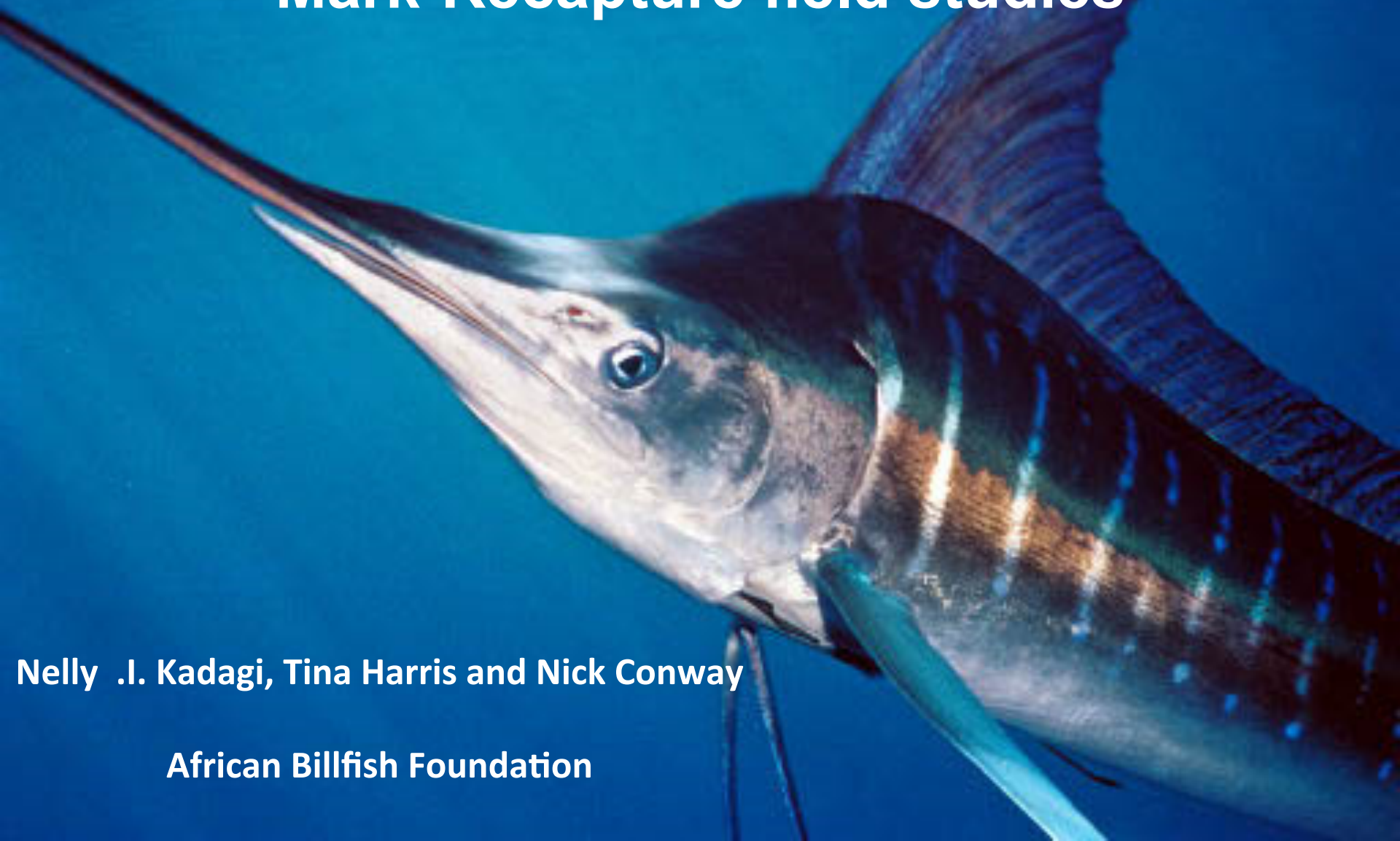


# East Africa billfish Conservation and Research: Marlin, Sailfish and Swordfish Mark-Recapture field studies



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African Billfish Foundation

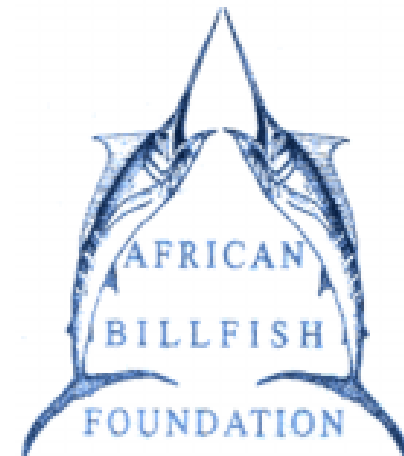
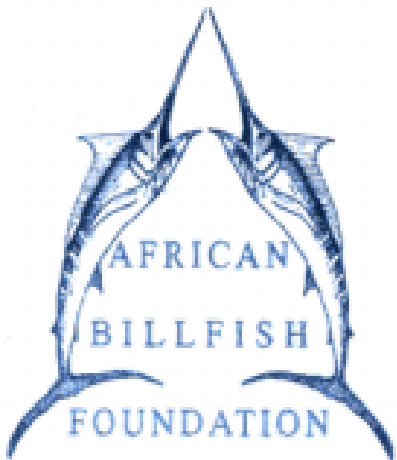


# BILLFISH



❖ Ecological function as Top predators

❖ Fisheries Importance – Gamefishing, Commercial and Artisanal



# MAIN ISSUES

- ❖ Inadequate information on billfish
- ❖ Scant recognition for billfish
- ❖ Insufficient financial and resources backing
- ❖ Inadequate support from stakeholders



# WHAT we DO – AFRICAN BILLFISH FOUNDATION



## Programmes

❖ TAGGING

❖ TAG RECOVERIES

❖ Research on BILLFISH and other species

❖ COMMUNITY empowerment



❖ ADVOCACY



# Materials and Methods



Hydroscopic nylon tags



Get Involved! <input type="radio"/>		TAGGING DATA REPORT <input checked="" type="radio"/>		ABF B 12599
DAY - MONTH - YEAR 20-11-2010		LOCATION SABAKI	Lat: _____ Long: _____	North / South East / West
