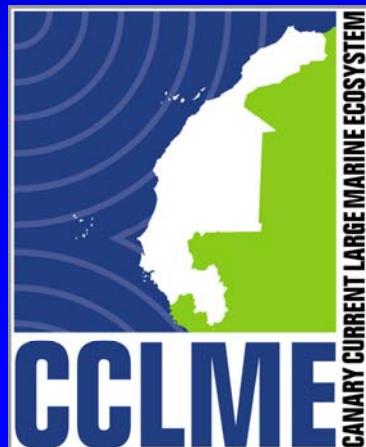
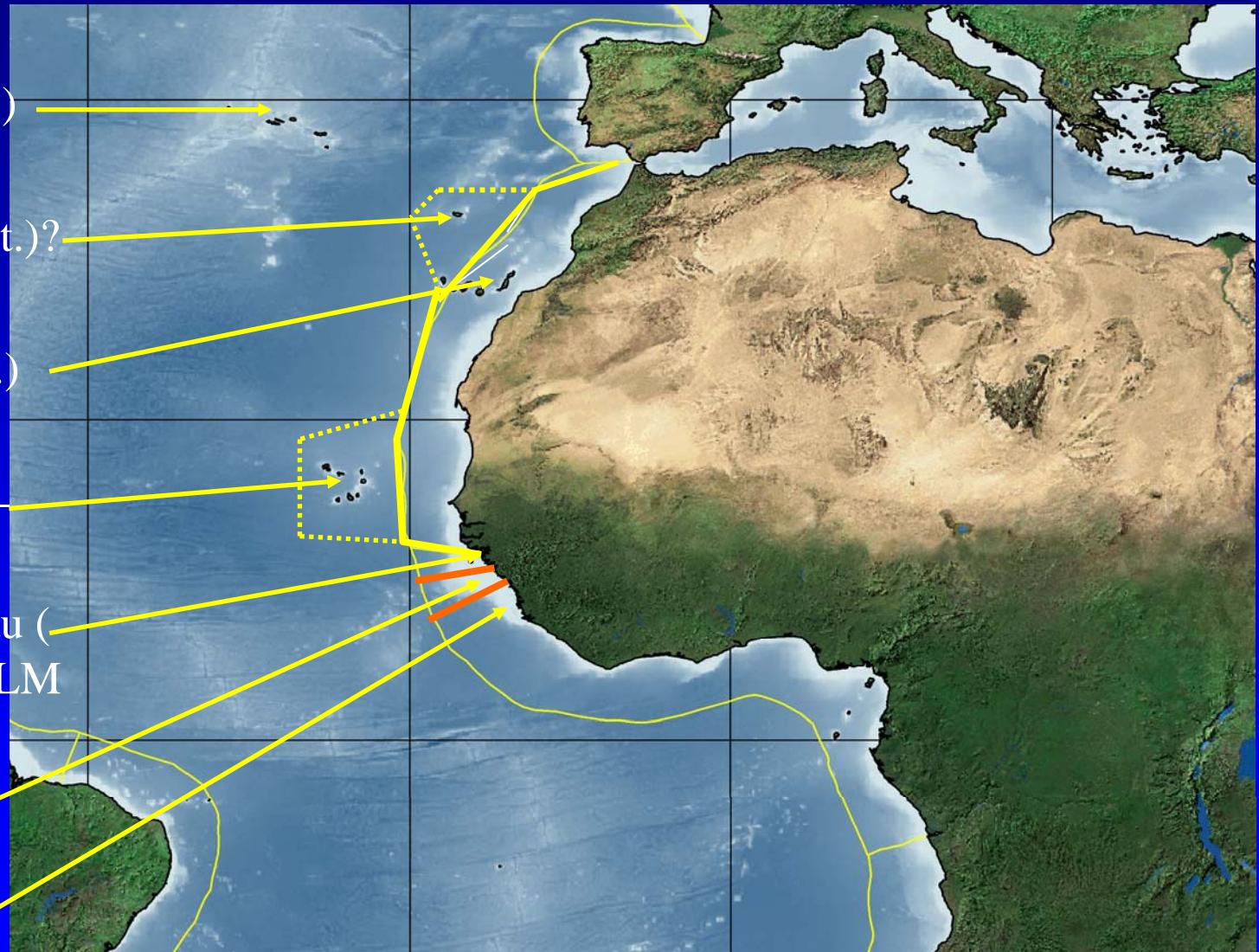


**GEF / UNEP / FAO
CANARY CURRENT
LARGE MARINE ECOSYSTEM PROJECT
Preparation Phase (PDF-B)
PRELIMINARY TDA, PROJECT DESIGN &
PRE-SAP
IOC-UNESCO/NOAA/IUCN
8th Consultative LME Meeting
Paris, 3-4 July 2005**

