Loss of access rights leads to collapse of traditional fisheries governance and rise of conflicts: A case from Malala and Ebillakela lagoons in Sri Lanka

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A traditional fisheries governance system was in place in Malala-Ebillakela lagoons, which involved all relevant parties including fishers, non fishers and government organizations to manage the lagoon ecosystem. The special features of this system were the involvement of all parties, from different layers of decision-making, in the different forums across levels and the pressure which came from both fisher and non-fisher communities who were totally dependent on the resources of the lagoons. However, with the declaration of the lagoons as a Bird Sanctuary and National Park, subsequently, under the Wild life Act of Sri Lanka in 1990s, this common property was turned into a state property. Consequently, it came under the direct supervision of the Wild Life Department. As a result, the Wild Life Department started to control the access rights of the traditional fishers and non fishers, leading to conflicts between fishers, fishers and non-fishers, fishers and the Wild Life Department and so on. In the meantime, the ecosystem started to deteriorate in the face of uncoordinated infrastructure development interventions. This paper attempts to discuss the consequences of these developments and the collapse of the traditional fisheries governance system, and the impacts of introducing State-led management under the Wild Life Act.

Key words: Self governance; Legal frameworks; Conflicts; Malala and Ebillakela lagoons; Hambantota

1. INTRODUCTION

1.1 Background to the study

Practical Action, formerly known as Intermediate Technology Development Group, is an international non-governmental organization, working alongside communities to find practical solutions to the poverty they face. Practical Action see technology as a vital contributor to people's livelihoods. The definition of technology includes physical infrastructure, machinery and equipment, knowledge and skills and the capacity to organize and use all of these.

Practical Action(Sri Lanka office) started working with small scale fisher communities in post Tsunami rehabilitation as an entry into the fisheries sector.Thereby, the fisheries activities expanded into working with lagoon fisher communities on building their capacities to take the lead in collaborative lagoon

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resource governance with other stakeholders. Practical Action has been working with 8 lagoons in Sri Lanka and Malala and Ebillakela is one of them.

1.2 Malala Ebillakela lagoon

Malala-Embilikela Lagoon (6º9′18″ – 6º11′06″ N and 81º10′30″-81º13′12″ E) ecosystem is located in Hambantota Secretariat Division of Hambantota District in the Southern Province of Sri Lanka. It is about 250 km from Colombo, the capital of Sri Lanka, towards the southeast.

Malala-Ebillakela Lagoon ecosystem is a result of two connected brackish water bodies called Malala and Ebillakela. They are connected to each other through a natural narrow canal.The ecosystem receives freshwater from Malala Oya to Malala Lagoon and Weligatta Ara to Embilikala Lagoon. Malala lagoon opens to the sea through a nearly 300 m wide mouth during the rainy season. In the dry periods, the mouth is closed by a naturally formed sand bar which is about two meters high from the lagoon water level.The total water area of both lagoons is estimated to be 1080 ha.The adjacent sea coast and surrounding terrain is normally flat with sand dunes and sparse dry evergreen scrub.

Figure 1. Geographical settings of the Malala-Ebillakela lagoons as (Satellite image by Google Earth)

Generally, the vegetation found in this area can be specified as dry evergreen scrub' (CEA, 1993), heavily disturbed by human encroachment and domestic animals. Past records (Priyadarshana, T.,etal 2009) indicate 48 species of Angiosperms (flowering plants). Common trees and shrub species are as identified by Heart (Priyadarshana, T.,etal 2009).

This biologically rich area is an internationally important wintering ground for a variety of migratory water birds. In the past, 324 species of vertebrates have been recorded, which include 32 species of fish, 15 species of amphibians, 48 species of reptiles, 197 species of birds and 32 species of mammals. Among the invertebrates,

52 butterfly species are included. Breeding populations of two species of crocodiles (*Crocodylus palustris* and *C. porosus*) inhabit mainly the Malala and Ebillakela ecosytem.

1.3 Social and Economic statues

It is believed that in ancient times, there were only 13 families inhabiting a small fisheries village called *Pathirajaya*, which was located near the Malala Lagoon, towards the seaward side. This hamlet lay along the causeway, connecting Hambantota-Tissamaharama,[3] on which bullock carts used to operate.

With the recent establishment of the present Hambantota-Tissamaharama highway and other related infrastructure, these villagers together with other migrants from areas such as *Mawela, Kudawella* and *Moraketi Ara*[4] formed new settlements that can be found around the Lagoon at the present time.

