

FISHBYTES

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Talking about Fish and Fisheries in Indonesia

by **Eny A. Buchary**

ICOSTI '99 (International Conference on Ocean, Science, Technology and Industry 1999) was held in Jakarta, Indonesia, from December 2 to 3, 1999. The purpose of the conference was to evaluate and develop national and international collaboration on ocean scientific research and ocean resource exploration within the Indonesian maritime continent. The conference was organised by several agencies in Indonesia, including research institutions such as LIPI (Indonesian Institute of Sciences) to HANKAM (Ministry of Defence and Security). However, its operation was steered by BPPT (Agency for the Assessment and Application of Technology).

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and Notes than usual!
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The UBC Fisheries Centre is not new to BPPT. Our first involvement with them was when Dr Daniel Pauly was invited to give a talk at a Fisheries Stock Assessment meeting in Jakarta in August 1997 (see *FishBytes* 3(4)). In October 1997, a delegation of senior Indonesian fisheries and ocean scientists and representa-

tives met with Canadian fisheries scientists at the UBC Fisheries Centre. It was there agreed that Canada and Indonesia should work towards a joint program of scientific studies linked to sustainable ocean management. These events led to two Canada-ASEAN Centre-sponsored missions to Indonesia by Nigel Haggan and Dr Tony Pitcher in 1998.

This time, BPPT invited Dr Tony Pitcher and Nigel Haggan again to give a talk at the ICOSTI '99 conference. Unfortunately, Dr Pitcher was ill at the time, and he asked me if I could go instead so that I could present the result of my thesis research work. I was thrilled and honoured at the same time. Being an Indonesian of no government nor research institution affiliation in Indonesia and having done a thesis on the controversial Indonesian trawl ban issue, my feelings were a mixture of excitement and apprehension.

ICOSTI '99 had a very tight schedule. It had five overlapping themes, viz., marine geo-resources prospects within the Indonesian maritime continent, oceanography of the Indonesian marine continent and EEZ, marine bio-resources of the Indonesian maritime continent, marine eco-techno tourism, and tropical river and ocean programs in coastal settings. In addition to prominent domestic and international scientists from 10 countries and fisheries students of Indonesian universities, many VIPs attended the conference. These included ministers, high-ranking officials, governors of all 26 provinces, and even military generals with various colourful medals on their chests! Overall, there were 66 oral presentations and about 10 to 15 posters.

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The opening speeches emphasised development, but also delivered some cautions on real problems in the marine environment, such as pollution, overfishing, habitat loss, foreign fleet poaching, etc. In contrast to the note of caution in the opening speeches, most of the other presentations that we attended emphasised high technology-based development with, at best, lip service to the need for caution. The daily dissemination (by fax) of fishing ground information from NOAA's satellites to all fishers' co-operatives in the northern coast of Java was considered as an achievement. This dissemination has indeed cut down purse seiners' fishing trips from 14 to 4 days, which means a reduction in fuel consumption of 60%. The figures of 6.2 million tonnes per year of potential production and US\$10 billion in potential revenue were also quoted time and again. Wherever these magic numbers came from, they were quite popular during the ICOSTI '99 conference.

The conference also witnessed the keynote address from the new Minister of Oceans and Fisheries for Indonesia, Mr. Ir. Sarwono Kusumaatmadja. I think that was the

best of all keynote address speeches for it was relieving and brought a fresh breeze to the whole talk of fisheries development in the conference. Being an old face but prominent in the Indonesian bureaucracy, the Minister was very humble and emphasised that scientists needed to be cautious over statistical numbers. He stressed the importance of not giving any number in any policy-making if there is no reliable base, and the importance of using a co-management approach for Indonesian fisheries management.

Nigel and I were given a slot in theme 3, *i.e.*, the *Marine Bio-Resources Of The Indonesian Maritime Continent*, just at the end of the conference, on Friday afternoon. We had actually prepared the PowerPoint presentation material

before we arrived in Jakarta. However, after hearing various dismaying and 'scary' presentations about the state and direction of Indonesian fisheries development, I personally felt the necessity to revise our presentation material (at the last minute), to put even more emphasis on the precautionary approach in

fisheries management.

