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Envisioning a Polycentric Maritime Order: Is an Inclusive and Effective System of Governance Achievable?

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1. Complexities and inefficiencies of maritime governance

Today's global governance often takes the form of regime complexes, where actors are diversified and contentious areas and institutions are combined. The maritime domain is no exception. The world's oceans function as a corridor for transporting people, goods, and munitions, as well as a wealth of other resources, thereby constituting a complex domain in which the contentious areas of geopolitical security, economic interests, resource security, and environmental and ecological protection become inextricably linked.

In the past, maritime order was maintained under the principle of the "freedom of the high seas," with hegemonic powers guaranteeing the safety of shipping routes and major powers sharing a minimum set of rules. With the rise of developing countries and the involvement of corporations from developed countries, the actors have diversified and their number increased, and various issues such as the management of fishery resources, the development and profit sharing of deep-sea resources, and the prevention of marine pollution have been compounded, resulting in a clustered regime complex, that of the United Nations Convention on the Law of the Sea (UNCLOS). Since the United Nations Conference on Environment and Development (UNCED) in 1992, the aspect of environmental and ecological conservation has been emphasized, and what was called "fisheries governance" has since been referred to as "maritime governance."¹

In the 2000s, the linkages between climate change, ocean acidification, and biodiversity came into the spotlight due to the idea of "planetary boundaries" as the issue of how to deal with conflicts between regimes, such as ocean acidification promoted by the use of carbon sinks for climate change mitigation, has arisen. In addition, regarding fisheries biodiversity, there is a horizontal conflict between the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which emphasizes individual conservation, and the Food and Agriculture Organization of the United Nations (FAO), which emphasizes the precautionary approach. With regard to biodiversity, the depletion of fishery resources, the increasing influence of environmental NGOs at the Conference of the Parties to the Convention on Biological Diversity (CBD), and the development of technologies for the extraction and exploitation of marine genetic resources (MGRs), Marine Biodiversity of Areas Beyond National Jurisdiction (BBNJ) has been a focus of discussion since the 2010s. As in the case of the UNCLOS negotiations, the conflict between developed countries, which advocate "freedom of the high seas," and China and the G77 countries, which insist on the management of MGRs as the "common property of mankind," has become more acute.²

Thus, the inter-regime rivalry between UNCLOS's "principle of freedom of the high seas" and "common property of mankind," which is ultimately a conflict between national interests in terms of the distribution of benefits among nations, and the CBD's conflict of values in terms of ecosystem conservation, creates a complex negotiation dynamic.

Meanwhile, traditional fisheries governance has been governed in a multi-layered and systematic fashion by regional waters management through Regional Fisheries Management Organizations (RFMOs) and other agencies, with the maritime order centered on UNCLOS and the food security domain centralized on FAO being consistent. However, there is no formal system for fisheries resources and aquaculture in Exclusive Economic Zones, and it has become a form of soft governance that encourages voluntary action through non-binding guidelines and study forums organized by FAO as well as private regimes centered on certification and assessment by private organizations such as the Marine Stewardship Council (MSC). In the case of domestic fishery resources and aquaculture, the importance of local governance by coastal fishermen is particularly high. Thus, the governance of fishery resources is a multi-layered structure that is managed through a combination of formal and informal institutions.³

The numerous inefficiencies in modern ocean governance have been pointed out as described above. One of the root causes is that the linkage between security and economic interests is easily politicized. Thus, it is easy to presume the impossibility of designing and operating a formal and centralized framework. The current formal governance structure as a whole has a less inclusive (more closed) institutional design, and tends to apply top-down, uniform policies. This has given rise to a mismatch between the system and the status quo, a lack of adaptability to change, and a lack of capacity building and empowerment, all of which have led to problems in effectively dealing with problems on the ground (such as resource depletion, environmental pollution, and reduced diversity).⁴

If formal, centralized institutions do not function well, what governance methods are effective? As one answer to this question, polycentric governance of the oceans has been discussed in recent years.

