

**OVERVIEW OF COASTAL FISHERIES IN FIJI.
FIJI ENVIRONMENTAL LAW ASSOCIATION &
DEPARTMENT OF FISHERIES: COASTAL FISHERIES
MANAGEMENT LEGAL DEVELOPMENT FORUM.**

**TANOA HOTEL.
10TH-12TH FEBRUARY, 2016.**





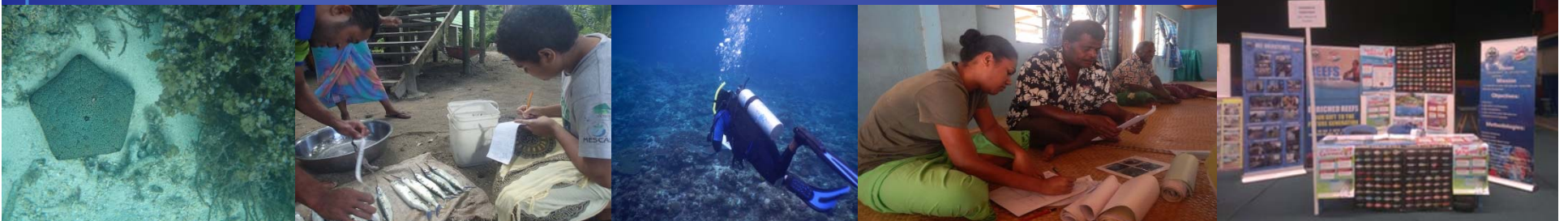
MINISTRY OF FISHERIES & FORESTS:

VISION:

The leader in fisheries and forestry sustainability and innovation for small island economies.

MISSION:

To drive sustainable resource management, economic growth and improve livelihoods through SMART fisheries and forest policies that is based on applied research and development.



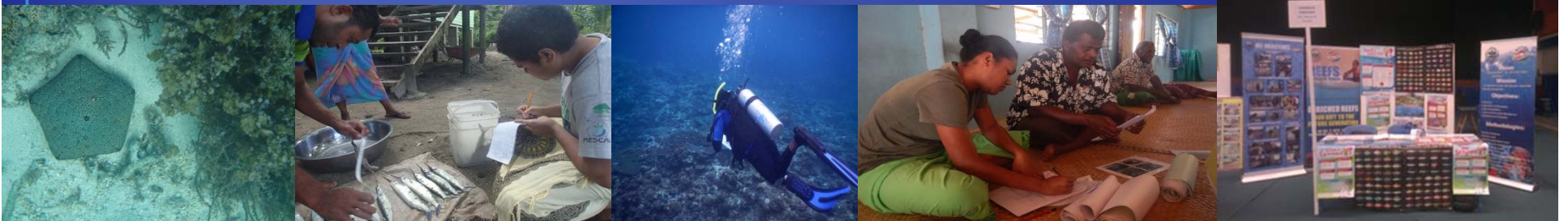
DEPARTMENT OF FISHERIES :.

DO Fisheries : 12 Outputs



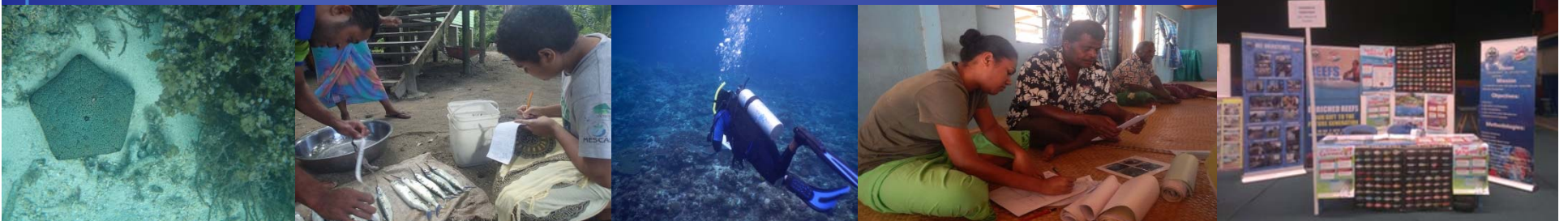
CORE OUTPUTS:

- 1) Portfolio Leadership, Policy Advice and Secretarial Support.
- 2) Research and Development
- 3) Education & Training – Basic Fisheries Management techniques and options.
- 4) Public Awareness & Promotion : Sustainable Fisheries Management.
- 5) Food Security and Income Generation – Aquaculture & Inshore Fisheries Development.
- 6) Fisheries Law Enforcement – Licensing, Compliance and Monitoring.
- 7) Sustainable Trade Environment – Fisheries
- 8) Climate Change Adaptation and Resilience
- 9) Value Adding and Down Streaming Processing
- 10) Strengthen Global , regional and National Partnership – Fisheries Development
- 11) Promote Gender Equality and Women in Development – Fisheries
- 12) Financial Services – Fisheries.