It has been noted that the population in Hambantota district is increasing more rapidly than other parts of the county due to recent development projects such as irrigation and settlement schemes and to the fact that Hambantota has a higher birth rate and lower infant mortality and death rates in comparison to the average all island rates. During the period between 1971 and 1981, the population of the Hambantota District grew by 25% as compared to the average of 19% for Sri Lanka. According to a study carried out by Fauna International in 1992, the average family size living close the lagoon was recorded as 4.9 persons/ per family.

There are four Grama Niladari[5] (GN) divisions around the lagoon, which comprise a total of ten villages (Table 1).

Table 1 : GN Divisions around the Lagoon

GN Division	Village
Koholankala	Mayurapura Koholankala *Udamalala* *Arabedda*
Pallemalala	*Pallemalala* *Kiripattiya*
Boralessa	*Weligatta* *Boralessa*
Bundala	Bundala Wellegamgoda

Out of the ten villages listed in Table 1, the villages pertinent to the discussion of the present study, is limited to six: *Udamalala, Arabedda, Pallemalala, Kiripititya, Weligatta* and *Borelessa*.

Primary sources of income generating activities of these six villages are mainly

[3] The main cities between Malala Ebillakela lagoons
[4] Mawela, Kudawella and Moraketi Ara are three fishing villages in Tangalle divisional secretariat of Hambantota district
[5] The smallest administrative division in Sri Lanka

fishing and agriculture.People have organized themselves to form a Fishery Cooperative Society and a Farmer Society. In addition to these two major livelihoods, the percentage of households belonging to casual labour, government and private sector employment are comparatively small.

2. ANALYSIS

2.1 History of fishing in Malala and Ebillakeal lagoons

It is believed that the history of fishing in Malala and Ebillakela lagoons is more than 15000 years old, which is evidenced by the findings of fossils. Archaeologists have found prehistoric human fossils from close to Malala lagoon. They are considered far older than *Balangoda Manawaya*, which is considered as the prehistoric human remains in Sri Lanka, which survived until 500 B.C and faded out under the advances of early settlers from India.

2.1.1 Recorded History from 1912 to 1944

As mentioned above, there were only 13 fisher families living around the lagoon. This fishing village was called *"Pathirajaya"* . They were involved in both lagoon and sea fishing. During the season of rough sea, which lasts for almost 6 months every year, these fishers used to fish in the lagoon. The personal communications and participatory time line development exercises with the fisher communities in Malala and Ebillakeka revealed that these 13 families had been mainly using trap net fishery. Thus, fishing in the sea and the lagoon was mainly limited to in-shore fishing which was very primitive and artisanal. At the same time, they had been involved in *chena*[6] cultivation, paddy farming and dairy farming. Bartering was the method used for trade. So, all sorts of livelihoods had supported the food security of the community. Remaining archaeological sites (buddhists temples) support the fact that religious activities had been part of their lives.

In 1944, with the onset of the Second World War, a military training camp had been set-up in this fishing village, resettling these fisher families in another village called "*Pallemalala"* which is also close to the lagoon and the sea. There were military camps set-up in other coastal areas in theSouthern province as well, . As a result, some people from these areas were resettled in *Pallemalala*.

2.1.2 Infrastructure Development in the area

The key infrastructure development work such as the *Tissa-Matara* coastal belt main road, running across *Pallemalala*, market places, hospitals, etc were developed. Consequently, a lot people continued to migrate to *Pallemalala*. It is also said that

[6] Chena cultivation or shifting agriculture is the most primitive type of agriculture known to man from the dawn of civilization, practiced in Sri Lanka & some other Asian countries. It does not make use of the same piece of land (unlike where paddy is grown) and goes on rotation of crops. The 'Chena' cultivator cuts down, at regular intervals, the trees of a small jungle land and sets fire to the woody growths as far as possible, to begin cultivation. This virgin land is very suitable for cultivation in view of its rich soil.

many of the migrants who settled there were also fishers. This was largely due to that fact there had been a lot of migrant sea fishers in and around Malala and Ebillakela lagoons and the adjoining sea. They had mainly come from other coastal villages in the Southern Province of Sri Lanka. They married local village women and settled in there.

