

# FISHBYTES

THE NEWSLETTER OF THE FISHERIES CENTRE – UNIVERSITY OF BRITISH COLUMBIA  
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## Welcome to the Fourth World Fisheries Congress

by Daniel Pauly and Robyn Forrest

The Fisheries Centre members welcome the participants of the Fourth World Fisheries Congress to Vancouver. We are proud to be silver sponsor to this event, the most important event in the world of fisheries research. Members of the Fisheries Centre have been associated with the first three fisheries congresses, but our participation has never been as strong as it will now be, and it is not only a matter of location.

Involvement by the Fisheries Centre began in 2001 when Bruce Ward, of the BC Fisheries Research and Development Section and now Congress Co-Chair, was asked to chair the congress by the Presi-



The Congress logo, "Mayant" ("respect") was created by artist Calvin Hunt especially for the Fourth World Fisheries Congress. To read more about it, please visit [www.worldfisheries2004.org/artwork/artwork.htm](http://www.worldfisheries2004.org/artwork/artwork.htm)

persons who would lead sessions and/or present keynotes; and considered each and every abstract submitted to the Congress before compiling the final programme (see "Quality, Relevance, Equity", p7, this issue). In addition, the Congress theme, "Reconciling Fisheries with Conservation: The Challenge of Managing Aquatic Ecosystems", was suggested by Tony and was selected by the International Steering Committee and members of the International Fisheries Section of the AFS at the annual AFS meeting in Phoenix. We take this opportunity to thank Tony and Bruce for all their efforts towards bringing the Congress together.

Fisheries Centre members registered a large number of presentations at the Congress, not least because its overall theme very well matches the focus of the Fisheries Centre: *i.e.*, "restoring fisheries, conserving aquatic life, rebuilding ecosystems and researching options". We briefly present these contributions inside this special issue of *FishBytes*, to illustrate our commitment to the Fourth World Fisheries Congress, to document the breadth of work presently undertaken at the Fisheries Centre, and in the process, to provide a guide to any Congress participant interested in attending one or several of these presentations.

Three of the conference's keynote presentations and plenary addresses will be given by Fisheries Centre members (Daniel Pauly, Carl Walters and Amanda Vincent<sup>1</sup>) and we have a number of oral and poster presentations, mainly by Fisheries Centre Faculty, their graduate students and/or other members of projects they lead.

Last but not least, we have a booth (close to that shared by two of our projects, the *Sea Around Us* project and FishBase) peopled by graduate students of the Fisheries Centre, offering information about the Fisheries Centre, its projects and their many research activities.

1. Note: Dr Vincent was selected as a keynote speaker whilst still at McGill University.

### SPECIAL FOURTH WORLD FISHERIES CONGRESS EDITION

Welcome

Units and Unity: who we are

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Ecosystem indicators

dent of the American Fisheries Society (AFS), after their successful bid to host the fourth congress in North America. At Bruce's invitation, Tony Pitcher, the Fisheries Centre's founding Director, then joined as the head of the Programme Committee.

The Programme Committee determined the Congress structure and sub-themes; identified the



# The Fisheries Centre: Units and Unity

by Jackie Alder and Robyn Forrest

## Restoring fisheries, conserving aquatic life, and rebuilding ecosystems: researching the options

This special issue of FishBytes gives us the opportunity to introduce ourselves to World Fisheries Congress delegates who might not yet be familiar with us, whilst providing our established readers and colleagues with a timely 'refresher' about our research units and the work that they do. Although we are made up of seven research units, we are united under the common themes encapsulated in our mission statement above. Many of the oral and poster presentations that you will see on the following pages are the result of collaborations among members of our different research units and we are proud of the productive relationship that many of our members share with their colleagues in different units. Here we list the key features of our research units and in doing so, we hope to illustrate the breadth and depth of the research being done at the Fisheries Centre.



### Sea Around Us project

[www.seaaroundus.org](http://www.seaaroundus.org)

Principal Investigator (P.I.):

Dr Daniel Pauly

The Sea Around Us project (SAUP) assesses large-scale impacts of fishing on marine ecosystems and finds solutions to the challenges they pose using a variety of tools including ecosystem modelling, mapping, economic and policy analyses and public outreach. SAUP's tools for mapping global catches make it possible to look at landings spatially and enables quantification of ecosystem impacts of fisheries at a larger scale than ever attempted before.



