RAC, using a number of global datasets.

¹³⁸ <http://www.fao.org/gfcm/data/maps/fras>

¹³⁹ <http://www.fao.org/in-action/vulnerable-marine-ecosystems/vme-database/en/vme.html>

¹⁴⁰ <http://www.fao.org/gfcm/background/structure/sac/en/>

¹⁴¹ <https://www.cms.int/en/legalinstrument/accobams>

¹⁴² <http://www.accobams.org/conservations-action/protected-areas/>

¹⁴³ <http://www.accobams.org/4704/>

¹⁴⁴ <https://www.cbd.int/ebsa/>

¹⁴⁵ <https://onlinelibrary.wiley.com/doi/abs/10.1111/cobi.12649>

¹⁴⁶ <http://www.rac-spa.org/node/1149>

International Maritime Organisation (IMO)

The entire Mediterranean Sea is designated as a Special Area¹⁴⁷ under the International Convention for the Prevention of Pollution from ships, MARPOL. This means that adequate port reception facilities in States bordering the Special Area must be provided, in accordance with the provisions of MARPOL. This is to prevent sea pollution from the high level of ship traffic in the Mediterranean.

There are no IMO Particularly Sensitive Sea Areas (PSSAs) within ABNJ anywhere in the world, though there is one in the Mediterranean within the national jurisdictions of both France and Italy, in the Strait of Bonifacio.¹⁴⁸ The two countries applied to the IMO for PSSA designation in order to protect against ecological disaster in the strait through obligatory measures such as piloting of vessels.

Birdlife International

Birdlife International have designated a large number of Important Bird and Biodiversity Areas (IBAs) within 10km of the coast in the Mediterranean. These do not have formal management measures associated with them.

IUCN Marine Mammal Protected Areas Task (MMPA) Force

The MMPA Task Force, during a workshop¹⁴⁹ conducted in 2016 in partnership with ACCOBAMS, has identified 26 Important Marine Mammal Areas (IMMAs) in the Mediterranean, available on the Task Force's website.¹⁵⁰ IMMAs are evidence-based biocentric denominations like IBAs, and therefore do not include formal management measures.

Cross-sectoral coordination in the Mediterranean

The Barcelona Convention, GFCM and other governance organisations and institutional arrangements in the Mediterranean each emphasise cross-sectoral coordination as an integral part of achieving the goals of the region, in particular the Aichi Targets and Sustainable Development Goal 14 (SDG14), as well as the Ecosystem Approach¹⁵¹ in the Mediterranean. With regards to area-based planning in both national jurisdiction and the High Seas, efforts are being made to ensure that current and future ventures are joined up and coherent between the organisations.

The Barcelona Convention, the General Fisheries Commission for the Mediterranean (GFCM) and other governance organizations in the Mediterranean, each of them emphasizes cross-sectoral coordination as an integral part of achieving the goals of the region, in particular the Aichi Targets and Sustainable Development Goal 14.

There are many Memorandums of Understanding (MoUs) between organisations of the region to facilitate cooperation. There is an MoU in place between United Nations Environment Programme/ Mediterranean Action Plan Secretariat to the Barcelona Convention and FAO General Fisheries Commission for the Mediterranean¹⁵² covering a number of topics including ecosystem based approaches and harmonization of activities of the Parties, something of relevance to the identification of Fisheries Restricted Areas (FRA). Such cooperation is in line with the UN General Assembly annual resolutions regarding enhanced cooperation between Regional Seas Conventions and RFMOs,¹⁵³ as well as supporting SDG 14.^{154, 155}

¹⁴⁷ <http://www.imo.org/en/OurWork/Environment/SpecialAreasUnderMARPOL/Pages/Default.aspx>

¹⁴⁸ <https://www.iucn.org/content/strait-bonifacio-particularly-sensitive-sea-area-pssa>

¹⁴⁹ <https://www.marinemammalhabitat.org/download/report-regional-workshop-mediterranean-important-marine-mammal-areas/>

¹⁵⁰ <https://www.marinemammalhabitat.org/imma-atlas/>

¹⁵¹ <http://www.rac-spa.org/ecap>

¹⁵² <https://wedocs.unep.org/rest/bitstreams/45270/retrieve>

¹⁵³ See para 145 of UNGA resolution A/RES/70/75 on sustainable fisheries encouraging RFMOs to strengthen integration, coordination and with RSCs

¹⁵⁴ UNGA Resolution A/RES/70/226

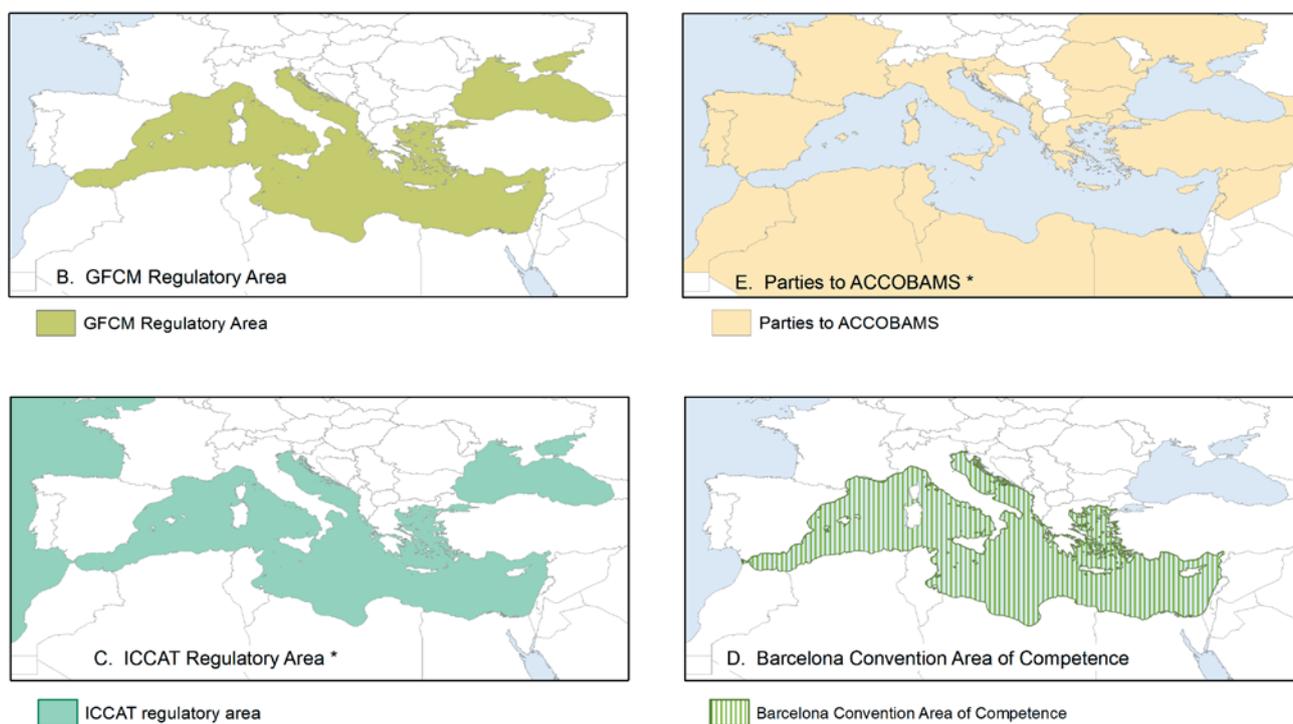
¹⁵⁵ See also Wissem Seddik & Daniel Cebrian. 2017. Marine Spatial Planning and the protection of biodiversity beyond national jurisdiction (BBNJ) in the Mediterranean Sea. UNEP(DEPI)/MED WG.431/Inf.8

This coordination in particular has resulted in many achievements for area-based planning, including:

- Harmonisation of criteria for identifying SPAMIs and FRAs, in particular those located partially or wholly in the High Seas (for example, recent FRAs declared in the Sicily Channel and Adriatic Sea are within Priority Areas for the declaration of SPAMIs in the Open Seas)¹⁵⁶
- Implementation of the Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs to Achieve Aichi Target 11 in the Mediterranean
- Future strengthened cooperation on area-based management measures, in cooperation with other organisations (ACCOBAMS, IMO)

With the International Maritime Organization (IMO), an MoU is also in place. Work to identify Special Areas and a Particularly Sensitive Sea Area (PSSA) under MARPOL is of particular relevance. These are specific examples of how cross-sectoral coordination in the Mediterranean has been successful in implementing aligned and joint area-based planning measures both within EEZs and the High Seas.

