

Protection of Natural Resources and Knowledge of Indigenous Fishermen Communities in Bangladesh: Adopting Saemaul Development Model

Sk Mashudur Rahman¹

*¹Joint Director, Bangladesh Academy for Rural Development (BARD), Cumilla, Bangladesh.
E-mail: mashudur.rahmanbard@gmail.com*

Keywords:

indigenous fishermen; extreme poverty; livelihoods; saemaulundong; rural development.

Received: 28 July 2021

Revised: 30 August 2021

Accepted: 3 October 2021

Publication: 30 December 2021

Abstract: This article develops to focus the protection of natural resources and knowledge of five indigenous fishermen communities in Bangladesh as well as addressing the miracle development model of Saemaul Undong (SMU) of South Korea for accelerating their socio-economic development. There are more than 30 indigenous fishermen communities who traditionally resourceful on fishing as their chief sources of livelihoods in the past. Due to pouring the natural wetlands, involvement of non-indigenous fishermen in fishing, lack of diligence, self-help and cooperation now they are shifting their traditional occupations at an alarming rate and running their livelihood with very measurable economic condition. The objectives of the study are to assess present situation, key barriers, identifying the core areas for recovering their resource through addressing SMU. Based on sample survey, Focus Group Discussion (FGD), PEST, SWOT analysis and information collected on SMU of Republic of South Korea, this paper has been prepared. For this purpose 250 respondents from the five communities were selected randomly. For combating extreme poverty and hunger, these communities can be empowered by using proper natural resources and knowledge through diligence, self-help and cooperation of SMU. The findings of this paper can help the policy maker of Global Saemaul Development Network (GSDN) with a number of directions for formulating future strategies for recovering resource that will eradicate extreme poverty and hunger among the fishermen of these indigenous communities.

1. Introduction

The Saemaul development model is now regarded as the highlight of the Korean economic development experience. Through this experience Republic of South Korea has transformed into a modern industrialized country from a poor country within a short period of time by the great leader Present Park Chung Hee. The success of this movement originated from the spirit of “we can do”, homogeneous culture, cooperative communities, egalitarian society with land reform and government’s strong will to escape from the poverty. This unique spirit of development can be applied for the development of some homogenous

indigenous fishermen communities in Bangladesh. Before applying SMU approach for their economic development, we should know about Bangladesh, indigenous fishermen communities and their problems. It is relevant to mention here that Bangladesh is situated in the delta of the Brahmaputra, Meghna, and Ganges rivers. The total land area of Bangladesh is 147 570 km² and out of them 4.56 million ha is covered with an extensive water resource in the form of ponds, natural depressions (*baors* and *beels*), lakes, canals, rivers and estuaries [1]. And from time immemorial, a large number of fresh water based Bengali indigenous fishermen have depended for their livelihood on fishing and related activities.

Information about the fishermen community of Bangladesh was first made by FAO through a household survey. This report stated that the number of fishermen villages in Bangladesh was around 706 [2]. The approximate number of these indigenous fishermen is 1.4 million ([3] p.57-59). In, most cases, more than 50% of the fishermen have not sufficient resources including land [4]. Fishing is considered as a low-class profession and fishermen are traditionally poor. Traditionally, indigenous fishermen have been Hindus. After analyzing the report on the census of 1872, WW Hunter had concluded that Muslims clung closer to the land and did not follow any trade in sowing or harvesting seasons to supplement their income [5]. For Hindus, fishing has a traditional link with the caste system and is hereditary. Hindu fishermen believe their occupation to be sacred, although in the cast hierarchy, the fishermen are ranked the lowest of all occupational groups. People who pursue fishing or related occupations can be grouped into different social categories. Hindu fishermen are formed into separate and distinct castes. The indigenous fishermen communities that are found among the Hindus are-Kaibartta/Kavivarta, Kewat, Mala/Jhala/Malo/Jhala, Tiwar/Tiwar (Rajbangsi), Das Shikari (Rajbansi origin), Berua (Namasudra sub-caste), Jiani (Namasudra sub-caste in Bakarganj & Faridpur), Karal/Charal (sub-caste of Namasudra)*, Bind/Bindu, Bagdi, Patni (ferrymen), Nadial, Mali/Bhuimali, Gonrhi/Gunhri/Mallah, Banpar (sub-caste of Gonrhi), Lohait/Lohait-Kuri, Muriari/Mariyari/Mariyari, Mala (possible Kewat connection) and Surahiya/Kalwat-Mallah. On the other hand, the indigenous fishermen communities that are found among the Muslims are Mahefarosh*, Chaklai*, Datiya/Dalatiya*, Dhawa/Katwar, Gutiyajelia, Nikari*, Jiani (Nikari in Rajshahi)*, Abdal (branch of Bebajiya), Bebajiya/Bediya/Mal Baidya, Dohuriya, Kunjara/Kunjra*, Dom-Patni, Dohariya/Dohuriya*, Pajar/Pajhra/Pajara (possibly Nikari), Chandali/MusulmanBagdi, Machhua, Mahimal/Maimal/Mahemahol. Here * denotes the fish sellers based communities ([6]

p.30). From the 1950 to 1965, anybody could participate in the auction to bid for the open water bodies (*jalmohals*) lease which involved many non fishermen, rich and influential land lords (*jaradar*) in this business [7]. The overall objective of this study is to assess the contemporary situation of indigenous fisherman communities with a view to develop their community by using Saemaul Development Model.