### Project Seahorse

[www.projectseahorse.org](http://www.projectseahorse.org)

P.I.: Dr Amanda Vincent

Using seahorses as flagship species, this

unit advances marine conservation by undertaking biological and social research, then applying its findings to the management of populations, habitats, fisheries, and trades. Project Seahorse has a strong commitment to international policy development and was instrumental in the recent addition of seahorse to the CITES list of regulated species - a major achievement for marine conservation.



### Marine Mammal Research Unit

[www.marinemammal.org](http://www.marinemammal.org)

P.I.: Dr Andrew Trites

The Marine Mammal Research Unit conducts multidisciplinary research on marine mammals in the field, in captivity and in the laboratory. The Unit works with other Departments, Institutions and FC units in a coordinated effort to combine specialties and provide research and advice on matters related to marine mammals. Members investigate interactions between humans and marine mammals, marine mammals as indicators of ecosystem change, and their natural history, biology and conservation.



### Back to the Future

[www.fisheries.ubc.ca/](http://www.fisheries.ubc.ca/projects/btf/)

[projects/btf/](http://projects/btf/)

P.I.: Dr Tony Pitcher

Back to the Future is an integrative approach devoted to restoring aquatic ecosystems and ensuring that they are fished sustainably. Tony Pitcher and his team use historical and traditional knowledge, ecosystem simulations and participatory workshops that foster a sense of ownership, and ecological economics, biodiversity and employment measures to evaluate the tradeoffs of policy goals. Research projects are based in British Columbia, Newfoundland, Indonesia, Portugal, Mexico, Australia, Brazil, the UK and Hong Kong.



### Quantitative Modeling Group

P.I.: Dr Carl Walters

This group focuses on

population and ecosystem dynamics and sustainable resource management. Its members develop a range of models exploring ecosystem interactions and stock assessment methodologies. In collaboration with other projects at the Fisheries Centre, the University of Wisconsin and the US National Marine Fisheries Service, they are exploring the use of Ecopath with Ecosim as fisheries management tools. Recent studies include the ecological effects of fishing, optimal management strategies and the utility of marine protected areas.



### Fisheries Economics Research Unit

[www.fisheries.ubc.ca/ru/](http://www.fisheries.ubc.ca/ru/)

[feru/](http://feru/)

P.I.: Dr Ussif Rashid Sumaila  
The guiding principle of this unit is "fisheries benefits for all generations" and the use of economic tools to address issues relating to the management of aquatic resources for the benefit of current and future generations, while maintaining ecosystem integrity. Research interests range from fundamental economic theory to applied empirical studies. Although less than two years old, the unit has already captured the attention of scientific colleagues and national and international funding agencies.

Continued on page 3 - Units and Unity

*Units and Unity - Continued from page 2*

### BC Fisheries Research and Development Section

The Fisheries Centre houses 12 members of the Aquatic Ecosystems Science Section, Biodiversity Branch of the BC Ministry of Water, Land and Air Protection. The section conducts research on freshwater fisheries management, fish habitat restoration, fish forestry interactions, and fish culture techniques. In addition, an active focus on conservation biology supports British Columbia's

goal of maintaining and enhancing the province's fish and wildlife species and their habitats.

In addition to these units, the Fisheries Centre, UBC First Nations House of Learning ([www.fisheries.ubc.ca/aborig/](http://www.fisheries.ubc.ca/aborig/)) and the BC Aboriginal Fisheries Commission ([www.bcafc.org](http://www.bcafc.org)) have a Memorandum of Understanding aimed to make university science more relevant to First Nations communities, accelerate enrolment of Aboriginal graduate students and explore practical

and respectful ways to incorporate First Nations' traditional knowledge and values in managing aquatic ecosystems.