Cross-sectoral coordination in the Mediterranean has been successful in implementing aligned and joint area-based planning measures both within EEZs and the High Seas. Given the number of agreements between organisations and the work for the preparation of a Joint Cooperation Strategy between Secretariats, we can hope to see even more positive results for area-based planning in the Mediterranean.



* NOTE: The displayed map layer extends beyond the area shown in the map.

Figure 7: **B-D)** Geographical extent of regulatory areas and areas of competency of (B) GFCM, (C) ICCAT, (D) Barcelona Convention; **E)** Parties to ACCOBAMS

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Global coastline and political boundaries data (1:1,000,000 scale) from the UN Boundaries dataset, UN Cartographic Section, 2016. See A3 for map layer citations.

¹⁵⁶ http://www.rac-spa.org/sites/default/files/meetings/nfp_r_ext_1/wg.348_inf04.pdf

■ North East Atlantic case study: key features

Areas beyond national jurisdiction – key jurisdictional and ecological features

Areas Beyond National Jurisdiction in the North East (NE) Atlantic are characterised by a relatively high density of human activities. ABNJ in this region can be found in four distinct areas: Arctic waters, the Barents Sea Loophole,¹⁵⁷ the ‘Banana Hole’¹⁵⁸ and the wider Atlantic. The boundaries of these four areas are clearly defined by the limits of adjacent countries’ EEZs. The NE Atlantic area, which this case study focuses on, is bounded by the similar convention areas of both the Regional Seas organisation, OSPAR, and the RFMO, NEAFC.

The ocean system within this region is dominated by the North Atlantic Current. The main topographic feature of the Atlantic deep ocean basin is the Mid-Atlantic Ridge, an active tectonic boundary with vents and mineral rich seeps. The North-East Atlantic also includes several relatively isolated seamounts and expanses of abyssal plain at depths of around 5000m. It supports deep-sea habitats such as cold water corals and deep-sea sponges as well as specialized and endemic ecosystems associated with hydrothermal vents. Deep sea ecosystems also contain long-lived deep water species such as the Orange Roughy.

Whilst the region has been subject to a history of scientific surveys, biodiversity is still not properly quantified. Many mobile species which occur here have an extensive geographical ranges which extend beyond the boundaries of this region (e.g. tuna, marlin and deep-water sharks). For example, Bluefin tuna stocks straddle several regions. The effects of climate change are already being noted in the region with plankton (Barton *et al.* 2016)¹⁵⁹ and some fish (Engelhard *et al.* 2014;¹⁶⁰ Perry *et al.* 2005)¹⁶¹ moving northwards, following colder water as a result of increasing temperatures over the whole region.

Organisations in the North East Atlantic and their tools

Table 5 highlights the competent organisations operating in the North East Atlantic, and the types of area-based planning tools that they employ. The geographical extent of the mandates of these organisations is presented in Figure 8. For general information about the mandates of international organisations, please refer to this study¹⁶² on “Institutional arrangements and cross-sectoral cooperation in the Western Indian Ocean and South East Pacific”.

Table 5: Organisations with competence in the North East Atlantic and their relevant Area-Based Planning tools

Regional organisations	ABP tools in the North East Atlantic
OSPAR Commission (<i>Regional Sea Organisation</i>)	Marine Protected Areas
North East Atlantic Fisheries Commission (NEAFC) (<i>Regional Fisheries Management Organisation</i>)	Recommendation on Protection of Vulnerable Marine Ecosystems (VMEs)
International Commission for the Conservation of Atlantic Tuna (ICCAT) (<i>Regional Fisheries Management Organisation</i>)	None
Joint Norwegian-Russian Fisheries Commission (Joint-Fish) (<i>Regional Fisheries Body</i>)	Fishing quotas (*not area-based)
International governance organisations	
International Seabed Authority (ISA)	None
Convention on Biological Diversity (CBD)	Ecologically and Biologically Significant Marine Areas (EBSAs)
International Maritime Organisation (IMO)	None
Other organisations	
Birdlife International	Important Bird and Biodiversity Areas (IBAs)

¹⁵⁷ Barents Sea Loophole: area of high seas beyond EEZs of Norway and Russia in Central Barents Sea.

¹⁵⁸ Banana Hole: area of high seas beyond the EEZs of Greenland, Iceland, Norway in the Norwegian Sea

¹⁵⁹ <https://www.pnas.org/content/113/11/2964>

¹⁶⁰ <https://onlinelibrary.wiley.com/doi/full/10.1111/gcb.12513>

¹⁶¹ <http://www.o3d.org/eas-4300/lectures-2012/MarineEcosys/Perry-2005-shifts.pdf>

¹⁶² <https://www.unep-wcmc.org/resources-and-data/governance-of-abnj>

Regional Sea Organisation: OSPAR Commission

OSPAR has a mandate to protect and conserve the ecosystems and biological diversity of the OSPAR Maritime Area and Parties to OSPAR have agreed to establish an ecologically coherent network of well-managed Marine Protected Areas (MPAs). Currently there are a total of seven MPAs designated in ABNJ.

In five of the seven Marine Protected Areas (MPAs) in the North-East Atlantic, the water column is in the High Seas but the seabed is under the jurisdiction of a coastal state. In these cases, coordination is required between the Regional Sea Organisation (OSPAR) and the national authorities that have claimed jurisdiction over the seabed. In the case of Portugal (4 MPAs) this is in place, however in the case of Iceland (1 MPA) only the water column has been designated by OSPAR.

OSPAR has a number of formal MoU arrangements with other institutions operating in ABNJ in the NE Atlantic, each of which facilitate greater cooperation, a shared understanding and information sharing. For more information on these relationships, see OSPAR's website¹⁶³.

To provide a more coordinated cross-sectoral approach to area-based management, including MPAs, in partnership with NEAFC, OSPAR initiated the so-called 'collective arrangement'^{164,165}. At the 4th meeting of the collective arrangement in 2018, discussions included presentation of an OSPAR MPA proposal in ABNJ, possible joint request(s) to ICES for scientific evidence on threatened and endangered deep-sea shark species. It was always the intention that other competent international organisations, such as ISA and IMO, should become involved to share information. Other organisations attending the 2018 meeting included representatives from ICCAT, NAMMCO, Abidjan Convention, the Caribbean Environment Programme and ICES.

Regional Fisheries Management Organisation #1: North East Atlantic Fisheries Commission (NEAFC)

NEAFC regulates fisheries to achieve the convention's objectives. These are to ensure the long-term conservation and optimum utilisation of the fishery resources in its Convention Area, providing sustainable economic, environmental and social benefits. It regulates fisheries through the following:

- Management measures¹⁶⁶, including technical measures and measures on the protection of Vulnerable Marine Ecosystems (VMEs) (more information from NEAFC¹⁶⁷ and the Food and Agriculture Organisation¹⁶⁸ (FAO))
- The introduction of control and enforcement¹⁶⁹ measures

Consideration of biodiversity has been integrated into NEAFC's activities for many years. Increasing attention has been given to deep sea fisheries and their effects on deep sea fish stocks and associated marine ecosystems since the late 1990s. The first significant step on VMEs was taken in 2004 with agreement to close three areas to "bottom trawling and fishing with static gear" with further closures to protect VMEs subsequently. Scientific advice from the International Council for Exploration of the Sea (ICES) has been essential throughout the process. NEAFC relies on ICES for all the scientific advice for its policy decisions, emphasising the importance of an independent, peer-reviewed source of information for such decisions. For more information, see the Recommendation¹⁷⁰ adopted by the Commission.