2. Research Method and Overview of Indigenous Fishermen Communities

In this article several techniques of data collection were followed to collect information. These were sample survey, Focused Group Discussion (FGD), PEST and SWOT analysis (conducted with the representative of local elected bodies, GoB and NGO workers, and member of Civil Society Organizations). The sample size of the study was 250 as primary respondents and two stages stratified random sampling method was used in 2018. The first stage was Upazilas of selected districts and the second stage was the villages. After selecting communities, all the households of indigenous fishermen were listed by with respects to villagers. Thus the study covered a total of 5 indigenous fishermen communities of Bangladesh. Among these indigenous fishermen communities, Bagdi, Rajbonshi and Malo community were covered in Manikganj district of Dhaka division and Julla and Barman community were selected Comilla district of Chittagang Division.

In order to go deep into the problem it is necessary to have a clear idea about these communities covered under the study.

- (a) **Bagdi:** Bagdi is a cultivating, fishing and menial caste of Dravidian descent and a kin to the aboriginal tribes of the subcontinent. There are different sub-castes of *bagdis* living in different regions. All sub-caste of *bagdi* admits into their circle members of any other caste higher than themselves in social standing. The religious practices of *bagdis* combine orthodox Hinduism and nature worship of their ancestors. The occupation of *bagdis* differs from region to region and from sub caste to sub-caste. Some *bagdis* still work in fishing, some as palanquin bearers, lime producers, gunny bag makers and cotton weavers. *Bagdis* are socially ranked very low and are treated by others as dwellers on the outskirts of Hinduism. Many of them eat beef or pork, though according to the prevailing Hindu custom, some of them abstain from all sorts of flesh. With the dispersion of modern amenities,

customs and values amidst all strata of society, *bagdis* are currently able to change their social standing along with their life style and are able to engage in several occupations.

- (b) **Rajbangshi:** *Rajbangshi* is a small fishing community of the *Bhotbarmi* group. They entered Bangladesh territory from the Himalayan region and the Brahmaputra valley. *Rajbangshis* are people of a mixed race, although identified by many as a branch of the *Ksatriyas* known as the *Kotch*. They are short and have flat noses and raised jaws. They are followers of *Vaisnavism*. Some of them now adopted Islam and some Christianity. In Bangladesh, they live mostly in Rangpur, Dinajpur, and Rajshahi districts and a small number of them in the districts of Bogra and Mymensingh. In the censuses conducted in 1941 and later, they were treated as part of the Hindu community and as a result, their number could not be properly ascertained. *Rajbangshis* are now a declining community in Bangladesh area. In 1991, their total population was a little higher than five thousand. Catching and selling fish is the main profession of *Rajbangshis*. *Rajbangshi* women are skilled in handicrafts and cottage industry. In their community, the father is the head of the family. Only male children inherit the property; of their father after his death. But most of the *Rajbangshis* have no ownership of land.
- (c) **Malo:** Mala, Mal Malo or Mallah are the same meaning, Malo may originally have been boatmen who shifted to fishing as the population increased and as other forms of transport competed with boats. Certainly many *Malo* worked as helmsmen (*Majbis*) and boat pliers (*Mallahs*) hired to carry cargo and passengers. Not all Malo were fishers or boatmen; some farmed, others traded in fish, vegetables and grain, while others manufactured twine. In Mughal times they acted as boatmen, mace bearers, and staff bearers during processions and transported treasure from Dhaka to Murshidabad [8]. Malo fished from boats with nets in rivers and large *beels* (large water bodies), and used a short Jalka boat, sometimes using two, when they fished for large fish such as Katla and Rui with the large case nets called *utharor othar* in Rajshahi, Dinajpur and Faridpur. *Malo* women were free to sell fish in hats and markets although this was prohibited or restricted to older women and widows in some areas [9, 8]. In certain districts, such as Pabna in the early 1900s, Malos began to prevent widows from selling fish in the market and their relatives were fined and ritually degraded if

they allowed such a practice[10]. Besides trading and hawking, women repaired nets and carried out other ancillary tasks. They also fished but usually with traps by hand. There were anywhere between 170,000 and 450,000 Malo in Bengal of the early 20th century[9, 11].

- (d) **Julla or Jaladas:** Traditionally jal means water and das means servant so the word jal das means the servant of water. Actually jaladas is a sub caste or the members of a single endogamous group of Hindu caste system with strong kindred of recognition of kinship and affinity have been engaged in the profession of fishing since ancient times. They believed the occupation to be sacred and God has entrusted them to serve others with the supply of fish. Their occupations are determined by their birth. In different regions, there are different names of jaladas and these are-Kaibartta Das, Kaibartta Jele, Jalia Kaibartta etc. They numbered over two million of which at least a quarter million were fishers concentrated in Midnapur, Dhaka, Mymensingh, Tippera, Sylhet and Kamrup.
- (e) **Barman Community:** The Barman, a lower class Hindu sect. is one of the indigenous fishing communities of Bangladesh. They are principally group fishers and use seine nets in group fishing. The catches are normally sold to middlemen who in turn sell to the consumers via several other intermediaries. They earn their subsistence by catching fish and collecting carp fry in the river and its adjacent floodplains. The fishermen of this community are socially, economically and educationally disadvantaged and lack their own financial resources. Moreover, the caste system of Hindu communities limits or precludes occupational mobility and employment opportunities, as does a lack of education and access to basic information. The gradually declining wetland including river fish production in recent years has added to their adversities. To maintain their livelihood intact the subsistence fisher folk have resorted to increased and indiscriminate fishing using different types of destructive gears. The fine-meshed seine nets are the most extensively used destructive gears in the locality.

3. Saemaul Development Model: Success Factors

In 1961, Republic of South Korea initiated National Reconstruction Movement for developing rural areas as well as establishing social order through promoting the national spirit. But due to government led movement, enlightenment

campaign, ignoring socio-economic lives of residents, providing leadership from outsiders this National Reconstruction Movement was failed. Consequently SMU was launched on April 22, 1970 by Park Chung-hee, it aimed to modernize the rural Korean economy. Diligence, self-help and collaboration were the slogans to encourage community members to participate in the development process [13].