FISHERIES LANGUAGE:

- Coastal, Inshore, Nearshore are considered to be equivalent terminology to describe the area/body of water directly in front of the beach area (high level water mark to the reef edges)
- “Fish” – finfish, invertebrates and edible marine plants.
- Small scale commercial fishing = artisanal fishing
- Small scale non commercial fishing = subsistence fishing
- Fisheries Development : increasing fishery related tangibles through building of infrastructure – ice plants, wharves, jetties and boats,etc.
- Fisheries Management: adoption of tools, plans that contribute to the protection and the sustainability of marine resources.
- Overexploitation = Overfishing





OVERVIEW OF FISHERIES SECTOR – GDP VALUE (\$M)

	2005	2006	2007	2008	2009	2010
GDP	105	131	119	151	133	137
GDP (%)	2.43	2.85	2.59	3.14	2.76	2.75
Export Earnings	93.41	96.74	103	134	156	206
Employment	~50,000 (including subsistence sector)					

FISHERIES DEPARTMENT ESTIMATES OF COMMERCIAL COASTAL FISHERIES PRODUCTION.

DESCRIPTION	2012	2013	VALUE (FJD\$)	
			2012	2013
Finfish (Volume mt)	4440	2710	23,560,000	20,105,000
Invertebrate (volume mt)	3091	2876	12,650,000	13,100,100

Source : 2013 Annual MFF Report



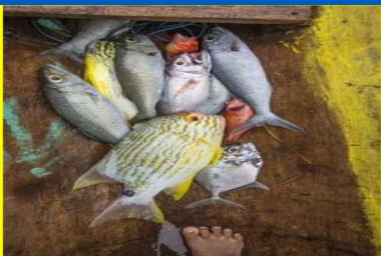


Importance of Coastal Fisheries

(i) Coastal fisheries (subsistence and increasingly commercial) are important sources of nutrition (food security, village food supplies) and livelihoods:

1,000 licensed fishermen (many more in practice), and at least 50 percent of rural households are involved in subsistence fishing.

(ii) Inshore (coastal) resources are substantial, comprising an estimated 80% of the value of Fiji's fishing and aquaculture sectors to the gross domestic product (Gillett et al. 2014).



Challenges to sustaining inshore fisheries for future generations.

- Evidence of overfishing and declines in catches and fish sizes caught; fewer and smaller fish in markets and demand is higher than supply.





What is overfishing (=overexploitation) and how can it be solved/reduced?



Overfishing is when too many fishes are taken too quickly for their populations to reproduce sufficiently to recover...leads to diminishing fishery catches and earnings and smaller fish; calls for management.





Fiji's finite reef fish resources



Subsistence (before)