SPECIES TAGGED: Black Blue Striped Sail ✓ Sword Other: _____				BOAT: BLACK WILLOW
Est. Weight: 2.8 lb/Kg				Fork Length: _____ In/Cm
Fighting time: _____ Hr _____ Min		Bait type: Live Dead ✓ Fly Lure Combo		
Fish Condition: Excellent ✓ Live Marginal Other: _____			Remarks:	
ANGLER'S NAME: Hendrik Potgieter			CAPTAIN'S NAME: ADAM OGBEN	
ANGLER'S ADDRESS: Middelburg			CAPTAIN'S ADDRESS: P.O. BOX 267 WATAMU	
COUNTRY: Frewin str 27			COUNTRY: KENYA POSTCODE: _____	
COUNTRY: RSA POSTCODE: 1050			CAPTAIN'S PHONE #	
ANGLER'S EMAIL ADDRESS: lukas.lp@vodamail.co.za			CAPTAIN'S EMAIL ADDRESS:	
PLEASE SEND RELEASE CERTIFICATE (Marlin only) <input type="checkbox"/>			PLEASE JOIN US <a href="http://www.africanbillfish.org">www.africanbillfish.org</a>	

## Recapture Information

TAG NO.....

DATE .....

(Recovery date NOT

Tag date) .....

SPECIES .....

LOCALITY .....

WEIGHT .....

METHOD Nets  Rod & line  Long line  other  (please tick one)

WAS FISH boated  re-released  re-tagged  new tag No .....