*For more information about the Fisheries Centre's research, staff and students, please visit our website ([www.fisheries.ubc.ca](http://www.fisheries.ubc.ca)). Here you can download research reports, as well as past newsletters and annual reports. Hard copies of our annual reports, including the most recent, edited by Jackie Alder and James Hrynshyn, are also available at our Congress booth.*



## The Fisheries Centre at the Fourth World Fisheries Congress



*Here we list the oral and poster presentations given by faculty, staff and students of the Fisheries Centre. Presentations are listed by day and then by theme. Sessions led by Fisheries Centre members and colleagues are indicated. Abstracts for each presentation and poster are available online at [www.scolars.com/worldfisheries/program/](http://www.scolars.com/worldfisheries/program/).*

### Grand Conference Keynote

9.45 am

*Reconciling Fisheries with Conservation*

Daniel Pauly

### Q1-1 Achieving RFC Through an Ethical Approach

3.30 pm (oral presentation)

*Achieving RFC through an ethical approach*

Harold Coward, Conrad Brunk, and Melanie D. Power

5.00 pm (oral presentation)

*Reconciling fisheries and allocation using a justice-based approach*

Melanie D. Power and Tony J. Pitcher

### Q1-2 The Human Dimension in Achieving the RFC

POSTERS

*How to evaluate fishers' decisions in terms of fishing effort allocation in mixed fisheries? Management implications*

Silvia Salas and Ussif Rashid Sumaila

## Day 1 Monday May 3rd 2004

*Success through stewardship: Conservation of white sturgeon in the Lower Fraser River, BC*

Troy C. Nelson, Rick Hansen, Marvin L. Rosenau, William J. Gazey, Karl K. English

### Q1-5 Reconciling Fisheries and Conservation (RFC) and Lessons from History

*(Session Leader: Tony J. Pitcher)*

3.30 pm (oral presentation)

*Back to the Future: A solution to the fisheries problem*

Tony J. Pitcher

4.45 pm (oral presentation)

*Opening the Lost Valley: Evaluating goals for restoration in Northern British Columbia*

Cameron H. Ainsworth and Tony J. Pitcher

POSTERS

*Restoring the northern South China Sea ecosystem: identification of strategies*

*and their cost-effectiveness*

Wai Lung Cheung and Tony J. Pitcher

*How to build models of the past for the "Back to the Future" approach*

Sheila J.J. Heymans and Tony J. Pitcher

*"Back to the Future" in Newfoundland*

Sheila J.J. Heymans, Cameron Ainsworth, Tony J. Pitcher and Wai Lung Cheung

*Towards reverting the shifting baselines in fisheries: The use of historical accounts of great abundance to affect the cognitive map of resource users*

Eny A. Buchary and Tony J. Pitcher

### Q4-1 RFC and Quantitative Ecosystem Indicators:

*An index of ecosystems resilience for the Newfoundland marine ecosystem, from Network Analysis.*

Sheila J.J. Heymans

### Q4-7 By-catch Reduction and RFC

*Haunted Waters: A tentative global estimate of ghost fishing of large crustaceans (poster)*

Amy Min-Yee Poon, Reg Watson and Daniel Pauly



# The Fisheries Centre at the Fourth World Fisheries Congress



## Day 2

## Tuesday

## May 4th 2004

### Q3-3 RFC by Habitat Improvement- Freshwater

**11.00 am (oral presentation)**

*Whole-river ecosystem restoration to reconcile fisheries with conservation at the Keogh River in coastal British Columbia*

Patrick A. Slaney, Bruce R. Ward, Don J.F. McCubbing

### Q1-4 Fisheries Trade and RFC 2.00 pm (oral presentation)

*Universal minimum size limits for managing trade in an entire genus of fishes listed on CITES Appendix II*

Sarah J. Foster and Amanda C.J. Vincent

#### POSTERS

*The Global Marine Aquarium Database – European trade statistics for marine ornamental fish*

Colette Wabnitz and Sarah E. Ferriss

*The importance and effects of fishing marine species for pharmacological use*

Bob Hunt and Amanda C.J. Vincent

*Canada's international fisheries trade since 1950: volume, value and implications for conservation*

A. Dale Marsden and U. Rashid Sumaila

### Q1-6 RFC and Maintaining Biodiversity

#### POSTERS

*Using a Fuzzy Logic Expert System to identify resilience and extinction vulnerability of marine fishes*

