



International governance of the arctic marine environment

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A book review on

International Governance of the Arctic Marine Environment: With Particular Emphasis on High Seas Fisheries

Authored by Weidemann, L., Springer International Publishing, Cham, Switzerland, 2014, 251 pages, US\$129.00 (Softcover). ISBN: 978-3-319-04470-5

The Arctic is a region in the northernmost hemisphere of the Earth. It is known for its extreme environmental conditions, in particular its cold temperatures, high winds, snow, and ice. Yet, life in this polar region is plentiful and includes both terrestrial and marine organisms. The Arctic Ocean provides for a unique, cold-temperature-adapted ecosystem containing plankton, marine mammals, and fish.

Studies have shown that polar ice coverage has declined, which is believed to be caused by climate change (i.e., a persistent long-term warming trend). This widespread change impacts arctic biota by altering the distribution of species and the composition of food webs. Shifts in species distribution patterns of arctic benthic communities and marine fishes of the arctic have recently been described in detail by Ilken et al. (2013) and by Mueter et al. (2013), respectively.

The book by Weidemann (2014) is about the implications of climate change for the arctic marine environment and the deficits of legal regimes that govern this part of the world. The example of high seas fisheries is used to demonstrate the shortcomings in the Arctic's international governance. Besides a brief introduction, Weidemann (2014) divided the book into three major sections: 1. Environmental Situation in the Arctic; 2. International Governance of the Arctic Marine Environment; and 3. Possible Ways for Enhancement. I will use in this review the same section headings to highlight

some of the author's main arguments. The book is part of the series *Hamburg Studies on Maritime Affairs* (Volume 27).

ENVIRONMENTAL SITUATION IN THE ARCTIC

Weidemann (2014) pointed out that the most pronounced warming in recent decades has occurred in the Polar Regions. Surface temperature has risen, arctic ice has thinned and is receding, and marine ecosystems are impacted by diminishing sea ice and increased UV radiation exposure.

The melting of the Arctic's ice allows for extended exploration and exploitation of both marine organisms (e.g., fish) and natural resources (e.g., oil and gas). Shipping, tourism, and military uses also impact this region. Increased human activities led to concerns about environmental hazards, such as oil spills, acidification, persistent organic pollutants, and heavy metals, as well as radioactive contamination, noise pollution, and the invasion of non-native species. In my opinion, Weidemann (2014) reviewed in a remarkable way the numerous risks the natural Arctic ecosystem is facing due to human activities. Her review complements well the various tipping elements and consequences for the arctic environment and marine ecosystem that have been described by Duarte et al. (2012). Weidemann (2014) emphasized that since the large water masses of the Arctic have borders to numerous territories belonging to powerful nations, the

uses of the Arctic by the various competing stakeholders has led to intense discussions about how to best govern this region.

INTERNATIONAL GOVERNANCE OF THE ARCTIC MARINE ENVIRONMENT

In this section, Weidemann (2014) provided a comprehensive review of current legal regimes that focus on the Arctic. She believes that the changes in the arctic marine environment require adequate international governance for conservation, development, and management. She mentioned the regional "soft-law" regime which only focuses on arctic cooperation among the border nations but without having a comprehensive treaty for environmental protection. In 1991, the Arctic Environmental Protection Strategy (AEPS) was developed as a joint action plan aimed at stimulating scientific cooperation and sharing of research data, as well as addressing the most pressing issues of arctic exploration and exploitation. Then, in 1996, the AEPS was integrated into the newly established Arctic Council (AC), and the original environmental mandate was expanded to include resource governance, business development, and sustainable development (Runnalls, 2014; Weidemann, 2014). It is important to mention, as Weidemann (2014) pointed out, that although the AEPS and AC have achieved many meritorious goals (e.g., the recognition of the Arctic as an entity with unique characteristics, environmental and ecosystem monitoring

and assessment), it is not a regulatory body backed by a “hard-law” treaty, has no structural funding and no comprehensive mandate (e.g., fisheries are not included), and has other institutional challenges. Weidemann (2014) also discussed other organizations that promote awareness and protection of the Arctic, including the International Arctic Science Committee (IASC), the Barents Euro-Arctic Council (BEAC), and the Northern Forum.