¹⁶³ <https://www.ospar.org/about/international-cooperation/memoranda-of-understanding>

¹⁶⁴ <https://www.ospar.org/documents?v=33030>

¹⁶⁵ UNEP, 2016. On the process of Forming a Cooperative Mechanism between NEAFC and OSPAR. Available at: <http://hdl.handle.net/20.500.11822/11128>

¹⁶⁶ https://www.neafc.org/managing_fisheries/measures/current

¹⁶⁷ <https://www.neafc.org/system/files/NEAFC-and-VMEs-August-2015.pdf>

¹⁶⁸ <http://www.fao.org/3/a-i5952e.pdf>

¹⁶⁹ <https://www.neafc.org/mcs/scheme>

¹⁷⁰ https://www.neafc.org/system/files/Rec_19-2014_as_amended_by_09_2015_fulltext_0.pdf

Regional Fisheries Management Organisation #2: the International Commission for the Conservation of Atlantic Tuna (ICCAT)

ICCAT is another key RFMO in the region. Its area of competency covers the whole of the Atlantic, including adjacent seas. It has no ABP measures in ABNJ for the NE Atlantic region, but it does implement a seasonal closed area for management¹⁷¹ of bigeye and yellowfin tunas, the northern limit of which is defined by the North African coast.

Joint Norwegian-Russian Fisheries Commission (Joint-Fish)

Joint-Fish¹⁷² provides additional management through implementing fishing quotas for the most important fish stocks of Norway and Russia, in the Barents Sea and Norwegian Sea, including the Barents Sea Loophole area of ABNJ. This management regime has been hailed as among the most successful of a major fishery area anywhere due to the scientific and governance cooperation between the two countries (Grønnevet 2016¹⁷³). There are currently no ABP measures in place.

International Seabed Authority (ISA)

For information on the ISA's mandate in ABNJ, see page 41 of the study on institutional arrangements in ABNJ¹⁷⁴.

The ISA is working towards the development of regional environmental management¹⁷⁵ plans where there are currently exploration contracts.¹⁷⁶ In broad terms, the objective of regional environmental management plans is to provide the relevant organs of the Authority, as well as contractors and their sponsoring States, with a proactive area-based management tool to support informed decision-making that balances resource development with conservation. Regional environmental management plans also provide the Authority with a clear and consistent mechanism to identify particular areas thought to be representative of the full range of habitats, biodiversity and ecosystem structures and functions within the relevant management area, and provide those areas with appropriate levels of protection, thus helping the Authority to meet internationally agreed targets, such as Aichi Biodiversity Target 11.¹⁷⁷ The ISA has approved exploration areas¹⁷⁸ further south on the Mid-Atlantic Ridge, but there are currently none in place in the NE Atlantic. In the context of the regional environmental management plan for the Clarion Clipperton Zone, for example, a network of nine APEIs were identified on the basis of robust scientific criteria adopted through a collaborative process involving relevant stakeholders.

International Maritime Organisation (IMO)

For information on the IMO's mandate in ABNJ, see page 34 of the study¹⁷⁹ on institutional arrangements.

The IMO's primary ABP tool is the designation of Particularly Sensitive Sea Areas (PSSAs¹⁸⁰). There are to date no PSSAs applied to any designations in ABNJ. However, the IMO has MoU agreements of cooperation with both NEAFC¹⁸¹ and OSPAR¹⁸² which facilitate dialogue and coordination between the organisations, towards greater protection of the marine environment.

¹⁷¹ <https://www.iccat.int/Documents/Recs/compendiopdf-e/2011-01-e.pdf>

¹⁷² <http://www.fao.org/fishery/rfb/jointfish/en>

¹⁷³ <https://www.sciencedirect.com/science/article/pii/S2211464515000731>

¹⁷⁴ <https://www.unep-wcmc.org/resources-and-data/governance-of-abnj>

¹⁷⁵ Towards an ISA Environmental Management Strategy for The Area ISA Technical Study No: 17 <https://www.isa.org.jm/document/towards-isa-environmental-management-strategy-area>

¹⁷⁶ Article 1(1) of the UN Convention on the Law of the Sea designates "the seabed and ocean floor and subsoil thereof" in areas beyond national jurisdiction as "the Area".

¹⁷⁷ See par (5) <https://www.isa.org.jm/sites/default/files/files/documents/isba24-c3-e.pdf>

¹⁷⁸ <https://www.isa.org.jm/map/mid-atlantic-ridge>

¹⁷⁹ <https://www.unep-wcmc.org/resources-and-data/governance-of-abnj>

¹⁸⁰ <http://www.imo.org/en/OurWork/Environment/PSSAs/Pages/Default.aspx>

¹⁸¹ https://www.neafc.org/system/files/IMO_Agreement-of-Cooperation-between-IMO-NEAFC_Dec2009.pdf

¹⁸² https://www.ospar.org/site/assets/files/1357/imo_oneils_letter_30_nov_1999_and_attachments_from_imo.pdf

Convention on Biological Diversity

A workshop to describe Ecologically or Biologically Significant Marine Areas (EBSAs) was co-convened by OSPAR and NEAFC Secretariats in 2011. The outcome of this workshop was revised by ICES, reducing both the number and extent of EBSAs described, but no agreement has been reached to submit the revised results to CBD.

BirdLife International sponsored by Germany have proposed¹⁸³ the North Atlantic Current and Evlanov Seamount (NACES) High Seas MPA for designation by the OSPAR Commission. In 2013 OSPAR highlighted the lack of MPA sites protecting seabirds and other highly mobile species within its MPA network. The proposal combines the efforts of 66 researchers from 9 countries using seabird tracking data of 23 species from 105 colonies representing 2188 individual birds. Robust statistical methods have been used to identify the highest overall density of seabirds and species richness. Conservation objectives for the resulting extensive foraging area have been determined and characteristics set against the internationally agreed OSPAR MPA criteria. In 2018 OSPAR agreed that the scientific case for the MPA had been met and set out a process of consultation with third parties.

Birdlife International

Birdlife International, a non-governmental organisation, has identified a series of Important Bird and Biodiversity Areas (IBAs) in the NE Atlantic based on tracking data from 40 populations of North Atlantic breeders and southern hemisphere migrants. For more information on IBAs visit the Birdlife Data Zone¹⁸⁴.

Examples of projects which feature ABNJ in the NE Atlantic

The ATLAS Project – A transatlantic assessment and deep-water ecosystem-based spatial management plan for Europe

The aim of the ATLAS¹⁸⁵ project, a European Commission scientific research project, is to develop a spatial management plan for the remote and poorly understood ecosystems of the deep Atlantic Ocean. One¹⁸⁶ of the twelve ATLAS case study areas (Rockall and Hatton Banks) is in ABNJ in the NE Atlantic.

The SponGES project – Deep-sea Sponge Grounds Ecosystems of the North Atlantic: an integrated approach towards their preservation and sustainable exploitation

The aim of the SponGES¹⁸⁷ project, a European Commission blue growth project, is to develop an integrated ecosystem-based approach to preserve and sustainably use deep-sea sponge ecosystems of the North Atlantic. It will contribute to the implementation of international agreements established to conserve VMEs and EBSAs.

¹⁸³ <https://www.cbd.int/doc/meetings/mar/ebsaws-2014-02/other/ebsaws-2014-02-submission-birdlife-03-en.pdf>

¹⁸⁴ <http://datazone.birdlife.org/home>

¹⁸⁵ <https://www.eu-atlas.org/>

¹⁸⁶ <https://www.eu-atlas.org/about-atlas/atlas-case-study-descriptions/case-study-12-mid-atlantic-canyons>

¹⁸⁷ <http://www.deepseasponges.org/>

Regional coordination

In the North East Atlantic, the primary example of cross-sectoral coordination is the collective arrangement¹⁸⁸ between OSPAR and NEAFC. This arrangement facilitates cooperation and coordination regarding selected areas in ABNJ. The process to arrive at this arrangement was complex and took over ten years, but was achieved with full support from both organisations and without changing the legal competence of either organisation. Key components of success have been discussed by both organisations in an information paper, titled "On the process of forming a cooperative mechanism between NEAFC and OSPAR"¹⁸⁹. These include:

- Both organisations expanding their horizons to look beyond their main focus;
- Establishing a good informal relationship between the two Secretariats;
- Each organisation taking the time to understand the other's internal processes and institutional culture; and
- Institutionalising the cooperation and coordination.

