The Convention on Biological Diversity's Ecologically or Biologically Significant Areas: Origins, development, and current status

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A B S T R A C T

In 2008, the Convention on Biological Diversity (CBD) adopted seven criteria to identify Ecologically or Biologically Significant Areas (EBSAs) “...in need of protection, in open ocean waters and deep sea habitats”. This paper reviews the history of the development of the “EBSA process”, which was originally driven by the commitment to establish marine protected areas in areas beyond national jurisdiction, but which has since broadened to encompass the possibility of informing marine spatial planning and other activities, both within and beyond national jurisdiction. Additionally, the paper summarizes ongoing efforts through CBD regional workshops to describe EBSAs and the development of the EBSA Repository, where information on these areas is to be stored. The overlap between the EBSA criteria and biodiversity criteria suites used by various authorities in areas beyond national jurisdiction is illustrated. The EBSA process has reached a critical juncture, whereby a large percentage of the global ocean has been considered by the regional workshops, but the procedure by which these areas can be incorporated into formal management structures has not yet been fully developed. Emerging difficulties regarding the mandate to describe, identify, endorse, or adopt EBSAs, are discussed.

1. Introduction

Fueled by technological improvements and growing competition for marine resources, human activities have focussed increasingly on areas beyond national jurisdiction (ABNJ). Recognition of the extent [1,2] and impact [3–5] of our activities on the world’s oceans, has led to growing awareness and efforts to improve the governance and management of the global ocean, most recently through the use of area-based management [6]. Tools to inform decisions on how to balance biodiversity conservation needs with sustainable use of environmental/natural resources are increasingly required [7]. There are a wide range of criteria suites to identify areas of ecological importance, including some that focus on taxa individually (e.g., Important Bird Areas [8]) or jointly (e.g., Key Biodiversity Areas [9,10]), to suites for specific habitats (e.g., Ramsar criteria for wetlands), regional criteria suites [11,12], or regional criteria suites [11,12]. Since 2006, and in response to the Johannesburg Plan of

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2 Adopted by the 7th (1999) and 9th (2005) Meetings of the Conference of the Parties to the Convention on Wetlands (Ramsar, Iran, 1971), superseding earlier Criteria adopted by the 4th and 6th Meetings of the COP (1990 and 1996), to guide implementation of Article 2.1 on designation of Ramsar sites.
Implementation (JPOI) call to establish protected areas globally [13], the Convention on Biological Diversity (CBD) has sought to develop and employ a broad suite of criteria to describe Ecologically or Biologically Significant Areas or “EBSAs” globally in the marine environment.

This paper tracks the development of the EBSA criteria and the process used by the CBD to describe areas meeting one or more of these criteria in the marine environment. This process has reached a critical juncture, whereby a large percentage of the global ocean has been considered by an initial round of intergovernmental workshops seeking to describe EBSAs; however, the procedure by which these areas can be incorporated into formal management structures is not yet developed in detail. This paper provides background to the current EBSA process, and seeks to advance the discussion on how EBSA descriptions could be incorporated into national and international decision-making.

2. Origins of the EBSA process

2.1. Pre-EBSA policy context

The Convention on Biological Diversity was opened for signature on June 1992 at the United Nations Conference on Environment and Development (the Rio “Earth Summit”). The Rio Earth Summit also set forth Agenda 21 and called upon States to “identify marine ecosystems exhibiting high levels of biodiversity and productivity and other critical habitat areas” and to (…) “provide necessary limitations on use in these areas, through, inter alia, designation of protected areas” [14].

Ten years later, in 2002 at the second Earth Summit, the Johannesburg Plan of Implementation (JPOI), confirmed the need to “maintain the productivity and biodiversity of important and vulnerable marine and coastal areas, including in areas within and beyond national jurisdiction”, and provided explicit targets for the “application by 2010 of the ecosystem approach” and the “establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012” [13].

Despite some progress regionally and nationally [15], global protection of marine biodiversity remained inadequate, and in 2004 the 7th Conference of Parties (COP 7) to the CBD committed to the target in the JPOI for representative networks of MPAs by 2012 [16]. CBD COP 7 set a target that there should be: “Effective conservation of at least 10% of each of the world’s ecological regions by 2010”, which was endorsed by COP 8 in 2006 [17].

