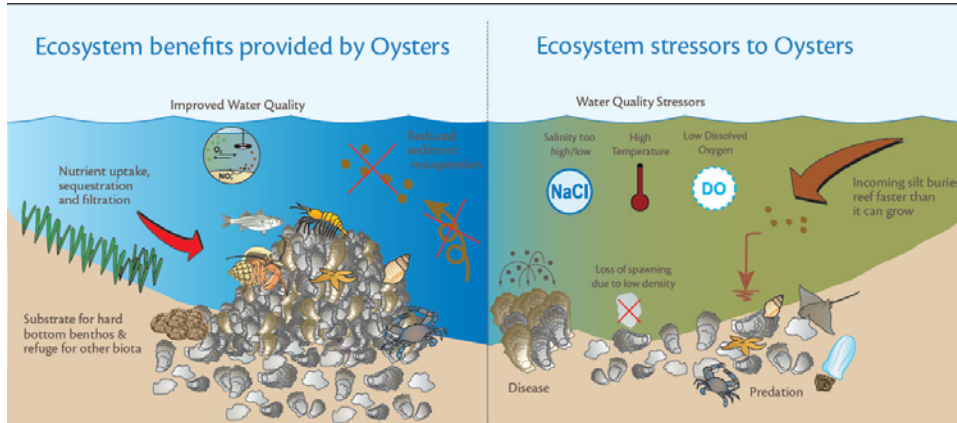


Water Quality

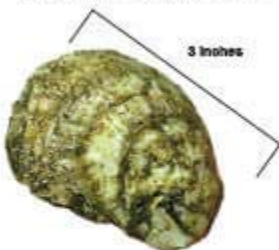
Oysters contribute to water quality by filtering the water! Oysters are filter feeders, meaning they have tiny sticky gills inside their shell. The oysters can pump water over their gills and tiny particles of oyster food get stuck to the gills and are eaten by the oyster. The organisms that the oyster eats are the same organisms that cause the Chesapeake Bay to be murky, cloudy, and have high amounts of bad or dangerous organisms. The Bay and all the organisms that live in, interact with, swim in, or play in the water benefit from cleaner water, and the oysters get food and can continue to grow and filter water! It's a win-win.



Fishing – commercial and recreational

Recreational fishing occurs when fishermen go out into the Chesapeake Bay and harvest oysters or blue crabs or some other organisms for sport; they go out to have fun and not in order to earn money. Fishing commercially means that the fishermen survive on the money they make from fishing; they sell their catches to seafood buyers who sell them to stores who sell them to individuals. Commercial fishing for oysters is much more highly regulated than recreational fishing in the Chesapeake Bay because commercial fishers have something more to lose if they cannot fish. Regulations include seasons, catch limits, and catch size.

HOW TO MEASURE OYSTERS



Recreation

Recreation involves anything to do with fun in the Chesapeake Bay! Boating, sailing, recreational fishing, paddle boarding, kayaking, etc. Recreation value comes from having the ability to have access to the Bay, having a clean Bay to play in, and the joy people get from playing in the Bay instead of playing anywhere else (for example a swimming pool, a state park).



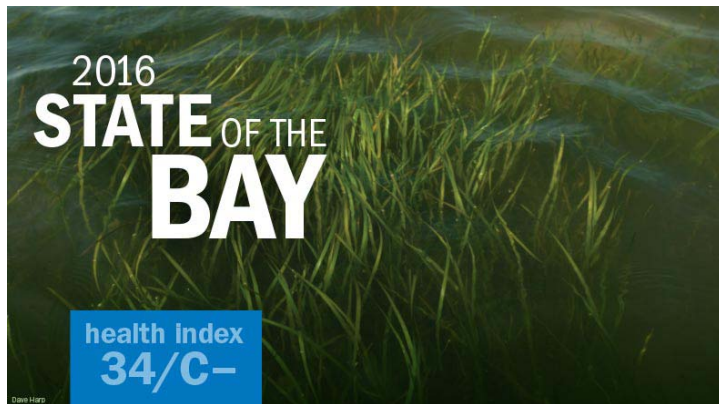
Habitat

Once they settle, oysters are sedentary creatures, meaning they do not move. They often form on top of each other and can create a large, three dimensional oyster reef. These reefs are valuable for other oysters as a place to settle on (baby oysters settle best on other oysters) and many other organisms in the Bay including blue crab, white perch, oyster toadfish (see below!), striped bass, silver perch, green goby and many others.



Ecological Health

Water quality is in a way linked to overall ecological health of the Bay, but ecological health is so much more than good water quality. Ecological health of the Bay includes the health of all the organisms within the Bay, if fished species are present in high enough numbers, if harmful algal blooms aren't causing fish kills during the summer, if temperatures remain low enough so as to not decrease oxygen levels in the water. Measuring the ecological health of the Bay, something the Chesapeake Bay Foundation does every year, is NOT easy and involves many factors. Right now, the Chesapeake Bay is graded a C- which isn't a grade that any student wants to get, but it's the highest level the Bay has achieved in years!



Seafood availability

Seafood availability involves many aspects. Is seafood available all year, or just a certain time of year? How much do people have to pay for seafood? Can individuals actually afford the seafood? Those are all more financial seafood availability issues, but there's also ecological considerations. Is it sustainable to fish a certain amount of seafood? Is the seafood we harvest safe to eat? All of these things have to be paid attention to when setting management.



Shoreline protection

Oysters form reefs and while that does support habitat, those reefs can also help heavy waves from reaching the shore and eroding the beach. Erosion is a process where particles from land, typically sand in the case of the Bay, is washed away into the water which reduces the size of the beach and makes people, structures, plants, animals and anything else further back from the beach more vulnerable to water crashing over it. Oysters also promote a healthy ecosystem in the Bay which promotes other shoreline protecting organisms, like seagrasses.



Research

Oysters and the ecosystems they support provide amazing research opportunities to scientists in and around the Chesapeake Bay and around the world! Research can be done on the oysters themselves (how they reproduce, where they live, how much they filter, what they filter, and on and on!), organisms that associate with oyster reefs (our not-so-attractive friend Mr. Toadfish) and how oysters are managed (like what you are all doing!).



Economics

The economics of oysters is a big deal. Oysters support the second more lucrative fishery in the Chesapeake Bay (only behind blue crabs, which they provide habitat to!). This fishery represents the livelihoods of many individuals either directly (watermen) or indirectly (people attending an Oyster Festival). Oysters also provide many ecosystem services like discussed previously (water filtration, habitat, shoreline protection). All of these ecosystem services can and have been valued, meaning economists have put dollar amounts on how much the Chesapeake Bay benefits from having oysters around. So cold hard money isn't the only economic value oysters provide.



CHAPTER 1: THEORISING ABOUT PARTICIPATORY FISHERIES GOVERNANCE

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Abstract

This edited book is about participation in fisheries governance, which is an issue that has become fashionable during the last decade, partly because of dissatisfaction with the performance of fisheries management systems across the world; partly because of the increasing interest in the notion of ‘governance’ as a substitute for ‘government’ in a variety of policy sectors; and partly because of the growing popularity of the concept of stakeholder participation in all areas of decision-making. The purpose of this introductory chapter is to establish a theoretical framework within which the participatory mode of governance may be best understood. First, I explore the conceptual issues raised by the notion of governance. Second, I analyse and discuss the three main ways in which the notion of governance has been applied to fisheries management – the hierarchical mode; the market mode; and the participatory mode – focusing especially on the four sub-types of the participatory mode: industry self-governance; co-management; community partnership; and environmental stewardship. Third, I discuss the wider implications of the three different modes. Finally, I provide a synopsis of the chapters in the book, showing how they all focus in one way or another on the central imperative of contemporary fisheries governance – how to make greater use of participation in order to improve the quality of decision-making.

1.1 Introduction

It is a commonplace that many of the world’s commercial fisheries are in a state of crisis. As Blyth *et al* (2003:409) point out, in 2000, the Food and Agriculture Organisation (FAO) reports that 72-75 per cent of the world’s major fish stocks are either “over-exploited, fully exploited, rebuilding or depleted”. A recent report by the highly respected UK Royal Commission on Environmental Pollution (RCEP 2004: paras 1.7-1.8) refers to a “Crisis in the marine environment”, claiming that the seas “are being depleted of fish and other living creatures at an alarming and unsustainable rate.” Much of the blame for this crisis is levelled at the way in which fisheries are managed (RCEP 2004:para 5.109; van Vliet and Dubbink 1999:13; Jentoft *et al* (1999:239). Symes and Phillipson (1999:59) are in no doubt where the blame lies – with the ‘top-down’ or hierarchical mode that characterises ‘conventional’ management systems, but Holden (1994) argues for a reinforcement of the hierarchical mode. Other critics claim that only a suitably managed market system can deliver a sustainable fishing industry. However, a strong body of opinion favours a much more participatory mode of governance, linked to environmental imperatives to curb chronic over-fishing.

