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Chapter thirty-one

*Speaking for themselves:
new acts, new actors and a
New Deal in a reinvented
fisheries management*

Daniel Pauly, Paul J.B. Hart and Tony J. Pitcher

ABSTRACT

Judged by a dismal record, the methodology, data, institutions and policy goals for fisheries stand worldwide in need of reinventing. Despite many new tools available for considering uncertainty, incorporating multiple data sources and listening to a variety of stakeholders, a reinvented fisheries management needs to adopt new, broader policy goals and to find new ways to examine, predict, shape, and ultimately mitigate the impact of fisheries on aquatic ecosystems. In parallel, new actors are asking for a voice in fisheries management, and for new legislative and other arrangements that will be required to accommodate their roles. The alternative to the inclusion of these new acts and actors, i.e. continuation of the present single-species focus, centralized arrangements, ineffective control of human fishing, and the resource exploitation patterns they induce, imply no less than a miserable, unrelenting erosion, and an eventual destruction of marine fisheries resources.

One of the articles in this book reminds us that 'fishers can speak for themselves' (Jentoft, Chapter 12, this volume). Trivial as it may seem, this

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observation is deep, as it implies – because fish cannot speak – a very different relationship between social science and fisheries management than that between fishery biology and fisheries management. The book of which this is the concluding chapter contains, in different voices, many similar snippets, small truisms from which deeper questions are derived.

Emerging from the voices in this book are four clear themes and needs:

- reinventing the collection and handling of the data necessary to monitor marine resources;
- reinventing the methodology to analyse these data;
- reinventing the institutions designed to implement policy;
- reinventing policy goals for fisheries.

Therefore, we consider that:

1. fisheries globally are really in deep trouble (Buckworth, Chapter 1, this volume; Pitcher and Pauly, Chapter 24, this volume), far more so than is admitted to the public, to whom technical fixes are still being sold;
2. government institutions and stock assessment scientists charged with managing fisheries are still largely engaged in a quasi-exclusive partnership with the fishing industry – often with its least enlightened subsector – and further are engaged in denying the self-destructive streak that characterizes this subsector; and
3. addressing the issues in (1) and (2) requires a ‘New Deal’ in fisheries, involving new institutional arrangements that empower currently marginalized stakeholders to participate in fisheries management, both at strategic (who should have access to what still largely is, after all, a public resource) and at tactical levels (what gear should be used to extract what out of the multispecies assemblages constituting our resource base).

An important element of any New Deal must be the recognition that a central problem of fisheries management is human behaviour. Indeed, the heart of this book has no fewer than nine chapters addressing aspects of human behaviour in fisheries. The perspective from contemporary advances in social science is represented by Jentoft (Chapter 12, this volume) and by McGuire (Chapter 18, this volume). In the past, social scientists have felt ignored by fisheries managers, probably because of their different traditions and because social scientists have been much influenced by all-embracing theories through which they see the world. This often drives them to take stances that are at odds with the data-driven approach of biologists and the pragmatism of managers. On the other hand, rigorous social analysis of the politics and social beliefs that structure the bureaucratized science favoured by governments has been of considerable value in understanding convoluted processes leading to damaging decisions

about fish resources (Finlayson, 1994, Hutchings *et al.*, 1997), and it may be good for all our souls to be deconstructed once in a while. But at the extreme, and fortunately not represented in this book, deconstructionists may regard the entire methodology, traditions and institutions of science as an arbitrary social construct (Latour, 1988), a view that is profoundly misguided (Sokal, 1996; Sokal and Bricmont, 1997). Other social science disciplines, such as economics, have attempted to look more at the empirical base of human behaviour, as shown by the two chapters by Scott (15) and by Hannesson (19), while a more anthropological view is taken by Harris (20), who emphasizes the link between the nature of the resource base and that of human social behaviours. Rice and Brown in their respective chapters (14, 13) show how the balance of power in fisheries management needs to be carefully monitored so that important groups are not left out, nor feel left out. A further perspective is provided in the two chapters by Hart and Pitcher (16) and by Hart (17), where an attempt is made to use an evolutionary perspective to understand the resource acquisition behaviour of fishers. This approach makes use of the extensive theory about the biology that underlies conflicts of interest among individuals, a science that has been developed by behavioural ecologists to make experimentally testable predictions about behaviour.

Central to all these views is that developing new relationships with fishers, fish workers and fish traders should be a central task of a reinvented fisheries management. Their lives are defined and given meaning by fishing, and they should be listened to and brought into the management system if they are to agree to be managed (Link and English, Chapter 10, this volume; Hart and Pitcher, Chapter 16, this volume).

