



The Fisheries Centre was well represented at the CREAM Conference in Barcelona, with, from left to right, Dr. Philippe Cury (International Advisory Council Member), Dr. Marta Coll (former visiting scientist), Chiara Piroddi (former student), Dr. Simone Libralato (former visiting scientist), Dr. Daniel Pauly (Principal Investigator of the Sea Around Us), and Aylin Ulman (current student) (courtesy A. Ulman).

CREAM Conference in Barcelona

By Aylin Ulman

On April 9 and 10th, 2014, Dr. Daniel Pauly and I joined the international CREAM (Coordinating Research in support to application of Ecosystem Approach to Fisheries and Management advice in the Mediterranean and Black Seas) conference in Barcelona. The conference itself was hosted at the lovely seaside Institut de Ciències del Mar, located in the Vila Olímpica district.

Dr. Pauly opened the conference as keynote speaker by giving an overview of the *Sea Around Us* global catch reconstruction project, and illustrated several individual results. Dr. Marta Coll and Chiara Piroddi (former visiting scientist and student of

the Fisheries Centre, respectively), as well as myself then presented the results of four Mediterranean catch reconstruction case-studies: Spain, France, Italy and Turkey, respectively. From these presentations, it became apparent that Mediterranean fish stocks have been rapidly declining for the last couple of decades, likely earlier than the reported data suggest.

The conference had a healthy fusion of scientists both from the northern and southern Mediterranean, necessary in the context of Mediterranean fish stocks, since many stocks are shared. One fact which shocked many of us was that the Egyptian Mediterranean has over 1,000

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bottom trawlers in operation, atypical of the region. Talks which I found very interesting included Dr. Jordi Leonhart's example of a successful co-management regime in the sand-eel fishery of Catalonia, Dr. Marta Coll's Mediterranean-wide initiative to develop a new set of indicators to assess exploitation status, Dr. Francesc Maynou's results of his 'Shifting Baselines' assessment of elasmobranchs in the Mediterranean, and Dr. Simone Libralato's multi-fleet EwE (Ecopath with Ecosim) model to manage multi-species fisheries.

Mediterranean fish stocks have been rapidly declining for the last couple of decades

On a networking level, this meeting was very important for my ongoing projects. Collaborations and the sharing of information are crucial in the success of marine conservation work, most of which is fairly new to me. I was delighted to meet some Turkish scientists I did not know previously and discuss the local problems and initiatives at depth (which is part of my thesis). In addition, I got some advice on statistical analysis techniques I could apply to some of my survey results on the 'Shifting Baselines of the Turkish and Cypriot fisheries'.

The end of the conference closed with a round-table discussion on how best to implement the Ecosystem Approach to Fisheries framework in the Mediterranean and Black Seas. Before ensuring that there are enough fish to sustain the fisheries and all the stakeholders, including even the seabirds as Dr. Philippe Cury suggested, the rapid decline of fisheries first must be dealt with, before it becomes irreversible because certain thresholds will have been bypassed.

Some of the key points emphasized were that:

- A new vision is urgently needed for the Mediterranean and Black Sea fisheries;
- Processes, not only problems, need to be monitored;
- Leading policymakers need to be convinced that fisheries matter; not only oil & gas, tourism and aquaculture;
- A compliance committee needs to be established to ensure that overcapacity is dealt with; this is an illness and should be treated with prescriptive medication;
- More science is not necessarily needed; rather, clear messages and fast solutions are needed;
- Research needs to continue to be a collaborative process utilizing social and economic indicators;
- Co-management needs to incorporate the Traditional Ecological Knowledge (TEK) of fishers, since fishers have lifetimes of important understanding, and excluding them from management undermines our collective knowledge;
- Successful case-studies of ecosystem-based management need to be shared and promoted;
- Research and the inclusion of small-scale fishers is almost totally lacking in this large marine ecosystem. However, they are the largest sector in terms of players, which should warrant more attention; and
- Marine Spatial Planning is multi-zone management as a mosaic, and the health of the ecosystem is not just for fisheries but for all stakeholders. Perhaps there are too many actors in too small an area 

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The *Sea Around Us* Project website can be accessed at www.seaaroundus.org and contains up-to-date information on the Project.

The *Sea Around Us* Project is a scientific collaboration between the University of British Columbia and The Pew Charitable Trusts that began in July 1999. The Pew Charitable Trusts work around the world to establish pragmatic, science-based policies that protect our oceans, wild lands and climate. Pew also sponsors scientific research that sheds new light on the dimensions of and solutions to the problems facing the global marine environment.



A beautiful view of Rome from the United Nations Food and Agriculture Organization's (FAO) headquarters (© D. Belhabib).

