



Gender roles in bagnet creek fishery in North-West coast of India

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Introduction

Why on me?

- **Set bagnet** is one of the main indigenous gears operated by small-scale fishermen in countries such as Bangladesh, **India**, Indonesia, Malaysia, Myanmar, and **Thailand**.
- Bagnet operated in the north-west coast of India is locally called **Dolnet**, Bokshi jal or Kavi jal whereas it is known as Behundi jal on the north-east coast of India.
- Dol net is a non-selective, location-specific gear and is unique in its ingenuity (Ibrahim *et al*, 2017)
- Koli fisherfolk of Maharashtra are well known for their skills in fishing and marketing of fishes especially the women folks



Study area



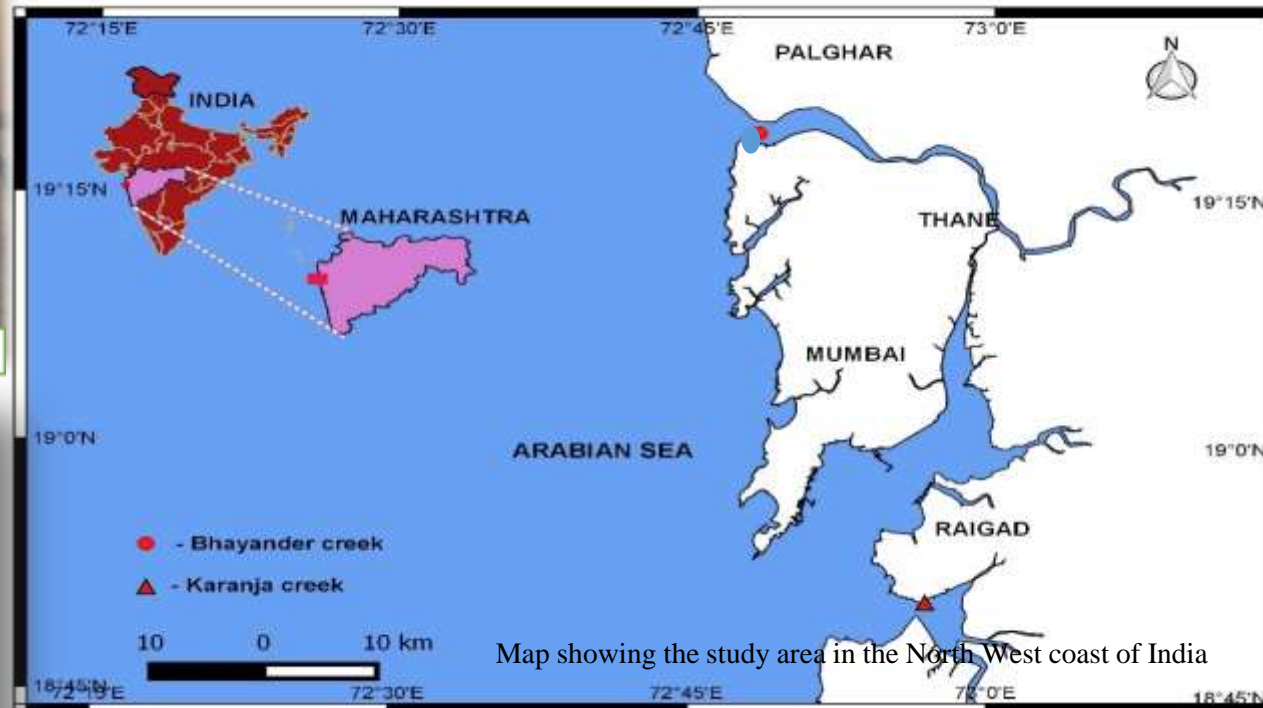
Overfishing



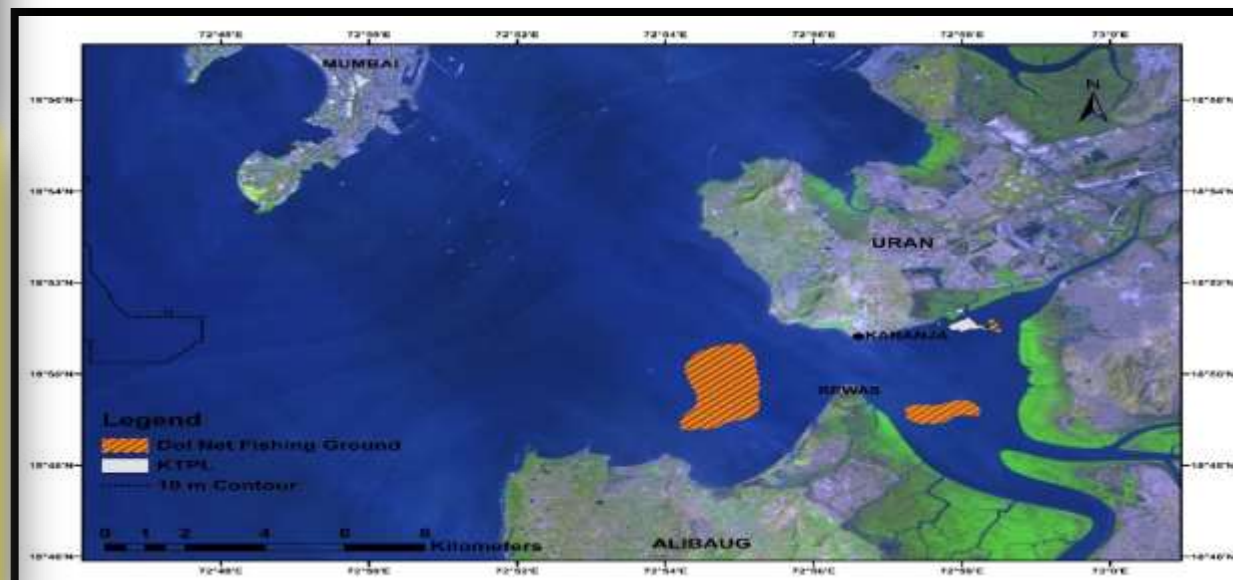
Pollution



Hectic activities



Map showing the study area in the North West coast of India



Mangrove degradation



Jetty Construction



Vessel Traffic

Study period

- ❖ Data collection: September 2016 to May 2017.
- ❖ Fortnight on-board sampling and questionnaire based sampling were carried out to fulfil the objectives of the study.



Design of Dol net

- ✓ The designs of the gear were documented according to Nedelec (1975).

Gender roles

- ✓ Questionnaire based and direct observation was carried out to find out the different roles of men and women in dol net fishery