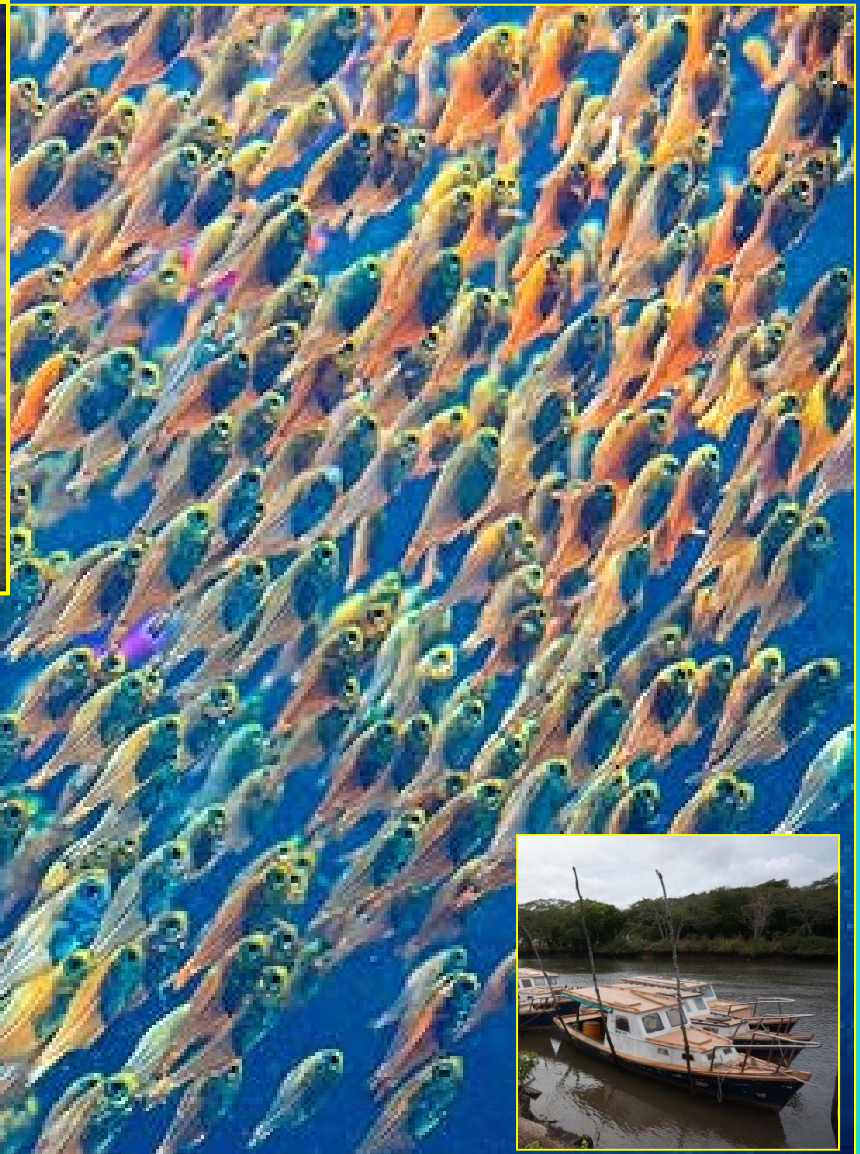
Fiji's finite reef fish resources



Subsistence

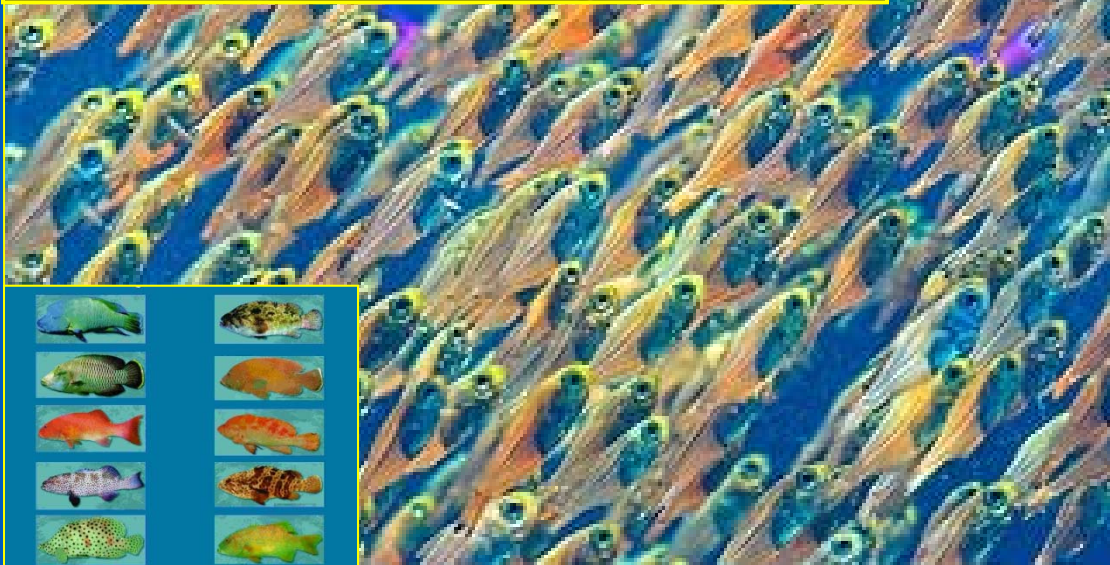


Fiji's reef fish resources



Then came domestic commercial

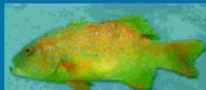
Fiji's finite reef fish resources*



Exports increased: live reef fishes

*Note: relative areas are only for illustrative purposes

Today, how much is left and for whom?



EXPORTS: dead reef fishes

***Note: relative areas are only for illustrative purposes**

REVIEW

“COASTAL FISHERIES IN FIJI – RESOURCES, ISSUES AND ENHANCEMENT OF THE ROLE OF THE FISHERIES DEPARTMENT.”

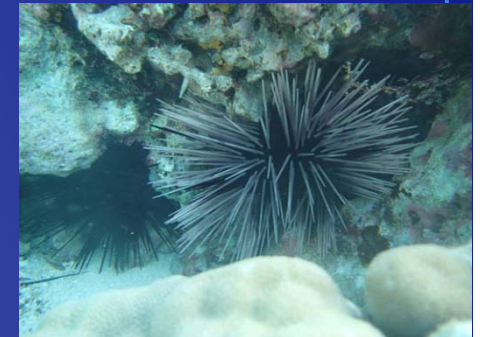
- ❖ Review commenced in late 2014 following on from an earlier review done in 2010.
- ❖ Robert Gillett, Antony Lewis and Ian Cartwright.
- ❖ Reviews the status and management of Coastal fisheries in Fiji , objective of providing ideas to enhance the Department’s performance.



