

FISHBYTES

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More fishing in Sierra Leone?

by Sheila Heymans and Sylvie Guénette

On the 24th of February 2003, the Norwegian fisheries newspaper *Fiskaren* reported that Norwegian boats are preparing to go fishing for shrimps in Sierra Leone. The *Boltholm*, a boat with 300 tonnes of freezer capacity will have the right to as much shrimp and other fish species as it can haul for US\$71,000 and the hiring of 14 fishers from Sierra Leone (half of the crew). The agent for licences from Sierra Leone's authorities, Mr Dahlstrøm,



Fishing boats in West Africa, typical of those used by local fishers in Sierra Leone.
Photo by Sheila Heymans

confirms that there are several companies interested for the potential of US\$228.6M worth of licences available. Korean and Chinese vessels are already fishing in the area. Mr Dahlstrøm is quoted saying that "Sierra Leone has incredible resources of fish, agriculture and forests that they are not capable of utilising themselves. The

best help the country can get is that rich countries such as Norway contribute by utilising the resources and building up an industry in the country. Then Sierra Leone would, in the long term, become an industrialised country".

Those are troubling statements that suppose large plentiful resources in African

waters. In reality, the biomass of demersal fish in Sierra Leone has declined by an order of magnitude from 672,000 tonnes in 1964 to 67,000 tonnes in 1990. The decline from 1964 to 1990 was due to a massive increase of the catches from 29,100 tonnes in 1964 to 240,600 tonnes in 1990 (Heymans and Vakily, 2002; see Figure 2). There was also a change in the fleet structure, with the foreign fleet increasing dramatically after the mid-1970s (Vakily 1992). The reduction in biomass had resulted in different flow structures for the food webs of 1964 and 1990 (www.saup.fisheries.ubc.ca/Dakar/Session5.html).

The decline in demersal fish of Sierra Leone is consistent with the general decline in biomass shown for West Africa (see www.saup.fisheries.ubc.ca/Dakar/program.html, and MacKenzie, 2002) and the North Atlantic (Christensen *et al.*, 2002). Although Mr Dahlstrøm's view of the world is consistent with the frequent loss of perspective and reference points concerning the state of resources (Pauly, 1995), this view cannot be maintained in the light of recent studies mentioned earlier. Furthermore, the article suggests that most of the Norwegian catch would be landed in Gran Canaria which leads us to believe that there will be

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little indirect benefit for the country, as has happened before (Kaczynski and Fluharty, 2002). In contrast, a national fishery will benefit the population of Sierra Leone directly. Historically, the main catch in Sierra Leone has been taken by the country itself, mainly in the small scale fishing sector (see Figure 2). According to the marketing website of the government of Sierra Leone (www.sierraleone.org.sl/pages/business/fishing.htm), small scale fishing contributes significantly to feeding the population of Sierra Leone and there are plans for pilot smoke oven-fish projects in various fishing communities in the country. In our opinion, using the national fishing fleet would be a much more beneficial way of contributing to the economy of this country and trying to rebuild after a devastating war.



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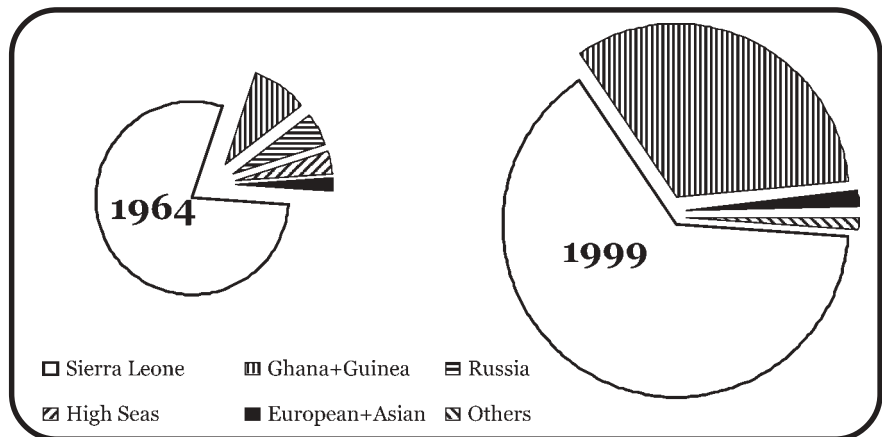


Figure 2 The breakdown of catches by country fishing in Sierra Leone for 1964 and 1999 (Source: Sea Around Us database). Note that the 1999 catch was approximately double that of 1964.

