

## COMMENT

### Why conserve marine environments?

Damage to marine environments attracts increasing attention and alarm, instilling in many observers a sense of urgency in promoting preventive and restorative measures (see for example Pauly & Maclean 2003; Roberts 2003; RCEP [Royal Commission on Environmental Pollution] 2004; MEA [Millennium Ecosystem Assessment] 2005). Such concerns have had effect. As noted in a recent British policy document, ‘countries all over the world are reviewing the way they manage their marine environment’ (Defra [Department for Environment, Food and Rural Affairs] 2007, p. 1). In much that has been said and written on this subject it is a basic premise that marine ecosystems and biodiversity ought to be protected, at least to some degree. This implies a moral injunction: that it is wrong to allow these systems to be degraded or destroyed, and right to limit human activities that generate harmful impacts. The interesting and fundamental question is why. What Norton (1982, p. 319) calls an ‘intuitive ethic’ for conservation might be invoked, but in a world of conflicting priorities it will often be necessary to support intuition with evidence and argument. Answers to the question, ‘why conserve?’ are important because the reasons offered for defending marine environments have a bearing on the extent to which conservation can be justified, and on the kinds of policies that might ensue. Although different premises will sometimes point to broadly similar actions, there are circumstances in which the underlying rationales for conservation will have divergent policy implications.

It might legitimately be argued that there is nothing distinctive about the case for marine (as opposed to terrestrial) conservation, in terms of any fundamental rationale. But reasoning changes over time and sometimes becomes confused, especially in policy and political contexts. The new imperatives to produce marine strategies, and the conflicts that these entail, demand that the arguments be rehearsed again. The need is heightened by some special characteristics of marine environments, which reinforce a sense of urgency and concern.

One is their invisibility. Though modern ways of ‘seeing’ reveal new wonders, more is known about the surface of the moon than about the ocean deep (RCEP 2004), so that havoc may be wreaked with little attention. A second characteristic lies in the nature of human exploitation, which differs in kind from that of terrestrial systems. The predominance of common property and open access institutions makes the seas especially vulnerable to the tragedy of the commons, and the effect is exacerbated, in the case of capture fisheries, by what amounts to high technology hunter-gathering, practised on a substantial scale. Most importantly perhaps, the oceans constitute the ‘last great living wilderness’ (Culliney 1976,

p. 14), and a test of human capacity to live in harmony with the non-human world.

One obvious rationale for marine conservation is that of prudent self-interest. If humanity is to avoid ‘blundering into ecosystem catastrophe’ (Foster 1997, p. 233), it would be foolish and short-sighted to harm elements of the marine environment that provide ‘services’ (an unattractive term) to humankind, the loss of which might threaten economic activities, health and well-being, or even survival. Such reasoning was central to the MEA (2005), which considered the benefits of ‘supporting’, ‘provisioning’, ‘regulating’ and ‘cultural’ services, and spent four years assessing the consequences of ecosystem change for human well-being. On this basis, the MEA documented many instances of marine environments being degraded and used unsustainably. There is a further argument. If the case for prudence is compelling, then limited understanding of complex systems surely demands an element of precaution in determining which aspects of the environment provide critical services and how much protection they should be afforded. As noted above, our ignorance of the marine environment remains profound.

Such arguments, emphasizing the material and instrumental values of the non-human world, have long been prominent in conservation discourse. They can be extended, though not without difficulty, to embrace future generations and non-material (or less obviously material) components of welfare, such as aesthetic appreciation. But the essential rationale is that the benefits of conservation outweigh the costs, such that humanity will be better off in the aggregate if the marine environment is protected. The more vital and non-substitutable the services it provides, the more persuasive such an argument will be. The ‘ought’ in this case is furnished by a utilitarian ethical framework, in which the right course of action is the one that optimizes welfare, usually of the human kind, and typically defined in terms of utility or preference satisfaction. When markets are imperfect or absent, the tools of welfare economics are employed, controversially, to measure preferences and indicate where the balance might lie.