In this chapter, I examine the theoretical foundations and practical implications of the three main modes of fisheries governance – the still dominant hierarchical mode, and its two main rival modes, the market mode and the participatory mode, dividing the latter into its four main types: industry self-governance; co-management; community partnership; and environmental stewardship. My argument is that, although in the real

world we will find a mixture of all three modes of governance in which the hierarchical mode plays a leading part, there is increasing emphasis on the participatory mode of fisheries governance. In the last section of the chapter, I introduce the subsequent chapters in the book, showing where they fit into this schema or taxonomy of modes of fisheries governance, and pointing out their contribution to our understanding of the participatory mode. But first, I analyse the concept of ‘governance’.

1.2 The meaning of the term ‘governance’

The term ‘governance’ is ambiguous, spawning a variety of meanings (Pierre and Peters 2000:7). Political scientists such as Rhodes (1996:652) have associated it with the minimal state, the hollowing out of the state, public-private partnerships, corporatism, new public management, and policy networks. Often ‘governance’ is contrasted with ‘government’: during the 1990s, it became fashionable to denote a shift from the hard-nosed concept of **government**, with its connotations of a legally-based, centralised, sovereign state authority, formally elected, and possessing constitutional powers (including the right to exercise coercive force), ruling over a specific territory by means of an exclusive elite; to the soft-nosed concept of **governance**, with its connotations of a more informally-based, decentralised, shared, collective and inclusive decision-making structure, with multiple levels of engagement. According to Rhodes (1996:652-653), governance is less about making and enforcing authoritative decisions, than about extending decision-making outwards to embrace a wider public, thereby creating a culture of mutual respect between governors and governed. If government is founded on **consent**, governance is founded on **consensus**. Pierre and Peters argue that there has been a “gradual shift from ‘government’ towards governance” (2000:25), and that the “governing state has been replaced by an enabling state that governs to a large extent by co-ordinating and facilitating other powerful actors in society” (2000:12). However, in my view, ‘governance’ has not so much replaced government, as supplemented it, by adding more consensual processes for accomplishing its ends (Rosenau 1992:4).

Another governance issue is about the distinction between governance as a structure of decision-making, and governance as a set of principles. So far, I have been assuming that governance simply refers to *structures* (such as hierarchical, market or participant structures), but the literature also alludes to *principles* of governance, such as transparency, the rule of law, and equity. The European Commission, in its definition of governance, refers to principled elements, as we can see from the so-called “Roadmap” of the 2002 Common Fisheries Policy (CFP) Reform process (EC 2002:23 footnote 14): “Governance means rules, processes and behaviour that affect the way in which powers are exercised, particularly as regards openness, participation, accountability, effectiveness and coherence.” Some of these governance principles are, of course, directly connected to structures – such as the principle of participation. But others, such as the principle of the rule of law, are largely independent of structures. In what follows, I will include both structures and principles in my analysis of modes of fisheries governance.

1.3 Three modes of fisheries governance

Different writers suggest different typologies for modes of governance (Pierre and Peters 2000:14; Kooiman 1999a and 2003). But the most persuasive typology is that of van Vliet and Dubbink (1999:14), who suggest the following three modes: hierarchical governance; market governance; and participatory governance, and it is this typology that I have adopted.

1.3.1 HIERARCHICAL GOVERNANCE

Hierarchical governance is the ‘state-centric’ or ‘directive’ mode of fisheries governance, featuring a principal role for the state (van Vliet and Dubbink 1999:22). This is currently the most common mode of fisheries governance, though its dominance is now being challenged by both the other modes. Features of the hierarchical style of governance include its top-down structure, and its emphasis on legality, political legitimacy, centralisation, bureaucracy, interventionism, command-and-control, scientific elitism and exclusivity, and sense of public responsibility. Part of the rationale of the hierarchical mode is that fisheries are a public resource – an important element of the national heritage – and therefore, like other public resources such as air space, are a prime responsibility of the state. Fisheries cannot be either privatised or communalised, because that would signify that fish can be exclusively owned by either individuals or groups, whereas they are the property of the whole nation.

The ideological underpinning of hierarchical governance is captured in John Dryzek’s account of the environmental discourse which he calls “administrative rationalism”, or “leave it to the experts”, which places emphasis upon problem solving by a public-spirited elite of bureaucrats and scientists (Dryzek 1997: chapter 4; Frid, this volume). Decision-making is administration rather than politics, and the decision makers are the expert few, not the mass public. The psychological underpinning of hierarchical governance is Hobbesian – that human nature is self-centred and egoistical, and that the only way to avoid “the tragedy of the commons” (Hardin 1968) is to institute strict measures of control, backed up by force. Typically, this requires fish quotas, days-at-sea, decommissioning, satellite surveillance, and inspectors on boats and in ports to check that catches and landings do not break the rules. In other words, the stick rather than the carrot is necessary to discipline fishers’ behaviour that puts fish stocks at risk.

An example of the hierarchical mode of fisheries governance is the UK system (Symes and Phillipson 1999:70-71), where the most important decisions are made by a central government department – the Department for Environment, Food and Rural Affairs (DEFRA). Further up the chain of command is another example of hierarchical governance – the European Union’s (EU) CFP (Symes (1999a:5; Kooiman 1999b:160,166; Hawkins, this volume). It is true, Kooiman concedes, that national governments in the European Fisheries Council can, and often have, resisted the cuts in quotas (total allowable catches or TACs) proposed by the European Commission, but he argues that national governments do not have much influence over policy decisions. The fishing industry has even less influence. Even the much vaunted 2002 CFP reform process, with all its emphasis on consultation and transparency, was perceived by the industry to have been conducted in a very hierarchical fashion, as an editorial in *Fishing News* (27/9/02:2) makes clear:

One of the most striking aspects of the CFP reform package that is currently being drawn up is just how little input the fishing industry has into the detailed proposals. These are being worked out almost entirely behind the scenes by member state and Commission officials.

Moreover, in Article 11 of the proposed new Constitution for the EU (EC 2004), fisheries policy, under the “conservation of marine biological resources”, has been made one of four areas (the other three areas being “customs union, commercial policy, monetary policy”) where the EU will have “exclusive competences” (*Fishing News* 14/2/03:2), thus ruling out the possibility of devolving management powers to the newly launched Regional Advisory Councils (RACs) (*Fishing News* 1/10/04:5).

By contrast to most commentators and the fishing industry, who are all highly critical of the hierarchical mode of governance, one of the most forceful advocates of hierarchical governance is the late Mike Holden, a senior official in the European Commission’s Fisheries Directorate during the 1980s. Holden (1994:245ff) argues that the reason for the failure of the conservation objectives of the CFP is not because the CFP is *too* hierarchical, but because it is *insufficiently* hierarchical.

There are three main criticisms of hierarchical governance (van Vliet and Dubbink 1999:22). First, the state does not have a monopoly of knowledge about fisheries: other stakeholders have important contributions to make to our understanding of the marine ecosystem, the sheer complexity of which makes it impossible for a single body to grasp (Kooiman *et al* 1999:261). Second, the state does not have a monopoly of judgement about the right measures to introduce to deal with fisheries problems. Again, other stakeholders have much valuable advice to give on the utility of alternative measures. Third, the state does not have a monopoly of power to enforce its measures. It is almost impossible to prevent individuals and groups from undermining government policies, if these policies are unpopular. In a remarkably frank statement, a recent report from the British Prime Minister’s Strategy Unit (PMSU 2004: para 3.5.7) sums up these criticisms of the top-down structure of the CFP as follows:

Simple command-and-control policies will not work in complex, multi-jurisdictional, mixed fisheries. Currently, the quota control system implicitly assumes that stocks can be measured reasonably accurately and that the capacity exists to develop appropriate management measures and plans for all EU stocks centrally in the Commission. It assumes that the Fisheries Council can and will take the necessary detailed decisions to manage stocks. Furthermore, it is assumed that Member States can enforce the rules and that fishermen will obey them. This set of assumptions is for the large part flawed and does not reflect the reality of fisheries management in the EU.

Nevertheless, despite these weaknesses of the hierarchical mode, many writers insist that the state cannot be absent from fisheries governance (Kooiman 1999b:167; Pierre and Peters 2000:18,68). On this view, there will always be a need for at least some element of hierarchy, no matter what the prevailing mode of fisheries governance. According to Symes (1999b:32), the state supplies several vital functions which every fisheries management system requires, including “democratic accountability”, “exclusive legal status in negotiations with third countries”, and “legislative and revenue raising powers”, and, we may add, coercive power to enforce the rules. This means, says Symes (1999a:32-33), at least as far as EU fisheries are concerned, that there is no prospect of a ‘hollowing out’ of the state. However, events have to some extent overtaken this prediction, and the 2002 CFP reform has addressed at least some of the above criticisms, as we shall see.

