

PI's Workshop 2001—Introducing Ecosystem-Based Management

PFRP Principal Investigators gathered at the University of Hawai'i for their annual workshop early in December, meeting over three days to share project presentations and status reports, and prepare for the PFRP 2002 Request for Proposals (RFP). The Workshop this year was planned in part to help shape an RFP for research that supports ecosystem-based management of pelagic fisheries.

According to PFRP Director John Sibert, this strategy is rapidly becoming the preferred mode of fishery management, yet scientists and managers lack a clear understanding of how it works. To shed light and encourage interest in the topic, many of the workshop presentations focused on "ecosystem approaches" to fisheries research.

John Sibert opened the Workshop with an overview of ecosystem-based resource management, followed by Tim Essington, who outlined the limits of the same. Subsequent presentations included Graeme Parkes on "Ecosystem and Precautionary Approaches in Antarctic Fisheries Management;" Ramzi Mirshak on "Application of Ocean Atlas Data as Part of a Comprehensive Coral Reef Ecosystem Monitoring System;" Patrick Lehodey on "A Dynamic Spatial Modeling of the Pelagic Ecosystem as an Integrative Framework for a Regional



Shiham Adam is working with John Sibert, Dave Itano and Kim Holland to analyze data from the Hawai'i Tuna Tagging Program, in an effort to gain insights into tag attrition and estimated yield-per-recruit.

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Group shot, final day: 21 of nearly three dozen researchers who attended the PFRP's 2001 Principal Investigators Workshop to present project updates and consider opportunities for fisheries research focused on ecosystem-based management.



Laurent Dagorn discussed the advantages and behaviors characteristic of tuna schooling, and what this could reveal about why the fish aggregate.



Kim Holland told PFRP researchers that about 15 FADS around O'ahu are being equipped with data loggers to listen for the presence of tuna carrying sonic transmitters; he and Dave Itano will start tagging tuna with transmitters late in January, and the "audio-locating" results will complement the PFRP Tuna Tagging Program.

Project," and Valerie Alain on "A Food Web Study in the Western and Central Pacific Ocean Tuna Ecosystem."

The objective with regard to the RFP was to establish the goals, appropriate policies and information requirements for ecosystem-based resource management of pelagic fisheries. For more information, interested researchers should contact John Sibert (jsib-

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Pacific Agency's Technology Nabs Atlantic Scofflaw

The National Oceanic and Atmospheric Administration (NOAA) in December successfully prosecuted a Massachusetts-based fishing captain for repeatedly entering a closed area about 160 nautical miles off the Northeast Atlantic coast. NOAA says it was the first federal fisheries prosecution based exclusively on vessel-tracking data gathered by the satellite-based Vessel Monitoring System (VMS), which, in a slight geographic irony, was designed for the Pacific-based Forum Fisheries Agency (FFA).

The FFA serves its 16 South Pacific member nations through research on conservation and optimum utilization of the region's marine resources, as well as advocacy for the sovereign rights of coastal states. It commissioned the VMS to enable monitoring of vessels through use of global satellite positioning and advanced communications and computer technology. According to the FFA,

automatic analysis of vessel position information allows speedy identification of potentially illegal fishing activity, and quick distribution of information to surveillance and enforcement authorities.

In this case, U.S. Coast Guard Judge Edwin Bladen assessed a \$250,000 fine and ordered permanent revocation of the federal fishing permit of the scallop vessel *Independence*, and the federal operator permit of its captain, Lawrence Yacubian, for repeatedly entering an area closed to protect spawning groundfish.

"The significance of this case was that the judge accepted VMS data as admissible evidence that the vessel was inside the closed area," said NOAA Special Agent Louis Jachimczyk. "This type of information had never been used on its own to prove a closed-area case."

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Protected Species Workshops Continue for Hawai'i Longliners

Carla Gore

The National Marine Fisheries Service (NMFS) continues to host its Protected Species Workshops to share vital information with Hawai'i longliners about how to avoid— or properly handle and release— protected species while at sea. The 2001 Workshops were presented in the primary languages of the fishery (English, Vietnamese and Korean) and scheduled in the late summer and early fall with advice from the Hawai'i Longline Association (HLA) to ensure a good turnout with minimal inconvenience to the fishermen.

