

PERFORMANCE, POTENTIAL AND PROSPECTS OF FISHERIES SECTOR IN ERITREA

Tesfom Melake Araya
International Masters Scholar (Fisheries Economics)
tesmel4@gmail.com

M. Krishnan
Head, Social Sciences Division
mkrishnan@cife.edu.in

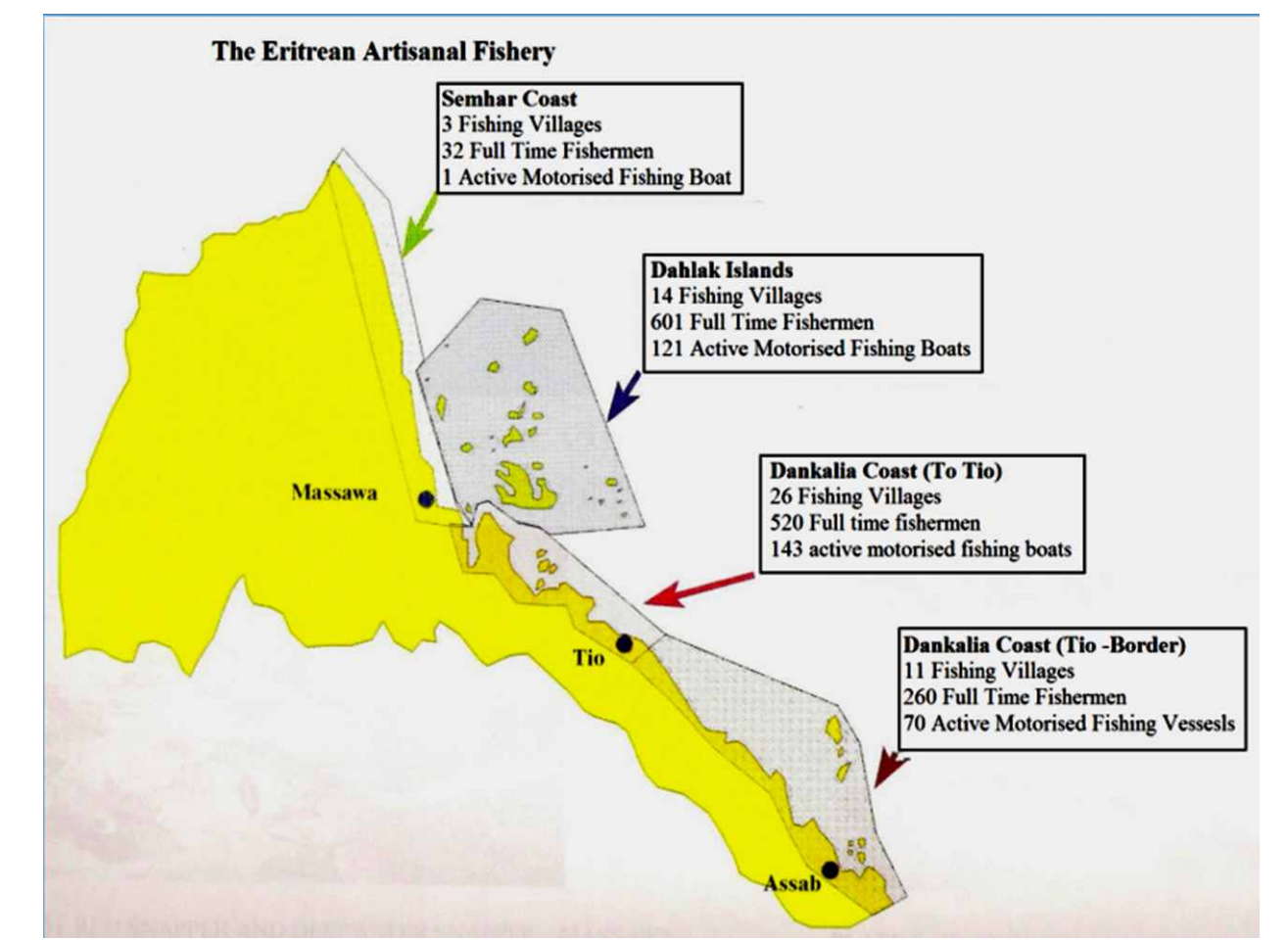
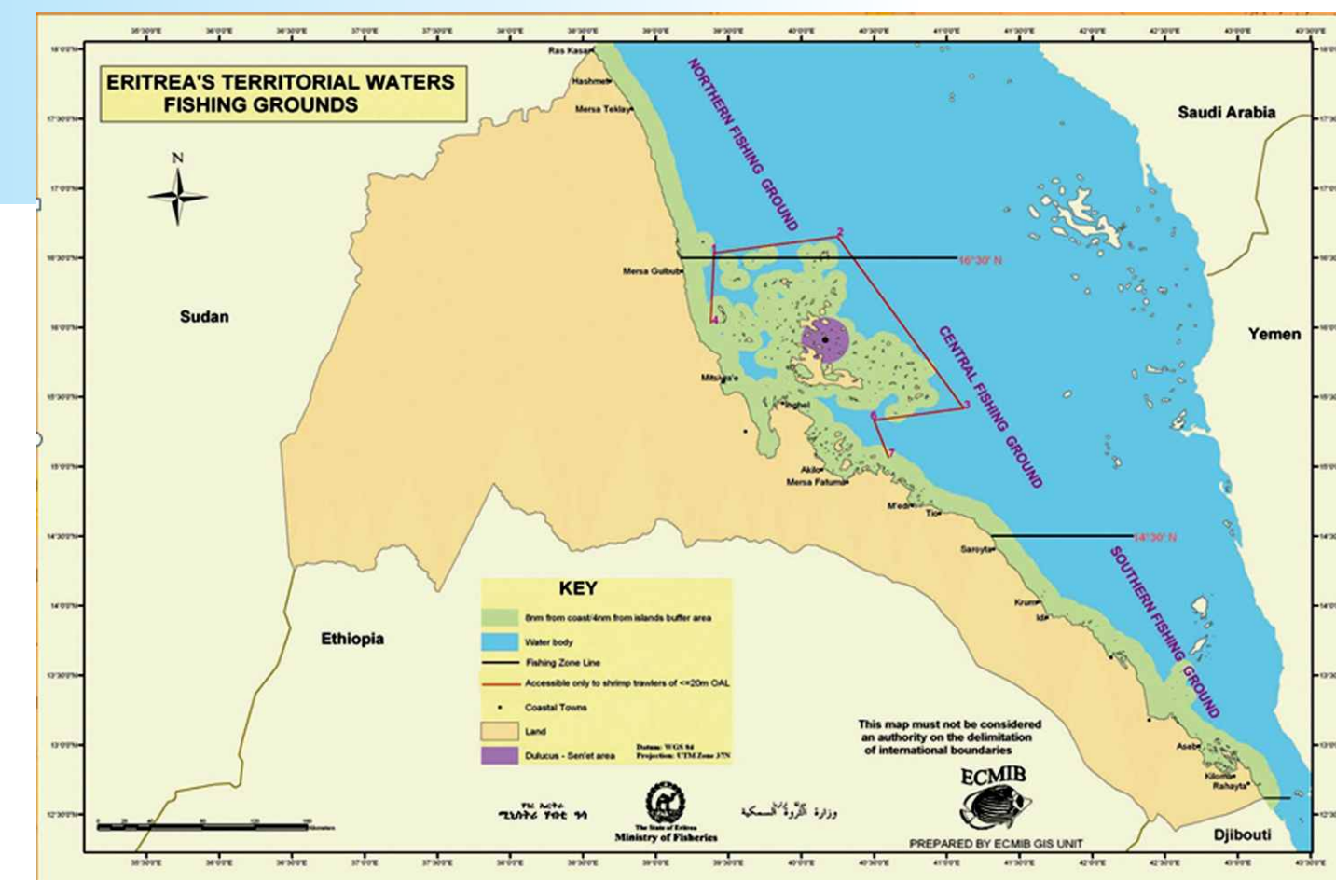
