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THE NEWSLETTER OF THE FISHERIES CENTRE AT UBC

Coastal Zone Canada '98

By Dr Ratana (Ying) Chuenpagdee

Coastal Zone Canada '98 (CZC) Conference was held in Victoria from August 30th to September 3rd, the third in a series of conferences in coastal zone management that takes place every two years. The theme of this year was "Coastal Communities in the 21st Century: Sharing Our Experience, Building Our Knowledge". About 400 participants from over 40 countries attended the conference.

The conference was unique in its format. Apart from the usual plenary sessions in the morning where keynote addresses and selected papers were presented, seven concurrent workshops were held in the afternoon. For three days, participants were asked to attend one of the workshops, ranging from the topics of community-based management, sustainable fisheries, and marine protected areas to competing uses, pollution and environmental degradation. The aim of the workshop was to explore the problems and issues relating to each topic and to come up with a set of tools that could be used to deal with them. Most participants were frustrated from not knowing exactly what to expect from these workshops, but in the end, many tools were developed as a result. Although the usefulness of these tools remains to be seen, it was a good exercise and a good attempt to develop something practical as an outcome of a conference.

Another highlight of the conference was the youth participation. Prior to the CZC Conference, about 80 youths from across Canada spent three days discussing their roles and contribution in coastal management. They presented their views at the main conference and challenged the participants to listen to them with respect as they have much to offer, with open minds and no preconceived ideas.

At the end of the conference, the international delegates (mostly from developing countries, and of which I was one), got together to discuss whether our expectations were met at the conference. Overwhelmingly, we agreed that it was more the sharing of our experience about coastal communities in coastal zone management to those from developed countries than the building of our knowledge from their expertise. This was, of course, far beyond our expectations.

Two ***Fisheries Centre members had papers at CZC '98. Ratana Chuenpagdee presented a paper from her doctoral thesis entitled "Damage Schedules: An alternative approach for integrated coastal zone management". Ratana's participation at the conference was sponsored by CIDA. "Ethical Analysis as a basis for policy decision making: Canadian fish stocks, east and west" was co-authored by Melanie Power of the Fisheries Centre and graduate students from the University of Victoria and Memorial University of Newfoundland. This paper was based on the work of the 'fish ethics' project (see*** FishBytes *3(5), or visit the Fisheries Centre's web site and follow the links).***

Ratana Chuenpagdee recently completed her PhD in Resource Management and Environmental Studies through the Fisheries Centre. (See FishBytes *4(4).)*

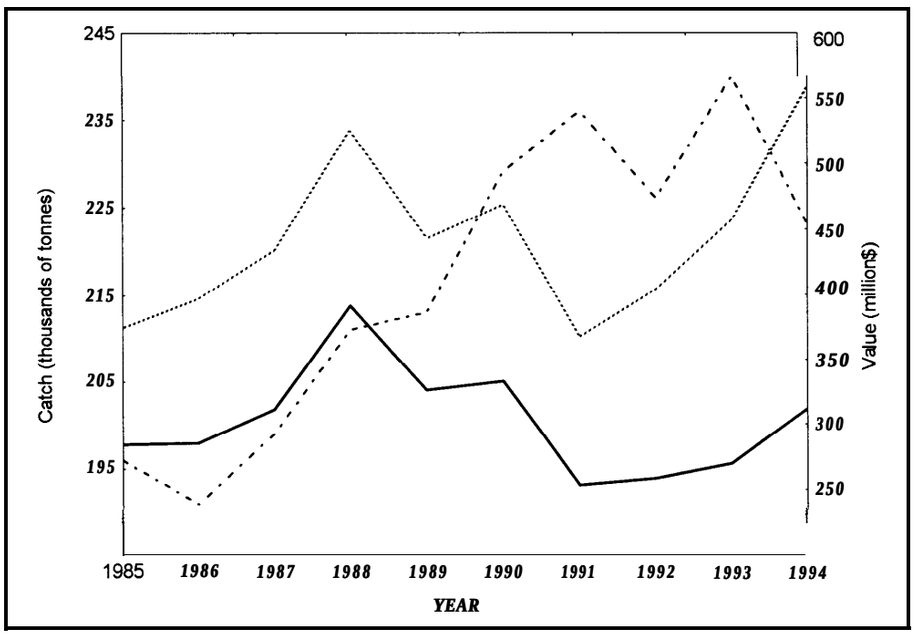
FishBytes is now available in .pdf format on the Fisheries Centre's **website!** Visit www.fisheries.com and follow the links. A link is also available to download the free Acrobat Reader software needed to read .**pdf files**.

