

“Sustainability of Deep-Sea Fisheries”.

A global trend that has not yet penetrated public awareness is the spread of commercial fishing into deeper, more remote waters. Our experience in environmental policy has shown that nothing changes for the better until the public is aware and aroused enough to pressure decision makers to effect change. People and TV cameras can see spilled oil for themselves, but all the public knows about what’s happening in the depths of the open oceans depends on scientists. And public perception on some subjects—such as impacts of fisheries—lags far behind what we, as scientists, know. That is why we are asking you to participate in a study that Marine Conservation Biology Institute (MCBI) is coordinating on sustainability of deep-sea fisheries.

A growing number of eminent marine scientists (e.g., Merrett and Haedrich 1997; Moore and Mace 1999; Koslow et al. 2000; Morato et al. 2006) have offered evidence and reasoning indicating that deep-sea fisheries are generally unsustainable. Dick Haedrich and his students recently made a big international press hit with a brief paper (Devine et al. 2005) in *Nature* on the vulnerability of five deep-sea fishes. Peter Tyedmers, Reg Watson and Daniel Pauly (2005) point out that commercial fisheries burn 1.2% of the world’s oil (only the top 18 countries burn more fuel), which is 12.5 times the energy in the fish they catch. And a growing number of scientists, including Rainer Froese, Sylvia Earle, Ricardo Serrão Santos, Callum Roberts and Alex Rogers, have told decision makers that trawling on seamounts is a major threat to sessile structure-forming invertebrates on seamounts, on recent meetings, known as Science Tours, organised by the Deep Sea Conservation Coalition.. Furthermore, as Colin Clark (1973) suggested in his classic paper, killing organisms with intrinsically low population recovery rates may be inherently unsustainable. Together, these and other scattered publications cast doubt on the inherent sustainability of deep-sea fisheries. Because such fisheries are increasing, decision makers in the UN and its agencies, regional fishery management organizations and nations’ fishery agencies need to know the circumstances, if any, in which deep-sea fisheries can be environmentally and economically sustainable, to avoid irreversible harm to the oceans.

It is time for an analytic synthesis of the sustainability of deep-sea fishing that is rigorous enough to withstand scrutiny, that integrates the biology and economics, and whose results get the visibility needed to move the world’s decision makers. If we can do this effectively and quickly enough, we may be able to influence some ongoing international policy initiatives about deep-sea fishing.

Our intent is to develop several products, including a paper to be submitted to one of the two highest-impact scientific journals, and we will all have an opportunity to strategize on this together. We think that, by bringing together a diverse group of experts to synthesize the relevant arguments, we can make a statement that will be heard not only by the scientific community, but also by the general public and the decision making community around the world.

Participants

Beth Babcock, Pew Institute for Ocean Science, Miami, USA
Sarah Fowler, Nature Bureau International, Newbury, UK
Matthew Gianni, Deep Sea Conservation Coalition, Amsterdam, the Netherlands
Pippa Gravestock, economics/finance consultant, London, UK
Dick Haedrich, Memorial University of Newfoundland, St. Johns, Canada
Selina Heppell, Oregon State University, Corvallis, USA
Tony Koslow, Commonwealth Science and Industry Research Organization, Perth, Australia
Telmo Morato, Universidade dos Açores, Horta, Portugal
Ransom Myers, Dalhousie University, Halifax, Canada
Daniel Pauly, University of British Columbia, Vancouver, Canada
Ellen Pikitch, Pew Institute for Ocean Science, New York, USA
Murray Roberts, Dunstaffnage Marine Laboratory, Oban, UK
Gilbert Rowe, Texas A&M University, Galveston, USA
Marty Smith, Duke University, Raleigh, USA
Rashid Sumaila, University of British Columbia, Vancouver, Canada

Agenda for Miami Sustainability of Deep-sea Fisheries workshop

Monday, April 24

8:30 Welcome and logistics: Ellen Pikitch
8:40 Introductions
9:00 Why we are here, Q&A: Elliott Norse and Margaret Bowman
9:20 Why there are deep-sea fisheries: Daniel Pauly
9:40 Ecology of fishes and corals affected by deep-sea fisheries: Tony Koslow
10:00 Global patterns of deep-sea fisheries and affected taxa: Telmo Morato
10:20 Break
10:40 Life history and demographic vulnerability in fishes and invertebrates: Selina Heppell
11:00 Deep-sea coral habitat value and demographic vulnerability: Murray Roberts
11:20 How fishermen choose what to fish for, with what, where and when: Marty Smith
11:40 Economics and the sustainability of deep-sea fisheries: Rashid Sumaila
12:00 A food web approach to deep-sea sustainability: Gil Rowe
12:20 The deep-sea in 2020, and the challenge we face: Dick Haedrich
12:40 Lunch
1:40 Science affects the politics governing deep-sea fisheries: Matt Gianni
2:00 Synthesis and gameplan group discussion: Elliott Norse and Lance Morgan
2:30 How I see it: Ransom Myers
2:40 How I see it: Beth Babcock
2:50 Break
3:10 How I see it: Sarah Fowler
3:20 How I see it: Pippa Gravestock
3:30 How I see it: Ellen Pikitch
3:40 How I see it: Margaret Bowman
3:50 Break
4:10 What we need to do group discussion: Elliott Norse and Lance Morgan
6:00 reception and dinner with Pew Institute for Ocean Science Leadership Council

Tuesday April 25

8:30 Goals of the day: Lance Morgan

8:40 After sleeping on it: Daniel Pauly and Pippa Gravestock lead group discussion on outputs

10:00 Breakout groups caucus on outputs

11:30 Reports from breakout groups on outputs

12:30 Lunch

1:30 Data needs and analysis breakout groups

2:00 Reports from breakout groups on data needs and analysis

2:30 Break

2:50 Reality check: Matt Gianni

3:00 Reality check: Margaret Bowman

3:10 Strategy, products and timeline group discussion: Elliott Norse and Lance Morgan

4:30 Drafting and how to proceed from here group discussion: Elliott Norse