



Fisheries education for tribal communities: A transect from Tripura

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ABSTRACT

India is harbouring a heterogeneous group of indigenous population among which the Scheduled Tribe (ST) represents one of the most economically backward and marginalized groups with a population of 10.43 crores. Tripura, being the 2nd most populous state in the North-Eastern Region with one-third of ST population and the highest per capita fish consumption in the country, has an additional potential of having one of the Constituent Colleges of CAU (Imphal), i.e. College of Fisheries (COF), Lembucherra for imparting education in different branches of fisheries and allied sciences. Through this study, an attempt was made to look into the status of development of tribal population in Tripura through imparting fisheries education from COF during last five years (2015-19) and consequent employment opportunities. Results showed that out of a total of 300 students of COF in Under Graduate, Post Graduate and Doctoral levels, 33.34 per cent were tribal students. A total of 36 ST students got employed (2015-19) in different Government organizations where 8 of them were from Tripura. The study also unveils the problems and prospects of fisheries education for tribal students in Tripura.

Keywords: Employment opportunity, fisheries education, higher education, tribes of Tripura

Education plays a vital role in the development of any community or nation, which has been defined by many educationists, philosophers and authors in different times in various dimensions. Aristotle defined education as “the process of training man to fulfil his aim by exercising all the faculties to the fullest extent as a member of society” (Exam planning, 2019). Throughout the nation, education has been proved to be a very basic tool in improving different backward communities, and tribal community is one of them. There is an existence of huge and heterogeneous tribal population in India, with a population size of 10.43 crores with the literacy rate of 63.1 per cent (Census of India, 2011), out of which the North Eastern (NE) states of India have the major shares. The states like Mizoram, Meghalaya, Nagaland *etc.* are in top of the list for having higher tribal population size (Sahu, 2014). Among the NE states, Tripura is the second most populous state and has its one-third of population, belonging to the Scheduled Tribes (ST) with a population size of 11,66,183 as per 2011 census, which is around 31.75 per cent of its total population (TRCI, 2019). It is believed that tribal community was the first community to arrive in Tripura during the 65 AD (Sodhganga, 2014) as so called ‘*Adivasis*’. Presently, Tripura harbours 19 different tribal communities, namely *Tripura/Tripuri, Riang, Jamatia, Noatia, Uchai, Chakma, Mog, Lushai, Kuki, Halam, Munda, Kaur, Orang, Santal, Bhil, Bhutia, Chaimal, Garo, Khasia, and Lepcha*, inculcating their cultural heritage and pride (TTADC, 2020). Among those, Tripuri community is the largest one with a share

of 53 per cent in total tribal population of the state (Sodhganga, 2014).

Though Tripura possesses the status of highest per capita fish consumption, only 8-9 per cent of the total farming communities are engaged in fish farming, which broadens the gap between fish production and consumption of 3.26 kg annually. This seeks for an additional fish import to the tune of 11,886 tonnes annually from outside the state. Lack of quality human resources seems to be one of the precursors in this context, creating a unique opportunity for the budding entrepreneurs, especially in the fields of fisheries and allied agriculture (Lahiri *et al.*, 2019; Ghosh, 2018).

In livelihood development of youth with special reference to backward tribal communities of the country, education in agriculture and allied fields has created an immense opportunity (Lahiri *et al.*, 2002) as the agricultural Gross Domestic Product (GDP) (17.8%) peaked to a significant level in the recent past (Kapil, 2021). Among the agricultural sub-sectors, fisheries has been given due importance for its gradual increasing GDP share of around 0.91 per cent during the year 2017-18 (NFDB, 2019). Thus, the fisheries education towards human resources development and livelihood generation has been felt to be a key player in tribal development. Towards meeting the need of well-trained human resources in fisheries sector of Tripura, the College of Fisheries (COF) under the Central Agricultural University (Imphal) has been intervening since 3rd October 1998 as the 12th Fisheries College of the country in the state of Tripura with the prime mandates of