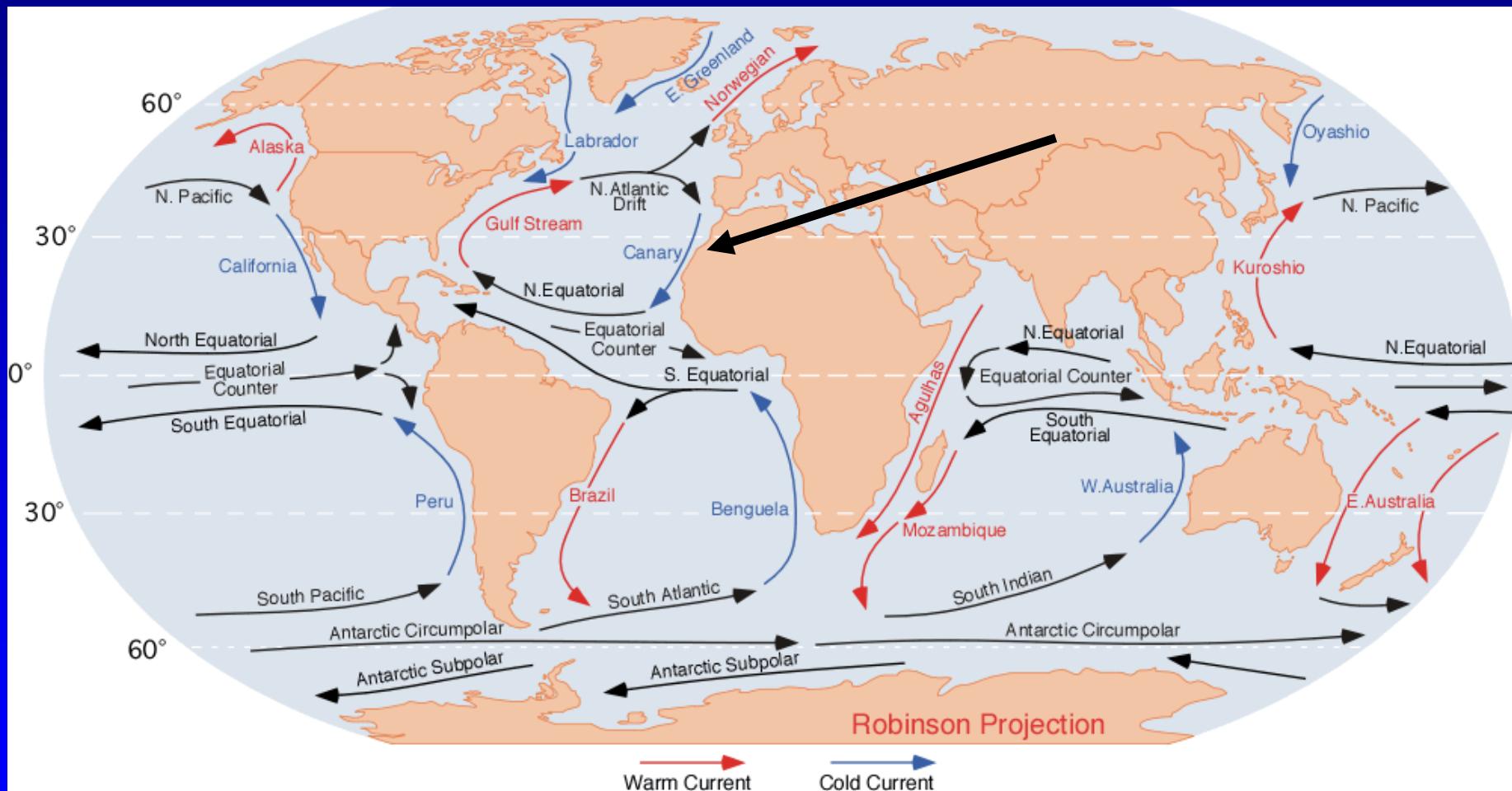


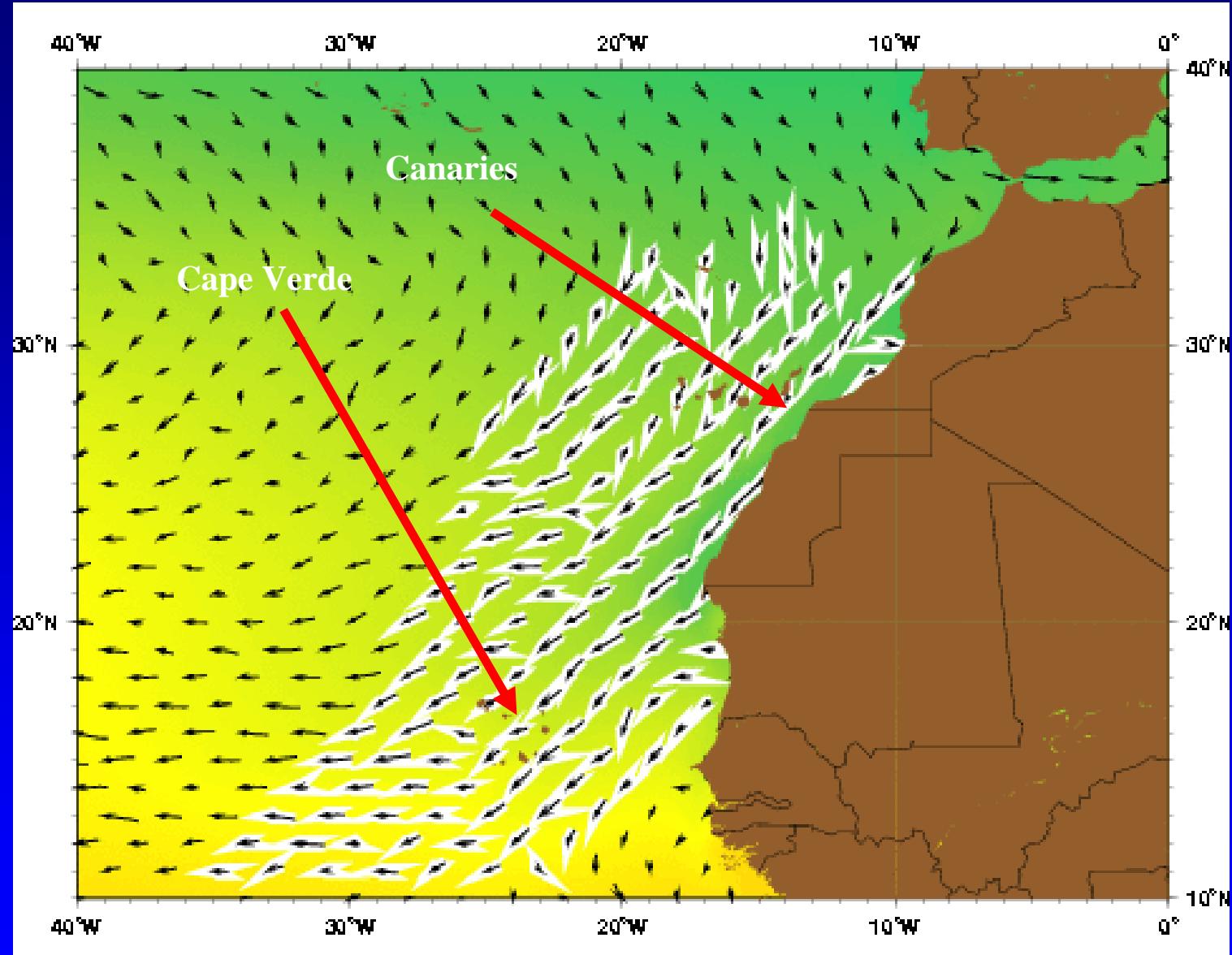
CCLME & adjacent areas

- Azores (Port.)
- Madeira (Port.)?
- Canaries (Sp.)
- Cape Verde –
‘transitional’
- Guinea Bissau (CCLME/GCLM E)
- Guinee –
transitional
- Sierra Leone (GCLME)



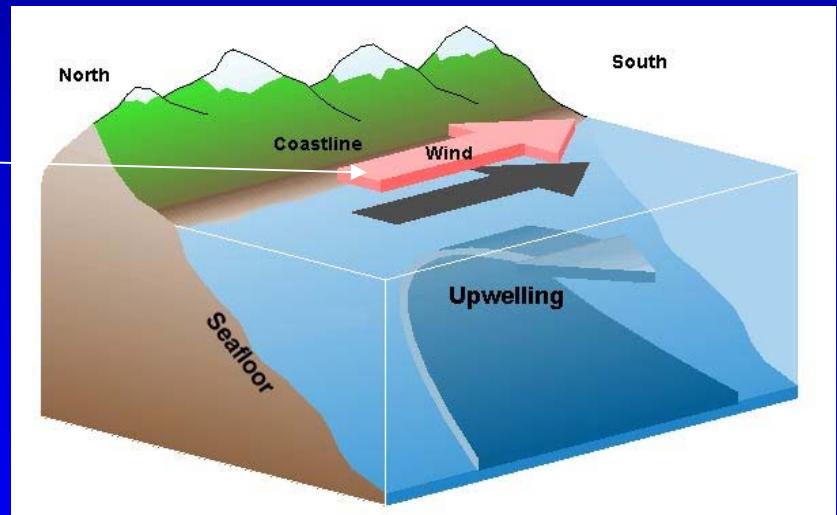
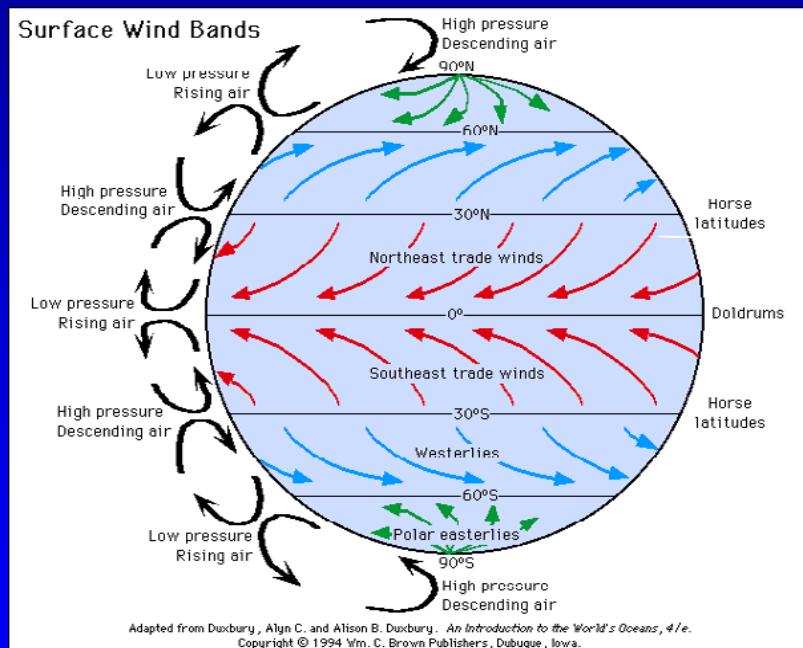
World surface currents





MGSVA (Mariano Global Surface Velocity Analysis).