CBD COP 7 established an Ad-hoc Open-ended Working Group on Protected Areas (PAWG), which met in Montecatini, Italy in 2005 (Fig. 1). The first substantive agenda item was (1) “options for cooperation for the establishment of marine protected areas in marine areas beyond the limits of national jurisdiction” [18]. However, the larger question of what mandate the CBD had in governance of ABNJ impeded further progress. A “friends of the chair” sub-group led by Canada concluded that existing criteria should be compiled and synthesized as a basis for future work, and the Government of Canada offered to host a workshop on the issue [19].

Before the CBD PAWG met in Montecatini, Canada had begun a national effort to advance its integrated management process, as mandated under the 1996 Oceans Act [20]. Scientific criteria had been developed “to facilitate provision of a greater-than-usual degree of risk aversion in management of activities in such areas” [21], and were coined “Ecologically or Biologically Significant Areas” (EBSAs). The Canadian EBSA criteria (Uniqueness, Aggregation, and Fitness Consequence, with two additional criteria: Resilience and Naturalness) were presented in Montecatini. Hence, while the early development of the CBD EBSA process had its beginnings in efforts to identify networks of marine protected areas (MPAs) in ABNJ, EBSA criteria were already being employed nationally within integrated management strategies to generally identify areas requiring more risk-averse management.

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Fig. 1. The evolution of the EBSA process. While it stemmed from the Programme of Work on Protected Areas within the CBD, the EBSA process has been implemented entirely through recommendations relating to Coastal and Marine Biodiversity. Adapted from Dunn (ed) 2011. Background adapted from Richard Hermann-Galatée films, Census of Marine Life.
2.2. Development of the EBSA criteria

2.2.1. First Ottawa workshop (2005)

Canada hosted a meeting in Ottawa to further consider criteria that could lead to the selection of EBSAs in ABNJ. It set out to inform not just the CBD, but also the Food and Agricultural Organization (FAO) of the United Nations (UN) and the International Maritime Organization (IMO). It sought a broad and overarching set of criteria that could be used by all three organizations and “contribute to a shared scientific basis for their dialogue and action” [22]. This recognized explicitly that although the CBD mandated focus was on criteria to inform identification of areas for MPAs and networks of protected areas, the functions of the criteria were being viewed broadly as contributing to conservation planning across agencies. A draft background paper by Dearden and Topelko [23] provided a thorough review of major criteria suites for MPA site selection and network selection. Although the criteria that were derived from these discussions were also called EBSA criteria, they differed from the Canadian national EBSA criteria (see above). The experts in Ottawa defined six EBSA criteria: Uniqueness, Life history stages, Vulnerability, Productivity, Biological Diversity and Naturalness (Representativity was considered separately). The final report of the workshop was transmitted to the CBD Parties as a background document at COP 8 in 2006 [22].

2.2.2. CBD COP 8 (2006) and the CBD (Azores) workshop (2007)

Debate regarding the role of the CBD in ABNJ, already an obstacle in Montecatini, arose again at COP 8 in 2006. Concerns were raised that criteria were developed without full consultation of all nations, and hence in the final recommendations, there is little reference to the Montecatini workshop, and no mention of the Ottawa workshop. However, progress was made on defining the CBD’s role in ABNJ. It was agreed the CBD would focus “on provision of scientific and, as appropriate, technical information and advice relating to marine biological diversity, the application of the ecosystem approach and the precautionary approach, and in delivering the 2010 target [for protected areas]” [24]. Further, COP 8 called for the convening of an expert workshop to “refine and develop a consolidated set of scientific criteria for identifying ecologically or biologically significant marine areas in need of protection” [25]. This delineation of a boundary between the provision of scientific and technical advice and provision of advice on policy and management has strongly influenced dialog and action within CBD and its expert processes to the present.

