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**WCPFC BYCATCH MITIGATION INFORMATION SYSTEM (BMIS)**

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## Purpose

The purpose of this information paper is to describe the WCPFC Bycatch Mitigation Information System (BMIS) and to outline its development and current and future needs, including ongoing maintenance.

## Introduction

The WCPFC BMIS database system has been developed over the past 3 years to manage and facilitate access to information covering (i) bycatch and (ii) bycatch mitigation in the western and central Pacific Ocean (WCPO). Specifications for a database system were presented in an information paper at the WCPFC Scientific Committee meeting in 2007 (SC3; Williams 2007). The database houses information on species encountered in WCPFC fisheries, as well as mitigation measures or methods relevant to the WCPFC fisheries, the species they relate to, and how they are linked to WCPFC Decisions (and Decisions of other RFMOs), where relevant.

Specifications include web-accessibility; the BMIS will be launched on the WCPFC web site in 2010. In the interim the BMIS can be accessed at <http://www.spc.int/ofp/mitigation>.

## Database Description

### Audience and purpose

The WCPFC BMIS is a resource for fisheries managers, scientists, fishers and the general public. It is a central repository of information on the mitigation and management of bycatch in the WCPO. The purpose of publishing the BMIS on the WCPFC website is so that its content may be easily shared among Cooperating Commission Members, cooperating non-members and participating territories (collectively known as CCMs) and other stakeholders. It is envisaged that content will be continually updated.

In the context of the BMIS, 'bycatch' refers to those species, such as sharks, seabirds and turtles, which are incidentally caught in fisheries that target other species, such as tuna or swordfish.

Fisheries in the WCPFC Convention Area are required to 'minimise waste and discards' and to 'minimise the risk of adverse effects' on bycatch populations. The BMIS supports this aspect of WCPFC's 'marine stewardship' responsibilities.

### Content

There are several sections to the BMIS, structured by the scientific and technical literature (**references**), technical **mitigation methods**, **Decisions** by WCPFC and other management bodies, and target and bycatch **species** of the WCPO.

The **references** section focuses on seabird, shark and turtle bycatch mitigation methods relevant to the longline, purse seine, pole and line and troll tuna fisheries of the WCPO.

Reference types include peer-reviewed papers in scientific journals, meeting papers (including papers submitted to meetings of the WCPFC and its subsidiary bodies), project reports, fact sheets, and official guidelines from the WCPFC, CCMs, and other Regional Fisheries Management Organisations (RFMOs). The full citation, abstract and key points are listed for each reference.

General descriptions of **mitigation methods** are also included; these may contain notes on cost, ease of deployment, need for further research and compliance issues.

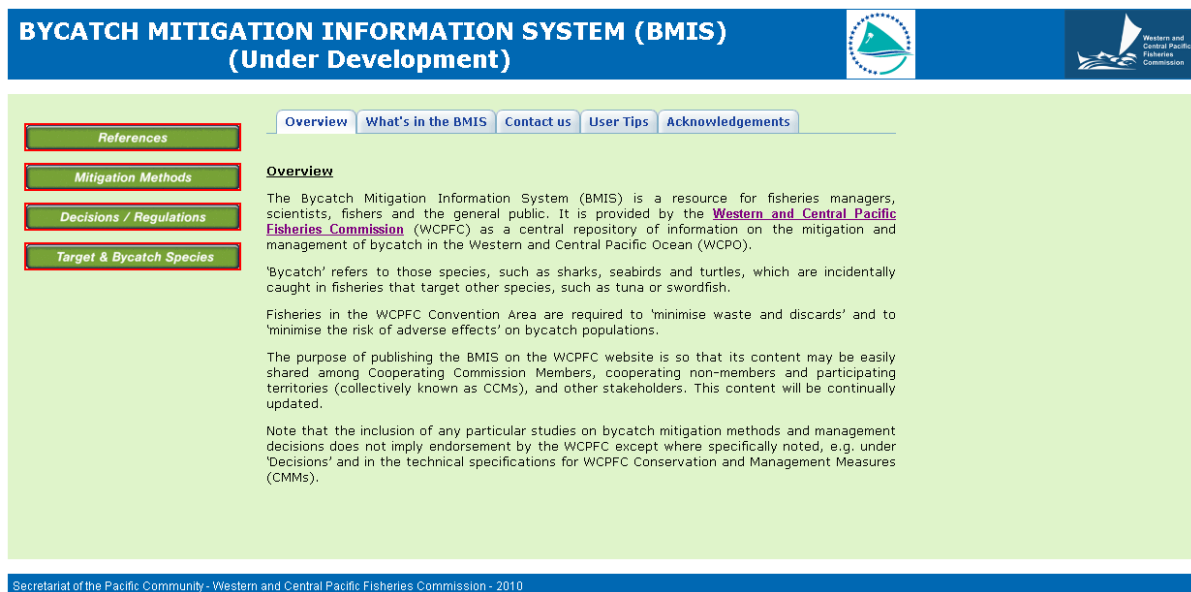
WCPFC **Decisions**, i.e. Resolutions and Conservation and Management Measures, and the decisions of other RFMOs are included, where they refer to and/or require the use of particular mitigation methods.