Resulting from this cooperation is a "joined-up" approach to protection of marine ecosystems in the NE Atlantic. NEAFC designates Vulnerable Marine Ecosystems which are not a cross-sectoral tool but specifically focused on fisheries management. However, OSPAR have designated complementary Marine Protected Areas which overlap with the NEAFC VMEs. Management measures within these MPAs, rather than focusing on fisheries, look at complementary issues such as pollution (OSPAR Recommendation 2010/13¹⁹⁰). NEAFC and OSPAR have now held their 4th annual meeting under the collective arrangement, attended by other regional and sectoral organisation observers. Latest discussions included on closer cooperation on the protection of deep sea sharks.

Coordination in the North East Atlantic is also found between OSPAR and Portugal, one of its member states. Portugal has submitted claims to the extended continental shelf, which would bring the seabed into national jurisdiction. Fragile seamount ecosystems on the continental shelf include features in the seabed and subsoil, as well as the water column. In order to protect the entire ecosystem, the continental shelf must be protected by the country with jurisdiction and the High Seas water column above it must be separately protected. In 2010, Portugal nominated the seabed and subsoil of four seamount ecosystems located on the continental shelf to the OSPAR Network of Marine Protected Areas. Following this, a coordination between the OSPAR Commission and Portugal led to the establishment of four complementary High Seas (water column) Marine Protected Areas, allowing the entire ecosystem to be protected (Ribeiro, 2014¹⁹¹).

In both these examples, the consideration of the whole ecosystem through cooperation overcomes the jurisdictional challenges posed by overlapping mandates of different organisations. Therefore, these are possible models for other areas where overlapping mandates exist, and demonstrate that it is possible to ensure protection and management of multiple sectors. Where 3D layered jurisdiction occurs, these are useful mechanisms to allow the protection of important ecosystem functions in a holistic manner.

¹⁸⁸ <https://www.ospar.org/about/international-cooperation/collective-arrangement>

¹⁸⁹ UNEP, 2016. On the process of Forming a Cooperative Mechanism between NEAFC and OSPAR. Available at: <http://hdl.handle.net/20.500.11822/11128>

¹⁹⁰ <https://www.ospar.org/convention/agreements/page6>

¹⁹¹ Ribeiro, M.C. 2014. Marine Protected Areas: the case of the extended continental shelf. University of Porto https://www.researchgate.net/publication/263008039_Marine_Protected_Areas_the_case_of_the_extended_continental_shelf

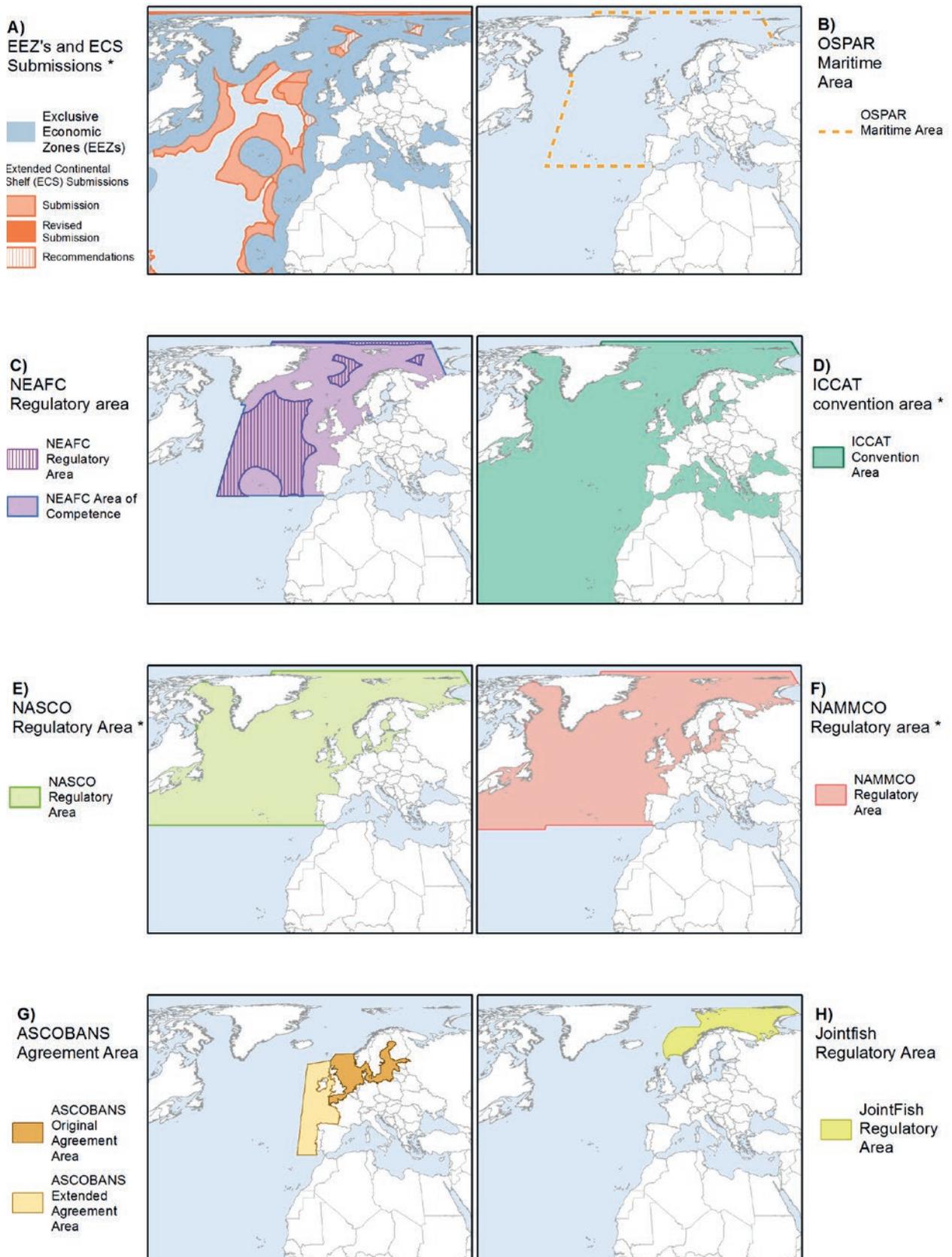


Figure 8: **A)** Extended continental shelf submissions in the North East Atlantic region; **B-F)** Geographical extent of regulatory areas and areas of competency of (B) OSPAR, (C) NEAFC, (D) ICCAT, (E) NASCO, (F) NAMMCO, (G) ASCOBANS and (H) Jointfish

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Global coastline and political boundaries data (1:1,000,000 scale) from the UN Boundaries dataset, UN Cartographic Section, 2016. See A3 for map layer citations.

■ Southern Ocean case study: key features

Areas beyond national jurisdiction – key jurisdictional and ecological features

The Southern Ocean is characterised by its extreme climate, remoteness and resulting wilderness. The Southern Ocean comprises three major deep ocean basins: the Pacific, Indian and Atlantic Basins, separated by submarine ridges and the Scotia Arc island chain. The area of application of the Antarctic Treaty is the area below 60° South. However, the Antarctic marine ecosystem extends further north, up to the northern limit of the Antarctic Convergence, where cold Antarctic waters meet and mix with warmer sub-Antarctic waters. The extent of the Antarctic marine ecosystem is reflected in the coverage of the CCAMLR Convention (Molenaar *et al.* 2013¹⁹²). A deeper continental shelf than average is another unique feature of the Southern Ocean, where the Antarctic continental shelf exceeds 1000m depth in places (Brandt, 2012¹⁹³).

The Southern Ocean's environment is dominated by glaciation and strong currents (Griffiths, 2010¹⁹⁴). Marine communities of Antarctica show high levels of endemism, gigantism, slow growth, longevity and late maturity (Brandt *et al.* 2007¹⁹⁵). This region of the world is believed to contain very high levels of biodiversity, most of which might remain to be discovered, and much of which is greatly threatened by rising water temperatures (Barnes & Peck, 2008¹⁹⁶).