FINDINGS FROM REVIEW.

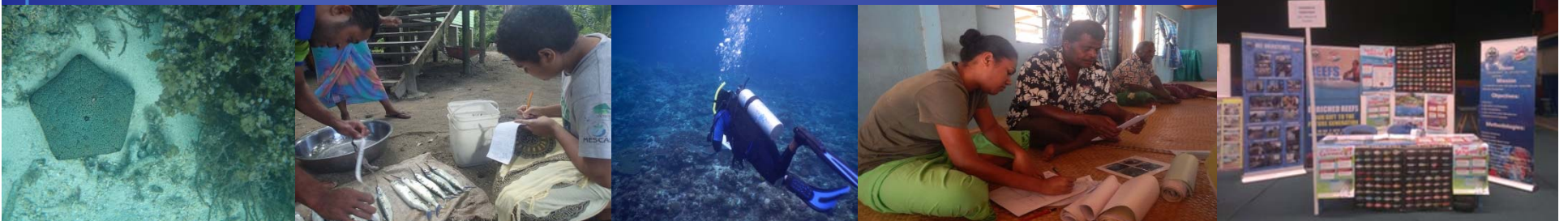
LIMITED INFORMATION ON COASTAL FISHERIES;

- ❖ Finfish, invertebrates and marine plants.
- ❖ Estimating status and coastal fisheries production – useful for monitoring management effectiveness : complex, expensive and challenging process.
- ❖ Due to the prioritisation of scarce resources – statistical system for coastal fisheries data is no longer functional – shortfall of fisheries information therefore management is hard to determine also leading to inadequate recognition of the economic and social values of coastal fisheries.



REVIEW OF COASTAL FISHERIES

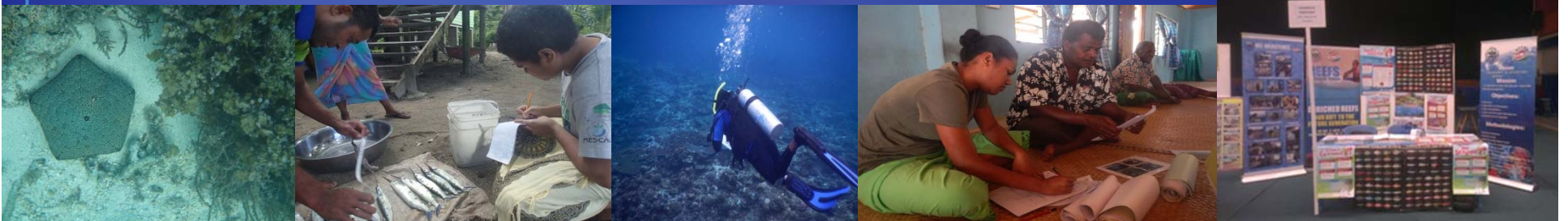
- FULLY EXPLOITED WITH LIMITED POTENTIAL FOR EXPANSION:
 - ❖ Limited information available : overexploitation of reef fisheries.
 - ❖ Unlikely for CFP to increase as there is a potential clash with those that favour development of infrastructure for fisheries to stimulate economic growth.
 - ❖ Challenge : increase the large existing benefits from coastal fisheries.



REVIEW OF COASTAL FISHERIES

IMPORTANCE OF COASTAL FISHERIES.

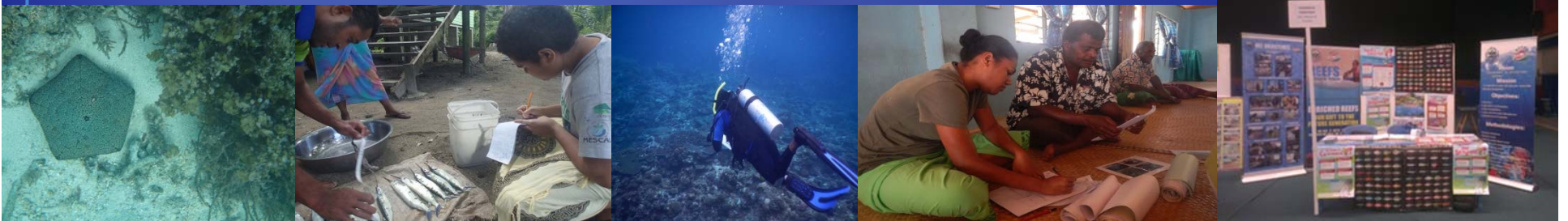
- ❖ Extensive benefits Employment & Nutrition
- ❖ Direct contribution of coastal commercial & Subsistence fishing to the GDP about \$73 million with around 27,000 tonnes of fish produced.
- ❖ Export Data (questionable) but suggest that CF exports in 2007-2008 were FJ \$25 and FJ \$46 million respectively.
- ❖ Range of benefits difficult to quantify and include social & recreational values.



