



Conservation, Sustainable Use & Management of Pelagic Fisheries: Research and capacity building at CERMES

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CRFM / WECAFC-IFREMER-MAGDELESA / CARIFICO

Workshop on FAD Fishery Management

9-11 December 2013, Kingstown, St. Vincent & the Grenadines



Centre for Resource Management
and Environmental Studies



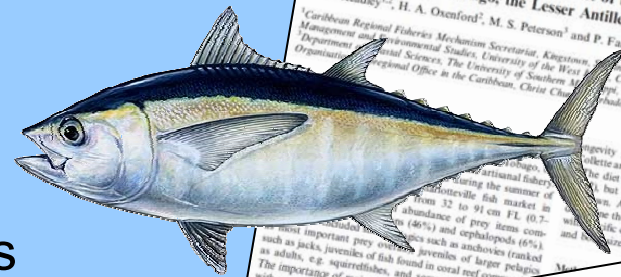
The University of the West Indies (UWI)
Cave Hill Campus, Barbados

Teaching, Outreach & Research

- MSc Programme
 - Coastal and Marine
 - Climate Change
 - Water Resources Management
- Public Outreach
 - Short courses, workshops, co-management partnerships, Advisory boards/working groups
- Research
 - 2-3 month MSc research
 - 2-3 year MPhil / PhD research
 - Faculty research, projects, consultancies

