

RECASTING TRANSBOUNDARY
FISHERIES MANAGEMENT
ARRANGEMENTS IN LIGHT OF
SUSTAINABILITY PRINCIPLES

Canadian and International Perspectives

EDITED BY

DAWN A. RUSSELL AND
DAVID L. VANDERZWAAG

Recasting Transboundary Fisheries Management Arrangements in Light of Sustainability Principles

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Series Editor's Preface

This is the eighth volume in the Martinus Nijhoff series on *Legal Aspects of Sustainable Development* published under my general editorship. The aim of this series is to publish works at the cutting edge of legal scholarship that address both the practical and the theoretical aspects of this important concept.

I am delighted to be able to include in the series this outstanding collection of essays edited by Dawn A. Russell and David L. VanderZwaag on a highly topical issue – the search for sustainability in transboundary fisheries management. This enterprise is, at its core, one of Canadian scholars, with a group of international scholars also providing important global comparisons and perspectives. Canada, or certainly the east coast of Canada, has had vivid firsthand experience of a major international fish stock collapse. The collapse of the east coast cod stocks in the late eighties, brought on by rapacious fishing by foreign as well as domestic vessels, failures to pay proper heed to scientific advice and the inability under the current international law regime to exercise effective policing and enforcement, led Canada to pass legislation to give itself more effective powers of enforcement jurisdiction. This in turn presaged the arrest of the Spanish vessel – the *Estai* – an incident which, as much as any, led to the inclusion in the 1992 UNCED Agenda 21 of the mandate to the UN to convene a conference on straddling fish stocks and highly migratory fish stocks. The resulting 1995 UN Fish Stocks Agreement includes the tools for modern sustainable fisheries management – principally the endorsement of the ecosystem approach and the precautionary approach. However even armed with these tools progress has been slow and, as the Editors' comment, the current state of stocks is "dismal."

The book combines a series of expertly written case studies with a number of insightful crosscutting reviews of current issues and processes, including the new port state jurisdiction agreement, RFMO performance reviews, and allocation issues. It is a major and very timely contribution to the literature on this important issue. I very much hope that the insights it provides will themselves assist in the process which the Editors themselves define as "fragmented incrementalism" whereby "existing governance processes and arrangements continue to evolve in incremental fashion towards the goal of sustainable fisheries and healthy marine ecosystems."

David Freestone
Washington DC

Foreword

Lori Ridgeway*

Domestic and international fisheries governance is one of the most pressing of international resource management issues. It has implications for sustainability that cut across the spectrum of environment, economic, and social interests. Indeed, fisheries are a perfect laboratory for sustainable development concepts and practices, including the institutions and processes of decision making that lead to sustainable outcomes. Fishing—especially high seas fishing/eries¹—is also often seen as the litmus test of progress in responsible oceans management and is most often found wanting. It is one of the highest-profile extractive activities in the oceans; data exist to easily measure success and failure; and fishing has clear ecosystem/biodiversity spillovers. Thus the public focus on responsible fishing is relentless and increasing, and there is a high premium on analysis and reflection on the ingredients of effective management and reform. The work represented by this book is thus extremely timely.

The Stakes on Improved Management

The stakes for improved management are high. For example:

- In 2007, about one-fifth of the fish stocks monitored by the Food and Agriculture Organization of the United Nations (FAO)² were deemed to be underexploited (2 percent) or moderately exploited (18 percent) and could perhaps produce more. However, 80 percent of world fish stocks for which assessment information is available are deemed fully exploited or overexploited, thus requiring effective and precautionary management.³ The areas

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¹ Even if a small share of total global fishing is in the high seas.

² The Food and Agriculture Organization of the United Nations (FAO) is a specialized United Nations agency that acts as the global fisheries body.