(If retagged, please attach this form with the tag card)

# Tagging programme

*Why tag?*

Over 45,000 fish TAGGED

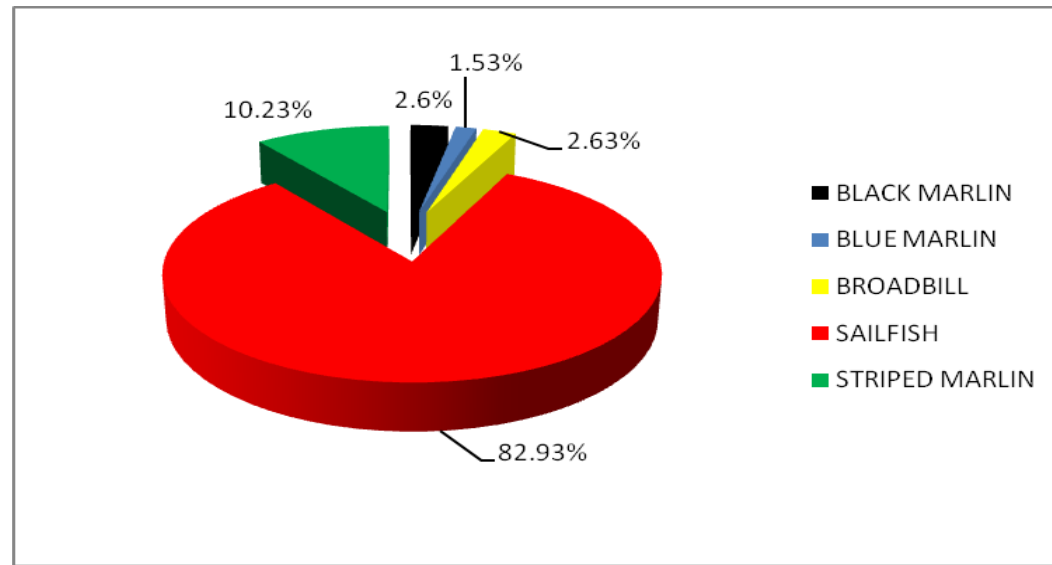


Fig 1: Total of all billfish reported caught in the East African waters (tagged, released or killed)