Pelagic Fisheries Research

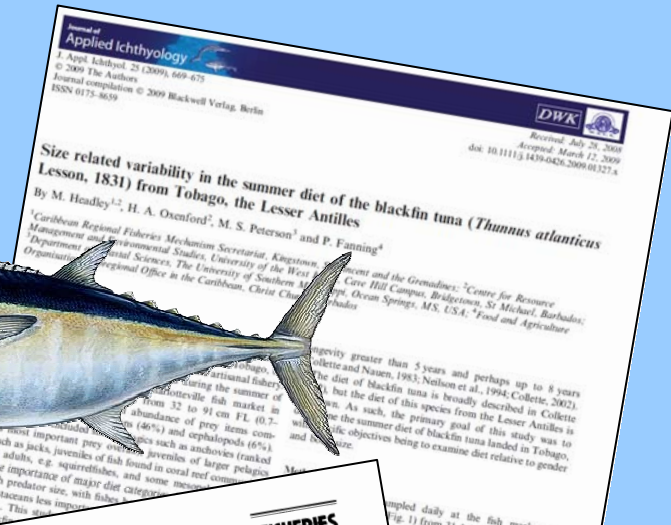
Blackfin tuna diet



- MSc programme
- Short 2-3 month research projects

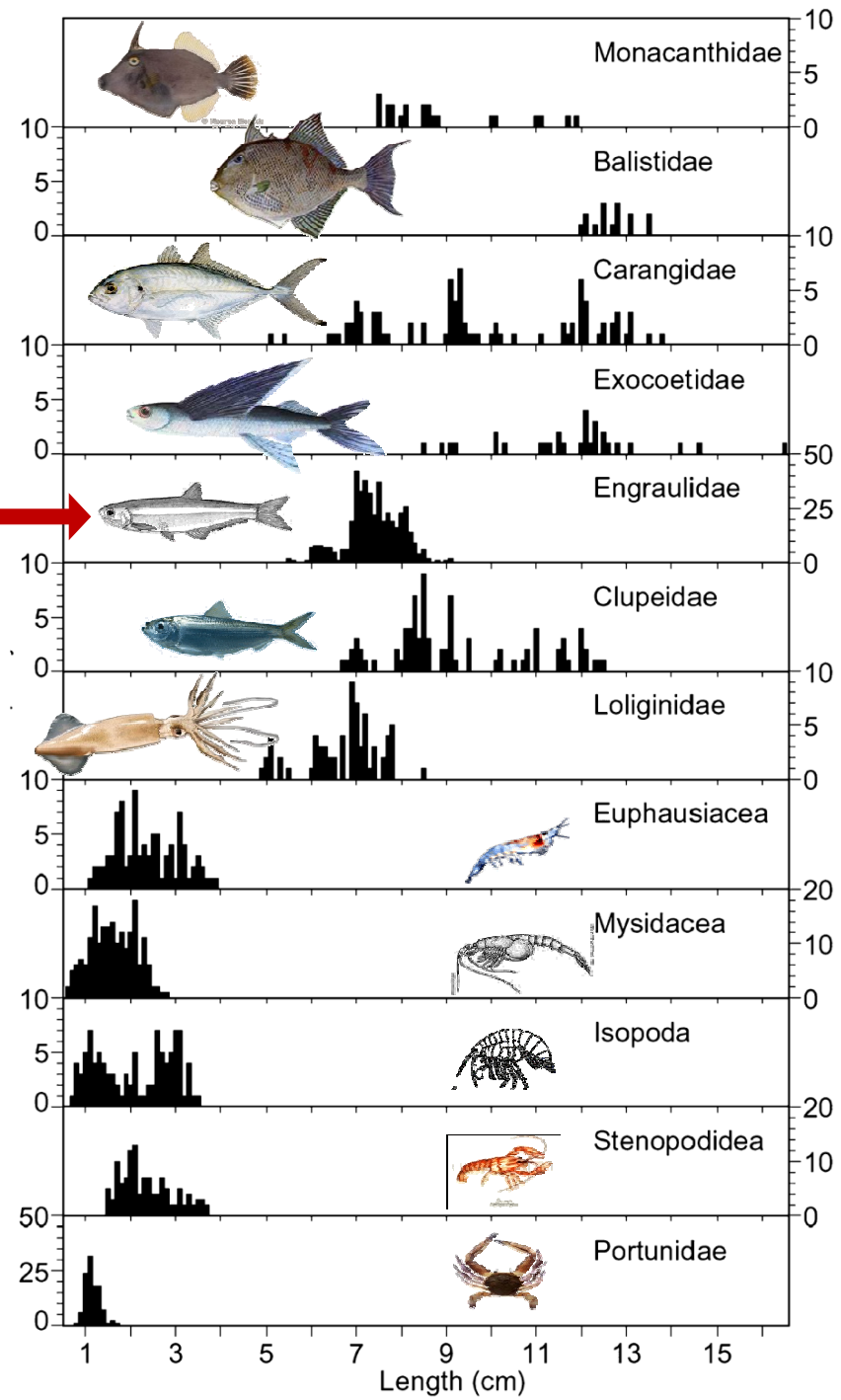
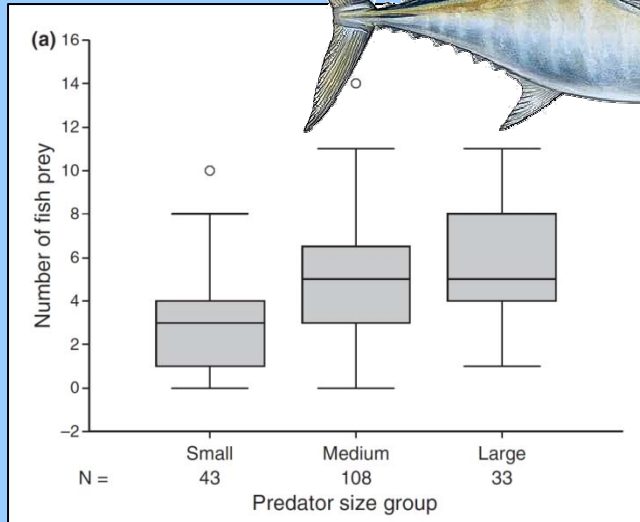
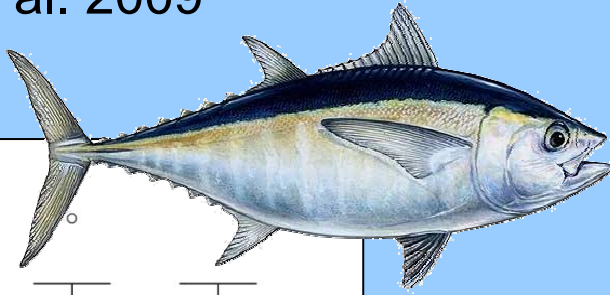
Longline fishery in Barbados

Role of drifting FADS



Blackfin tuna diet

Headley et al. 2009



- Fishes 48%
 - small pelagics, juv. larger pelagics, juv. reef species
- Crustaceans 46%, squid 6%
- 3 size classes tuna
 - Larger tuna eat more fish

