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## Letters to the Editor: More responses on whether marine conservation and food production are on a collision course

The letters below are responses to a piece by Jake Rice, Chief Scientist with Fisheries and Oceans Canada, which appeared in the [August-September 2013 issue](#) of MEAM. Titled "Marine conservation and sustainable food production are on a collision course", Rice's piece already elicited responses from several readers, which appeared in our [October-November 2013 issue](#).

### Dear MEAM:

In his recent Letter to the Editor, Jake Rice did not say that conservation and food security are incompatible. He stressed that the two governance streams are on a collision route because they were not talking enough to each other and acting in harmony. He was not referring to the governance rhetoric (which is generally correct and similar in both streams) but to the global reality and resulting outcomes. I share his conclusion that, without a radical institutional change for closer interaction, both systems may fail to meet their respective goals.

Most of the responses to Jake's letter recognized his point of view. Many stressed what is being done or advocated in each governance stream to address both sets of issues, and the similarities in the prescriptions are strikingly similar. Among the issues that are highlighted, equity, social impacts, good governance, and social and economic costs of economic reforms are important as they affect political will, legitimacy, willingness to pay, and compliance in both streams. Technological fixes have also been proposed in the responses - the real social, economic, and environmental impacts of which need careful examination. Marine spatial planning is offered as a reconciliation platform and needs more consideration.

There is probably good agreement on the need to finding compromise solutions, minimizing risks and costs to both streams, tackling the difficult issue of allocation of short- and long-term costs and benefits, and developing ecological and social resilience. The resistance stems from the respective perceptions of risks and their relative allocation to humans or Nature; the level of tolerance for misses and false alarms; and the level of impact deemed "acceptable".

My response to the question in the title is YES: marine conservation and sustainable food production are on a collision course. While progress is being made in some areas, in others the collision is already hitting the poorest people. Moreover, in a context of increasing economic, financial, and social distress, States are already shelving some of their former environmental commitments with important social and environmental implications. To avoid further social and environmental degradations, affordable solutions need to be elaborated urgently and jointly, not separately and in competition.

### Serge M. Garcia

Serge Garcia is Chair of the Fisheries Expert Group of the IUCN Commission on Ecosystem Management

### Dear MEAM:

Thank you to Jake Rice for raising this fundamental conflict and for prompting some good discussion. The responses generated by his letter are interesting and informative.

Based on the published replies (which I recognize may be abridged in some cases), I would categorize those responses into two broad groups. The first and larger group is made up of those who have replied with off-the-shelf solutions: participation, fish aggregation devices, aquaculture, and marine protected areas. In my view, each of these tools has a potential role to play in fisheries governance and management, but none provides even close to the total solution and, with the exception of participation, none will be an appropriate tool in every case. I am not suggesting it was the intention of the respondents, but pushed too hard and too blindly, this single-measure approach easily becomes a case of a solution looking for a problem. Advocacy of specific "solutions" as a cure has been an all-too-common feature of the scientific and management advice that has characterized so much of the fisheries debate for at least the last century. If one looks at the history of fisheries science, the roll-out of successive wonder solutions is clearly evident: single species stock assessment methods, MSY and TACs, TURFs, ITQs and MPAs are some examples in more or less chronological order of modern emergence. Each has an important role to play in the right environment and context, but, as is clearly evident today, none on its own made the big break-through or has come close to solving the basic problems on its own.

Together with Rolf Willmann and William Emerson, I wrote a paper on the topic entitled "Sustainable fisheries: the importance of the bigger picture". [Editor's note: this paper is at [www.fisheriessociety.org/proofs/sf/cochrane.pdf](http://www.fisheriessociety.org/proofs/sf/cochrane.pdf).] In it, we expressed the view that "ensuring effective, sustainable, and responsible fisheries is neither simple nor are there any quick fixes to the problems being experienced." In my view, the common tendency for scientists, conservationists, development agencies, and others to promote magic bullets as the solution has done at least as much to distract governments, decision-makers, funding agencies, and other potential change-agents from finding the true, holistic solutions to the world's sustainable use problems as they have helped to solve the problems. Individual management measures are essential for day-to-day management. Even in the most stressed fisheries they may provide some protection against total collapse. But in the absence of broad, robust solutions to underlying conflicts and desperate needs, they will remain little more than superficial bandages for deep-seated problems.

The second category of responses was the big-picture perspectives of Meryl Williams, Chris Béné, and Jake's initial letter. These pointed to the importance of the underlying drivers of the problems, the need to consider the human system as a whole, and the recognition that there will only rarely be options for win-win solutions. I side firmly with the big picture advocates.

If one considers my own country, South Africa, as an example, it has a well-developed and fully subscribed fisheries sector that makes important contributions to livelihoods and employment for approximately 25,000 people and their dependants living on the coast - frequently in areas where there are only limited alternative employment opportunities. These fisheries are taking place in a country with approximately 25% unemployment, with over a third of the population living on less than US \$2.50 per day,

and ongoing efforts to achieve equality in fisheries after the injustices of apartheid. Within this context, the offshore fisheries, which are inaccessible without high capital investments, are generally well-managed for sustainable use and the resources are in reasonable condition or recovering. However, the inshore fisheries are much more accessible and many of the resources - particularly the valuable and easily accessed abalone and West Coast rock lobster - are badly over-exploited and are subjected to high levels of illegal fishing that is proving very difficult to control. The drivers of the illegal fishing include "greed" to use Meryl's terminology, particularly in the case of abalone, but I think there would be little disagreement that "need" is the much stronger and less tractable driver.

Various management measures have been and are being tried to bring these fisheries under better control but they have proven insufficient. The only long-term solution must be to resolve the high levels of poverty and unemployment in the adjacent coastal areas. Aquaculture is certainly one potential contributor to this, but the harsh coastline and scarcity of inland waters in most of the area will limit this option. Comparable situations exist in most, if not all, developing countries and in some fisheries-dependent developed countries around the world. There will be no simple fixes for most of these.

It goes without saying that I cannot offer a solution to reconciling the tripod of poverty alleviation, sustainable fisheries and biodiversity conservation, but I can put forward a first step. That is that anyone or any agency aiming to improve the performance of fisheries anywhere in the world should: 1) approach the task with a completely open mind; 2) work closely with and be guided by all the major stakeholders; 3) think of no solutions until they have understood the full set of objectives and analyzed the problems and the big picture of which they are a part; and 4) recognize that holistic, multi-faceted, and multi-stakeholder solutions will almost invariably be required for long-term, sustainable solutions.

**Kevern Cochrane**

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