The *Sea Around Us* at FAO's Headquarters

By Dyhia Belhabib

As part of the *Sea Around Us* reconstruction of worldwide marine fisheries catch, we always end up comparing our results to the data supplied to the United Nations Food and Agriculture Organization (FAO) by its Member Countries; statistics which eventually make their way to us through FAO's software FishStatJ. It is these official catches that we complement with what is missing, e.g., industrial discards, subsistence catches, illegal catches of various sectors. Although this approach does not assume by default that these official data are wrong (but rather lacking to account for non-commercial sectors), it often has to face a certain degree of controversy. This is particularly true while attending official meetings.

Just when I thought I had managed to go through the most challenging meetings I could ever have to attend with regards to catch reconstructions — i.e., facing government officials supplying the original data to FAO — I had the immense honour to go to FAO's headquarters in Rome, Italy, to present some key findings of West African catch reconstructions at the Second Symposium on Fishery-Dependent Information, on March 3-6 2014. This symposium was designed for "resource managers,

scientists and the fishing sector [and focused] on the collection and interpretation of information in the context of the ecosystem approach". I was there, stepping upon the previously known great empire of Julius Caesar.¹

Although the conference — I thought — was largely at the disfavour of the developing countries,² the very fact that a 'fisheries dependent data' conference was organized and included a fair number of colleagues from developed countries meant a great deal to me with regards to the global effort of the *Sea Around Us*: "You may be rich, but you still depend on fisheries catch data — just as any other developing country."

I was really surprised to see that our methods — although more global in scope — were reproduced at very local scales and were generally welcomed. This certainly

¹ Or at least, what remains of it — lots of ruins and valuable rocks. This reminded me that too much power and expansion often leads to losing control and ultimately collapse, an interesting analogy to present day fisheries.

² The United States, Europe and Norway were particularly well represented.

contributed to de-emphasizing the controversy and putting the emphasis on interpreting the results, where it always should have been.

I was privileged to be one of the very few people to talk about West Africa, or should I say Africa at all. Accompanied and supported by Angela Bednarek (from The Pew Charitable Trusts), the talk went smoothly, and questions about common issues, e.g., uncertainty and lack of data, were not raised. Apparently, these issues were common for everyone in the room; a room filled with senior FAO staff members, so I used this opportunity to introduce myself.

A brief encounter with one of these senior FAO staff member was most surprising. I was told things such as "we saw that official landings were increasing sharply in some islands, and we discovered that some countries were adding 6% every year, which is very dubious", or "some countries even question the very fact of supplying data to us", or "a lot is missing from their data". So it was clear to me that even FAO staff members are perfectly aware of — and understand — the issues that we are dealing with on a daily basis, and that a 'zero' is the worst possible estimate for a sector that may well not be marginal at all.

Yet — and ironically-enough — this uncertainty appeared to vanish when I mentioned that the catch reconstructions by the *Sea Around Us* are meant to address this very

issue, i.e., reduce that uncertainty. These issues were particularly apparent with poor countries, notably those of Africa, and the situation of having developed countries over-represented did not help. I, for one, felt that it was unfair for Africa, along with other developing regions of the world, to be under-represented despite the immense efforts of the organizers and the hosts. We often think we know what to do when we have the money and capacity to monitor fisheries, but we have to start accepting alternative solutions for the other, less wealthy countries.

The next meeting where there will be opportunities to continue these discussions will be on the occasion of the meeting of the Committee on Fisheries (COFI) in June, described in the FAO website as "the only global inter-governmental forum where major international fisheries and aquaculture problems and issues are examined and recommendations addressed to governments, regional fishery bodies, NGOs, fishworkers, FAO and international community, periodically on a world-wide basis". Hopefully, this will provide the opportunity for starting a more sustained collaboration 

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The Salish Sea in FishBase and SeaLifeBase

By ML Deng Palomares and Nicolas Bailly

We reviewed the biodiversity of the Salish Sea and its regional components (Puget Sound, Straits of Georgia, and Juan de Fuca) based on the incorporation into major databases — i.e., FishBase (www.fishbase.ca) for fish and SeaLifeBase (www.sealifebase.ca) for other marine organisms — of a massive body of literature data. The objective was to document the marine biodiversity of the Salish Sea, and if possible to complete this documentation for marine vertebrates.

This information is vetted for quality and can be compared with information from similar ecosystems. The review resulted in a complete list of about 250 fish species for the Salish Sea in FishBase (over 150 for Puget Sound, about 200 for the Strait of Georgia, and about 140 for the Strait of Juan de Fuca), and over 2,000 marine species in SeaLifeBase, extracted from about 100 published sources (see figure on the right side).

Though documentation is ongoing (notably for marine invertebrates), we can now say that overall, the Salish Sea is as biodiverse as can be expected of a temperate ecosystem of its size, i.e., 17,000 km².

This work was presented as the sole 'fish' contribution at the session on 'Marine Birds and Mammals of the Salish Sea: Identifying Patterns and Causes of Change' during the 2014 Salish Sea Ecosystem Conference (April 30-2 May 2014) held at the Washington State Convention and Trade Center in Seattle, Washington 

