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David VanderZwaag

*Schulich School of Law and Marine & Environmental Law Institute, Dalhousie University,*  
david.vanderzwaag@dal.ca

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# Edging Towards Principled Ocean Governance: Law of the Sea and Beyond

*David L. VanderZwaag*

Marine & Environmental Law Institute, Dalhousie University,  
Halifax, Nova Scotia, Canada

## Introduction

Elisabeth Mann Borgese is well known for her commitment to advancing the legal order for the improved regulation of the world's oceans. Her advocacy with respect to the United Nations Convention on the Law of the Sea (UNCLOS)<sup>1</sup> is the subject of other essays in this volume. However, in the decades since 1982, legal principles, sometimes linked to provisions in treaties, have become critical in the global quest for sustainable seas and healthy coastal communities. Principles, such as precautionary and ecosystem approaches, have influenced the negotiation, implementation, and interpretation of international agreements.<sup>2</sup> They may also guide national ocean law and policy reforms, for example, encouraging adoption of integrated coastal and ocean management approaches and enhancement of public participation in ocean-related decision-making.<sup>3</sup>

The continued importance of principles and the long list of what are considered to be key ocean governance principles can be seen in the 2016–2017 UN Preparatory Committee discussions trying to hammer out possible elements for a new international agreement for the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction.<sup>4</sup> Wide convergence

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1 Montego Bay, 10 December 1982, 1833 *U.N.T.S.* 3 [UNCLOS].

2 P. Sands et al., *Principles of International Environmental Law*, 3rd ed. (Cambridge: Cambridge University Press, 2012), 94–134.

3 D.R. Rothwell and D.L. VanderZwaag eds., *Towards Principled Oceans Governance: Australian and Canadian Approaches and Challenges* (London: Routledge, 2006).

4 See the essay by David Freestone in this volume.

was reached on what key principles might be included in a future agreement. Among others, they are sustainable development; ecosystem approach; precaution; integrated approach; science-based approach, using the best available scientific information and knowledge, including traditional knowledge; adaptive management; polluter pays principle; public participation; transparency and availability of information; and good faith.<sup>5</sup>

Getting a firm grip on ocean governance principles is difficult for at least five reasons. First, the term 'principle' is itself slippery with other terms sometimes used interchangeably such as concept, approach, and norm.<sup>6</sup> An especially confusing terminological issue is whether the terms ecosystem approach and ecosystem-based management are synonymous, or whether they represent different paradigms.<sup>7</sup> Second, the legal status of principles is often uncertain, whether they are legally binding or merely 'soft law'.<sup>8</sup> Third, the practical implications of principles are often contested, for example, as to the precautionary measures required by the precautionary principle.<sup>9</sup> Fourth, the definitions of principles may vary, for example, some versions of the precautionary principle call for measures to be cost-effective while others do not.<sup>10</sup> Fifth, the inter-relationship of principles tends to be confusing, for example, the relationship between the preventive principle and the precautionary approach.<sup>11</sup>

This essay provides an overview of how the international community has edged forward in developing ocean governance principles. Principles emanating from the UNCLOS and its progeny, such as the Rio Declaration on Environment and Development (Rio Declaration),<sup>12</sup> are summarized and the importance of UN General Assembly (UNGA) resolutions and processes in promoting principled ocean governance is highlighted. This is followed by a

5 United Nations General Assembly (UNGA), Report of the Preparatory Committee established by General Assembly resolution 69/292, UN Doc. A/AC.287/2017/PC.4/2 (2017).

6 S. Schiele, *Evolution of International Environmental Regimes: The Case of Climate Change* (Cambridge: Cambridge University Press, 2014), 104–118.

7 C. Engler, "Beyond Rhetoric: Navigating the Conceptual Tangle Towards Effective Implementation of the Ecosystem Approach to Oceans Management," *Environmental Reviews* 23 (2015): 288–320; K.A. Waylen et al., "The Need to Disentangle Key Concepts from Ecosystem-Approach Jargon," *Conservation Biology* 28, no. 5 (2014): 1215–1224.