Upwelling: a wind driven process



Productivity

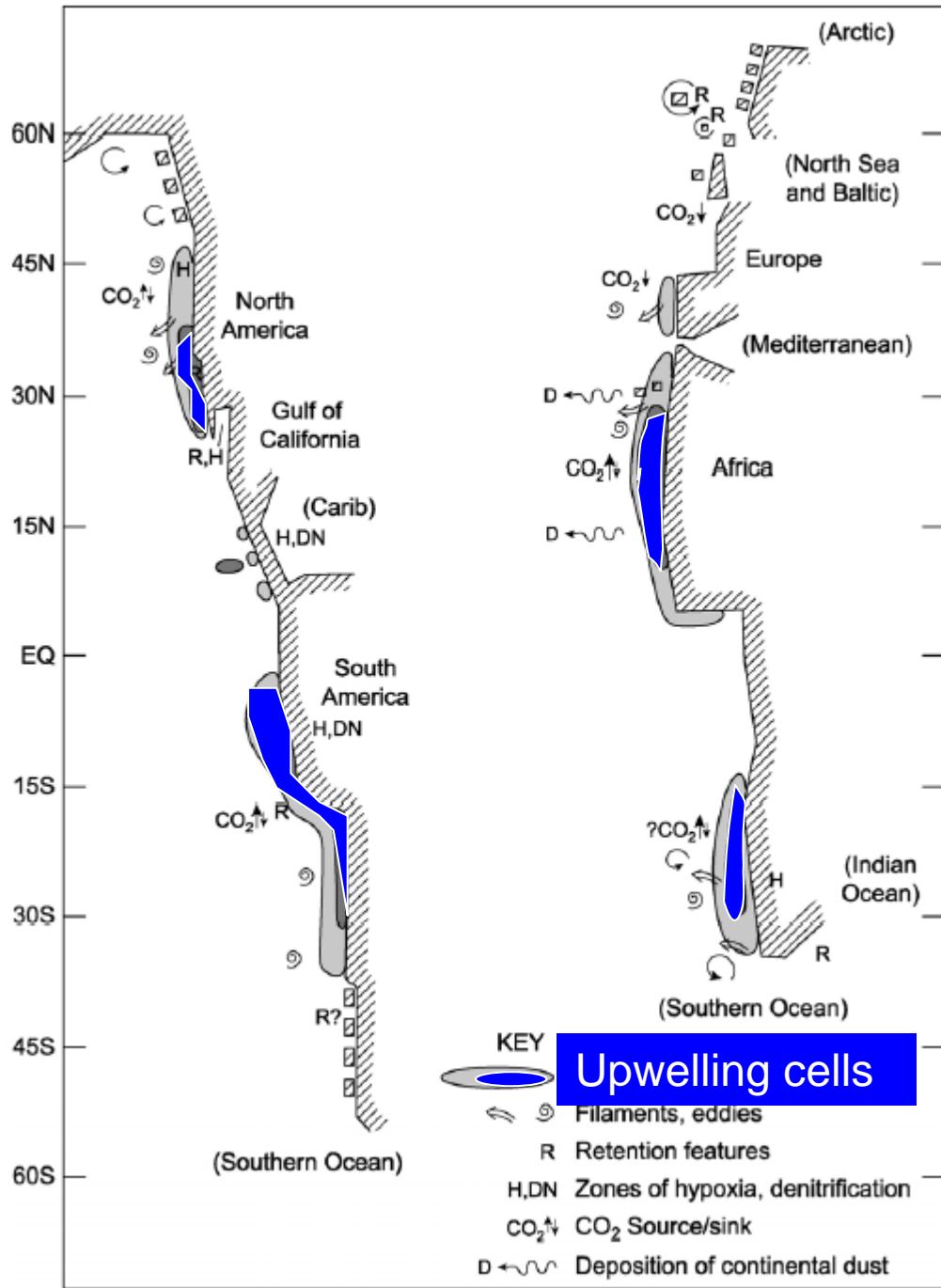
Common features:

- High productivity of plankton and pelagic fish

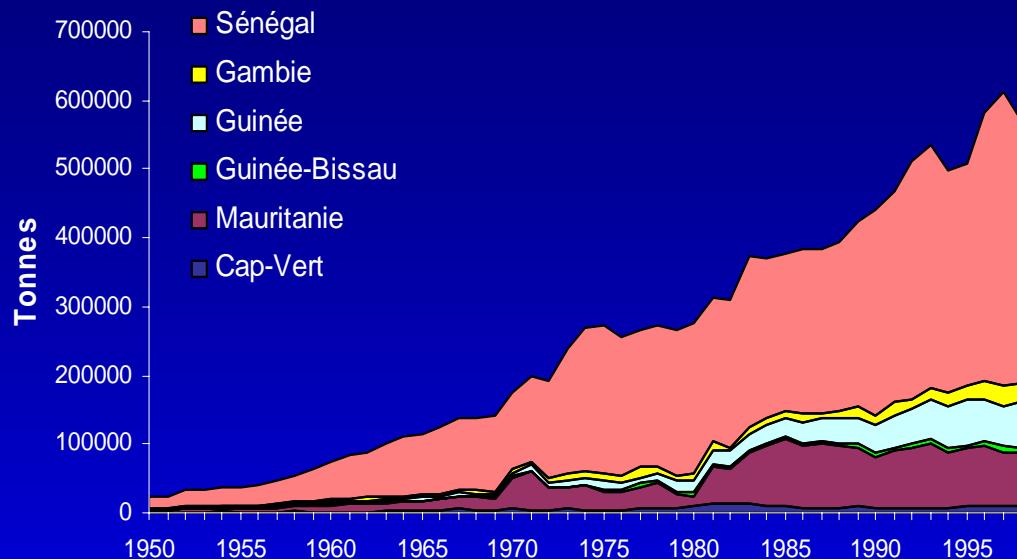
- Dominance of pelagic vs demersal consumers (short food webs)

The Coastal Upwelling systems represent:

- 2-3% of the oceanic surface
- 8% of the global marine primary production
- 20-30% of the global marine fisheries production (Fao, 2005)

