Investigating Multi-Stakeholder Conflicts and Challenges in Rekawa of Sri Lanka: Implications for Co-Management

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Abstract

Coastal resources are used by multi-stakeholders with different interests. This leads to the emergence of diverse conflicts among them challenging the coastal zone management efforts. This paper aims at proposing a mechanism to address multi-stakeholder issues, to ensure sustainable resource management and improved wellbeing of people Towards meeting this objective a study was carried out in Rekawa, of Southern Sri Lanka, using Key Informant Discussions, Focus Group Discussions and field visits to obtain primary information. Results reveal that a number of stakeholders; fishers, farmers, tourism etc. have different interests in coastal resource use, which generate negative externalities on the others, leading to conflicts. It shows that there are positive links between stakeholders and the most important institutions supporting them. This is quite conducive for the establishing a co-management mechanism to address multi-stakeholder conflicts, by integrating different sectors which is one of the requisites for an effective co-management. Yet, an effective co-management mechanism needs to meet other requirements, such as, inclusiveness, active participation of all and holistic approach to management.

Keywords: Rekawa; Stakeholder Conflicts; Co-Management; Sustainable Resource Use; Sectoral integration

Introduction

Sri Lanka has a coastal zone of 24% of its land area, which provides home to 32% of the population (UNDP, 2023). Rekawa in the southern coastal belt of Sri Lanka, is rich in biodiversity, with both terrestrial and aquatic ecosystems, including beaches, mangroves, a lagoon, corals, and the ocean (Amarasinghe, N. Jeevanthi De S. Amarasinghe, & Sandika, 2003). Also, this area hosts a diverse range of stakeholders, including local communities, fisheries, tourism operators, and conservation organizations. As the anthropogenic pressures on coastal resources intensify, these stakeholders face increasing challenges in maintaining their livelihood. That can lead to conflict over resource use and conservation priorities. This paper intends to identify causes for these conflicts and to explore the implications for effective co-management mechanism. By identifying the key challenges and potential solutions, this will contribute for finding common ground for effective co-management in ecologically sensitive coastal areas.

The objective of the study

This study aims to examine the diverse resource use conflicts among multi-stakeholders in the coastal zone and to propose a mechanism to address these issues ensuring sustainable resource management and improved wellbeing of people.

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Literature Review

The coastal ecosystem is characterized by high diversity and wealth of resources, yet it remains highly fragile (Pomeroy, Ratner, Hall, Pimoljinda, & Vivekanandan, 2006) and vital for maintaining ecological balance, supporting livelihood (Chen, De Bruyne, & Bollempalli, 2020). Livelihood activities in this area, including fishing, tourism, aquaculture contribute significantly to the economy (Bavinck et al., 2005; Bavinck, Jentoft, Pascual-Fernández, & Marciniak, 2015). The presence of multi-stakeholders in the coastal zone makes the ecosystem very sensitive and each stakeholder group has its own objectives in coastal resource use. As they generally make resource use decisions independently of those of others, conflicts are likely to emerge. Conflicts are likely to intensify when the demand and the pressure on resources and the marine ecosystem get increased with the growing human population (Hollowed et al., 2013). Hence, the government as the custodian of a country's resources, has the responsibility to develop appropriate regulatory frameworks to safeguard these resources.

Accordingly, Sri Lanka has drafted the Coastal Zone and Coastal Resources Management Plan of 2024, which is the fourth generation Plan. The earlier Plans presented in 1990, 1997, 2004 and 2018 (CCCRMD, 2024), in which, effective mechanisms to address the multi-stakeholder conflicts in the coastal zone were absent and it is too premature to make any comment on the new 2024 plan. However, it is quite evident that an effective coastal zone management mechanism is urgently required to address negative externalities exist and to promote sustainable coastal resources use by all resource users (Amarasinghe & Piyasiri, 2021). Co-management has emerged as an important management tool when, resources are being utilized by multi-stakeholders with different interests, including Small Scale fishers (Evans, Cherrett, & Pemsl, 2011). It is a process of management where government shares power with resource users and all stakeholders collaborate in managing coastal resources (Evans et al., 2011; McConney, Pomeroy, & Mahon, 2003). Such mechanisms are not present in Sri Lanka, although the Department of Fisheries had made an attempt to establish co-management platforms in lagoons. Despite the government's initiative to develop a National Fisheries Policy and Legislation, Amarasinghe, (2020) suggests revising and remodeling the policy to ensure promoting the establishment of participatory, inclusive, integrated and holistic co-management platforms (Amarasinghe, 2020).