At the initiation of SMU, Government of Republic Korea adopted three types of initiatives for reforming Korea and these are material assistance by Government, discriminatory support based on participation and spread of SMU through inter-village competition. In the first stage, 335 bags of cement granted to 33,267 villages in 1971 and promoted voluntary participation in beautification of living environment in off-season of farming. Villagers decided which project would be carried out. Projects were closely related to livelihood especially widening village roads, small river maintenance, development of wells, fertilizer-producing facilities. In the second stage only high performing 16,600 villages were again supported 500 bags of cement and one ton of iron bar in 1972. And in the third stage most of villages (34,655) nationwide participated in SMU in 1973 [14]. After 1973, emphasis was given on quality of leaders, rearing leaders, promotion of Saemaul education. Expending programs for the production infrastructures and program for income development were taken in 1974. As a result Republic of South Korea became self-sufficient rice in 1975. Expansion of welfare programs, non-agricultural income program was started since 1977. After that, dissemination of SMU to urban, factories and schools was remarkable. In this process all villages were driven into the SMU movement contest and eventually turned out to be successful for about 5-6 years period, when the household income gap between the urban and rural sectors was almost eliminated [15]. The ultimate result of SMU was changed the mind set of people.

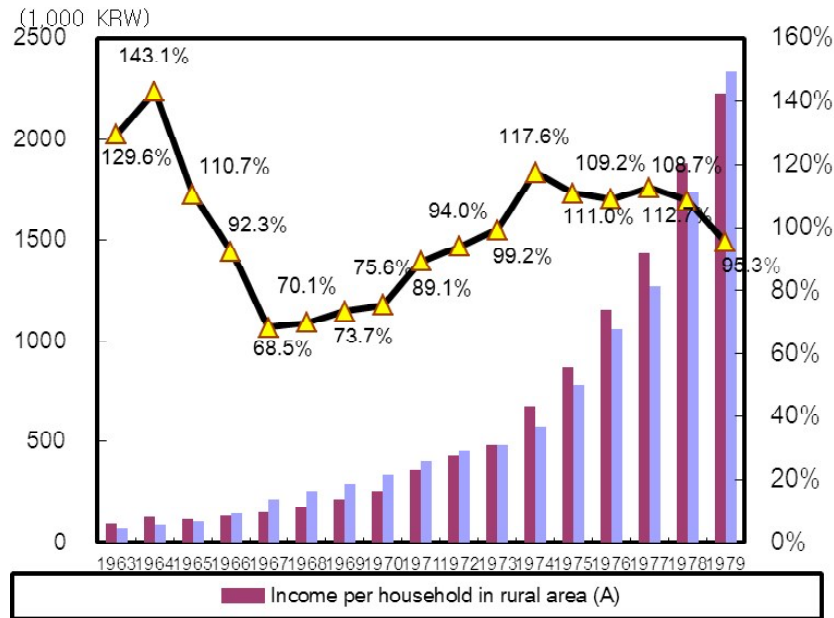
Table 9: Stage of village wise rural development in Korea

<i>Stage of Villages</i>	<i>1973 (%)</i>	<i>1974 (%)</i>	<i>1975 (%)</i>
<i>Kicho-Maul</i> (Primary village)	18,415 (53.1)	10,656 (29.1)	6,165 (17.8)
<i>Jajo-Maul</i> (Self-helping village)	13,943 (40.2)	19,763 (67.1)	21,500 (62.0)
<i>Jarib-Maul</i> (Self-supporting vi.)	2,307 (6.7)	4,246 (12.2)	7,000 (20.0)
Total	34,665 (100)	34,665 (100)	34,665 (100)

Source: Tae-Yeung You (1986), "The Patterns of rural development in Korea," The Institute of Saemaul, Kon-kuk University, Seoul ([16] p.65).

This achievement can also be presented in the following figure [14].

Trend of farm and urban sector average household income



Recently, this unique development tool has received attention from government agencies and international organizations such as the United Nations and the Organization for Economic Cooperation and Development because it is regarded as a successful example of a poverty reduction and community-development program [17-20]. Many developing countries involved in promoting their own rural development programs send their public officials to Korea to study the RSU [21]. For maintaining the prosperity of the global community, a group of scholars, activists and government officials launched an international non-governmental organization in Gyeongju, to promote Korea's development model of the Saemaul Movement on 17 September 2015. The organization, tentatively named the Global Saemaul Development Network (GSDN), encompasses 50 countries and five international organizations, including the United Nations and the World Bank. As a new village development approach, SMU is now successfully operating in many developing countries like Vietnam, Philippines especially in rural agricultural sector. [22]. Consequently this world recognized development approach or tool can be used easily for the development of indigenous fishermen communities in Bangladesh. So, every aspect of SMU is very much important for developing the fishermen communities.

4. Current Situation of Indigenous Fisherman Communities: Survey Result

Occupation and Land Ownership

There is a co-relation between traditional occupation and poor economic condition. In the past the professional activities of indigenous fishermen were limited to certain specific professions. They had little scope to come out of that professional circle because of their social and economic position in the society. Once upon a time they solely depended on the fishing but now days they are involved in many non-fishing activity as a main source of income. The following table presents the main professional activities of indigenous fishermen communities.