1.3.2 MARKET GOVERNANCE

Turning now to the second of the three modes of fisheries governance – market governance – notwithstanding Symes’ assertion, we will find that part of the impetus towards it has come from the hollowing out trend in other policy areas. Markets empower ordinary people as consumers (Pierre and Peters 2000:19), and incentivise entrepreneurs as producers. Market governance is based on the natural forces of supply and demand, untrammelled by government interference, though supported by the legal security of private property rights. Dryzek (1997: chapter 6) characterises this mode as “economic rationalism”, or “leave it to the market”.

Market governance follows the classical economic theory of Adam Smith, in that it assumes that the pursuit of individual economic self-interest, within the legal framework of the protection of rights of life, liberty and property, will lead to the optimal benefit for everyone, by the so-called ‘invisible hand mechanism’. On this neo-liberal theory, failure to achieve optimality is usually because of interference with the market mechanism by governments for ideological reasons. As Hayek (1944) argues, the workings of economic and social enterprises are so complicated that no-one can possibly know how to run them, and so they should be left largely to run themselves. Further theoretical underpinnings of market governance include the methodological assumption that all social activity in the end boils down to individual decision-making (methodological individualism); the ethical assumption that each person knows best what is in his or her own interest (utilitarianism or philosophical radicalism); and the psychological assumption that people are rational in the choices that they make (rational choice theory).

Applying this theory to fisheries, instead of trying to replace the free market forces of supply and demand (as the hierarchical CFP does by adjusting fish price levels; imposing the principle of relative stability; designating special boxes, such as the Irish and Shetland Boxes; and creating the Hague Preferences), governments should adjust market carrots and sticks to reward self-interested behaviour that protects public resources, and punish self-interested behaviour that damages them, and then leave the forces of supply and demand to get on with it (van Vliet and Dubbink 1999:19-20).

Of the EU Member States, Spain is the most vociferous advocate of a shift towards the market mode of governance in the way in which the CFP is managed. For instance, Jose Fuertes (Director-General of the Vigo Fishing Vessel Owners’ Cooperative) argued at the Public Hearing in Brussels in June 2001 on the CFP Reform Green Paper, that the fishing industry should be treated by the EU like other industries, in compliance with World Trade Organisation (WTO) principles, with guaranteed freedom of fisheries activity, non-discrimination between fishers of different nationalities, equal access to all markets, complete transferability of fishing rights, free competition, and anti-monopoly regulations (Wood and Ritchie 2001:2-3). The recent report from the British PMSU (2004: para 9.1) argues for a move away from the command-and-control model to a “central role for market-driven incentives and mechanisms whereby information can be used to influence decision-making by individual businesses.”

In answer to critics such as Hardin (1968), who claim that the free market produces the tragedy of the commons, whereby the remorseless pursuit of self-interest leads to the destruction of common user resources, free marketeers say that the solution is not to abandon the market, but to structure it in such a way as to incentivise producers to take

good care of scarce resources. “For the market to work, privatisation is essential” (Jentoft and McCay 2003:295). In the case of fisheries, this means introducing a system of individual transferable quotas (ITQs) (van Vliet and Dubbink (1999:15). There is an Aristotelian assumption here that people are much more likely to look after a resource that they themselves own, than a resource that is common to all (Sissenwine and Mace 2001:13). Cooperation between fishers is secured out of mutual self-interest, rather than because of either state coercion (hierarchical governance) or collective commitment to the general good (participatory governance).

Several writers claim that there has been a move from hierarchical governance to market governance in fisheries during the last 20 years, following the neo-liberal trend towards deregulation and privatisation (Kooiman (1999b:142). One reason for market governance’s popularity during the 1980s and 1990s, according to Jentoft and McCay (2003:296), is that economists were held in much higher esteem by fisheries managers than were social scientists, who advocated the participatory mode. ITQs are now in operation in Iceland, New Zealand, and parts of Australia, Canada (Murray *et al*, this volume), Chile, Namibia, the USA, and Europe (in Denmark and the Netherlands) (Sissenwine and Mace 2001:13). However, in the EU as a whole, despite the trend towards deregulation in other policy areas, in fisheries, the trend has been in the opposite direction – towards greater regulation.

In critically appraising the market mode of fisheries governance, the first point to make is that it rests upon an over-simplified view of human motivation - “a one-dimensional *homo economicus*”. (Kooiman 1999b:143). But fishing is more than a pecuniary activity; at least for some fishers it is a way of life, a form of self-expression, self-identification, and self-determination. Also, the market mode’s extreme individualism ignores social and cultural influences on fishers’ behaviour, such as concern for the marine environment (Jentoft and McCay 2003:297). Moreover, the market mode of governance does not entail the *elimination* of state involvement in fisheries management. Far from it: market governance depends on the state for several functions, including the tasks of establishing the terms of the market (for example, deciding the overall quotas, for shares of which fishers will compete); of monitoring the functioning of the market to ensure that fair competition is maintained; of ensuring that public goods such as adequate fish stock levels and the health of the marine ecosystem are not damaged; and of guaranteeing that private property rights are not violated. The fact is, that the market mode of fisheries governance is a highly regulated market – it does not entail letting everything rip.

Furthermore, where the market mode has been introduced, there are mixed messages about its success. For example, its advocates are highly positive about its beneficial effects on the fisheries in New Zealand (Clark *et al* 1998) and Iceland (Arnason 1996), pointing out that where ITQs are introduced, there is a marked reduction in overcapacity (Jentoft and McCay 2003:296) . But critics point out that a market system of ITQs was abandoned in the Faeroes, and replaced by a days-at-sea scheme (hierarchical governance), and that it is causing severe social problems in both New Zealand (*Fishing News* 7/11/03:6) and Iceland (*Fishing News* 20/8/04:6).

Another criticism is that market governance has a damagingly differential impact upon fishers (van Ginkel, this volume). As Jim Portus (Chief Executive of the English South Western Fish Producers’ Organisation (SWFPO)) put it, “we do not need...monstrous

market forces experiments with quotas which will benefit the few and impoverish the many” (quoted in Wood and Ritchie 2001:21). For instance, an ITQ system rewards those who are already in a market, but penalises those who are trying to get in (van Ginkel 1999:55-56). Moreover, market governance favours the offshore sector, which is highly capitalised, at the expense of the inshore sector, which is more artisanal. As a result, it has an adverse effect on local fishing communities, which rely heavily upon the inshore sector. Steps have to be taken by the state to protect these often remote local communities from being wiped out by globalising forces, because they may have little alternative employment prospects (Collet 1999:124).

Finally, it is important to note that market governance in itself will not necessarily maintain the level of fish stocks, still less look after the health of the marine ecosystem (Wilson, this volume). Indeed, market logic might dictate to capitalists a strategy of exploitation of stocks to the point of economic extinction, to gain a short term high return which can be “reinvested elsewhere” (Collet 1999:123). However, this criticism may be partly met from within the market mode of governance – for example, by an eco-labelling system, whereby consumers can choose to buy fish products solely from sources that are independently certified as sustainable (Jentoft and McCay 2003:296-7). Such a system is already in place, in the shape of the Marine Stewardship Council (MSC) (Long 1999), though after eight years of existence, the MSC has only managed to certify a fraction of the world’s fisheries (*Fishing News* 27/2/04:7) and, with its limited funding, it is doubtful whether its scheme will ever have much impact on consumer choices.

Notwithstanding these criticisms, the market mode of governance has one significant value – it serves as an important corrective to the hierarchical mode in that it demonstrates that regulators should not try to ‘buck the market’, because rules that prevent fishers from making a living will be ignored. In other words, fishing regulations must be economically literate.

1.3.3 PARTICIPATORY GOVERNANCE

We now come to the third and last mode of fisheries governance – the participatory mode – on which this book is focused. The participatory mode is more variegated than are the two previous modes, in that it contains four distinct sub-types: industry self-regulation; co-management; community partnership; and environmental stewardship. Before examining these four sub-types in detail, however, there are some generic features of the participatory mode to be explained. First, its concept of the person is very different from those held by the other two modes. By contrast to the hierarchical concept of the master/subject relationship between regulators and regulated, and the market concept of producers and consumers, the participatory concept is that of citizens and stakeholders. Also, the participatory mode operates at the meso (civil society) level, that is, mid-way between the macro (state) level of the hierarchical mode, and the micro (individual) level of the market mode (van Vliet and Dubbink (1999:22). The four types of participatory governance are made up of four different cohorts or segments of civil society: industry; industry plus regulators; local communities; and environmentalists. Moreover, whereas for hierarchical governance, legitimacy lies in the formal system of parliamentary elections (van Vliet and Dubbink 1999:26), the essence of legitimacy in the participatory mode lies in the involvement of stakeholders in decision-making (see Hatchard, this volume), though the nature and extent of that involvement will vary from one type of participatory mode to another (Dryzek 1997:86). Furthermore, the characteristic style of the participatory mode is one of consensus-seeking negotiation, rather than either the hierarchical style of command, or the market style of exchange.