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Unsound Comments about Smith Sound

by William A. Montevecchi

Three hundred or more tonnes of cod have been killed by an extreme cold water event in Smith Sound, the site of one of the best remnants of the northern cod stock in eastern Canada. The most recent information from Fisheries and Oceans Canada scientists is that virtually all of the water in Smith Sound is at -1.6°C and that many more cod may be dead in the water. An extreme and unexpected oceanographic event has occurred.

As the oceanographic event is unfolding and being investigated, there has also been an immediate upwelling of scape-goating and extreme unfounded rhetoric coming from some politicians, the fisheries union and from some fishers. Member of Parliament John Efford continues his inordinate negative focus on seals. As he informs the public and the Minister of Fisheries and Oceans, he has been telling us

about this problem for two decades. He certainly has: "... I would like to see the 6 million seals, or whatever number is out there, killed and sold, or destroyed or burned. I do not care what happens to them ... the more the kill the better I will love it." (Newfoundland and Labrador House of Assembly, 4 May 1998). The head of the fisheries union, another star soloist in the choir of misinformation sings similar unfounded refrains. While seals may have had some association with these fish, that would not be unexpected, it's a hungry ocean out there. However, the real and the most basic concern about seals is the misunderstanding that somehow killing lots of them will help solve fisheries mismanagement problems in eastern Canada. It won't. It would simply be a foolish and horrific blood-letting. Furthermore, it would be a devastating blow to the Newfound-

land seal hunt that in recent times seems to be coming into its own. It is simply not credible, sustainable or ethical for a fisher, hunter or harvester to exhibit hatred for an animal that they utilize.

Some blame seals, some blame foreigners, some assume responsibility. There are no simple, easy or quick fixes. That's difficult to accept because it acknowledges that in the dynamics of marine ecosystem our role is participatory rather regulatory.



Bill Montevecchi is a Professor in the Psychology and Biology and Oceans Sciences Departments at Memorial University, Newfoundland.

Eds: For a well-argued attack on both the 'seal' and 'coldwater' hypotheses, see www.fisherycrisis.com/DFO/frozencod.htm.

Ecofish: strengthening partnerships

by **Silvia Opitz**

University of Kiel, Germany

A two-year project named "Ecofish" has been implemented, beginning in July 2002 at the Institute of Marine Research in Kiel, Germany, with financial support by the European Union. Ecofish stands for "Enhancing the Outreach of Aquatic Biodiversity and Ecosystem Research in Support of the Transition Towards Global Sustainability".

Ecofish has been created with the idea to:

1) strengthen networking activities among FishBase (www.fishbase.org) and *Ecopath with Ecosim* (EwE) (www.ecopath.org) users in Europe and developing countries;

2) co-ordinate research among Ecofish partners (25 scientists from 19 countries), with a view to enhance relevance for global and regional sustainability;

3) increase the impact of research co-operations through dissemination of results to other scientists, decision makers and the public at large; and

4) involve the interested public (such as anglers and divers) in monitoring fish biodiversity.

A scientific steering committee of international experts, supervising the Ecofish work program, meets once per year. Daniel Pauly represents EwE



and the Fisheries Centre in the steering committee.

Several expert workshops on the following topics are organized:

1) Identification and implementation of indicators for sustainable use of aquatic ecosystems with emphasis on FishBase and EwE;

2) Integration of biological databases with ecosystem models, such as FishBase with EwE models, to improve ease of use as well as quality of models;

3) Integration, harmonization, and analysis of biodiversity databases; and

4) Reaching the public with quality information on sustainable use of natural resources and involving special interest groups (e.g. anglers and divers) in monitoring of biodiversity.