REVIEW OF COASTAL FISHERIES

FUTURE CHALLENGES TO COASTAL FISHERIES:

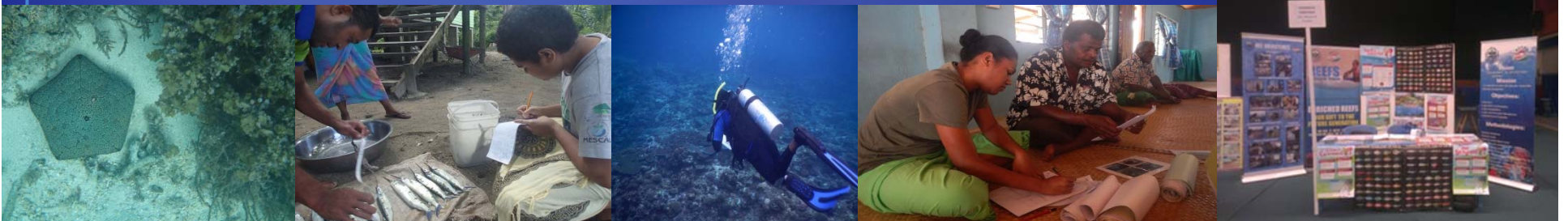
- ❖ Current trends : overexploitation and habitat degradation – indication of what the future looks like (unless action is taken).
- ❖ Increases in population & urbanisation : potential to dramatically reduce substantial benefits from CF:
 - Coastal fisheries accessible to urban residents will decline through over exploitation and habitat destruction.
 - Expanding urban populations fishing intensively will increase levels of overfishing close to those populations .
 - Proportion of the urban population will not be able to catch sufficient fish to provide for household consumption.



REVIEW OF COASTAL FISHERIES

FOCUS OF THE FISHERIES DIVISION:

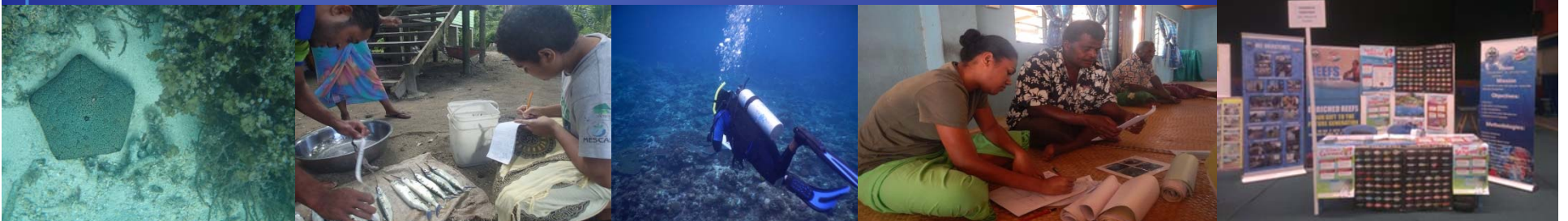
- ❖ 280 staff for FD : 57 are dedicated to Offshore Fisheries.
- ❖ 223 Spread across : 6 technical divisions & 4 geographical areas.
- ❖ Deeply involved in CFM – focus and nature not directed to achieve specific management outcomes.
- ❖ FD more attention on OFD , dedicated management Division – ensuring adequate attention to key priorities.



REVIEW OF COASTAL FISHERIES

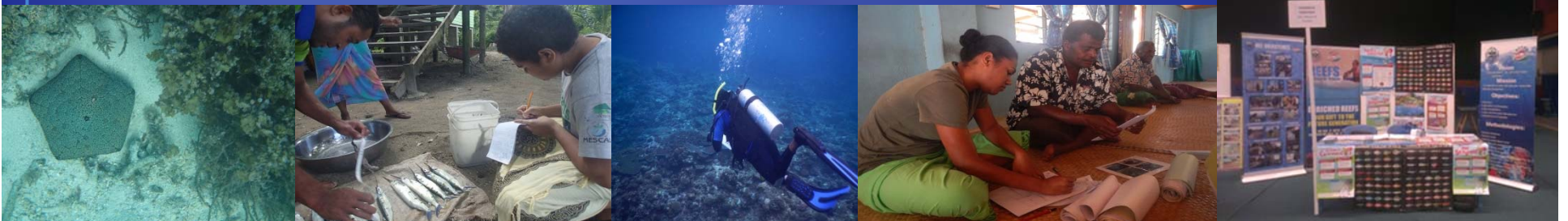
- MANAGEMENT VS DEVELOPMENT:

- ❖ Increasing production of CF and survey of new resources.
- ❖ Growing recognition that over exploitation is a major threat.
- ❖ Emphasis on increasing production to encourage more fishing to meet demand : without adequate management in place, this assistance is likely to result in less fisheries production.