A major body of discussion in Weidemann’s (2014) book is devoted to the United Nations Convention on the Law of the Sea (UNCLOS). This international legal regime for the marine environment was adopted in 1992 and has jurisdiction within the different maritime zones. Its obligation is to protect and preserve the marine environment and mandates cooperation among member states. However, as Weidemann (2014) mentioned, it “grants states the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment” (p. 83). The arctic Northwest Passage is another topic Weidemann (2014) discussed. While Canada claims sovereignty over the land and waters north of its continental border, the U.S. recognizes the Northern Passage as an international strait. There are also other specific regulations of certain areas of the marine arctic, such as the Oslo-Paris (OSPAR) Convention(s) as well as species-specific regulations (e.g., polar bear conservation) and sector-specific regulations (e.g., shipping and fishing).

Weidemann (2014) emphasized throughout this section of the book that there is no integrated, ecosystem-based, cross-sectoral management of the arctic marine environment as each of the arctic activities are regulated under separate regimes: “This approach suffers from the weakness of principally ignoring cumulative impacts of several undertakings or interactions between multiple stressors” (p. 119). There is also no network of Marine Protected Areas (MPAs), and UNCLOS only sets minimum standards regarding pollution. There are gaps in participation and geographic scope, deficits of the legal regime for biodiversity

conservation, and no regulatory instrument for transboundary environmental impact assessment. Weidemann (2014) added that in regard to fishing, the main problem lies in the incomplete coverage of the marine Arctic by Regional Fisheries Management Organizations (RFMOs) in that large parts of the region do not fall under the spatial scope of any competent organization; others are only managed with regard to a single species or a single group of species. Since RFMOs are assigned a crucial role in fisheries management, particularly of straddling and highly migratory fish species, this is a considerable gap for the management of international fisheries in the marine Arctic. In sum, Weidemann (2014) believes that there are not only shortcomings for high seas fish stocks (i.e., the UNCLOS provisions are insufficient and there is insufficient participation in relevant instruments), but there are also deficits of the institutional framework for fisheries in the Arctic (e.g., sub-standard frameworks and performance of RFMOs).

POSSIBLE WAYS FOR ENHANCEMENT

Weidemann (2014) considers the Arctic “a [potential] test case for the legal framework for high seas fisheries governance, or more broadly, for integrated and comprehensive ocean governance and—depending on the outcome of the enhancement process—even as a role model for necessary adaptations and improvements” (p. 195). She suggested some specific ways for enhancement such as sector-specific enhancements (e.g., the creation of Arctic-wide RFMOs and a comprehensive mandatory polar code for shipping), area-based enhancements (e.g., the establishment of MPAs and the creation of national parks within the Arctic Ocean), and other governance improvements (e.g., the expansion of Transboundary Environmental Impact Assessment [TEIA] toward a Pan Arctic EIA, and an Arctic trust fund as a robust funding mechanism). Furthermore, the adoption of a cross-sectoral binding agreement (i.e., an Arctic treaty based on the model of the Antarctic treaty), regional seas agreement, an implementing agreement under UNCLOS, and a regime for the Areas Beyond National

Jurisdiction (ABNJ) would be desirable. In short, Weidemann (2014) believes that it essentially comes down to political will, avoidance of fragmentation, and solving of disputes about maritime boundaries. Along the same line of thought, Young (2012) suggested that the focus needs to be on “maximizing the fit between the socioecological features of the Arctic and the character of the governance arrangements needed to steer the Arctic toward a sustainable future.” An interesting comment was recently made by Runnalls (2014) who believes that “pressures will grow as the environment continues to deteriorate and natural resources development gains pace. One severe oil spill, for example, could well change the calculations about a potential treaty.”

I believe Weidemann (2014) has written a comprehensive text that summarizes and evaluates numerous aspects that influence the international governance of the arctic marine environment. Her contribution to the literature on this subject matter is extremely valuable as it shows how difficult it is to govern the arctic marine environment by considering all parties involved and the different interests and concerns. The bibliography Weidemann (2014) provides is extensive and will help readers to access individual topics in more detail. However, I believe the use of tables for contrasting the various legal regimes would have been helpful and increased the clarity of the presentation. Nevertheless, Weidemann (2014) clearly made her case that the current “patchwork of international treaties, most importantly UNCLOS, various regional and sub-regional agreements, national laws and soft-law agreements” (p. 228) demonstrate deficits in the legal framework and that “action to enhance protection of the fragile Arctic marine environment will [hopefully] be taken before it is too late” (p. 232).

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