8 E. Hey, *Advanced Introduction to International Environmental Law* (Northampton, MA: Edward Elgar, 2016), 53–55.

9 S.A. Atapattu, *Emerging Principles of International Environmental Law* (Ardsley, NY: Transnational Publishers, 2006), 208–273.

10 S. Marr, *The Precautionary Principle in the Law of the Sea* (The Hague: Martinus Nijhoff, 2003), 38–40.

11 A. Trouwborst, *Evolution and Status of the Precautionary Principle in International Law* (The Hague: Kluwer Law International, 2002), 35–44.

12 31 *I.L.M.* 874 (1992).

brief consideration of the role of the Food and Agriculture Organization of the United Nations (FAO) in developing principled approaches to fisheries and aquaculture. The essay also reviews the contributions of key multilateral arrangements and agreements, such as the Convention on Biological Diversity (CBD),<sup>13</sup> to the evolution of principles. The role of courts and tribunals in interpreting ocean-related principles is not addressed.<sup>14</sup>

### UNCLOS and Its Progeny

Besides the ‘common heritage of mankind’ principle, UNCLOS is noted for articulating three other governance principles.<sup>15</sup> First, the protection and preservation of the marine environment principle is set out in Article 192 as an unqualified obligation.<sup>16</sup> Second, Article 194, paragraph 2, affirms the principle of preventing transboundary harm. While this principle is considered an obligation under customary international law,<sup>17</sup> UNCLOS expands the obligation to include a responsibility by states to prevent the spread of pollution beyond their zones of maritime jurisdiction. Third, the principle of co-operation also receives broad support in multiple UNCLOS provisions, for example, Article 197 requires states to co-operate on global and regional levels in developing international rules and standards for the protection and preservation of the marine environment. Co-operative conservation efforts are required for fish stocks not recognizing national boundaries including stocks shared across exclusive economic zones (EEZs), stocks straddling EEZs and the high seas, high migratory species, marine mammals, anadromous stocks, and catadromous stocks.<sup>18</sup> States are also obligated to co-operate in the conservation and management of living resources in areas of the high seas.<sup>19</sup> States bordering on enclosed or semi-enclosed seas are encouraged to co-operate in managing living

13 Rio de Janeiro, 5 June 1992, 1760 *U.N.T.S.* 79 [CBD].

14 T. Stevens, *International Courts and Environmental Protection* (Cambridge: Cambridge University Press, 2009); D.L. VanderZwaag, “The ICJ, ITLOS and the Precautionary Approach: Paltry Progressions, Jurisprudential Jousting,” *Hawaii Law Review* 35 (2013): 617–632.

15 T. Stephens and D.R. Rothwell, *The International Law of the Sea* (Oxford: Hart Publishing, 2010), 474–475. See also the essay by Prue Taylor in this volume.

16 D. Freestone, “Principles Applicable to Modern Oceans Governance,” *The International Journal of Marine and Coastal Law* 23 (2008): 385, 387.

17 P.-M. Dupuy and J.E. Viñuales, *International Environmental Law* (Cambridge: Cambridge University Press, 2015), 58–60.

18 UNCLOS, *supra* note 1, arts. 63–67.

19 *Id.*, arts. 118–119.

marine resources, protecting and preserving the marine environment, and in marine scientific research.<sup>20</sup>

Since UNCLOS does not include specific provisions spelling out legal principles, there might be some argument over whether it also includes other principles. For example, the Preamble recognizes a version of the integration principle which matured after the adoption of UNCLOS: “*Conscious* that the problems of ocean space are closely interrelated and need to be considered as a whole ....”

Similarly, the UN Agreement on Straddling and High Migratory Fish Stocks (UNFSA),<sup>21</sup> which supplements UNCLOS, also modernizes it through express incorporation of the precautionary approach.<sup>22</sup> While UNFSA does not explicitly adopt the ecosystem approach, various provisions in it are supportive of such an approach.<sup>23</sup> UNFSA also fleshes out the principle of co-operation in relation to straddling and high migratory fish stocks. States are required to give effect to their duty to co-operate by not accessing stocks subject to a regional or sub-regional fisheries management organization or arrangement unless they are a member or a participant, or agree to apply the measures of the organization or arrangement.<sup>24</sup>