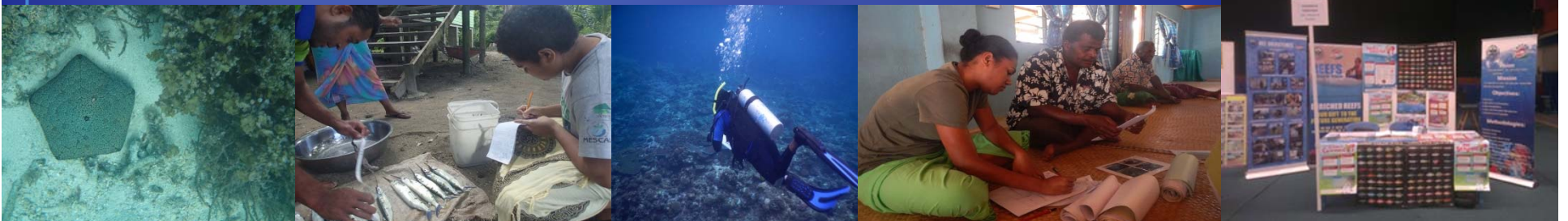
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- NGO'S & FLMMA (Fiji Locally Managed Marine Area Network):
 - ❖ Co-ordination between agencies that work with communities to better manage traditional fishing grounds using a well documented and established process.
 - ❖ 20 NGO's in the country : significant involvement in CF on the conservation and management of Fisheries. Some are not well co ordinated not necessarily aligned with government priorities – gradually assumed Government type functions.
 - ❖ Recent establishment of the Conservation Officers within the ITAB ;



REVIEW OF COASTAL FISHERIES

- **Improving governance** : management effective & ensuring of benefits are not further corroded. DOF addresses issues by default rather than design and a new approach is needed.
- **Dealing with over-exploitation:** Reef / Sea Ranching and alternative activities such as continuing experimental Aquaculture unlikely to be effective.
- **Declining Capacity:** Key elements of Fiji's coastal fisheries management program degenerated over the years, such as fisheries statistics, enforcement of coastal fisheries regulations, effective management tools, formulation/implementation, etc.
- **Addressing the Management /Development Balance:** No Clear National Policy /Plan – clear pathway to implementation at high level directives or re focus the work of the Department.





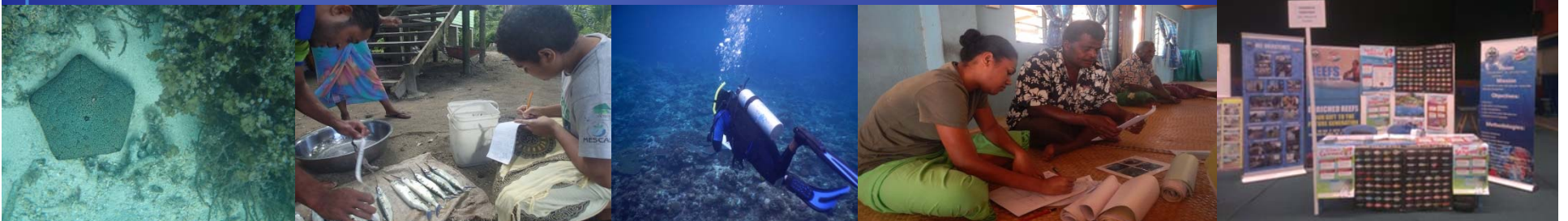
REVIEW OF COASTAL FISHERIES

Improving Resource Knowledge: : Addressing the gaps – determine information required for achieving management objectives and reconciliation of those needs with the current program of the MRIS.

Consolidating Services: CF – food, employment, contribution to GDP – seems logical to create a Division for CF. Focus, consolidate and coordinate supply of fisheries management services to that sector. Funding and staff – leverage.

Improving communication: Stakeholders have reported that there is limited interaction between DOF staff, NGO's, coastal fishers & communities.

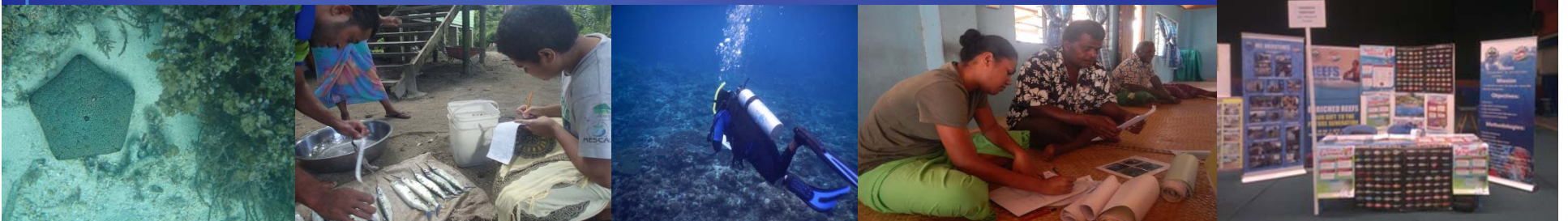
Legislations: *Not kept in pace with the changing requirements of CF. Review, update and revitalisation of regulations and enforcement –important action point.*