Why we should use deflated dollars when plotting time series of catch values

By David Preikshot

As we all know, all currencies tend to lose value as time goes by, a process called inflation. Therefore when we want to compare the values, say, of fisheries catches from different time periods we must use currency units which account for inflation, i.e. de- flated dollars.

The graph at right, representing the catch and value of BC commercial fisheries for the period 1985-1994, was generated using data provided in the ***Annual Summary of British Columbia Commercial Catch Statistics, 1994, Pacific Region,*** as compiled by the Fisheries Catch Statistics Unit. The dotted line shows the value (in $Cdn) data and the dashed line shows the catch (in tonnes) as reported on page 10 in the table titled "B.C. Landings and Value: 1985-1994". The solid line showing the actual deflated value of the catch in $US and was generated by using a Canadian Consumer Price Index (CPI) which set prices at a 100% nominal value baseline in 1986. This CPI was taken from page 196 of ***The 1997 Canadian Global Almanac.*** The reported values were then converted to their US dollar equivalents **using** the average exchange rate value for each year, in order to accurately represent the real value of the fishery on the global stage. This is a practice common among economists when comparing the performance of different economies, since US dollars are the ***de facto*** international currency and time series of deflated US dollars are readily available in all countries for comparison. US dollar exchange rates were generated from the exchange rates table on page 198 of ***The 1997 Canadian Global Almanac.***



As shown in the graph the values reported by the Department of Fisheries create a false impression of constant growth in value, mirroring increasing catches over the time period covered. The conversion of deflated value however, shows that in fact there has been almost no growth in the value of catches in BC. This was also true when data for species and gear sectors (on pages 10-12 of the report discussed here) were deflated. This indicates that while the data reported by DFO suggests growth in the nominal value of the fishery the truth is that most growth in value has been slight (sockeye, herring roe and halibut), or non existent (chinook, chum, coho and pink). For the gear types reported (gillnet, seine and troll) only troll experience slight real growth in real value, while gillnet and seine declined). While there is some indication of this in the original data the magnitude of the economic difficulties facing the BC fisheries industries are masked by not using some constant value conversion. It would be very interesting to compare the constant value of the BC fishery through a wider time period, especially given the larger catches of earlier decades.

(David Preikshot is a Master's student, working with Dr Daniel Pauly.)

Third Larkin Lecture

On Thursday, March 4, 1999, the Third Larkin Lecture will be given by Dr Kevern Cochrane and will be on the topic of "Reconciling sustainability, economic efficiency and equity in fisheries: the one that got away?". Dr Cochrane is a senior research officer at the UN Food and Agriculture Organisation with special responsibility for the Caribbean and southeast Atlantic. Dr Cochrane is also a member of the Fisheries Centre's International Advisory Council. More details will follow in future issues of *FishBytes*. ***(Please note change in date of the lecture!)***

The Law of Ma'at, Modelling and Lake Nasser

By Tony Pitcher

Many of the cornerstones of Canadian life, such as the balance between freedom, wealth, bureaucracy and taxes, not to mention recreational and commercial fishing, turn out to have their origins in the civilisation of ancient Egypt. The ethical basis of Egyptian life was expressed as the goddess Ma'at, originally the power, favour and justice between the upper and lower Egyptian kingdoms, but by the time of the Old Kingdom Pharaohs (they built the great pyramids c4500 BP), coming to reflect the harmony and balance of forces among all things.

That balance concept sound familiar? Right! Ecopath ecosystem models are also based on balance among all elements. Hence my paper entitled ***Ecopath and the Law of Ma'at,*** written for a recent workshop I attended in Egypt and a hopeful challenge to the best-selling *Ramses* novels by the French Egyptologist, Christian Jacques.

