Integrated Maritime Policy

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Integrated and ecosystem-based maritime policy should be seen as a versatile multidisciplinary and cross-sectoral instrument for international dialogue within the region.

sustainable development | marine policy | ecosystem-based marine management | climate change | the Asia-Pacific region | marine environmental strategy

1. Introduction

The cornerstone of Ecosystem-Based Marine Management (EBMM) is establishing an effective management system to ensure that marine space uses do not exceed its ecological carrying capacity. Striking a balance between socio-economic development and the conservation of natural resources requires an effective governance system that fosters sustainable development and human wellbeing according to common guiding principles of environmental integrity. The role of EBMM has been expanding through pilot projects and official program implementation, often in conjunction with the development of Integrated Coastal and Ocean Management (ICOM) (The IOC of UNESCO characterizes ICOM as a “dynamic, multidisciplinary, iterative and participatory process to promote sustainable management of coastal and ocean areas balancing environmental, economic, social, cultural and recreational objectives over the long-term. ICOM entails the integration of all relevant policy areas, sectors, and levels of administration. It means integration of the terrestrial and marine components of the target territory, in both time and space. ICOM, therefore, is an approach to manage not only coastal areas but exclusive economic zones and large marine ecosystems, serving the purposes of national ocean policies” ([1], p. iv)) and Marine Spatial Planning (MSP) (The IOC of UNESCO describes MSP as a “public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process” ([2], p.x.)), and other ecosystem-based approaches [3], which coastal nations have used to improve the management of the coastal and marine areas. It has been projected [4] that by 2030, marine spatial plans could cover 50 percent of all marine areas encompassed in exclusive economic zones.

Capacity development to promote EBMM has relied on the guidelines and methodologies designed, primarily through U.N. agencies, multi-national cooperative organizations, national governments, and non-governmental organizations. The results include a growing agreement on general principles underlying EBMM [1][2][5][6][7][8][9], a shared recognition of ecosystem health challenges [10][11], and recommended processes for improving the sustainable development of coastal and marine ecosystems and strengthening marine resource-dependent

economies [12]. However, EBMM implementation is not uniform but reflects marine ecosystems' local characteristics and differing administrative, ecological, and geopolitical frameworks [13][14][15]. This paper highlights commonalities and differences in perspectives regarding EBMM in the Asia-Pacific region. It explores the advantages of and challenges to developing an Integrated Marine/Maritime Policy (IMP) in the Asia-Pacific region as an *indispensable contribution to the dialogue of civilisations leading toward a safer world*. While acknowledging that "problems of ocean space are closely interrelated and need to be considered as a whole" ([16], p. 25) and recognizing the need to overcome the threats to marine ecosystems in areas beyond national jurisdiction [17][18], this study focuses on the integrative function of the ecosystem-based approaches [19] as mechanisms to promote transnational unity on sustainable development issues of the Asia-Pacific region.

2. Toward an Asia-Pacific Marine Environmental Strategy

It suffices to highlight significant gaps in regional marine policy and identify the lack of coordination regarding coastal and ocean use as a gap that is causing difficulties. Moreover, the lack of coordination between scientific knowledge and policy decisions presents a critical gap in the national efforts to maintain and restore the coastal marine environment. A recognition of the geopolitical and environmental realities of the world today could lead the region to understand the need for a full-fledged *Asia-Pacific Marine Environmental Strategy as a vital contribution to the dialogue of civilisations* and a significant milestone of international cooperation in the areas of food security and marine management.

The potential role of major maritime Powers in championing a regional approach to coastal and ocean management cannot be overstated Table 1.

Table 1. Characteristics of the major maritime Powers of the Asia-Pacific region.

State	Territory, km^2		Population 2020, Thous. Persons [20]	GDP 2019 [21]	Military Spending, Percent of GDP [22]		Management Tools [23] [24]		
	Land Area [20]	EEZ [25]		US$ Billion	2011	2020	Dynamics 2020/19	ICM Sites Established or Initiated (2018)	MSP Applications
USA	9,147,420	11,351,000	330,139	21,433	4.8	3.7	4.4	34	4
China	9,388,210	2,236,430	1,402,667	14,280	[1.7]	[1.7]	1.9	16	9
Russia	16,376,870	7,566,673	144,379	1700	3.4	4.3	2.5	0	2 (pilot)
Japan	364,560	4,479,674	125,769	5082	1.0	1.0	1.2	0	0
RO Korea	97,489	473,280	51,727	1647	2.5	2.8	4.9	1	0

4. UNESCO. Intergovernmental Oceanographic Commission and European Commission–DGMARE. The 2nd International Conference on Marine/Maritime Spatial Planning, Paris, France, 15–17 March 2017; UNESCO: Paris, France, 2017; Volume 279. Intergovernmental Oceanographic