Our presentation was divided into two parts. I delivered the first part, with results of my thesis research work as the core of the talk. At the talk, I emphasised the complexity of ecosystem effects caused by fisheries. This complexity calls for a precautionary approach, so that today's fisheries do not foreclose benefits and options for the next generation. This was followed by a description of the recent paradigm shift from single species assessment to ecosystem modelling with graphics showing how the Ecopath software simulates predator-prey relationships and fishery impacts in the marine environment. The presentation of the Java Sea case study from my M.Sc. thesis research that explored the ecological and economic impacts of revoking the trawl ban got a lot of audience attention, as the idea of revoking the 1980 Indonesian trawl ban has come up several times recently.

In the second part, Nigel outlined how ecosystem modelling can maximise the value of scientific information by standardising and



Dr Rokhmin Dahuri, Director-General of Coastal Zone and Small Islands Management, introduces Nigel Haggan to Ir. Sarwono Kusumaatmadja, Minister of the newly-established Indonesian Ministry of Oceans and Fisheries.



Nigel Haggan introduces Eny Buchary to Dr Indroyono Susilo, one of five Directors-General in the newly-established Indonesian Ministry of Oceans and Fisheries

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integrating existing data. In a step further, Ecosystem models can be improved with input from coastal communities, large- and small-scale fishers, conservation groups and other resource users. Once a model has been built that represents a broad basis of agreement, the same group of resource users, scientists, managers and others can use the Back to the Future approach (see *FishBytes* 3(4)), Ecosim, and Ecospace to explore the ecological, economic and social consequences of different management and harvest strategies. Our presentation concluded with a description of the planned Indonesian pilot project.

It was encouraging for me personally that most of the critical questions that I got were asked after the formal question session, and they were mostly from fisheries students – the future cohorts of Indonesian fisheries scientists. Remembering how enthusiastic and critical these young Indonesian fisheries students were, I am quite optimistic with the future of Indonesian fisheries conservation and management.

(Eny's and Nigel's participation at the conference was sponsored by the Canada-ASEAN Centre in Singapore.)



“MSY Reborn”: The 2000 Larkin Lecture

The Fisheries Centre is pleased to announce that the fourth Larkin Lecture will be held on Thursday, February 17, 2000. Entitled “MSY reborn, but with a new identity: is it necessary, is it sufficient?”, the Lecture will be presented by Dr Pamela Mace. Dr Mace is an alumnus of UBC and is currently the national stock assessment co-ordinator in the US NMFS Office of Science and Technology. She was the invited keynote speaker at the Second World Fisheries Congress in Brisbane, Australia, in 1996.

Family, friends, and colleagues of Dr Peter Larkin established the Larkin Lecture Fund and a public lecture series to honour him upon his retirement from the University of British Columbia and later, when he passed away in 1996. The Lecture is held approximately biennially at the Fisheries Centre, UBC, and the manuscript is submitted for publication in *Reviews in Fish Biology and Fisheries*, subject to the normal referring process.

For further information, visit our website (www.fisheries.com). A report of the fourth Larkin Lecture will follow in an upcoming issue of *FishBytes*.



Sailing, Sailing, Over the Ocean Blue...

Paul Leblonde, a retired University of British Columbia fisheries oceanography professor, recently emailed a note to Tony Pitcher offering his regrets at missing the Fourth Larkin Lecture. The reason? Well, he wrote that:

“Unfortunately (I always seem to have some good reason) I will be in Indonesia at that time. I got a job teaching oceanography on a cruise ship that is sailing around the world. The Ocean Explorer I left Athens on Nov 19 and I will join it in Ushaia on Dec 28, crossing the south Pacific from island to island (Easter, Pitcarin, Tahiti, Fiji, New. Cal., Australia, Bali, etc... all the way to Mombassa, from which I fly home on March 10.”

Please remember us landlubbers during your cruise!



The Fenians are Coming!

By Nigel Haggan

The Fenians, so called after their leader, Finn MacCumhaill (or MacCool), were a clan of Irish warriors from the time before English colonisation. Over time, rebellions and political agitation led to the establishment of the Irish Republic. Even so, a heavily colonised portion of the ancient province of Ulster chose to remain part of the United Kingdom. It is well-known that this arrangement didn't please everyone.