Finally, the BMIS provides a list of target and bycatch **species** that have been recorded in the region's oceanic fisheries. Scientific and common names, as well as species Identification Codes, are included.

It is stated in the BMIS that the inclusion of any particular studies on bycatch mitigation methods and management decisions does not imply endorsement by the WCPFC except where specifically noted, e.g. under 'Decisions' and in the technical specifications for WCPFC Conservation and Management Measures (CMMs).

### Searching the database

Finding references and information about mitigation methods, Decisions or species in the BMIS is easy. The Home Page on the web interface has buttons to take the user to the appropriate sections. Instructions are found on each page, to assist with searching. Additionally, there is a 'User Tips' tab, to help with searching and to provide links to other useful websites.



### **What remains to be done**

Significant work is required to finish populating the database, including entry of the most recent bycatch mitigation references. Remaining tasks include:

- Completing Mitigation Method descriptions (currently 30% complete)
- Extracting and entering 'key points' from references not yet synthesized (currently 40% complete)
- Updating Decisions
- Seeking comment on BMIS from species experts. Birdlife International has assisted with seabird contacts, but the list needs development for sharks and turtles. It is hoped that contacting species experts for comment will assist in the task of updating the seabird and sea turtle literature (the BMIS is only comprehensively current to June 2009 for these species groups).
- Updating seabird and sea turtle literature (as above)

- Responding to criticisms (from species experts) of the database structure and content, and user interface
- Entering citations, abstracts, hyperlinks, key points and links to mitigation methods for references discovered through literature searches and suggested by species experts
- Seeking and responding to comment on the BMIS generated by the SC6 information paper.
- Preparing an ongoing maintenance strategy for WCPFC Secretariat to implement. This will include compiling a list of journals to assist with literature searches and modifying/updating the list of species experts to be contacted on a regular basis.

## **Ongoing maintenance**

### Basic maintenance

The BMIS will require active management to keep content current. Information will need to be collected, analysed and integrated on a regular basis. This should involve literature searches and contacting species experts.

It is also important that staff will be available to respond to user enquiries and contributions, and make technical changes to the database and user interface where necessary.

## **Further development of the BMIS**

There are a number of ways in which the BMIS could be further developed. These are outlined in brief, below:

**User Help.** While users can contact the database administrator via an email address under the “Contact Us” tab, it would be efficient to develop a list of frequently asked questions and answers. This could be included under the “User Tips” tab. This tab would also be the appropriate place for a more in-depth Help Manual, if the latter were deemed necessary.

**Photographs.** Provision of photographs and drawings to assist with identification.

**Training.** Provide training in the use of the BMIS for fishery managers of the CCMs. Training, besides increasing the knowledge and awareness of bycatch management of WCPO fishery managers, would allow an opportunity for actively seeking feedback on the BMIS. Feedback would assist in keeping the database relevant. It would be useful to know how the database was being used and what users would like to be able to do with it.

**WCPO Bycatch Forum.** The BMIS could be linked to a bycatch forum, where users could post comments about, for example, bycatch encounters or ideas for improving fishing gear to avoid bycatch interactions. Staff managing the BMIS could act as moderator.

## **References**

Williams, P.G. 2007. Specification of a database system to manage and facilitate access of information covering (i) by-catch and (ii) by-catch mitigation on behalf of the Western and Central Pacific Fisheries Commission (WCPFC). WCPFC-SC3-EB-IP-2.

<http://www.wcpfc.int/doc/eb-ip-2/specification-a-database-system-manage-and-facilitate-access-information-covering-i-catch>