imparting quality education in different branches of fisheries and allied sciences supported with research-based extension linkages (COF, 2019b). Every year, the college provides an opportunity to the aspirants of specially NE region and other regions of the country as well for enrolment in different Under Graduate (UG), Post Graduate (PG) and Doctoral degree programmes, namely, Bachelor of Fisheries Science (B.F.Sc.) at UG level, Master of Fisheries Science (M.F.Sc.) in 7 disciplines (Aquatic Animal Health, Fish Processing Technology, Aquaculture, Fisheries Extension, Fisheries Resource Management, Fish Genetics and Reproduction, and Fish Biotechnology) and Doctor of Philosophy in 2 disciplines [Fish Processing Technology and Aquatic Health Management (Aquaculture to be included from the academic year of 2020-21)], in which a sizable population of enrolled students/scholars belong to the tribal communities (COF, 2019a). The study aims at providing an introspective look into the status of development of tribal population in Tripura through imparting fisheries education from COF during last five years (2015-19).

MATERIALS AND METHODS

The present study was undertaken to collect the detailed information on enrolment in UG, PG and Ph.D.

programmes in the College of Fisheries (CAU), Lembucherra during the last five years (2015-2019) from the Academic Cell of the college, and the collected data were analysed for eliciting meaningful interpretation. The rationale behind selecting the last five years (2015-2019) was due to major ramifications of different PG disciplines apart from the UG courses during this period in this college. Apart from this, the research works, which were undertaken by the tribal students of Tripura in the college, were also put in an inventory. Further, Focussed Group Discussions (FGD) with the college officials and faculty members were conducted to get the suitable suggestions for expediting the progress of fisheries education in the entire NE states.

RESULTS AND DISCUSSION

According to 2011 census, the population of Tripura was much higher (37.74 lakh) as compared with other NE states including Assam (Fig. 1). The unemployment rate was also on higher side, which was around 39.1 per cent (The Statesman, 2020). To mitigate these problems, it is important to identify the issues regarding unemployment and the scopes of placement. In this regard, it is important to find out the status of tribal youth’s involvement in technical education sector like fisheries education, which can improve the employment rate directly or indirectly (Kozik, 2015).

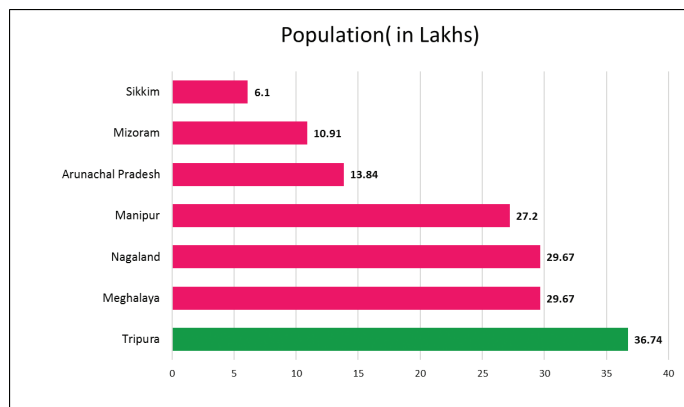


Fig. 1: Population of the NE states of India (Source: Jagran Josh, 2020)

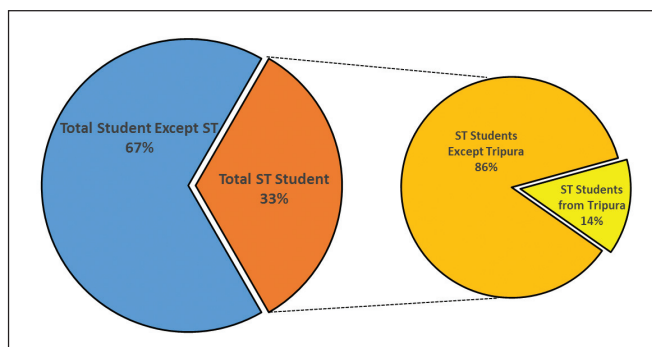


Fig. 2: Student’s enrolment share in academic session (2015-2019)

Table 1: Year-wise enrolment of students/scholars in UG, PG and PhD Programmes under College of Fisheries during 2015-19