### Earth Summits and Their Documents

Any consideration of principles for ocean governance must take account of the wider environmental events and agreements occurring after 1982 which also articulated principles regarding ocean governance. The 1992 Rio Conference on Environment and Development (Rio Earth Summit) produced two non-legally binding documents which substantially advanced the aspiration for principled governance. The Rio Declaration sets out 27 principles with an overarching aim to encourage sustainable development. The principle or concept of sustainable development is specifically recognized in Principle 1, “Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.” Principle 3 highlights the closely associated principles of intra- and inter-generational

20 Id., art. 123.

21 New York, 4 August 1995, 2167 *U.N.T.S.* 3.

22 Id., see, e.g., arts. 5 and 6, and Annex II, s. 7.

23 Id. Article 5 requires coastal states and states fishing on the high seas to protect biodiversity in the marine environment and to adopt measures for species belonging to the same ecosystem or dependent on or associated with the target stocks.

24 Id., art. 8, para. 4, see also para. 5 regarding co-operation in other cases.

equity whereby development must ensure the meeting of environment needs of present and future generations.

The Rio Declaration is particularly important in pushing for several principled reforms relevant to environmental management at the national level, but also applicable more broadly to ocean and coastal management. For example, Principle 15 urges the adoption of the precautionary principle:

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

The polluter pays principle is encouraged in Principle 16 and the principle of public participation and access to justice is voiced in Principle 10. Principle 22 sets out the community-based management principle recognizing the important role of Indigenous peoples and other local communities in the achievement of sustainable development.

The Rio Declaration's principled contributions have left numerous implementation issues in their wake. For example, in relation to precaution, when are strong versions of precautionary measures appropriate, such as reversing the burden of legal proof or prohibiting risky activities versus weaker versions such as adaptive management?<sup>25</sup> For polluter pays, precisely who is the polluter and what damages should be compensable?<sup>26</sup> For public participation, who represents the public and what should be the scope of participation, for example, information sharing, consultation, or shared decision-making?<sup>27</sup> For community-based management, what are the implications of the subsequent UN Declaration on the Rights of Indigenous Peoples<sup>28</sup> for Indigenous peoples and their communities in terms of ocean management and development?

Also emerging from the Rio Earth Summit, Agenda 21 is the non-legally binding global plan of action for mobilizing actions and financing towards

25 See, for example, International Union for the Conservation of Nature (IUCN) Guidelines for Applying the Precautionary Principle to Biodiversity Conservation and Natural Resource Management (67th IUCN Council Meeting, 14–16 May 2007), Guideline 12.

26 G. Roller, "Polluter Pays Principle," in *Environmental Law and Sustainability*, eds., K. BosseLMann, D.S. Fogel and J.B. Ruhl (Great Barrington, MA: Berkshire Publishing, 2013), 168–170.

27 D. VanderZwaag, *Canada and Marine Environmental Protection: Charting a Legal Course Towards Sustainable Development* (London: Kluwer Law International, 1995), 35–37.

28 UNGA Res. 61/295 (2007).

achieving sustainable development.<sup>29</sup> Chapter 17, addressing ocean issues, reaffirms the need for a precautionary approach to prevent degradation of the marine environment<sup>30</sup> and emphasizes the need to actualize the principle of integrated coastal and ocean management.<sup>31</sup> Each coastal state is encouraged to establish national and local co-ordination mechanisms for management of coastal and marine areas and to promote the development and implementation of integrated management plans.<sup>32</sup>

At the 2002 World Summit on Sustainable Development, the Johannesburg Plan of Implementation<sup>33</sup> added little on the ocean governance principles set out above. It encouraged application by 2010 of the ecosystem approach to fisheries and called for the promotion of integrated, multidisciplinary, and multisectoral coastal and ocean management at the national level.<sup>34</sup>

The main outcome document of the 2012 Rio+20 Conference on Sustainable Development, "The future we want,"<sup>35</sup> merely reconfirmed previous principles. Governments renewed their commitment to sustainable development and its three pillars of economic, social, and environmental sustainability.<sup>36</sup> All the principles of the Rio Declaration were affirmed.<sup>37</sup> A specific commitment was made to effectively apply ecosystem and precautionary approaches in marine management in accordance with international law.<sup>38</sup>

### UNGA Resolutions and Processes

Annual UNGA resolutions have consistently emphasized the need for ecosystem and precautionary approaches in marine management. For example, the UNGA 2016 resolution on oceans and law of the sea urges states to enhance efforts towards applying an ecosystem approach and encourages competent

29 Available at <https://www.sustainabledevelopment.un.org/content/documents/Agenda21.pdf>.

30 *Id.*, para. 17.21.