Table 1: Main Occupational Pattern of the Household Members

<i>Occupational Status</i>	<i>Indigenous Fishermen Community</i>					<i>Total Number (%)</i>
	<i>Bagdi (%)</i>	<i>Rajb- onsbi (%)</i>	<i>Malo (%)</i>	<i>Julla (%)</i>	<i>Barman (%)</i>	
Catching fish	24.31	28.08	27.27	31.60	29.55	28.27
Making fish equipment with bamboo (Banari)	0.46	11.82	-	-	-	2.30
Student	10.55	30.05	27.81	20.35	22.67	22.01
House wife	33.03	12.81	28.34	29.00	27.13	26.24
Petty business	0.92	3.94	2.67	3.46	4.05	3.04
Service	2.29	0.99	5.35	1.73	2.02	2.39
Masonry	0.92	0.49	-	-	0.81	0.46
Remittance	0.92	0.49	-	0.87	0.81	0.64
Day Laborer	2.75	0.00	-	6.06	3.64	2.67
Rikasa/Van/CNG Driver	0.46	0.49	-	0.43	1.21	0.55
Blacksmith	1.38	-	-	-	-	0.28
Carpenter	2.75	-	1.07	-	-	0.74
Barber	5.96	-	-	-	-	1.20
Agriculture	1.38	-	1.07	-	-	0.46
Unemployment	0.46	0.49	-	0.87	2.02	0.83
Children	11.47	10.34	6.42	5.63	6.07	7.92
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Field survey, 2018

From the above table it is understandable that most of the fishermen's households of the study area, whose main source of income and livelihoods

are either agriculture or fishing. Some of them have other occupations. From this table we can find that out of 1086 family members, 28.27% directly involved in catching fish. Nearly 50% of the total family members are housewife and student and they spend a significant time for fish related diverse occupation such as making nets, helping hand for catching fish. The significant aspect of this table is that 11.82% family member among the Rajbonshi depend on making fish equipments with bamboo. 3.04% depend on petty business, 2.67% depend on day laborer and only 2.39 % depend on services. The occupation of masonry, CNG (Compressed Natural Gas) driving, barbering, carpenter was also found among the fishermen community but the ratio was very poor. It is clear that the members of all the five surveyed communities had a major shift in their profession, but they still could not improve their social or economic condition from these new sources of earning.

Table 2: Secondary occupational status of the household members

<i>Occupational Status</i>	<i>Indigenous Fishermen Communities</i>					<i>Total Number (%)</i>
	<i>Bagdi (%)</i>	<i>Rajbonshi (%)</i>	<i>Malo (%)</i>	<i>Julla (%)</i>	<i>Barman (%)</i>	
Preparing Banar	-	75.36	-	-	-	26.80
Catching fish	86.30	11.59	36.84	18.18	18.18	43.30
Carpenter	-	2.90	0.00	-	-	1.03
Petty business	-	1.45	47.37	18.18	36.36	9.28
Masonary	-	1.45	0.00	4.55	0.00	1.03
Day Laborer	6.85	-	5.26	54.55	18.18	10.31
Rikasa/Van/ CNG	1.37	-	10.53	4.55	9.09	2.58
Agriculture	2.74	7.25	-	-	-	3.61
Poultry rearing	1.37	-	-	-	-	0.52
Service	-	-	-	-	9.09	0.52
Making net	1.37	-	-	-	-	0.52
Fish drying	-	-	-	-	9.09	0.52
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Field survey, 2018

*one respondent involves more than one occupation

The table shows that most of the family members are involved in catching fish and preparing the fishing equipment as the secondary source of income. Petty business that is mostly related with fish is another secondary source of income of 9.28% family members. Most of the fishermen have that skill how

to repair the net instantly. It is evident from the above data that these communities had very little scope for economic activities for earning their livelihood. Their earning activities are centered on the traditional profession of their forefathers. With the changing scenario of the country, They have gradually adopted diversified earning activities as a secondary source of income.

Table 3: Land ownership pattern of respondents

<i>Land in decimal</i>	<i>Indigenous Fishermen Community</i>					<i>Total Number (%)</i>
	<i>Bagdi (%)</i>	<i>Rajb- onsbi (%)</i>	<i>Malo (%)</i>	<i>Julla (%)</i>	<i>Barman (%)</i>	
Below 3	76.00	4.00	88.00	54.00	44.00	53.20
4 to 6	10.00	54.00	8.00	36.00	46.00	30.80
7 to 10	6.00	38.00	-	8.00	6.00	11.60
11+	8.00	4.00	4.00	2.00	4.00	4.40
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Field survey, 2018

Ownership of homestead land is very scares among all the studied communities. Most of the respondents of the studied communities own less than three decimal of land which indicates that the communities' homesteads are very limited. Very few households own 4-11 decimals of land.

Table 4: Agricultural land ownership of the respondents

<i>Land indecimal</i>	<i>Indigenous Fishermen Community</i>					<i>Total Number (%)</i>
	<i>Bagdi (%)</i>	<i>Rajb- onsbi (%)</i>	<i>Malo (%)</i>	<i>Julla (%)</i>	<i>Barman (%)</i>	
No agro land	100.00	86.00	96.00	84.00	86.00	90.40
1 to 20	-	12.00	-	14.00	4.00	6.00
21 to 40	-	2.00	2.00	-	6.00	2.00
41 to 60	-	-	-	-	2.00	0.40
61 to 80	-	-	-	2.00	-	0.40
81 to 100	-	-	2.00	-	2.00	0.80
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Field survey, 2018

From the above table we can see that nearly 90% of the respondents have no agricultural land. Only less then 10% families of studied communities own

very limited amount of agricultural land. *Julla* and *Rajbonsbi* communities adapt agriculture in a very limited level where *Bagdi* community still fully depends on fishing where they own not a single decimal of agriculture land.