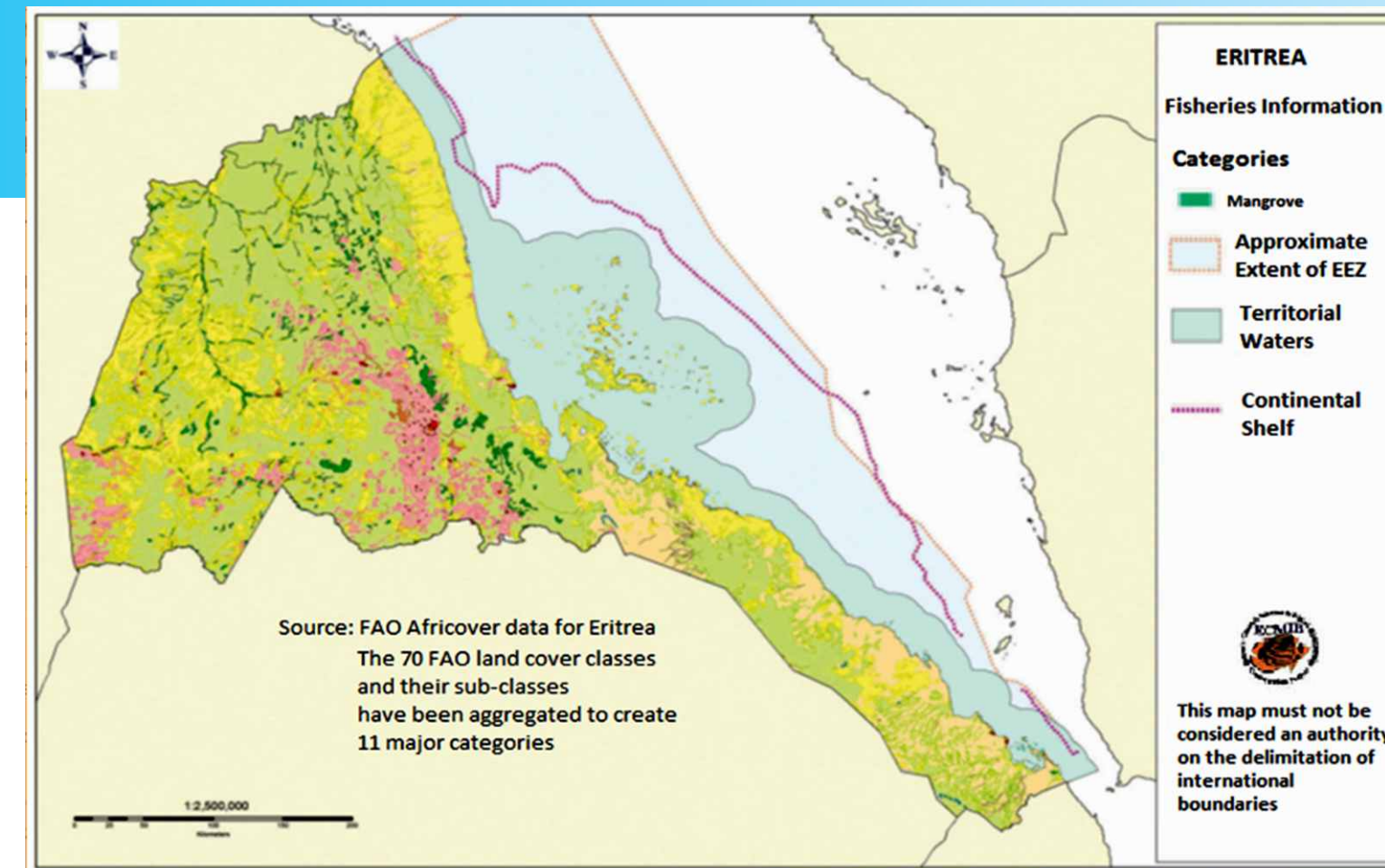
Central Institute of Fisheries Education
(Indian Council of Agricultural Research)
Versova, Mumbai – 400061, India