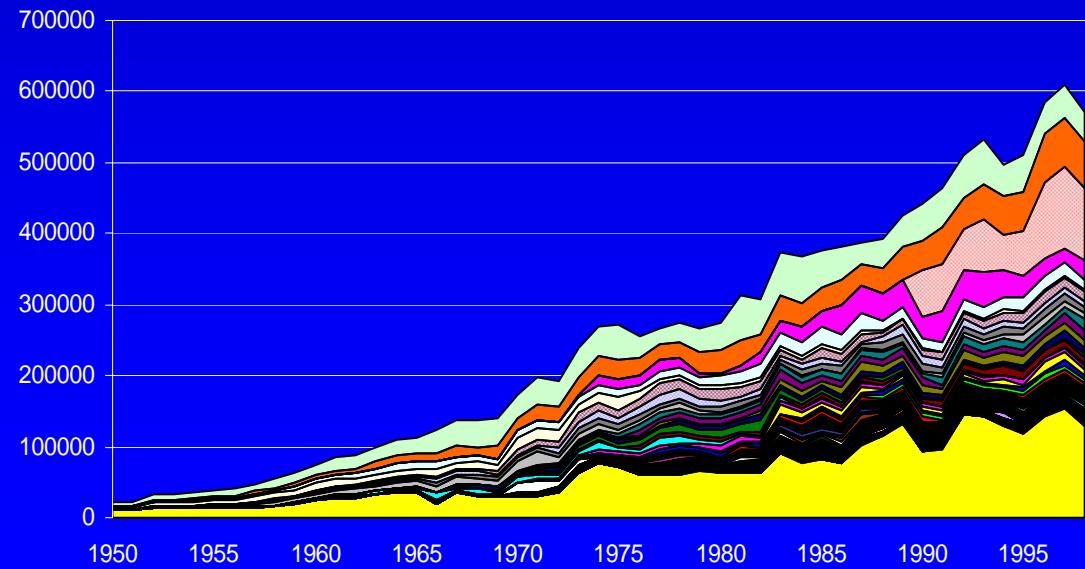


Fisheries production of 6 CCLME states

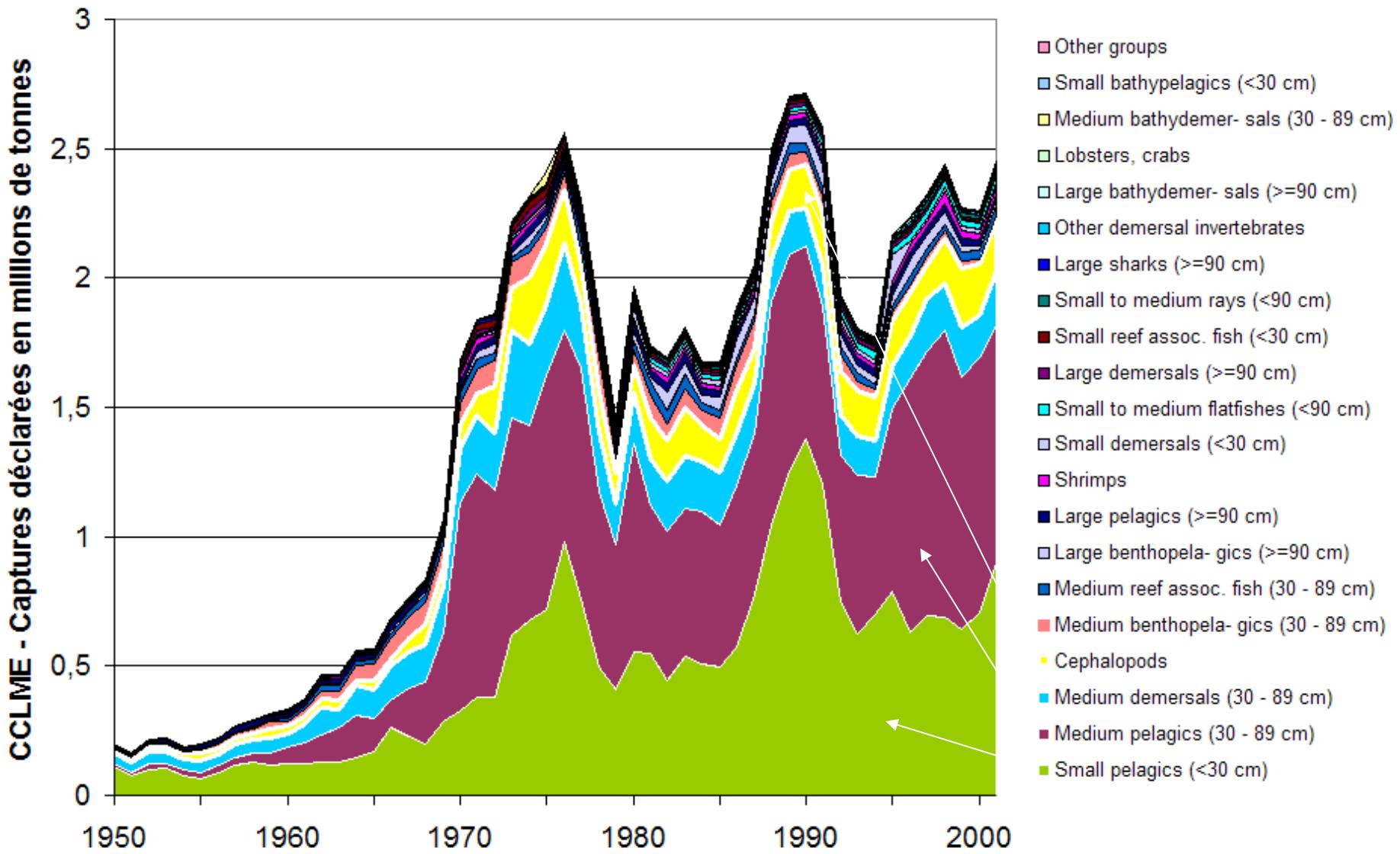


Augmentation
importante des
débarquements
totaux

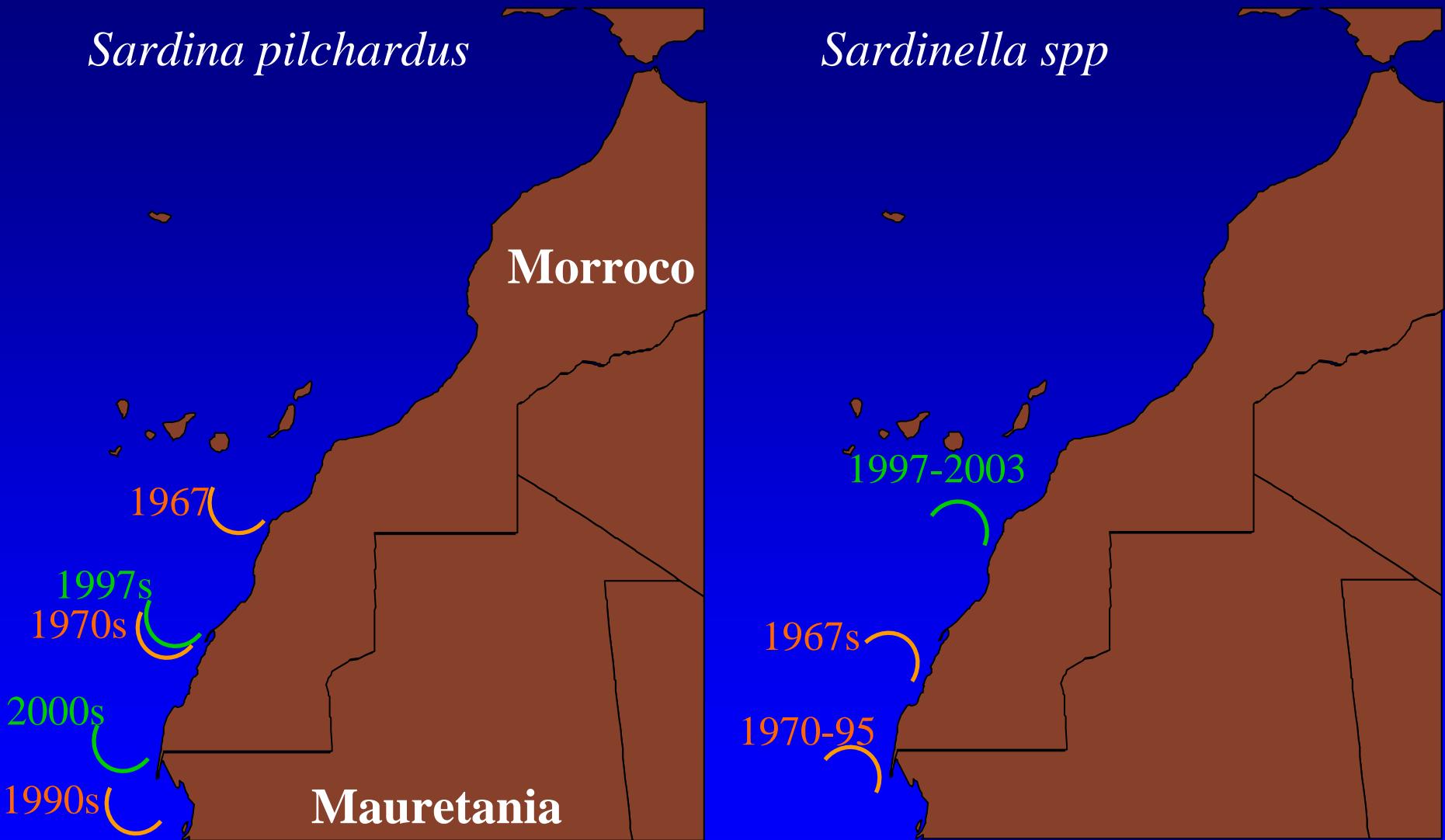
Sardines
Foie
poisson
Saumon
Thon
Poisson
d'eau douce



Large interannual and interdecadal variability in fish catches



Changes in fish distribution

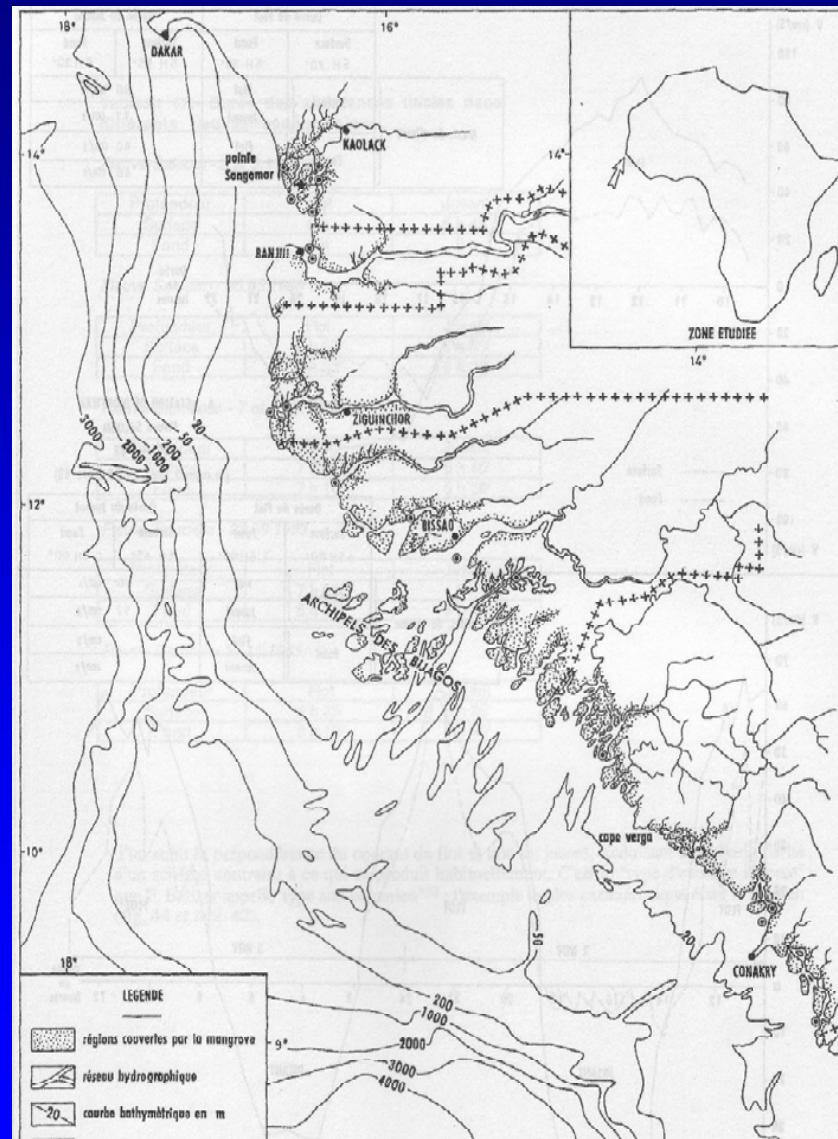
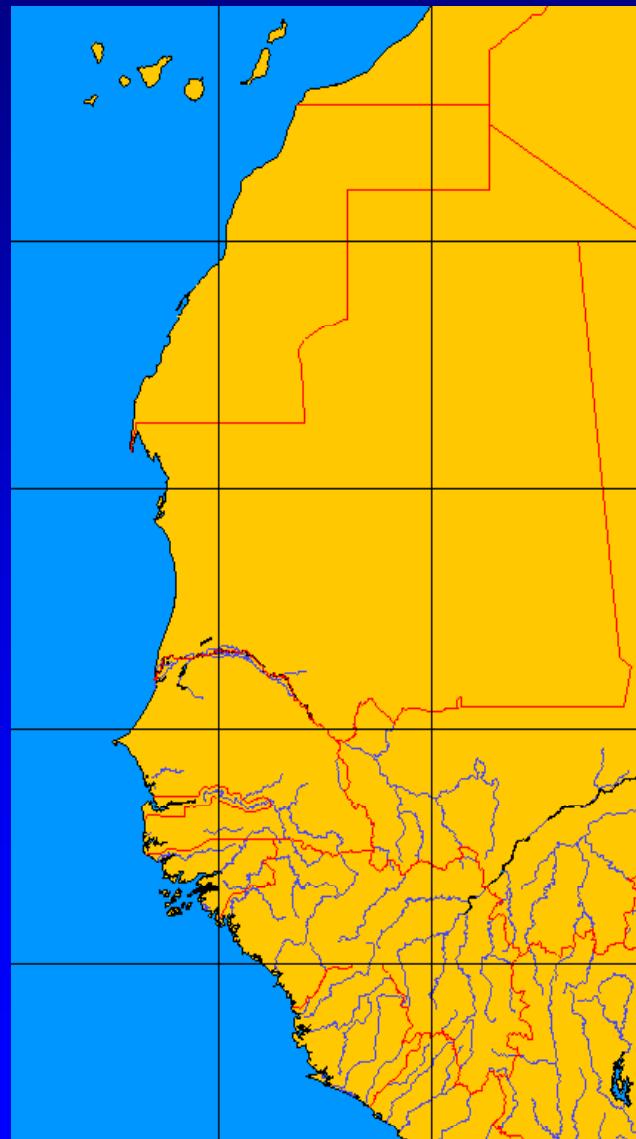