The ensuing CBD Expert Workshop in 2007 hosted by Portugal/The Azores, considered an updated version of the Dearden and Topelko review [23] and included the 2005 Ottawa workshop report as a background document. During the workshop, the EBSA criteria were further refined, resulting in a set of seven site criteria:

1. Uniqueness or rarity.
2. Special importance for life history of species.
3. Importance for threatened, endangered or declining species and/or habitats.
4. Vulnerability, fragility, sensitivity, slow recovery.
5. Biological productivity.
6. Biological diversity.
7. Naturalness.

While the inclusion of an endangered species criterion separate from the importance to life history criterion was a notable change, the major addition made by the Azores workshop was to separate out representativeness as part of a new discrete set of MPA network criteria [26]. Other identified, network level criteria included connectivity, replication and adequacy and viability. It was agreed that future development of MPA networks should include EBSAs as one of the five MPA network design criteria, and a link between the two criteria suites was established. Their inclusion as one criterion for MPA network design was not intended to mean all EBSAs, or the full extent of any given EBSA, would become MPAs; just that they should be considered with regard to the contribution they could make to the design of MPA networks, and that some EBSAs (in part or in whole) should be included in MPA networks.

2.2.3. CBD COP 9 (2008)

At COP 9 in Bonn, Germany, the seven EBSA criteria and five MPA network criteria (renamed “scientific guidance for designing networks of MPAs”) were adopted in Decision IX/20, and included as Annexes 1 and 2, respectively. This choice of language reflected a commitment by the Parties to the CBD that not only were the criteria and guidance helpful, but that they would actually be used in the identification of marine areas “in need of protection in open-ocean waters and deep-sea habitats” [27]. The separation of site-level criteria and network-level approaches was a unique CBD development, and remains the only internationally agreed-upon criteria system to formally recognize this distinction. It established a process that allowed the CBD to first focus on site-level description of EBSAs, in advance of any consideration by other bodies of management regimes such as networks of MPAs. The separation of the criteria suites has thus allowed EBSA descriptions to be useful for more than solely the design of networks of MPAs and has been an important acknowledgment of the desire of many Parties to broaden the scope of the EBSA process.

2.2.4. CBD (Ottawa) workshop (2009)

While COP 9 adopted the criteria, there remained concerns about how the criteria would be applied. COP 9 therefore called for a follow-on CBD Expert Workshop to provide “scientific and technical guidance on the use of biogeographic classification systems and identification of marine areas beyond national jurisdiction in need of protection” [28]. Canada together with Germany agreed to hold a CBD Expert Workshop in Ottawa in 2009. At the workshop a series of expert presentations on how to apply the EBSA criteria were provided, including from the newly organized Global Ocean Biodiversity Initiative (GOBI) [29]. While the focus of the workshop was on application of the EBSA criteria in ABNJ, the workshop concluded, inter alia, that “there are no inherent incompatibilities between the various sets of criteria that have been applied nationally and by various inter-governmental
organizations (IGOs; e.g., FAO [30], IMO [31], ISA [32]) and environmental non-governmental organizations (NGOs); e.g., BirdLife International [8] and Conservation International [9] and went on to point out that “unlike the CBD EBSA criteria some of the criteria applied by other UN agencies include considerations of vulnerability to specific activities” [33].

The EBSA process to date has limited its assessment of the vulnerability (the fourth EBSA criterion) of particular sites to inherent structural habitat features or life history characteristics (e.g., late maturity, slow growth, low fecundity, etc.), noting that human activities (not considered in the EBSA criteria) and their impacts would usually influence what is deemed to be vulnerable.

2.2.5. COP 10 (2010)

In 2010, the CBD COP 10 in Japan adopted the Aichi Biodiversity Targets, of which target 11 reaffirmed the call for “10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures” [34]. COP 10 also noted with concern the slow progress towards achieving the 2012 target of establishment of MPAs [35] and took note of the results of the CBD Ottawa Expert Workshop. It was within this context that the Parties agreed on a process for describing EBSAs through a series of regional workshops [36]. The Decision reflected a willingness by Parties to move ahead with the use of the criteria. The COP 10 decisions not only regionalized the process, but also broadened it from previously only considering ABNJ to include, where desired by certain Parties, marine areas within national jurisdiction. All draft language that exclusively referred to ABNJ was removed. The Parties also requested the Executive Secretary to “establish a Repository for scientific and technical information and experience related to the application of the scientific criteria on the identification of EBSAs (…) and to develop an information-sharing mechanism” [37] and invited Parties and Governments to contribute information and experiences from the application of nationally or internationally agreed upon criteria within national jurisdiction to the Repository.