The workshop reports are expected to provide an overview on the

state of the art and identify relevant future research activities in the respective areas. An increased level of networking amongst Ecofish partners is expected to lead to long-term co-operations including one or more multi-disciplinary, multi-partner research proposals to be presented to the European Community for funding in the scope of the 6th Frame Work Program.

Strategic alliances with respective organisations in Europe and in developing countries are established. A web-based information system with different interfaces for different user groups is being created that allows participants to directly add and edit some information in FishBase, such as observations of fishes. It is expected that this public database - similar to voluntary weather observations recorded by ships, or occurrences of birds reported by bird watchers - can be evaluated by a variety of means and can be used to analyse local and global trends in aquatic biodiversity. See the next issue for an update on the April EcoFish workshop in Dakar. For further information on Ecofish proceed to the webpage at www.ecofish.org or contact Silvia Opitz sopitz@ifm.uni-kiel.de.



In Memoriam: Sir Cecil H. Green

It is with regret that we inform you of the passing of Sir Cecil H. Green, who died on Saturday, April 12, 2003, at the age of 102. Sir Cecil Green, the founder of Texas Instruments, was a philanthropist who generously supported post-secondary education throughout his life. He studied liberal arts and applied science at UBC from 1918 to 1921, before moving to MIT to complete a Master's degree in electrical engineering. In 1967, Cecil and Ida Green bought the house at Cecil Green Park, UBC, and donated it back to the University. In 1993, it became UBC's first graduate college, Green College, founded by Dr Green. In 1970, the Greens donated \$600,000 to UBC to establish the Cecil and Ida Green Visiting Professorship.

Sir Cecil Green received more than a dozen honorary doctorate degrees during his lifetime, including from UBC (D.Sc, 1964). He was appointed an Honorary Knight of the Most Excellent Order of the British Empire in 1991, in recognition of his educational philanthropy, which totalled \$200 million and benefited numerous medical and educational institutions in Canada, the United States, Britain and Australia. Over the years, many students and visitors of the Fisheries Centre have stayed at Green College and have had their visit enriched by its beautiful surroundings and learned atmosphere. In early 2002, Dr Kevern Cochrane of the FAO, visited the Fisheries Centre as the Cecil H. and Ida Green Visiting Professor in Residence (see *FishBytes* 8-2). Sir Cecil Green will be sadly missed by many people and we extend our condolences to his family and loved ones.

2003 Larkin Lecture: *Trouble on the Reef*

by *Wai Lung (William) Cheung*

On February 20, 2003, Dr Yvonne Sadovy, of the Department of Ecology and Biodiversity, University of Hong Kong, delivered the Sixth Larkin Lecture at UBC, entitled *Trouble on the Reef: tackling a vulnerable and undervalued fishery*. Here, William Cheung, PhD student at the Fisheries Centre and former student of Dr Sadovy shares his impressions of the lecture.

Dr Yvonne Sadovy opened the Sixth Larkin Lecture, *Trouble on the Reef: tackling a vulnerable and undervalued fishery*, with a series of slides depicting beautiful images of tropical fish, copied from the journals of early explorers. These were the same pictures that she had shown in my undergraduate lectures at the University of Hong Kong and the same that had inspired me to pursue a career relating to fish and fisheries. Dr Sadovy became my Masters supervisor and, under her teaching, I began to gain an appreciation of the complexity of the issues facing tropical fisheries in developing countries.

This year's Larkin Lecture, delivered by Dr Sadovy at UBC in February, elegantly highlighted many of these issues, beginning with, and frequently returning to, the story of the disappearance of spawning aggregations of Nassau grouper (*Epinephelus striatus*) in the Virgin Islands of the Caribbean. The Nassau grouper is a large reef fish, with an interesting life-history. It spends most of its life as a sedentary resident of the reef, but aggregates in massive numbers at spawning times, making it an easy target for fishers. It is also in high demand as a table fish. During Dr Sadovy's time as a member of the