2. Polycentric governance theory

Although there are various definitions of polycentric governance, it can be minimally defined as a mode of governance in which mutually independent centers of authority interact in an autonomous and self-organizing process that maintains order as a whole.⁵ The centers of authority include not only public institutions and public officials, but also corporations, private professionals, NGOs, and local fishermen's associations. However, even if local governments, NGOs, and businesses are involved in the decision-making and implementation processes, the framework cannot be considered polycentric if the central government has hierarchical control over them. The framework will be polycentric if it takes the form of loose governance in a non-binding manner, affording broad discretion to local governments and fishermen on site.

Since polycentric governance is a system in which administrative control cannot be centralized, there is a risk that both the legitimacy and effectiveness of governance will be diminished due to lack of democratic control, unclear responsibilities, lack of coordination, and lack of collaboration. However, this framework has various advantages that compensate for the inadequacies of a centralized system, such as flexible adaptation to change and an institutional design suitable for solving problems on the ground, mitigating the risk of dysfunction through a multi-level backup system, promoting the development of experimental methods, generating innovative ideas to overcome the current situation, and improving accountability through greater inclusiveness.⁶

This approach has been in development since the early 1960s by a group led by Vincent and Elinor Ostrom; the latter, a Nobel laureate in economics, discussed polycentric governance in fisheries resource management as a way to manage the "tragedy of the commons."⁷ One specific form is a vertical division of labor in which central government, local governments, and local communities use their own institutions to regulate in complementary ways. For example, the lobster fishing community in Maine self-regulates with access restrictions and informal rules about daily fishing to prevent overfishing, while the state government enacts and enforces policies pertaining to fishery resource conservation, typically leaving it to the local community to self-regulate. However, there have been cases where the state government intervenes in which such frameworks do not function as intended and the target resource is threatened by imminent depletion.⁸ The case of Bizen City's "Satoumi Zukuri," in which local fishermen, schools, and businesses worked together to regenerate eelgrass beds independent of national legislation (such as the Basic Act on Ocean Policy and the new Basic Plan on Ocean Policy) is another example of polycentric governance that relies on bottom-up activities by coastal communities.⁹

Others exist in the form of multi-stakeholder networks that are horizontal and inclusive. While there are networks of various contenders, participants, functions, and organizational forms, such networks often serve to connect the multi-layered efforts described earlier and facilitate multi-level coordination and collaboration. In such cases, the governance structure is polycentric, both vertically and horizontally. It is also often an informal (not addressed to international or national laws) system. A representative example is the UN-Oceans Task Force on the Global Partnership Climate, Fisheries and Aquaculture (PaCFA), which is composed of international organizations such as FAO, UNEP, and the World Bank, as well as a network of related NGOs such as WorldFish, and which is working on ocean acidification issues.¹⁰

In addition, the Commission for the Conservation of Antarctic Marine Living Resources

(CCAMLR), which monitors and responds to illegal, unreported, and unregulated (IUU) fishing in the Antarctic Ocean, is the core of the network and is composed of a diverse group of participants, including government agencies, legislators, NGOs such as Greenpeace and Friends of the Earth, fishermen, and journalists.¹¹ The Japan Blue Economy Technology Research Association (JBE), which promotes the blue economy in Japan, is also a polycentric network characterized by horizontal collaboration among different industries.¹²

According to Dalton et al., who surveyed various networks in marine governance, the most common of the various networks are those with learning and knowledge sharing/creation as their main functions. As such, almost all local networks, about half of the regional and global networks, and approximately one-third of the national networks are positioned as networks with learning and knowledge functions.¹³

Such learning networks have been established to effectively address a variety of complex and rapidly changing ocean issues. Specific challenges include fragmented and inefficient operation of institutions despite high overlap among issues; inaccessibility of resources and information to stakeholders; lack of capacity building at the local level (external capacity building support is generally costly and inefficient, and often does not meet local needs); and the need for creative and innovative solutions to technical problems. In response to these issues, networks have developed whose primary tasks are knowledge sharing, capacity building and empowerment, and advisory and advocacy activities. According to their findings, these networks have improved field management, encouraged local community participation, facilitated effective capacity building and women's empowerment to meet the needs of participants, and improved access to resources and equity.¹⁴