2.2 Community level self governance on fishing

According to the personal communications with the lagoon fishers, there had been a traditional community level self governance system (CSGS) to regulate fishing long before the resettlements in 1944. This period still being pre-independence era, the CSGS should have been enacted under "The village Communities Ordinance (VCO) No.24 of 1889". This was considered as the first and main legislation that dealt with artisanal fisheries management (K.Sivasubramaniam, 1997). Even though the fishers was resettled in 1944, the governance system is said to have continued and become stronger in the face of increasing migrant sea fishers and new settlers. The fishing regulations was a fishing gear and ground- specific system. The fishers were divided according to the fishing gear type, and allocated a fishing area for each fishing gear type. It is said that there were time limitations for the operation of fishing traps. With the increase of population in the area, in 1950s, the CSGS introduced two more regulations. They were that to fish in the lagoons or the adjoining sea, fishers had be members of the CSGS and belong to the same caste (fishing caste *Karave*). CSGS held monthly meetings to monitor the fisheries management and handle disputes among fishers. The CSGS even carried out punishments to those who broke the fishing regulations.

In 1958, the state rehabilitated a village level irrigation tank called *"Badagiriya Wewa"* to promote and assist the paddy farming in the area. The tank was rehabilitated diverting Malala Oya, which feeds fresh water into the lagoons. This new intervention did not produce any major implications to the lagoon ecosystem, as it was constructed in such a way that the excess water gets fed to the lagoons. The paddy cultivation was gradually increased around the tank and the lagoon.

2.2.1 CSGS in agreement with farmer association

Usually, the area receives high rain fall from monsoons during October-December period every year leading to an increase of fresh water in the lagoons. This period coincides with the high tide season of the sea. Due to the hydrological pressure from both the increase of fresh water and the high tide of the sea, the lagoon mouth opens up, naturally facilitating migration of fish, crustaceans and sea water into the lagoons and vice versa. This process ensures the fish production of the lagoon and the level brackish water to make an enabling environment for the fauna and flora of the lagoon ecosystem. When the fresh water level went-up during this period, the opening of the lagoon mouth had to be manually facilitated without waiting it to happen naturally, to avoid the paddy farms cultivated around the lagoons being flooded. To do this, both CSGS and the paddy farmer association came into an agreement to carry it out collaboratively once a year. This collaborative work continued until 1985.

2.3 CSGS registered as Fisheries Cooperative Society

The CSGS evolved into a Fisheries Cooperative society in the 1980 with a total number of 450 fishers and received its legal registration in 1990. This was a result due to the changes of the fisheries act in Sri Lanka. Fisheries Cooperative Society expanded its activities into delivering micro credits, purchasing fish landings and other social welfare activities in addition to fisheries management. With the registration, FCS started taking part in divisional and district level development committee meetings, to both voice their needs and get the relevant service from other organizations for the village level lagoon resource governance. Also, the FSC started working closely with the Department of Fisheries on fisheries welfare activities and to implement the fisheries regulations.

2.4 Interventions of Wildlife Department

An area of 6,216 hectares including Malala and Ebillekala lagoon ecosystems were declared as a Sanctuary by the Gazette Notification of 5th December 1969 (No. 14,883) under the Fauna and Flora Protection Ordinance No. 02 of 1937 as amendments (Wilde Life Act). This declared area was named Bundala Sanctuary. In 1991, Bundala became the first wetland to be declared as a Ramsar site in Sri Lanka, which is the largest Ramsar wetland out of the three Ramsar wetlands in Sri Lanka.

Again Bundala Sanctuary was upgraded to a National Park by the Gazette Notification of No. 01-379/2 0f 31st December 1992.However, the description of boundaries in various publications gives rise to confusion about the actual gazetted boundaries.

2.5 Collapse of traditional fisheries governance system

2.5.1 From common property to state property

With the declaration of the area, including the lagoon ecosystems, as a Sanctuary and National Park, the area legally became State Land (Crown Land). Accordingly Wildlife Department (WD) of Sri Lanka was mandated by the Fauna and Flora Protection Ordinance No.02 1937 as amended, to oversee the management of the National Park. Earlier, this lagoon ecosystem used to be common property managed by a community level self governance system, led by small scale fishers, which is now known as the Pallemalala Fisheries Cooperative. The Wildlife Department started regulating the National Park which includes the lagoon ecosystems and did not involve or consult the traditional community governance systems. This gave rise to conflicts between lagoon fishers and Wildlife Department officials (WDO). Often, WDOs tried to control the fishing hours and sometimes fishing at night was not permitted. Nor did the lagoon fishers give up fishing and they continued irrespective of the regulations. This led to fights between fishers and WDOs and these regularly ended with Police intervention.