Top: William Cheung and Dr Yvonne Sadovy pose for a photograph on the morning of the Larkin Lecture. Bottom: Dr Amanda Vincent (right) thanks Dr Sadovy immediately following the lecture. Photos by R. Forrest

Caribbean Fishery Council and Director of the Fisheries Research Laboratory in Puerto Rico, she became interested in reports that many of these, usually predictable, aggregations of Nassau grouper had begun to disappear. Her work on this issue led her to show that fish with this type of life-history are particularly vulnerable to overfishing and part of the reason for this was that, while fishers and managers had recognized declining numbers as a local problem, they had failed to realize that such declines were actually occurring

simultaneously in a number of locations – thus masking a larger-scale problem affecting the whole region. Similar problems have occurred in south-east Asia and the Pacific, where overfishing is exacerbated by high demand for live reef-fish, destined mainly for restaurants in Hong Kong and South China. Typically, such reef fisheries are undervalued and, with little incentive to conserve them, there is a widespread lack of effective management control.

Dr Sadovy's particular skill in her lecture was to weave the social, economic and biological components of the issue together to illustrate the extreme vulnerability of reef fish with complex life-histories. In doing so, she was able to identify key indicators that might be used to identify vulnerable species and fisheries and that should be the foci of managerial attention. Her lecture was delivered with clarity and simplicity – yet illustrated a complex and difficult issue. For myself, I found the ideas and issues raised in the lecture greatly relevant to my own research and I think this feeling will be shared by most who were in attendance.

Colleagues, family and friends established the Larkin Lecture Fund to honour Dr Peter Larkin when he retired from the University of British Columbia, Vancouver, Canada, 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 *Fish and Fisheries*, subject to the normal refereeing process (until 1999 in *Reviews in Fish Biology and Fisheries*). For the abstracts of this and previous Larkin Lectures, visit www.fisheries.ubc.ca/events/lectures.

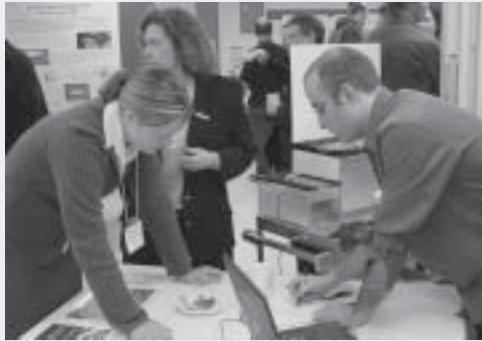


Fisheries Centre Open House

On February 20, 2003, the Fisheries Centre held its first Open House, where members of the public were invited to come and find out what we are all about. Each research group presented posters and interactive displays of their work and were on hand to answer questions. The day was a great success, with lots of people braving the Vancouver rain to come along! Here are some pictures from the day.

Photos by R. Forrest

Nathan Taylor, of Carl Walters' Fisheries Modelling research group demonstrates modelling methods to Sarah Foster of Project Seahorse.



Tony Pitcher and Dr. Frieda Granot, Dean of the Faculty of Graduate Studies at UBC, assign a trophic level to a rockfish to win a candy!

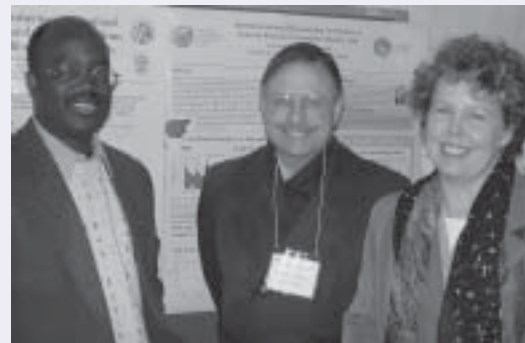


From left: Dirk Zeller, Jackie Alder, Villy Christensen and Deng Palomares of the Sea Around Us project.

Display of seahorse crafts, part of Project Seahorse's program to develop alternative livelihoods for villagers dependent on the seahorse trade.



The Back to the Future Team. From left: William Cheung, Ery Buchary, Nigel Haggan, Sheila Heymans, Cameron Ainsworth and Tony Pitcher.