3. The current status of the EBSA process

3.1. The State-based, regional approach

The current EBSA process is undertaken using a structured UN regional approach and reflects typical practice of UN agencies to accommodate regional differences in needs, capacities and culture. It is also consistent with the approach of the Regional Seas Programme, and with regional fisheries management organizations and agreements (RFMO/As). Further, it is ecologically and politically coherent as it recognizes the fundamentally connected nature of the marine environment at a regional scale, and the consequent responsibility which nations have toward their neighbors when their actions affect shared resources. Fig. 2 presents a schematic workflow of the process adopted by the Parties at COP 10 whereby intergovernmental regional workshops are used to describe potential areas meeting the EBSA criteria. The “scientific and technical data and information and results collated through the workshops” would be shared with relevant agencies, organizations and partners, and compiled into a report to be forwarded to the next meeting of the CBD Subsidiary Body for Scientific, Technical and Technological Advice (SBSTTA) [38]. SBSTTA would then recommend specific EBSA descriptions to be included in a synthesis report to the COP, which would have an opportunity to consider and “endorse” the synthesis report and described EBSAs. The final endorsed EBSA descriptions would then be entered in to the CBD EBSA Repository and submitted to the UN General Assembly, the Parties, other Governments, and other relevant international organizations [38].

3.1.1. The EBSA regional workshops

The CBD Secretariat with regional partner organizations convened six regional workshops between November 2011 and April 2013 to enable the description of areas meeting the EBSA criteria...
Prior to these, in September 2011, a similar workshop was held by the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) and the North-East Atlantic Fisheries Commission (NEAFC), which was attended by the CBD Secretariat. In the Mediterranean region, an explicit EBSA workshop was not held; rather, results from the Mediterranean Action Plan under the Barcelona Convention Regional Seas Programme were transmitted directly to SBSTTA for consideration. All descriptions of EBSAs at the regional workshops were subject to consensus agreement among Party nominated experts in plenary.

A defining factor in any workshop is the make-up of those attending. For the regional CBD EBSA workshops, attendance has been by invitation only with intergovernmental experts nominated by the Parties, and recognized organizations (including ENGOs and industry groups) invited through the CBD. Where international experts/observers have been invited, they have typically been those who had data to contribute to the regional process. The make-up of the regional workshops (i.e., largely experts nominated by their government) reinforced the State-based, limited access nature of the EBSA process as defined at CBD COP 10. Workshops have been supported by GOBI partners, i.e. by technical teams from either the Commonwealth Scientific and Industrial Research Organisation (CSIRO; Australia) or Duke University (USA) who assisted through the compilation of global datasets and a data report prior to each workshop (providing a consistent core of base environmental conditions across the workshops to supplement the available regional datasets), data access mapping and interpretation, and the development of EBSA descriptions at the meetings. The participation of the CBD Secretariat and technical teams helped to ensure consistency across workshops. Three further workshops have been planned for early 2014 covering the Arctic, the Northwest Atlantic and the Mediterranean.

### Table 1: CBD Regional EBSA workshops and other relevant meetings.

<table>
<thead>
<tr>
<th>Regional workshop on EBSAs</th>
<th>Date</th>
<th>Host country</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSPAR/NEAFC Northeast Atlantic</td>
<td>Sep-11</td>
<td>France</td>
</tr>
<tr>
<td>Western South Pacific</td>
<td>Nov-11</td>
<td>Fiji</td>
</tr>
<tr>
<td>Wider Caribbean and Western Mid-Atlantic</td>
<td>Feb-12</td>
<td>Brazil</td>
</tr>
<tr>
<td>Southern Indian Ocean</td>
<td>Jul-12</td>
<td>Mauritius</td>
</tr>
<tr>
<td>Eastern Tropical and Temperate Pacific</td>
<td>Aug-12</td>
<td>Ecuador</td>
</tr>
<tr>
<td>North Pacific</td>
<td>Feb-13</td>
<td>Russia</td>
</tr>
<tr>
<td>South-Eastern Atlantic</td>
<td>Apr-13</td>
<td>Namibia</td>
</tr>
<tr>
<td>Mediterranean Synthesis Report</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

* Not organized by the CBD Secretariat.