Role of drifting FADs in eastern Caribbean

Gomes et al. 1998

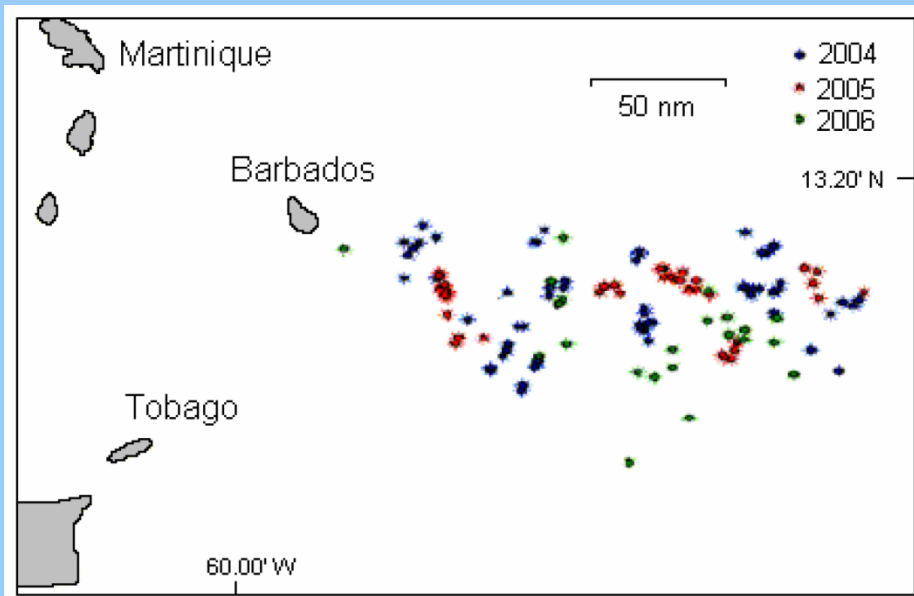
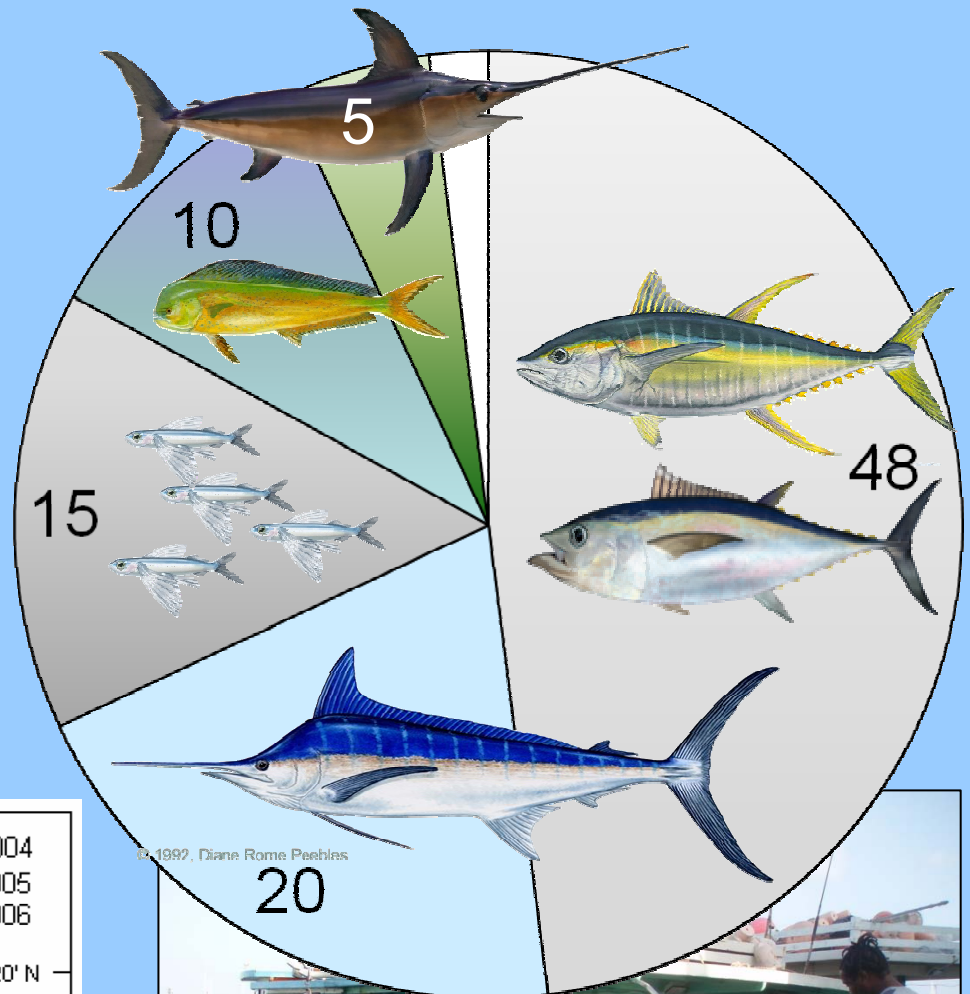
- Tobago, Grenada, Barbados, St. Lucia
 - All pelagic fishers target floating objects opportunistically (most prevalent Jan-Mar)
 - Vessels deploy constructed FADs for flyingfish



Longline fishery in Barbados

Walcott et al. 2009

- Fishing grounds
 - 6-21 day trips, east of the island up to 550 km
- Target tuna & billfishes



Pelagic Fisheries Research

- **PhD & MPhil programme**
 - 2-3 year research projects

Livelihood dependency

Dependency on Caribbean Coral Reefs

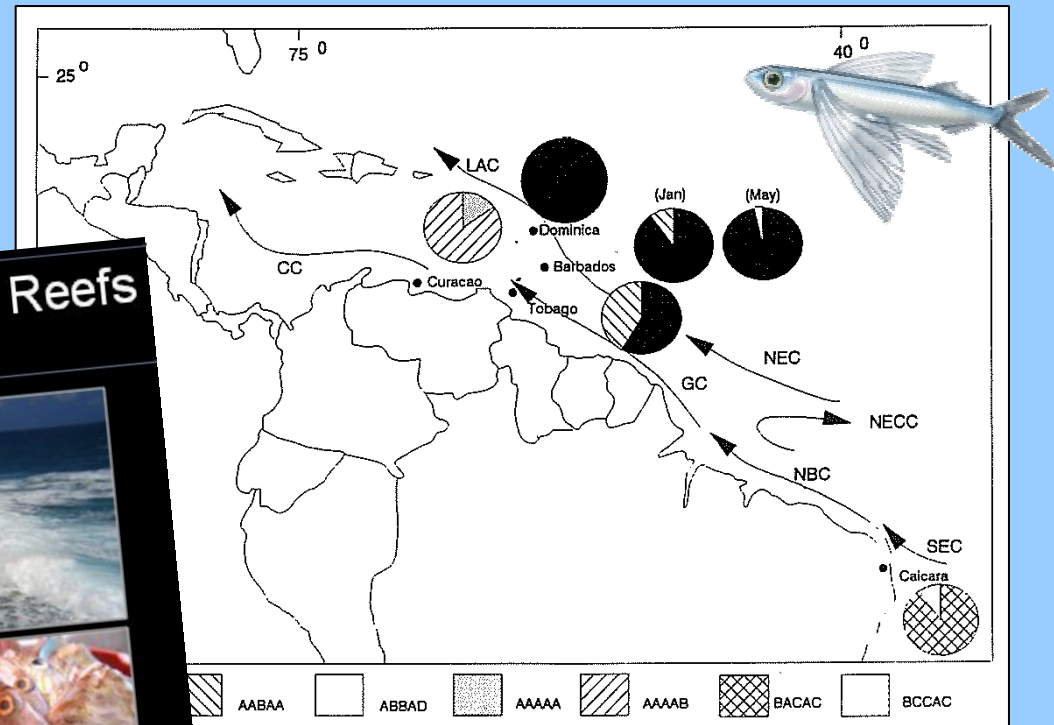
Caribbean Tidbits

Shoreline Protection

- 26,000 km² of shallow reef (~7% of world)
- Protect approximately 20% of coastlines

