## Saving Global Fisheries. Reducing Fishing Capacity to Promote Sustainability

By J. Samuel Barkin, and Elizabeth R. DeSombre. 2013. The Massachusetts Institute of Technology Press, One Rogers Street, Cambridge, MA, USA, 02142-1209. 276 pages, 29.00 USD, Cloth.

The management of ocean fish populations has been of increasing concern as international fishing pressure increases and fish stocks decline. The problem is often exacerbated because some stocks decline and governments subsidize the fishing industry's switch to alternative, initially more common species. In their academic treatise Saving Global Fisheries, the authors describe the inherent problems they see with current international fishing agreements and processes, and propose a comprehensive new approach to managing global fisheries. The authors waste little time in putting forward their case, clearly stating the central theme and purpose of this book very early on. Both the title and the introductory paragraph contain a synopsis of the problems as they see it, and the solution. The major challenge was succinctly summarized on the second page as "too many boats, chasing too few fish", and the main solution was presented on the third page as the "need to see fisheries as long-term environmental resources embedded in ecosystems rather than as solutions to shortterm domestic employment crises or the embodiment of noble cultural value. We need to stop subsidizing fishers and figure out how to get people out of the industry". This in essence describes the primary focus and intent of the book, with only additional details and rationale to be added. The authors spend the rest of the book explaining in detail the problems with current approaches to the management of ocean fish stocks, and what they see as the solution. Global fisheries are not specifically defined, but refer to oceanic fish stocks traversing the jurisdictional waters of several different countries. The authors do not appear to be referring to freshwater fish stocks at all, although the same case could perhaps be made for fish stocks in large freshwater systems managed by several adjacent jurisdictions.

The authors lay out their case logically, progressively and in considerable, often excessive, detail. They generally build a thoughtful, sequential argument for a broad global regulatory and policy approach to management, rather than the current piecemeal jurisdiction-by-jurisdiction approach. The latter approach tends to simply shift fishing pressure around geographically and by species, especially when supplemented by fishing industry subsidies.

The book is not for the lay reader, with considerable reliance upon economic theory and principles, for example, why an approach based upon Maximum Sustainable Yield can lead to higher levels of fishing pressure than one based upon Maximum Economic Yield. The authors have a solid grasp on economic theory, and apply a great deal of it to this topic. At times the discussion is as much or more about environmental economics as it is about ecological management. In fact, at times the book seems to be directed more to a non-biological audience, with many economic terms re-

maining undefined while some basic biological terms, such as recruitment, are. The book uses many acronyms and, while confusing at times, they are all helpfully itemized at the beginning of the book. The book is a tough read at times, and somewhat repetitive in the arguments that are being made. Those simply wanting a general overview of the issue and proposed solution would be well served by sticking to the Introduction and the Conclusion – these two chapters summarize the main points without delving into the economic, regulatory and policy complexities.

While the authors make a generally compelling broad case for their thesis, at times they make sweeping generalized statements that are not well supported. Some statements are well supported by scientific studies and reports, while others appear to be unsubstantiated and undocumented. In particular, the success of existing regional fisheries management programs (and their "micro approach to fisheries management") seems to be almost completely disparaged as unsuccessful and unworkable by definition. Even regional fisheries management programs that manage fish stocks based on scientific advice to limit the catch of specific species within specific geo-political limits are seen as ineffectual by design. Where citations are referenced, they are described by footnotes on each page and also included in a full citation list at the back of the book, a useful redundancy.

The authors are adamant in their belief that existing fishing levels are too high, and that this overcapacity needs to be reduced. They believe that regionally managed industrial fishing as currently practised is unsustainable, that existing fisheries should be phased out, and that developing countries not yet exploiting their fisheries should not aspire to make greater use of this "development dead end". The authors propose a bold solution that would require a high degree of international commitment, collaboration and compliance – a global fisheries organization managing a system of individual transferable quotas. The challenges in implementing such a solution are formidable, and the authors do not shy away from identifying the many large hurdles. While it is difficult to see how such a solution can ever be successfully implemented, the authors optimistically close with what they term their core argument - "we should try". In the end they argue that such an international solution is necessary if we are to save global fisheries.

This book is a valuable contribution to the academic discussion on the management of global fisheries, and could be a useful basis for serious discussions on how to better manage them. At the same time, it is neither an easy read nor a book for those with a more general interest in natural history and natural resource management.

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