Workshop Content

The Workshops focused on handling, resuscitation and release of sea turtles, with guidelines explained in an instructional video. The biology of sea turtles was covered by staff from the Western Pacific Regional Fisheries Management Council (WPRFMC), while species identification was discussed in a prerecorded slide show prepared by NMFS staff. NMFS staff also outlined regulations regarding mitigation and recovery in interactions with sea turtles.

Identification, life history and distribution of seabirds were also taught at the Workshops, along with regulations regarding seabird bycatch and mitigation. A video created for the Workshops illustrated general techniques for handling most seabirds, and spe-

cific techniques for the Short-Tailed Albatross; it was presented by the U.S. Fish & Wildlife Service (FWS) and summarized in an informational placard.

Also covered were gear disentanglement, identification of marine mammals, and the Marine Mammal Authorization Program (see boxed text for background). Species guides and informational placards (available in Korean and Vietnamese) were given to all Workshop participants, while vessel operators were given workbooks containing copies of each presentation, current regulations, species identification and handling placards, marine mammal guides, and blue-dyed bait cards. The workbooks are intended to be kept on the vessels and updated annually.

Sharing Fisheries Knowledge

In addition to the slide and video presentations, Russell Ito, Chris Boggs and Yonat Swimmer from the NMFS Honolulu Lab presented Year 2000 logbook and catch data, and discussed the experiment to modify fishing gear to reduce sea turtle bycatch. Sean Martin and Scott Barrows of the HLA gave a brief introduction to the Workshop, and fishermen were encouraged to ask questions and voice concerns. Korean and Vietnamese translators eased communication, which helped when fishermen raised questions about handling guidelines for the Short-tailed albatross; the NMFS and USFWS are working to clarify the guidelines.

Collaborators & Rationale

Sole sponsor last year, the NMFS this year increased the number of agencies involved in organizing the Workshops: in addition

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The Marine Mammal Authorization Program

The Marine Mammal Authorization Program (MMA) provides an exemption for commercial fishermen from the general taking prohibitions of the Marine Mammal Protection Act (MMPA). The MMA replaces the Interim Exemption for Commercial Fishing that was in effect from 1989 to August 1995.

Information collected under the MMA (and from other sources) provided the basis for determining whether the incidental serious injury and mortality of marine mammals in commercial fishing operations was reduced to “insignificant levels” (those approaching a zero mortality and serious injury rate) by the target date of April 30, 2001.

Amendments to the MMPA in 1994 resulted in a number of changes to regulations governing incidental taking; the changes included:

- issuance of permits to incidentally take endangered and threatened marine mammals;
- a simplified registration process, and new criteria for Category I, II and III fisheries; and,
- establishment of take-reduction teams and development of take-reduction plans for certain fisheries.

The NMFS annually reviews and revises its list of Category I, II and III fisheries, so the requirement to register with NMFS may change from year to year. Category I designates fisheries with frequent serious injuries and mortalities incidental to commercial fishing; Category II designates fisheries with occasional serious injuries and mortalities, and Category III designates fisheries with no known serious injuries or mortalities.

Marine Mammal Authorizations are issued in January of each year, when the NMFS or its designated agent mails a registration or renewal package to all vessel owners who may participate in Category I or II fisheries. Vessel owners must have a valid authorization certificate in hand before resumption of fishing each year.

to its Pacific Islands Area Office, Honolulu Lab and Enforcement Division, contributors included the WPRFMC, HLA, and the FWS.

Six Workshops were originally scheduled for between August 28 and September 13 (two in each of the languages), but the terrorist attacks of September 11 forced the last two to be rescheduled when the Sand Island Coast Guard station in Honolulu was closed for security reasons. The delayed Workshops were held on October 19 and 22 at the NMFS Area Office, and make-up sessions were scheduled for the first Wednesday of each month beginning in December.

The Workshops were created in response to an emergency rule enacted in June 2000 as one of the requirements of the NMFS

Turtle Biological Opinion; the rule requires all Hawai'i-based longliners to attend a Protected Species Workshop each year, and specifies that they earn a certification card that must be carried on the vessel while fishing. A total of 89 vessel operators and 114 owners, crew and other personnel attended the 2001 Workshops.