³ About 52 percent were fully exploited, therefore, producing catches at or close to their maximum sustainable limits, with no room for further expansion. The other 28 percent were either overexploited (19%), depleted (8%), or recovering from depletion (1%) and thus yielding less than their maximum with no possibilities in the short or medium term of further expansion (and with risk of further declines and a need for rebuilding).

showing the highest proportions of fully-exploited stocks are the Northeast Atlantic, the Western Indian Ocean, and the Northwest Pacific.⁴

- Fisheries, directly or indirectly, play an essential role in the livelihoods of millions of people around the world. For each person employed in the primary sector, it has been estimated that there could be four employed in the secondary sector, including fish processing, marketing, and service industries.⁵ Globally about eight percent of the world's population could be dependent on this sector.
- In Canada alone, while fishing may be a relatively small overall contributor to the diversified national economy compared to many states, Canadian fisheries contribute an estimated CAD 5 billion, and is the mainstay of approximately 1,500 communities in coastal and rural Canada, and employed about 80,000 people in 2008.⁶ Fisheries products are the largest single Canadian food export, and are entering many markets that place a high premium on sustainability—as demonstrated by market demands such as ecolabels or state requirements (e.g., the European Union, the United States, and Chile).⁷
- A stable, predictable, and enforceable (and enforced) regulatory and management framework for fisheries is an essential contributor to efficient and viable outcomes in the fishing industry—if not the effective functioning of the fisheries value chain—just as is the case for any other economic sector.⁸ The challenges to effective fisheries governance and management are domestic, bilateral, regional, and, in the case of legal policy norms and standards, global.
- Moreover, an effective and ecosystem-responsible fishing governance and management system is also a key pillar to effective and integrated oceans management and governance, which relies on all oceans sectors to do their share in the delivery of healthy oceans and economic and oceans community

⁴ FAO, *The State of the World Fisheries and Aquaculture 2008*, Rome: FAO, 2009, p. 7.

⁵ *Ibid.*, p. 26.

⁶ Source: DFO data bases and estimates. The Atlantic fishery accounts for 82 percent of total landings, the Pacific fishery accounts for 15 percent, and the freshwater fishery three percent of total landings.

⁷ EU and Chilean state requirements include a requirement for state certification as to the legality of the fish catch.

⁸ This point regarding the equitable treatment of fisheries as an economic sector in having a predictable and enforced regulatory framework was made forcefully by the International Coalition of Fisheries Associations (ICFA) to international fisheries ministers at the St. John's Conference (*Governance of High Seas Fisheries and the United Nations Fish Agreement – Moving from Words to Action*) held in St. John's, Newfoundland and Labrador, 1–5 May 2005), when arguing for reformed and strengthened regional fisheries management, the elimination of IUU fishing, more effective enforcement, and the need to address the environmental impacts of fishing in a manner that includes fisheries tools rather than unpredictable bans and recourse to environmental governance.

resilience.⁹ However, to be a credible player to the biodiversity community (which itself must be more inclusive of fisheries interests) and at the integrated management table, responsible fisheries must use the available tools to ensure that avoidable negative impacts on ecosystems and biodiversity are indeed avoided, and unavoidable ones are managed to ensure that their impacts are sustainable.¹⁰

Contributions of this Work

The collection of work in this volume makes an important contribution to the domestic and international debate on fisheries governance and reform in a number of important respects. For example:

1. It emphasizes Canadian experiences and perspectives. While accounting for a small share of global catches, Canada is an important fishing nation and fish exporting nation. It bears its own responsibility of reflection and scrutiny on what has worked well and what has not in its own management context, especially as a state that has made international leadership in fisheries governance and management reform a high priority. Effective leadership includes leading by example. Canada, as can be seen by chapters in this book, also has significant experience in transboundary and high seas fisheries that can provide lessons learned to others with more limited experience/exposure to collective management decision making.
2. Whether describing Canada's engagement in key international fisheries on the west coast or east coast, and whether bilaterally on transboundary stocks or in regional for a fora managing high seas fisheries, the book provides an extremely useful institutional history of various arrangements that is extremely up-to-date on developments and events. The book provides, especially, a unique perspective on how 'history matters' in describing paths of change, an important lesson in transferring lessons and governance solutions from one context to another.
3. Sustainability principles and standards—an anchoring focus of the book—cascade through the range of hard and soft law commitments providing the foundations to fisheries governance. This hierarchy consists of broad international legal frameworks (such as the United Nations Convention on the Law

⁹ L. Ridgeway, "Governance beyond areas of national jurisdiction. Linkages to sectoral management," in J. Rochette (ed.), *Towards a New Governance of High Seas Biodiversity*, *Oceanis* 35(1-2), Paris and Monaco: Institut océanographique, 2009, pp. 245–260.