Fisheries

- Important source of protein for coastal communities
- Supports artisanal fishery
- ~ US\$310 million in net annual revenue

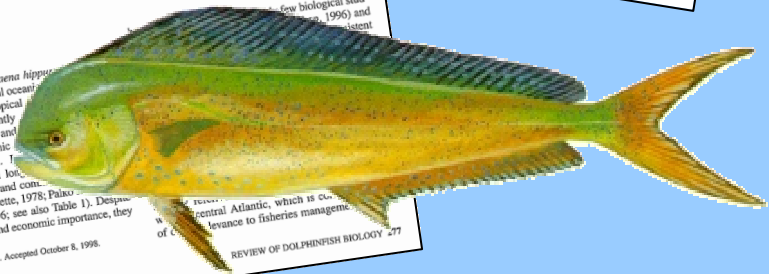


Gomes PhD

David Gill PhD

Centre for Resource Management and Environmental Studies
University of the West Indies, Barbados

- **Faculty research**
Oxenford et al



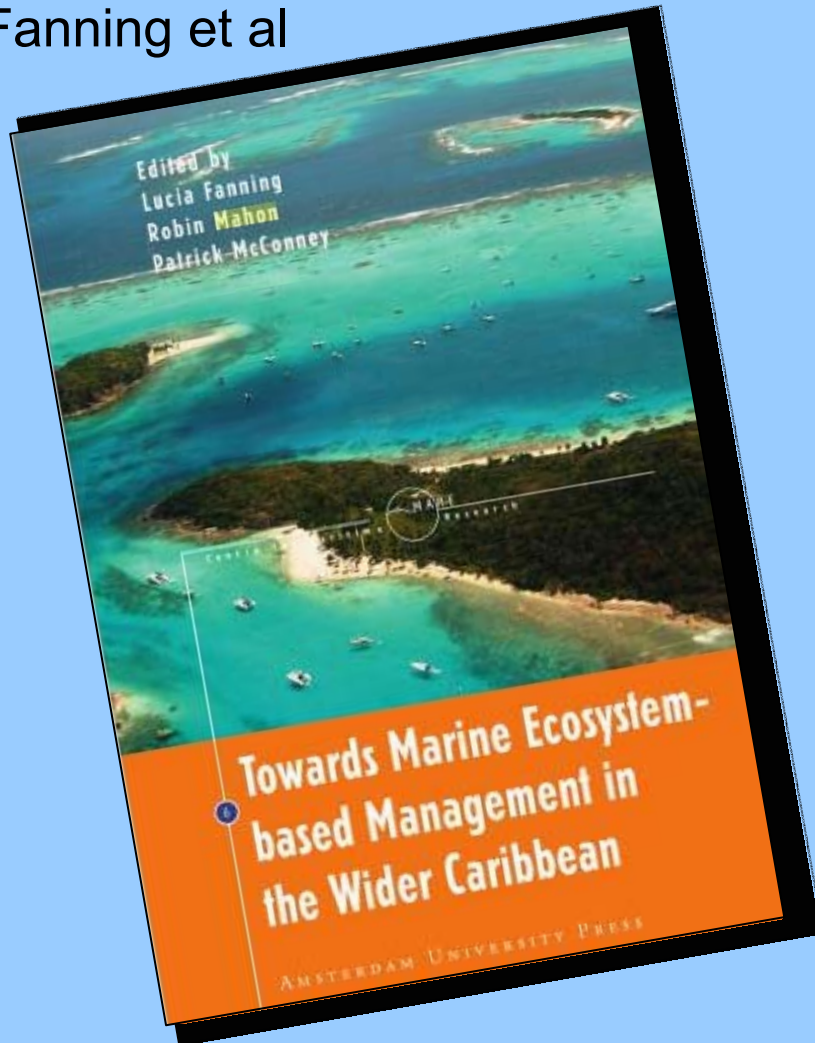
Biology and management

Pelagic Fisheries Research

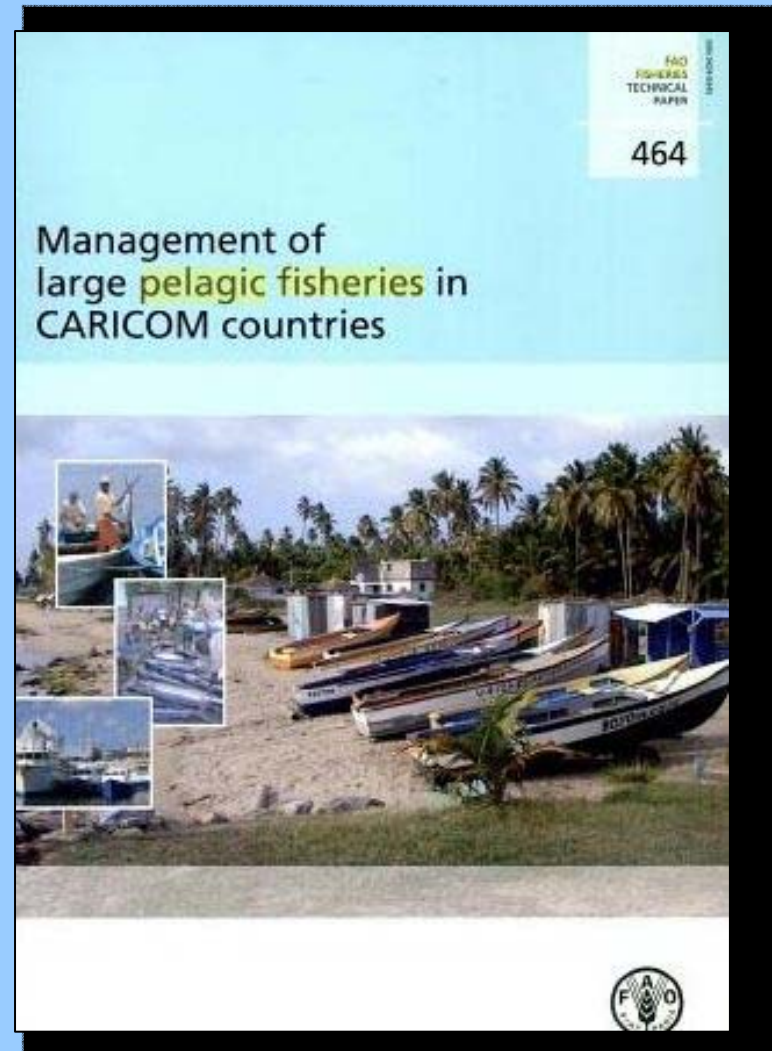
management

- **Faculty research**

Fanning et al



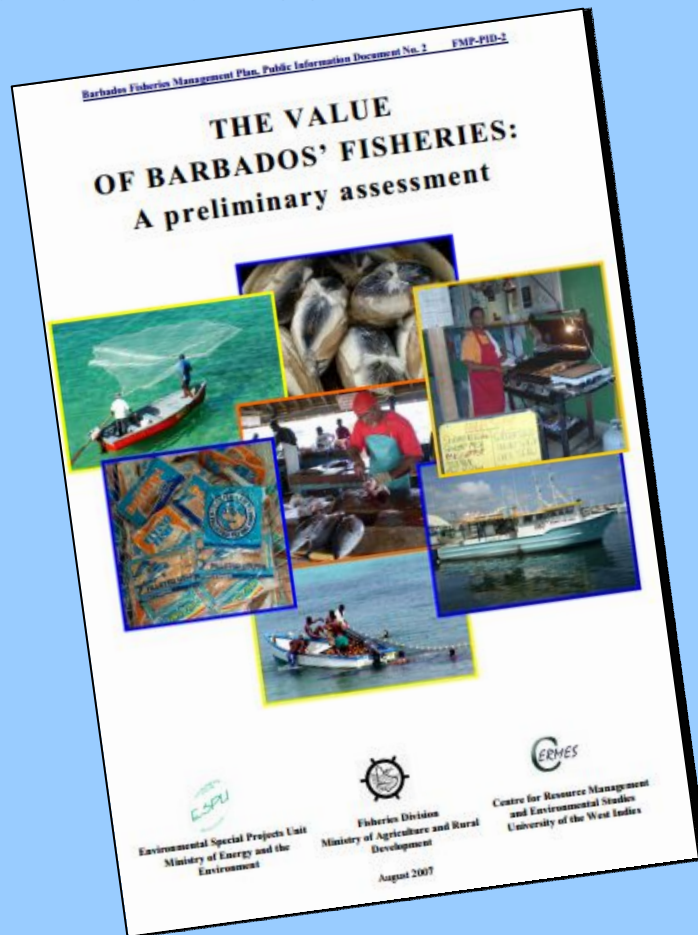
Mahon and McConney