Introduction

Eritrea occupies a key strategic position on the central and southern side of the Red Sea, with an extensive sea area including approximately 354 islands and islets. The length of its coastline is around 3,300 km, out of which 1,350 km is mainland coastline and the rest 1,950 km forms the coastline of its Red Sea islands. Eritrea claims a 12 nm territorial sea limit although the exact borders of its territorial sea remain in dispute in some areas [Morgan, 2004].

It is situated at the horn of Africa and has a rich history of links with and through the Red Sea. Eritrea as a newly developing country, has limited capacity to rebuild its war-devastated infrastructure. Nationally Eritrea is food insecure with the agricultural sector producing only 60% of food requirements even in good rainfall years. However, Eritrea possesses abundant and underexploited fish stocks, which have the potential to considerably contribute to and diversify national food security and reduce the incidence of poverty, particularly among coastal communities [IFAD, 2010].



Eritrean marine and coastal Environment overview

Country coastline:	3300 km
Mainland Coastline:	1350 km
Islands coastline:	1950 km
Islands and islets:	354
Country Area:	124,000 km ²
Territorial waters area:	55,000 km ²
Exclusive Economic Zone (EEZ):	120,000 km ²
Watersheds linked with the coast:	44,000 km ²

Source : ECMIB GIS Unit 2007/UNDP 2007

Resource potential of Eritrean fisheries sector

Maximum Sustainable Yield	40,000 up to 80,000mt
Species of Fish	Around 1000
Coral Reefs	220 known species
Generate Income	\$ 37.5 - 40 Million

Source: IFAD, 2010

Marine resources

Resources	MSY in mt
Demersal fish	17 000
Coral Demersal fish	5 000
Small Pelagics	24 000
Large oceanic pelagics	6 000
Sharks	5 000
Shrimp	500
Lobster	500

Source: IFREMER (FAO Website, ©2012)