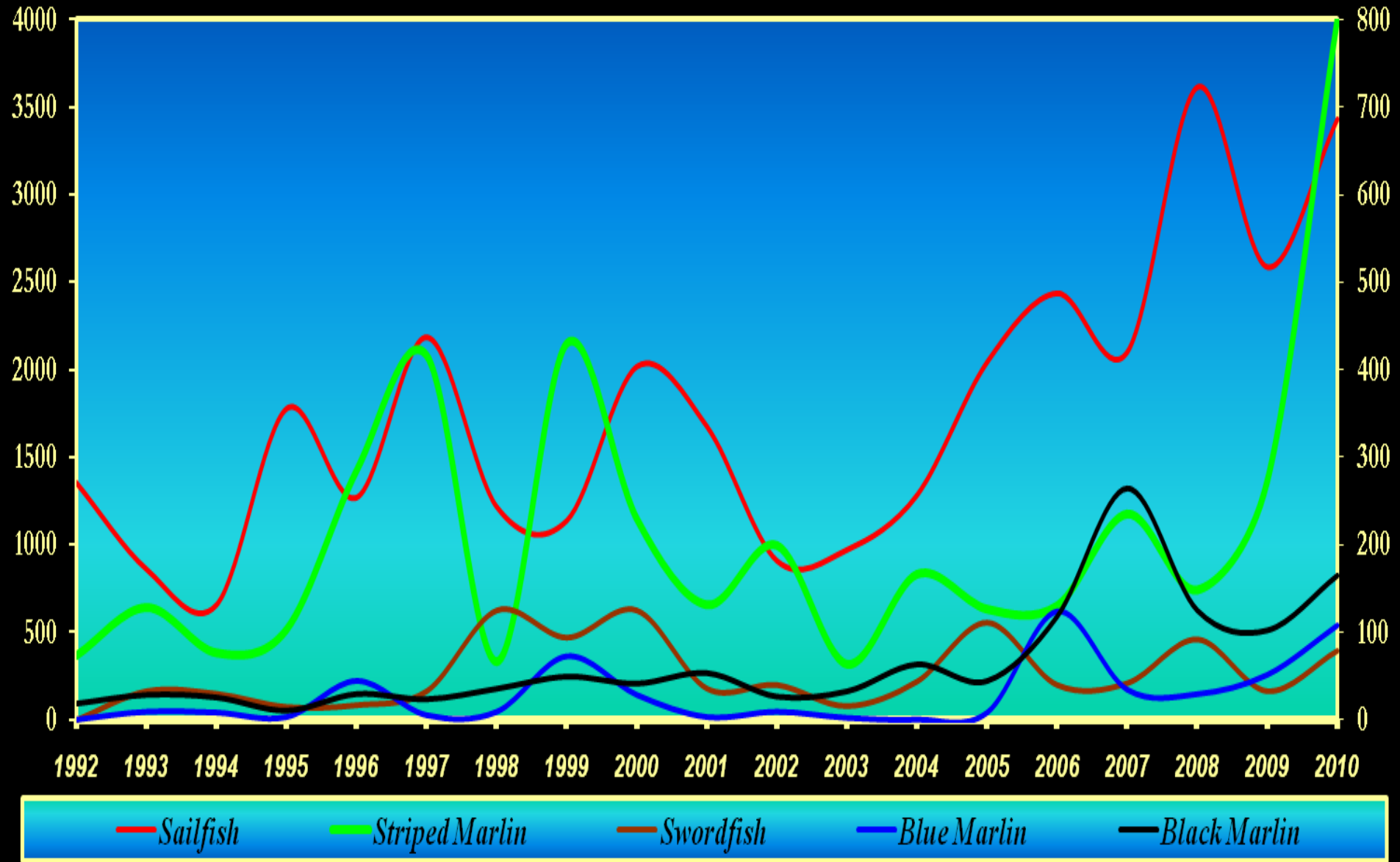


Fig 2: The different billfish species that were tagged from 1992 to 2010