A disruption to the balance of Ma'at between upper and lower Egypt that was not present in pharaonic times is Lake Nasser/ Nubia, a hydro-electric project that dammed the Nile in a big way in the 1960s. Hydroelectric and other benefits have been partially offset by the lack of nutrients from the now-controlled annual Nile flood, so that fertilisers have become essential and a 60,000 t Mediterranean sardine fishery off the Nile delta has collapsed, while a new 'delta' is rapidly silting the upstream, Sudanese end of the lake.

The illustration shows the goddess Ma 'at, sea ted, wearing her ostrich feather, by which she is sometimes represented.

"Constraints to the Production of Lake Nasser's Fisheries" was the focus of an ICLARM workshop held in Aswan, Egypt from June 20th – 23rd, 1998. Convened by ICLARM's principal scientist in Egypt, Dr John Craig, whom many will remember from his visit to the Fisheries Centre last year, the workshop was the first planning phase of a major research project. The meeting was attended by over 25 Egyptian scientists and social scientists from the research laboratory at Aswan, Egyptian universities and research institutes, representatives from FAO, NRI (UK), ICLARM HQ in Manila, and other African scientists familiar with human-made lakes.

The workshop was held on an island in the Nile, reached by a boat passing a 4500-year-old Nileometer that measured the annual flood (taxes were based on the predicted flood height), and a Royal cartouche incised at the ancient border of Egypt with Nubia. The Nile valley here is verdant green packed with brightly-coloured birds, a stunning contrast with the sharply-demarcated desert sand and blue sky. We visited the magnificent Nubian museum (built with Canadian help), and the temple of Isis (Osiris is one of the oldest resurrection myths), relocated after the Nubian valley was flooded.

In a striking parallel to events in then Rhodesia after the construction of the Kariba Dam on the River Zambezi, and in Canada after the Nechako project in British Columbia, local people were displaced by the rising waters: Nubians on the Nile, Katonga on the Zambezi, and Cheslatta on the Kemano. In all three places there are stories of people being forced from their homes at gunpoint, although this is hotly denied by two of the three governments (the present Zimbabwean and Zambian governments can credibly deny responsibility). Certainly, over 150,000 Nubians were displaced by the construction of the Aswan Dam, and, as in the other two countries, there is growing political concern about their re-settlement conditions.

The fish catch from Lake Nasser is recorded at the government-run landing station as 30,000 t, although as fishers have to take the government fixed price, it is estimated reliably that a further 25,000 t is sold illegally. The principal food fish in the lake are Nile tilapia (to 25kg), Nile perch (some get to over 100kg) and several large catfish. We also saw the extraordinary Rift Valley freshwater puffer fish (it puffed for us).

The research lab at Aswan houses a big, well-run hatchery built by the Japanese to release large numbers of Nile tilapia fry. This is odd, as I was not aware that this prolific mouthbrooding tilapia could be recruitment limited. The hatchery facilities might in future be used to conserve riverine cyprinids, which are now short of breeding sites and comprise valuable food and sport fish. As often in African Lakes, simple improvements to post-harvest treatment would add tremendous value to the fishery.

Its riverine origin means that there are no pelagic zooplantkivores in this human-made lake, as evidenced by the very high cladoceran to copepod ratio, and some hulking great ***Daphnia.*** Lake Nasser is therefore a candidate for the introduction of planktivorous freshwater lake sardines from Lake Tanganyika, or nilotic sardine species from West Africa. Fish introductions in Africa have a bad press on account of the Nile perch in Lake Victoria, but sardine introductions are a relatively unsung success story in Lakes Kariba, Cahora Bassa, Kainji, and Kivu (see my 1995 book ***The Impact of Species Changes in the African Lakes,*** Kluwer). Preliminary modelling suggests that over 80,000 t might be harvested sustainably in Lake Nasser, but some careful evaluation has to be performed first.