Table 5: Pond/Wetland Ownership of the Respondents

Type	Indigenous Fishermen Community					Total Number (%)
	Bagdi (%)	Rajbonsbi (%)	Malo (%)	Julla (%)	Barman (%)	
No wetland	98.00	98.00	100.00	80.00	84.00)	92.00
1 to 10	-	2.00	-	18.00	10.00)	6.00
11 to 20	2.00	-	-	-	4.00)	1.20
21 +	-	-	-	2.00	2.00)	0.80
Total	100.00	100.00	100.00	100.00	100.00)	100.00

Source: Field survey, 2018

It is observed from the table that 92% respondents have no wetland. A very few respondents have a poor amount of wetland. Out of 250 respondents only 2 respondents have 21 to 30 decimal of wetland or pond. From this table it indicates that most of the indigenous fishermen traditionally depend of open water body, river, beel, baor, marchy area or wetland and these types of property commonly identified as the communal property. But their access to the wetland are gradually decreasing due to siltation of river and pouring the wetland.

Involvement in Traditional Education

Education is the process of receiving or giving systematic instruction through school or institution. Involvement in traditional education of fishermen communities are shown below:

Table 6: Education status of the indigenous fishermen communities

Education Status	Indigenous Fishermen Community					Total Number (%)
	Bagdi (%)	Rajbonsbi (%)	Malo (%)	Julla (%)	Barman (%)	
Below Five	11.47	10.34	6.42	5.63	6.07	7.92
Illiterate	43.12	5.91	1.07	24.24	16.19	18.78
Can Sign Only	6.42	4.43	27.27	9.52	14.98	12.25

contd. table 6

Education Status	Indigenous Fishermen Community					
	Bagdi (%)	Rajbo- nshi (%)	Malo (%)	Julla (%)	Barman (%)	Total Number (%)
Read & Write only	22.48	29.56	29.41	42.42	34.41	31.95
Primary	14.68	41.87	20.86	16.02	21.86	22.74
Secondary	0.92	3.45	6.42	1.73	5.67	3.59
SSC	0.92	2.46	5.88	-	-	1.66
HSC	-	0.99	1.60	0.43	0.81	0.74
BA/BSS/BSC	-	0.99	1.07	-	-	0.37
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Field survey, 2014

The above table shows that over 18.78% of the population of these indigenous fishermen communities did never receive any education and remained illiterate. The data show that nearly 23% of the populations surveyed, received primary level education while slightly over 3.5% could reach up to the secondary level, and less than 1% received higher secondary certificates. Among these indigenous fishermen communities, the condition of *Bagdis* is the worst. In terms of educational attainments, *Malos* are in a better position with literacy. But the saddest part is that among the *Bagdi*, *Julla* or the *Barman* community, no person was found who could go above higher secondary level of education.

Problems Faced by the Indigenous Fishermen

At present, the problems that are faced by indigenous fishermen are mentioned below.

Table 7: Problems in fishing

Problems	Indigenous Fishermen Community					
	Bagdi (%)	Rajbo- nshi (%)	Malo (%)	Julla (%)	Barman (%)	Total Number (%)
Not applicable	-	21.69	2.00	2.06	5.17	6.67
Fishing by the other caste	9.72	8.43	8.00	15.46	10.34	10.83
High fund needed for lease	4.17	14.46	6.00	12.37	5.17	9.17
Other caste people also participate in the process of taking lease	2.78	12.05	4.00	14.43	6.90	8.89

cont. table 7

<i>Problems</i>	<i>Indigenous Fishermen Community</i>					<i>Total Number (%)</i>
	<i>Bagdi (%)</i>	<i>Rajbanshi (%)</i>	<i>Malo (%)</i>	<i>Julla (%)</i>	<i>Barman (%)</i>	
Seine net used for fishing in various places	-	4.82	8.00	11.34	3.45	5.83
Faced by the influential	8.33	19.28	18.00	15.46	8.62	14.17
Pay of extra tax in case of fishing	-	2.41	6.00	8.25	-	3.61
Blockage by leaser	31.94	-	6.00	-	-	7.22
Lack of modern fishing equipments	23.61	-	-	-	-	4.72
Less fish in water	5.56	-	—	-	-	1.11
Problem of minority	6.94	2.41	6.00	3.09	6.90	4.72
There is no problem	6.94	4.46	36.00	17.53	53.45	23.06
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Field survey, 2014

From the above table it is found that out of 250 respondents nearly 14% faced by the influential, 10.83% of the respondents mention that now a day's fish is caught by other segment of people. 9.17% of the respondents mention that high fund is needed during lease. As they are poor, so they are incapable to meet the expected lease demand. About 9% respondents point out that other caste of people also participates in the process of taking lease. The rest of the respondents mention different difficulties and these are blockage by leaser, seine net used for fishing in various places, lack of modern fishing equipments, paying extra tax in case of fishing, problem of minority, insufficient fish in water bodies and so on. The interesting point is that nearly 23% respondents identify that they have no problem regarding fish and 6.67% of the respondents keep silent for answering on this issue.

Major Hindrance of Fishery Occupation

Hindrance means something immaterial that interferes with or delays action or progress in other words it means any obstruction that impedes or is burdensome. The hindrances that are faced by the indigenous fishermen are mentioned in the following table.