¹⁰ J. Rice and L. Ridgeway, "Conservation of biodiversity in fisheries management," in R. Q. Grafton, R. Hilborn, D. Squires, M. Tait, and M. Williams (eds), *Handbook of Marine Fisheries Conservation and Management*, New York: Oxford University Press, 2010, pp. 139–149.

of the Sea (LOSC)¹¹); implementing legislation (such as the UN Fish Stocks Agreement – UNFA¹²; or the new international Agreement on Port State Measures¹³); implementation frameworks such as policy frameworks and guidelines (such as the FAO Code of Conduct for Responsible Fisheries and its many implementing guidelines¹⁴); formal management regimes (e.g., RFMO conservation and management measures); and political commitments (such as UN General Assembly Resolutions¹⁵). As one moves through this continuum of hard law to soft law and then to political commitments, the guidance they provide to management approaches becomes more specific and forward looking.¹⁶ Put another way, the most specific emerging guidance is in soft law and especially political commitments, which are often overlooked by commentators. This collection of work is especially notable because of the many and up-to-date references to the obligations and commitments in the full range of these mechanisms in describing the progress that is being made in improved management and governance. This broad and up-to-date integrative literacy is much too rare in the many evaluations of management reform.

4. This book also indirectly demonstrates the integrated contributions to better fisheries management of a range of disciplinary communities—science, legal, technical/management, policy, and diplomatic.
5. According to the FAO,

Fishery governance establishes the overriding principles and objectives of the sector. It develops the policy and regulatory frameworks. It connects government with civil society, harmonizing individual, sectoral and societal perspectives and maintaining social order and productive socio-ecological systems. It legitimates and balances stakeholder

¹¹ *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 U.N.T.S. 396.

¹² *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea December 10, 1982, relating to the Conservation and Management of Straddling Stocks and Highly Migratory Stocks*, 4 August 1995, 34 I.L.M. 1542 (1995).

¹³ FAO, *Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing*, 36th Session, FAO, Rome, 18–23 November 2009, C2009/LIM/11-Rev.1. Online: <[ftp://ftp.fao.org/docrep/fao/meeting/018/k6339e.pdf](http://ftp.fao.org/docrep/fao/meeting/018/k6339e.pdf)> (accessed 19 January 2010).

¹⁴ FAO, *Code of Conduct for Responsible Fisheries*, Rome: FAO, 1995, online: <<http://www.fao.org/docrep/005/v9878e/v9878e00.HTM>> (accessed 19 January 2010).

¹⁵ See Division for Ocean Affairs and the Law of the Sea, United Nations, “Oceans and the Law of the Sea in the General Assembly of the United Nations.” Online: <http://www.un.org/Depts/los/general_assembly/general_assembly_resolutions.htm> (accessed 20 January 2010).

¹⁶ Important examples include the guidelines for preventing significant adverse impacts of fishing on VMEs, which originated in the UN General Assembly sustainable fishing resolution (Paragraphs 83 to 90 of the United Nations General Assembly Resolution 61/105, 2006), and guidance regarding the emerging focus on specific behaviors associated with flag state control. See, for example, the Canadian workshop report, Fisheries and Oceans Canada, *Expert Workshop on Flag State Responsibilities: Assessing Performance and Taking Action, 25–28 March 2008, Vancouver, Canada*, online: <<http://www.dfo-mpo.gc.ca/overfishing-surpeche/documents/flag-state-eng.htm>> (accessed 20 January 2010). These examples demonstrate why formal international standards that consolidate these commitments are so essential.

interaction, enforces decisions and regulations and maintains coherence across jurisdictional, space and time scales. Finally, it conditions the allocation of power, resources and benefits and maintains the governance system capacity to learn and change.¹⁷

These are the very topics described in many of the case studies in this book; thus the book provides, in totality, a comprehensive snapshot of the governance challenge.