The supporters of a United Ireland came to be known as 'Fenians' after the ancient warriors. Those who wanted to stay British are generally referred to as 'Unionists' or 'Orangemen'. Where I grew up on the shores of Belfast Lough, children would fish for crabs with a limpet tied to a string. The green ones (*Carcinus maenas*) were called 'Fenians'. Dungeness crabs (*Cancer pagurus*) were called 'Orangemen' as you would properly

expect.

In the late 1990s, a Fenian crab population was reported in California, probably as the result of ballast water discharge. So far, one specimen has been reported from Vancouver



Island (see www.pac.dfo-mpo.gc.ca/ops/fm/shellfish/crab/GREENCR.HTML).

The general assessment is that these faster, smarter and meaner 'colonists' are faster, smarter and meaner than the local fauna. There are widespread fears of serious impacts on clam beds and, in particular, the Pacific 'Orangeman', (*Cancer magister*). If you're wondering how *C. pagurus*, the original 'Orangeman', manages to co-exist with the Fenians at home, its likely because he has a particularly hard shell.

(Nigel Haggan is a researcher at the Fisheries Centre.)

An Ode to MPAs

Lyrics by Cristina Soto

(Sung to the tune of "Wouldn't it be Lovely" from *My Fair Lady*.)

All we want are some MPAs
Far away from the factories
With some enormous no-takes
Saving bio-diversity

Lots of rockfish all o'er the place
Lots of abalone in that space
More clams, more hake, more salmon
Saving bio-diversity

Oh so lovely
Watching all the little fishies grow
See those
Lar-vae spil-ling o-ver
Into the other zones

Healthy fish stocks are on the rise
Our sense of fulfilment, it satisfies
And also performance indicators
Saving bio-diversity.

(Cristina Soto is a PhD student at Simon Fraser University's. These lyrics were written during a workshop on MPAs, sponsored by the Living Oceans Society, and held in Sointula in September 1999.)



News and Notes - 'Congratulations All Around!'



Congratulations to **Jessica Bratty**, who recently defended her M.Sc. thesis. Studying with Carl Walters, Jessica's thesis was entitled "The winter ecology of juvenile coho salmon in interior B.C. streams". Now that she has completed her Master's degree, Jessica says that her plans include enjoying a break and awaiting an epiphany of what to do with her life! In the meantime, she is continuing to work on fisheries-related contracts.

Congratulations to **Edward Nsiku**, who recently defended his M.Sc. thesis, "Changes in the fisheries of Lake Malawi, 1976-1996: Ecosystem-based analysis". A student of Daniel Pauly, Edward plans to visit Malawi to thank the Fisheries Department officials there who helped him secure financial support for his studies. He then intends to return to Vancouver to rejoin his family. His wife, Millie, has begun a course in Environmental Engineering at BCIT, giving Edward the chance, he says, to be a part-time Mr. Mom.

Congratulations to **Sylvie Guénette** and **Steve Martell**, who were recently informed that their papers shared top honours for the best student papers at the February 1999 meeting of the North Pacific International Chapter of the American Fisheries Society. A feather in each of their caps, as well as for the Fisheries Centre!

Upon returning to the United Kingdom, **Dr Steven Mackinson** was quickly offered a post at the Centre for Environment, Fisheries and Aquaculture Science in Lowestoft. He will be working on a five-year multispecies project on predator-prey interaction. Specifically, it will involve acoustic work on cod and sandeels to gain a little more insight into their behavioural ecology. Steve will shortly be joined by another soon-to-be-alumnus of Tony Pitcher's group – **Trevor Hutton** has also accepted a post at CEFAS, which he will take up upon completion of his PhD.

News and Notes - 'Hellos and Good-byes'

Welcoming New Members:

Jackie Alder, from Edith Cowan University in Perth, Australia, has joined the Sea Around Us team to work with Tony Pitcher and the Fisheries Centre's students on furthering the Rapfish technique using Monte Carlo simulations and Leverage Analysis. Data from the Gulf of Maine and the North Sea will be used in the analysis. It is anticipated that the results of the analysis will allow for improved error estimates. The project will involve considerable number crunching - so look out for computers running Rapfish!