Wai Lung Cheung and Tony J. Pitcher

*FishBase at the Fisheries Centre, University of British Columbia*

Maria Lourdes D. Palomares and Daniel Pauly

*The Sea Around Us project's biodiversity database: documenting the ecosystem*

*and biodiversity impacts of global marine fisheries*

Maria L. D. Palomares and D. Pauly

### Q1-7 RFC and Jurisdictional Equity 11.30 am (oral presentation)

*When a Fisheries code backfires*

Erwin O. Brunio and Amanda C.J. Vincent

#### POSTERS

*Estimating Illegal, Unreported and Unregulated fish catches*

Tony J. Pitcher, Daniela C. Kalikoski, Reg Watson and Daniel Pauly

*Illegal Unreported and Unmandated (IUU) study of Indonesian fisheries*

Gabriel A. Wagey, Indroyono Soesilo and Tony J. Pitcher

### Q2-2 RFC and Aboriginal Fisheries

**11.00 am (oral presentation)**

**(Session Leader: Simon Lucas)**

*Everything is One*

Simon Lucas

### Q2-3 RFC and Small Scale Fisheries

**3.15 pm (oral presentation)**

**(Session leader: Ratana Chuenpagdee)**

*Small is Beautiful? - A global evaluation of small-scale fisheries*

Ratana Chuenpagdee and D. Pauly

### Q2-5 RFC and the Valuation of Fisheries

**(Session leader: Ussif Rashid Sumaila)**

**3.15 pm (oral presentation)**

*Economic valuation and the reconciliation of fisheries to conservation*

Ussif Rashid Sumaila

**4.15 pm (oral presentation)**

*Intergenerational Discounting and the conservation of fisheries resources: A case study in Canadian Atlantic cod*

Cameron H. Ainsworth and Ussif Rashid Sumaila

**4.45 pm (oral presentation)**

*Subsidies, buybacks and sustainable fisheries*

Colin Clark, Gordon Munro and Ussif Rashid Sumaila

#### POSTERS

*Development of a global database of ex-vessel prices for commercial marine resources*

Eny Anggraini Buchary and Ussif Rashid Sumaila

*Export and processing growth points in Namibian fisheries: opportunities and limitations*

Orton V. Msiska, Ussif Rashid Sumaila and A. P. Ithindi

### Q3-2 RFC and the Ecological Footprint of Aquaculture

**4.15 pm (oral presentation)**

*The rapid expansion of global aquaculture's ecological footprint*

Peter H. Tyedmers, Reg Watson and Daniel Pauly

#### POSTERS

*Aquaculture: a Solution or a problem?*

Yajie Liu

*A trophic model approach for analyzing, determining and forecasting the effects of aquaculture development on ecosystems*

Pablo Trujillo and Tony J. Pitcher



# The Fisheries Centre at the Fourth World Fisheries Congress



## Day 2

Tuesday

May 4th 2004 *cont'd.*

### Q4-1 RFC and Quantitative Ecosystem Indicators

11.00 am (oral presentation)

*The role of quantitative ecosystem indicators and objectives for fisheries management in reconciling fisheries with conservation: What are quantitative management goals for ecosystem management?*

Philippe M. Cury

### Q4-2 Ecosystem Modelling and RFC (Session Leader: Villy Christensen)

3.15 pm (oral presentation)

*Using ecosystem modeling for fisheries management and marine ecosystem conservation: where are we?*

Villy Christensen

### 4.45 pm (oral presentation)

*Looking at fisheries on a large scale: Challenges and opportunities*

Yvette Rizzo, Andrea Coombs, Brajgeet Bhathal, Katia Freire, Ahmed Gelchu, Andrea Hunter, Vasiliki Karpouzi, Kristin Kaschner, Tom Okey, Amy Min-Yee Poon, Dave Preikshot, Wilf Swartz, Dawit Tesfamichael, Louisa Wood, Daniel Pauly

### POSTERS

*Tracing mercury through the Faroe Island marine food web, and its impact on human seafood consumption*

R. Shawn G. Booth, Dirk Zeller and Jakup Reinert

*Incorporating the Ecopath modeling approach into United States fisheries management*

Roger Pugliese and Thomas A. Okey

*Fisheries and conservation in New South Wales, Australia: an ecosystem modelling approach*

Robyn Forrest and Tony J. Pitcher

*Trophic ecosystem models of the upper Gulf of California (Mexico); evaluating past biodiversity and productivity*

Hector M. Lozano and Tony J. Pitcher

*Reconciling the decline of the Steller sea lion with fisheries and ecosystem change in Alaska*