3. Orchestration of polycentric networks

However, as mentioned earlier, polycentric systems often do not function efficiently due to a lack of control and coordination. In fact, systems with polycentric structures range from weak systems with only information-sharing functions, to moderately strong systems that promote multi-level coordination and informal cooperation and collaboration among sectors, to strong systems with even conflict resolution mechanisms. Weaker systems are often threatened by conflicts among participants or by external influences.¹⁵

Here, a typical example of conflict among participants is the discrepancy between scientific neutrality and policy orientation, as was seen in PaCFA. It is not uncommon for a weak network whose main purpose is to share and learn scientific information to expand its original purpose and come to actively influence international policy as it gains strength. At such times, conflicts are likely to arise between members who value scientific credibility and those who want to actively make policy statements.¹⁶

Asymmetrical power relations between members also lead to inefficiency and legitimacy problems.¹⁷ When power asymmetries exist among participants, even in horizontal discussion forums, it is not uncommon for the more powerful participants to dominate the discussion or even take over the network. There is no shortage of examples where civil society has been unable to counter the views of government agencies and large corporations, even in the face of claims of multi-stakeholder processes. In particular, it is difficult to correct such power-grabbing problems in the case of informal governance because it is difficult to control from the outside.

In addition, one of the factors that cause networks to suffer from external influences is the instability of external funding. In particular, when the main source of funding is short-term, project-based grants, the continuation of activities is dependent on the status of the external organizations that provide the grants. Also, in cases where the network is established from the beginning as an adjunct to the multilateral system, or where an independently created network strengthens its input to the multilateral system, the international political dynamics within the multilateral system and the course of international negotiations are likely to have a direct impact on the network. This is the second external factor. In order to give universality and legitimacy to the knowledge, codes of conduct, etc., generated by the network, they eventually need to be accepted and implemented by national governments. For this reason, failure to influence international negotiations may result in a loss of confidence in the network, or conversely, attempts to strengthen its influence on international negotiations may strengthen the voice of the government in the network,

resulting in power asymmetry. Moreover, as mentioned earlier, the imbalance of power among stakeholders inhibits horizontal and equal discussion, and the original function and purpose of the network is lost.¹⁸

Thus, polycentric networks carry an inherent risk of losing their effectiveness and legitimacy due to internal conflicts caused by value conflicts and power asymmetries, as well as influences from external institutions. Empirical analyses of marine-related networks have also found that certain conditions are necessary for the networks to function effectively. These include advanced capabilities for monitoring and analyzing information, maintaining long-term operational capacity, multi-level and multi-network collaboration for a multidimensional response, balancing legitimacy and efficiency, clarity of purpose, long-term trust and proactive collaboration among participants, ensuring equality in participation and discussion, and the presence of a dedicated coordinator.¹⁹

The new theory of public management (public administration), which has discussed this problem as “network failure,” argues for the effectiveness of meta-governance (also known as network management), which optimally introduces vertical control and management into a horizontal order. Effective meta-governance is said to clarify objectives, coordinate and resolve conflicts, and reduce transaction costs while ensuring the autonomy and flexibility of participants.²⁰

This has also been discussed in international relations theory using the concept of “orchestration.”²¹ Orchestration generally refers to soft and indirect modes of governance, such as influencing the behavior of those being governed through intermediaries (such as public agencies, NGOs, and other private actors) in a soft (non-binding and noncoercive) manner.²² When the intermediary is a network, orchestration becomes network management in actuality. There is the view that if orchestration can be conducted properly, the benefits of polycentric governance can be maximized while reducing inefficiencies and enhancing the capabilities of stakeholders.²³

In fact, most of the conditions for the effectiveness of an ocean network listed above can be met through orchestration. A dedicated coordinator is an orchestrator in his or her own right, and the mediation of internal conflicts, legitimacy of activities, security of financial resources (external funding), and mitigation of negative influences from multilateral institutions can be facilitated by the long-term commitment of public institutions such as government agencies and international organizations as orchestrators.