6. This book takes a balanced approach. The contributions freely give credit where it is due while outlining challenges that remain to be overcome and progress yet to be achieved. It thus gives proper credit to adaptive implementation, while noting that the underlying principles grounding better overall measurable *outcomes* set demanding standards.
7. Most importantly, in taking an inherently institutional approach to the issue of management improvement, this book puts the emphasis squarely on *implementation*—emphasizing the journey *from words to action*. Indeed this was the theme of the St. John's Conference on improved management of straddling and highly migratory fish stocks,¹⁸ and was also a theme adopted by the FAO Committee on Fisheries (COFI) in 1995 as the overriding focus to achieving measurable improvements in fisheries outcomes. The implication is that we have sufficient understanding and general buy-in to sustainability principles to manage well, and that the time has come to implement them fully. This was also the theme of the 2006 UNFA Review Conference at the United Nations.¹⁹ UNFA parties elected to look at progress in implementation of its provisions as a basis for their recommendations rather than the adequacy of the Agreement itself. They argued that not enough time had passed to judge the Agreement and demonstrated an underlying disinclination to focus on further legal issues/development.

In respect to understanding the steps needed to implement newer sustainability principles, the underlying issue addressed in this book, it must be said that there were lingering uncertainties in 2006 about some UNFA commitments/principles such as ecosystem-based management. Unlike other recommendations for improved implementation, states at the Review Conference

¹⁷ Fisheries and Aquaculture Department, FAO, "Fisheries Topics: Governance. Fisheries governance." Online: <<http://www.fao.org/fishery/topic/2014/en>> (accessed 20 January 2010).

¹⁸ See "Conference on the Governance of High Seas Fisheries and the United Nations Fish Agreement – Moving from Words to Action," St. John's, Newfoundland and Labrador, 1–5 May 2005. Online: <http://www.dfo-mpo.gc.ca/fgc-cgp/index_e.htm> (accessed 20 January 2010).

¹⁹ See United Nations General Assembly, *Report of the Review Conference on the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, New York, 22–26 May 2006, A/CONF.210/2006/15, 5 July 2006. Online: <http://www.un.org/Depts/los/convention_agreements/review_conf_fish_stocks> (accessed 20 January 2010).

were reluctant to make detailed commitments for next steps regarding implementation of an ecosystem approach to fisheries management (EAF).²⁰ They wanted to wait until they had concluded the then soon-upcoming discussions at the Informal Consultative Process on Oceans and the Law of the Sea (ICP), which would feature a discussion aimed at ‘demystifying’ EAF and ecosystem-based management (EBM). In that later discussion, however, it was (and is still) recognized that sufficient is known to make definitive progress on implementation.²¹ Indeed this was the *consensus* of the ICP, as seen in the Agreed Elements sent to the UNGA to anchor that year’s debate on Oceans and the Law of the Sea.²² These elements focused on practical next steps in adaptive approaches to implementing ecosystem-based approaches. They put to rest the somewhat paralyzing notion that EAF or EBM is a single overwhelming holistic approach that needs either a definitive and consensus definition or complicated models and data to even get started.

An important emphasis of these discussions was that, unequivocally, the robustness of the regime for comprehensive fisheries management even on single stocks is a *sine qua non* for better ecosystem outcomes. The latter cannot be achieved without the former. This was an important clarification to international confusion on where fishing ‘fits’ in ecosystem approaches and oceans management.²³

8. Some authors in this book also make reference to other practical standards that help define effective international fisheries arrangements and regional organizations. This includes the work arising out of the Ministerially-led Task Force on IUU Fishing on the High Seas. Here a Canadian-sponsored recommendation led to a request to Chatham House to develop, using credible independent experts, determinants of a ‘model’ RFMO/A based on RFMO best practices. This work included a series of analyses of issues and best practices,

²⁰ An ecosystem approach to fisheries management (EAF) is distinct from ecosystem-based management of oceans (EBM), which includes intersectoral integrated management.

²¹ See also, J. C. Rice, “After the revolution you have to govern well: delivering the promises of an Ecosystem Approach to Fisheries,” *Fish and Fisheries* (in press); and S. A. Murawski, “Ten myths concerning ecosystem approaches to marine resource management,” *Marine Policy* 31, 2007, 681–690.

²² See United Nations General Assembly, *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*, 12–16 June 2006, submitted to the UN General Assembly by co chairs L. Ridgeway (Canada) and C. Maquieira (Chile), UN Doc. A/61/156 (17 July 2006). Online: <<http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N06/432/90/PDF/N0643290.pdf?OpenElement>> (accessed 20 January 2010).