Sylvie Gu enette, Sheila J.J. Heymans and Andrew W. Trites

### Q4-3 The Role of Data Quality in RFC POSTERS

*The global fisheries crisis as a rationale for improving and reconstructing catch statistics*

Dirk Zeller and Daniel Pauly

*Long-term monitoring of a seahorse fishery in central Philippines*

Denise M. McCorry, Melita Samoily, Erwin Bruino and Amanda C.J. Vincent

*Genetic tagging as a novel method for improving the value of tag returns from commercial fisheries*

Sean Cox, Rik C. Buckworth, Lynne Yamanaka and Merran Hague

*Genetic Tagging to Monitor Catchability and Fishing Rates*

Rik C. Buckworth, Sean P. Cox, Simon Hoyle and Jenny R. Ovenden

## Day 3

Wednesday

May 5th 2004

### Plenary Coral Reefs Keynote 8.30 am

*Reconciling Fisheries with Conservation in Marine Waters: the Coral Reef Example*  
Amanda C.J. Vincent

### Q4-5 RFC Over-capacity and Effort Management

2.15 pm (oral presentation)

*Fueling the Decline: Energy, overcapacity and global fisheries*

Peter H. Tyedmers, Reg Watson and Daniel Pauly

### Q4-6 RFC and Protected Areas/Times 11.45 am (oral presentation)

*Modeling and mapping trophic overlap between marine mammals and fisheries on a global scale: implications for fisheries management*

Kristin Kaschner, Reg Watson, Andrew W. Trites, Villy Christensen and Daniel Pauly

### 2.00 pm (oral presentation)

*Optimal spatial and temporal allocation of fishing effort to meet economic and conservation objectives*

Sean P. Cox, Steven J.D. Martell, Carl J. Walters and Steven Cox-Rogers

### POSTERS

*Variable impacts of MPAs on exploited fish species in the Central Philippines*

M. Samoily, J. Anticamara, B. Giles, B.T. Cabrera, E. Brunio and Amanda C.J. Vincent

*Selecting ecologically viable marine protected areas in British Columbia*

Natalie Ban and Amanda C.J. Vincent



# The Fisheries Centre at the Fourth World Fisheries Congress



## Events

**Coastal Ocean Forum: "Movement Toward World Summit Targets for Fisheries in Large Marine Ecosystems: A Global Perspective."**

**Mon May 3, 2004: 6:30 pm - 9:30 pm**

*Location: Hyatt Regency Hotel, Georgia B, 2nd floor*

During this forum, Daniel Pauly and Ratana Chuenpagdee will give a presentation entitled "Fishing Down the Food Chain Without Precaution in the Gulf of Thailand LME".

**Roundtable: *Small is Beautiful - Roles of small-scale fisheries in conservation of aquatic ecosystems***

**Mon May 3, 2004: 7:30 pm - 8:30 pm**

*Location: Room Plaza A, Hyatt Regency Hotel, Vancouver*

Discussion on the roles and contributions of small-scale fisheries in conservation of aquatic ecosystems, with an aim to develop strategies and mechanisms to promote sustainable management of small-scale fisheries and reconcile fisheries with conservation. Contact: Ratana Chuenpagdee ([rchuenpa@sfx.ca](mailto:rchuenpa@sfx.ca)).

***Innovation and Outlook in Fisheries***

**Fri, May 7, 2004: 9:00 am - 5:00 pm**

*Location: Marriott Residence Inn, 1234 Hornby Street, Vancouver.*

A critical assessment of the contributions of current research to reconciling fisheries with conservation. A template will be used to systematically evaluate all oral presentations at the World Fisheries Congress. The results will be presented at the workshop, which is open to everyone (note that space is limited and registration is required). Organizer: AQUALINK (co-sponsored by the Fisheries Centre). Contact Ratana Chuenpagdee ([rchuenpa@sfx.ca](mailto:rchuenpa@sfx.ca)).

