

Cleaning oiled seabirds: Highly overrated

by Michelle Paleczny

Since the Deepwater Horizon explosion of April 20th, millions of litres of oil continue to gush into the Gulf of Mexico every day, intensifying what will turn out to be the largest oil spill in history. The environmental impacts are highly visible, and images of dolphins, sea turtles and seabirds struggling in oil are making headline news. Emergency facilities have been established to clean the oiled wildlife. Seabirds are the most frequent visitors at these facilities, especially vulnerable to oil spills due to their large marine ranges and feathered bodies which lose insulation and flying ability once oiled. However, through my seabird studies, I have come to realize that this effort to relieve the seabirds of their suffering may actually do little more than alleviate our guilt, and here is why:

First, a cleaned seabird is not a saved seabird. Survival rates of cleaned seabirds range from 1% to 80%. Survival of a cleaned seabird depends on many factors, including: severity of starvation and hypothermia when collected, amount of oil ingested (oil can be cleaned externally but not internally where it causes chronic poisoning), stress caused by contact with humans, species-specific characteristics that determine resilience (e.g., size, foraging method), methods used to assess survival rate, and condition of the remaining habitat. Furthermore, there is little evidence that survivors breed successfully. Although cleaning oiled seabirds may reduce some suffering, it often has little or no benefit at the population level.

Second, the seabirds saved from this oil spill are a drop in the bucket. Cleaning oiled seabirds will save a fraction of the thousands of seabirds oiled in this spill, yet we kill



Oiled gull and pelican at East Grand Terre Island, Louisiana. Photos by Charlie Riedel, The Boston Globe.

hundreds of thousands of seabirds every year when we entangle them in our fishing gear, deplete their food stocks, introduce predators to their breeding islands, destroy their breeding habitat, eat them, cull them, and poison them with various chemicals, plastic, and oil. Seabird decline is a global problem that requires global action. I find it hard to believe that paying \$4,000 to \$18,000 per cleaned seabird is the best approach for advancing seabird conservation.

If we value seabirds and other marine life, we can better show this through actions that prevent oil spills, such as banning oil exploitation in wildlife-rich areas (e.g., the Gulf of Alaska, where the smaller Exxon Valdez spill killed hundreds of thousands of seabirds) and reducing our dependence on oil altogether.



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Better baselines: Workshop highlights role of historical ecology in ocean policy

by Jennifer Jacquet

... analyzing only fish biomass from, say, 2005 onward, we could erase the problem of overfishing around the globe.

What we can't see, can hurt us. The use of inadequate baselines in ocean policy and management has allowed for a steady erosion of both our perception and use of marine resources [1]. As an example, let's look at the New England Fisheries Management Council's 2007 stock assessment for monkfish (*Lophius americanus*) in the Northwest Atlantic, which reversed the scientific community's previous proclamation that monkfish were overfished and in great need of rebuilding. There was a perverse reason for the reversal: the new analytic model ("SCALE") for monkfish used to generate the stock assessment was done considering data using a shorter assessment time frame (1980-2006) rather than the previously-used time frame (1963-2006), when biomass indices from surveys were approximately two times higher than 1980s estimates [8]. Using

similar techniques analyzing only fish biomass from, say, 2005 onward, we could erase the problem of overfishing around the globe.

Many ocean policies call for baselines

but they also allow management to consider a timeframe that best suits certain interests and not necessarily society as a whole. Improving baselines by taking an early industrial or pre-industrial perspective of the ocean could lead to more precautionary policies regarding fisheries quotas, pollutant discharges, and habitat modification as well as the implementation of no-entry oceanic zones, which could all demonstrably benefit humanity, even in the short term. How to make the connection from historical ecology to policy?

This question was the premise of a five-day May 2010 workshop led by Drs. Jeremy Jackson and John Pandolfi and hosted at the Smithsonian Natural History Museum. I participated alongside 19 others, including environmental lawyers (e.g., Kathryn Mengerink of Environmental Law Institute and Steve Roady of Earthjustice), marine managers (e.g., John Day, Director – Ecosystem, Conservation and Sustainable Use, Great Barrier Reef Marine Park Authority and Billy Causey, Southeast Regional Director for the U.S. National Marine Sanctuary Program), and scientists (e.g., Loren McClenachan, Terry Hughes, and Julia Baum). Based on our collective experience and a review of the literature, we compiled marine-related examples of U.S. and Australian legislation that is guided by baselines, the misuse of baselines, and policy recommendations.

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The *Sea Around Us* website may be found 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 Environmental Group. The Group supports nonprofit activities in the areas of culture, education, the environment, health and human services, public policy and religion. Based in Philadelphia, the Group makes strategic investments to help organizations and citizens develop practical solutions to difficult problems. In 2000, with approximately \$4.8 billion in assets, the Group committed over \$235 million to 302 nonprofit organizations.

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As research uncovers the species abundance and richness of the past [3-8], there is a tendency toward disbelief. This is because many historical ecological baselines contradict a functional but fictitious bias: that the world is getting better. This is not true in many places, including many parts of the ocean. How can we use existing legislation to turn back the clock even a little and regain some of the ocean's past bounty? Watch for a paper coming soon with some possible answers to this question.

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Photo of the group in the Sant Ocean Hall of the Smithsonian Natural History Museum.

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Welcome

In May, **Dr. Kristin Kleisner** started a postdoc with the *Sea Around Us* Project. Kristin did her PhD at the University of Miami, Rosenstiel School of Marine and Atmospheric Science, followed by postdoctoral work at Texas Tech University and University of Western Sydney. Kristin will be working on global indications as part of a collaborative project funded by Conservation International.