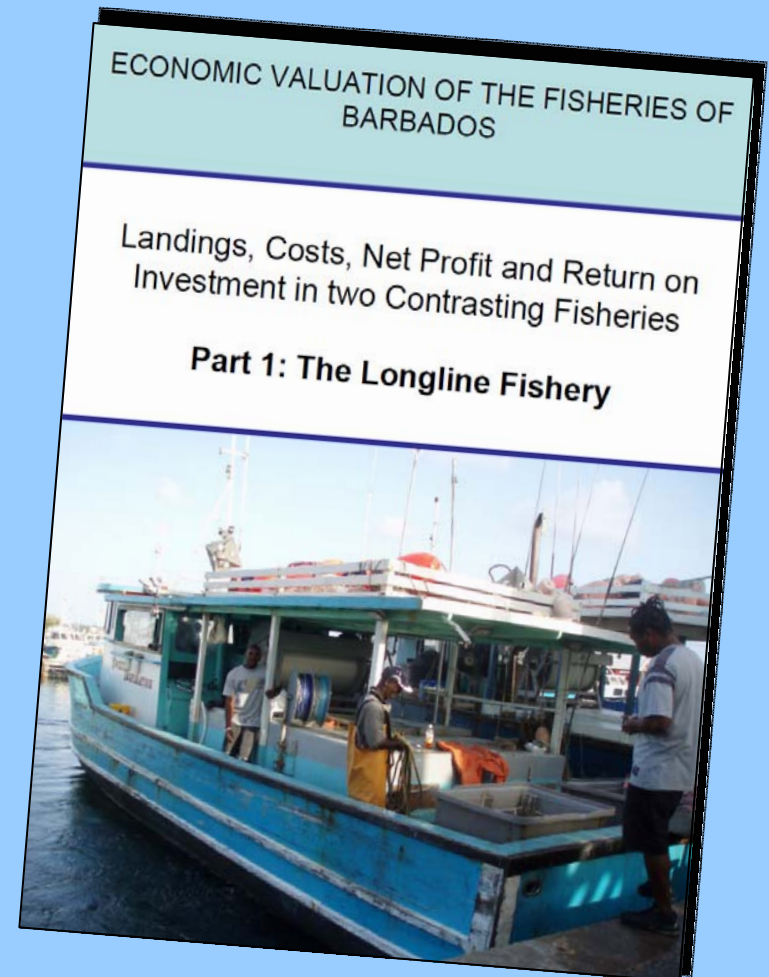
Pelagic Fisheries Research

- Faculty research

Mahon et al 2007



Economic
valuation



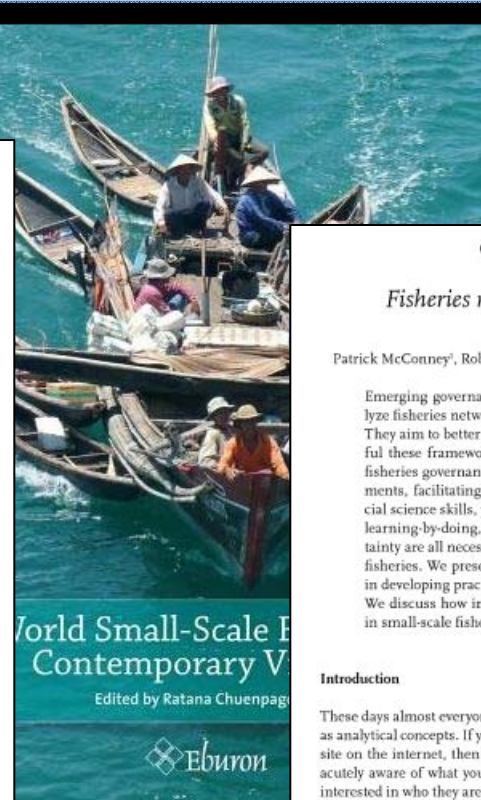
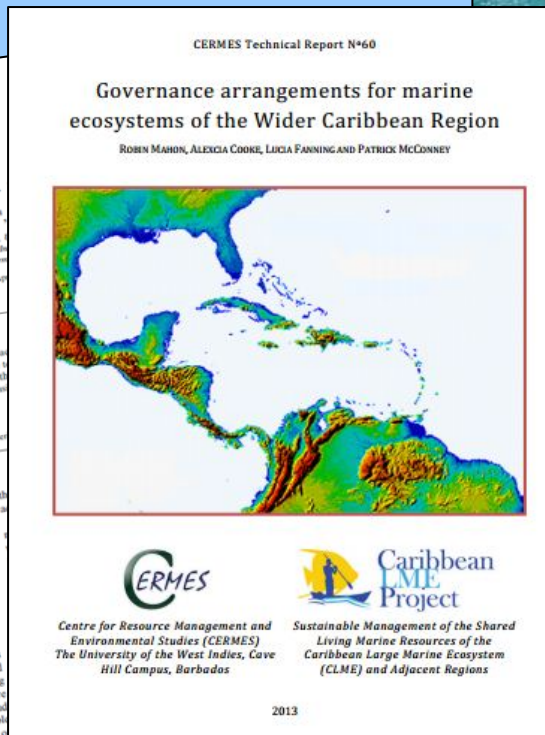
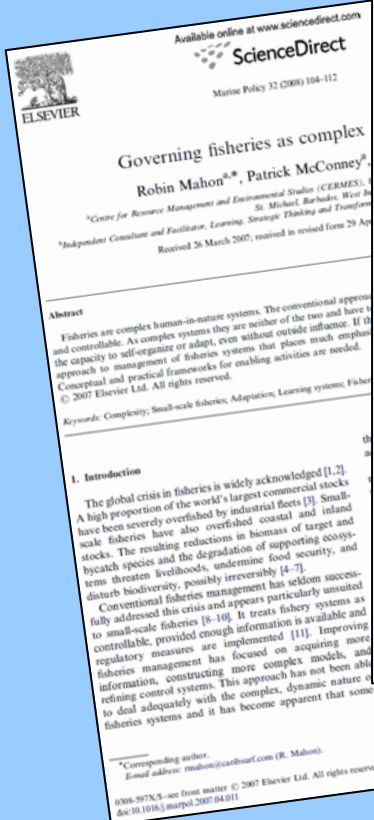
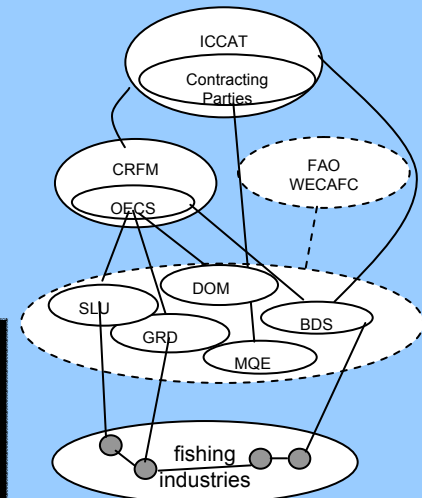
Schuhmann et al 2010