## Day 4 Thursday May 6th 2004

### Plenary: Panel of Keynote Speakers 2.00 pm

*Disputant's Comments: Reconciliation versus Honest Analysis of Tradeoffs*  
Carl J. Walters

### MH-2 RFC in Coastal Zones

*Impacts of non-selective fishing gears on the population structure of two seahorse species in a coastal lagoon* (poster)

Janelle M. Curtis and Amanda C.J. Vincent

### MH-3 RFC in Estuaries

*Modelling the role of 'estuaries closed' to fishing* (poster)

Robyn Forrest and Tony J. Pitcher

### MH-4 RFC in the Deep Sea

**10.30 am (oral presentation)**

*Ecosystem simulations in support of the management of seamount ecosystems: the Bowie Seamount Area (British Columbia, Canada) example*

Telmo Morato, Tony J. Pitcher, Kevin Conley and Dale Gueret

### MH-5 RFC in Coral Reefs 10.45 am (oral presentation)

*Gold rush: the rise and fall of a sea cucumber fishery in the Central Philippines*

Siân K. Morgan and Hazel M. Panes

### MH-5 RFC in Coral Reefs

*The North American trade in marine fauna for curiosities* (poster)

Melissa Grey, Anne-Marie Blais, Alanna Edwards and Amanda C.J. Vincent

### MH-6 RFC in Enclosed Seas 10.45 am (oral presentation)

*Multidisciplinary evaluation of the sustainability of Red Sea fisheries using Rapfish*

Dawit Tesfamichael and Tony J. Pitcher

### Q4-4 Decision Frameworks and RFC

*Collaborative development of management options for an artisanal seahorse fishery in the Central Philippines* (poster)

Keith Martin-Smith, Melita Samoily, Jessica Meeuwig and Amanda C.J. Vincent

### Workshop: *Using Ecosystem Modeling for Fisheries Management* **Mon May 10 through Fri May 14, 2004**

*Location: Student Union Building, UBC*

This workshop will be based on the use of Ecopath with Ecosim (EwE; [www.ecopath.org](http://www.ecopath.org)) that is finding widespread use throughout the world for ecosystem-based management of fisheries. The workshop will explore

the use of EwE to address ecological questions; evaluate ecosystem effects of fishing; explore management policy options; evaluate impact and placement of marine protected areas; and evaluate the relative effect of fisheries and environmental changes, to mention some key areas. Instructors: V. Christensen and C.J. Walters. Registration essential. Contact Janice Doyle ([j.doyle@fisheries.ubc.ca](mailto:j.doyle@fisheries.ubc.ca)).

# Quality, Relevance, Equity

by Tony J. Pitcher and Bruce Ward

As the former Director (TJP) and a long-time associate of the Fisheries Centre (BW) we would like to congratulate UBC Fisheries Centre members and former members for their considerable success in submissions to the World Fisheries Congress. It might be thought, given our association with the Centre, that they had some kind of inside track, but that is far from the truth. The Programme Committee, composed of nine international members - listed below - adopted strict criteria, applied in a hierarchy, when allocating oral speaking slots and posters - a procedure approved by the Executive Committee to which we report. The same principles were adhered to when seeking replacement speakers after drop-outs. To give some idea of the Programme Committee's task: 1211 abstracts were submitted from 89 nationalities and 78 countries. With 39 concurrent sessions, there are 243 oral presentations. Thirty percent of the submitted abstracts were graded as of very high quality for oral presentation, yet only half of these could be chosen. The first criterion was therefore a score reflecting how well the submitted abstract addressed the congress and session theme with new research of high quality. Scores were made independently by committee members, and then assessed one-by-one at a week-long meeting held at FAO in Rome in September 2003. Where scores were close, three further criteria were brought into play: we favoured female over male presenters, developing countries over developed, and non-North American presenters over North American. In this way we strove to make the World Congress as international, equitable and of as high a quality as possible: Fisheries Centre members had no 'inside track'.

The Fourth World Fisheries Congress Programme Committee members are: Pete Bisson (USA), Keven Cochrane (FAO/South Africa),

Paul Hart (Co-Chair, UK), Steve Kennelly (Australia), Jennifer Nielsen (Chair of Publication Committee, USA), Tony Pitcher (Chair, Canada), Yvonne Sadovy (Hong Kong), Bruce Ward (Congress Co-Chair, Canada), Jack Wingate (USA).

Since the inaugural congress planning meeting with the International Advisory Committee in August 2001, the full Programme Committee has met three times. The first meeting was in Vancouver in November 2001, to determine the structure of the theme questions and sessions and to invite the Keynote speakers. The second was also held in Vancouver in March 2002 to review Keynotes, invite session leaders, and devise the programme schedule and abstract submission procedure. The third was held at FAO in Rome in September 2003, as mentioned above.