The governance of the Southern Ocean is as unique as its environment. The Antarctic continent is the only land area beyond national jurisdiction in the world. The continent and the surrounding Southern Ocean are principally governed by the Antarctic Treaty, signed in 1959. The 59 parties to the Antarctic Treaty call it “a natural reserve, devoted to peace and science”. The Treaty System makes recommendations to countries and organisations operating in the region regarding a number of matters, including environmental protection, scientific cooperation, management of tourism and information exchange. Part of the Treaty System is the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)¹⁹⁷, which was established in 1980 in response to concern that unregulated increases in krill catch would upset the balance of the Antarctic ecosystem. CCAMLR effectively functions both as a regional fisheries management organisation and a regional seas organisation, although is not specifically described as either of these. With such a strong focus on peace, scientific research and protection of a vulnerable and valuable shared ecosystem, the cooperation between countries over Antarctica and the Southern Ocean is a model for efforts towards cooperation elsewhere.

Governance organisations and ABP tools

The various area-based planning (ABP) tools in place in the Southern Ocean are summarised in Table 6. The geographical extent of organisational competencies for a number of organisations in the Southern Ocean, and extended continental shelf claims in the region, are presented in Figure 9. For more information about the mandates of international organisations in this region, please refer to the UNEP-WCMC study ‘Institutional arrangements and cross-sectoral cooperation in the Western Indian Ocean and South East Pacific’.¹⁹⁸

¹⁹² <https://brill.com/view/title/22109>

¹⁹³ <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0ahUKEwj-yK-XpcTbAhXHORQKHffyDclQFggrMAE&url=https%3A%2F%2Fwww.springer.com%2Fcontent%2Fdocument%2Fdocument%2Fcdadownloaddocument%2F9783642273513-c2.pdf%3FSGWID%3D0-0-45-1307151-p174275559&usq=AOvVaw0HM1DAebmEOBORSPDjdD9z>

¹⁹⁴ <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0011683>

¹⁹⁵ <https://royalsocietypublishing.org/doi/full/10.1098/rstb.2006.1952>

¹⁹⁶ https://www.jstor.org/stable/24869472?seq=1#page_scan_tab_contents

¹⁹⁷ Information on CCAMLR and its links to the Antarctic Treaty: https://www.ccamlr.org/en/system/files/e-linkages_1.pdf

¹⁹⁸ <https://www.unep-wcmc.org/resources-and-data/governance-of-abnj>

Table 6: Organisations with competence in the Southern Ocean and their relevant Area-Based Planning tools

Regional governance organisations	ABP tools in the Southern Ocean
Antarctic Treaty	Antarctic Specially Protected Areas (ASPAs); Antarctic Specifically Managed Areas (ASMAs)
Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) (Regional Fisheries Management Organisation)	Area-based Conservation Measures managing access, research and fishing activities cover the entirety of the Convention Area; Marine Protected Area (MPA); Vulnerable Marine Ecosystems (VMEs)
International Commission for the Conservation of Atlantic Tunas (ICCAT) (Regional Fisheries Management Organisation)	
Commission for the Conservation of Southern Bluefin Tuna (CCSBT) (Regional Fisheries Management Organisation)	
Indian Ocean Tuna Commission (IOTC) (Regional Fisheries Management Organisation)	
International governance organisations	
International Maritime Organisation (IMO)	Polar Code
UNESCO: World Heritage Convention (WHC)	World Heritage Sites (WHS)

Antarctic Treaty

The Antarctic Treaty was established in 1959. There are 53 parties to the treaty, 29 of which are Consultative Parties¹⁹⁹ whose activities in Antarctica are recognised and who are able to participate in decision making. The Treaty applies to the entire area south of 60° South latitude. It designates Antarctica to be exclusively used for peaceful purposes, and guarantees freedom to conduct continued scientific research²⁰⁰. The Antarctic Treaty System (ATS) has a central limitation, that there is no single international organisation to enforce ATS obligations (Goldsworthy & Hemmings, 2009²⁰¹). Instead, each party writes and enforces its own laws and regulations to implement the Treaty. This can lead to parties enforcing marine conservation regulations with varying levels of ambition. For example, there are wide differences in the ways in which parties conduct and share their Environmental Impact Assessments, with some parties never preparing one (Goldsworthy & Hemmings, 2009).

The Antarctic Treaty has two area-based planning tools: Antarctic Specially Protected Areas (ASPAs) and Antarctic Specifically Managed Areas (ASMAs). These were introduced with the adoption of the Madrid Protocol in 1998 to simplify a growing number of categories of protected areas in the Southern Ocean (Goldsworthy & Hemmings, 2009).

There are 72 designated ASPAs²⁰². These areas are intended to be kept without human interference, to enable future comparisons with other areas affected by human activities. Each has a management plan, many of which include measures such as the requirement for a permit to visit the region.

There are six designated ASMAs²⁰³. The intention of ASMAs is to help with the planning and coordination of activities, and potential conflicts involved. They are intended to improve cooperation between parties operating in close proximity to each other and minimise environmental impacts. Each has a management plan, which do not include entry permits but include measures such as establishment of a management group involving all parties operating in the area.

¹⁹⁹ Consultative Parties to the Antarctic Treaty as of June 2018: Argentina, Australia, Belgium, Brazil, Bulgaria, Chile, China, Czech Republic, Ecuador, Finland, France, Germany, India, Italy, Japan, Republic of Korea, Netherlands, New Zealand, Norway, Peru, Poland, Russian Federation, South Africa, Spain, Sweden, Ukraine, United Kingdom, United States, Uruguay.

²⁰⁰ <https://www.bas.ac.uk/about/antarctica/the-antarctic-treaty/the-antarctic-treaty-explained/>

²⁰¹ Goldsworthy & Hemmings, (2009) The Antarctic Protected Area Approach. Chapter (PDF Available) January 2008, In book: Shared Resources: Issues of Governance, Chapter: The Antarctic Protected Area Approach., Publisher: IUCN, Editors: Sharelle Hart, pp.105-128

²⁰² https://www.ats.aq/devPH/apa/ep_protected_search.aspx?type=2&lang=e

²⁰³ https://www.ats.aq/devPH/apa/ep_protected_search.aspx?type=2&lang=e

Fisheries & Environmental Management: Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)

As the main RFMO for the Southern Ocean, CCAMLR is responsible for fisheries. However, in contrast to other RFMOs, it also has a mandate to conserve the ecosystem, which is usually taken on by a Regional Seas programme. CCAMLR employs both Vulnerable Marine Ecosystems (VMEs) and Marine Protected Areas (MPAs) as area-based planning tools in the Southern Ocean, and in addition specifies management regulations (Conservation Measures) for all Subareas and Divisions within the Convention Area.

CCAMLR has a number of MPAs, including the largest MPA in the world, the Ross Sea MPA²⁰⁴. CCAMLR's MPAs are no-take zones. The key aim of the network of MPAs is to contribute to sustaining ecosystem structure and function, including areas outside MPAs. This will support the resilience of Antarctic ecosystems, enhancing their ability to adapt to climate change. This is a particularly important issue for this region, because climate change is predicted to be very severe in Polar Regions²⁰⁵. Conservation measure 91-04²⁰⁶ of CCAMLR provides the General Framework used to establish CCAMLR MPAs.

Antarctic fisheries are a responsibility of CCAMLR, as such the Commission has adopted a number of Conservation Measures²⁰⁷ to protect VMEs in the Southern Ocean²⁰⁸. Respectively, these measures:

- ban bottom trawling gear in high seas areas of CCAMLR (with the exception of areas with conservation measures and scientific trawling);
- establish a framework for the management of bottom fisheries;
- implement measures when encountering a potentially vulnerable marine ecosystem (including a VME registry);
- implement measures to protect benthic communities; and
- require the protection of registered VMEs.

Tuna Regional Fisheries Management Organisation #1: International Commission for the Conservation of Atlantic Tunas (ICCAT)

ICCAT's area of competence covers the length of the Atlantic from north to south. Unlike other RFMOs, its coverage extends into Antarctic waters, so ICCAT's and CCAMLR's respective areas of competence overlap. ICCAT implements a seasonal closure of tuna fisheries elsewhere in its area of competence, but does not implement any area-based measures in the Antarctic waters.

