

## Statement to the Pacific Fisheries Management Council from the National Fisheries Conservation Center\*

The policy debate over the use of marine reserves as a fishery management tool has generated more than its share of conflict. In addition, the role played by science and scientists in this debate has sometimes blurred the lines between science, advocacy, and policy making in ways that have both helped and hindered decision making about reserves.

While there is broad agreement that marine reserves lead to more and bigger fish, and a more diverse fish community, within the boundaries of a reserve, there are important scientific differences of opinion about the implications of such changes. Much of this debate focuses on the question of whether and how reserves, and the changes they lead to, should be used as a fishery management tool. We think there are five more specific questions (at least) embedded here:

- Will marine reserves increase yields in ways that existing management tools cannot?
- Are marine reserves and existing management tools equivalent in terms of controlling fishing effort?
- What is the extent to which larvae and/or adults will spill over reserve boundaries and what are the impacts of such spillover on fishery yields?
- How should existing management constraints on fishing efforts be accounted for in the design of marine reserves?
- How should managers deal with congestion externalities?

While there are any number of opinions about these five questions, there is no clear scientific consensus available to guide management, nor is there an available process for developing one.

Fortunately, the fisheries management community is not alone in wrestling with the problem of how to use scientific knowledge, and the scientific process, to help make tough management and policy decisions. Of the many approaches available, we think that one, developed by the National Institutes of Health (NIH), is particularly applicable to the marine reserves problem. NIH uses formally structured consensus conferences, and state of the science conferences (<http://consensus.nih.gov/about/process.htm>), to develop national policy on the management of specific health issues. It uses these conferences in cases where there are scientific differences of opinion about the interpretation of scientific evidence and their implications for medical practice, situations directly analogous to the situation we now face with marine reserves.

The National Fisheries Conservation Center (NFCC) is planning to use this process to convene a group of fisheries scientists and marine ecologists to wrestle with the five questions, the controversy they raise, and explore plausible avenues for answering them. We have garnered some enthusiastic partners for the endeavour, and welcome more. We hope that the Council would agree to provide a statement of support for this effort.

We don't expect science and technology to provide all the answers to questions about marine reserves. But science gives us a means to ask and vigorously probe questions to which our colleagues in the policy community may not already have the answer – at least not an answer in which we can all be confident. And confidence in scientific findings which we can clearly communicate to those who will be affected by the policies our science informs is one of the most critical tasks we face. Because at the end of the day, policy making on MPAs should stand on a firm foundation of thoughtfully considered, well communicated, and critically examined science.

\* The National Fisheries Conservation Center is a non-profit organization dedicated to promoting effective discourse on fisheries issues and helping to develop solutions that work for the oceans and the fishermen who depend on them.