REVIEW OF COASTAL FISHERIES

CONCLUSIONS:

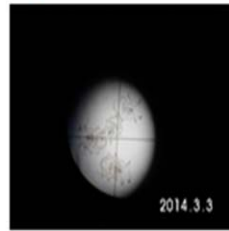
- (i) Lack of a dedicated Division within the Department dedicated to Coastal Fisheries Management.
- (ii) Investment in Fisheries Research as a main priority.
- (iii) Re engaging coastal fisheries stakeholders.
- (iv) Appropriate level of decentralisation of CF to the provinces.
- (v) Review of Fisheries regulations and revitalization of enforcement of CF legislations.





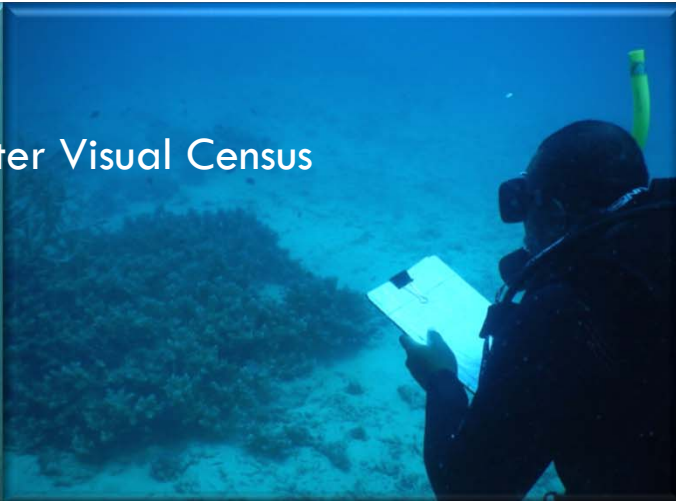


Dairo Breeding Timeline

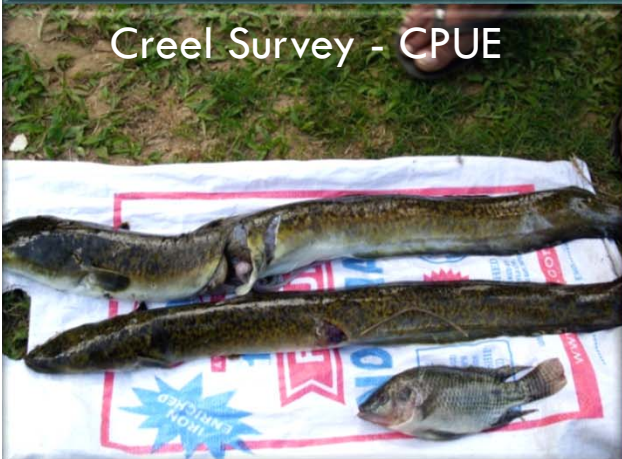




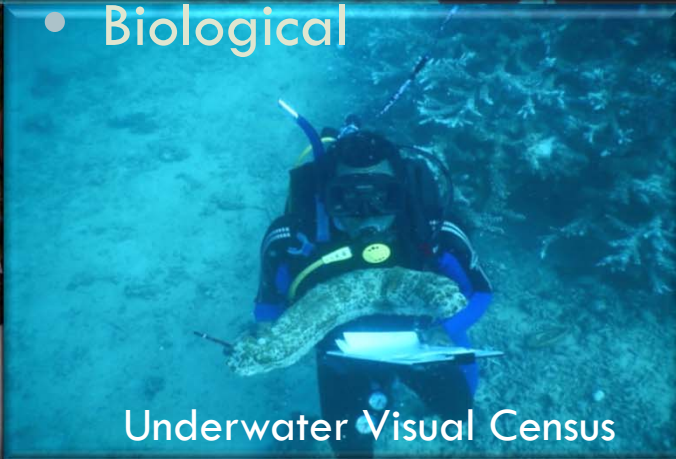
Underwater Visual Census