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Australia	7,692,020	6,369,268	25,653	1397	1.8	2.1	5.9	no data	5

In social and cultural settings, this would mean overcoming fragmented national efforts and achieving intercivilizational harmony through understanding common heritage of humankind within an Environmental Philosophy of the Universe, which treats in fringe sense of equality of all nations before law of the universe that is the universality of the changing environment of the Earth. The issue of the cosmic and ecosystem sustainability seems promising for extension of the EBMM methodology in the face of climate change to make good political decision on environmental issues and develop integrated approach in marine management [25]. Joint development of an *Asia-Pacific Marine Environmental Strategy* would be a significant step toward implementing the U.N. Agenda for Sustainable Development in the Asia-Pacific region and could stimulate interest in developing an *Asia-Pacific Environmental Union* (APEU) (Figure 1). Ancillary benefits of developing an Asia-Pacific Marine Environmental Strategy will arise from an increased alignment of national policies and the identification of shared objectives for environmental security in the face of cumulative anthropogenic effects of regional marine activities and environmental change. Coordinated national sustainable development strategies supported by scientific and economic frameworks could be the initial base for these actions. Equally, there is a need to expand scientific horizons aimed at understanding climate change and cooperative goal setting for issues that require the engagement of the transnational community. The following bullet points suggest steps that could aid in the development of a science-reinforced *Asia-Pacific Marine Environmental Strategy* based on peacekeeping priorities:

6. Environmental Law Institute. Ocean. and Coastal Ecosystem-Based Management: Implementation Handbook; ELI: Washington, DC, USA, 2009; 169p. Available online: (accessed on 20 March 2021).
7. PEMSEA Course 1: Understanding Integrated Coastal Management (ICM)—Model Course on ICM. Instructor's Manual. In Global Environment Facility/United Nations Development Programme/Partnerships in Environmental Management for the Seas of East Asia; PEMSEA: Quezon City, Philippines, 2018; 212p. Available online: (accessed on 20 March 2021).
8. Plink, N.L.; Gogoberidze., G.G. Action Policy in Coastal Zone; State Hydrometeorol. Univ.: St. Petersburg, Russia, 2003; 226p. Available online: (accessed on 25 March 2021). (In Russian)
9. Clark, J.R. (Ed.) Coastal Zone Management: Handbook; CRC Press: Boca Raton, FL, USA, 1995; 720p.
10. U.N. Ecosystem Approaches and Oceans: The Panel Presentations during the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (Consultative Process) Seventh Meeting, New York, NY, USA, 12–16 June 2006; United Nations Headquarters; Sales No. E.07.V.4: U.N.: New York, NY, USA, 2007. Available online: (accessed on 25 March 2021).
11. McLeod, K.; Leslie, H. (Eds.) Ecosystem-Based Management for Oceans; Island Press: Washington, DC, USA, 2009; 392p. Available online: (accessed on 25 March 2021).
12. WWF. Improving International Ocean. Governance for Life below Water Report; WWF: Grand, Swiss, 2020; Available online: (accessed on 28 March 2021).
13. Ehler, Ch.N. A Review of International Experience in the Field of Marine Spatial Planning. Report; WWF: Grand, Swiss, 2014; 136p. Available online: (accessed on 28 March 2021).
14. Pido, M.D.; Xie, X.; Koshikawa, H.; Nam, J.; Arzamastsev, I.S. Integrated Coastal Planning and Ecosystem-Based Management in the Northwest. Pacific Region; POMRAC Technical Report 8; Dalnauka: Vladivostok, Russia, 2015; 188p. Available online: (accessed on 28 March 2021).
15. Zaucha, J.; Gee, K. (Eds.) Maritime Spatial Planning: Past, Present, Future; Springer: Cham, Switzerland, 2019; 496p.
16. U.N. The United Nations Convention on the Law of the Sea; U.N.: New York, NY, USA, 1982; Available online: (accessed on 28 March 2021).

Figure 1. Potential contribution of an integrated maritime policy to development of the Asia-Pacific Environmental Union (APEU).

- Encourage scientific research on cosmic and other natural drivers of climate change to complement ongoing research on anthropogenic drivers;
- Encourage each Asia-Pacific nation to move toward an integrated approach to marine policy guided by the enduring principles of international law, with due regard for the traditions and national practices;
- Use global experiences in the coastal and ocean management and multidisciplinary scientific approaches to guide the methodological evolution of EBMM in the face of climate change;
- Explore the formation of an *Asia-Pacific Environmental Union* (Figure 1).