Barkova and Domanevsky 1976. ICES. C.M. 1976/J: 6 Pelagic fish Committeee.-15p.

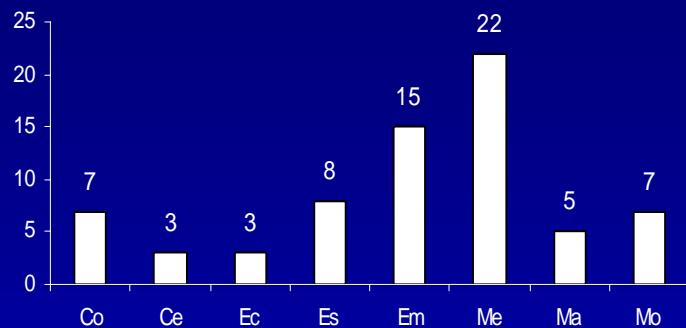
Fréon and Stéquert 1976. Cybium (FRA), 6: 65-90.

Nansen project data; Belvèze, H. and K. Erzini, 1983. FAO, Fish. Rep. 291: 285-327.

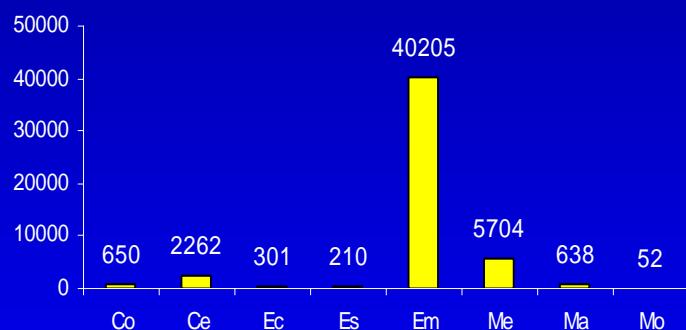
Importance of CCLME estuarine component



Nb Species



Nb Individuals



Gambia estuary fishery species

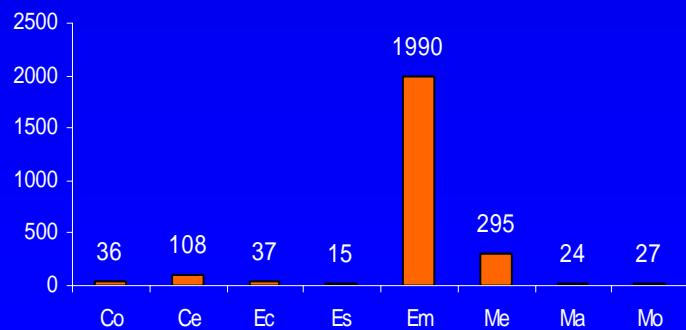
Marine origin

70% of species

93 % of individuals

92% of biomass

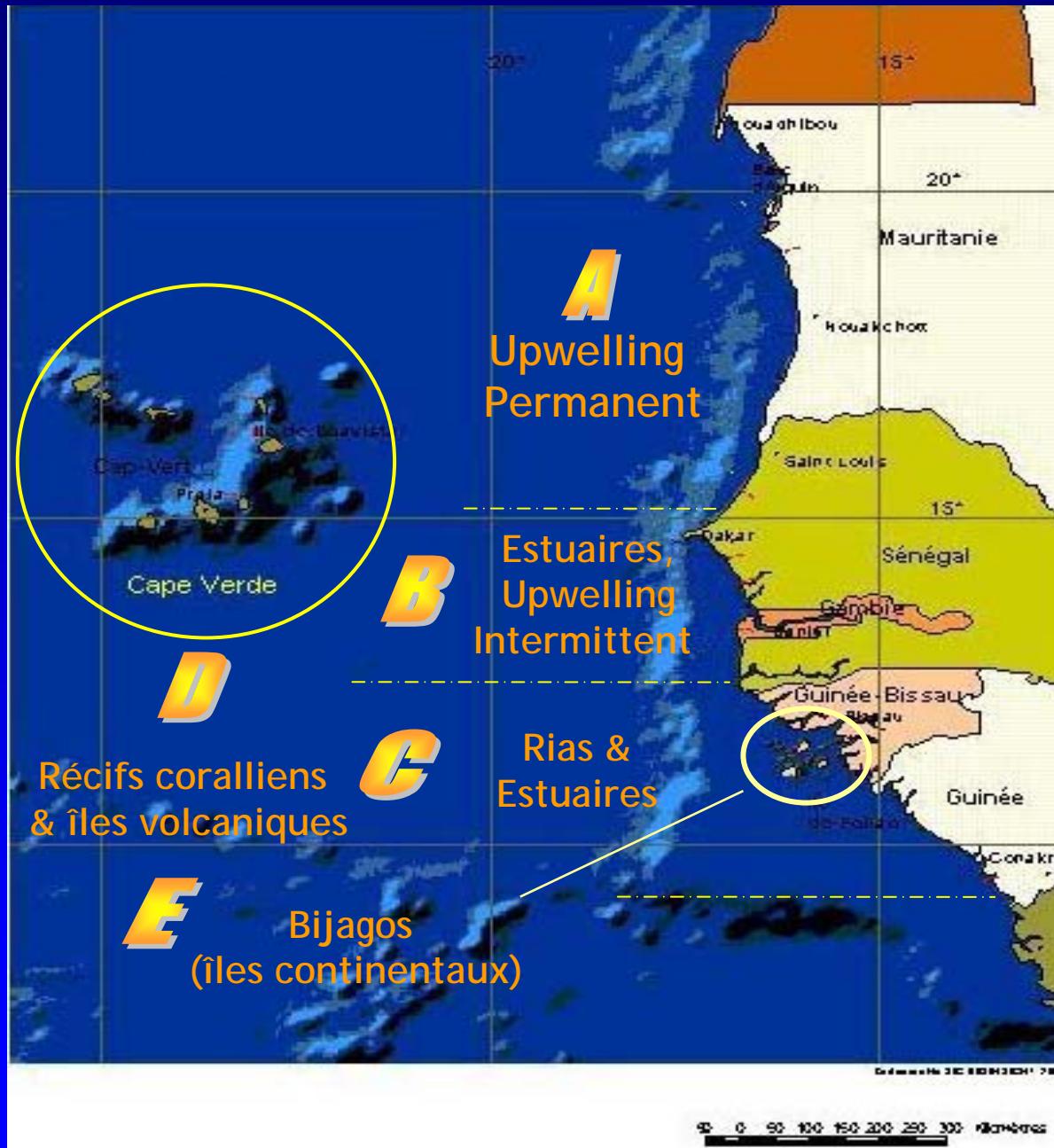
Biomass (kg)