B.F.Sc.	Number of enrolments												Total	Percentage (%)		
	2015		2016		2017		2018		2019		2019					
Total	26	13	27	08	19	34	14	20	40	16	24	42	19	23	169	M-41.4 F- 58.6
ST	12	06	12	02	10	13	05	08	20	09	11	21	09	12	78	46.15 (M- 39.7, F- 60.3)
ST (Tripura)	02	02	Nil	02	Nil	02	01	01	02	01	01	02	01	01	10	12.82 (M- 5, F- 5)
M.F.Sc.																
Total	26	14	24	16	08	21	12	09	17	10	07	32	15	17	120	M-55.8 F-44.2
ST	04	02	04	03	01	05	03	02	03	02	01	04	03	01	20	16.67 (M- 13, F- 07)
ST (Tripura)	Nil	Nil	Nil	Nil	Nil	01	01	Nil	02	01	01	01	01	Nil	04	20 (M- 3, F- 1)
PhD.																
Total	Nil	Nil	02	01	01	01	01	Nil	04	04	02	04	04	01	11	M-63.6 F-36.4
ST	Nil	Nil	Nil	01	01	Nil	Nil	Nil	01	01	Nil	Nil	Nil	Nil	02	18.19 (M- 2, F- 0)
ST (Tripura)	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	-

Source: Academic Cell, College of Fisheries (CAU), Lembucherra

Out of 300 enrolled students of COF during last five years (2015-19) in UG, PG, and Doctoral levels (Table 1), 33.34 per cent were tribal students from all over the India, out of which, 14 per cent were the tribal students of Tripura (Fig. 2).

Students’ enrolment in UG, PG, and Ph.D. levels

It was found that during last five years (2015-19), 169 (Male- 41.4% and Female- 58.6%) students from different parts of India were enrolled for B.F.Sc. degree in the college, out of which 46.15 per cent (Male-39.7%, Female- 60.3%) were from ST categories, and among them 12.82 per cent belonged to Tripura (Table 1). It was also enumerated that out of 120 students (Male-55.8 % and Female- 44.2 %), 16.67 per cent tribal students were enrolled for M.F.Sc. degree programme across different disciplines of fisheries science in this college, out of which 20 per cent belonged to Tripura.

At Doctoral level, out of a total of 11 students, only 2 tribal students were enrolled in the college in which none of them were from Tripura. The present study revealed an impression that there would have a scope to ameliorate the status of tribal enrolments in fisheries education, especially for the tribal students of Tripura, keeping in view of the important contribution of tribal population in fish production in the state. The results of the present study also revealed that the enrolment of girl students was higher than that of boys with regard to the degree programmes in fisheries education, which proved to be a good indicator for ensuring women empowerment and establishing gender equality. Apart from these, three dissertation works were carried out by three tribal master’s students of the state in the disciplines of Fisheries Extension, Aquaculture and Aquatic Animal Health respectively (Table 2).

It was also observed that, only in case of UG to PG there was an increment in enrolment during 2017 (50%),

Table 2: Masters’ research works carried out by the tribal student of Tripura (2015-19)

S. No.	Topic of Masters’ Research / Dissertation	Discipline	Status
1.	A study on job satisfaction of fisheries extension professionals in Tripura	Fisheries Extension	Ongoing
2.	Optimization of carbon to nitrogen ratio during seed rearing of pabda, <i>Ompok bimaculatus</i> (Bloch, 1794) in a biofloc system	Aquaculture	Ongoing
3.	Effect of oxytetracycline on <i>Labeo rohita</i> (Hamilton, 1822) infected with <i>Aeromonus hydrophila</i>	Aquatic Animal Health	Ongoing

2018 (100%) and 2019 (50%) for the ST students of Tripura, but in case of PG to PhD no increment was observed during 2015-19 (Fig. 3).