The stronger the management of regulations of WD became, the more, the lagoon fishers started using far more efficient fishing nets to harvest fish and prawns. This was because they thought that they would not be able to fish on the next day. This

led to an over-exploitation of aquatic resources, and wide use of illegal fishing nets (zero mesh-sized fishing nets). Due to the use of these nets, there was competition among fishers as well, which also led to conflicts among themselves. In the end, the whole traditional fisheries management system collapsed, which paved the way for migrant fishers and whoever was interested, to enter into the lagoon for fishing as well. Nor could WD distinguish migrant fishers. The problems of over-exploitation, conflicts between fishers and fishers, migrant fishers and WDOs were all mounting.

2.5.2 Uncoordinated development work takes its toll

In 1982 the state developed an irrigation scheme in Lungamwehara which is about 30 km off the lagoons. This was initiated with the objective of forming a Paddy farming colony around the irrigation scheme. The excess water of the irrigation scheme was diverted to lagoons. As the lagoons were under management the of WD,no fisher was consulted for their indigenous knowledge on the area before this intervention. Diversion of excess water caused a significant increase of fresh water in the lagoons, totally converting the brackish water in the lagoons into fresh water. This immediately changed the whole ecosystem in the lagoon and inevitably had an impact on the fish production in the lagoon. Particularly, the prawn fishery went down drastically, as prawns grow in brackish water. Prawn fishery is the most commercially important fishery in Malala and Ebillakela lagoons, which the fishers used to catch for a period of 5 months every year before the excess water situation. With less and less fish, the lagoon fishers started to fish using more and more illegal fishing methods to maintain the same level of catch that they used to get and stayed longer hours in the lagoon.

To compound the situation, the paddy farmers around the lagoon were also affected by the excess water situation in the lagoon. Because, when there was excess water in the lagoon, the adjoining areas got flooded and this happened five to six times a year. To drain the flood out, the lagoon mouth needed opening manually and was a costly exercise for the government as well. Previously, the lagoon mouth had to be open once a year during rainy season, which was also carried out by fishers and farmers together under the agreement of CSGS and Farmer Association. From the fishers‘ point of view, opening the lagoon mouth should coincide with the high tide season of the sea, to facilitate natural migration of the fish and crustaceans, as doing it otherwise caused loss of fish and the ecosystem. Since the fishers were opposed to the constant opening of the lagoon mouth, there were conflicts between the paddy farmers and the fishers, leading to several fights.

2.5.3 Some fishers leaving the fishery

This conflicting situation has threatened the 450 traditional lagoon fishery livelihoods to collapse, resulting in a lot of social conflicts. With the fish stocks in the lagoon going down, many fishers started working as part-time fishers while working as daily labors, crew members in sea fishing, illicit liquor production, illegal hunting of wild animals and migrant fishers. Some even left the village in search of work in cities and ended up getting engaged in mafia groups.

With a view to addressing this excess water in the lagoon, in 1992 the government put up a canal close to right side of the lagoon mouth, in order to drain out the

excess water to the sea. But this canal was not functioning efficiently, because the canal had been constructed at a higher elevation than the lagoon excess water level. Therefore, the construction of the canal did not gave an effective solution to the issue.

There have been a lot of attempts by the Ministry of Fisheries to re-organize this community level fisheries governance system with the new fisheries and aquatic resources act, No.02 1996. This act makes provisions for small scale fishers to claim legal rights to manage their aquatic resources through de-centralized community based management systems. Because this act becomes null and void in areas which are under the Fauna and Flora Protection Ordinance No. 02 of 1937 as amended, the attempts of the Ministry of Fisheries also have not worked out. Sometimes, this only aggravated the situation resulting in department level conflicts between WD and the Ministry of fisheries. Also, the District and divisional level administrations tried to set up a coordination mechanism to manage the lagoons with all stakeholders, only to find that the WD was absent in many instances.

2.5.4 A new fishing regulation Gazette

The FCS continued fighting against WD for their traditional fishing rights and the protection and conservation of the lagoons. At the same time, fishers continued fishing in the lagoon irrespective of the meagre fish catch and constant raids by WD. As a result, a Fishing regulation Gazette in the year 2006 was published under the said Fauna and Flora Act. The Gazettes order the following points (only the key points are presented here) :

1. This Gazettes orders all lagoon fishers to obtain a license from WD to fish in the lagoons

2. The decision to allow fishing in the lagoon and, when decided, so to issue licenses to fishers, the number of licenses to be issued to the lagoon fishers must be decided by the Director General of WD.