# Recapture studies

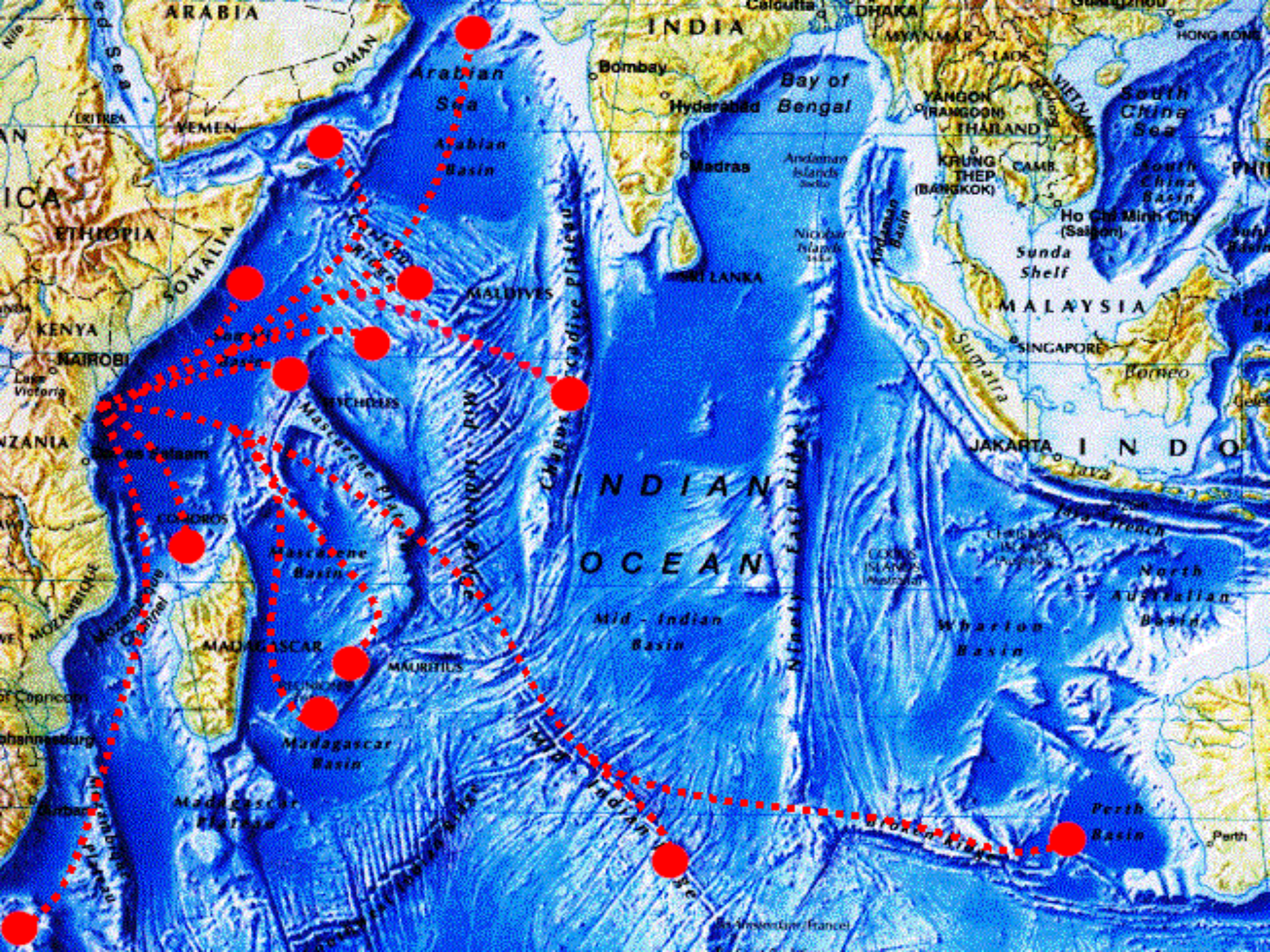
- ❖ Keep track of the numbers
- ❖ Manage populations