Tuna Regional Fisheries Management Organisation #2: Commission for the Conservation of Southern Bluefin Tuna (CCSBT)

The CCSBT²⁰⁹ is unusual in its coverage as it is not geographically confined but rather covers wherever the Southern Bluefin Tuna populations are found. Its area does not currently overlap with that of CCAMLR and it does not implement any area-based planning tools.

Tuna Regional Fisheries Management Organisation #3: Indian Ocean Tuna Commission (IOTC)

The Indian Ocean Tuna Commission is responsible for managing tuna stocks in the Indian Ocean. Its coverage extends to the edge of the CCAMLR regulatory area, so it does not have competency over the Antarctic. It has a number of conservation and management measures,²¹⁰ however none are area-based.

²⁰⁴ <https://www.ccamlr.org/en/organisation/ccamlr-create-worlds-largest-marine-protected-area>

²⁰⁵ IPCC 2014 https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap28_FINAL.pdf

²⁰⁶ <https://www.ccamlr.org/en/measure-91-04-2011>

²⁰⁷ Conservation Measures (CM) 22-05, 22-06, 22-07, 22-08 and 22-09.

²⁰⁸ <https://www.ccamlr.org/en/science/vulnerable-marine-ecosystems-vmes>

²⁰⁹ <http://www.fao.org/fishery/rfb/ccsbt/en>

²¹⁰ <http://www.iotc.org/cmms>

UNESCO World Heritage Convention (WHC)

The 1972 World Heritage Convention (WHC) defines the criteria for natural or cultural sites which can be considered for inscription on the World Heritage List²¹¹. There are three WHS in the Antarctic, but none in areas beyond national jurisdiction (ABNJ). However, WHC and IUCN are assessing the potential for applying the concept of Outstanding Universal Value to the High Seas²¹². One potential implication of this is that member states of the WHC could agree on a regime for the protection of identified OUV sites in the high seas. This could include coordination with existing international sectoral organisations with relevant competence, for example the International Seabed Authority (ISA) (UNESCO, 2016²¹³).

International Maritime Organisation (IMO)

The Polar Code²¹⁴ of the IMO entered into force in January 2017. In Antarctica, it covers the same area of water as the Antarctic Treaty. It is mandatory under two conventions: the International Convention for the Safety of Life at Sea (SOLAS) and the International Convention for the Prevention of Pollution from Ships (MARPOL). It covers all shipping-related matters relevant to vessels operating in the waters surrounding both poles. This includes ship design, construction, equipment, operation, training, search and rescue, and the protection of the unique environments and ecosystems of the Polar Regions. In particular, it protects the ecosystems surrounding sea ice and ice shelves from pollution from ships.

Regional coordination

The Antarctic Treaty designates Antarctica as “a natural reserve, devoted to peace and science”. That it has been continuously upheld since it entered into force in 1961, and membership continues to grow, makes it an example of successful international cooperation to protect and preserve a shared area and resource. The Treaty provided that after 30 years, any party could call for a review conference. No party has done so, and in 1991 the parties adopted a declaration recording their determination to maintain and strengthen the Treaty and to protect Antarctica’s environmental and scientific values.

In terms of cross-sectoral coordination in the Southern Ocean, CCAMLR provides an illustration of how environmental and fishery concerns can be combined and addressed within one organisation. CCAMLR’s designation of both MPAs and VMEs represents an example of successful area-based planning within ABNJ. CCAMLR aims to maximise its transparency and seek broad input into decision making. It does this through a number of different strategies, including regular updates of its website (CCAMLR transparency review²¹⁵).

CCAMLR allows a number of NGOs and other accredited observers (such as civil society and industry organisations) to participate to meetings of the Scientific Committee and Commission where VME and MPA discussions are on the agenda. They are also able to contribute papers to these meetings and have the opportunity to address the meeting at the invitation of the chair. Observers are thus not excluded from any ABP-related meetings, and have the ability to work with CCAMLR’s members in a transparent way.

²¹¹ <http://whc.unesco.org/en/convention/>

²¹² <https://whc.unesco.org/en/highseas>

²¹³ <https://unesdoc.unesco.org/ark:/48223/pf0000245467>

²¹⁴ <http://www.imo.org/en/MediaCentre/HotTopics/polar/Pages/default.aspx>

²¹⁵ <https://www.ccamlr.org/en/organisation/transparency>

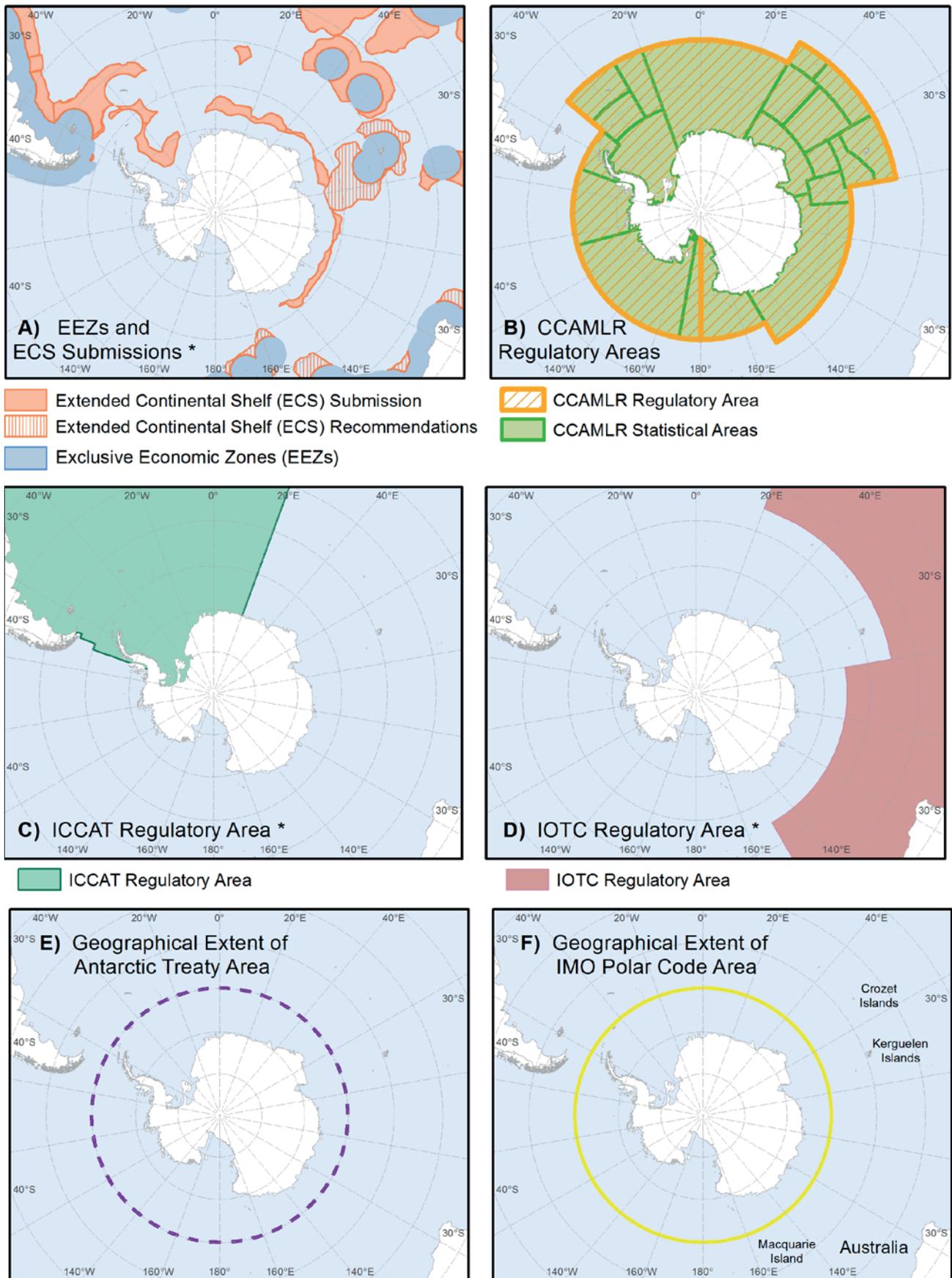


Figure 9: **A)** Extended continental shelf submissions in the Southern Ocean region; **B-F)** Geographical extent of regulatory areas and areas of competency of (B) CCAMLR, (C) ICCAT, (D) IOTC, (E) Antarctic Treaty and (F) IMO Polar Code.