Catch Composition

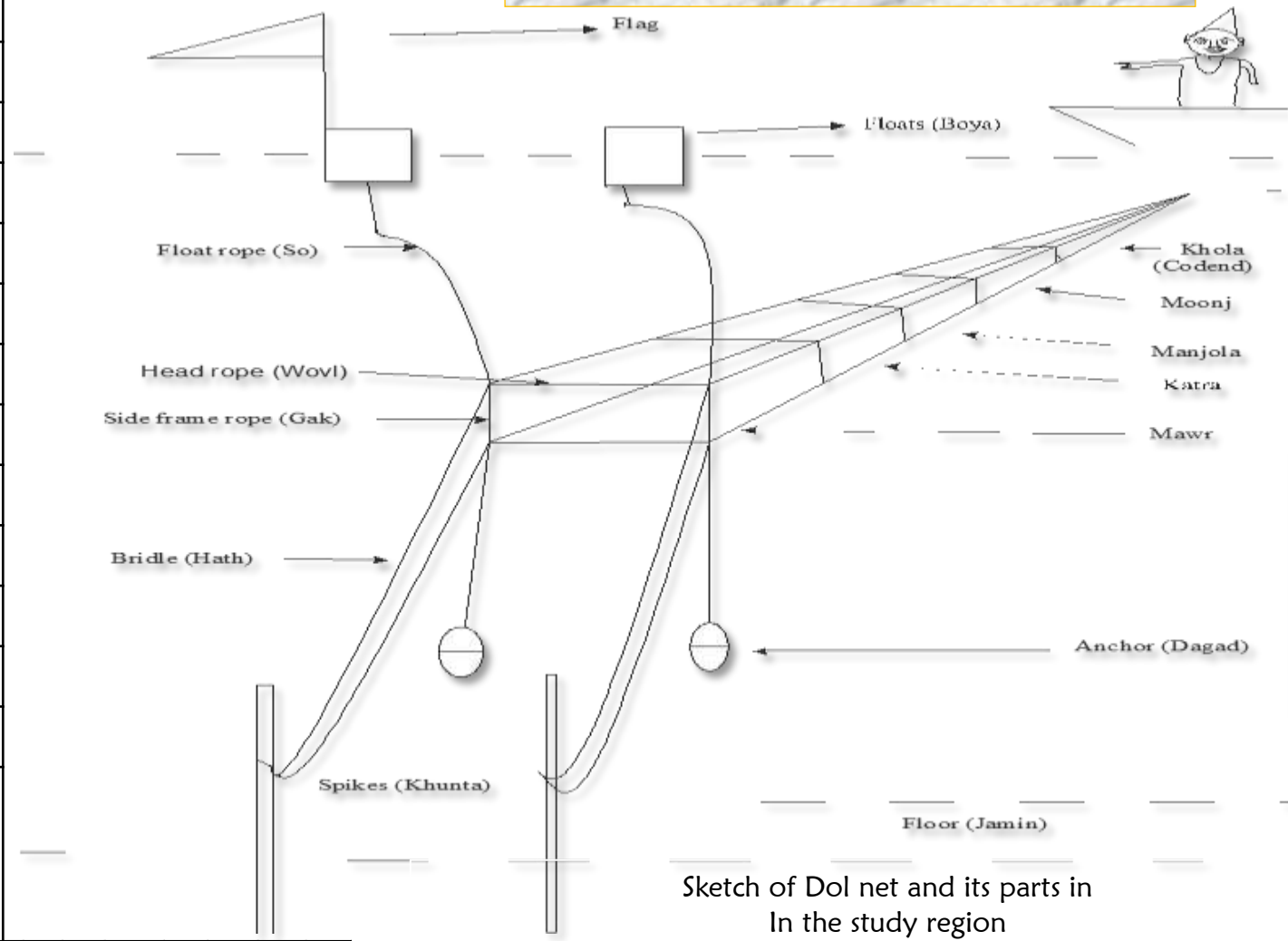
- The Month-wise species composition by weight was analysed after segregation of catch from dol netters.
- The species were identified based on Fischer and Bianchi (1984), Rasmussen (2001), Carpenter and Niem (2001).



Fishing gear type	Dol net
Type of operation	Small scale
Local name	Dol net
Colour of the net	Blue
Total number of sections	5
Total number of Panels	5
Length of float line (m)	14-18
Length of sinker line (m)	14-18
Depth of stretched netting (m)	12-14
Weight of the net with rigging (Kg)	Approx. 35
Without rigging (Kg)	28-30
Total weight of the net (Kg)	Approx. 35
Cost of net with rigging	Rs. 34000
Without rigging	Rs. 30000
Number of man days for construction of gear	Fishermen buy the machine-made net and



Dol net



❖ Setna (1949) reported 5 parts which is similar to present study.



Folded dol net



Float

Sketch of Dol net and its parts in the study region

Sections	Mawr				Katra					Manjola			Moonj			Khola		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Mesh size (mm)	165	155	145	135	125	115	105	95	85	75	65	55	45	35	25	15	10	8
Upper edge (nos)	950	900	850	800	750	700	650	600	550	550	500	450	400	400	350	300	300	250
Lower edge (nos)	950	900	850	800	750	700	650	600	550	550	500	450	400	400	350	300	300	250