Pelagic Fisheries Research

• Faculty research

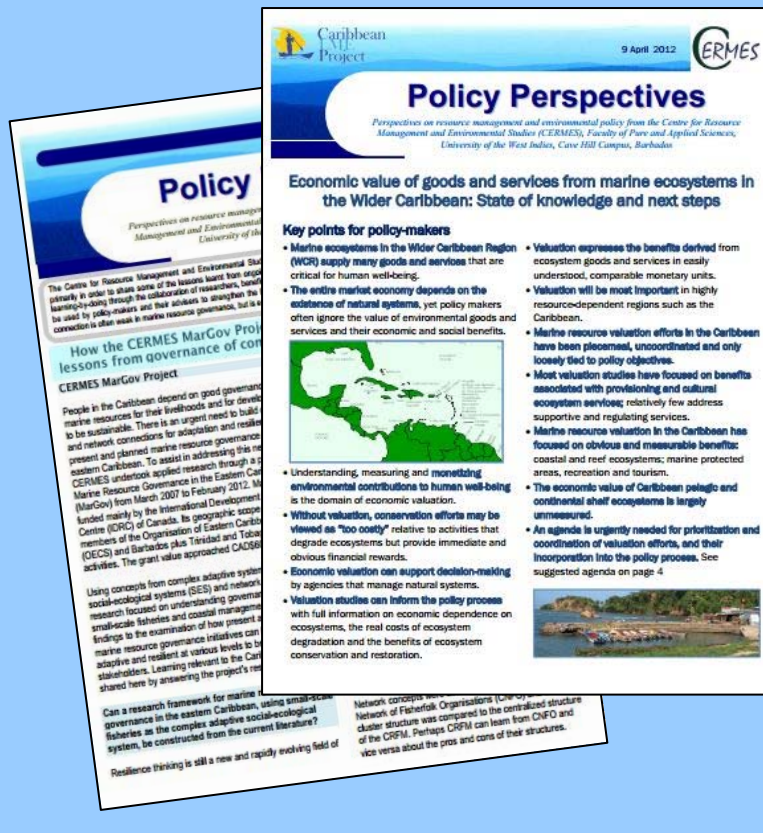
Mahon, McConney et al

Governance and networks



Capacity Building

- Teaching programme
- Fisher discussion groups
- CERMES policy briefs

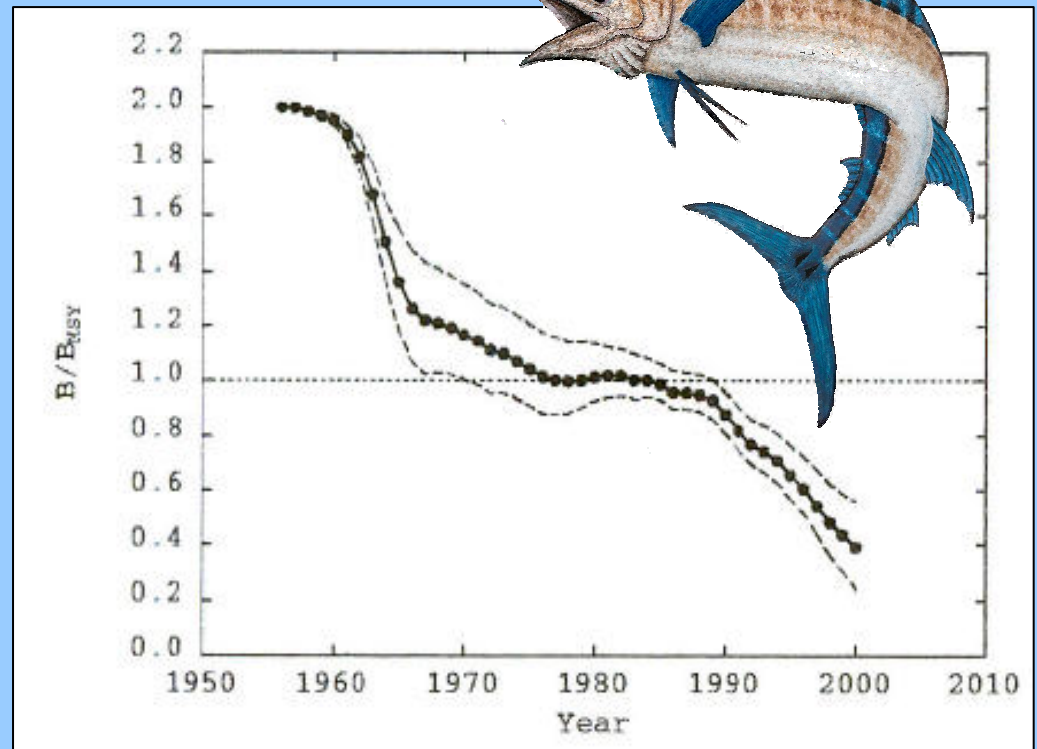


- Involvement of fishers in research / workshops
- Advisory Committees / Working groups
- Training workshops
- SocMon Caribbean
- Ecosystem-based management
- EAF toolbox