The principal aim of the Lake Nasser project is ecosystem and community-based management of the lake fishery resources, with an overriding concern of preserving water quality. Watch for the workshop proceedings to appear in the Fisheries Centre library.

News and Notes

New Fisheries Centre Members

Ling Tong has joined the Fisheries Centre as a visiting scholar and will be here for three months. Ling is from Qingdao city, Peoples' Republic of China, where he works for the Yellow Sea Fisheries Research Institute. The Institute is the biggest marine fisheries institution in China and is involved in research on resources and mariculture in the Bohai Sea and the Yellow Sea. Ling's research is on the fish stock assessment and ecosystem modelling, and has come to the Fisheries Centre to work with Daniel Pauly on Ecopath projects. Specifically, they will be developing Ecopath models of the Bohai sea in Chinese waters, an area studied under a Chinese research project (19982000). He is glad to be the Fisheries Centre and hopes to have a good time here.

Elizabeth Mohammed is from Trinidad and Tobago and is on scholarship from the CARICOM (Caribbean Community) Fisheries Resource Assessment and Management Program to pursue an MSc in Resource Management and Environmental Studies. Elizabeth too completed her B.Sc. (Zoology) and M. Phil. degrees at the University of the West Indies, St. Augustine campus, in Trinidad. Before coming to UBC, she worked at the Fisheries Division, Ministry of Agriculture, Land and Marine Resources, most more recently as a Fisheries Officer. At the Fisheries Centre, Elizabeth's research will trace the development of fisheries in the eastern Caribbean region in the post-War era. She also intends to propose options for future management of fisheries in the region in light of present regional and international developments.

Stephen Watkinson recently received his BSc in Natural Resource Conservation from UBC. At the Fisheries Centre he will be working toward an MSc with Daniel Pauly. Stephen's research project has yet to be determined but will likely deal with native fish traps and their use as a selective harvesting method for salmon along BC's coast. Stephen is the inaugural First Nations student at the Fisheries Centre. The Fisheries Centre, along with the First Nations House of Learning, wants to bring more aboriginal students into the Fisheries Centre, and hopes are that there will two more First Nations students joining the Centre next year. Stephen's ancestry is Tsimshian from the Kitkatla band (a little island just south of Prince Rupert). Although Stephen did the majority of his growing up in the town of Port McNeill, he has been relaxing in Sooke for the past several years.

Conference Calls

The American Fisheries Society North Pacific International Chapter Annual General Meeting will hold a **Bull Trout Workshop** at Prestige Lakeside Resort and Conference Centre in Nelson, BC, November 16-17 1998. For information contact Gordon Haas at Ghaas@ubc.env.gov.bc.ca, (604)222-6769, or Tim Slaney at 76043.2377@compuserve.com, (604)266-l 113, fax (604)266-1513.

Advance notice for the **19th Northeast Pacific Pink and Chum Salmon Workshop,** to be held in Juneau Alaska March 3-5 1999. For more information, contact one of the workshop co-chairs at the Auke Bay Laboratory in Juneau, Alaska, USA: Sharon Hawkins (907)789-608 1, Christine Kondzela (907)789-6084, Charles Guthrie III (907)789-6093, or Richard Wilmot (907)789-6079.

Publications

Global versus Local Changes in Upwelling Systerns is a collection of 33 contributions originally presented at an international conference held in September 1994 in Monterey, USA. Editors include the Fisheries Centre's Daniel Pauly. For information, contact Orstom editions-Diffusion at 01 48 02 56 49, fax 01 48 02 79 09, or email diffusion@bondy.orstom.fr.

Spawn, Sprat, and Sprains, from the Alaska Sea Grant College Program, describes the dangers faced by shellfish farmers and hatchery workers at the work site, and how to reduce the chance of injury. For information, call (907)474-6707, fax (907)474-6285, or email FYPUBS@uaf.edu.

FishBytes is the. newsletter of the Fisheries Centre at the University of British Columbia. Contributions and queries should be sent to Melanie Power, *FishBytes* Editor, Fisheries Centre, 2204 Main Mall, UBC, Vancouver, BC, Canada, V6T 1Z4, or by email to melanie@fisheries.com.

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