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Global coastline and political boundaries data (1:1,000,000 scale) from the UN Boundaries dataset, UN Cartographic Section, 2016. See A3 for map layer citations.



A3 Map layer citations

Region: Eastern Central Pacific

Data Layer	Citation
Areas of Particular Environmental Interest (APEI)	International Seabed Authority (2012). Areas of Particular Environmental Interest (APEI) as per Decision of the Council relating to an environmental management plan for the Clarion-Clipperton Zone (ISBA/18/C22). URL: https://www.isa.org.jm
CBD Ecologically or Biologically Significant Marine Areas (EBSAs) - Eastern & Western Pacific	Secretariat of the Convention on Biological Diversity (CBD) (2015). Areas Meeting the EBSA (Ecologically or Biologically Significant Marine Areas) Criteria (Annex I of Conference of the Parties (COP) 9 Decision IX/20). URL: https://www.cbd.int/ebsa/
Costa Rica Thermic Dome	MarViva Foundation (2013) Protection and Management of the Costa Rica Thermic Dome. Figure IA: Estimated extent of the limits of the Costa Rica Thermal Dome as an oceanographic feature (Figure IA). URL: http://www.marviva.net/Publicaciones/FOLLETO%20MARVIVA%20-%20Costa%20Rica%20Thermic%20Dome.pdf
CPPS Regulatory Area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
Eastern Tropical Pacific (ETP) region	Fiedler PC, Lavin MF (2006). Introduction: A review of eastern tropical Pacific oceanography. Progress in Oceanography 69 (2–4): 94–100. URL: http://www.sciencedirect.com/science/article/pii/S0079661106000280
Exclusive Economic Zones (EEZs)	VLIZ (2014). Maritime Boundaries Geodatabase. Version 8. Ostend (Belgium): Flanders Marine Institute. URL: http://www.marineregions.org
Extended Continental Shelf (ECS) Submissions - Submission	Grid-Arendal (2015). Extended continental shelf (ECS) submissions through the Secretary-General of the United Nations, to the Commission on the Limits of the Continental Shelf, pursuant to Article 76, paragraph 8, of the United Nations Convention on the Law of the Sea of 10 December 1982. Updated vs. Submissions and Recommendations on 03 August 2015. URL: http://www.continentalshelf.org/onestopdatashop/6350.aspx
IATTC (Inter-American Tropical Tuna Commission) regulatory area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
ISA Clarion-Clipperton Environmental Management Plan Area	International Seabed Authority (2012). Environmental Management Plan for the Clarion-Clipperton Zone (ISBA/17/LTC/7) as per Decision of the Council relating to an environmental management plan for the Clarion-Clipperton Zone (ISBA/18/C22). URL: https://www.isa.org.jm
ISA Polymetallic Nodules Exploration Areas	International Seabed Authority (2018). Polymetallic Nodules Exploration Areas as per Decision of the Council relating to the extension of an approved plan of work for exploration (ISBA/21/C/19). URL: https://www.isa.org.jm
ISA Polymetallic Nodules Reserved Areas	International Seabed Authority (2018). Polymetallic Nodules Reserved Areas. URL: https://www.isa.org.jm
LME – Large Marine Ecosystem (Pacific Central-American Coastal & Humboldt Current)	NOAA Fisheries (2013). Large Marine Ecosystems (LMEs) of the World (66). Large Marine Ecosystem Program, Narragansett Laboratory, Rhode Island (USA). URL: http://www.lme.noaa.gov
Marine Protected Areas (WDPA)	IUCN and UNEP-WCMC. (2016). The World Database on Protected Areas (WDPA) [On-line], 03/2016, Cambridge, UK: UNEP-WCMC. URL: www.protectedplanet.net
NPAFC Regulatory Area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
NPFC Competency Area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
Particularly Sensitive Sea Areas (PSSAs) (IMO)	International Maritime Organisation (2014). Global distribution of Particularly Sensitive Sea Areas (PSSA). URL: http://pssa.imo.org ; http://www.maritimemaps.co.uk
SPRFMO Regulatory Area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
WCPCFC (Western and Central Pacific Fisheries Commission) regulatory area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en

Region: Southern Ocean

Data Layer	Citation
Antarctic Treaty Area	Antarctic Treaty Area (2013). Antarctic Treaty Area. URL: http://www.aspistrategist.org.au/wp-content/uploads/2013/05/East-Antarctic-map-for-MPA-fact-sheet-12-2-13.jpg
Antarctic Specially Managed Area (ASMA)	Secretariat of the Antarctic Treaty (downloaded 2016). Antarctic Specially Managed Area. URL: https://www.ats.aq/devPH/apa/ep_protected.aspx?lang=e&lang=e#
Antarctic Specially Protected Areas (ASPA)	Secretariat of the Antarctic Treaty (downloaded 2016). Antarctic Specially Protected Area. URL: https://www.ats.aq/devPH/apa/ep_protected.aspx?lang=e&lang=e#
CCAMLR Ecosystem Monitoring Programme (CEMP) sites	Commission for the Conservation of Antarctic Marine Living Resources (2016). CEMP Sites. URL: https://gis.ccamlr.org/home
CCAMLR Marine Protected Areas	Commission for the Conservation of Antarctic Marine Living Resources (2017). Marine Protected Areas. URL: https://gis.ccamlr.org/home
CCAMLR Regulatory Area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
CCAMLR Statistical Areas	Commission for the Conservation of Antarctic Marine Living Resources (2013). Statistical Areas. URL: https://gis.ccamlr.org/home
CCAMLR Vulnerable Marine Ecosystems (VMEs)	FAO (2018). Vulnerable Marine Ecosystems Database. VMEs (CCAMLR). URL: http://www.fao.org/in-action/vulnerable-marine-ecosystems/vme-database/en/vme.html
CCAMLR Vulnerable Marine Ecosystems (VMEs) Risk Areas	FAO (2018). Vulnerable Marine Ecosystems Database. Risk Areas (CCAMLR). URL: http://www.fao.org/in-action/vulnerable-marine-ecosystems/vme-database/en/vme.html
Exclusive Economic Zones (EEZs)	Flanders Marine Institute (VLIZ) (2016). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 9. Ostend (Belgium): Flanders Marine Institute. URL: http://www.marineregions.org ; http://dx.doi.org/10.14284/242
Extended Continental Shelf (ECS) Submission	Grid-Arendal (2015). Extended continental shelf (ECS) submissions through the Secretary-General of the United Nations, to the Commission on the Limits of the Continental Shelf, pursuant to Article 76, paragraph 8, of the United Nations Convention on the Law of the Sea of 10 December 1982. Updated vs. Submissions and Recommendations on 03 August 2015. URL: http://www.continentalshelf.org/onestopdatashop/6350.aspx
International Important Bird and Biodiversity Areas (IBAs)	Birdlife International, Conservation International (2016). Global distribution of Key Biodiversity Areas (KBA), Important Bird Areas (IBA) and Alliance for Zero Extinction (AZE) sites. Cambridge (UK): Birdlife International. URL: www.birdlife.org
ICCAT Regulatory Area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
IMO Polar Code	International Maritime Organization (2017). IMO Polar Code 60 degrees south. URL: http://www.imo.org/en/MediaCentre/HotTopics/polar/Documents/POLAR%20CODE%20TEXT%20AS%20ADOPTED.pdf
IOTC Regulatory Area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en