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3.1.2. Capacity building/training to support the EBSA process

In the context of describing EBSAs, COP 10 emphasized that “workshops are likely to be necessary for training and capacity-building”, but did not request them [39]. Consequently, the amount of training provided at each workshop has evolved over time. The South West Pacific workshop, held in November 2011, only included a short session dedicated to building the understanding of the EBSA process and the available data. Participants were not comfortable with the details of how potential EBSAs would be described until they used their expertise on the data in latter parts of the workshop. A similar pattern emerged during the Caribbean and Mid Atlantic workshop (though see the description of Brazil’s pre-workshop activities below).

Learning from the first two workshops, the CBD secretariat increased the length of subsequent workshops to allow for further training. This significantly improved the effectiveness of workshop participants in describing potential EBSAs. Going even further, a later workshop, in the South East Atlantic, was preceded by a 5-day capacity building workshop held in Senegal 2 months prior to the EBSA workshop and supported by the Sustainable Ocean Initiative. The workshop provided an overview of EBSAs, MPAs, and ecosystem-based fisheries management. The expanded capacity building phase for this region was in response to calls from African nations at the SBSTTA 16 in 2012 for greater involvement and capacity building in the EBSA process. This level of training provided strong outcomes at the subsequent EBSA workshop, allowing the workshop to focus on the description of areas meeting the EBSA criteria.

The importance of, and the wish of parties for, capacity building in the regional approach to describing EBSAs cannot be overstated. Those workshops with some level of capacity building organized either nationally or in conjunction with the CBD prior to the workshop had a higher number of EBSA proposals submitted prior to the workshop. For example, one party (Brazil) held a national meeting before the regional workshop that provided them the opportunity to identify EBSAs in their national waters. In comparison, only a small numbers of EBSA descriptions were proposed before three of the other regional workshops (Eastern Tropical Pacific Ocean, Southern Indian Ocean, and North Pacific Ocean); no EBSAs were described prior to the first EBSA regional workshop in the Western South Pacific Ocean. Improved understanding of the EBSA process prior to the workshops reduced the amount of time spent in each workshop relating the process and how EBSAs could be described. Increased capacity and engagement was reflected in the number of pre-workshop submissions, but such submissions were not a prerequisite for a successful workshop, and arguably resulted in countries being less flexible to changes to the EBSA description during the workshop. Hence, while pre-meeting training and EBSA preparation formed a valuable component of some regional processes, the cooperative development and review of EBSA’s descriptions during the workshops remained central to their success.

3.2. The EBSA Repository and information sharing mechanism

According to the process laid out by the Parties at COP 10, the results of the regional EBSA workshops were meant to be stored in a CBD EBSA Repository. In 2011, the CBD Secretariat awarded a consultancy for a prototype Repository to members of GOBI. The consultancy considered and adapted a web-tool they had developed earlier to gather information (e.g., documents, figures and spatial data) on how areas might meet the EBSA and other criteria suites via a web-based survey that was open to all interested researchers, NGOs, practitioners and academics seeking to inform the EBSA process. However, this open-submission process was philosophically incompatible with the State-based regional process for describing EBSAs agreed to by COP 10 (Fig. 2). In the prototype CBD Repository, an EBSA description moves through various stages of development and official review within the Repository, with each stage assigned specific, password protected, user access and distribution rights.

In all regional workshops to date, EBSA descriptions have been made available in the final workshop report, and spatial data have been stored by the technical support teams. However, the lack of a CBD-hosted Repository that displays the results of the regional EBSA workshops and supporting data is a critical gap in the current process, and does not readily allow for external usage, interactive geographical searching or open review by civil society.