By contrast to the administrative rationalism of hierarchical governance (leave it to the experts), and the economic rationalism of market governance (leave it to the forces of supply and demand), participatory governance is depicted by Dryzek (1997:chapter 5) in terms of “democratic pragmatism” (“leave it to the people”) (cf Kooiman 1999b:142). As Dryzek (1997:92) explains, this means putting politics back into governance in place of administration, which is characteristic of hierarchical governance, and economics, which is characteristic of market governance. Although both market governance and participatory governance employ against hierarchical governance the argument that fisheries, ecosystems and regulations are too complex for government to manage alone, they draw different conclusions. Market governance argues that only the market can provide solutions, whereas participatory governance argues that only the collective knowledge of all affected parties can deliver answers (van Vliet and Dubbink 1999:15). Two heads are better than one; collective wisdom outweighs individual wisdom.

Turning now to the roots of the participatory mode of fisheries governance, one root is post-materialism, a theory which Ronald Inglehart (1990) developed to account for the fact that in post-war Western countries, many citizens have reached the point where they are less concerned with the accumulation of material goods, and more concerned with their quality of life – that is, post-material values. These post-material values include environmental goods and greater self-determination, which in turn entail a demand for more public participation in political decisions. This leads us to another, closely related root, which is the appearance of new social movements (NSMs). NSMs, unlike old social movements such as trade unions, which demanded redistributive economic and social policies, have arisen to push for causes such as environmental protection, feminism, and community values. NSMs have spawned an explosion of non-governmental organisations (NGOs) demanding inclusion in decision-making forums.

A further root is loss of faith in experts. People are less inclined nowadays to defer to claims to superior knowledge held by bureaucrats and government scientists, and the value of experiential knowledge is becoming increasingly recognised. Also, there is increasing recognition that many features of decision-making in fisheries governance are value-laden, not value-free, and that the value judgements of the public should prevail over the value judgements of the experts (Sissenwine and Mace 2001:13). Another root is the spirit of devolution, particularly in the UK, where in recent years we have seen the creation of the Scottish Parliament, the Welsh Assembly, and moves towards regional assemblies in England. This is a response to the need to devolve decision-making to its lowest possible levels, which is formally endorsed by the EU’s principle of subsidiarity.

Communicative rationality is a further root. This is a concept derived by Jurgen Habermas (1984) to denote the contemporary aspiration of civil society to engage in dialogue on the important political issues of the day in order to reach more reasoned decisions (Wilson, this volume). It differs from the administrative rationality of hierarchical governance, because it opens up the lines of dialogue to all citizens, not just the experts, and it differs from the economic rationality of market governance, in that it strives to reach universalistic, not individualistic, conclusions (Kooiman 1999b:164). For Habermas (1984:19), dialogue is a collective search for truth. Van der Schans (1999:115) makes the important point that this does not necessarily rule out all hierarchical regulations or economic drivers, but it does mean that they must pass the

dialogic test of good reasons. And this test entails a process of interactive communication (Kooiman *et al* 1999:262; Hatchard, this volume).

The final root of the participatory mode is the failure of the other two fisheries governance modes (Hanna 2003:311). Crises in the fisheries drive managers to seek the help of stakeholders (Hall-Arber; Dunn, both this volume). Sen and Nielsen (1996:416) point out that in nearly all of the 22 cases of co-management that they studied, the rationale for setting up the co-management regimes was because the fishery was near, or at, the stage of over-exploitation.

There are several generic criticisms of the participatory mode of fisheries governance, which I will consider at more length in the final chapter. They can be summarised here as follows: right wing critics argue that participation is unnecessary, because experts have all the knowledge that they need; damaging, because it inhibits flexibility and slows down rapid responses to emergency; costly, because it absorbs considerable time and energy to organise; and subversive of representative democracy. Left wing critics argue that participation is a charade, cynically used by regulators to mask their domination, and to co-opt, and therefore neutralise, stakeholders.

Let us now turn to the four different types of the participatory mode of fisheries governance – industry self-regulation; co-management; community partnership; and environmental stewardship.

1.3.3.1 *Industry Self-Regulation*

The industry self-regulation version of participatory governance is the assumption by the fishing industry of sole responsibility for running the fishery (Sutinen and Sobol 2001:16; Symes and Phillipson 1999:63). Essentially, industry self-regulation is about fishers' organisations taking charge of their own destinies. This is why the terms 'autonomous self-management' and 'self-determination' have been used to characterise industry self-regulation. However, this does not mean entire independence: industry self-regulation is autonomous only within certain limits. For instance, safety rules laid down at national/international level could not be set aside by a fisheries organisation.

Examples of industry self-regulation are common in developing countries, as Johannes (2003:15) points out: "in indigenous fisheries...management is...often largely in the hands of the fishers". A partial example of industry self-regulation in a developed country is the large-scale offshore fisheries in the USA, where, in 1976, the government conferred on eight Regional Fisheries Management Councils (in which the majority of members are from the commercial and recreational fishing industry (Symes, this volume)) most of the responsibility for managing fisheries in federal waters (USCOP 2004:231). A clearer example is in New Zealand, where the Challenger Scallop Enhancement Company has entire responsibility for the Southern scallop fishery (PMSU 2004:Annex D, para 4.4). A further example is in Normandy, France, where a fishers' organisation (CRPMEM), headquartered at Cherbourg, representing over 2000 fishers in 640 over-25 metre vessels, manages 85 per cent of the species within its allocated area (*Fishing News* 14/11/03:18). Within the UK, the best example of industry self-regulation is in inshore shellfisheries which have been subject to a Regulating Order, whereby exclusive fishing rights are vested in an organisation largely composed of fishers and charged with the responsibility of running the fishery – for instance, the Shetland Islands RO 1999, where management is in the hands of a limited company called the Shetlands Shellfish Management Organisation (Symes and Ridgway 2003:42). Also, as Stead (this volume) shows, the UK aquaculture industry is characterised by a

high degree of voluntary self-regulation, whereby trade associations bodies set down detailed codes of conduct, to which they require their members to adhere.

Advocates of industry self-regulation argue that it has many benefits. For one thing, industries are very good at protecting their fisheries from external vessels which threaten to wipe out the stocks (van der Schans 1999:113-114). Also, it is claimed that the industries have first hand knowledge of fisheries, and that this experiential knowledge is invaluable for accurate management measures. Moreover, industry self-regulation shifts the responsibility for decision-making to those whose livelihoods depend on the measures being taken, so there is a considerable incentive for the industry to take steps that will protect the stocks, thereby safeguard their own long-term economic prospects. Furthermore, the fact that the industry is self-regulating suggests that fishers are likely to look favourably on the resulting regulations, and so compliance rates will be high. Finally, it is claimed that because the industry is in charge, it will bring peer pressure to bear on those fishers who continue to violate the rules.

However, critics of industry self-regulation argue that it has serious weaknesses. One weakness is that if its codes of practice remain voluntary, sanctions against their violation may not be strong enough to ensure compliance (Stead, this volume). Another weakness is that the industry's self-interest may not coincide with the public interest. For example, the industry may take the view that the protection of small cetaceans such as dolphins and porpoises is not a high priority, and, therefore, that their members are not required to take energetic steps to reduce their cetacean by-catch, if such steps would significantly reduce their profit margins. A further weakness is that there is no guarantee that members of the fishing industry will be able to agree on management decisions: self-regulation does not guarantee that everyone will be happy with fisheries management decisions. As Sissenwine and Mace (2001:14) note, "At present, the US National Marine Fisheries Service is coping with more than one hundred legal actions attempting to overturn fisheries management decisions. In almost all cases, the litigating parties actively participated in the debates leading up to the decision, but they disagreed with the outcome."

1.3.3.2 *Co-Management*

In a co-management system, management is generally shared between government regulators and representatives from the fishing industry (van der Schans 1999:119). Kooiman (1999b:163-164) points out that this does not mean mere consultation of the industry by the government, but genuine partnership in decision-making: "power sharing is a must" (Jentoft 2003: 4). For Symes and Phillipson (1999:64), the role of user groups in management is not "passive or reactive", but "active or proactive". Moreover, for Van Vliet and Dubbink (1999:23-24), co-management does not entail an adversarial relationship between the two sides (regulators and industry), but a genuine endeavour on both parties to reach the common good. This is not to say that co-management comes naturally to either side: as Langstraat (1999:78) notes, each side must have some incentive to co-operate.