3. The licenses must be renewed every year. To do that, the fishers must communicate with the Director General in written request one mouth prior to the expiry of the current license .

4. The fishers must pay a sum of 250 LKR to WD annually for the use of fishing crafts in the lagoon.

5. Director General will decide the number of fish landing centers around the lagoon and where the fish landing centers will be. Such recommended fish landing centers will be used to land and park the fishing crafts.

6. Only gill nets must be used of which mesh sizes should not be below 85 mm although they could be bigger than that.

With these new regulations, WD tried to stop the lagoon fishers coming to fish without licenses. WD even sought the support of police to do that. Also, WD went onto banning fishing in the lagoons at night. But fishers continued fighting against the

new regulations and tried to prove that fishing regulations should be formulated in line with the characteristics of a fishery. They elaborated that fish will not come at times given by WD to be caught by fishers, types of fishing gear are dependent on the types of fish they catch and the fishing in the lagoons is multi species and multi-gear. WD did not pay attention to them and continued to raid the fishers. Nor did fishers obtain licenses, saying that it was their traditional fishery which they had been doing long before the ownership of the lagoons transferred to WD. Both the divisional and district administrations along with the Ministry of Fisheries tried to mediate and facilitate discussion between the fishers and WD, in order to develop a co-management approach to the fishery. But, WD did not consent to that and nor did they take part in the discussions in many instances.
So, the lagoon fishers continue to fish and WD tries to control the lagoon fishery, while paddy farms continues to get flooded and paddy farmers fight for a solution to their problems. The increasing conflicts between the lagoon fishers themselves, the migrant fishers and the paddy farmers has mounted leading to several fights.

3. PRACTICAL ACTION'S EFFORTS

As mentioned at the beginning of the paper, Practical Action has been working with lagoon fishers communities in 8 Sri Lankan lagoons. The findings of this paper are part of the work. With the findings generated from the participatory exercises amongst the lagoon fishers and other stakeholders of Malala and Ebillekale lagoons, Practical Action has tried to build the capacities of the lagoon fishers and other stakeholder to take the lead for collaborative governance of the lagoon eco-system. Building the traditional community level fisheries governance was part of this process.

As direct outcomes of the project, a lagoon eco-system management plan and institutional set-up of collaborative governance have been proposed and so have recommendations with a plan to correct the excess drainage water from the canal - to mitigate flooding of the paddy fields. At present, to operationalize these proposed changes, Practical Action is facilitating a process to amend the legal and policy framework to include collaborative governance of the lagoon ecosystem. This paper also can be considered as part of this advocacy work.

4. LESSONS AND RECOMMENDATIONS

Across the world, where conservation and natural resource governance is concerned, it is believed that the empowerment of local communities to manage their surroundings should come from within the communities. This could be a self initiation by the community, or triggered by a non governmental organization, governmental organization or a donor. The motivation could be attributed to the livelihood security through biodiversity conservation or others.No matter what the origin of motivation behind the initiative, building on traditional community based conservation mechanisms is the key to sustainable natural resource governance rather than top-down management approaches.

Based on the lessons of the case-study of Malala and Ebillakela lagoons, it proves that the community level self governance system had been driven by the community values such as equity in resource allocation, conservation of natural resources for

the next generations, community development and conflict management. The introduced legal framework does not recognize the relationship between social values, traditional fishing livelihoods and lagoon ecosystem. As a result, the implementation of the legal framework led to a conflicting situation in the area, creating immense social issues. Irrigation development work aimed at generating livelihoods and poverty reduction only resulted in 450 small scale lagoon fishers and 100 paddy farmers losing their traditional livelihoods. The policy plans, frameworks and development initiatives should look at the natural capital on which traditional communities are dependent and should be implemented without damaging such systems. On the contrary, they should build on them. To build on such traditional systems, communities directly and indirectly depending on natural resources should be thoroughly studied before policy formulations. That will help understand common property management systems and their relationships with natural resources.

Unbelievably, across the region, at hundreds of sites, community based resource management strategies are protecting the natural eco-systems and achieving higher levels of livelihood security. Yet, there are challenges in terms of class, bureaucratic inefficiency, caste, political corruption and gender forces undermining community-based resource management.

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