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PrepCons Advance MHLC

Following are highlights from the website describing the status of the Preparatory Conferences for the Establishment of a Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific (MHLC PrepCons). The site address is <http://www.ocean-affairs.com/PrepCon.html>. See "Upcoming Events" for dates and preliminary information on PrepCon 2, scheduled for late February.

Matters for Future PrepCons

A number of items referred to in the resolution establishing the PrepCons will be considered at future PrepCons; these include:

- Choosing a location for the headquarters of the Commission (the Forum Fisheries Committee informed the PrepCon that a single candidate from the region would be selected through an evaluation process, with a formal proposal to be presented at a later PrepCon);
- Completing Draft Financial Regulations; and,
- Completing a Draft Agenda for the first meeting of the Commission.

It also was agreed to establish a PrepCon Organizational Fund (PCOF) to be financed through voluntary contributions or funding in kind, to offset the costs of future PrepCons as well as the costs associated with an interim secretariat. Following discussions with the Forum Fisheries Agency (administrator of the PCOF), agreement was reached in June 2001 on guidelines for administration of the PCOF.

Also in June, PrepCon Chairman Michael Powles wrote to participants appealing for donations to the PCOF. As of November 15, 2001, contributions to the PCOF had been received from Australia, New Zealand and the United States. PrepCon 2 will be provided with a full report on the status of the PCOF, together with information on disbursements made from the Fund.

PrepCon 1

The first session of the Preparatory Conference was convened by New Zealand, as depository of the Convention, in Christchurch from April 23 to 28, 2001. Among the main achievements and decisions of the first session were:

- Appointment of Ambassador Michael Powles (New Zealand) as Chairman of the PrepCon;
- Adoption of an agenda, subject to amendment, which would serve as the basis of work for future PrepCons;
- Establishment of two open-ended working groups to consider organizational and budget matters and the provision of scientific advice to the Commission (consisting of agreement on the terms of reference for the two working groups, and adoption of a plan of work for each group);
- Agreement to establish a PrepCon organization fund to finance future PrepCons and an interim secretariat;
- A first reading of the draft rules of procedure for the Commission;
- Agreement to convene an informal consultation immediately prior to PrepCon 2 to discuss mechanisms to promote participation in the Convention; and,
- Tabling of a paper on the participation of territories in the future Commission, with further discussion to occur at future PrepCons.

With regard to the Working Groups: Ambassador Lucy Bogari (Papua New Guinea) was appointed to chair the Group focused on the organizational structure of the Commission, its budget and financial contributions. Peter Ward (Australia) was appointed chairman of the Group focused on the scientific structure of the Commission and the provision of interim scientific advice; Liu Xiaobing (China) was appointed vice-chairman of this Group.

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Giant “Mystery Squid” Caught on Video

A group of NOAA-affiliated scientists conducting undersea research in December spotted a 21-foot-long squid at a depth of about 6,300 feet in the Gulf of Mexico. Promptly dubbed the “Mystery Squid,” the cephalopod will retain its informal nom de plume while researchers complete its classification and naming. The squid is featured in an article in the Dec. 21 issue of the journal *Science*, and its taxonomy is under way by scientist Michael Vecchione of NOAA’s National Marine Fisheries Services Systematics Laboratory.

According to *Science*, the December sighting is the most recent in a string of eight worldwide; it took place while researchers were investigating gas hydrates from the submersible *Alvin*. “The scientists in the submersible got a close-up look and saw tiny suckers along some of the arms,” says Vecchione, whose specialty is

cephalopods. He arranged for scientists from eight institutions in four countries to pool their observations and document the worldwide occurrence of these unusual animals. This type of squid has also been seen west of Africa, in the Indian Ocean, and near Hawai‘i, at depths ranging from 6,300 to 15,390 feet.

“These squids are not just a new species, they are very different from any squid ever seen before,” says Vecchione. “They have... extremely long, slender arms and tentacles that have ‘elbows,’ and very large fins extending beyond the end of the body. One of the squids was estimated to be 21 feet long and another was 13 to 16 feet long.”

Vecchione suggested that the squid could be a never-before-seen adult of the family that he and a co-author recently described and classified from two juveniles and a larval-like specimen.

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