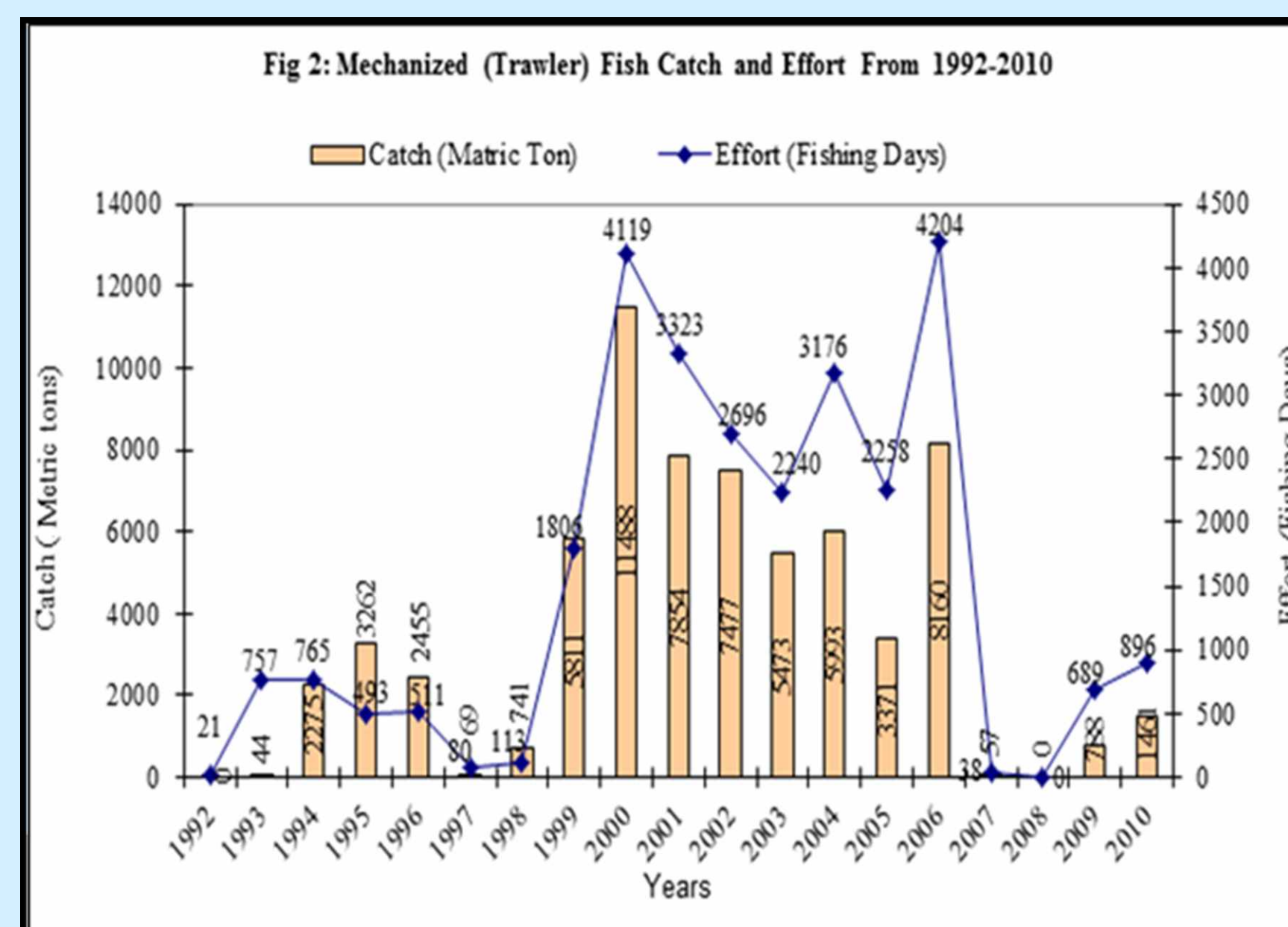
Fishing Vessels

Vessel Length	Engine Type	Average horsepower of engines?	Crew Number
Canoes (non-motorized, double-ended small craft) Small and uncommon	No engine	-	-
Decked boats or open decked 8-13 m or 6-15 m or 4-9 m 4-11 m	small outboard motor	Average is 40 HP	crew size is 4-6
Generally decked, ≤ 16 m &/OR 12-17 m	Inboard diesel motor	Average is 30 HP	Crew size ≤10
Artisanal		Mechanized	
pelagic gillnets (60 - 270 mm mesh), no machine, demersal handlines, no machine, troll-lining, beach seining, shark gillnet		Industrial small (Mediterranean type) trawls mainly Egyptian, Industrial inshore and offshore trawls, Longlines	