**Over 1500 fish tags recovered**

- ❖ Striped marlin re-caught off Perth, Australia travelling 5250 miles in just 195 days
- ❖ Broadbill re-caught on the Mid Indian Ridge travelling 3600 miles in 123 days

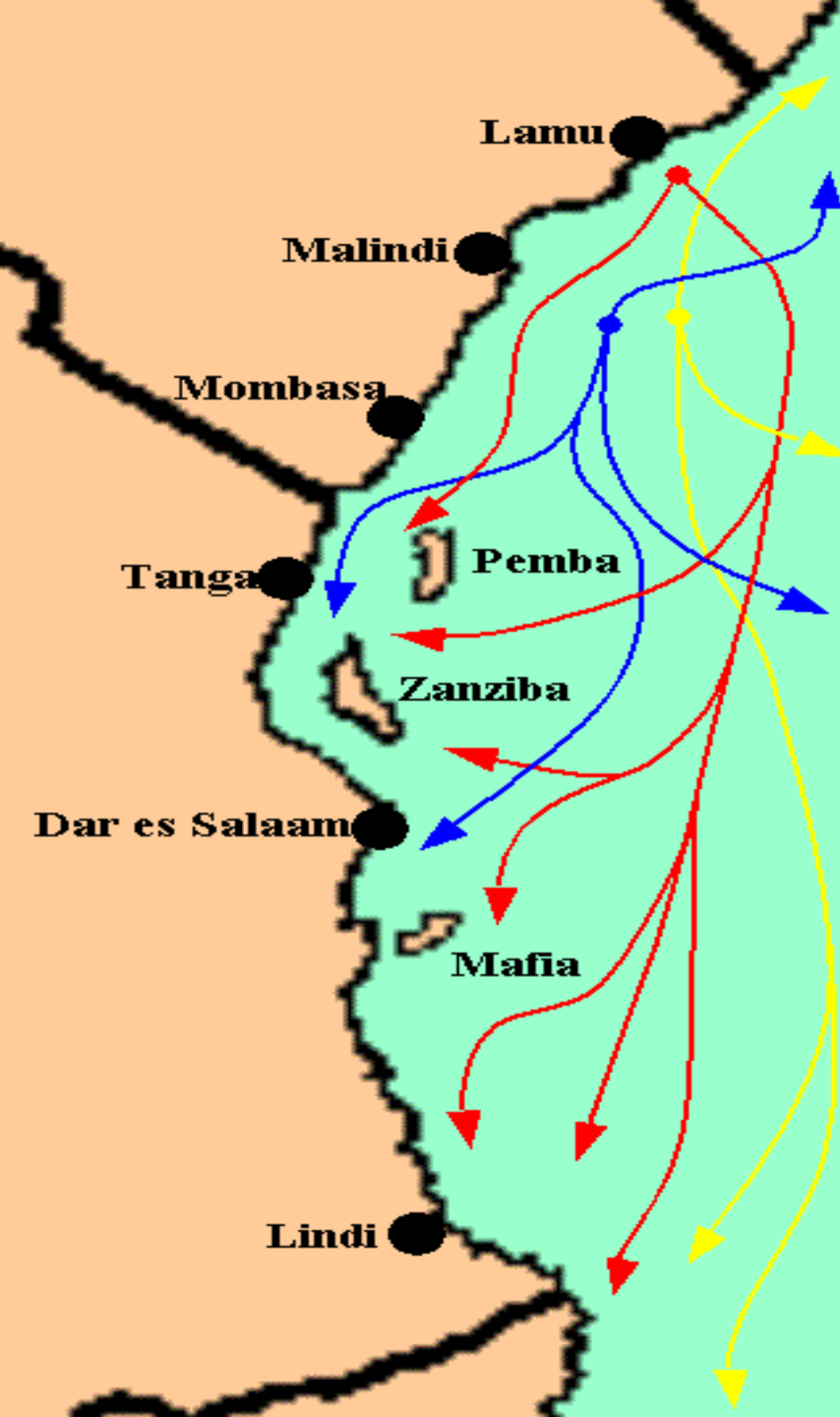






11. Sailfish that Re-caught off – South Africa on a Japanese long liner. Time Out: 2 years

12. Sailfish - Re-caught in the Atlantic Indian Ridge on a Approx distance : 3300 miles. Time Out: 1.5 years.



Most recaptures are confined to the Somali basin and its surrounding ridges and plateaus

