



Spawning aggregations need managing: An update on the work of the Society for the Conservation of Reef Fish Aggregations

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The Society for the Conservation of Reef Fish Aggregations (SCRFA) was formed in 2000 with the recognition that fish spawning aggregations are particularly vulnerable to fishing, are increasingly being targeted, and are rarely managed or considered in the design or implementation of marine protected areas. We also recognise and advocate that effective management and conservation must be informed by good science. Given that spawning aggregations are often the only reproductive opportunity for many commercially important species, their loss or declines can have severe impacts on stock viability, as has been clearly shown in the case of the Nassau grouper, *Epinephelus striatus*, in the Caribbean and tropical western Atlantic. This formerly important commercial species is now a candidate for the Endangered Species List in the United States, and is listed as endangered on the IUCN (World Conservation Union) Red List of Threatened Species, largely, it seems, because of uncontrolled aggregation fishing. From the Indo-Pacific, an increasing number of examples is coming to light of targeted aggregations that have shown marked declines from fishing pressure for both live and dead (chilled) fish markets.

Funded in 2002 by the Packard Foundation and with a current membership of almost 200 biologists, managers, conservationists and fishery researchers, SCRFA is working towards several goals to ensure that spawning aggregations gain a higher profile in conservation and management agendas. A major focus of our work is to promote protective approaches that are not only practical but have a sound biological basis. The major aims of our work are to:

1. raise awareness of the vulnerability of spawning aggregations to exploitation;
2. seek options and practical means for managing reef fish spawning aggregations;
3. conduct or foster research that addresses key biological, management and monitoring needs;
4. provide information and advice, either directly or by developing materials and publications on aggregation research, monitoring, etc.; and
5. develop a comprehensive and global database on reef fish spawning aggregations, making it available in the public domain for data input and output to assist and promote initiatives in aggregation research and management.

Progress to date includes:

1. A Call for Action was endorsed by the second International Tropical Marine Ecosystem Management Symposium (ITMEMS2) held in March 2003, in Manila, that formally recognises the biological significance and vulnerability of spawning aggregations and calls for their protection and management in tropical ecosystems, globally. The Call for Action concludes with the following recommendation (for the full statement, see Attachment 1 of Action Statement in the website www.icriforum.org/itmems.html):

“... fish spawning aggregations should be conserved, through robust management strategies. Whenever possible, this should include complete or managed protection, to ensure persistence of the populations that form aggregations, the integrity of reef ecosystems and the livelihoods and food supply of communities that depend on aggregating species.”

2. A website has been developed that incorporates materials and information, ranging from a newsletter (No. 3 came out in August 2003; No. 4 came out in December; submissions for the next newsletter are welcomed), scientific, educational and popular articles, video material, relevant publications, and information on the work of the Society (www.scrfa.org).
3. A comprehensive Methods Manual (available on our website or directly from me in hardcopy or as a CD — see email address below) that addresses all aspects of aggregation-related work, from monitoring fish at aggregation sites, to carrying out research on reproductive behaviour, fisherman interviews for current status and history of exploited aggregations, egg production, water movement, and covering management and conservation options. Key references and case studies are provided.
4. A new aggregation monitoring method is being developed that directly uses GPS (global positioning system) information together with counts of aggregated fish, linking them spatially within the aggregation site. The method is easy to use and reduces a lot of the error and problems inherent in more conventional monitoring approaches (see SCRFA Newsletter No. 3).

5. The Global Database now has records from more than 500 aggregations and the development of a programme for data input and retrieval through the SCRFA website is almost complete. Information has been collected by literature review, personal communications and by field surveys to collect information, through detailed interviews, in areas from which little has been published. Over 100 interviews have now been completed for the Solomon Islands, Papua New Guinea, Fiji, Palau, and Federated States of Micronesia, and partially completed for the Philippines; and they will shortly be conducted in eastern Malaysia and eastern Indonesia. Summaries of completed field surveys will be posted on the SCRFA website and results to date have revealed at least 50 exploited aggregations, all previously unrecorded. Although aggregation sites are documented in the database, actual locations are not made available in the public domain to avoid the possibility of further exploitation as a result.

We continue to provide support and information and to focus attention on spawning aggregations through activities ranging from technical input into conservation and management initiatives by other NGOs (non-governmental organisations) and fishery departments, to presenting our work in international forums, providing information and preparing educational materials. Most recently, presentations were made in Palau and the Philippines (June and July 2003), at the SPC Heads of Fisheries meeting (August 2003), the Gulf and Caribbean Fisheries Institute meeting (November 2003), and to NGOs and fishery departments wherever field surveys have been conducted. In 2004 we will participate in the 4th World Fisheries Congress in Canada, and the 10th International Coral Reef Symposium (ICRS) in Japan, among other meetings. We encourage submissions to participate in our aggregation mini-symposium at the 10th ICRS.

If you wish to learn more about SCRFA's work, or if you have particular information needs, please contact us at scrfa@hkucc.hku.hk.



Project update: Developing industry standards for the live reef food fish trade

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Introduction

As described in the previous issue of this Bulletin (Number 11, April 2003, pages 47–52), a project is being undertaken by the Marine Aquarium Council (MAC) and The Nature Conservancy (TNC) to develop industry standards for the live reef food fish trade (LRFFT). The goal of the project is to bring together stakeholders and build a consensus on what “best practices” are needed to improve the conduct of the industry and enhance industry sustainability, including sustainable reefs, fish stocks, and fishing communities. Support for the project is being provided by the Asia-Pacific Economic Cooperation (APEC) Fisheries Working Group, the United States Department of State, the MacArthur Foundation, and the Packard Foundation.

The standards identify best practices relating to assessment and management of fish stocks, capture and culture methods, transportation and holding and human health and safety issues. The

implementation of the standards is done on a voluntary basis.

It is envisaged that industry operators, governments, marine conservation organisations and other stakeholders will use these standards as a guide to ensure that the LRFFT becomes a sustainable, high-value fishery providing improved livelihoods for local fishers while conserving the reef habitats upon which those fisheries rely. For example, government agencies may use the standards as input in developing rules and regulations governing the LRFFT in their respective countries. Industry operators may benefit from the standards by learning what best practices are in place so that they can improve their operations accordingly.

To ensure credibility, these standards are being developed via an open consultative process that, as much as possible, brings together and engages all relevant stakeholders through the use of advisory groups and standards review workshops in source and market countries. This process not only creates

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