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3.3. Post-regional EBSA workshop developments

From 2004 to 2012, there has been a steady evolution in the development of the EBSA criteria and the description of areas that met those criteria. Each CBD COP took a step forward toward the agreed upon goal of describing EBSAs, and from 2010 onward, the CBD Secretariat worked at a fast pace, organizing six regional workshops and collating the results in 18 months. However, in May 2012, SBSTTA 16 saw the first signs of possible problems in this process. Questions arose around whether the recommendations coming out of SBSTTA, which is the baseline text for discussions at the COP, should “endorse” or “take note of” the SBSTTA synthesis report of the EBSA workshop results. One Party stated that the SBSTTA could not endorse the report as that was the exclusive role of the COP. Hence, the word “endorse” was bracketed1 in the draft recommendations going to COP 11. Failure to “endorse” the synthesis report threatened to stop the process and prevent dissemination of the described EBSAs.

The discussion continued at COP 11 in October 2012, however this time the argument was reversed: a number of countries now argued that it was not the COP’s place to endorse a scientific report that SBSTTA had not been able to endorse unanimously. Specifically, they felt it was not the role of the CBD COP to endorse the overwhelming amount of scientific and technical information in the SBSTTA synthesis report. As a compromise, CBD COP 11 requested “the Executive Secretary to include the summary reports on the description of areas that meet the criteria for EBSAs (…) in the Repository (…) and (…) to submit them to the UNGA [and relevant organizations]” [40]. Thus, without formally endorsing or otherwise passing judgment on the SBSTTA synthesis report, the Parties approved dissemination of the report (which was officially sent by the CBD Executive Secretary to the UN Secretary General on 19 March 2013). Several countries questioned whether this recommendation was in line with the process outlined in Decision X/29. There was consensus, however, that the results of the CBD EBSA workshops should provide an important contribution to UN negotiations on how to manage and conserve biodiversity in ABNJ and they have been communicated accordingly [41].

The circular argument that SBSTTA has the technical capacity to review the workshop reports but not the political capacity to suggest their endorsement, while the COP had the political power to endorse them but not the technical capacity to review them, may reflect some Parties’ discomfort with aspects of the process (e.g. if they were not represented in regional meetings) and/or the longer term implications of it (in this case the possible delineation of MPAs in ABNJ). Alternatively, consensus may not have been reached due to ambiguity surrounding the word “endorse” (or its translation in other languages) which could imply an action that is outside the legal competence of the CBD. One other possible explanation for the lack of consensus may be a determination by certain Parties that substantive discussions should be held at the UNGA, not the CBD. Furthermore, developing States have been particularly concerned that movement forward on the conservation of ABNJ at the UNGA should be accompanied with progress on the issue of access and benefit sharing of marine genetic resources.

4. Discussion: the utility of describing EBSAs

4.1. Commonality of the EBSA criteria with those of other IGOs/ processes

As the CBD acts through the authority of its Parties, the real utility of describing EBSAs lies in the relationship between the CBD and the CBD Parties (for EBSAs in national jurisdiction), and other UN processes, international agreements, conventions, arrangements, and related competent management authorities for ABNJ. In the long-term, EBSAs may contribute to a network of MPAs as indicated in Annex II of COP Decision IX/20. However, the legal process and international agreements necessary for achieving this are only now being debated. EBSAs can already inform existing regional and global management bodies with responsibility beyond national jurisdictions in both conservation and sustainable use and this requires no additional legal process.

Governance of human activities in ABNJ is distributed across a number of international institutions, all of which have adopted decisions that describe the importance of biodiversity and the need to manage the activities under their purview so as to limit adverse impacts to marine ecosystems. Many of these management authorities have also promulgated suites of criteria for the identification of areas of biological or ecological importance to support conservation and sustainable use of biodiversity and non-living resources (Fig. 3). Not surprisingly, the overlap between these criteria suites and the EBSA criteria is significant (Table 2), since the EBSA criteria were developed through the consideration of extant systems.