# Recapture summary

\_ 2% rate

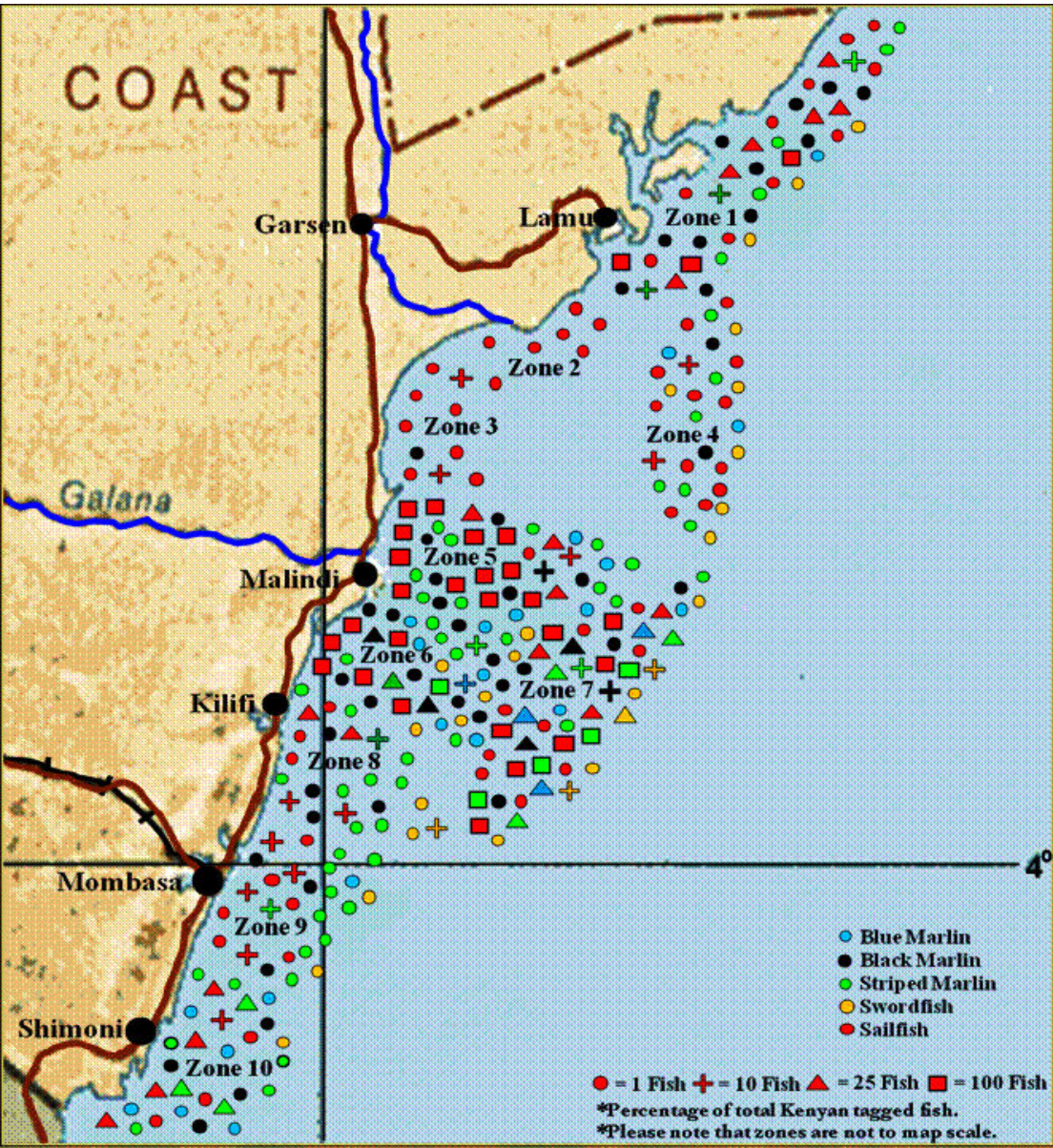
----- low recapture rate-----

**Solution** → Satellite tagging project – using pop- up tags

## **Challenge:**

- Quality analysis of data
- Technology
- Publicity

# Other studies



- ❖ Stock structure
- ❖ Growth rates
- ❖ Migratory routes
- ❖ Seasonality changes influence

# Research focus

❖ Community Empowerment

Education and awareness



Incentive scheme

USD 5 reward

# Advocacy

- Sustainable Fishing methods
- Development of a billfish management strategies
- sustainable use of billfish resources



# Threats

- ❖ Fisheries Interactions – by-catch
- ❖ Other threats – Pollution, degradation of habitats