Rashid Sumaila (left) and Gordon Munroe, of the Fisheries Economics Research Unit, with Jane Hood, Graduate Studies Grants Officer.



Eric Parkinson and Megan McCusker, of the BC Provincial Fisheries Research Branch, with their displays.

And the star of the show - Sitka the Steller sealion, a research animal of the Marine Mammal Research Unit, housed at the Vancouver Aquarium. Photo by A. Trites.



Minister Professor plans fisheries research partnership

by *Tonny Wagey and Tony Pitcher*

Want to guess what country has a Fisheries Minister with a Doctorate in marine biology from Dalhousie University, has worked as a Professor of Fisheries Ecology, and whose chauffeur, once a month, takes the Minister on a two-hour drive to deliver a lecture to students at his old University? Well – the country is Indonesia. And the Fisheries Minister in question is Dr Rokhmin Dahuri.

A couple of years back, newly-elected President Megawati Sukarnoputri telephoned Dr Dahuri at his office at the Bogor Agricultural University set in the lush hills above the sprawling capital, Jakarta. She persuaded him to take up the difficult job of Fisheries Minister. Indonesia has the sixth largest fishery in the world, and many millions of people living in coastal communities, scattered over a huge tropical archipelago. Valuable fisheries for tropical tunas, reef fishes and forage fish caught for food take place against a backdrop of a mosaic of mangroves, seagrass and coral reefs that are home to over 40% of the world's biodiversity of fishes. Management and planning of the multi-species fisheries in these diverse marine ecosystems is serious scientific challenge.

So we are very pleased to announce that, on March 10, 2003, the Fisheries Centre signed an 'Arrangement on Fisheries Research' with the Ministry of Marine Affairs and Fisheries of Indonesia (MMAF). Dr Tony Pitcher, Fisheries Centre Director, and Mr Anang Noegroho, Director of International Institutions of MMAF, signed the document, witnessed by Dr Rokhmin Dahuri (Minister of Marine Affairs and Fisheries), and the Consul General of Indonesia, Mrs Binarti Sumirat. The ceremony was held at the Indonesian Consulate in Vancouver.

At the ceremony, Minister Dahuri said that he was very pleased with the

arrangement because he believes the Fisheries Centre at UBC has the capability to provide valuable scientific assistance to the Indonesian government. He underlined the importance of initiating a tangible collaborative programme after the signing of the document. Following the minister's remarks, Dr Pitcher mentioned the Fisheries Centre's research strengths in ecosystem-based management and the desire to set up a genuine two-way partnership among scientists to better understand fishery resources in support of Indonesian fisheries managers. After the signing ceremony, a dinner reception was held at the Consul General's residence.

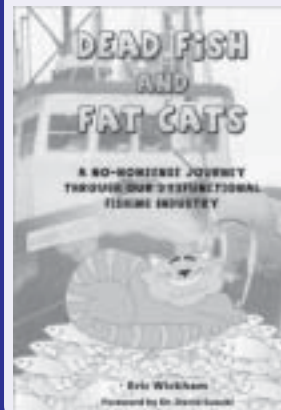
The relationship between the Fisheries Centre and Indonesian institutions goes back more than 5 years, and has been marked by modelling work on three Indonesian marine ecosystems, MOUs with Universities in Bogor and Riau, a visit by an MMAF scientist to UBC for an ecosystem modelling workshop in July 2000, and, in 1999, Fisheries Centre members attended the signing of Indonesia's accession to the UN 'Oceans Charter' in Manado (see *FishBytes* Vol 6 (1)). Currently, a major collaborative proposal is awaiting funding from international donors, and it is hoped that the new arrangement will expedite that research work. Minister Dahuri and Mr Noegroho were supportive of the Centre's study of illegal and unreported fishing in Indonesia, part of the *Sea Around Us* project, and promised to assist in providing relevant information.



Mr Anang Noegroho (seated left) and Dr Tony Pitcher sign the Document of 'Arrangement on Fisheries Research' between the Fisheries Centre and the MMAF, Witnessed by Dr Rokhmin Dahuri (standing left), Mrs Binarti Sumirat and Dr Tonny Wagey of the UBC-Fisheries Centre.