Heaps of dol nets



Sinker



Spikes



Fishermen joining the dol net parts



Acetes indicus



Coilia dussumieri



Arius maculatus



Lepturacanthus savala



Trypauchen vagina



Parapenaeopsis stylifera



Chryosara caliparea



Johnius machrorhynchus



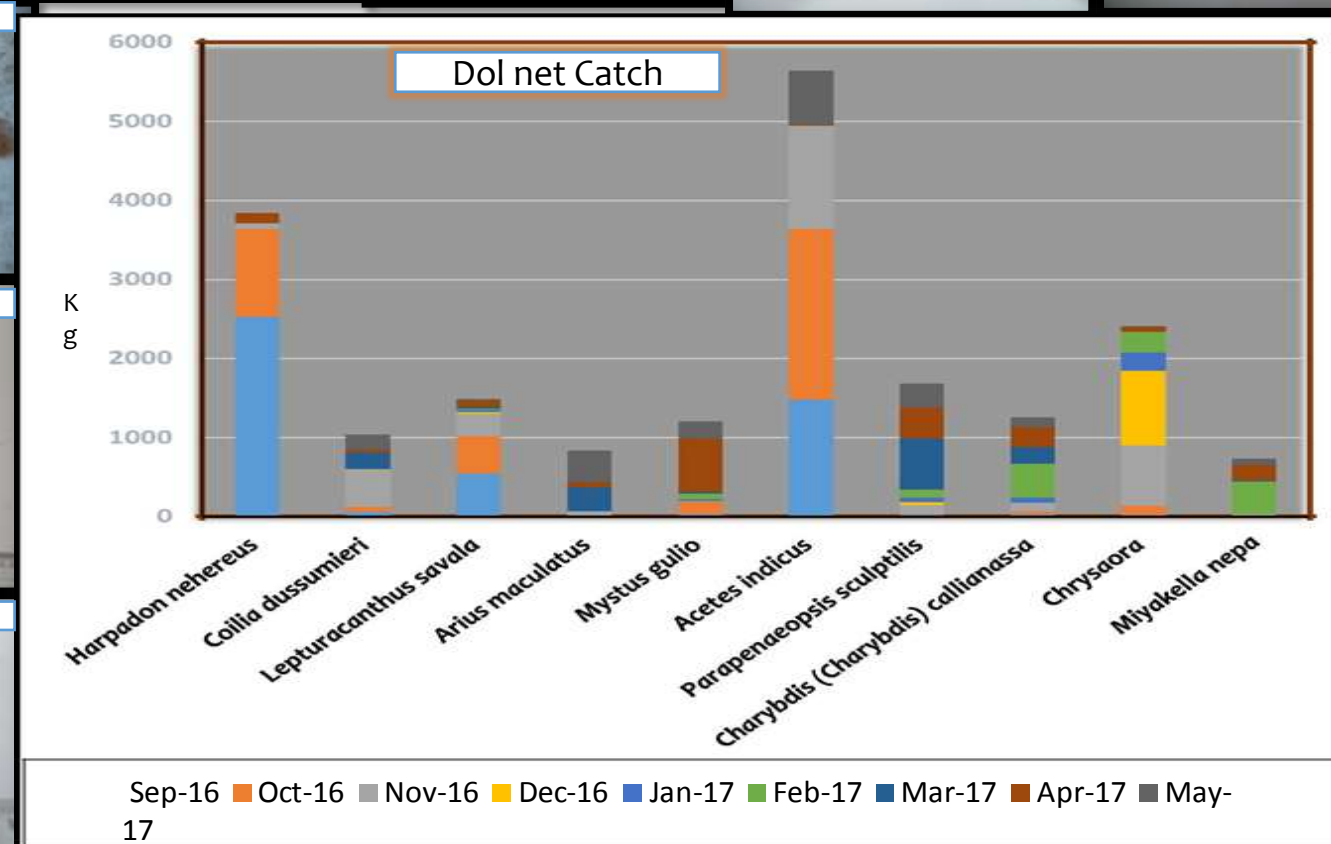
Miyakella nepa



Charybdis callianasa



Harpadon nehereus



Group	Current study	Pawar (2011)
Finfishes	51	28
Elasmobranch	3	3
Sea Snakes	4	-
Jellyfish	3	-
shrimps	13	-
Crabs	10	-
Cephalopod	5	-
Stromatopods	3	-
Lobster	1	-
Total	93	31