Source: Blue Ocean Institute, Country Profile – Eritrea, 2007

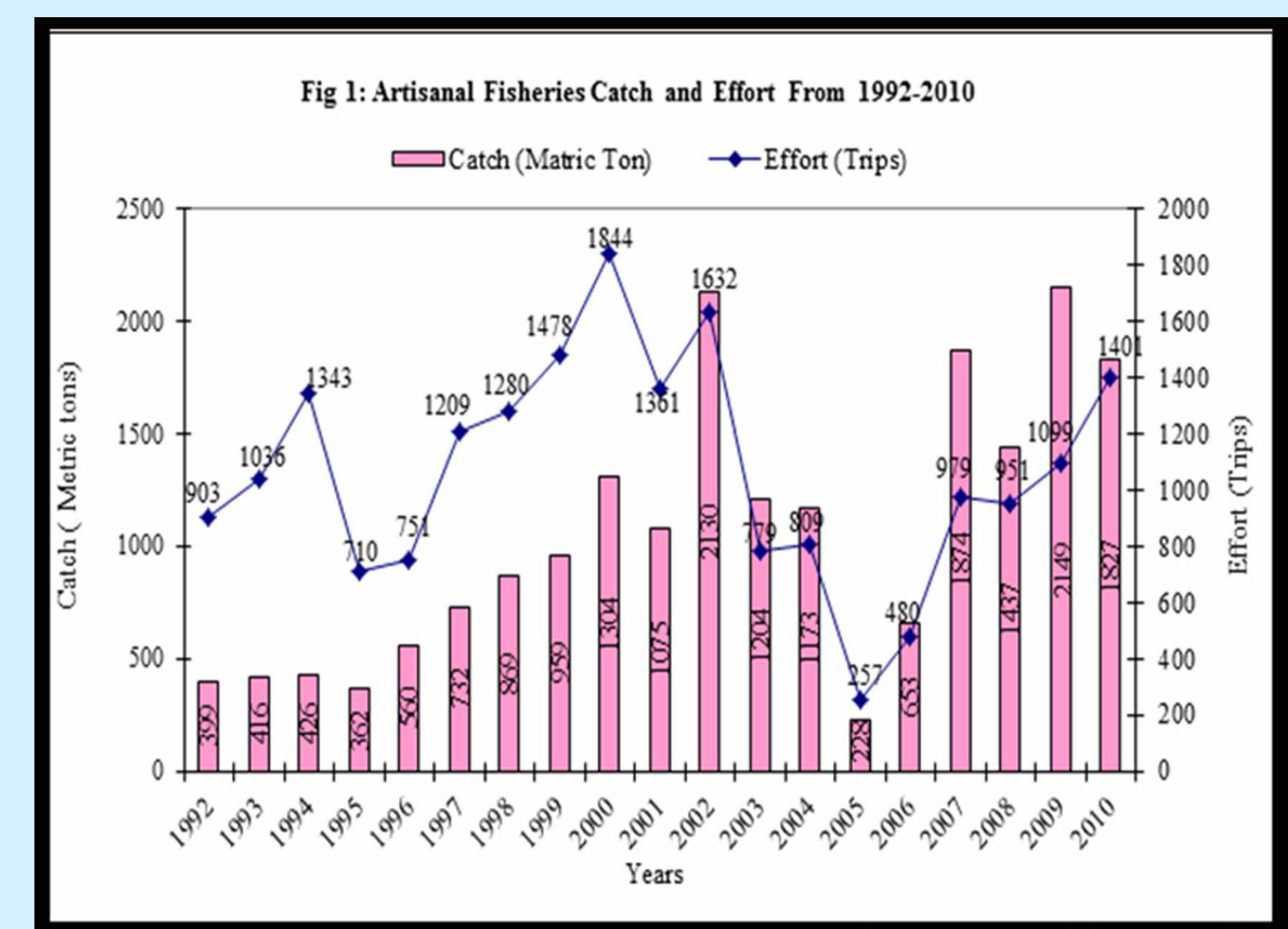


Artisanal fisheries



- * During 1992-2010 there was high variability in fish landing from artisanal fisheries
- * Artisanal fisheries peaked in 2002 and 2009, contributing about 2.7% of the total MSY of the fisheries potential of the country
- * The Eritrean fisheries sector is still underutilized and far below the MSY
- * According to reports of the Ministry of Marine Resources only 13% of the potential is currently exploited