Basic information

- **Countries:** Morocco, Mauritania, Senegal, Gambia, Guinea Bissau, Guinea, Cape Verde
 - **Implementation:** UNEP
 - **Execution:** FAO
 - **Regional platform:** SRFC, Dakar
-
- **Collaborating organisations:** SRFC, ATLAFCO, Abidjan Convention, IUCN, UNIDO, NOAA, CECAF
 - **Additions:** NEPAD, IMR (Nansen Program), UNESCO (IOC & MAB), INGOs...
 - **Funding (PDF-B):** GEF (50%) and in-kind contributions (50%+) – Supplementary PDF-B
 - **Duration:** 20 months (Feb 2005 to Sep 2006) +

Etudes Préliminaires



Indicative CCLME project goal

Reversing the depletion of fisheries and conserving nursery and reproductive habitat of the Canary Current Large Marine Ecosystem (LME) caused by over-fishing and pollution

[Note twin facets of the goal – reflecting fisheries (FAO) and pollution orientations (UNEP)]

CCLME Presentation structure

- **PDF-B chronology**
- **Preliminary TDA** (1st regional meeting, national consultations, thematic reports, expert groups, Preliminary TDA workshop)
- **Project design** (demonstrations, core activities)
- **Preliminary SAP initiative** (shared programming, synergies, co-finance arrangements)
- **Request suggestions** from the meeting

CCLME PDF-B chronology

2005

- Feb – installation at SRFC
- March – work plan, networking etc.
- April – May country & other missions (1st wave)
- June – July 1st draft Supplementary PDF-B request
- August – September – 1st regional workshop preparations
- **October 10-12 – 1st regional workshop and SC meeting**
- Nov – Dec – Supplementary PDF-B finalisation

2006

- Jan – May 2006 – National Consultations (1st wave)
- March 10 – April 10 – 1 month suspension
- March 31 – **Supplementary PDF-B granted**
- April – June – National consultations - continued
- July – Preliminary TDA, demo concepts & brief outline
- **Aug 31 – 1st full draft of project brief**
- Sept 23 – submission of brief for review
- **Oct 22 – submission of brief to GEFSEC**
- Dec 4-8 – GEF Council Meeting

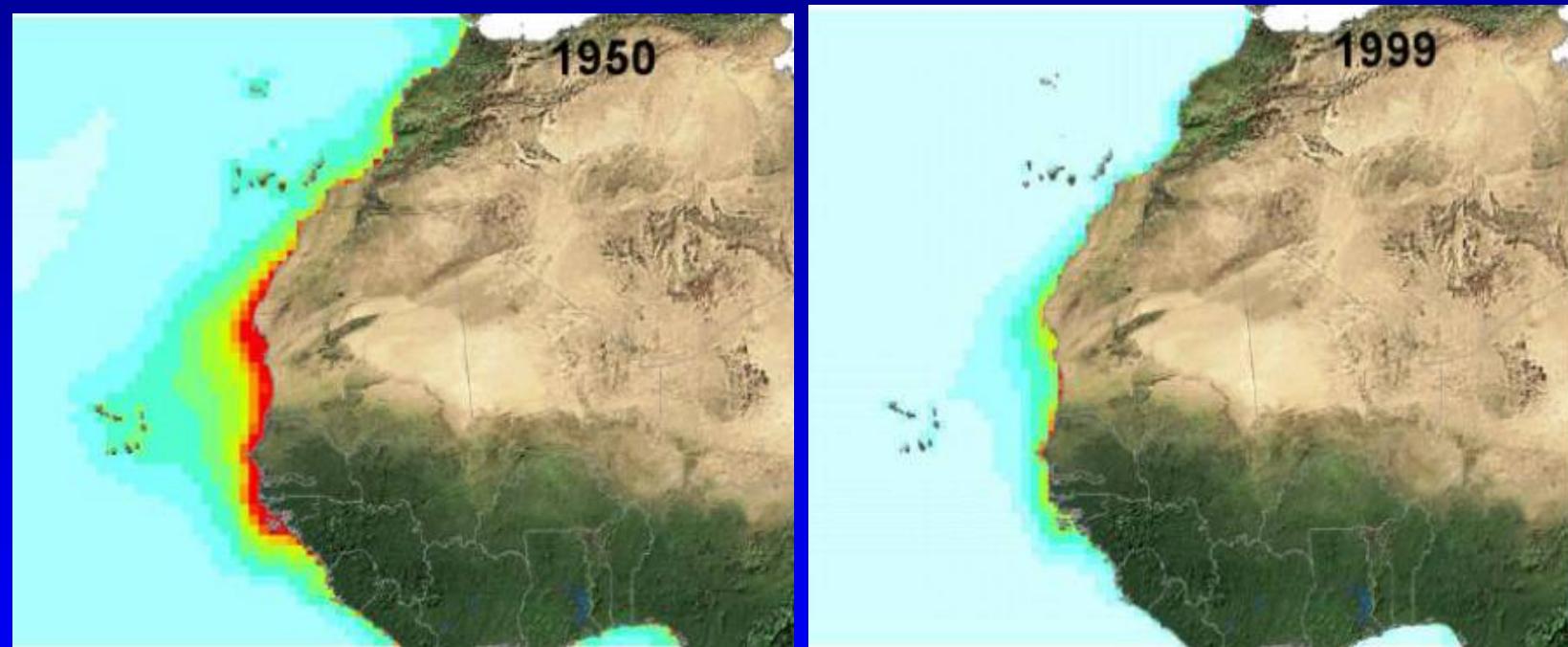
CCLME PRELIMINARY TDA

- Regional process
- National processes

REGIONAL PROCESS

- Regional constituency development
- 1st regional workshop
- Inventory of data sources
- Regional trans-boundary reports (ecosystem profile, fisheries, water quality & critical habitats)
- Contributions of regional expert bodies (FAO small pelagics Working Group, IUCN Shark Specialists group (W Africa), FAO Regional workshop on factors of ‘unsustainability’)
- Regional Preliminary TDA workshop
- Regional validation workshop

Effondrement rapide des stocks



D. Pauly

NATIONAL PROCESS

- Designate National Focal Point & National Technical Coordinator (environment / fisheries balance) (Morocco still awaited)
- Establish National Interministerial Committees
- Assist with regional data review
- Identify national stakeholders
- Organize national consultation
- Prepare national report
- Provide data for incremental cost analysis etc.

CCLME 1st workshop – Main TB issues

Working group	Trans-boundary environmental issues	Principle causes	Principal solutions
Fisheries & marine ecosystems	<ul style="list-style-type: none"> ▪ Vulnerability of pelagic fisheries resources ▪ Demersal fisheries in decline ▪ Loss of biodiversity and critical habitat 	<ul style="list-style-type: none"> ▪ Absence of trans-boundary management ▪ Insufficient MCS ▪ Non-selective fishing techniques ▪ Variability of the ecosystem 	<ul style="list-style-type: none"> ▪ Reinforce scientific capacity and cooperation ▪ Reduce fishing effort ▪ Introduce co-management of demersal fisheries ▪ Adopt an ecosystem approach to management ▪ Establish MPAs
Environment and coastal zone	<ul style="list-style-type: none"> ▪ Modification of water quality ▪ Natural environmental fluctuations ▪ Modification of coastal dynamics 	<ul style="list-style-type: none"> ▪ Urban and agricultural development ▪ River basin management 	<ul style="list-style-type: none"> ▪ Reinforce regional cooperation ▪ Reinforce institutional capacities ▪ Environmental monitoring & warning systems ▪ ICZM ▪ Establish MPAs
Governance and socio-economics	<ul style="list-style-type: none"> ▪ Over exploitation of resources due to foreign & internal demand 	<ul style="list-style-type: none"> ▪ Non-operational regional cooperation ▪ Lack of national coordination 	<ul style="list-style-type: none"> ▪ Reinforce regional cooperation frameworks ▪ Reinforce integration at the national level

CCLME 1st workshop

Main Trans-boundary issues (general)

- vulnerability of pelagic resources
- decline of demersal resources
- loss of biodiversity and habitat modification
- modification of water quality
- environmental fluctuations
- modification of hydrological processes
(river basins)

CCLME 1st workshop

Main causes of issues (direct to indirect)

- Non-selective fishing techniques
- Urban & agricultural pollution
- River basin modification
- Inadequate surveillance (MCS)
- Lack of trans-boundary management
- Insufficient regional cooperation
- Insufficient integration at national level

CCLME 1st workshop - Main solutions

- Adopt an ecosystem approach to fisheries management
- Reinforce capacity and scientific cooperation
- Reduce fishing effort
- Introduce co-management of demersal artisanal fisheries
- Establish a regional network of MPAs
- Develop regional ecosystem monitoring & forecasting
- Reinforce regional cooperation frameworks
- Reinforce management institutional capacities
- Implement ICZM at the national level
- Reinforce integration at the national level

