

15) CARIBBEAN REGIONAL RESPONSE TO LIONFISH INVASION

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Lionfish Invasion in the Caribbean: The Extent of the Problem

In the last decade, the invasion of lionfish (*Pterois sp.*) has spread across the Wider Caribbean Sea, threatening the health of temperate and tropical Atlantic reefs and hence the social and economic welfare of coastal communities that depend on them. The lionfish invasion is a serious issue because it can not only affect the structure and function of coral reefs and associated ecosystems, such as mangroves, seagrasses and estuaries; it can also disrupt the food web and in turn affect the recovery of species of concern such as the Nassau grouper, Warsaw grouper, and speckled hind. Combined with other major reef stressors such as land-based pollution, overfishing and climate change, the stress posed by the lionfish could have profound and unexpected impacts on coral reefs and associated ecosystems.

Although complete eradication of lionfish from the Atlantic is unlikely, coordinated and strategic actions at local, national and regional levels are critical to address the lionfish invasion and mitigate its impacts. These efforts are invaluable for supporting other conservation initiatives such as management of marine protected areas and fisheries stock rebuilding.

Joining Forces Against the Intruder: The Regional Lionfish Committee

Created under the auspices of the International Coral Reef Initiative (ICRI), the Ad Hoc Committee on the Caribbean Regional Response to Lionfish Invasion (now known as Regional Lionfish Committee, RLC) was established in November 2010 at ICRI's 25th General Meeting in Apia, Samoa. Key stakeholders including Mexico, the United States of America, France and the United Nations Environment Programme (UNEP) Caribbean Environment Programme Secretariat to the Protocol on Specially Protected Areas and Wildlife (SPAW-RAC) are leading this work.

As shown here, the RLC has been a catalyst for regional collaboration since its inception, among resource managers involved in the development of local and regional lionfish control strategies.

Taking aim at the Lionfish: Projects underway

Since its creation, the RLC has undertaken a number of tasks, some of which are still on-going:

- Releasing a Host Secretariat Advisory on the Lionfish Invasion in the Wider Caribbean (in July 2011) in three languages. The Advisory called attention to the lionfish invasion and its threats to coral resources of the Caribbean region and urged implementation of local control measures and engagement in a regional response.
- Compiling a list of contacts for practitioners, decision-makers and scientists involved in lionfish invasion control on a list-server (activated in mid 2011). Used to exchange the latest lionfish information, the list-server now counts more than 170 members from the entire Caribbean region.

- Facilitating local workshops to encourage governments and organizations working on this issue to share best management practices.
- Supporting the creation and publication of a best practices manual entitled: *Strategies and Practices for Invasive Lionfish Control: A guide for managers*.
- Promoting regional training workshops to facilitate dissemination of the lionfish control manual, including hands-on training underwater.
- Contributing to the development of a lionfish web portal to facilitate regional communication, convey current and credible scientific information, and provide access to best management practices and manager training tools. A launch is planned for the end of this year.
- Assisting in the development of a lionfish regional control strategy to identify and guide collaborative responses, with a release planned for late 2012.

Developing the Invasive Lionfish Control Manual

Recognizing the urgency of the lionfish invasion and the need to develop clear recommendations for local control, a special workshop was organized by an international team including ICRI, the Reef Environmental Education Foundation (REEF), the U.S. National Oceanic and Atmospheric Administration (NOAA) and SPAW-RAC and held in August 2010 in Cancun, Mexico. With 47 participants representing over 25 organizations from 20 countries and territories of the Wider Caribbean, this workshop identified many of the best strategies for addressing the lionfish invasion.

A writing workshop was held in Miami in April 2011, with representatives from the University of the West Indies in Jamaica, NOAA, REEF, SPAW-RAC, Simon Fraser University, the Mexican National Commission for Natural Protected Areas (CONANP), and the Centre for Agriculture and Biosciences International (CABI). Chapter authors were assigned and outlines developed. The manual will contain many of the tools and best practices needed to control, manage, and research lionfish.

The Manual, entitled *Strategies and Practices for Invasive Lionfish Control: A guide for managers* was formally presented at the 64th Annual Meeting of the Gulf and Caribbean Fisheries Institute (GCFI), 31 October- 4 November 2011, and a side event was held at the 4th International Marine Ecosystem Management Symposium in Guadeloupe 5-8 December 2011. It is being published and will soon be available for distribution; a version in Spanish will also be available.

Regional training workshops

The National Fish and Wildlife Foundation (NFWF) provided funding for holding three regional training workshops to facilitate dissemination of the lionfish control manual, including hands-on training underwater. The first regional lionfish collecting and handling workshop of the series was convened during the 64th meeting of GCFI in Mexico, November 2011. It attracted more than 20 participants from a dozen Caribbean countries. The two remaining workshops are scheduled for 2012 in the Bahamas and Florida.

Lionfish web portal

A lionfish web portal is being developed to provide current and reliable information on the lionfish invasion, including status, reporting, management techniques, sample control plans, and legislation, all widely accessible to managers and decision makers. It is also intended to allow web-based training on lionfish control strategies to coastal managers across the Wider Caribbean Region (WCR).

Lionfish Regional Response Plan for the Wider Caribbean

A workshop will be conducted with government representatives of affected Caribbean countries to substantively review a draft Lionfish Regional Control Strategy and develop a vision on regional elements of the response strategy. The lionfish control manual will be used as a basis to develop this plan, which will build on existing local strategies developed for the Bahamas, Bonaire, Cuba, and Mexico.

About ICRI

The International Coral Reef Initiative (ICRI) is an informal partnership of like-minded governments and organizations seeking to build and sustain the capacity of countries and regions to achieve effective management and sustainable use of coral reefs and related environments. Founded by eight governments (Australia, France, Japan, Jamaica, the Philippines, Sweden, the United Kingdom, and the United States of America), the establishment of ICRI was announced at the First Conference of the Parties (COP) to the Convention on Biological Diversity in December 1994, and at the high level segment of the U.N. Commission on Sustainable Development (CSD). The Initiative is currently co-chaired by the governments of Australia and Belize. For more information about ICRI visit www.icriforum.org and/or www.icriforum.org/lionfish