The recent dialogue between fisheries planners and researchers from African, Caribbean and Pacific (ACP) countries and the European Union (EU) to develop the ACP-EU Fisheries Research Initiative is a case in point of an emerging new relationship (Anon., 1995, 1996, 1997; Chakalall *et al.*, 1997; Ruddle, 1997). This dialogue is founded on the twin concept of partnership and co-responsibility, which involves overcoming the out-moded donor-recipient relationships between industrialized and developing countries and their institutions (Williams, Chapter 11, this volume). Throughout the dialogue it was recognized that governments are increasingly unable to control and regulate economic activity through bureaucratic instruments, and to fund the required high levels of services and enforcement. On the other hand, non-governmental actors, e.g. in the corporate and cooperative sectors, are entering the space left by governments (Nauen *et al.*, 1996). This goes hand in hand with the need for new approaches in research, where a transition to transsectoral approaches is overdue, along with a shift from technological 'fixes' to a vision that takes cultural and social contexts into account.

It required a science-fiction author, Stanislaw Lem, to point out that the future is not realized as a choice between rosy Utopia and bleak Apocalypse, but through transmutations of old crises, through half-hearted fixes, into new crises (Lem, 1981). Thus, if he is right, and following on another theme of this book, one can easily envisage the crises that will occur globally, or in individual countries, if none of the adjustments in (1) to (3) above are implemented:

- (a) fishing down the food webs of marine and freshwater ecosystems, as defined in Pauly *et al.* (1998) and in Pitcher and Pauly (Chapter 24, this volume), will continue, and will subvert scattered attempts at sustaining this or that single-species stock;
- (b) the first cases of the global extinction of marine fish species will occur, complementing the ongoing extinction of many of their populations, and of freshwater fish species (Bruton, 1995; Baillie and Groombridge, 1996), and making a mockery of our governments' ratification of various treaties devoted to the protection of biodiversity; and
- (c) we will still end up with subsidy-guzzling, overcapitalized fisheries, gradually pushed aside by mariculture, the next technological 'fix'.

On the other hand, there are powerful forces working against business as usual, notably the entry of new stakeholders into fisheries management, a process forming the most hopeful theme of this book. Thus Charles (Chapter 6, this volume), Walters (Chapter 21, this volume), and especially Sutton (Chapter 8 this volume) illustrate the potential of public involvement. Both Charles and Walters stress the public as the owner, and thus ultimate 'client' of fisheries resources management – in contrast to the often irresponsible resource users who operate at the public's tolerance.

Also, the public at large can be expected to affect fisheries management. This may happen indirectly, through the demand for legislation to protect the natural environment in general (e.g. the Magnuson Act, intended to protect sea mammals, among others, and which can be interpreted as also protecting the forage fish that the marine mammals require), through industrial standards (Sproul, Chapter 9, this volume), or through market mechanisms such as ecolabelling schemes (Sutton, Chapter 8, this volume) which allow for well-managed fisheries to be rewarded by purchase of their products. The involvement of this new actor in fisheries management, through non-governmental organizations or otherwise, will in many cases require new 'acts', i.e. new legislation to create new arrangements in the narrower context of co-management (Brown, Chapter 13, this volume), social 'collimation' (Dunsire, 1994) or broad participatory schemes (Hyden and Bratton, 1992; Putnam, 1993; Kooiman, 1994).

But the public is not willing to sacrifice short-term advantage for long-

term gain. Like fishers, the consumers will act to protect their own interests. What is also required, therefore, are institutions that devise ways of incorporating the prospect of future benefits into the daily decision process so that some fish are left in the water (Hart, Chapter 17, this volume; Sutton, Chapter 8, this volume).

Perhaps paradoxically, it needs stating here that reinventing fisheries management does not include only changes in the socio-economic and institutional aspects of fisheries, though much emphasis must be given to this. Indeed, in addition to interdisciplinary work (Pitcher *et al.*, Chapter 3, this volume; Preikshot, Chapter 7, this volume), there is a role for good 'science' (Policansky, Chapter 4, this volume), i.e. for fisheries 'biology': data will have to be made and kept available for rigorous analysis (Richards and Schnute, Chapter 30, this volume), ocean patterns will have to be interpreted with the most advanced theory at hand (Bakun, Chapter 25, this volume), uncertainties will have to be accounted for (Bundy, Chapter 26, this volume; Peterman *et al.*, Chapter 29, this volume), trophic interactions between resource species and their preys and predators will have to be accounted for (Christensen and Pauly, 1993; Walters *et al.*, 1997; Neill, Chapter 22, this volume), and the optimal size and placement of marine protected areas will have to be researched, such as to enable them to play the beneficial role that is now widely expected of them (Sumaila, Chapter 23, this volume).

Our current inability to resolve these themes, except in a piecemeal and uncoordinated 'band-aid' fashion (Walters, 1995), is symptomatic of a profound lack of a coherent policy goal. The disaster that is the likely future of our seas is not what the responsible fishery scientists represented in this volume are diligently working towards; however, without change, we fear that this depressing scenario is what they will get. Accordingly, we argue strongly in this book for the adoption of an ecosystem-rebuilding goal for fisheries management (Pitcher and Pauly, Chapter 24, this volume). Thus, reinventing fisheries management also requires that we creatively expand our disciplines beyond their current boundaries. Business as usual, on the other hand, is bad science, and bad fisheries, such as those that now give us 'black greens', the very small (25–30 cm) but near fully grown cod that are now (illegally) landed in British and French ports by a North Sea fishery in denial of the need to change.

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