TRANSBOUNDARY ISSUES

‘Issue’ = problem or concern relating to trans-boundary ecosystem that is best addressed by countries acting together

NATIONAL CONSULTATIONS

- 2 or 1 day meetings
- Full range of stakeholders represented (generally 30 to 40 participants)
- Encouraged to express views freely
- Issue analysis (causal chain)
- Identification of priority trans-boundary concerns
- Suggested solutions to the concerns
- Analysis of existing projects and gaps
- Suggested demonstration projects
- Consider participation of other states (Spain, Portugal, Sierra Leone)

Results of national consultations

Country	Vulnerable pelagic fisheries	Declining demersal fisheries	Critical habitat modification	Water quality decline / pollution	Biodiversity loss	Environmental fluctuation*
Guinea	X	X	X	X	**	
G. Bissau		X	X	X	X	
Gambia	X	X	X	X	X	X
Senegal	X	X	X	X		X
Cape Verde	X***	X	X	X	X	
Mauritania	X	X	X	X	X	X
Morocco	X			X		X

* Upwelling countries expressed concern about variability

**Guinea considered biodiversity loss as an impact of habitat loss

*** Cape Verde's concern relates to tuna and associated species

GUINEA TRANS-BOUNDARY ISSUES

- Decline of fisheries resources (especially demersal)
- Loss of critical habitat (especially mangrove)
- Declining water quality (urban, shipping, petroleum & agricultural pollution)

SENEGAL PRIORITY TRANS- BOUNDARY ISSUES

- Declining fisheries resources (especially demersal)
- Habitat modification (mangrove loss)
- Water quality change (due to river basin management)

GUINEA BISSAU

- **Fisheries** - demersal declines (especially crustaceans & cephalopods, sharks & rays)
- **Loss of critical habitat** (mangrove)
- **Loss of biodiversity** – sea turtles & manatees
- **Water quality decline** (risk of oil pollution)

Zones Prioritaires

ECOREGION MARINE OUEST AFRICAINE
(WAMER)

WEST AFRICAN MARINE ECOREGION
(WAMER)



AIRES PRIORITAIRES PRIORITY AREAS

Légende / Legend

- Capital
- Villes / Cities
- Aires protégées / Protected areas
- Aires protégées / Protected areas
- Trait de côte / Coast line
- Limite d'Etat / National boundary

Niveau / Level

- Mondial / Global
- Ecoregional
- National

100 0 100 200 Kilometers



GAMBIA

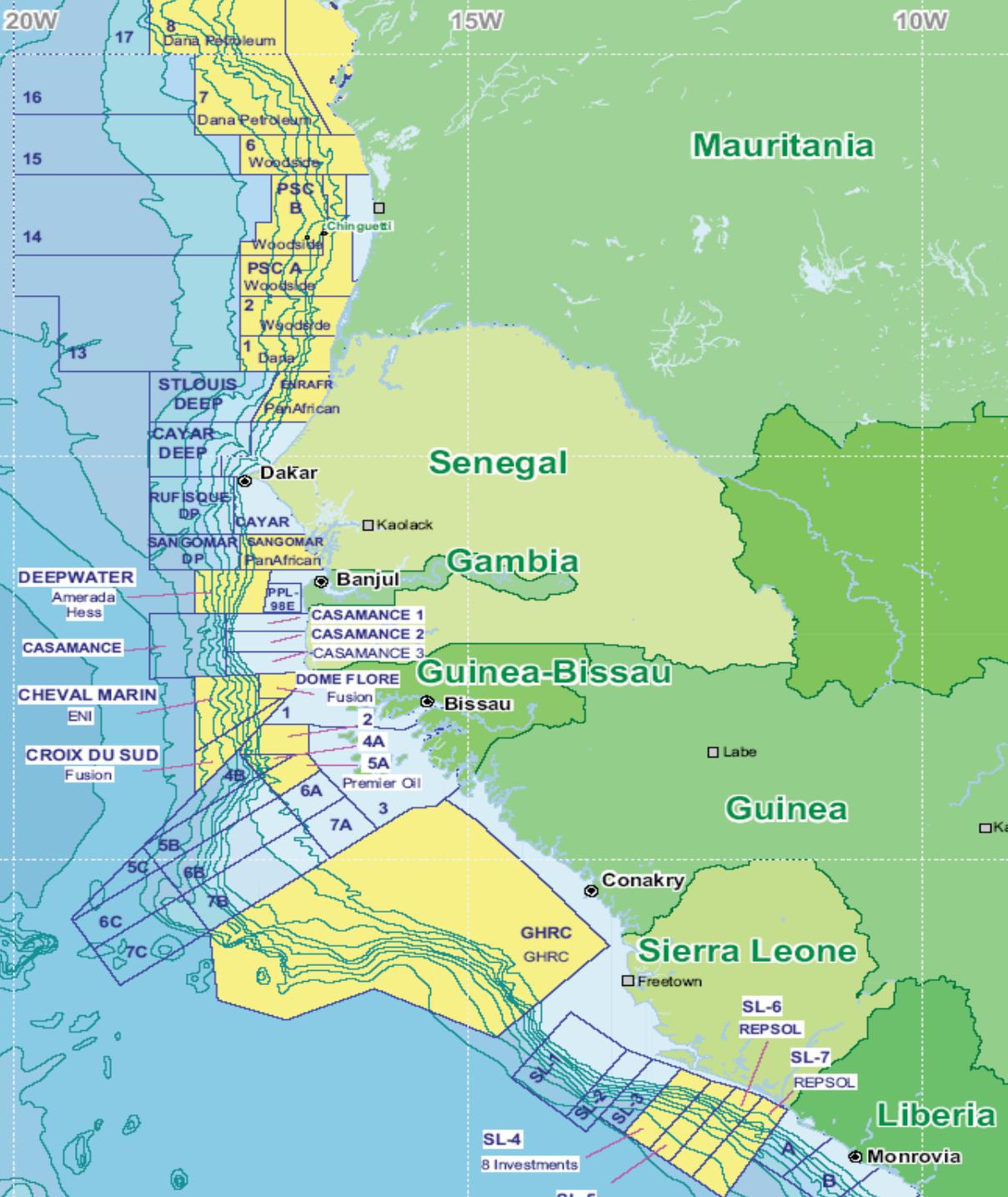
- Decline of small pelagics
- Benthic habitat damage due to trawling
- Degradation of / threats to critical estuarine habitat (especially mangrove)
- Decline in water quality (sediment & salinity change)

CAPE VERDE

- **Decline of oceanic pelagic fisheries** due to IUU
- **Loss of biodiversity** (turtles, cetaceans, birds, corals)
- **Loss of critical habitat** (sea mounts, coral reefs)
- **Pollution** (oil, pesticides, solid & toxic wastes)