Villy Christensen has joined the Fisheries Centre as Principal Research Associate of the Sea Around Us project. A Danish citizen with expertise in ecosystem modelling and programming, Villy joins us from ICLARM in the Philippines, where he most recently held the posts of Program Leader (Fisheries Resources Assessment and Management Program) and Senior Scientist. Villy has also been a visiting professor at the Fisheries Centre for the last several years.

Felimon (Nonong) Gayanilo has joined the Fisheries Centre as part of the Sea Around Us team. Originally from the Philippines, Nonong joins us after working at ICLARM for the past several years. His expertise and consultancy experience has led him to many corners of the globe. Be sure to visit the Fisheries Centre's web pages to see Nonong's redesign of the site.

Katia de Meirelles Felizola Freire comes to the Fisheries Centre from Brazil. She is an oceanographer with a Master's Degree in Biological Oceanography from FURG (Fundacao Universidade do Rio Grande) in Brazil. She has researched growth of teleosts as yellowtuna, blackfin tuna and barracuda at the Universidade Federal Rural de Pernambuco (Brazil). As a Ph.D. student with Daniel Pauly,

Katia will work on an analysis of Northeastern Brazilian Fisheries.

Yvette Rizzo has begun a Ph.D. in Zoology with Daniel Pauly. A native of the Mediterranean island of Malta, Yvette's research will involve using Ecopath as a tool to define a conservation strategy for the central Mediterranean. Yvette graduated from the University of Malta with Bachelor's and Master's degrees in biology, and has spent the last five years working as a coastal and marine environment planning officer with the Local Planning Authority.

As a postdoctoral researcher with the Sea Around Us Project, **Lore Ruttan** will be comparing the socio-economic and biological impacts of small versus large scale fisheries in the North Atlantic. She was educated at the University of Chicago (A.B. 1984), the University of Minnesota (M.S. 1988) and the University of California at Davis (Ph.D. 1999). Her publications include (with C. Packer) "The Evolution of Cooperative Hunting" (*American Naturalist* 132:159-98), "Closing the Commons: Cooperation for Gain or Restraint?" (*Human Ecology* 26:43-66), and "Are East African Pastoralists Truly Conservationists?" (*Current Anthropology* 40:621-652).

Reg Watson has also joined the Sea Around Us team, as a Senior Research Associate. A Canadian, Reg joins us from Perth, Australia. Long-time readers of *FishBytes* may recall that Reg visited at the Fisheries Centre two years ago, when he worked on an Ecopath model of Hong Kong harbour to evaluate the advantages and impacts of artificial reefs and marine reserves. (see *FishBytes* 3(4), and visit www.omen.com.au/~rwatson)

Dirk Zeller recently joined the "Sea Around Us" project as a post-doctoral fellow, after finishing a three year

post-doc in collaboration with Garry Russ at James Cook University, Australia. Dirk completed his B.Sc. (Hons.) (1983-86) and Ph.D. (1993-96) at James Cook University, and has published in *CJFAS*, *Fish. Bull.*, *MEPS*, *Mar. Fresh. Res.*, and *Aust. J. Wildl. Res.* He describes his area of specialisation as fish and harvest species ecology, quantification of effects of marine protected areas, fisheries and natural resource management, applied animal behaviour (particularly patterns of movement), and the interactions between species, their distribution, and habitats. The majority of his past research had a strong emphasis on quantitative experimental field ecology. He also has an interest in bio-telemetry and advanced tagging technology in quantitative ecology and fisheries research.

Farewells:

The Fisheries Centre bids adieu to **Tom Okey**, who spent nearly two years at the Fisheries Centre working on Ecopath-related projects. The focus of his efforts here involved the Ecopath model of Prince William sound, both before and after the *Exxon Valdez* oil spill. Tom has left us to spend several months travelling the world with the intention of returning to academia this autumn. Readers in British Columbia might have seen Tom on Knowledge Television's "Planet Education" on January 18, 2000, discussing "Prince William Sound – Ten Years After".

