

# SAFARI Monograph Outline

## 1. Introduction (Chapter lead: Nick Hardman-Mountford)

- Scientific basis, climate change context, emerging applications (Platt)
- Scope of report: remote sensing contributions to fish harvesting, assessment and management (Dulvy)
- Terminology, concepts (ecological indicators - Hardman-Mountford)
- Earth observations and societal benefits (Bundy)

## 2. Ecosystem Variability, Climate Change and Fisheries (Chapter lead: Nick Dulvy)

- Propagation of environmental variability into the fisheries (Platt)
- Environmental variability and fisheries at the scale of LME's (Sherman, Hyde)
- Predicting impacts and consequences of climate change on global fish production (Dulvy, Barange)
- Ecosystem flow-structure and fisheries yield (Daniel Pauly)

## 3. Remote Sensing Applications in Stock Assessment (Chapter lead: Peter Koeller)

- Shrimp case study on the Scotian Shelf (Koeller)
- Haddock larval recruitment (Platt, Fuentes-Yaco)
- Recruitment control of Haddock on Georges Bank (Hyde, Sherman)
- Recruitment of Grand Banks White Hake juveniles (Han)

## 4. Remote Sensing Applications to Fisheries Management (Chapter lead: Cara Wilson)

- Management tools
  - PFT's, phytoplankton size composition (Sathyendranath, Morales)
  - LME approach as a management tool (Sherman, Hyde)
  - Eco-regions as a management tool (Longhurst, Platt, Devred)
- Habitat characterisation (Hu)
- Living marine resources / protected species (Polovina, Kobayashi)  
Remote sensing uses in the study and monitoring of marine protected areas (Wilson)
- Marine hazards: HABs, sediments, ice, surveillance, pollution, hypoxia (Stewart Bernard, Groom, Sandven, Hu, JRC/CSA)
- FAO Case Study (Fanning, Forget)

## 5. Remote Sensing Applications to Fish Harvesting (Chapter lead: Sei-Ichi Saitoh)

- Remote sensing support for sustainable artisanal and coastal fisheries
  - examples from Japan (Saitoh, Matsumura)
  - PFZs from India (Dwivedi)
  - Peruvian artisanal fishery (Herera)
  - examples from the Azores (Martins)
- Offshore / deep-sea fisheries
  - Tropical tuna fisheries using AVHRR (Chassot)
  - other examples?

## 6. Remote Sensing Applications in Marine Aquaculture (Chapter lead: Jon Grant)

This chapter needs to be developed further.....

- Site selection
- Shellfish farming (Grant)
- Cardigan Bay case study (Sathyendranath)
- Fish Farming

## **7. Building Links with the Fishing Community (Chapter lead: Alida Bundy)**

- Building links with scientists, fishing community, managers, and policy makers (Bundy, Hoepffner)
- Network, capacity building, coordination e.g. ChloroGIN (Field, Lutz, Groom)
- Looking into the Future