Box jelly



Uroteuthis (Photololigo) duvaccelli





Sepila inermis



Fishing ground	Rocky on seaward side , muddy on riverine side
Based on scale of operation	Small scale
Based on number of vessels used	One boat
Depth of operation	8-10 m
Method of finding the fish shoal	Visual(current),wind direction
Time Required for	
a) setting the net	20 min
b) hauling the net	20 min
Immersion period	4-5 hours (depends upon the lunar cycle)
Duration of single trip	2 hours
Duration of single operation	2 hours
Average number of dol net operations per trip	2-3 Dol nets per trip
Average quantity of fish caught per trip	10-15 Kgs (excluding bycatch)
Average returns from sale of fish per trip	Rs.500-1000/-



Gender Roles in fishery	Karanja			Bhayandar		
	Total	Male	Female	Total	Male	Female
Fishermen families	1845			470		
Traditional fishermen families	1844			470		
BPL families	36			69		
Fisherfolk population	8856	4865	3992	1603	636	967
Full time fisher	2659	2309	340	549	300	249
Marketing of fish	35	11	24	764	288	476
Making/ Repairing Net	2553	802	1751	19	19	0
Curing/ Processing	102	33	69	41	1	40
Peeling	872	15	857	181	2	179
Labourer	2633	1695	938	44	21	23
others	12	0	12	5	5	0



Gender Roles in Dol net fishery	Karanja			Bhayandar		
	Total	Male	Female	Total	Male	Female
Fishermen families	44			26		
Traditional fishermen families	44			26		
Fisherfolk population	244	118	126	115	73	42
Full time fisher	125	85	40	55	45	10
Marketing of fish	35	11	24	19	-	19
Making/ Repairing Net	49	19	30	20	7	13
Curing/ Processing	30	-	30	-	-	-
Peeling	-	-	-	-	-	-
Labourer	3	3	-	21	21	-
others	2	0	2	-	-	-

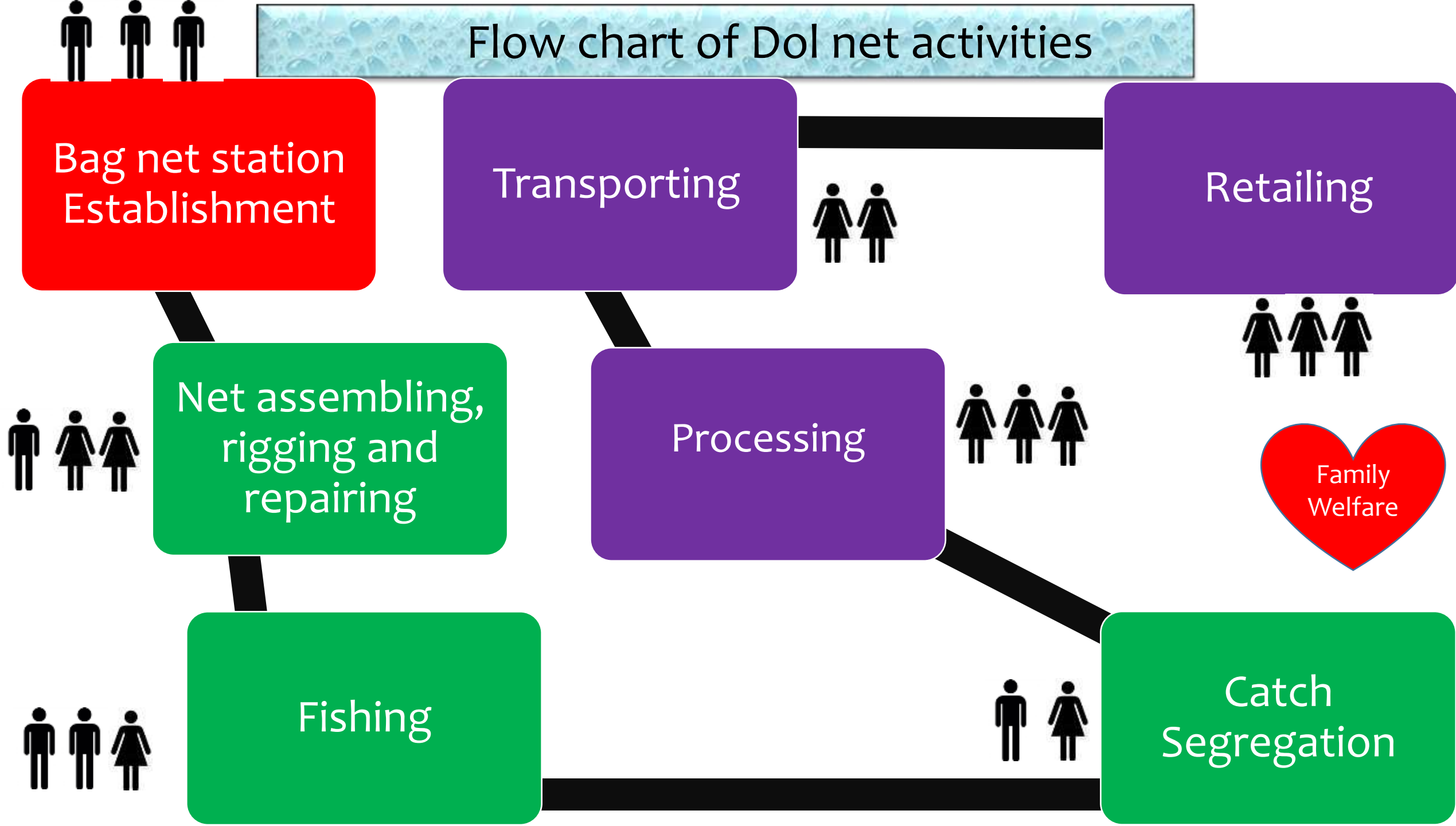
- Women fishers dominate marketing , Net assembling, rigging and operation of dol nets.
- Crew members include at least one women fisher during lean seasons , mostly wives of the registered fishermen