The promise of net benefits is seductive. The MEA’s (2005, p. 6) observation that ‘the total economic value associated with managing ecosystems more sustainably is often higher than the value associated with the conversion of the system’ suggests that if the total value could be ascertained, the case for conservation would be strengthened. This view has become widespread. But a problem, quite apart from the non-trivial difficulties of quantification, may soon present itself to conservationists. When preferences are expressed or revealed, and aggregated to produce a value, the outcome might indicate that a marine ecosystem should not be protected but that

instead the seas should be exploited to derive other benefits. Such an outcome is more likely if what counts are ‘the wants which people happen to have’ (Barry 1990, p. 38) rather than prudent, informed or otherwise ‘laundered’ preferences (Hausman & McPherson 1993, p. 714; see also Goodin 1995; J. O’Neill 1998). As Onora O’Neill (1997, p. 131) has argued, utilitarianism and environmental protection are ‘uneasy allies’ because ‘[t]here is . . . no guarantee that widely shared or trivial short-term pleasures that damage the environment will not outweigh the pains caused by that damage. The destruction of wilderness or environmentally sensitive areas will be a matter for concern only insofar as it is not outweighed by the pleasure of destroying them . . .’

One obvious retort is that preferences (prudent or otherwise) might be satisfied in a variety of different ways, some of which may not be environmentally destructive. In practice, therefore, the choices may be less stark. But the point being made here is not that utilitarian reasoning is invariably bad for the environment, rather it is that the logic must be followed to its end. If, when the nuances are exhausted, harmful activities deliver the greatest net benefits to society, in this framework damaging the marine environment will be right, even required. It is notable in this respect that the ecosystem transformations of the past fifty years have, according to the MEA, resulted in large net gains for humankind: ‘[i]n the aggregate, and for most countries, [the changes] have provided substantial benefits for human well-being and national development’ (MEA 2005, p. 5).

Such changes may nevertheless feel wrong. This is not just a matter of faulty measurement, or of ignorance or neglect of longer term impacts. They feel wrong when there is a sense that conservation should be defended in spite of aggregative (human) welfare considerations rather than because of them. Instead it might be maintained that there is a duty to protect the marine environment, of a kind that cannot be breached simply because the benefits of exploitation would outweigh the costs (rather as it would be considered wrong to betray a friend, whatever the promised advantages of doing so). This invokes a deontological ethical framework in which duties or rights, rather than happiness or preferences, are the fundamental categories, so that the scope for trade-off is restricted. Such arguments need to be carefully constructed; duties and rights cannot simply be proclaimed, but the important point is that within such a framework the ‘rightness’ of actions and policies is defined by adherence to certain axioms and principles rather than by maximizing utility.

One illustration must suffice for the present purpose. Working within a Kantian framework, Onora O’Neill (1996, 1997) showed how a fundamental obligation to ‘reject the principle of injury’ would define constraints on what should be done at any given time and place. She argued, further, that such an obligation would furnish a strong case for precaution and conservation as a matter of justice: ‘The basic thought . . . is that it is wrong to destroy or damage the underlying reproductive and regenerative powers of the natural world because such damage may inflict systematic or gratuitous

injury (which often cannot be foreseen with much accuracy or detail) on some or on many agents’ (O. O’Neill 1997, p. 137).

In this framework, even an act that generated substantial aggregate benefits would not be permitted if it could be shown to cause systematic or gratuitous injury, because in doing so it would breach a fundamental obligation. A case in point might be the depletion, by over-exploitative fishing, of a cheap source of protein in developing countries (MEA 2005, p. 13; see also Clover 2004). Even if the gains to welfare from the fishing outweighed the losses to the poor, the perpetuation of such practices would be wrong.

In speaking of ‘agents’, O. O’Neill (1997) meant humans (including distant others), though she sought to demonstrate that conserving the material basis for life and livelihoods (an important aspect of just treatment for humans) would often be good for nature at the same time. In the example of overfishing, ethical behaviour would benefit fish populations and marine ecosystems, as well as maintaining sustenance for the poor. However, in O. O’Neill’s account the non-human world is not directly the subject of fundamental or perfect obligations (that is, obligations with counterpart rights). Similarly, in utilitarian frameworks it is usually humans whose welfare is to be maximized, even if kindness to non-humans is seen to contribute to this end. The problem here, for friends of conservation, is that a commonality of interests cannot always be assumed. As Banner (1999, p. 170) has pointed out, ‘even if the interests of humans and of the natural environment are not always simply opposed, there are surely cases where they are not simply compatible’. For many environmentalists, it is far from axiomatic that human interests should always take precedence in these circumstances. Such thinking implies a different kind of argument for conservation.