Mechanized fisheries



- * Better performance of mechanized fisheries motivated the Government of Eritrea to develop policies in favour of the mechanized sector.
- * Regulations governing the mechanized trawl fleet include measures to protect the coastal biomass at a minimum depth of 30 m and a minimum distance of 6.5 miles from the shore and 4 miles from any island.
- * During summer, July through September, all mechanized fishing operations are prohibited in Eritrean waters.
- * A balanced approach of promotion of mechanized and artisanal fisheries is advocated

Classification Of Fishermen In Eritrea

- Artisanal Fisheries
- Mechanized Fisheries

Artisanal fishing community characteristics of the Northern and Southern Red Sea Regions

SN	Sub Zone	Population		Number of Fishermen	Cooperative Members	Type and No. of active Boats			
		House hold	Singles			Houri and FG	Sambuks	Total by Village	Owned by Coop members
1	Gellalo	1384	5829	426	241	124	83	15	9
2	Foro	732	3449	80	80	45	36	1	1
3	Dahlak	529	2565	299	228	128	55	18	6
4	Massawa	7265	31042	540	96	54	4	13	13
	Sub Total	9910	42885	1345	645	351	178	47	29
1	Araraata	870	3810	683	174	109	109	21	21
2	Central	340	1340	195	102	52	52	15	15
3	Assab	7680	23770	1050	191	174	174	24	24
	Sub Total	8890	28920	1928	467	335	335	60	60
	Grand Total	18800	71805	3273	1112	686	513	107	89

Source: Ministry of Marine Resources (Cooperative and Extension unit) Annual Report, 2009

Inland Fisheries

- > Reservoirs built in the high and lowlands of the country
- > They are strategically placed to collect water during rainy seasons for irrigation and supply of drinking water
- > Species stocked or considered good candidates for further stocking include *Oreochromis niloticus*, *Tilapia zilli*, *Cyprinus caprio*, *Carassius carassius* and *Carassius auratus*.
- > The total catch of inland fisheries including subsistence fishing was about 5 metric tons per year in 2002, but according to the Ministry of Marine Resources, has a potential of 100 metric tons per year [FAO, 2012].
- > Inland fisheries produces only 5% of the estimated potential
- > It needs a careful strategic management for the exploitation and contribution to the food security objective of the country.

Constraints And Development Strategies

Factors	Major operational constraints	Developmental strategies for improvement
Social and cultural factors	Lack of skill and knowledge Shortage of manpower in the sector	- Training for skill up-gradation and operational knowledge to fishermen - Awareness of code of conduct for responsible fisheries -Promote education - Institutional buildings-Training, consultancy and extension services - Creating avenues for occupational diversification - self-employment programs
	Low gender representation due to rigid religious and cultural background	- Empowering women through formation of Self Help Groups (SHGs) and micro-finance schemes - Building awareness and mobilization of gender equality
Economic factors	Low catch per trip, low productivity Inadequate harvest and post-harvest infrastructure	- Introduction of efficient crafts and gears and techniques - Building necessary infrastructure facilities Low prices, marketing problems -Providing marketing & technical support to create an organized market structure
	Poor information system and inefficient management system Lack of financial capital	- marketing the output through organized cooperatives, ensure fair prices to artisanal fishers - Establishment of electronic fish finders/ GPS equipment and satellite information technology - introduce efficient management system -Introducing Total Quality Management (TQM) systems in production, processing and marketing - provide cheap credit schemes

Conclusion

The initiatives of the Eritrean government in collaboration with the UNDP is expected to ensure resource use management and efficient human resource deployment in the fisheries sector which could well lead the way to the overall development of the agricultural sector in general and the fisheries sector in particular in Eritrea. Simultaneously trans-boundary issues in fisheries need to be addressed in order to develop and sustain a cordial and healthy exploitation of the fisheries resources of the country. Efficient business models suitable to the ethos and lifestyles of the people need to be developed so that growth is balanced with sustainability which will enable poverty alleviation, improve rural livelihoods and contribute to the food and nutritional security of Eritrea.

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