Jentoft (2003:1) points out that while the concept of co-management is only about 25 years old, co-management regimes have existed in some parts of the world for centuries. There are now many examples of co-management. For instance, Hara and Nielsen (2003) describe co-management systems in Africa, while Nsiku (2003) focuses on the case of Malawi; Pomeroy and Viswanathan (2003) discuss co-management approaches

in Southeast Asia and Bangladesh, focusing particularly on coastal fisheries, and case-studying co-management in the Philippines, while Baird (2003) case studies Southern Laos; Begossi and Brown (2003) explain co-management regimes in Latin America and the Caribbean; Loucks *et al* (2003) outline co-management arrangements in North America, comparing power sharing in the USA and Canada; while Hall-Arber, this volume, focuses on the New England's groundfish fishery co-management scheme; and Metzner *et al* (2003) analyse the diverse set of co-management structures in Australia (cf Baelde 2003) and New Zealand. In Europe, there are several examples of co-management, the purest form being in Norway, which operates a centralised co-management system at national level (Hernes *et al*, this volume). Within the EU, which does not have a co-management structure at the intergovernmental level of the CFP, the Netherlands (van Ginkel, this volume) has the strongest co-management system at the national level (Symes *et al* 2003:124), while the UK has some features of a co-management system in its sectoral quota management by the Producer Organisations (POs) (Symes *et al* 2003:126) and in its regulation of inshore fisheries in England and Wales (the Sea Fisheries Committees (SFCs)) (Knapman, this volume; Symes and Phillipson 1999:81). Many writers, including, Symes (1999b:41), have argued for an extension of the principle of co-management to the regional level in Europe, and the recently established RACs may be a step in that direction (Symes, this volume).

There are many advantages claimed for co-management systems. For example, Symes and Phillipson (1999:65) list the following benefits of co-management: increased transparency; a wider source of knowledge; more rational regulations; greater legitimisation and compliance (cf van Vliet and Dubbink 1999:24); and reduced costs of surveillance. Kooiman *et al* (1999:264-5) argue that co-management is essential to get to grips with the "diversity" of fisheries. Given these major advantages, it is hardly surprising that such writers claim that co-management is essential for modern fisheries. Indeed, Kooiman *et al* (1999:260) state that "This model is more than an option: it is a necessity."

On the other hand, Pomeroy (2003:248) claims that "There are only two well documented cases of long-standing marine fishery co-management arrangements that work, in Norway and Japan". Also, Symes and Phillipson (1999) warn that co-management cannot be forced upon an unwilling industry and/or government. Both sides must be able and willing to make it work, and this cannot be taken for granted. For example, the industry side may lack the professional skills or the financial resources to handle important negotiations; or it may be too fragmented to organise itself into a coherent body; or it may be reluctant to shoulder responsibility for decision-making, fearing loss of its autonomy; or it may worry that it would have to share power with other stakeholders, such as environmentalists. For its part, the government may be psychologically unable to share power with the industry. The major problem lies in building trust between the two sides.

Also, co-management may mask, rather than eliminate, local tensions (Jentoft and McCay 2003:302; Singleton 2000:18; Hernes *et al*, this volume). Moreover, co-management still entails a significant, even dominant role for government (Pinkerton 2003:65; van Ginkel, this volume; Symes and Phillipson 1999:64). Indeed, Pierre and Peters (2000:49) argue that the state might have "co-opted social interests that might otherwise oppose its actions" (cf Singleton 2000:2). Also, co-management raises the thorny questions of who are the stakeholders, and how will they be selected to be members of the decision-making body? The usual answer to the first part of this question is 'regulators and fishers', but there is a growing feeling in certain quarters that

other groups of stakeholders should also be included, representing anglers, fish processors, conservation agencies, environmental NGOs, consumers, and recreational interests (Mikalsen and Jentoft 2001). And what about scientists? Should fish biologists and marine ecologists be represented in co-management councils, rather than be assigned an advisory role as experts? This raises the deeper question of whether members of such councils are recruited because they represent particular interest groups, or because they possess particular expertise (Jentoft *et al* 2003; Rice, this volume). In theory, the list of potentially eligible representatives is almost endless, embracing, as Hemmati (2002:2) suggests, anyone who has “an interest in a particular decision” (cf DfID 1995). However, extending membership beyond fishers and regulators also risks diluting the principle of co-management.

Equally difficult problems arise in trying to answer the second part of the above question – how will the representatives be chosen, and how are they to be selected? For example, which regulators will take part – only bureaucrats, or also ministers? Will the fishers be represented exclusively by their national organisations? If so, might that not exclude certain kinds of fisheries? Another issue is whether all stakeholders are to be regarded as of equal weight in the co-management deliberations. Moreover, some writers argue that the elaborate process of deliberation in co-management regimes makes it difficult either to reach decisions at all, or to do so speedily or decisively (Symes and Phillipson 1999:83,92).

Nevertheless, despite these drawbacks, co-management remains the favourite form of governance in the view of many writers. Yet, as Symes (1999b:32) points out, it is not widespread in practice. Co-management is easier to establish at local levels, where it may resemble community partnership, but it is more difficult to organise on a larger scale, because of the greater diversity of fisheries interests. However, its advocates hold that it is at the higher levels that it is needed most.

1.3.3.3 *Community Partnership*

Turning to the third type of participatory fisheries governance – community partnership – we find a much more inclusive structure. Here, the emphasis is less on the industry *per se* (industry self-regulation), or even on the industry’s co-decision making with the regulators (co-management), than on the industry sharing management responsibilities with the whole range of local stakeholders who have an interest in the marine resource (not including the government) (Sen and Nielsen 1996:406). The focus of community partnership is on local fisheries, on the assumption that, like direct democracy, it is only practicable on a small, face-to-face scale.

Examples of community partnership are common in developing countries, typified in artisanal inshore fisheries, often based on complex systems of ‘sea tenure’ (Jentoft and McCay 2003:299). For instance, Bird *et al* (2003:178) describe a successful community partnership in Mexico. They are less common in developed countries, though Vodden *et al* (this volume) case study a community partnership in Newfoundland; Kooiman (1999b:162) finds them in Vigo and Shetland; and Symes and Phillipson (1999:64) locate “historical fragments” of them in “Spain (*cofradia*) and Mediterranean France (*prud’homie*).” Moreover, several local initiatives in the UK are developing new community partnerships for managing fisheries: for example, Loch Torridon in Scotland; ‘Invest in Fish’ in the south west of England; and the Solway Firth Partnership (*Fishing News* 22/10/04:6). Another form of community partnership is based on

community quotas – that is, the purchase of quota by local communities (such as local authorities) in order to lease it to local fishers and to prevent quotas being bought by companies outside the area. Three community quota schemes have been operating in Shetland, Orkney and Cornwall: though the Shetland and Orkney schemes were ruled illegal by the European Commission because they breached EU competition rules; while the Cornwall scheme is now privately funded (*Fishing News* 17/9/04:3). We can also find examples of community partnership in UK aquaculture – in the many local forums and Integrated Coastal Zone Management (ICZM) schemes operating especially in Scotland (Stead, this volume).

Advocates of community partnership argue that it has many benefits. They claim that local communities have more extensive knowledge of their fisheries and their economic and social impact than anyone else, and that local communities more naturally reach consensus over fisheries decisions (van der Schans (1999:114). Also, local communities have a huge incentive to safeguard their fish stocks – the very life of their community may depend upon it. Moreover, communal partnership is held to be the best safeguard for small-scale fishing, which is described by the Scotland-based Fishermen’s Association Ltd (FAL) as “the most efficient in creating employment and ensuring environmental and ecological benefits” (*Fishing News* 8/12/00:18). Furthermore, Sissenwine and Mace (2001:14) assert that there is a higher rate of compliance with locally made rules.

However, other writers are sceptical of these claims. Symes and Phillipson (1999:63), for example, argue that community partnership was more appropriate in the past, when there was not so much pressure on stocks, and therefore the main task of management regimes was simply to ensure that every fisher got a fair share of the abundant fishing opportunities available. Modern fisheries management, however, facing declining stocks, requires capacities that are not available in local fisheries, such as research skills to provide scientific assessments of the state of the stocks and the health of the ecosystem as a whole. Stead, this volume, notes that voluntary community partnerships such as ICZM suffer from not being legally compulsory. Also, van der Schans (1999:114) disputes the claim that, nowadays, local communities are particularly homogeneous and consensual in their values: the fact is that the extent of fisheries dependence is now much less than in the past, and so the views of the community on resource use are more varied. However, van der Schans (1999:115-117) is not claiming that, nowadays, local communities are incapable of participatory governance; all he is arguing is that they must base that governance on a process of Habermasian dialogue that does not depend on a pre-formed consensus of values. Nevertheless, critics argue that community partnership’s much-vaunted principle of interactivity may not lead to the enunciation of the public interest. In other words, contrary to the predictions of Habermas’s theory of communicative rationality, the general will may not prevail over particular wills, as each sub-group may pursue only its own self-interest (Jentoft *et al* 1999:252).

1.3.3.4 *Environmental Stewardship*

The fourth type of the participatory mode of fisheries governance reflects the growing power of environmentalism in fisheries policy. As the Royal Society of Edinburgh (RSE) put it in a recent report (2004:56), environmental integration of fishing is “the new culture”. Symes and Ridgway (2003:9) state that “There is no escaping the inevitability of environmental integration; the question is not whether but how to do it.”