One (now very extensive) body of work in environmental ethics seeks to develop a less anthropocentric framework than those outlined above. It has variously been argued that individual living things, species or ecosystems have ‘goods of their own’ and can therefore be said to have intrinsic, or at least non-instrumental, value (Hargrove 1992 provides an interesting discussion; see also Owens & Cowell 2002, chapter 6). Elements of such thinking are often present alongside instrumentalism in policy discourse. The UK Marine Bill White Paper, for example, spoke of the ‘innate importance’ of marine biodiversity (Defra 2007, p. 4), and even the MEA, somewhat inconsistently with its instrumental emphasis on ‘services’, acknowledged that people’s actions in respect of nature ‘. . . result not just from concern about human well-being but also from consideration of the intrinsic value of species and ecosystems. Intrinsic value is the value of something in and for itself, irrespective of its utility for someone else’ (MEA 2005, p. v).

Some go further to infer from the concept of intrinsic value that non-human entities are directly morally considerable; that is, they should be afforded ethical standing in their own right, so that their ‘goods’ count in any utilitarian calculus, or they can directly be the subject of obligations, or possess rights. For example, Johnson (1991, p. 118) argued that we should give

‘due respect to all the interests of all beings that have interests, in proportion to their interests’, and Taylor (1986) proposed a guiding principle that non-basic human needs should not be permitted to outweigh the basic needs of non-humans. Such thinking, when applied to marine conservation, might justify policies (such as extensive protected areas and reserves) that would not emerge from conventional cost-benefit analysis, or from frameworks in which perfect duties are owed only to human beings. Extending the moral universe also raises some difficult issues and questions: why should we be mean to pests or non-native species, for example, when even they have ‘goods of their own’?

For other thinkers, the moral injunction to protect and cherish nature is based on different, but also controversial, premises. Some argue that preferences for conservation are simply ones that it is ‘right for people to have’ (Banner 1999, p. 172), values that must be cultivated, not least because ‘naturalness’ and ‘wildness’ provide a vital reflective counterpoint to the human world (Goodin 1992; Elliot 1997; Holland 1997). Thus, the flourishing of marine ecosystems ought to be promoted ‘because they are constitutive of our own flourishing . . . care for the natural world for its own sake is a part of the best life for humans’ (J. O’Neill 1993, p. 24; see also Partridge 1984; Banner 1999; Goodin 1992; Hargrove 1992). This perspective might also help with non-living or dispersed features of the marine environment, which can hardly be said to have ‘goods of their own’ or interests (Johnson 1991 developed this argument in a terrestrial context). The difficulty here is that objective conceptions of what constitutes a ‘good human life’ sit uncomfortably with liberal principles, especially with the view that, within reasonable limits, people should be free to define and pursue their own ‘goods’: in this view, if a person is unmoved by the wonders of the deep, then no-one else can insist that that individual is simply misguided. Objective conceptions of the good also run counter to the driving forces of the market and a neo-liberal economic system. Such conflicts may not be an issue if environmental values are in fact (or might become) widely shared, but claims to this effect remain in dispute. In practice, the view that protecting marine environments is constitutive of human flourishing often seems to conflict with what consumers and assorted interest groups believe to make their lives more fulfilled.

None of the ethical systems outlined above precludes all change to, or intervention in, the natural world. Nor would adherence to any one of the frameworks provide an ‘autopilot’ (O. O’Neill 1996, p. 78) for making specific policy choices: in the real world judgements are invariably required, and values and beliefs are in constant interplay with interests, institutions and power. Still, a reminder that there are different and distinctive rationales for conservation can clarify thought, identify opportunities and help to avoid some pitfalls.

It suggests, for example, that there may be some, even much, common ground. Authors starting from seemingly incompatible premises can agree in principle that humans should not destroy species or ecosystems without good cause,

and that ‘when we do, we ought to proceed only with moral consciousness, and with caution and restraint’ (Johnson 1991, p. 200). Given the extent to which marine ecosystems have been damaged and continue to be threatened, it seems likely that in many instances different ethical frameworks will point happily in the same policy direction. But a willingness to travel together is not the same as travelling on a false ticket. Those for whom values in nature are ultimately non-instrumental should be wary of embracing instrumental rationales: when the road forks they might find themselves on the wrong path (Sagoff 1988; McCauley 2006). And when common ground is exhausted, divergent beliefs about what is good and what is right, and about the boundaries of moral considerability, may have very different policy implications. It would be helpful to acknowledge that it is these ‘intractable controversies’ (Schön & Rein 1994), as much as familiar conflicts of interest, that are reflected in intense disputes over legislation (in which principles become institutionalized) and over the many specific claims on the seas.