The Parties to the CBD clearly understand the potential benefits to collaboration and sharing among conventions, agencies and organizations, and have repeatedly requested a cooperative approach [e.g. 36,42]. Responding to this, the majority of the regional Expert Workshops have been jointly hosted by the CBD, a national government and RFMOs or Regional Seas Programmes. However, EBSAs are still new to the international community, and do not formally have any status in, or have yet to feature in, any decision-making processes in ABNJ.10

4.2. Broadening the EBSA process to include areas within national jurisdiction

The CBD Secretariat has a key role in the provision of information, guidelines and (when requested) technical assistance to its Parties to support the identification of EBSAs within national jurisdictions. The recognition of this element of the EBSA process was provided at COP 10 through the removal of references to ABNJ in the recommendations pertaining to EBSAs. The broadening of the scope of the process to include areas within national jurisdiction means that developing countries can use the process to (1) support CBD National Biodiversity Strategies and Action Plans, (2) promote the status of previously identified national protected areas, and (3) potentially increase access to international funding for area-based planning, resource management and conservation efforts. At the regional EBSA workshops, a number of countries reported that national processes were already underway to identify EBSAs within national waters and other countries were intending to use the EBSAs agreed to by regional experts to support marine management within their national jurisdiction. For example EBSAs identified in the Western South Pacific regional

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10 Noting the on-going OSPAR and NEAFC processes in the North-East Atlantic, where described EBSAs are now under consideration as well as developments for the Sargasso Sea [40].
workshop provided input to the Cook Island’s intention to declare a marine reserve in their exclusive economic zone (EEZ).

4.3. The relationship between EBSAs and MPAs

Within national jurisdictions there are already cases of national EBSA type description processes informing the selection of areas for MPA designation (e.g., Canada, Australia, Korea and Japan). Although the impetus for the CBD to develop and adopt EBSA criteria was directly linked to a call for more effective conservation in ABNJ, including through the establishment of representative networks of MPAs, there has been an on-going debate about how such networks would be established and managed. The approach taken at the Azores workshop that separated site-level EBSA criteria from the network-level MPA criteria has allowed the process for describing ecologically important areas to be separated from the process of MPA establishment. It has been stressed at every COP, SBSTTA and CBD workshop since that the description of EBSAs is a scientific exercise that should not be conflated with any potential management requirements, and describing EBSAs does not come with any obligation to turn them into MPAs or other management commitments [e.g. 43,44]. Notwithstanding their usefulness for a range of potential management arrangements, there is a linkage between EBSAs and possible future MPAs, when the EBSAs contribute to network goals or when MPA designation is a preferred means of providing the enhanced management required. Concerns about the risk of treating all EBSA descriptions as a first step to calls for designation of the area as an MPA continue to arise in some regional workshops, and SBSTTA and COP debates about handling workshop summary reports. Although the CBD cannot be the forum for establishing MPAs in ABNJ, commitments for such MPAs have been made many times, including WSSD 2002, UNGA Resolution 57/141, CBD Aichi Target 11 and Rio+20. These policy commitments, as well as the underlying ecological requirements [47], mean that the UNGA will need to identify a process to successfully bring forward, designate, and manage MPAs in ABNJ, and facilitate marine spatial planning (MSP) more generally. Such a process should

Table 2
Correspondence between the CBD EBSA criteria and other international criteria used by IGOs and NGOs (i.e. Birdlife and IUCN) mentioned in this manuscript. Correspondence is indicated by either a check where it exists, an X where it doesn’t, or a ? where there is uncertainty or the criteria suite is under review.

<table>
<thead>
<tr>
<th>Site criteria</th>
<th>CBD</th>
<th>FAO</th>
<th>IMO</th>
<th>UNESCO</th>
<th>RAMSAR</th>
<th>Birdlife</th>
<th>IUCN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uniqueness or rarity</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Special importance for life history stages of species</td>
<td>✔</td>
<td>✔</td>
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<td>Vulnerability, fragility, sensitivity or slow recovery</td>
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<td>✔</td>
<td>✔</td>
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<tr>
<td>Productivity</td>
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<tr>
<td>Biodiversity</td>
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<tr>
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<td>✔</td>
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<tr>
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<td>X</td>
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</table>

* The KBA criteria are currently under review and is likely to be expanded to be more inclusive.

make use of the EBSAs that have been described in the regional workshops.