Table 8: Main Hindrance of Fishery Occupation

<i>Major Obstacles</i>	<i>Indigenous Fishermen Community(%)</i>					<i>Total Number (%)</i>
	<i>Bagdi (%)</i>	<i>Rajbanshi (%)</i>	<i>Malo</i>	<i>Julla</i>	<i>Barman (%)</i>	
Lack of proper equipment	22.63	19.11	10.61	3.63	6.84	12.28
Fish scarcity in river or marshy area	25.79	31.85	25.25	25.39	25.79	26.62
This is hard task	4.74	9.55	22.73	22.28	20.53	16.27
Siltation of canal and bogs	25.79	31.85	22.73	24.35	26.32	25.97
Fishing is comparatively less profitable than others	5.79	7.64	18.69	24.35	20.53	15.73
Leaseholder' oppression	15.26	-	-	-	-	3.13
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Field Survey, 2014 * One respondent answer more than one

The above table indicated that lack of proper or modern equipment has a negative impact on almost all the studied communities. The other issues are presence of fish scarcity in river or marshy area, challenging and hard working job, siltation, less marketing facilities which makes fishing comparatively less profitable than others. Another important issue came out and that was leaseholder' oppression.

During FGD, the fishermen mentioned the following socio-economic hindrances:

- Absence of effective production/marketing related cooperatives for fishermen
- Absence of institutional credit facilities
- Dependency of fishermen on traders, local storage keeper, village moneylenders, boat owners for loans at usurious rates of interest.
- Dissatisfaction of fishermen about the existing system of cash support
- Lack of capacity to procure fishing inputs such as boats and nets from own financial resources
- Lack of preservation facilities resulting in spoilage/wastage particularly at time of bumper catch
- No insurance coverage for life and fishing equipments
- Unlicensed fishing and use of destructive gear
- Pollution resulting from use of agrochemicals and discharge of industrial effluent and resulting threat to the existence of fish resources

Understanding the Ground Realities through Some native Quotations

Kanu Biswas (55) lives in Sridhorgang village of Pohela union under GeorUpazil of Manikganj district mentioned that occupation change is very common phenomenon of Bagdi people. According to him as a citizen of Bangladesh they have the voting right but after election, the representatives of Local Elected Bodies (LEBs) do not enter their community. As a result year after year their fate has been unchanged. Like Kanu, many Bagdis are diligent to cope with extreme poverty with their limited resources.

Preyo Lal Barman is now 60 years old. He resides in Ariora village under Durgapur union of Comilla Sadar Upazila. He said that instead of fishing, renting net is his main occupation. Like PreyoLal, many of Barmans are trying to fight against poverty individually.

Lakhan Rajbanshi (50) lives in Zabra village under Baniajuri union of Gheor Upazila. He expected that if they get the leasing opportunity from the officials including training facilities then they will be able to restore their community.

Urmila Halder is now 40 years old, his husband name is BiranHalder who leads his livelihood as a day laborer with taking his four children. She urged that concerned departments of the government should supply fish catching and rearing instrument, and also ensuring the right of access to water bodies. Pramananda (51) resides in Bancharampur and his main profession is fry business. He mentioned that he has a plan to change his current occupation.

From the above analysis it is clear that though in the near past, they led their life with prosperity but at present instead of having huge indigenous, they are living with very measurable economic situation. Thus it is the right time to explore key areas of fishermen community in where Saemaul can be fitted perfectly for their economic development the spirit of SaemaulUndong (SMU). Before identifying the core areas for fitting SMU, we should know about the PEST analysis of Bangladesh as well as SWOT analysis of indigenous fishermen communities of Bangladesh.

5. Potential of Communities, SWOT Analysis, Potentialities of Adopting Saemaul Development Model

Analyzing results from a samaul point of view, the result confirms that there is a relation for developing indigenous fishermen communities and samaulundong. In this section discussion part will cover the area of SWOT analysis for fitting Saemaul Undong (SMU), KOICA and its Relations with Bangladesh,

understanding SMU and its Potential Area for Developing Fishermen Communities and also expected result by SMU.

SWOT analysis of indigenous fishermen communities

Strengths	Weaknesses
<ul style="list-style-type: none"> • Homogeneous character and change in believe • Lot of traditional or occupational knowledge based society • Nearly one and half million of people are indigenous fishermen and out of them one third are youth • Easily motivated for creative or good works • Enthusiastic and courage • Hesitation free and volunteering attitude • Strong physical and mental strength or huge energy for work • Strong group feelings or community feelings 	<ul style="list-style-type: none"> • Limited infrastructure facilities in these indigenous fishermen communities • Lack of appropriate projects or support (professional, budgetary or financial, technical, technological and other special type of education) for making them self reliant • Easily misguided through various activities • A huge number of people are landless or resource less and they have limited access in the open water bodies • A huge number of economically active youth are unemployed • Lack of small aquaculture based farming • Lack of suitable employment opportunity
Opportunities	Threats
<ul style="list-style-type: none"> • Easy to guide them in community restoration program • Each indigenous fishermen village can work as a unique productive force of Bangladesh • Providing diverse professional training it is easy to raise their income. • Good acceptance to the community • Good acceptance to the donors • Large youth population in Bangladesh 	<ul style="list-style-type: none"> • Extreme poverty and hunger • Social insecurity or vulnerability • Social dignity crisis • Loss of their thousand years traditional knowledge or skill on fishing • Unskilled human resources, unemployment, low income and high rate of population growth • Many social mal practices • Adverse geography • Degradation of ethics or values

KOICA and its Relations with Bangladesh

Korea International Cooperation Agency (KOICA) was established on 1 April, 1991 as a government agency to implement the Korean government's grant aid and technical cooperation programs for its partner countries. Though officially SMU Program is not yet started in Bangladesh but KOICA has started its journey in our country since 1993. In 1995, it started its full-fledged activities in

Bangladesh with the initiation of an office within the Korean Embassy premises. KOICA's priority sector in Bangladesh are education (focused on technical and vocational and ICT education, agriculture and rural development (focused on income generation activities), climate change (focused on renewable energy, water and waste management), governance, healthcare etc. Based on this experience of KOICA (as a partner of development), the world recognized miracle development model of SMU can be used for reducing the extreme poverty and hunger among the indigenous fishermen communities of Bangladesh [12].