Farewell also to **Julie Martin**, **William Cheung**, and **Neil Gribble**, who all visited at the Fisheries Centre last term (see *FishBytes* 5 (5)). William has returned to Hong Kong, while Julie and Neil have returned to Australia. During his stay, Neil was particularly busy on the local lecture circuit, delivering two seminars at the Fisheries Centre and another at Green College.

News and Notes - 'The Outside World'

Conference Calls

Economics of Marine Protected Areas – to be hosted by the UBC Fisheries Centre, Vancouver, July 6-7, 2000. This conference aims to provide a forum for academics, government, and private sector actors to present and share ideas, information and models for assessing the benefits of MPAs as a tool in fisheries management. The deadline for submission of abstracts is March 15, 2000. Expressions of interest should be directed to Gunna Weingartner, Events Officer, UBC Fisheries Centre, 2204 Main Mall, Vancouver, British Columbia, V6T 1Z4, events@fisheries.com, fax (604) 822-8934. For more information, contact Dr Ussif Rashid Sumaila at the above address, or visit www.fisheries.com.

The **19th Lowell Wakefield Symposium: Crab 2001 – Crabs in Cold Water Regions: Biology, Management, and Economics** – Anchorage, Alaska, January 17-20, 2001. Abstracts are due May 15, 2000. The goal of the symposium is to bring together scientists and fishery managers to share recent research advances, synthesize new findings, and discuss future research avenues on crabs in cold water regions of the world. Contact Brenda Baxter, Coordinator, Alaska Sea Grant College Program, University of Alaska Fairbanks, PO Box 755040, Fairbanks, Alaska, USA, 99775-5040, phone (907) 474-6701, fax (907) 474-6285. More information can be found at www.uaf.edu/seagrant/Conferences/symposia.html.

The **International Congress on Authenticity of Species in Meat and Seafood Products** – Vigo, Spain, September 18-20, 2000. Authenticity testing has become necessary for various reasons, including fraudulent substitutions of species in commercial products, or the overexploitation of certain species. This congress will focus in part on exploring the state of labelling policies regarding the main protein sources (fish and meat) in the human diet.

The views of producers, processors and consumers will have the opportunity to be voiced during the presentations and discussions. Visit www.iim.csic.es/~qpmfsi/ for more information.

Coastal Zone Canada 2000 – Saint John, New Brunswick, September 17-22, 2000. This international conference will be the fourth in the Coastal Zone Canada Association biennial series and will address the theme "Coastal Stewardship: Lessons Learned and the Paths Ahead". Paper and poster abstracts are due April 30, 2000. Address inquiries to James A. Smith, Chair of the Program Committee, james@coastalsmith.com. Abstracts should be sent to Coastal Zone Canada 2000 Secretariat, c/o NB Department of Fisheries and Aquaculture, P.O. Box 6000, Fredericton, New Brunswick, E3B 5H1, (506) 462-5961, fax (506) 453-5210, email cacacc2000@gov.nb.ca, or visit www.gov.nb.ca/dfa/czc-zcc2000.htm.

Publications

Two new publications from the Alaska Sea Grant College Program. For either, contact the Alaska Sea Grant College Program, University of Alaska Fairbanks, PO Box 755040, Fairbanks, Alaska, USA, (907) 474-6707, fax (907) 474-6285, email FYPUBS@uaf.edu.

The **Alaska's Ocean Bounty (Japanese version)** poster includes colour illustrations and facts about 33 fish and invertebrate species important in Alaska's commercial fisheries. Publication Number SG-ED-32.

Ecosystem Approaches for Fisheries Management presents key research on how ecosystem information can be incorporated into practical fishery management. The book includes 50 papers presented at the 1998 Lowell Wakefield Symposium, "Ecosystem Considerations in Fisheries Management", in Anchorage, Alaska.

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Opinions expressed in this newsletter do not necessarily reflect those of the Fisheries Centre or its members.

Be sure to visit the Fisheries Centre's website, www.fisheries.com, and follow the links to *FishBytes*. There, you'll also find details on Fisheries Centre projects, publications, faculty and students, as well as information on upcoming Fisheries Centre events.