4.4. The relationship between EBSAs and MSP

The sheer size of some of the EBSAs described in the regional workshops is such that no single type of conservation measure can be expected to deliver appropriate protection at appropriate societal cost to the entire area. For example, the Equatorial Upwelling Zone in the Pacific Ocean, described as an EBSA on its western half by the regional workshop held in Fiji, and its eastern side by the regional workshop held in Galapagos, is a planetary feature of a magnitude comparable to the Amazon basin’s tropical forests. A single management approach for an area of that size, and particularly designation of such a large area as a no-take marine reserve, would very likely be opposed. Rather, as already suggested by Weaver and Johnson [45], EBSAs of all sizes lend themselves to be used as inputs to a rational framework for regional, ecosystem based, MSP processes, where a variety of management tools, spatial and dynamic, can be applied by competent authorities.

Within such an MSP process, EBSAs present areas that may require more risk-adverse management, including area-based management, which takes into consideration their needs and vulnerability to a range of activities. Risk assessments, including environmental impact assessments, are an important part of MSP and area-based management. These assessments can benefit from knowledge of the properties of EBSAs and help guide the selection of measures that ensure the EBSAs receive a relatively higher level of precaution. This is particularly true for EBSAs that may experience cumulative or synergistic impacts. For example, information on spawning, breeding or feeding grounds or migratory corridors collected through the description of how areas meet EBSA criteria 2 and 3 (the life history and endangered species criteria) might be used to decrease the risk of ship strikes or harmful fisheries bycatch. The identification of unique or rare areas (EBSA criterion 1) or areas with high biological diversity (EBSA criterion 6) might indicate an increased probability of discovering new genetic diversity. Scientific discovery could be prioritized for such EBSAs within an MSP. EBSAs also indicate areas of the ocean where observations could be focussed to monitor ecosystem health, as they are areas of relatively higher value than the surrounding seas.

Providing such information to management authorities or planning processes can only improve their ability to sustainably manage the resources under their purview. The need for competent authorities to coordinate their planning activities, particularly within EBSAs, is an issue that is yet to be addressed, and yet is critical to successful MSP in ABNJ [46,47].

5. Next steps

While our understanding of the utility of describing EBSAs has expanded over the last decade, there remain questions about the role that EBSAs play within a broader management framework. Building on proactive efforts by Canada, the early recommendations that led to the formation of what is now known as the EBSA process were initially structured around CBD’s scientific advisory role on how to better conserve biodiversity in ABNJ, including through the establishment of protected areas in ABNJ. A number of States, regional, and international organizations have experience with criteria suites similar to that used in the EBSA process and have also used these to prioritize planning and management and monitoring. In this light, the development of the inclusive EBSA criteria, which incorporate many aspects of previous criteria systems, both within and beyond national jurisdiction, has allowed for an approach compatible with other biodiversity criteria suites. Therefore, the EBSA criteria represent a common currency across marine/maritime sectors which have stimulated a new multi-party dialogue amongst the CBD and international conservation agreements, sectoral management bodies, and States. However, to be useful to these bodies future planning efforts, the EBSA Repository will have to be made fully functional, providing access to EBSA descriptions and their supporting data.

As outlined in this paper, some challenges have arisen in the EBSA process. CBD Parties will need to support the procedure agreed-upon at COP 10 whereby described EBSAs and their associated data can be shared amongst States and the competent authorities in a timely manner that conveys the Parties’ support for the results. As the CBD Secretariat wraps up the initial round of EBSA regional workshops, it is time to pause and consider next steps. At all regional workshops participants have agreed that this should not be a “one-off” process, and have requested future workshops, requiring further funding and planning by the CBD. Beyond the EBSA workshops, however, there remains the second adopted annex to Decision IX/20, regarding the “scientific guidance for designing networks of MPAs” in ABNJ which include EBSAs as one of the five criteria. To clarify or create an effective global mechanism whereby EBSAs and their descriptions could be used alongside biogeographies and other relevant information, the UNGA will need to move decisively on the call in paragraph 162 of Rio+20 to address, “…on an urgent basis, the issue of the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, including by taking a decision on the Convention of an international instrument under the Convention on the Law of the Sea.”

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