■ Region: Mediterranean

Data Layer	Citation
Barcelona Convention Area of Competence	UNEP-WCMC (2013). Area of competence of the Barcelona Convention. Cambridge (UK): UNEP-World Conservation Monitoring Centre
CBD Ecologically or Biologically Significant Marine Areas (EBSAs)	Secretariat of the Convention on Biological Diversity (CBD) (2015). Areas Meeting the EBSA (Ecologically or Biologically Significant Marine Areas) Criteria (Annex I of Conference of the Parties (COP) 9 Decision IX/20). Compiled by the Marine Geospatial Ecology Laboratory (MGEL), Duke University. URL: https://www.cbd.int/ebsa/
Fisheries Restricted Areas (FRA) in ABNJ	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
General Fisheries Commission for the Mediterranean's (GFCM) areas >1000m closed to bottom-trawling	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
GFCM Regulatory Area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
ICCAT Regulatory Area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
IMOs Particularly Sensitive Areas	International Maritime Organisation (2014). Global distribution of Particularly Sensitive Sea Areas (PSSA). URL: http://pssa.imo.org ; http://www.maritimemaps.co.uk
Important Marine Mammal Areas (IMMAs)	IUCN-MMPATF (2017). The IUCN Global Dataset of Important Marine Mammal Areas (IUCN-IMMA). Downloaded January 2019. Made available under agreement on terms and conditions of use by the IUCN Joint SSC/WCPA Marine Mammal Protected Areas Task force and accessible via the IMMA e-Atlas http://www.marinemammalhabitat.org/imma-eatlas/
Marine and Coastal Birdlife International Important Bird and Biodiversity Areas (IBAs)	Birdlife International, Conservation International (2016). Global distribution of Key Biodiversity Areas (KBA), Important Bird Areas (IBA) and Alliance for Zero Extinction (AZE) sites. Cambridge (UK): Birdlife International. URL: www.birdlife.org
Parties to ACCOBAMS	ACCOBAMS (2014). Parties to ACCOBAMS. URL: https://www.cms.int/en/legalinstrument/accobams
Potential Specially Protected Areas of Mediterranean Importance	SPA-RAC (2018). Potential Specially Protected Areas of Mediterranean Importance.
Specially Protected Areas and Biological Diversity in the Mediterranean (SPAMIs)	United Nations Environment Programme (2015). United Nations Environment Programme Mediterranean Action Plan. URL: http://rac-spa.org/nfp12/documents/information/wg_408_inf09_rev2_eng.pdf (p. 6)
The Pelagos Sanctuary	IUCN and UNEP-WCMC. (2016). The World Database on Protected Areas (WDPA) [On-line], 06/2016, Cambridge, UK: UNEP-WCMC. URL: www.protectedplanet.net

Region: Northeast Atlantic

Data Layer	Citation
ASCOBANS Extended Agreement Area	ASCOBANS (2016). Extended Agreement Area. URL: https://www.ascobans.org/en/legalinstrument/ascobans
ASCOBANS Original Agreement Area	ASCOBANS (2016). Original Agreement Area. URL: https://www.ascobans.org/en/legalinstrument/ascobans
Boundaries for the Strategic Environmental Management Plan for deep seabed mineral exploitation in the Atlantic basin (SEMPIA)	Morato T, Cleary J, Taranto GH, Vandepierre F, Pham CK, Dunn DC, Colaço A, Halpin PN (2015). Data report: Towards development of a strategic Environmental Management Plan for deep seabed mineral exploitation in the Atlantic basin. IMAR & MGEL, Horta, Portugal. 112 pp. URL: http://www.eu-midas.net/sites/default/files/Workshops/SEMPIA/SEMPIA_Data_Report_lowres.pdf
CBD Arctic Ice EBSA (Arctic workshop)	Secretariat of the Convention on Biological Diversity (CBD) (2015). Areas Meeting the EBSA (Ecologically or Biologically Significant Marine Areas) Criteria (Annex I of Conference of the Parties (COP) 9 Decision IX/20). Compiled by the Marine Geospatial Ecology Laboratory (MGEL), Duke University. URL: https://www.cbd.int/ebsa/
CBD Corner Rise Seamount EBSA (North-west Atlantic workshop)	Secretariat of the Convention on Biological Diversity (CBD) (2015). Areas Meeting the EBSA (Ecologically or Biologically Significant Marine Areas) Criteria (Annex I of Conference of the Parties (COP) 9 Decision IX/20). Compiled by the Marine Geospatial Ecology Laboratory (MGEL), Duke University. URL: https://www.cbd.int/ebsa/
CBD Hydrothermal Vent EBSA (North-west Atlantic workshop)	Secretariat of the Convention on Biological Diversity (CBD) (2015). Areas Meeting the EBSA (Ecologically or Biologically Significant Marine Areas) Criteria (Annex I of Conference of the Parties (COP) 9 Decision IX/20). Compiled by the Marine Geospatial Ecology Laboratory (MGEL), Duke University. URL: https://www.cbd.int/ebsa/
Exclusive Economic Zones (EEZs)	Flanders Marine Institute (VLIZ) (2016). Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 9. Ostend (Belgium): Flanders Marine Institute. URL: http://www.marineregions.org ; http://dx.doi.org/10.14284/242
Extended Continental Shelf (ECS) Submissions status: Submission	Grid-Arendal (2015). Extended continental shelf (ECS) submissions through the Secretary-General of the United Nations, to the Commission on the Limits of the Continental Shelf, pursuant to Article 76, paragraph 8, of the United Nations Convention on the Law of the Sea of 10 December 1982. Updated vs. Submissions and Recommendations on 03 August 2015. URL: http://www.continentalshelf.org/onestopdatashop/6350.aspx
ICCAT Convention Area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
IMO Particularly Sensitive Sea Areas (PSSAs)	International Maritime Organisation (2014). Global distribution of Particularly Sensitive Sea Areas (PSSA). URL: http://pssa.imo.org ; http://www.maritimemaps.co.uk
Jointfish Regulatory Area	FAO (2016) Regional Fishery Bodies. Geographic Area of Competence of Joint Norwegian-Russian Fisheries Commission (JointFish). In: FAO Fisheries and Aquaculture Department (FI), available online: http://www.fao.org/geonetwork/srv/en/main.home?uuid=fao-rfb-map-jointfish , Updated 2016-06-21 [date accessed: 22.06.1]
Large Marine Ecosystems - Barents and Norwegian Seas (LMEs)	NOAA Fisheries (2013). Large Marine Ecosystems (LMEs) of the World (66). Large Marine Ecosystem Program, Narragansett Laboratory, Rhode Island (USA). URL: http://www.lme.noaa.gov
Marine and Coastal BirdLife International and Important Bird Areas (IBAs)	Birdlife International, Conservation International (2016). Global distribution of Key Biodiversity Areas (KBA), Important Bird Areas (IBA) and Alliance for Zero Extinction (AZE) sites. Cambridge (UK): Birdlife International. URL: www.birdlife.org
NAMMCO Regulatory Area	FAO (2010). Regional Fishery Bodies. Fishery Governance Fact Sheets, FAO Fisheries and Aquaculture Department. URL: http://www.fao.org/fishery/rfb/en
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Data Layer	Citation
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ABNJ DEEP SEAS PROJECT

The Sustainable Fisheries Management and Biodiversity Conservation of Deep Sea Living Resources in Areas Beyond National Jurisdiction Project (ABNJ Deep Seas Project for short) is a five year project supported by the Global Environment Facility, and implemented jointly by the Food and Agriculture Organization of the United Nations, and the United Nations Environment Programme. The UNEP project component is executed through the UNEP World Conservation and Monitoring Centre.

The Project is designed to enhance sustainability in the use of deep-sea living resources and biodiversity conservation in the ABNJ through the systematic application of an ecosystem approach. It brings together over 20 partners who work on deep-sea fisheries and conservation issues in the ABNJ globally. The partnership includes regional organizations responsible for the management of deep-sea fisheries, Regional Seas Programmes, the fishing industry and international organizations.

The Project aims to:

- Strengthen policy and legal frameworks for sustainable fisheries and biodiversity conservation in the ABNJ deep-seas;
- Reduce adverse impacts on VMEs and enhanced conservation and management of components of EBSAs;
- Improve planning and adaptive management for deep-sea fisheries in ABNJ; and develop and test methods for area-based planning.
- The ABNJ Deep Seas Project started in September 2015 and is one of four projects under the GEF Common Oceans Programme.

More information is available from www.commonoceans.org



Food and Agriculture
Organization of the
United Nations



Convention on
Biological Diversity



International Coalition of Fisheries Associations



Southern Indian Ocean
Deepsea Fishers Association



SPRFMO
South Pacific Regional Fisheries Management Organisation



SIOFA | APSOI
Southern Indian Ocean Fisheries Agreement
Accord relatif aux pêches dans le Sud de l'Océan Indien