Dead Fish and Fat Cats

A new book about the decline of the BC fishing industry has just been released. *Dead Fish and Fat Cats* is written by fishing-boat captain, Eric Wickham, who fished for salmon, halibut and sablefish in BC for over fifty years. Part detective story, part memoir, *Dead Fish and Fat Cats* explores the question of how an industry that flourished for decades could suddenly founder. Wickham's exposé of the saga of the fish-decline is interspersed with colourful tales of life on the ocean and his reminiscences from the 1950s in the tiny coastal fishing village of Bamfield, Vancouver Island. *Dead Fish and Fat Cats*,



with foreword by David Suzuki, is published by Granville Island Publishing. For more information, please visit www.granvilleislandpublishing.com/profile/deadfish.

News and Notes

Daniel Pauly awarded Honorary Professorship at the University of Kiel

In March this year, Daniel Pauly was awarded the title of *Honorary professor* at the University of Kiel, Germany - the university at which he was awarded a doctorate in Fisheries Biology in 1979, under the supervision of Professor G. Hempel. Since moving to ICLARM in the Philippines in 1979, and then the UBC Fisheries Centre in 1994, Dr Pauly has always maintained strong ties with the University of Kiel. In 1984, he obtained a 'Habilitation' at Kiel, the post-doctoral degree required for teaching in many European universities. He has supervised several PhD students there (including Dr Silvia Opitz, see EcoFish story, p. 3).

The award of *Honorary professor* was proposed by the University Senate of the University of Kiel and was approved by Ministerpräsidentin Heide Simonis, the Premier of the state of Schleswig-Holstein. The award enables Dr Pauly to fully participate in the university's affairs.



Dr Pauly being presented the award of Honorary professor by Rektor Professor Dr Reinhard Demuth, of the University of Kiel. Photo by Silvia Opitz

Welcome

The Fisheries Centre welcomes more new faces this month ...

Karin Bodtker has joined the team at the Marine Mammal Research Unit as a research assistant to work on modelling potential competition between Steller sea lion foraging and commercial fisheries in the North Pacific. She recently completed her Master's at Simon Fraser University, BC, under Dr Randall Peterman, where she worked on developing precautionary reference points for Fraser River Sockeye salmon escapement goals, based on the productivity of nursery lakes.

Dr Gordon Hastie has just arrived from the University of Aberdeen, Scotland, where he completed his PhD on detailed aspects of the foraging habitat and diving behaviour of bottlenose dolphins off Scotland. He then worked as a post-doc, studying the oceanographic determinants of sperm whale distribution around the

Faroe Islands. Now at UBC, he'll be working studying the metabolic consequences of diving and foraging techniques by Steller sea lions at the Marine Mammal Research Unit's new Open Water Facility at Port Moody.

Dr Mary-Anne Lea has recently joined the Marine Mammal Research Unit from Tasmania, Australia, where she completed her PhD studying the relationship between the foraging activity of Antarctic fur seals and oceanographic variability around the Kerguelen Archipelago in the Southern Ocean. Over the last 10 years she has also studied the foraging behaviour and energetics of southern elephant seals and crested penguins on sub-Antarctic Macquarie Island. At the MMRU she will be studying the fine-scale relationship between juvenile Steller sea lions and their fish prey in SE Alaska and Prince William Sound.

And some that are not so new but are starting new jobs...

Dr Sheila Heymans, formerly of the *Back to the Future* project and **Dr Sylvie Guénette**, of the *Sea Around Us*, are both moving to the Marine Mammal Research Unit to begin work on a project named *Ecosystem analysis of Steller sea lion dynamics and their prey* - a new project, initiated by Dr Villy Christensen and Dr Andrew Trites. It aims to use ecosystem models of the Gulf of Alaska, the Aleutian Islands and the East Bering Sea to test whether the decline of Steller sea lions is due to environmental change, food web competition, trophic cascade effects or fishing.