31 *Id.*, para. 17.1(a).

32 *Id.*, para. 17.6.

33 Report of the World Summit on Sustainable Development, UN Doc. A/CONF.199/20 (2002), Resolution 2, Annex.

34 *Id.*, paras. 30(d) and 30(e).

35 UNGA Res. 66/288 (2012).

36 *Id.*, para. 1.

37 *Id.*, para. 15.

38 *Id.*, para. 158.

organizations and bodies that have not yet done so to incorporate an ecosystem approach into their mandates.<sup>39</sup>

UNGA processes have also promoted principled ocean governance. For example, the UN Informal Consultative Process on Oceans and Law of the Sea (UNICPOLOS) at its June 2006 meeting addressed the topic of ecosystem approaches and oceans. While recognizing there is no universally agreed definition of an ecosystem approach, the meeting identified a long list of key elements. They include the need to use integrated decision-making processes, strive to balance diverse social objectives, restore degraded marine ecosystems where possible, assess the cumulative impacts on marine ecosystems, and seek to minimize adverse impacts on marine biodiversity, especially on rare and fragile ecosystems.<sup>40</sup>

In September 2015, the UNGA launched the 2030 Agenda for Sustainable Development, transforming the concept or principle of sustainable development into a 15 year plan of action for meeting 17 sustainable development goals and 169 targets.<sup>41</sup> Goal 14 is to conserve and sustainably use the oceans, seas, and marine resources for sustainable development. The Goal is supported by ten targets, including increasing access by small-scale artisanal fishers to marine resources and markets.<sup>42</sup>

### FAO Code of Conduct and Guidelines

In considering wider principles of ocean governance, the principles specifically relevant to living resources are key. The FAO Code of Conduct for Responsible Fisheries (the Code) encourages principled governance approaches to all fisheries.<sup>43</sup> The Code calls for application of the precautionary approach and setting precautionary reference points for fisheries.<sup>44</sup> Although not specifically referring to the ecosystem approach, it encourages many elements of such an approach, for example, broadening management measures to ensure conservation of not only target species but also species belong to the same ecosystem;

39 UNGA Res. 71/257 (2016), paras. 227, 229. See also UNGA Res. 71/123 (2016) (sustainable fisheries), para. 11.

40 Report on the work of the United Nations' Open-ended Informal Consultative Process on Oceans and the Law of the Sea at its seventh meeting, UN Doc. A/61/156 (2006).

41 UNGA Res. 70/1, Transforming Our World: The 2030 Agenda for Sustainable Development (2015).

42 Id., Target 14.b.

43 (Rome: FAO, 1995).

44 Id., art. 7.5.



promoting selective and environmentally safe fishing gears and practices; protecting and rehabilitating all critical fisheries habitats; and managing fisheries as a biological unity over entire areas of distribution.<sup>45</sup> The Code also encourages the integration of fisheries into coastal area management.<sup>46</sup> It further encourages application of the social equity principle, calling on states to protect the rights and access of small-scale of fishers to secure just livelihoods.<sup>47</sup> Specific guidelines on all four principled aspects of the Code have been developed, namely, the ecosystem approaches to fisheries and aquaculture, integrated coastal management, and sustainable small-scale fisheries.<sup>48</sup>

### Multilateral Agreements and Arrangements

Finally, it must be noted that there are other key components in facilitating principled ocean governance, and only a broad overview is possible in this short essay with a focus on adoption and implementation of precautionary and ecosystem approaches. At the global level, international agreements vary widely in the strength of their precautionary embraces. The 1996 Protocol to the London Convention (LP)<sup>49</sup> adopts a strong 'reverse listing' approach to precaution whereby only wastes listed on a global 'safe list' may be considered for ocean dumping and only after undergoing waste assessment audits.<sup>50</sup> Through 2013 amendments, future ocean fertilization activities will be restricted to small-scale for research purposes and authorization will be subject to stringent environmental impact assessment requirements.<sup>51</sup> The CBD calls for a precautionary approach through its preamble and various decisions have emphasized the need for taking a precautionary approach to proposed