Sightings of these fish has greatly diminished



# Promising solutions

- ❖ Training in tagging, data collection and reporting

- ❖ Enhance research – fishing technologies, use of archival tags



- ❖ Education and awareness

- ❖ Regional cooperation

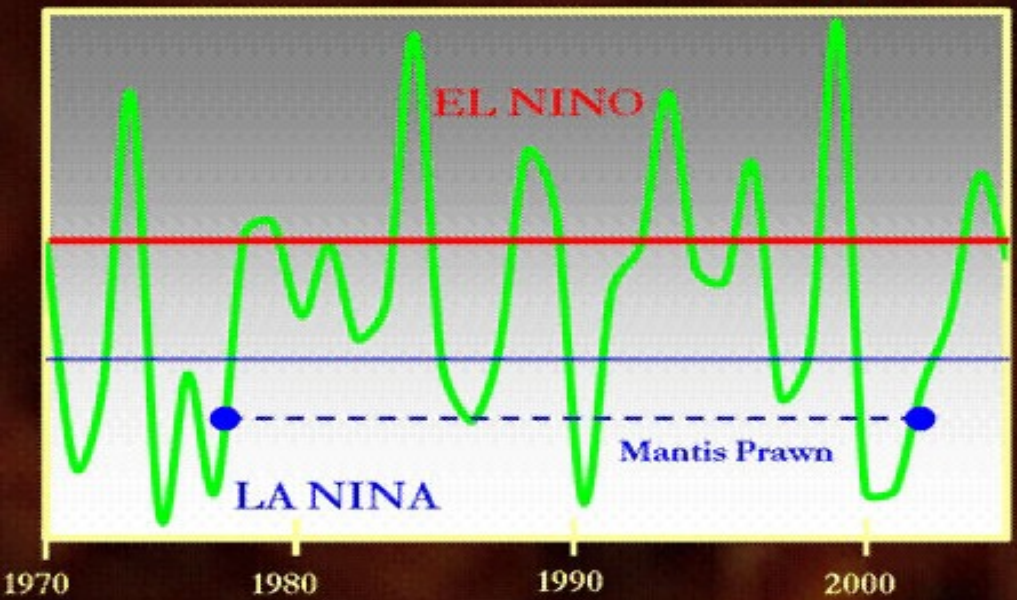
# THE FUTURE OF BILLFISH SPECIES

As long as there are people who care and take action, we can and we will make a difference



**THANK YOU**





mantis prawn population explosions  
effect on billfish catches

Fig 4: El Nino's (temp above the red line) and La Nina's (temp below the blue line)

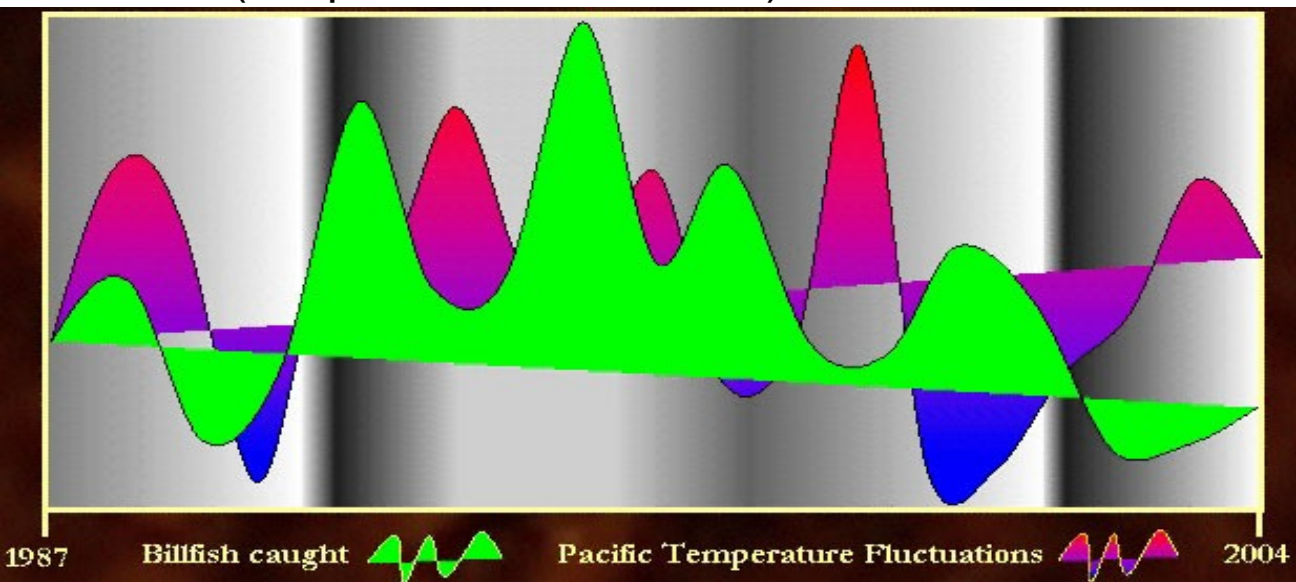


Fig 5: Relationship between Pacific Temp changes (red/blue) and billfish catches