For example, as mentioned earlier, the blue economy, which has received great attention in recent years, is driven by polycentric governance, but the way it is orchestrated may make a difference in the stability and effectiveness of the network. For example, a country’s inclusion of the blue economy in the Paris Agreement’s Nationally Determined Contributions (NDCs) may increase the network’s presence by formalizing its linkages with multilateral institutions, and it may stabilize its financial resources by promoting ESG investments and commissioning international cooperation such as technology transfer. In addition, by promoting national consensus and integrating the blue economy into the economic and social system, local governments may be able to stabilize and expand their activities.²⁴ Such inclusion may also improve the policy influence of scientist-centered networks by promoting dialogue between scientists and policy makers and facilitate horizontal debate within polycentric networks.

4. Conclusion: Facilitating the establishment of cognitive frameworks through orchestration

Polycentric governance has the potential to compensate for the inadequacies of unitary international agreements and promote substantive problem solving by sharing knowledge and norms among diverse stakeholders, developing innovative technologies and ideas through experimentation, promoting capacity building on the ground, facilitating effective domestic implementation of international agreements, and shaping multi-level public opinion. However, the purpose of this paper was to suggest that long-term, soft vertical management (orchestration) would be effective for its sustainable and effective operation.

Finally, this article will discuss how orchestration can also be expected to strengthen the state’s external power and presence. In the past, Peter Bachrach and Morton Baratz pointed out the existence of a “nondecision-making power” that prevents policy from being placed under consideration.²⁵ Furthermore, Steven Lukes referred to bargaining power as one-dimensional, non-decision-making power (or, conversely, agenda-setting power) as two-dimensional, and power

to influence perceptions, such as conditioning people not to be cognizant of problems, as three-dimensional power.²⁶ These two- and three-dimensional powers are difficult to recognize in the context of policy negotiations, but they set the cognitive framework within which the negotiations are conducted and are too important to overlook.

For example, from the perspective of the Global South, expert-led “scientific” knowledge in developed countries appears to be an irresponsible stance that takes no responsibility for structural inequalities between North and South and leads to the imposition of biased policies based on technological superiority. As long as this distrust, which has its origins in differences in values and normative contexts, exists, no matter how much we claim the neutrality of scientific knowledge, it can easily become a political confrontation. The difficulty in reconciling horizontal conflicts between regimes is due to the fact that they have different value norms and knowledge systems based on those norms, and trust building through the sharing of knowledge and values under the water will set the environment for smooth international negotiations. Conversely, if one leads the normative discourse, guides knowledge to converge in a particular direction, or establishes technical standards before full-fledged negotiations begin, formal international negotiations can proceed in one’s country’s favor.

For example, as mentioned earlier, while self-regulation through private regimes is the primary method of governance for aquaculture, with the growth of aquaculture in developing countries (not only fishery resources, but also blue carbon has been increasing rapidly in recent years), the tragedy of the commons, such as environmental degradation and pressure on other marine industries, will occur. Currently, the American and European markets are leading the way in sustainable aquaculture initiatives.²⁷ However, if we can effectively lead the convergence of knowledge and the establishment of norms, new technologies and standards based on the activities of the private sector, it will be possible to contribute to the creation of a fundamental framework for the international community’s understanding of sustainability.

Moreover, it is important to note that a variety of actors is involved in the formation of such cognitive frameworks. In particular, three-dimensional power involves a broad social context, also known as the “court of public opinion.” Perceptions of what is controversial and what is right are formed not only by governments, experts, mass media, opinion leaders, large corporations, and major NGOs, but also by diverse stakeholders, including small and medium-sized enterprises (SMEs), local communities, and ordinary citizens engaged in economic activities on the ground. With this in mind, active consideration of the various actors and the formation of a consensus among the public and the international community, or “marine public opinion,” will be an important task in establishing the bottom line for future international negotiations.