45 Id., arts. 6.2, 6.6, 6.8, 7.3.1.

46 Id., art. 6.9.

47 Id., art. 6.18.

48 Respectively the following FAO documents: *The Ecosystem Approach to Fisheries*, FAO Technical Guidelines for Responsible Fisheries No. 4, Suppl. 2 (2003); *Ecosystem Approach to Aquaculture*, FAO Technical Guidelines for Responsible Fisheries No. 5, Suppl. 4 (2010); *Integration of Fisheries into Coastal Area Management*, FAO Technical Guidelines for Responsible Fisheries No. 3 (1996); and *Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication* (2015).

49 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972. London, 7 November 1996, 36 *I.L.M.* 1 (1996).

50 D.L. VanderZwaag, "The International Control of Ocean Dumping: Navigating from Permissive to Precautionary Approaches," in *Research Handbook on International Marine Environmental Law*, ed., R. Rayfuse (Cheltenham: Edward Elgar, 2015), 132–147.

51 International Maritime Organization, Res. LP.4(8) (2013).

climate-related geo-engineering activities through biodiversity impact assessments and restricting activities to small-scale scientific research studies.<sup>52</sup> The Stockholm Convention on Persistent Organic Pollutants<sup>53</sup> has adopted a weak version of precaution, requiring detailed scientific risk assessments before a chemical can be listed for elimination or restriction.<sup>54</sup> Although the Conference of the Parties (COP) is required to decide on a precautionary manner whether to list a chemical, only 28 chemicals have been listed to date.<sup>55</sup> The Paris Agreement to the United Nations Framework Convention on Climate Change (UNFCCC) might be described as adopting a discretionary rather than a precautionary approach to climate change mitigation since it give parties broad discretion to determine their nationally determined contributions.<sup>56</sup>

The CBD has encouraged an ecosystem approach to fisheries and broader ocean management. The Strategic Plan for Biodiversity 2011–2020 sets a target of ensuring by 2020 that all fish and invertebrates are managed and harvested sustainably, legally, and applying ecosystem approaches.<sup>57</sup> Two COP decisions advocate the ecosystem approach as a strategy for integrated coastal and ocean management that promotes conservation and sustainable use of biodiversity in an equitable way and provide 12 principles to guide implementation.<sup>58</sup>

Efforts towards more principled governance have also occurred at the regional level, but overall progress is difficult to assess in light of the numerous forms of regional co-operation. They include 18 regional sea programs,<sup>59</sup> large marine ecosystem projects and arrangements,<sup>60</sup> and over 40 regional fisheries bodies.<sup>61</sup>

Common constraints in applying precautionary and ecosystem approaches do stand out for regional fisheries management organizations and arrangements.

52 CBD, COP Decision X/33, Biodiversity and Climate Change (2010), para. 8(w).

53 Stockholm, 22 May 2001, 2256 U.N.T.S. 119 (Stockholm Convention).

54 D.L. VanderZwaag, "The Precautionary Approach and the International Control of Toxic Chemicals: Beacon of Hope, Sea of Confusion and Dilution," *Houston Journal of International Law* 33 (2011): 605, 618–620.

55 Stockholm Convention, *supra* note 53, art. 8(9); "All POPs listed in the Stockholm Convention," Stockholm Convention Clearing House, accessed 30 November 2017, <http://chm.pops.int/TheConvention/ThePOPs/AllPOPs/tabid/2509/Default.aspx>.

56 UNFCCC, Decision 1/CP.21 (2015), Annex, "Adoption of the Paris Agreement," art. 4.

57 CBD, COP Decision X/2, Strategic Plan for Biodiversity 2011–2020 (2010), Annex, Target 6.

58 CBD, COP Decision V/6 (2000) and COP Decision VII/11 (2004).

59 See UN Environment, *Moving to Strategy and Action: Regional Seas Outlook for the Implementation of the Sustainable Development Goals*, Regional Seas Reports and Studies No. 200 (2017).