Pressions Partagées

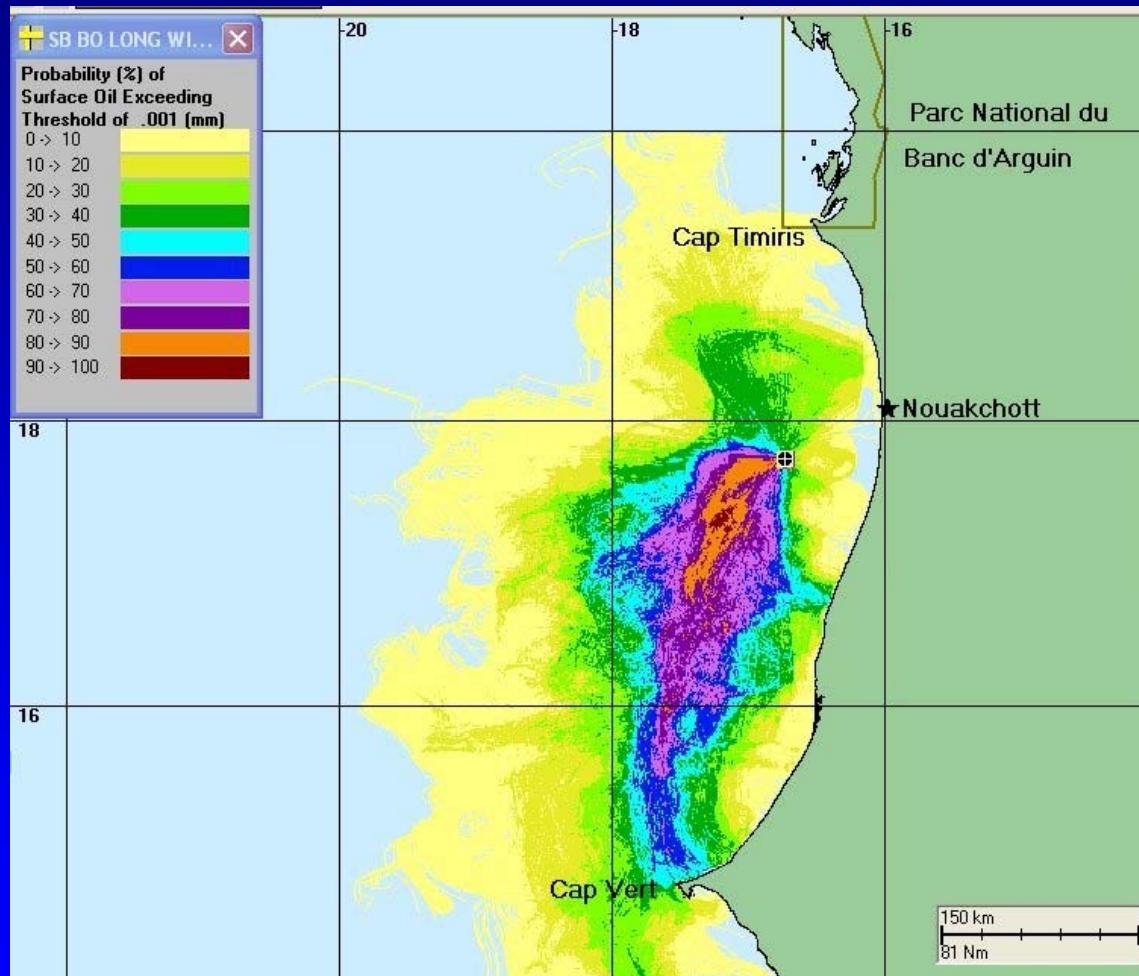
Blocs Pétroliers



Source: Deloitte
Petroleum Services
2003

Modelling results – stochastic (1)

Conditional probability of exposure from a 140,000 bbls (22,260m³) seafloor release of crude oil over 14 days from the Chinguetti field, in winter (assuming no intervention)



Source:
Woodside
Petroleum

Note: These conditional probabilities do not take into consideration the likelihood of a spill occurring in the first place. The coverage depicted does not represent the spatial extent of any single spill event, which will be significantly smaller.

Preliminary TDA workshop

- National focal points & technical coordinators
- Supporting experts & consultants (FAO, UNEP, NOAA, IMR, CEMARE, CSRP, GTZ, IUCN...)
- GCLME (to provide TDA experience)
- Assess major information needs

PROJECT DESIGN PROCESS

- Preliminary TDA
- Identify full range of possible solutions
- Select demonstration projects for Phase 1
- Establish elements of regional pre-SAP
- Assess gaps in pre-SAP not addressed by other projects
- Coastal stakeholder participation strategy (IUCN)
- Design core project activities
- Project brief preparation (ICA etc.) – consultant assisted

DEMOnSTRATION project process

CRITERIA

- GEF criteria (general, IW, demonstrations)
- Involve cooperation of 2 or more countries in addressing a common trans-boundary concern
- Contribute, directly or indirectly, to healthy, functioning LME
- Integrate capacity building, maximise use of national & regional expertise
- Must include baseline assessment and indicators (based on LME modules)

PROCEDURE

- Soliciting ideas (national consultations, expert groups, existing regional project coordinators, global GEF projects)
- Call for demonstration projects
- Submission of projects through focal points & national coordinators indicating expectation of national endorsement
- Consensus selection of concepts
- Preparation of proposals by proponents assisted by consultant

DEMONSTRATIONS under consideration

- Policies & plans for an ecosystem approach to small pelagics management (Morocco, Mauritania, Senegal, Gambia) (FAO/SRFC/ICA Holland)
- Trans-boundary management of coastal pelagics (e.g. mullet, meagre, bluefish) (same countries, building on program assisted by IUCN)
- Management of the trans-boundary demersal fishery centered on Senegal (Mauritania, Senegal, Gambia, Guinea Bissau) (Strategic Partnership?)
- Demonstrating MPAs as tools for artisanal fisheries within a co-management approach (SRFC/AFD)
- Development of a plan for a regional network of MPAs
- Forecasting meso & micro scale variability in shelf seas affected by upwelling ('MOLINA') (upwelling countries)
- Improved understanding and management of the estuaries of the southern CCLME (Senegal, Gambia, Guinea Bissau)
- Regional plan for the conservation of mangrove ecosystems
- Large species conservation (turtles, manatees, cetaceans) and use as state-of-LME indicators
- Oil spill risk assessment, prevention & response strategy

DEVELOPING PRE-SAP Strategic framework for the CCLME

- Review of all relevant instruments, policies (conventions, MDGs, African Process, NEPAD (Environment & Fisheries), WSSD, AMCEN
- Preparation of discussion paper (FAO)
- Meeting of agencies & programs (**NEPAD**, GEF Council Members, UNDP/GEF, UNESCO (IOC & MAB), FAO, CSRP, World Bank & INGOS
- Development of detailed program framework & gap analysis (associating NEPAD)
- Meeting to validate common framework
- Adoption of Pre-SAP at 2nd CCLME Regional workshop

Indicative PRE-SAP components for the CCLME

GOALS: MDG 1 & 7 (poverty & environment)

OBJECTIVES

- Responsible fisheries
- Biodiversity conservation (species & habitats) including regional MPAs network
- Pollution prevention (land & marine based)
- Adaptation to climate change
- Development alternatives in coastal zones (tourisme, mariculture etc.)
- Information, research and planning (ongoing TDA/SAP process)

Indicative Strategic framework

OBJECTIF (composante)	Programmes d'activités sous-régionaux principaux (non-GEF)				Projets FEM (IW, Biodiversité, changement climatique)							Projets et programmes supra-régionaux associés à la FAO		
	Actions nationales et locales	PRCM	CSRП	Recherche (bailleurs bilatéraux)	CCLME	GCLME (G Bissau & Guinée)	BM Projets GIZC	ACCC	Bassins versants	PS SSA (WB/FA O/ WWF)	PMED P Phase2	Nansen2 2006-2010	COPACE	
Pêche responsable (tous types de pêcheries)	X	X	X	X	X	X	X			X	X	X	X	
Conservation de biodiversité, espèces, écosystèmes et habitats) (y compris AMP)	X	X	X	X	X			X	X	X				
Prévention des pollutions et dégradations (d'origine terrestres et marines)	X	X			X	X				X			X	
Adaptation et lutte contre le changement climatique	X	X*			X*			X	X					
Alternatives pour le développement durable (ex. tourisme durable, mariculture)	X	X			?			X		X	X	X		
Recherche scientifique, systèmes d'information et planification stratégique (ex. ADT/SAP)	X	X	X	X	X	X				X	X	X	X	
Projets	ONG nationaux Etats Communautes de base PACPM (Sénégal)	Composantes 1 à 5 du PRCM *mangroves	MCS, AGPAO, AMP-cogestion, Appui GTZ Petits pélagiques	Eco-Up, ISTAM, ECOST, POORFISH, RED-AFRIMAR, AMPHORE	Processus ADT/PAS actions de démonstration, actions barrières *mangroves	Processus ADT/PAS Actions de démonstration	GIRMAC Sénégal, CPMP G Bissau, ICAM Gambie, PGIRN Guinée	Processus, 4 projets pilotes	BFS (OMVS) OMVG (attend financement)	Sénégal (pêche démersale transfrontalière)	Sénégal Mauritanie	Etudes LME Projet EAF	Evaluation des stocks, réunions de gestionnaires	
Bailleurs	Divers BAD (PACPM)	MAVA FIBA Pays Bas WWF (NL, DE)	EU AFD GTZ Pays Bas	EU, France, Espagne.	GEF + co-finance	GEF + co-finance, Norvège (Nansen), SIDA	GEF + pays	GEF UNES CO, pays Canada	GEF + pays, Pays Bas BAD (OMVS)	GEF + IDA loans etc.	DfID FAO	Norvège, FAO, GEF, Pays Ba	SIDA FAO	

INDICATIVE CCLME COMPONENTS

CCLME Phase 1 2007-2012

1. TDA development (LME issues assessment)
2. SAP development (planning)
3. Information management & systems
4. Institutional coordination mechanisms
5. Demonstration projects (5 to 8)
6. Actions to address any critical barriers

NB: capacity building & training would be cross cutting objectives

CCLME PDF-B LESSONS LEARNED

- An 18 month LME PDF-B needs full-time coordinator & team – competitive recruitment of support team from region
- Focal points - GEF Operational FP as Project FP plus a Technical Coordinator from fisheries
- National & regional consultations & Preliminary TDA will identify the obvious priority issues but no substitute for full TDA including assessment of poorly known issues

Questions to meeting

- Preliminary TDA – 3 days
- Project design - demonstrations, core activities
- Preliminary SAP - suggestions
- Additional OECD countries (Spain, Portugal)