Employment status of ST students under COF-CAU (2015-20)

The students, who had been passed out from the college, also ensured a significant sharing in different Governmental organizations like ICAR, DoF, SAUs, KVKs, and also in other Government organizations during the last five years (2015-20) as part of employment (Table 3). In the last five years (2015-20),

there were a total of 36 ST students who got selected in different Government organizations where 8 of them were from Tripura. Furthermore, it was also found that in case of overall ST candidates, majority of them *i.e.* 66.67 per cent got selected in DoF, followed by ICAR (8.34 per cent), SAUs (11.12 per cent), KVKs (8.34 per cent) and other Government organizations (5.56 per cent), whereas, in case of ST candidates from Tripura, majority (62.5%) of them got employed in DoF, followed by 25 per cent in ICAR and 12.5 per cent in SAUs.

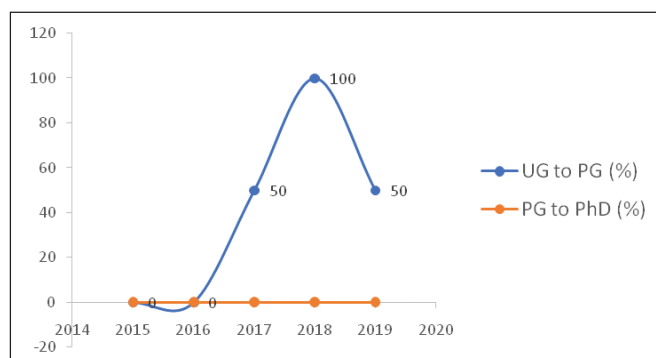


Fig. 3: Percentage change in ST students’ enrolment (2015-19) from Tripura

Table 3: Status of employment of ST Students under COF-CAU (Imphal), Lembucherra during 2015-19

S. Job Title/ No.Designation	Status of employment												Total				
	2015-16			2016-17			2017-18			2018-19				2019-20			
	Frequency	Over all ST	%	Frequency	Over all ST	%	Frequency	Over all ST	%	Frequency	Over all ST	%		Frequency	Over all ST	%	
1. ICAR-ARS	2	1	5.56	12.5	1	2.78	12.5	-	-	-	-	-	-	-	-	3 (8.34%)	2 (25.0%)
2. Extension Officers, DoF	-	-	-	-	13	5	36.1	62.5	2	-	5.56	-	9	-	25.0	24 (66.67%)	5 (62.5%)
3. SAUs	-	-	-	-	-	-	-	-	2	-	5.56	-	2	1	5.56	4 (11.12%)	1 (12.5%)
4. KVK	-	-	-	-	1	-	2.78	-	1	-	2.78	-	-	-	-	3 (8.34%)	-
5. Others Govt. Organizations	-	-	-	-	-	-	-	-	2	-	5.56	-	-	-	-	2 (5.56%)	-
																36	8

Source:- Technical cell, College of Fisheries (CAU), Lembucherra

So far, this college also ensured a sustained success in ICAR All-India Entrance Examination for PG studies in Fisheries Science, conducted every year, and the numbers of successful tribal students in this category were praiseworthy. As a part of the study, the following problems/issues were identified in discussing with a group of tribal students, and the same were corroborated with the views of college officials and faculty members:

- Heterogeneity in languages seems to be one of the primary barriers in the fisheries education of tribal students with special reference to Tripura (Rani, 2007).
- Lack of awareness on the future prospects of pursuing academic career in fisheries science.
- Lack of frequent recruitment/placement opportunities for fisheries graduates.
- Being a hilly state, the fisheries sector in Tripura is yet to ensure the optimum livelihood generation opportunities as well as optimum resource utilization in comparison to other states having upland areas in the country (Wani, 2011). This seems to be a hindrance in popularizing fisheries education in this state.

CONCLUSION

The college has been playing an instrumental role in furthering the fisheries education among tribal students in the NE region at large in which the state of Tripura is a major constituent. The study helps to generate awareness and sensitization on the prospects of fisheries education which may attract more tribal youths towards pursuing academic career in fisheries science. The college has been tirelessly intervening in terms of reaching out through teaching, research and extension activities, implementing different schemes, organizing capacity building and entrepreneurship development programmes, externally funded projects with a prudent professional and academic outlook. Though other non-academic and non-Governmental agencies are also engaged in the same direction, the role of College of Fisheries is considered to be the foremost in this arena.

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