Essentially, environmental integration entails subjecting the fishing industry to the same environmental requirements that every other user of marine resources has had to comply with in many countries for the past twenty years. If other industries are required to carry out satisfactory environmental impact assessments before they are allowed to set foot in the marine environment, “it is not clear why the fishing industry should be exempt from such procedures” (RSE 2004:56). The most common way of characterising this requirement is by using the concept of the ecosystem-based approach (EBA), which entails managing a fishery as part of the marine ecosystem within which it is situated. Instead of directing action at individual species and habitats that are at risk, which is a fire-fighting exercise that may be merely shutting the stable door after the horse has bolted, EBA concentrates on protecting the health of the whole marine environment, thereby taking care of potential threats to all individual species and habitats. With the ratification of the 1992 Convention on Bio-diversity (CBD), the EBA has become a legal necessity (Frid, this volume).

However, it is not as an idea, but as a structure, that makes environmental integration into environmental stewardship, and thereby into a type of the participatory mode of fisheries governance – a structure that is steadily tightening its grip on fisheries policy. This structure is forged by the link between environmentalism and participation – a link that is assumed in so much of the literature that it has become something of a received wisdom or even a necessary truth (I examine the basis of this assumption in chapter 20). This link between environmentalism and participation serves several purposes. The main purpose is to ensure that the aims of the EBA are determined by the society at large. A recent UK working group on marine nature conservation argued that public participation is necessary to the EBA in order to set its priorities, because the objectives of marine resource management are “a matter for societal choices” (DEFRA 2004:89). Additional reasons for the link between environmentalism and participation are to capitalise on the knowledge of a wide range of stakeholders, and to commit them to identification with the EBA.

This leads us to the variety of participative structural forms that environmental stewardship can take. The most direct form of environmental stewardship is where environmentalists are in complete charge of a fishery. A good example of this form is the Great Barrier Reef Marine Park (GBRMP), where “day-to-day management” is undertaken mainly by officers of the Queensland Parks and Wildlife Service (Day 2002:140). For the UK, SFCs provide a partial example of this term: in fact, as Knapman, this volume points out, since the 1990s they have been given environmental duties. The next most direct form of environmental stewardship is where environmentalists share responsibility for running a fishery. An example of this form is the Shetland sandeel fishery, which is jointly managed by the Royal Society for the Protection of Birds (RSPB – a leading UK environmental NGO (Dunn, this volume)); Scottish Natural Heritage (SNH – Scotland’s statutory conservation agency); the Shetland Fisherman’s Association (the local fishers’ organisation); and the Scottish Executive Environment and Rural Affairs Department (SEERAD – the regulatory authority).

A more indirect form of environmental stewardship is exercised by nature conservation agencies (NCAs), where they have a statutory right and duty to designate marine sites and habitats for special protection (Eno and Gray, this volume). For example, in the UK, there are three NCAs (English Nature; Scottish Natural Heritage; and Countryside Council for Wales) with this authority. They have no power of direct regulation, still less of enforcement, but there is a legal obligation on the regulators to implement the advice

of these statutory bodies, at risk of administrative penalties. So the NCAs wield significant effective control over fisheries, to the point where their recommendations could result in the closure of a fishery if it were judged to pose a serious threat to the marine environment.

The least direct form of environmental stewardship is that manifested by pressure exerted by environmental NGOs (ENGOS) (Todd and Ritchie 2000; Dunn, this volume). Such pressure may be exerted in five different ways:

1. **Confrontation** – This is a familiar technique employed by Greenpeace, an example of which was its campaign against industrial fishing in 1996, taking action against Danish trawlers to end sandeel fishing off the Firth of Forth by proclaiming a 30 mile exclusion zone off the east coast of Scotland, and preventing the Danish vessels from fishing in that zone by attaching buoys to their nets. Jim Slater (a Scottish fishers' leader) declared that: "Greenpeace have set themselves up as the governing body of the North Sea" (Gray *et al* 1999:124). Greenpeace is currently taking similar action against bass pair-trawling in the English Channel in protest against the cetacean bycatch of this fishery (*Fishing News* 18/03/05:3). The success of such confrontation critically depends upon sympathetic media coverage (Oliver, this volume).
2. **Legal action** – NGOs take advantage of environmental legislation which has third party appeal rights, to institute legal proceeding against regulators for failing to comply with their environmental duties. This litigious pressure is a familiar part of US fisheries culture (Hall-Arber; Symes, both this volume), and it is becoming an increasing feature of European (Eno and Gray; van Ginkel, both this volume) and Australian (Metzner *et al* 2003:181-2) fisheries practice. Greenpeace has recently issued a legal challenge in the UK High Court against the British government for failing to honour its obligations under the EU Habitats Directive to protect the dolphin population from pair trawling for bass in the Channel.
3. **Negotiation** – ENGO presence at the Esjberg North Sea Conference in 1995 was crucial in persuading the Conference to adopt two environmental criteria for fisheries, an outcome which Richard Banks (then chief executive of the National Federation of Fishermen's Organisations (NFFO)) declared "was a disaster for the industry... Environmentalists were allowed to influence decisions for the first time: the 'precautionary principle' and the closed areas principle were endorsed" (Gray *et al* 1999:127).
4. **Collaboration** – The best example of collaboration is over eco-labelling schemes (where environmental stewardship coincides with the market mode). For example, the San Francisco-based ENGO, Earth Island, awards its Dolphin Safe certificates to tuna fisheries across the world which adopt its approved method of fishing. According to Struan Stevenson, then chair of the European Parliament's Fisheries Committee, Earth Island has become "the all-powerful *de facto* regulator of the \$2 billion international tuna industry" (*Fishing News International* 2003 November:6)
5. **Advice** – Many ENGOS produce advice by employing environmental scientists (in both the natural and the social sciences) who present reports to regulators, which are based on expert knowledge of the environmental impact of fisheries. Such scientists form an 'epistemic community', composed of like-minded advocates of the ecosystem-based approach.

This is not to say that the notion of environmental stewardship as a type of the participatory mode of fisheries governance is without difficulties. On the contrary, it bristles with controversy. One criticism is that environmentalism is not a form of governance in itself, but a normative principle which may be (and indeed has been)

adopted by any of the existing forms of governance. However, such a criticism misses the point, because if we look at the reasons why these other modes of fisheries governance have adopted environmental perspectives, we will find that they are responding to pressure applied by environmentalists, and this is what governance is. As an editorial in *Fishing News* (4/3/05:2) pointed out, “Environmentalists are involved at all stages of the fishing regulation process and wield enormous power.”

Another criticism is about the lack of clarity in the mission of environmental stewardship. This criticism relates to the ambiguity of the environmental concept of EBA. Different players in the environmental stewardship type of fisheries governance interpret EBA in different ways. The main contrast is between the **preservationists** and the **sustainable developers** (Eno and Gray, this volume). The **preservationists** seek to preserve the marine ecosystem in aspic – that is, to maintain it in, or return it to, its original, pristine condition before human activity damaged it. By contrast, the **sustainable developers** seek not to prioritise, but to integrate environmental considerations into fisheries management, to ensure that fisheries do not damage the marine ecosystem beyond repair. Here there is a recognition that humans are part of the ecosystem, and that therefore their economic and social well-being must be taken into account and balanced against the well-being of other parts of the ecosystem. Perhaps a practical way of bridging the gap between these two contrasting, but equally legitimate, interpretations of EBA, is zoning – that is, dividing the sea into some areas where fishing is forbidden, and other areas where it is allowed (albeit under certain conditions) (Symes, this volume).

A further criticism of environmental stewardship centres on its participatory credentials. Who are the stewards? In some examples of environmental stewardship, the stewards are activists in ENGOs; in other examples, the stewards are officials in NCAs; in yet other examples, the stewards are the general public (Hernes *et al*; Coffey, both this volume). There are even examples of fishers as environmental stewards – indeed, for some researchers, the future lies with fishers adopting the mantle of stewards of the sea (EFEP 2004). This leads us to another criticism of environmental stewardship – that it appears to marginalise, or even demonise, the fishing industry: fishers see the environmental movement as a threat. However, if we take the view that the environmental stewards are the general public, then fishers are included in their ranks, along with all other stakeholders. Moreover, fishers themselves may be regarded as having an unrivalled practical knowledge of the sea, which should be utilised to improve the health of the marine ecosystem. The final criticism of the environmental stewardship type of the participative mode of fisheries governance comes from the opposite direction – namely that, far from being a powerful force in fisheries management, it is strong only on rhetoric, not on action. I will return to some of these issues in chapter 20.