²³ See also Rice and Ridgeway, *supra* note 10; Rice, *supra* note 21; Murawski, *supra* note 21; and J. C. Rice, “Implementation of the ecosystem approach to fisheries management – asynchronous co-evolution at the interface between science and policy,” *Marine Ecology Progress Series* 300, 2005, 25–30.

and an ultimate set of guidelines that useful for evaluation and reform of fisheries arrangements.²⁴

**Understanding Implementation Progress
and Gaps—A Prism on Some Key Issues Addressed
in this Book**

Adopting Modern Principles in Obligations

This book importantly focuses on reform and improvements as guided by sustainability principles. If these principles are widely agreed and understood, why do we see—such as in many of these case studies—such variation in timely implementation?

As demonstrated in this work, Canada is a member of various kinds of arrangements where the operating context differs significantly. One critical difference among these is the degree to which partner states 1) have adopted sustainability principles as legal obligations that would compel them to agree to—and abide by—the principles, and/or 2) have the capacity to implement these principles adequately. The examples in this book show a clear pattern of progress in arrangements and RFMOs that at least loosely correlate with such commitments.

- **LOSC:** LOSC is widely considered the broad ‘Constitution of the Oceans’, describing comprehensive obligations on sectoral users in various oceans zones. Most states members of regional arrangements have ratified LOSC, together with non-parties such as the United States, to the effect that they consider LOSC as customary international law. The ratio is equally as high for cooperating non-parties to RFMOs/As. That said, tuna bodies show the lowest rate of member ratification of LOSC among management bodies.
- **UNFA:** UNFA contains more specific legal commitments to modern management principles such as ecosystem-based approaches, the precautionary approach, certain enforcement mechanisms, and compatibility of management provisions regarding straddling and highly migratory stocks. RFMOs vary widely in terms of the proportion of parties that have ratified UNFA and thus have notionally taken on these principles as actual obligations. These range from nearly all in some RFMOs to less than half in others. Again most tuna bodies—especially large ones—feature in the bottom range of adoption, with

²⁴ M. W. Lodge, D. Andersen, T. Løbach, G. Munro, K. Sainsbury, and A. Willock, *Recommended Best Practices for Regional Fisheries Management Organizations, Report of an Independent Panel to Develop a Model for Improved Governance by Regional Fisheries Management Organizations*, London: The Royal Institute of International Affairs, 2007. Online: <<http://www.chathamhouse.org.uk>> (accessed 20 January 2010).

less than half of the membership in such arrangements as the International Commission for the Conservation of Atlantic Tunas (ICCAT) and the Inter-American Tropical Tuna Commission (IATTC) having ratified UNFA. Conversely, in arrangements that feature in waters critical to Canada, such as the North Atlantic, UNFA membership is high, and participants are generally developed states. This includes of course the United States and France, partners in bilateral management of transboundary fisheries.

- **FAO Compliance Agreement**²⁵: The main obligation of the Compliance Agreement is to ensure that fishing vessels of a state do not undermine the effectiveness of international conservation and management measures and provides for the systematic exchange of information regarding high seas fishing vessels. Ratification of this Agreement is lower across all RFMOs, and again, among RFMOs, tuna RFMOs face the lowest rate of ratification.

It would seem that one of the most important international efforts—demonstrated by issues raised in this book—*must* be to ensure the speedy international adoption of relevant international instruments as an urgent and shared foundation for management reform. This is highly urgent for tuna RFMOs.

Political Economy of Reform

This book amply shows how, even where states *have* adopted the relevant international instruments, implementation is often stymied by other challenges.²⁶

Knowledge for Decision Making

In many cases the key gap—especially for management for improved ecosystem outcomes—is adequate knowledge, especially integrated information and knowledge for decision making. One of the most poignant examples raised in the book is the degree to which RFMOs have adopted the necessary provisions of UN General Assembly Resolution 61/105 which includes key paragraphs on protecting vulnerable marine ecosystems (VMEs) from significant adverse impacts of fishing.²⁷ However, this requires accelerated information and knowledge about both the location of VMEs and ecosystem functions of their components, as well as assessment methodologies for the impacts of fishing in currently fished and

²⁵ The ‘Compliance Agreement’ refers to the FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, 24 November 1993, which was approved by Resolution 15/93 of the 27th Session of the FAO Conference. Online: <<http://www.fao.org/legal/treaties/012t-e.htm>> (accessed 20 January 2010).