Creel Surveys - CPUE



Creel Survey - CPUE



- Biological

Underwater Visual Census



Soft Benthos Transect



Water Sampling



Manta Tow

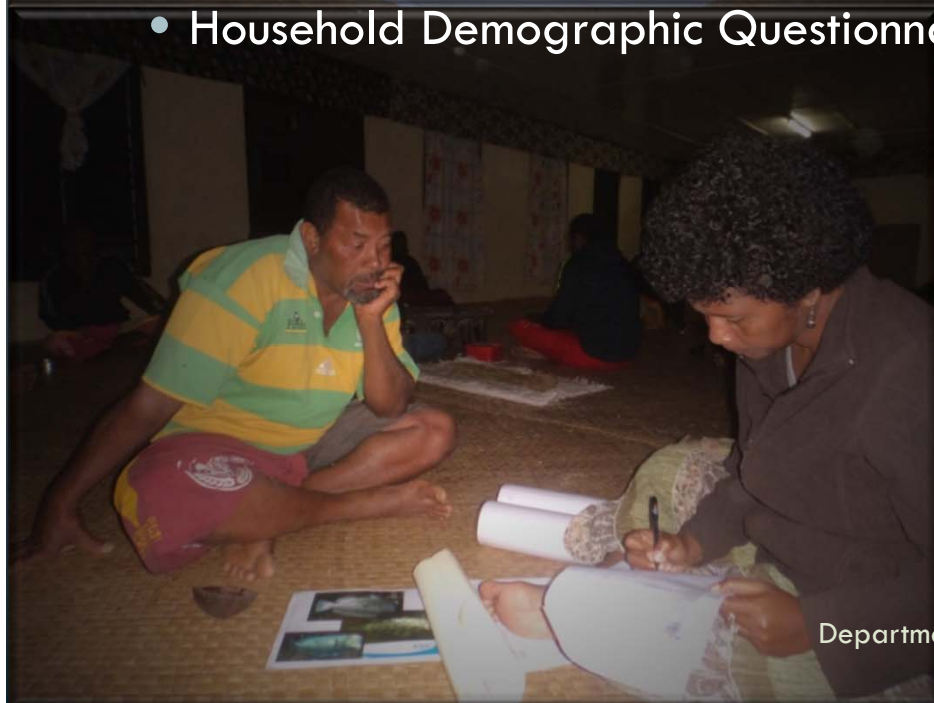
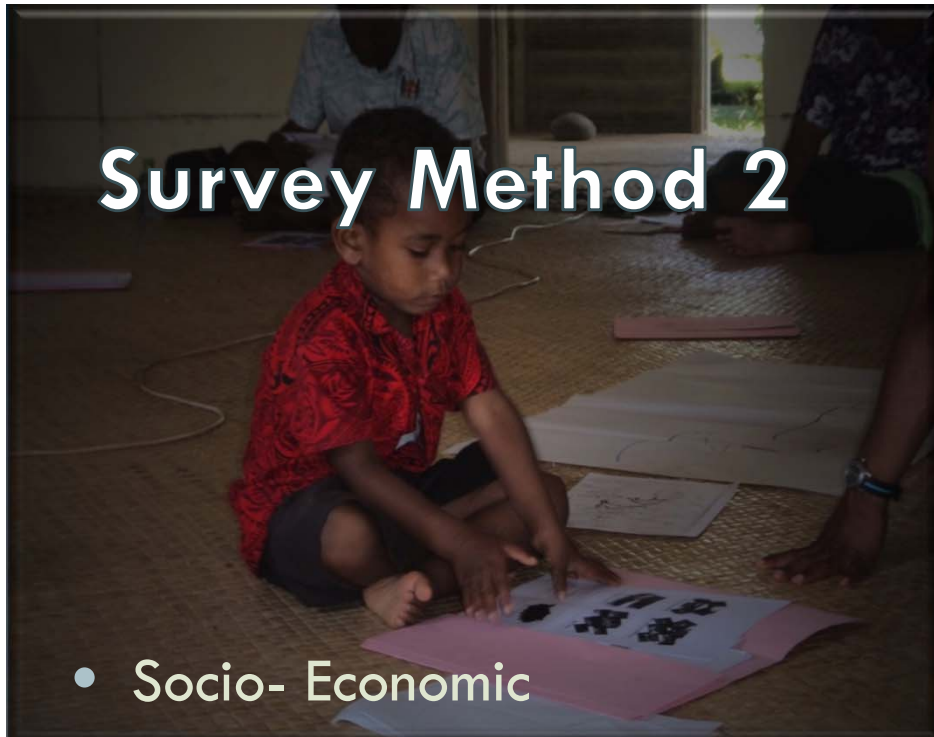
Department of Fisheries



Creel Survey - Gillnetting

Survey Method 2

- Socio- Economic
- Household Demographic Questionnaire





“ Taking the 4FJ Pledge means families can better feed their children, and better meet costs like school fees. More fish and bigger fish is better for everyone. That's why we are backing this campaign. We hope you will join us. ”

Ben Ryan and the World Champion 7s Team





THANK YOU FOR YOUR PATIENCE!