¹ Tsuru, Yasuko, “Oceans: Changing Principles of Freedom of the High Seas and Territorial Approaches,” in Nishitani, Makiko and Yamada, Takahiro (eds.), *Global Governance in a New Era*, Minerva Shobo, 2021, pp. 297–298.

² Tsuru Yasuko, *ibid.*, pp. 300–301; Sakamoto, Shigeki, “Treaty System Pluralization in Japan: Focus on Legislative and Interpretive Techniques of Treaties,” *International Journal of Law and Diplomacy*, Vol. 119, No. 2, 2020, 167–202.

³ Sakaguchi, Isao, “Natural Resources (Forest and Fishery Resources): An Attempt at Complex Governance,” in Nishitani and Yamada, forthcoming, pp. 277–292.

⁴ Dalton, Kathryn, Marlina Skrobel, Henry Bell, Benjamin Kantner, Dave Berndtson, Leopoldo C. Gerhardinger, and Patrick Christie, “Marine-Related Learning Networks: Shifting the Paradigm Toward Collaborative Ocean Governance,” *Frontiers in Marine Science*, November 2020, pp. 1–16; Kelly, Christina, Geraint Ellis, Wesley Flannery, “Conceptualising Change in Marine Governance: Learning from Transition Management,” *Marine Policy* 95, 2018, pp. 24–35.

⁵ Ostrom, Vincent, Charles M. Tiebout, and Robert Warren, “The Organization of Government in Metropolitan Areas: A Theoretical Inquiry,” *American Political Science Review* 55, 1961, pp. 831–842.; Ostrom, Elinor, “Polycentric Systems for Coping with Collective Action and Global Environmental Change,” *Global Environmental Change* 20, 2010, pp. 550–557.; Carlisle, Keith and

Rebecca L. Gruby, “Polycentric Systems of Governance: A Theoretical Model for the Commons,” *Policy Studies Journal* 47(4), 2019, pp. 927–952.

⁶ For further discussion of the advantages and disadvantages of polycentric governance, see: Carlisle and Gruby, 2019; Nishitani, Makiko, “Governance Modes: the Transformation of Global Governance,” in Nishitani and Yamada, forthcoming, pp. 118–131 (particularly p. 129.)

⁷ Ostrom, Elinor, *Governing the Commons: the Evolution of Institutions for Collective Action*, Cambridge: Cambridge University Press, 1990.

⁸ Low, Bobbi, Elinor Ostrom, Carl Simon, and James Wilson, “Redundancy and Diversity: Do They Influence Optimal Management?” in Fikret Berkes, Johan Colding, and Carl Folke eds., *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change*, Cambridge: Cambridge University Press, 2003, pp. 83–111.

⁹ Watanabe, Atsushi, “Towards a Blue Economy through the Sustainable Use of Coastal Environmental Values,” Japan International Forum (jfir.or.jp), <https://www.jfir.or.jp/j/activities/studygroup/200914.htm> (February 20, 2021) (viewed 20 Feb. 2021); Sasakawa Peace Foundation, Institute for Ocean Policy Research blog, “Urban Development Making Use of the Sea: Towards Integrated Coastal Management (ICM)” (canpan.info), https://blog.canpan.info/oprficm/category_2/1 (accessed on: 20 Feb. 2021)

¹⁰ Regarding PaCFA, see: Galaz, Victor, Beatrice Crona, Henrik Österblom, and Carl Folke, “Polycentric Systems and Interacting Planetary Boundaries—Emerging Governance of Climate Change—Ocean Acidification—Marine Biodiversity,” *Ecological Economics* 81, 2012, pp. 21–32; Galaz, Victor, Henrik Österblom, Örjan Bodin, and Beatrice Crona, “Global Networks and Global Change-induced Tipping Points,” *International Environmental Agreements* 16, 2016, pp. 189–221.

¹¹ Regarding CCAMLR, Österblom, Henrik, Ussif Rashid Sumaila, “Toothfish Crises, Actor Diversity and the Emergence of Compliance Mechanisms in the Southern Ocean,” *Global Environmental Change* 21, 2011, pp. 972–982.