The practical experience of nations and international organizations, including PEMSEA, NOWPAP and Asia-Pacific Economic Cooperation (APEC), working to advance sustainable coastal and marine resource management can help guide the Asia-Pacific region's environmental integration in the legal stages [27][28][29] (Figure 1). Support for intraregional research projects and analyses to address the Asia-Pacific region marine environmental condition would also represent a vital contribution to the U.N. Ocean Decade [28].

This strategy should more fully realize science and policy interaction to achieve environmental integrity and mutual geopolitical understanding. It is indicative that one of the objectives of the UNESCO/IOC Sub-Commission for the Western Pacific (WESTPAC) for marine science development per the U.N. Decade of Ocean Science for Sustainable Development (2021–2030), is to involve the Member States in the development and implementation of

17. U.N. United Nations Millennium Declaration; U.N.: New York, NY, USA, 2000; Resolution A/RES/55/2; Available online: (accessed on 20 March 2021).
18. U.N. Transforming our World: The 2030 Agenda for Sustainable Development. Available online: (accessed on 17 July 2020).
19. Kidd, S.; Calado, H.; Gee, K.; Gilek, M.; Saunders, F. Marine Spatial Planning and sustainability: Examining the roles of integration-Scale, policies, stakeholders and knowledge. Ocean Coast. Manag. 2020, 191, 105182.
20. World Data Atlas. Available online: (accessed on 10 April 2021).
21. Historical GDP by Country. Statistics from the World Bank. 1960–2019. Available online: (accessed on 15 April 2021).
22. Da Silva, D.L.; Tian, N.; Marksteiner, A. Trends in world military expenditure, 2020. SIPRI Fact Sheet. 2021. Available online: (accessed on 10 April 2021).
23. PEMSEA. ICM SITES. Available online: (accessed on 15 March 2021).
24. NOAA. Office for Coastal Management. Available online: (accessed on 20 March 2021).
25. Sea around, Us. Tools & Data. Available online: (accessed on 10 April 2021).
26. Sereda, A.V. Extension of the Ecosystem-Based Management Scale in the Face of Climate Change: Cosmic Perspective and Need to Respect the Basic Principle of Peacekeeping. In Book of Abstracts of the 4th International ICES/PICES/IOC/FAO Symposium, Washington, DC, USA, 4–8 June 2018; The Effects of Climate Change on the World's Oceans. Prepared by PICES Secretariat; p. 176. Available online: (accessed on 15 March 2021).
27. UNEP (United Nations Environment Programme). Northwest Pacific Action Plan (NOWPAP). Available online: (accessed on 25 March 2021).
28. Asia-Pacific Economic Cooperation. Available online: (accessed on 10 April 2021).
29. IOC UNESCO. United Nations Decade of Ocean Science for Sustainable Development. Available online: (accessed on 30 March 2021).
30. IOC Sub-Commission for the Western Pacific. In Proceedings of the Twelfth Intergovernmental Session of the IOC Sub-Commission for the Western Pacific (WESTPAC-XII), Manila, Philippines, 2–5 April 2019; WESTPAC: Bangkok, Thailand, 2019. Available online: (accessed on 30 March 2021).

adaptation strategies and policies for maintaining a life-supporting ocean to ensure adequate management of the marine environment to provide common protection and prosperity in a changing world [30].

The aspects, features, and perspective of marine environmental management of the Asia-Pacific region described above give reason to believe that an *Asia-Pacific Marine Environmental Strategy* could carry considerable weight in the global development of EBMM and its potential to contribute to civilisations dialogue that could consolidate conditions of peace and prosperity in the Asia-Pacific region and around the world.

3. Conclusions

By focusing on shared concerns, environmental cooperation, such as a multilateral approach to coastal and marine resource governance in the Asia-Pacific region, can reduce conflict potential and strengthen global security. World experience in marine management demonstrates that ecosystem-based marine management improves scientific understanding and conceptual knowledge for national and transnational marine policy. The combination of anthropogenic and climate change pressures on coastal and ocean ecosystems highlights the need to extend the ecosystem-based approach to marine management to include considerations of conflict avoidance, human wellbeing, and the role of cosmic and anthropogenic drivers of climate-related marine processes. With its environmental and socio-economic synergism, the Asia-Pacific region can be viewed as a test case for the international community to promote stable, sustainable development through coordinated activities. An opportunity to explore strategic integrated marine policies that enhance collective responses to anthropogenic and climate-related environmental challenges. These activities could proceed under the umbrella of an *Asia-Pacific Environmental Union*, which could help diffuse geopolitical military concerns within the context of environmental instability. It is necessary, however, not to underestimate the complexity of the process. Moreover, it would be prudent to strengthen regional environmental relations based on a hard look at long-term risks to shared interests in marine management, sustainable development, and security in the light of global climate challenges.