²⁶ See J. G. Sutinen, *Major Challenges for Fishery Policy Reform: A Political Economy Perspective*, OECD Food, Agriculture and Fisheries Working Papers No. 8, Paris: OECD, for some interesting perspectives.

²⁷ UN General Assembly, *supra* note 16.

previously unfished areas. Progress has certainly been made in this respect, although it is uneven across RFMOs and, in many cases, less than many would have wished given the urgency of the issue.

Is progress too slow? Some authors in this volume edge close to this question. As described in an important article on the implementation of the ecosystem approach to fisheries, it has been argued that policy commitments and scientific knowledge do not often move in lock step.²⁸ Sometimes scientific knowledge runs ahead of policy commitments and management reforms (1990s being cited as an example), and sometimes the opposite is true. Given the urgency of improved conservation and speedy implementation of ecosystem-based approaches, it has been argued that, currently, we are in a phase where political commitments to policy and management reform have run ahead of practical knowledge in which to implement them to the satisfaction of fisheries critics. This is especially risky at a time when enthusiasm for ecosystem approaches is running high, and questions abound regarding ‘commitment’. Rice argues that there is always a risk that our enthusiasm will run ahead of our knowledge and make problems too complex to solve realistically and—most importantly—make it impossible to discriminate the right answers from the wrong ones. Critical in this context, then, is the need to simplify, and to make progress on ecosystem components that are at the highest risk. This is especially important, as economists would also argue, in a resource constrained environment. *This is an important filter through which to read these chapters, as in all cases it is clearly demonstrated that progress is incomplete.*

Risk Tolerance and Political Will

One of the major implications of ecosystem-based approaches is that where management is myopic (e.g., planning scales are too small, or adequate information/knowledge is missing), management must be more precautionary.

It is hard to imagine a case where the ecosystem and precautionary approaches would expand fisheries opportunities in the short run from single-species approaches—or where fisheries reform for better conservation would cause an increase in fishing opportunities from pre-reform models. This raises issues of creating ‘political’ appetite for implementation of reform. Two very interesting concepts are raised by some authors in this volume, which are among the most topical of current debates.

First are the *differences* in perceptions among various stakeholders regarding what defines ‘sustainability’, and *especially differing tolerances for risk around managing responsibly*.²⁹ Simplistically put, ecologists might be most risk averse

²⁸ Rice, *supra* note 21.

²⁹ See also, Rice and Ridgeway, *supra* note 10; and Rice, *supra* note 21.

on the *environmental* dimension (intolerance of misses where conservation action is needed). Users, and perhaps governments, may be more likely risk averse on *economic and social* parameters (e.g., intolerant of false alarms). One of the challenges of implementation of ecosystem approaches and precautionary actions is how to have informed dialogue among communities of interest having different risk tolerances. This book makes ample reference to issues where tolerances for action differ among stakeholders.

Second, and related, is *how to increase the political appetite (or better said, "tolerance") for more precautionary management* in light of these differences. One dimension has been described above—whether states have embraced sustainability principles as internal legal obligations to which they will be accountable, and all that this entails.

Another dimension is the *need to be able to understand the benefits and costs of implementing sustainability principles and who will bear the burden of reform* (or precautionary decision making). This is a fundamentally an allocation or equity question; allocating the burden across resource users (including, as described in one chapter, within such groupings as the European Union, as well as between states or fleets, as described in another); between resource users and ecosystem services; and in the case of integrated management, even across different oceans users groups. 'Allocation' questions have always been among the most difficult in fisheries, and ecosystem approaches do not foretell any easier decisions. This is especially the case where costs and benefits do not have a common currency of measurement and calibration, e.g., between use and non-use.

Moreover, across the three criteria for sustainability—environmental, economic, and social—inclusive ecosystem approaches mean that more types of specialists pass judgment on the *credibility* of decisions, more diverse stakeholders will pass judgment on *legitimacy* of decisions, and more decision makers may find the issues and decision *relevant* to them.³⁰ One critical implementation issue for some of these principles is the likelihood that decision making will become potentially more divisive, which can affect governance reforms on all dimensions. Many of these issues are raised throughout this volume.