The Programme Committee has worked hard over the past two- and-a-half years, and we very much hope you will all enjoy the World Congress!

# Andrew Trites named Distinguished Junior Scholar

We are very pleased to announce that Andrew Trites (pictured far right on p8), principal investigator of the Marine Mammal Research Unit, has been named a Distinguished Junior Scholar by the University of British Columbia. The title is awarded to outstanding and innovative scholars whose accomplishments have, at an early stage in their careers, had a major impact in the field and who have emerged as scholars of international distinction. The Distinguished University Scholars programme is designed to retain at UBC scholars of exceptional merit, two of whom are now on Faculty at the Fisheries Centre (Daniel Pauly was named a Distinguished University Scholar in 2003). Please join us in congratulating Andrew on receiving this award.



## Fisheries Centre booth

by James Hrynyshyn



The Fisheries Centre is taking advantage of its participation in the Fourth World Fisheries Congress by assembling a versatile display booth featuring all six major research units. Fisheries Centre graduate students will

be in attendance at the booth and have taken much of the responsibility for its organization, particularly student representatives Louisa Wood and Colette Wabnitz. This will be the first time that we display our new banners (left), which were designed, after much discussion, by graduate student Andrea Coombs and myself. The design uses the artwork created by graphic designer Cindy Young for the Fisheries Centre's new brochure. Jackie Alder has incorporated the same art into banners for the *Sea Around Us* project, allowing for an economical mix-and-match approach to booths at future conferences.

# Quantitative Ecosystem Indicators

by **Vasiliki Karpouzi**  
*Fisheries Centre graduate student*

In collaboration with Philippe Cury of the Centre de Recherche Halieutique Méditerranéenne et Tropicale, France, the Fisheries Centre's Villy Christensen recently convened a major conference in Paris entitled "Quantitative Ecosystem Indicators for Fisheries Management" (March 31 - April 4, 2004), at which there were more than 250 participants representing 43 countries. Here at the Fourth World Fisheries Congress, Dr Cury will lead the session *Q4-1 RFC and Quantitative Ecosystem Indicators* (Tuesday May 4, 11.00 am) with a presentation of the major outcomes of the Paris conference and the meetings of the Intergovernmental Oceanographic Commission/ Scientific Committee on Oceanographic Research (IOC/SCOR) Working Group 119 that preceded the conference.

I was fortunate enough to go to Paris, along with several other Fisheries Centre members, and here I offer my own summary of the meeting. There was a common consensus amongst participants that environmental changes along with intense fishing practices have been responsible for seriously impacting the structure and function of marine ecosystems. Thus, indicators are useful tools for predicting and quantifying changes in ecosystems. Work presented at the symposium focused on: (a) the development of indicators, based on social and biological information; (b) the performance and reliability of indicators; and (c) their utility in fisheries management. More importantly, their use as tools within an Ecosystem Approach to Fisheries (EAF) framework was also emphasized. Some major concerns were expressed at the symposium: (i) a wide range of ecosystem indicators already exists, yet many have not been tested within an EAF framework. Evaluation of indicators is therefore of greater importance than the development of new ones. (ii) The establishment of an EAF framework has so far been attempted by looking mainly at only one component of the ecosystem: fish communities. Indeed, oral and poster presentations that used marine mammals and seabirds as indicators of ecosystem change were only one and five respectively out of 195 overall. Lastly (iii) raising public awareness using indicators to communicate knowledge of the ecosystem's state is of paramount importance in achieving successful implementation of EAF. Overall, it was broadly acknowledged that scientists have taken major steps towards establishing a framework for ecosystem-based fisheries management, while they are improving the quantitative tools needed for its implementation.



*Fisheries Centre members and colleagues at the Paris Ecosystem Indicators conference. Front row (L-R): Steve Mackinson, Beth Scott, Sheila Heymans, Karin Bodtke, Maria Lourdes (Deng) Palomares, Vasiliki Karpouzi and Andrew Trites. Back row (L-R) Cornelia Nauen, Nicolas Bailly, Simone Libralato, Daniel Pauly, Carl Walters, Marta Coll, David Preikshot and Villy Christensen.*

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