Fixed FADs - Issues to consider:

Environmental / biological / social / management

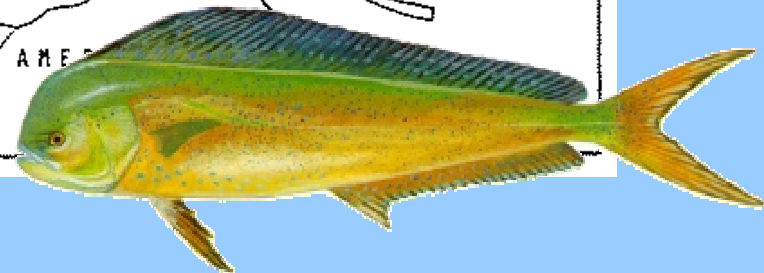
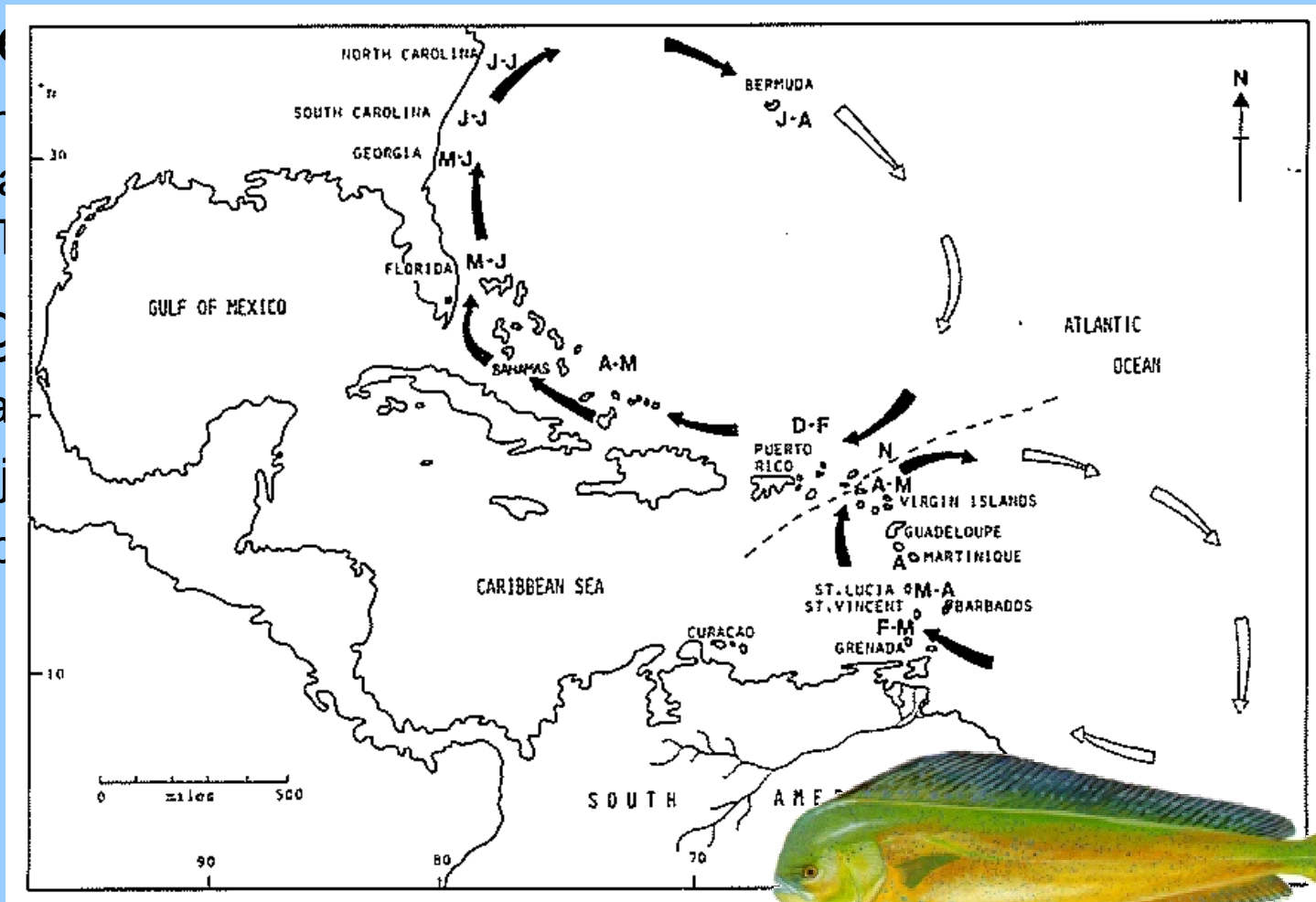
- Depleted resources
 - Billfishes fully or over-exploited by international fleets (controlled by ICCAT through quotas)



Fixed FADs - Issues to consider:

Environmental / biological / social / management

- Depletion
 - Billfish
 - international
 - ICCAT
- Aggregation
 - Increase
 - More
 - Disrupt



Fixed FADs - Issues to consider:

Environmental / biological / social / management

- Conflicts

- Intra fishery conflicts (access arrangements)
- Inter-fishery competition (longline vs FAD, recreational vs commercial, market impacts)
- Space use – navigational hazard?

- Shared resource

- Regional management responsibilities
- Regional policy on FAD fishery?

- Relieve pressure on reefs?

- Need to monitor impact