SMU and its Potential Area for Developing Fishermen Communities

Potential Area for developing Saemaul among indigenous fishermen communities

For combating extreme poverty and ensuing economic prosperity of the residents of indigenous fishermen communities, it is urgently needed to implement SMU through some infrastructure development programs. These include mental or soft-ware infrastructure development program, physical or hard-ware infrastructure development program (Long term livelihood program) and Saemaul alternative livelihood support program.

Mental or soft-ware infrastructure development program

Actually the ultimate goal for development program is to change the people's mindset. For changing the traditional mindset of indigenous fishermen communities, the following initiatives can be taken:

- **Establishment of Saemaul Center:** For spreading SMU spirit, Saemaul Center can be built in each of the studied indigenous fishermen communities of Bangladesh where workshops and trainings will be formally and informally carried out to induce attitudinal changes of the indigenous fishermen. One Bangladeshi Saemaul expert will promote to be center manager under technical support from advisor of Yeungnam University, Korean technical advisors and officials of KOICA in Bangladesh. This center will maintain the link with Global Saemaul Development Network (GSDN) organization to mutual sharing, successful case and key lesson learnt among the member countries.
- **Formation of self help group:** Considering the gender equity, a self help group of the residents of indigenous fishermen community can

be formulated in each Saemaul Center. Each self-help group can be consisted with at least 50 fishermen and out of them 50% will be the women. Providing different material assistance including micro finance support among the self-help group through different projects and incentive system will be introduced. Better performer will be rewarded repeatedly so that the member of self-help group can be realized easily that Saemaul program will help only those who help themselves. By using this approach among the self-help groups “can spirit” or “self-help spirit” can be developed which will be accelerated their economic development. Coordinating with local health center hygiene and sanitation training can also be given to the groups.

- **Selection and training of community leaders (Saemaul leaders):** For holding the Saemaul philosophy for development, it is urgently needed to select appropriate leaders from the fishermen communities. After selecting the leaders, Saemaul training will be provided for them. This initiative will be created the leaders to develop their capabilities and ensure a perfect understanding of the campaign and stimulate the community participation. One man and one women in each selected community who are willingly dedicated themselves for the development of their own community will be selected to lead the self-help group members in planning and implementing of community need based different activities.
- **Saemaul education and campaign program:** Saemaul education training which included the key concepts of global SaemaulUndong (diligence, self-help, cooperation, sharing, service and creativity), case study of Korean SaemaulUndong, transformational leadership, action plan design and implementation and so many issues. The training will support the leaders and self-help group members of the indigenous fishermen communities to prioritize their plan and prepare budget for seeking further support from development agencies. In addition the Saemaul campaign program can be monthly organized with the direct leadership of their own community leader. The video of Korean SaemaulUndong can be translated into Bangla language in order to inspire indigenous fishermen and other relevant stakeholders especially the chairman and members of local elected bodies, students and teachers from local school. The main activities of this campaign program can be cooperative work in constructing road, excavating

canals, wetlands, cleaning and other activities and deliver the inspired message to the fishermen communities.

Physical or hard-ware infrastructure development program

The physical or hard-ware infrastructure development program will accomplish the following activities for promoting their sustainable livelihoods.

- **Renovation or excavation program:** For reviving their traditional occupations of indigenous fishermen communities many wetlands and canals that are situated by their residents, should be excavated immediately with the collaboration of Government and international organizations. The participation of self-help group members in the activity of excavation program will be mandatory. After excavation, the members of self-help group will be part of the planning, monitoring and evaluation of this activity with support given by the different initiatives for improving their income generating activities.
- **Digging community ponds:** At least 5 to 10 community ponds will be dug in each residential area of indigenous fishermen community to support fish production and livestock activities. The self help group members from each Saemaul Center will access, discuss and prioritize the target areas for pond digging. In some specific cases it can be needed to purchase land for digging ponds. This program can be operated by the food for work program supported by the government also. After successful accomplishment of digging activities, the access of the indigenous fishermen in the pond based livelihood promotion activity will be ensured.
- **Construction of inner village and farm road network:** The leaders of each Saemaul Center of indigenous fishermen community will mobilize the members of self help group to construct inner village and farm road networks. Village and farm road networks are small, wavy, muddy and flooded almost every year particularly in rainy season. These conditions are the big challenges of indigenous fishermen for transporting their product from farm to village, travel to market and also constraint children for school. Through Saemaul Campaign led by Saemaul leaders and self help group members, the fishermen will be mobilized to construct these roads.

Saemaul alternative livelihood support program

Due to mechanized agriculture and degradation of wetland resources including river, there is the need for an alternative source of livelihood so that the residents of indigenous fishermen can easily engage this alternative livelihood program for improving their better livelihood options.

- **Conduct training on System of intensive fish production:** The Saemaul leaders will facilitate all the family members of self-help group (250 fishermen) to use more technical approaches with coordination with local fisheries department to increase fish yield. The training course will also include supplemental tools/materials so that most vulnerable fishermen can participate in this program.
- **Conduct training on integrated farming system:** Integrated farming system training will be conducted among the five indigenous fishermen communities. The Saemaul leader will facilitate the self help group members who are already producing rice in their own plots of land in comparatively low land area and are willing to learn and implement the recent innovation to increase the rice yield, to produce more fish, vegetable and fruit trees. This integrated farming system training will contribute a lot to the indigenous fishermen for improving food availability throughout the year of poor households of indigenous fishermen communities.
- **Conduct training on poultry farming:** Involving the self help group members from Saemaul Center, with the Poultry Research and Training Centre (PRTC), a series of training on poultry farming especially poultry production and management for improving their income. Side by side bull fattening and rearing of dairy cattle training should be arranged in every Saemaul Center for raising their income.
- **Support for horticulture farming:** Court yard or house roof based horticulture should be introduced immediately for raising the household level income of indigenous fishermen especially women. For doing this support and promotion of horticulture for improving the household income by providing appropriate inputs e.g. seed, organic fertilizer, soil conditioners, irrigation facilities as well as extension services.
- **Conduct handicrafts training:** Traditionally indigenous fishermen are very expert for making nets and various instruments for catching fish. In this respect by providing appropriate training they can produce

different handicraft products, and exporting these products in many countries they can earn foreign currency.