60 See essay by Kenneth Sherman in this volume.

61 "Regional Fisheries Bodies (RFB)", FAO, accessed 4 December 2017, <http://www.fao.org/fishery/rfb/en>.

Precautionary approach implementation has often floundered through the setting of high total allowable catches even when scientific information is lacking or limited and ignoring or over-riding precautionary scientific advice because of socio-economic and political pressures.<sup>62</sup> Implementation of the ecosystem approach has been hindered by managerial fixation on standard single stock assessments,<sup>63</sup> limitations in multispecies and ecosystem modelling,<sup>64</sup> failure to consider changing ocean conditions in decision-making,<sup>65</sup> limited political interest in subjecting all transboundary fish stocks to co-operative management,<sup>66</sup> and nominal progress in controlling fisheries bycatch and discards.<sup>67</sup> Limited understanding of complex social-ecological systems is a cross-cutting issue.<sup>68</sup>

### Conclusion

As reviewed above, principled ocean governance has certainly edged forward from the limited inclusion of the four key principles in UNCLOS. A broad array of environmental principles, promoting the overarching goal of sustainable development, but equally applicable to the oceans, has now emerged through both legally-binding agreements and soft law documents.

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- 62 D.A. Russell and D.L. VanderZwaag, "Ecosystem and Precautionary Approaches to International Fisheries Governance: Beacons of Hope, Seas of Confusion and Illusion", in *Recasting Transboundary Fisheries Management Arrangements in Light of Sustainability Principles*, eds., D.A. Russell and D.L. VanderZwaag (Leiden: Martinus Nijhoff, 2010), 61–67.
- 63 M.G. Burgess et al., "Describing Ecosystem Contexts with Single-species Models: A Theoretical Synthesis for Fisheries," *Fish and Fisheries* 18 (2017): 264–284.
- 64 See, for example, M.J. Fogarty, "The Art of Ecosystem-based Fishery Management," *Canadian Journal of Fisheries and Aquatic Sciences* 71 (2014): 479–490.
- 65 M. Skern-Mauritzen et al., "Ecosystem Processes Are Rarely Included in Tactical Fisheries Management," *Fish and Fisheries* 17 (2016): 165–175.
- 66 See, e.g., D.L. VanderZwaag, M. Bailey and N.L. Schakell, "Canada-U.S. Fisheries Management in the Gulf of Maine: Taking Stock and Charting Future Coordinates in the Face of Climate Change," *Ocean Yearbook* 31 (2017): 3–26.
- 67 E. Gilman, K. Passfield and K. Nakamura, "Performance of Regional Fisheries Management Organizations: Ecosystem-based Governance of Bycatch and Discards," *Fish and Fisheries* 15 (2014): 327–351.
- 68 R. Biggs et al., "Strategies for Managing Complex Social-Ecological Systems in the Face of Uncertainty: Examples from South Africa and Beyond," *Ecology and Society* 20, no. 1 (2015): 852–866.

Moving from paper to practice is sure to be a 'never ending voyage'. Conflicts over human values and interests are bound to continue.<sup>69</sup> Debates over the appropriate balance among economic, environmental, and social dimensions of sustainability will not go away.<sup>70</sup> Principles, such as ecosystem-based management, will continue to evolve.<sup>71</sup> We are all on the road to kingdom come.<sup>72</sup>

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- 69 K. Blosselmann, *The Principle of Sustainability: Transforming Law and Governance* (Burlington, VT: Ashgate, 2008), 207–208.
- 70 C. Voigt, *Sustainable Development as a Principle of International Law: Resolving Conflicts between Climate Measures and WTO Law* (Leiden: Martinus Nijhoff, 2007), 3–5.
- 71 R.D. Long, A. Charles and R.L. Stephenson, "Key Principles of Marine Ecosystem-based Management," *Marine Policy* 57 (2015): 53–60.
- 72 D.L. VanderZwaag, "On the Road to Kingdom Come," in *The Challenge of Arctic Shipping: Science, Environmental Assessment, and Human Values*, eds., D.L. VanderZwaag and C. Lamson (Montreal: McGill-Queen's University Press, 1990), 219–244.