## ACKNOWLEDGEMENTS

An earlier version of this paper was prepared for a meeting of the UK Royal Commission on Environmental Pollution (RCEP) during its study of the impacts of fisheries on the marine environment (RCEP 2004). The views expressed in this paper do not necessarily reflect those of RCEP. I am grateful for the comments of three anonymous referees.

## References

- Banner, M. (1999) *Christian Ethics and Contemporary Moral Problems*. Cambridge, UK: Cambridge University Press.
- Barry, B. (1990) *Political Argument: a Reissue with a New Introduction*, New York, USA: Harvester Wheatsheaf.
- Clover, C. (2004) *The End of the Line: How Overfishing is Changing the World and What We Eat*. London, UK: Ebury Press.
- Culliney, J.L. (1976) *The Forests of the Sea: Life and Death on the Continental Shelf*. San Francisco, CA, USA: Sierra Club Books.
- Defra (2007) *A Sea Change: A Marine Bill White Paper*. Cm 7047. London, UK: Defra.
- Elliot, R. (1997) *Faking Nature: The Ethics of Environmental Restoration*. London, UK: Routledge.
- Foster, J. (1997) *Valuing Nature: Economics, Ethics and Environment*. London, UK: Routledge.
- Goodin, R. (1992) *Green Political Theory*. Cambridge, UK: Polity Press.
- Goodin, R. (1995) *Utilitarianism as a Public Philosophy*. Cambridge UK: Cambridge University Press.
- Hargrove, E. (1992) Weak anthropocentric intrinsic value. In: *After Earth Day: Continuing the Conservation Effort*, ed. M. Oelschlaeger, pp. 141–169. Denton, Texas, USA: University of North Texas Press.
- Hausman, D. & McPherson, M. (1993) Taking ethics seriously: economics and contemporary moral philosophy. *Journal of Economic Literature* 31: 671–731.

- Holland, A. (1997) Substitutability: or, why strong sustainability is weak and absurdly strong sustainability is not absurd. In: *Valuing Nature: Economics, Ethics and Environment*, ed. J. Foster, 119–134. London, UK: Routledge.
- Johnson, L. (1991) *A Morally Deep World: Essays on Moral Significance and Environmental Ethics*. Cambridge, UK: Cambridge University Press.
- McCauley, D.J. (2006) Selling out on nature. *Nature* 443: 27–28.
- MEA (2005) *Ecosystems and Human Well-Being: Synthesis*. Washington, DC, USA: Island Press.
- Norton, B. (1982) Environmental ethics and the rights of future generations. *Environmental Ethics* 4: 319–337.
- O'Neill, J. (1993) *Ecology, Policy and Politics: Human Well-Being and the Natural World*. London, UK: Routledge.
- O'Neill, J. (1998) *The Market: Ethics, Knowledge and Politics*. London, UK: Routledge.
- O'Neill, O. (1996) *Towards Justice and Virtue: A Constructive Account of Practical Reasoning*. Cambridge, UK: Cambridge University Press.
- O'Neill, O. (1997) Environmental values, anthropocentrism and speciesism. *Environmental Values* 6(2): 127–142.
- Owens, S. & Cowell, R. (2002) *Land and Limits: Interpreting Sustainability in the Planning Process*. London, UK: Routledge.
- Partridge, E. (1984) Nature as a moral resource. *Environmental Ethics* 4: 175–90.
- Pauly, D. & Maclean, J. (2003) *In a Perfect Ocean: the State of Fisheries and Ecosystems in the North Atlantic Ocean*. London, UK: Island Press.
- RCEP (2004) *Turning the Tide: Addressing the Impacts of Fisheries on the Marine Environment. Twenty-fifth Report, Cm 6392*. London, UK: TSO.
- Roberts, C.M. (2003) Our shifting perspective on the oceans. *Oryx* 37(2): 166–177.
- Sagoff, M. (1988) *The Economy of the Earth*. Cambridge, UK: Cambridge University Press.
- Schön, D.A. & Rein, M. (1994) *Frame Reflection: Towards the Resolution of Intractable Policy Controversies*. New York, USA: Basic Books.
- Taylor, P. (1986) *Respect for Nature: A Theory of Environmental Ethics*. Princeton, NJ, USA: Princeton University Press.

SUSAN OWENS  
 Department of Geography  
 University of Cambridge  
 Downing Place  
 Cambridge CB2 3EN  
 UK  
 Tel: +44 1223 333399  
 e-mail: seo1000@cam.ac.uk