- **Training on how to catch fish from the Bay of Bengal:** Bangladesh has 574 kilometers (357 miles) of coastline on the Bay of Bengal of the Indian Ocean. And in this respect if the SaemaulCenter provide training to its self-help group members on how to catch fish in the Ocean by providing appropriate materials then they will able to create a new horizon for consuming sea fish in Bangladesh.
- **Modernizing cultivation facilities and markets:** Comprehensive facilities encompassing production, processing's, storage and distribution center can be established to enhance the productivity. Market accessibility of fishermen's product should be improved by supporting postharvest handling, treatment, storage, process, and package for keeping and enhancing quality of products.

6. Conclusions

From the above discussion it is clear that, Korea, once one of the poorest countries in the world, has now become a full-fledged member of the Organization for Economic Cooperation and Development (OECD) and combines efforts with the OECD to contribute to the rural development in developing countries. In this respect, this paper argues that for succeeding Saemaul it is urgently needed to introduce economic discrimination among the residents of indigenous fishermen communities. Good performer of fisherman should be rewarded while bad performer of fisherman should be penalized, it should be the motto for developing the indigenous fishermen communities of Bangladesh. And in this process, Saemaul Undong will be able to contribute a lot among these indigenous fishermen communities for eradicating poverty as well as transforming into the modern and equipped fishermen communities through the proper application of Saemaul Sprit like diligence, self –help and cooperation. For this reason, government, Global Saemaul Development Network (GSDN), civil society and also the community people from these fishermen should work together for developing the indigenous fishermen communities in Bangladesh.

References

DoF. Brief on Department of Fisheries Bangladesh. Department of Fisheries, Ministry of Fisheries and Livestock, Dhaka, Bangladesh, 2003.

Repors of FAO,1972

Shah, M.S. *Human resource development activities in fisheries sector*. In: Fish Fortnight Compendium 2003. Department of Fisheries, Ministry of Fisheries and Livestock, Bangladesh. Dhaka: Bangladesh.2003,pp. 57–59.

Jensen, K. M. *By the River Meghna*.Copenhagen: Centre for Development Research, 1985.

Hunter, W.W. *A Statistical Account of Bengal*.vols.1-XX.Trubner and Co. Reprinted 1976, Concept Publishing Co, 1877.

Chu-fa Tsai &M.Youssouf Ali. *Open water fisheries of Bangladesh*, Dhaka: The University Press Limited. 1997, pp.30.

Ali, M. Y. *Fish, Water and People: Reflection of Inland Open Water Fisheries Resources of Bangladesh*. Dhaka:The University Press Limited, 1997.

Risley, H. H. *The Tribes and Castes of Bengal*.vols I & II. Firma Mukhopadhyay, 1981.

De, K.C.*Report on the fisheries of East Bengal and Assam*. Shillong: India, 1990.

O’ Malley, L.S.S. *Bengal District Gazetteers, Pabna*. The Bengal Secretariat Book Depot: Calcutta, 1923.

Gupta, K.G. *Report on the results of enquiry into the fisheries of Bengal and into fishery matters in Europe and America*. Bengal Secretariat Book Depot: Calcutta, 1908.

<http://archive.thedailystar.net/newDesign/news-details.php?nid=233287>

Jwa, Sung-Hee. *Korea’s Economic Development: Lessons for developing and developed economics* (Unpublished), 2015.

Jwa, Sung-Hee. *Korea’s New Village Movement: Success Factors and Implications on Development Economics*. (Unpublished), first draft, 2015.1.

Chung,Kap.Jin.*Research Report on SaemaulUndong Experiences and Lessons from Korea’s SaemaulUndong in the 1970s*.Korea Development Institute (KDI): Seoul, 2009.

Tae-Yeung, You. *The Patterns of Rural Development in Korea*. The Institute of Saemaul:Kon-kuk University, Seoul, 1986, pp.65.

Kwon, Huck-ju. (2010) “Implications of Korea’s SaemaulUndong for International DevelopmentPolicy: A Structural Perspective”. *Korean Journal of Policy Studies* 25(3) 2010: 87-100.

Kim, Young-Mi. *Their Saemaul Movement*. Seoul: Purunyeoksa. (in Korean), 2009.

Park, Sooyoung. ”Analysis of SaemaulUndong: A Korean Rural Development Programme in the 1970s”, *Asia-Pacific Development Journal* 16(2) 2009: 113-140.

So, Jin-Kwang. “Local Governance and Saemaul Movement in Korea”, *Korean Journal of Local Autonomy* 59(3)2007: 93-112. (in Korean)

Jeong, Ki-Hwan. “Rural Development in Developing Countries and the Roles of KOICA”, *International Development and Cooperation* 2007(2) KOICA. (in Korean)

<http://koreajoongangdaily.joins.com/news/article/Article.aspx?aid=3009278>

To cite this article:

Sk Mashudur Rahman (2021). Protection of Natural Resources and Knowledge of Indigenous Fishermen Communities in Bangladesh: Adopting Saemaul Development Model. *Asian Journal of Economics and Business*, Vol. 2, No. 2, pp. 145-166.