1.4 The wider implications of different modes of fisheries governance

We turn, finally, to a discussion of some of the broader issues which arise out of this analysis of modes of fisheries governance. There are three questions which warrant our attention. First, do any of the three modes of governance exist in pure, unmixed forms? The answer to this question is ‘No’: the three modes are ‘ideal types’ rather than actual regimes; actual regimes are different mixtures of the three modes (Kooiman 1999a:8). In practice, therefore, the difference between fisheries management regimes is whether the

balance is struck more in favour of one mode rather than the others. For example, the CFP is a mixed regime where the balance is struck in favour of the hierarchical mode, because of the dominant role played by the central organs of the European Union – the European Commission, the Council of Ministers, and, to a much lesser extent, the European Parliament (EP). In some Member States such as the UK, this hierarchical mode is reinforced. However, there is also a strong element of market governance in the CFP; its markets policy includes neo-liberal principles such as (conditionally) equal access to common resources, and non-discriminatory treatment between Member States, together with rules about marketing standards, stabilising of market prices, support for producers' incomes, and safeguards of consumer interests, and it permits Member States to introduce ITQ schemes (as in Denmark and the Netherlands).

There are also some elements of participatory governance in the CFP (Coffey, this volume). For instance, the Fisheries Council formally exemplifies representative democratic decision-making (though its vexed relationship with the European Commission prompted the following poignant question posed by Alex Smith (Scottish Fishermen's Federation President): "Who runs Europe – the elected representatives or the non-elected Commission?" after the Commission invoked its emergency powers to impose a days-at-sea scheme (*Fishing News* 24/1/03:2)). Also, there is an Advisory Committee on Fisheries and Aquaculture (ACFA) made up of stakeholders from the Member States who represent widely different interests, which comments on proposals sent to it by the European Commission, though it has no decision-making role (Hawkins, this volume). Further evidence of the participatory mode in the CFP includes the facts that the 2002 CFP reform process entailed an extensive form of stakeholder consultation; that most major initiatives of the European Commission are now preceded by consultative exercises; and that the CFP permits Member States to make use of co-management at both national level (as in Denmark and the Netherlands) and sub-national level (as in SFCs in England and Wales).

Significantly, the then EU Fisheries Commissioner, Dr Franz Fischler, in introducing a three-day debate on the Commission's Green Paper on *The Future of the Common Fisheries Policy* (EC 2001), touched on all three modes of fisheries governance. On the hierarchical mode, he referred to "implementing more effective technical measures and strengthening and harmonising control and enforcement"; on the market mode, he stated that "in the longer term, market forces...could play a greater role in the CFP"; and on the participatory mode, he said that he was "particularly anxious to engage stakeholders in the review process" (*Fishing News* 15/6/01:7).

By contrast to the CFP, in New Zealand and in Iceland, the balance is struck more in favour of market governance, with a system of fully tradeable ITQs as private property rights, but administered by a strong, centralised, hierarchical state structure. In other countries, the balance is struck more in favour of participatory governance, such as in North America, where there are fisheries regimes that can almost be characterised as industry self-governance; in many other countries where there are co-management structures; in developing countries and in local areas in Europe (including Vigo and Shetland), where there are examples of fisheries regimes that are principally based on community partnership; and in environmental stewardship regimes such as the GBRMP (Day 2002). But all of these participatory fisheries are firmly nested into wider systems of both hierarchical and market governance.

The second broad question to be considered is 'is there a process of evolution or progression, from one mode of fisheries governance to another?' At first sight, the

answer is probably 'No', because there is evidence that all sorts of shifts have taken place: for instance, from hierarchical to market governance in Iceland and New Zealand; from hierarchical to participatory [co-management] (and market) governance in Denmark, the Netherlands and the USA; from market to hierarchical governance in the Faeroes and in the EU (Jentoft *et al* 1999:257); and from participatory [community partnership] to hierarchical and/or market governance in developing countries. However, we may be able to discern a long-term trend whereby the balance has broadly shifted between the three modes – from participatory governance [community partnership] (from pre-history to the nineteenth century); to market governance (from the nineteenth century to the 1930s); to hierarchical governance (from the 1930s to the 1980s); back to market governance (during the 1980s); and on to participatory governance [co-management and environmental stewardship] (during the 1990s and from 2000 onwards, respectively). I would add a simultaneous contemporary shift towards community partnership, at least in localised inshore areas, and towards industry self-regulation in North American fisheries (both offshore and inshore). But the most important recent development, in my view, has been the inexorable rise of the fourth sub-type of participatory governance – environmental stewardship – elements of which are now present in nearly every fisheries regime in the developed world.

The third broad question is 'does the mode of fisheries governance in a country reflect its political culture?' There is some evidence to suggest that the answer to this question may be 'Yes'. For instance, the co-management type of participatory governance found in the Netherlands and Denmark may be related to their proportional representation electoral systems, and their traditions of coalition governments and corporatism in national politics. Symes and Phillipson (1999:60) draw the conclusion that this is why it is difficult for a country to change its mode of fisheries governance. According to Kooiman (1999b:160), there is also a relationship between the predominant mode of fisheries governance in a country and the structure of its fishing industry. For instance, where there is co-management, the fishers' organisations are strengthened and united, but where the industry is excluded from decision-making, it remains fragmented and divided (Symes and Phillipson 1999:71).

As we shall see in the chapters which follow, many of the issues raised in this chapter are taken up, exploring particularly the implications of the co-management and environmental stewardship types of the participatory mode of fisheries governance.

1.5 Synopsis of the chapters

There are four broad sections to the book. The first four chapters focus on questions of participation in the EU's CFP. The next four chapters discuss issues of co-management in Norway, the Netherlands, the USA and the UK. Then, after a chapter on industry self-regulation and community partnership in the aquaculture sector, three chapters explore different aspects of the environmental stewardship type of participatory governance. Finally, five chapters concentrate on the complex issue of integrating fishers' knowledge and expertise with fisheries science and management. The concluding chapter draws out the three main themes that run through these chapters – the value of participation; the relationship between participation and the ecosystem-based approach (EBA) to fisheries governance; and the role of fishers' knowledge.

In chapter 2, **Clare Coffey** examines several important generic questions relating to public participation – including ‘Who are the public?’, ‘What does public participation entail?’, ‘Why is public participation regarded as valuable?’, and ‘How can we evaluate its effectiveness?’ – before case-studying the EU’s CFP. She shows how there is already an extensive amount of public participation in the CFP, especially after the 2002 reform process, and that the new RACs offer further opportunities for the public to get involved in decision-making. But she warns that public participation comes at a price, because it absorbs a considerable amount of time, energy and funding.

In chapter 3, **Jenny Hatchard** continues the theme of participation in the CFP by highlighting its three main democratic deficiencies – centralisation, politicisation, and externalisation – and showing how a distinction should be made between representative democracy (which exists in the CFP) and deliberative democracy (which does not). She explains how a recent interdisciplinary project into North Sea fisheries governance attempted to overcome these three deficiencies of representative democracy by using a process for obtaining stakeholder preferences called ‘iterative stakeholder engagement’ – which is a form of deliberative democracy – tied into an ecosystem-based approach to fisheries management. But whether the CFP will embrace deliberative democracy is unclear.

In chapter 4, **Tony Hawkins** also takes up the theme of the participatory deficit of the CFP, focusing particularly on the lack of stakeholders’ involvement in the process of obtaining expert advice on fish stock assessments. He argues that fishers’ contribution to this advice would be especially valuable, and he explains how the North Sea Commission Fisheries Partnership (NSCFP) was established in 2000 to provide a forum for fishers, scientists and others to develop a more collaborative method of fish stock assessment. The NSCFP was the prototype for the North Sea RAC, set up by the European Commission in 2004, but this is only a first step towards the goal of a more participatory CFP.

In chapter 5, **David Symes** interprets the RACs from the perspective of regionalisation, importantly linked to the concepts of ecosystem-based management and spatial planning. He shows how the thinking behind the RACs is bound up with the EU’s commitment to good governance and the 2002 CFP reform process. However, Symes points out some of the difficulties faced by the RACs – including ensuring the representativeness of stakeholders; arriving at consensus; and delivering environmental integration of fisheries policy – and he concludes that the jury is out on their likely effectiveness.

The sixth chapter, by **Hans-Kristian Hernes, Svein Jentoft** and **Knut Mikalsen**, shifts the focus of stakeholder participation in fisheries governance from regionalisation to social justice. They explore this angle by using a case study of the so-called ‘quota ladder’, a unique allocative scheme in Norwegian fisheries, whereby TACs are shared between the different inshore and offshore sectors of the fleet in such a way that the larger the TAC, the greater the proportionate share allocated to the offshore sector. Hernes *et al* argue that this quota ladder distribution system was the key to securing the consent (by a social contracting process) of fishers to the fisheries regime, responsibility for which the government was then able to delegate to a co-management structure. However, Hernes *et al* claim that the quota ladder is too narrow in both focus and representation to solve all the distributive justice issues involved.