The *Sea Around Us* Project also welcomes several new researchers. **Debbie Shon** and **KJ Kim** join the team to assist in catch reconstructions of South and North Korea. To help with reconstructing Taiwanese fisheries, the *Sea Around Us* also welcomes **Daniel Kuo**.

The UN experience

by Sarika Cullis-Suzuki

When I was done, I knew instantly I must have said something wrong.

If someone had told me this is where I'd end up, I would never have believed them.

Yet here I was, just six months after completing my MSc at the University of British Columbia Fisheries Centre, at the United Nations Headquarters in New York City about to address a roomfull of delegates-in-suits seated behind little country name plates... wondering what the heck I was doing.

The 2010 United Nations Fish Stocks Review conference took place May 24 to 28th 2010. This was a global forum convened to evaluate the effectiveness of the 1995 UN Fish Stocks Agreement¹. Current examinations on fisheries bodies and fish stocks on the high seas were particularly pertinent to this conference: PEW² was interested in the results of our recently published paper on the global effectiveness of regional fisheries management organizations (RFMOs), so asked Daniel Pauly to present our findings. But Dr. Pauly was to be in Peru at the time of the UN event, and thus could not make it. So he sent me.

The research Dr. Pauly and I carried out describes the effectiveness of the current 18 global RFMOs (see *Sea Around Us* 55), i.e., the international fishing organizations that were established to 'manage' and 'conserve' fish stocks on the high seas. The main findings of our work are that RFMOs are neglecting to uphold their duties as established by the UN Fish Stocks Agreement, and are thus failing the high seas; literally: they score low both

in theoretical effectiveness (as determined by their written texts) and even lower in practical effectiveness (as determined by the actual state of the stocks they manage).

At the UN event in New York, everything was interesting... even the lineups (I had my photo taken with Mr. Joji Morishita while in line, like a true tourist). After getting a pass (to get our *real* pass), we were well on our way, and after security we were finally inside. And now it was impossible not to get caught up in the excitement and bustle of the place: hundreds of people from all over the world, all walking with purpose, dressed up in suits or traditional wear, and oh! There's Mr. Ban Ki Moon! Exhibits, full rooms, speakers with flags waving behind them... It felt like... like this is where things came together, like this is where progress was being made. The historic sculptures representing justice and peace overruling war and hatred added to the place's powerful impression. We felt part of something very grand indeed.

All this temporarily distracted me from the task at hand, and suddenly it was time to get ready for my talk. The delegates began filing into the room, and I was fiddling with the translator box, wondering why it was suddenly so hot in here.

Had I known the audience would include the very people I evaluated in my research- i.e., delegates of many of the world's RFMOs- I doubt I would have used such strong language or been so direct in speech. But I was lucky: I *didn't* know. So I was bold.



With Mr. Joji Morishita, Counsellor of the Japan Fisheries Agency.

There were four of us speakers on the panel, all connected with PEW. I followed the mc, my presentation lasting only 10 minutes. When I was done, I knew instantly I must have said something wrong. You could have heard a pin drop. And then, up shot the hand of a representative of Norway (those name plates sure are handy) who apparently couldn't wait until the other speakers had presented: he had to voice his displeasure with my

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Standing outside of the UN building.

UN meeting - Continued from page 4

methodology and my data right away, and tell me just how wrong I was.

And so it went, after the other three panelists had spoken- two scientists and a lawyer, all women- for an hour and a half: the questioning continued. And almost every question was launched at me. And almost all the questions were criticisms. I was beginning to wonder what I had done wrong, or how I could be any more clear- most of the 'comments' were the same, and so I found myself repeating things, with special emphasis on the fact that I could only state what the data showed. When one particularly determined delegate asked where I got my data from, because they *had* to be faulty, I had to answer him honestly that I took them from his RFMO's website. He finally went quiet. Through their questions and reactions it was clear that these were business people first, and conservation organizations second; they had little patience for my results or my conclusions. Of course I understood that they had to defend their organizations, but it saddened me to hear them pick out and argue the mundane details of my study and painstakingly ignore the big picture.

When it was all over, I didn't feel good. I didn't feel happy or satisfied. I felt like bawling. I felt very guilty for having upset these people. Further, it wasn't a pleasant experience to 'defend' myself and my work over and over to a bunch of agitated strangers. And it was troubling to have people angry with my work because they say they don't understand it... only to follow up with the comment that they don't 'have time' to read the research and become informed. Overall, when it was done I felt sad. Watching people refuse to take

ownership for the state of the very things their organization was founded for, and depends on, was harsh.

At that moment, I understood why people, especially scientists, don't speak out. Because it can make you uncomfortable. On so many levels. And it forced me to question myself: were my statements too strong? Did extrapolating to the global scale make my study's results inherently useless? How am I even qualified to speak with any confidence about these things? I wondered if, in the end, I had any right to be addressing these people and making statements on these powerful organizations.

A few days later, safely back in Vancouver, I got a phone call from someone saying the conference and the results of the press briefing were all over the internet. A quick Google search revealed just how broadly the event had been picked up. It occurred to me that had my language been anything less than strong, my speech any less direct, my conclusions less severe, the audience at the conference would surely have been half the size. I am sure I would not have been quoted in the media. And I am sure I would not have upset anyone. In short, I doubt my presentation would have mattered. Conversely, though perhaps a long shot, I hope the outcome of this event and the findings of our research cause some heads to turn, force an RFMO member to pause and think about the impact of their organization, or shock someone reading Fox News.

Throughout this whole UN experience I have been conscious of how important every step was, and how often, science doesn't end with something as satisfying as a publication. Indeed, science will lead you, if you let it, to something highly unsatisfying, unsettling, and... invaluable.

Thanks to the Pew Environment Group and the *Sea Around Us* Project for this insight.

Notes

¹ Also known as the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

² This study was funded by the Pew Environment Group.

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