Managing Change

Lastly, mentioned here among a myriad of issues that could be discussed, is how more precautionary management becomes a whole-of-government issue, especially when one considers the issue of transition management for 'losers' in precautionary decision making.³¹ There is little dispute about the comparative

³⁰ Rice, *supra* note 21.

³¹ See R. Q. Grafton, R. Hilborn, L. Ridgeway, D. Squires, M. Williams, et al., "Positioning fisheries in a changing world," *Marine Policy* 32(4), 2008, 630–634; and M. Williams, L. Ridgeway, Q. Grafton, and D. Squires, "Positioning Fisheries in a Changing World," in *Proceedings of the*

static results of better management. Better management, even if it means doing less in the short run, confers post-reform benefits across all sustainable development pillars. But *managing the process of transition*, once agreement on direction of change is achieved, is itself part of the equation of getting agreement. Many of the tools of adjustment management and planning are outside the toolkit of fisheries ministers.

*Best Practices Implementing Reform—Outlining Critical
Success Factors for Change*

If there are obstacles to embracing modern sustainability principles, what are the critical success factors for actual change? *That is the essence of this book.*

In situating this work, it is interesting that the OECD Committee for Fisheries also addressed this question in its three-year project (2006–2009) on the political economy of fisheries reform. The project included case studies in many contexts, including RFMO modernization, and drew some conclusions in common with those addressed in this book.³² At least one factor from the OECD project is mentioned in each chapter in this book and many chapters address several. This volume goes further, however, in placing them in a more detailed institutional and historical perspective.

Common features of successful reform efforts for creating the conditions for change, as identified by OECD states comprising the Committee for Fisheries, include:

- ratification of international laws and obligations, to create a common starting point for reform;
- trust among key players and credibility to positions and commitments;
- successful dispute mechanisms and structured decision-making processes;
- agreement and adherence to scientific advice;
- strong compliance and elimination of free riders (e.g., IUU fishing) (so that gains are internalized to those taking the risks and attention can be focused on internal priorities for change by removing external pressures on fish stocks);
- fixing domestic overcapacity issues in order to remove domestic pressure for the status quo;
- ensuring compliance by contracting parties (to build trust and credibility);
- addressing allocation issues/dealing with the ‘benefits sharing’ issue; and
- flexible and innovative solutions.

Fourteenth Biennial Conference of the International Institute of Fisheries Economics & Trade, July 22–25, 2008, Nha Trang, Vietnam: Achieving a Sustainable Future: Managing Aquaculture, Fishing, Trade and Development, compiled by Ann L. Shriver, Corvallis, OR: International Institute of Fisheries Economics & Trade, 2008. CD ROM.

³² Committee for Fisheries, Organization for Economic Cooperation and Development (OECD), *Strengthening Regional Fisheries Management Organizations*, Paris: OECD, 2009.

Moreover, the authors in this book point to clear bottom lines shared with the OECD Committee for Fisheries:

- External performance reviews can play a big role in many cases in building consensus for change.
- Changes *are* underway; there are some success stories.
- Change is feasible under a range of circumstances.
- The pace of actual change depends on the characteristics of particular issues and players.
- There are no single cookie-cutter recipes.
- The fundamental building blocks for change need to be put in place and sustained to create and maintain the momentum for change.
- Alternatives depend on the underlying incentive structure for change.
- The costs of delaying action can be significant.³³
- Incremental change is often effective at building self-enlightened coalitions for further change.
- Significant change can take place even when key fundamental issues remain unresolved.
- A whole of government system provides mutually reinforcing rules and incentives.
- *Leadership matters.*

The matter of leadership brings us full circle to a book partly addressing Canadian perspectives for reform. Different forms of leadership are implicit in the various contributions to this book. If further progress is to be made in reaching measurable improvements in sustainability, then Canada—together with other key states with both willingness and capacity—will have to help create and sustain the momentum for implementation across the range of actions that will be needed, building on our lessons learned and experience.

³³ Realized economic crisis, not resource crisis, drives actual change, and the delay in moving beyond predicted resource crisis to realized economic loss can mean more draconian recovery planning is needed.

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