Family Fishing!



Flow chart of Dol net activities



Bag net station Establishment

Transporting

Retailing

Net assembling, rigging and repairing

Processing

Family Welfare

Fishing

Catch Segregation

Awareness Programme



Importance of Mangroves **मंजुव वन का महत्व**

• Mangroves provide habitat for fish and birds.
• Mangroves protect the coast from erosion.
• Mangroves are a source of timber and other products.
• Mangroves are a source of food and medicine.

Potential Fishing Zone (PFZ)
संभाव्य मासेमारी क्षेत्र

Guided by: Dr. Latha Shenoy, Principal Scientist, ICAR-CIFE
Prepared by: Suresh Kumar Pradhan, S Abuthagir (Ibnushim), PhD Scholars


Plastics entering in our diet
भोजन में प्लास्टिक

• Plastics are found in food and water.
• Plastics are harmful to the environment and human health.
• Plastics are a major source of pollution.

Effect of juvenile fishing on ecosystem
छोटा मासेछयापया मधुमीमारीवा पर्यावरणावर परिणाम

• Juvenile fishing is harmful to the ecosystem.
• Juvenile fishing leads to the depletion of fish stocks.
• Juvenile fishing is a major cause of overfishing.






I Support
Fishermen



Conclusions



I Support
Environment

- Fisher women play a dominant role in the creek dol net fishery but they are still neglected in development schemes as the boat registrations are done in the names of male fishermen
- Fishers are not aware of the techniques to avoid juveniles in the fish catch.
- Maharashtra Fisheries Regulation Act, 1981 is more than 35 years old, it has to be amended now by taking into consideration the opinions of various stakeholders and the changes in fishery over the years
- Near shore and small creeks are vanishing due to landfill. Mangroves in the vicinity are under threat. There is need of protecting mangroves which in turn would conserve juvenile fishes of various species. Total ban on effluents/ chemical water from industries should be made effective.

Way forward

- Value addition activities through Women self help groups (SHG's)
- Government support by schemes that provide good working conditions that would include safety, security, hygiene, gender centres and transport facilities for retail marketing
- Encouragement to take up small scale fishing
- Alternative livelihood like ecotourism and Mariculture .
- Responsible fishing by increasing the mesh size.

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- ❖ I thank the God (Whomever) and Sponsorship to attend GAF7 to experience my 1st foreign country travel in my life



So curious to explore Thailand

อยากรู้ อยากเห็นเพื่อสำรวจประเทศไทย

Mr.Abu



You gave me
 your **TIME**,
 the most *thoughtful*
gift of all.

ขอบคุณ



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