¹² Watanabe, Atsushi, previous publication; Japan Blue Economy Technology Research Association | Top (blueeconomy.jp) <https://www.blueeconomy.jp/> (accessed on February 20, 2021)

¹³ Dalton et al., 2020, pp. 4–5.

¹⁴ *Ibid.*, pp. 3–7.

¹⁵ Galaz et al., 2012, pp. 21–32.

¹⁶ *Ibid.* p. 29.

¹⁷ Morrison, T. H., W.N. Adger, K. Brown, M.C. Lemos, D. Huitema., J. Phelps, L. Evans, P. Coheng, A.M. Songa, R. Turner, T. Quinn, T.P. Hughes, “The Black Box of Power in Polycentric Environmental Governance,” *Global Environmental Change* 57, 101934, 2019; Morrison, Tiffany H., “Evolving Polycentric Governance of the Great Barrier Reef,” *Proceedings of the National Academy of Sciences*, March 2017, E3013-E3021. DOI: 10.1073/pnas.1620830114

¹⁸ For a discussion of such issues in the case of the World Dam Commission (WDC) and the Dam Development Forum (DDF), see Yamada, Takahiro, “From Multilateralism to Private Regimes: The Dilemma of Multistakeholder Processes,” in Japan Society of International Politics, Ryo Oshiba, Yoshiko Furushiro, Jun Ishida, supervising, eds. *International Politics in Japan 2: International Politics without Borders*, Yuhikaku, 2009, pp. 57–74.

¹⁹ Galaz et al., 2016; Dalton et al., 2020; Nishitani, supra.

²⁰ Sørensen, Eva and Jacob Torfing, “Making Governance Networks Effective and Democratic through Metagovernance,” *Public Administration*, 87(2), 2009, pp. 234–258.

²¹ Abbott, Kenneth W., “Orchestration: Strategic Ordering in Polycentric Climate Governance,” in Andrew Jordan, Dave Huitema, Harro van Asselt, and Johanna Forster, eds., *Governing Climate Change: Polycentricity in Action?*, Cambridge: Cambridge University Press, 2018, pp. 188–209.

²² Abbott, Kenneth W., Philipp Genschel, Duncan Snidal, and Bernhard Zangl eds., *International Organizations as Orchestrators*, Cambridge: Cambridge University Press, 2015; Nishitani, Makiko, “Orchestration in Polycentric Governance: The Role of International Organizations in Anti-Corruption Norms,” in Makiko Nishitani (ed.), *How International Norms are Realized: The Complexity of The Dynamics of Global Governance*, Minerva Shobo, 2017, pp. 201–251; Nishitani,

Makiko, “Governance Modes: The Transformation of Global Governance,” in Nishitani and Yamada, *supra*, pp. 118–133.

²³ Abbott, Kenneth W. and Duncan Snidal, “Strengthening International Regulation Through Transnational New Governance: Overcoming the Orchestration Deficit,” *Vanderbilt Journal of Transnational Law* 42, 2009, pp. 501–578; Abbott, Kenneth W., “Transnational Regime Complex for Climate Change,” *Environment and Planning C: Government and Policy* 30(4), 2012, pp. 571–590, esp., p. 582, pp. 586–587.

²⁴ The aforementioned points are based on the suggestions made by Atsushi Watanabe in his report given at the International Forum.

²⁵ Bachrach, Peter, and Baratz, Morton S., “Decisions and Nondecisions: An Analytical Framework,” *American Political Science Review* 57, pp. 632–642.

²⁶ Lukes, Stephen, *Power: A Radical View*, 2nd ed., New York: Palgrave Macmillan, 2005.

Although the meaning of Lukes’ three-dimensional power is controversial, it has something in common with the social power that constitutes subjectivity, identity, and “common sense” as discussed by constructivists, and can be said to be the power that sets social norms and concepts of normalcy. Knowledge can also serve as a catalyst for agenda-setting and charting the course of debate in issues with high technological uncertainty, such as environmental problems.

²⁷ Sakaguchi, Isao, *supra*., pp. 290–291.