In chapter 7, **Rob van Ginkel** examines another kind of co-management system, introduced in the Netherlands in the early 1990s in order to deal with the compliance and environmental problems thrown up by the individual transferable quota (ITQ) system, which was given legal status in 1985. This is the ‘Biesheuvel’ regime, under which fishers have to organise themselves into eight management groups, supervised by the Dutch Fish Product Board (PVIS), which enforce their own management plans on their members, largely by employing peer pressure backed up by legal penalties. However, van Ginkel notes that the extent of participation is still very limited, and the Dutch fisheries governance system retains much of its old command-and-control character.

In chapter 8, **Madeleine Hall-Arber** analyses the way in which a co-management regime was introduced in the New England groundfish fishery in 2003. She outlines the previous constraints on participation in this fishery, and explains how the New England Fisheries Management Council (NEFMC) was driven, by harsh criticism of its proposed options for regulating the fishery, to invite the fishers to suggest their own management tools. Three fishing organisations offered plans, and the NEFMC chose the one submitted by the New England Seafood Coalition, because it was more flexible, more accommodating to science, and involved a wider range of stakeholders than its rivals. This case demonstrates that a co-management system does not have to be place-based, but can be set up by a process of competitive bidding between organised groups of stakeholders, though whether compliance rates will improve as a result, remains to be seen.

In chapter 9, **Paul Knapman** describes a fourth sort of co-management system – that of the 12 Sea Fisheries Committees (SFCs), which regulate inshore fisheries in England and Wales. Half of the members of the SFCs are elected councillors from local authorities (which fund the SFCs), and the other half are largely fishers’ representatives. Knapman evaluates their contribution to good governance, including their environmental credentials, and concludes that ways have to be found of preventing some industry representatives from unduly influencing SFC decisions in their own interests; of increasing SFCs’ level of funding; and of giving SFCs more legal flexibility.

The tenth chapter, by **Selina Stead**, continues the theme of participation in inshore fisheries, but switches attention from capture fisheries to aquaculture. After noting that European aquacultural management contains elements of all three modes of fisheries governance, she focuses on two types of the participatory mode – self-regulation, where the participants are largely members of the industry; and integrated coastal zone management (ICZM), which is a form of community partnership, where the participants are all the stakeholders in the area. Stead concludes that elements of both types are needed for effective aquaculture governance, but currently there is a greater need for more ICZM than for more self-regulation.

With chapter 11, by **Clare Eno** and **Mark Gray**, we turn to the first of three analyses of the environmental stewardship type of the participatory mode of fisheries governance. Eno and Gray rehearse the role of statutory nature conservation agencies (NCAs) in the management of fisheries. This role includes the designation of Special Areas of Conservation (SACs) to protect marine habitats and species; Special Protected Areas (SPAs) to protect seabirds; and Marine Nature Reserves (MNRs) to protect ecosystems, under powers derived from EU Directives. Such designations often entail restrictions on fishing opportunities. In addition, NCAs have an advisory/advocacy role, promoting the

ecosystem-based approach in forums such as RACs, local partnerships, and official reviews of fisheries policy. However, the NCAs' effectiveness is sometimes blunted by their varied interpretations of what environmental integration entails.

In chapter 12, **Euan Dunn's** angle on environmental stewardship is the role played by environmental NGOs in fisheries governance. In his chapter, he shows how this role has shifted from a strategy of 'problem identification', on the fringes of fisheries management, to a strategy of 'problem solving', at the centre of fisheries management, and he provides five illustrations of generally successful ENGO problem solving efforts. However, Dunn points out that there has been a vast expansion of the demands on ENGOs to engage in these exercises, and that this is stretching their resources to the limit and making them reflect whether they should alter the balance between lobbying and stakeholder involvement in governance.

In chapter 13, from a very different perspective, **Tim Oliver** continues the story of environmental stewardship by examining the role of the media in fisheries governance. He points out that the national media contributes significantly to the environmental pressure placed on the fishing industry, by providing space for gloomy green reports on the condition of the sea. However, he acknowledges that regional newspapers sometimes take the side of the fishing industry, and that the fishing trade press (in which he occupies a leading position) performs a valuable role in representing the opinions of fishers and their communities.

With **Chris Frid's** chapter 14, the environmental theme is situated within the last major theme of the book – that of the role played by marine science in the participatory mode of fisheries governance. Frid considers how science has been used and misused in the hierarchical mode of fisheries governance for over 100 years, and he rehearses the management failures that have occurred during that period. He argues that the way to avoid such failures in the future is to incorporate ecosystem objectives into marine science, and to engage in closer dialogue with fishers and other stakeholders. This strategy entails a significant challenge for scientists, both in adjusting to a new holistic approach to the marine environment, and in taking on new advisory and educational responsibilities.

In chapter 15, for **Jake Rice**, the central issue in this changing role of marine science is how best to integrate fishers' experiential knowledge into fisheries science advisory meetings, an issue raised earlier by Hawkins. Drawing on his own extensive experience of such meetings, Rice discusses five different scenarios of how this integration has been attempted in Canada. He concludes that, although it takes time for both fisher and scientific participants to become accustomed to such arrangements, if everyone involved tries to make the meetings work as advisory, rather than as adversarial, exercises, there is no reason why such inclusive approaches should not become an accepted part of the practice of fisheries governance.

In chapter 16, **Grant Murray, Dean Bavington** and **Barbara Neis** follow directly on from Rice's chapter, providing detailed empirical evidence of the utility of fishers' ecological knowledge (FEK) to fisheries governance in Newfoundland and Labrador. They contrast the hierarchical mode of governance and marine science which was in place in Canada during the 1970s and 1980s, with the participatory mode of governance, making use of fishers' knowledge, which grew up during the 1990s. Two case studies of the participatory mode – Atlantic cod and American lobster – are analysed, and the conclusion is reached that there are great benefits to be gained from

such inclusive approaches, but only if they are properly designed, developed and funded.

In chapter 17, **Kelly Vodden**, **Rosemary Ommer** and **David Schneider** reinforce the conclusions of Rice and Murray *et al*, by reporting on three different ways of using collaborative learning in fisheries governance – hierarchy; networks; and community – all of which have been tried in the major Canadian *Coasts Under Stress Project*. They contextualise this comparative analysis by reference to the problem of ‘scale’ – that is, the need to choose a scale for fisheries governance that satisfies both the ecosystem-based approach and the human need to feel ‘at home’. Their finding is that collaborative learning is of immense value in improving the quality of fisheries governance, and that the wider the extent of such learning processes, the better.

In chapter 18, **Jim Wilson** picks up on the problem raised by Vodden *et al* of the appropriate scale of the marine ecosystem for fisheries governance purposes. The problem is where to draw the line between an area that is too large (and therefore too complex) to be adequately understood, and an area that is too small to include important interactions with factors outside it. Wilson points out that this problem is ignored by conventional fisheries science, which concentrates on single species populations which are essentially scale-less. But the ecosystem-based approach meets the problem head-on by scaling the ecosystem to the maximum size that can be adequately understood, and, therefore, properly managed by a decentralised co-management regime.

In chapter 19, **Douglas Wilson** and **Alyne Delaney** also refer to the problem of the scale of the fisheries that are being managed, in a detailed analysis of the production of scientific knowledge for the EU’s CFP. Their aim is to evaluate the way in which stakeholder participation is having an impact on the generation of the formal scientific advice that informs the governance of EU fisheries. Their conclusion is that conventional fisheries science should recognise its limitations; accept the fact that the boundary between objectivity and subjectivity is blurred; and engage in a co-operative exercise with fishers to find “serviceable truths” leading to “more flexible fisheries governance as well as better science”.

My concluding chapter sums up the book’s findings, and discusses the three main themes that emerge from the chapters: 1) the benefits and deficiencies of stakeholder participation in fisheries governance; 2) the relationship between the ecosystem-based approach and stakeholder participation; and 3) the role played by fishers’ knowledge in fisheries governance.

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What's the Deal with Oysters?

The Problem:

Because of overharvesting, pollution, and disease, **WE'VE LOST MORE THAN 99%** of the Chesapeake Bay's oysters.

Why it Matters:

One adult oyster can filter **50 gallons of water per day.**

Or, the same amount of water that would fill an average bathtub or the amount of water used in a 10-minute shower.*



Maryland and Virginia's economies have lost over

\$4 BILLION DOLLARS

in the last 30 years because of the decline in oysters.*



Oyster reefs provide **habitat and food** for crabs, fish, and other Bay critters. At one time, oysters were so abundant in the Chesapeake Bay that their reefs defined the major river channels.



What We Are Doing to Fix It:

CBF and our volunteers have planted more than **200 MILLION OYSTERS.**



Oyster Harvests are Rebounding: **

2003-2004



50,018 BUSHELS

2013-2014



In ten years, we have experienced a **1,752% increase** in annual harvests.

926,425 BUSHELS

We're working to restore the oyster population, but we need your help. Knowledge is power. Share with your friends.

*CBF's Report, "On the Brink: Chesapeake's Native Oysters," July 2010
**Maryland DNR and Virginia Marine Resources Commission