Dale Marsden, formerly of *Project Seahorse*, is now working in the Fisheries Economics Research Unit (FERU), researching the trade of fishery products. He started by looking at the Pacific halibut fishery and trade in BC, but is now expanding the study to cover all species traded in Canada. He would like to begin a PhD this September.



News and Notes

Congratulations



Melanie signing the ceiling of the beer room after her defence: a long-standing Fisheries Centre tradition.

Congratulations to Melanie Power for successfully defending her PhD thesis, *Fishing for Justice: An Ethical Framework for Fisheries Policies in Canada*. Melanie was supervised by Professor Tony Pitcher and her project grew out of the *Just Fish* project (see *FishBytes* 6-2). Melanie will be staying in Vancouver to take up a post-doctoral fellowship with Democracy, Ethics and Genomics project (gels.ethics.ubc.ca) at The W. Maurice Young Centre for Applied Ethics (www.ethics.ubc.ca). The project will call upon her doctoral work on environmental ethics and fisheries policy, as well as her background as a political scientist, and will also lead her into new directions

involving the ethics associated with genomics (salmon and human). She will be working with Dr Michael Burgess, Chair in Biomedical Ethics at UBC. Most readers will remember Melanie as the previous editor of *FishBytes* – a position she held for many years. She is glad to be staying in Vancouver, and relieved that her investment in rain gear over her doctoral years will not have gone to waste!

Faculty Citation Rates

Average annual citation rate of Fisheries Centre faculty over the past ten years, since 1993 (from *Science Citation Index*: *Trites average over six years; *Sumaila average over four years). Figures are approximate and rounded.

Walters	303	Neill	101
Pauly	284	Trites*	49
Pitcher	214	Vincent	44
Healey	152	Sumaila*	18

Conferences

Fourth World fisheries Congress - Call for Abstracts

The Fourth World Fisheries Congress now invites abstract submissions for consideration for the Congress program. Deadline is July 1, 2003. To submit an abstract, please visit www.worldfisheries2004.org/abstract/abstract.htm.

Quantitative Ecosystem Indicators for Fisheries Management

March 31 to April 3, 2004, UNESCO Headquarters, Paris, France.

Organised by the Scientific Committee on Oceanographic Research and Intergovernmental Oceanographic Commission. Co-convened by Dr Philippe Cury, IRD, UCT Oceanography Department, South Africa and Dr Villy Christensen, of the UBC Fisheries Centre. The Symposium will deal with two major themes: 1) to provide an overview of the vast range of indicators of exploitation and state of ecosystems being developed for fisheries management from an ecosystem perspective; and 2) to cover the scientific basis for integrating indicators into an effective ecosystem approach to fisheries. This comprises the evaluation of indicators, the definition of operational frameworks and communication to stakeholders. For more information, visit www.ecosystemindicators.org.

People and the Sea II:

Conflicts, Threats and Opportunities

September 4 - 6, 2003, Amsterdam, the Netherlands.

The Centre for Maritime Research (MARE) hereby announces its second international conference. The theme of the conference - conflicts, threats, and opportunities - arises from the conditions of resource erosion and livelihood insecurity that currently prevail in maritime areas globally. While critically engaging the problems that people face in coastal and maritime settings, the conference will highlight emerging attempts to mitigate them. The conference is intended for researchers and practitioners working within the social sciences and humanities on maritime topics, although papers from natural scientists will also be considered if they adopt a social scientific approach. For more information, visit www.marecentre.nl/people_and_the_sea_2/index.html.

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Our mailing address is UBC Fisheries Centre, 2204 Main Mall, Vancouver, British Columbia, Canada, V6T 1Z4 and our fax number is +1 (604) 822-8934. All contributions, reprint requests, subscription requests and address-changes should be sent to Robyn Forrest, *FishBytes* Editor, at the above address, or by email to FishBytes@fisheries.ubc.ca. Opinions expressed in this newsletter do not necessarily reflect those of the Fisheries Centre or its members. For back-issues, visit the Fisheries Centre's website, www.fisheries.ubc.ca, and follow the Publications link to *FishBytes*.

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