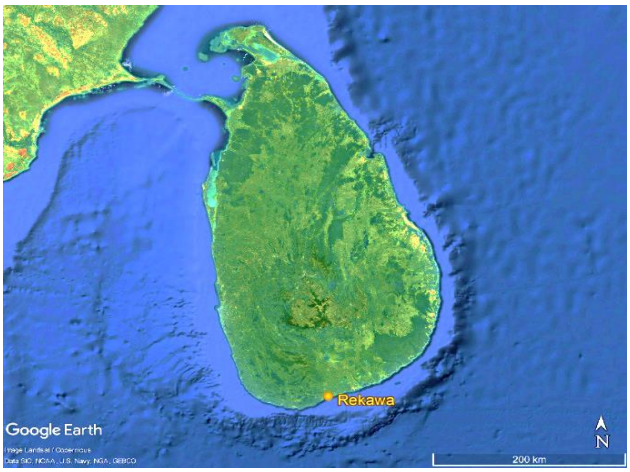
Methods

Study Area

Rekawa in Tangalle Divisional Secretariate division of Hambantota was selected as the study area, where multi-stakeholder conflicts are well evident. (Figure 1). This area is demarcated by the Coast Conservation Department (CCD) as "Rekawa Special Area Management area (SAM area)" because it is an area of intense conflicts among different stakeholders, demanding immediate attention of authorities in resolving conflicts among diverse resource users (Oscar Amarasinghe, N. Jeevanthi De S. Amarasinghe, & Sandika, 2003).

Rekawa SAM area consists of seven Grama Niladhari (GN) divisions as Wellodaya, Rekawa East, Rekawa West, Madilla, Netolpitiya South, Marakolliya and Madagama. Considering the time and available resources, only Rekawa West, Madagama and Madilla Grama Niladhari divisions, those bordering the lagoon, have studied (Figure 2).

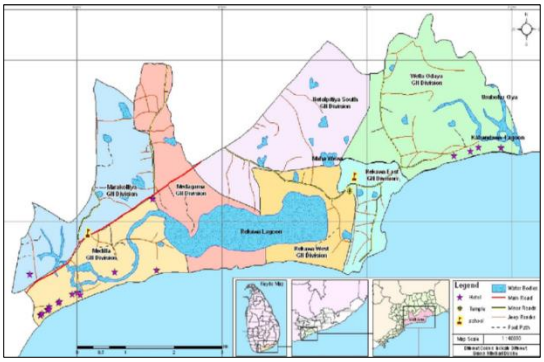
Figure I: **Location of the study area in Sri Lanka**



Source: Google Earth

Rekawa is well known for its pristine beaches and as a hub for turtle conservation initiatives (Kapurusinghe, 2021). The International Union for Conservation of Nature (IUCN) has declared Rekawa beach as one of the prime nesting habitats in Sri Lanka for turtles (IUCN, 2006). It is rich in biodiversity, with both terrestrial and aquatic ecosystems including beaches, mangroves, a lagoon, corals, and the ocean.Out of the seven sea turtle species in the world, five globally threatened species come to Rekawa beach every year for nesting (Rajakaruna, Ekanayake, & Kapurusinghe, 2013; R. Rathnayake, 2015). 35 species of stony corals and 138 species of reef fish and reef-associated fish have been recorded in Rekawa shallow fringing reef ecosystem (IUCN, 2006). Currently, Rekawa is famous among tourists for turtle watching.

Figure 2: Rekawa Map



Source: Goole Map

The Rekawa lagoon area is around 250ha with an average depth of 1.4m (Oscar Amarasinghe et al., 2010). Approximately 10 km long sandy beach lies on the seaside of the lagoon, bordered by a rich mangrove ecosystem (Gunawardena and Rowan, 2005) whereas, rice fields towards the landside. Most of the rice fields are now abandoned due to high salinity. Both lagoon and mangrove ecosystems provide a favorable habitat for range of species, including fish, shellfish, reptiles, mammals, invertebrates, and local and migratory birds (Ganewatte, Samaranayake, Samarakoon, White, & Haywood, 1995). 37 fish species and 9 crustaceans have been recorded from the lagoon environment (IUCN & CEA, 2006). Approximately 11, out of 21 true mangrove species are found in the Rekawa wetland (Jayatissa et al., 2002) which provides habitats for around 104 bird species,

including 15 migratory species, while serving as a vital breeding ground for fish and shrimp (IUCN & CEA, 2006).

Data Collection

Collection of Secondary Data

Secondary data were collected from unpublished Reports and Records available at regional offices of fisheries, coast conservation and coastal resources, wildlife, forestry and other relevant agencies, journal articles, theses, books, Laws and Acts which are related to the fisheries sector in Sri Lanka.

Collection of Primary Data

Field Observations

Rekawa SAM area was visited three times during December 2023 to February 2024 to get an understanding on the community, processes of resource extraction, the major threats to resources and conflicts among stakeholders. During the site visits informal discussions were held with leaders of fisheries community, fisheries cooperative, Civil Society Organizations and elderly coastal fishers, lagoon fishers and villagers to get qualitative information on the economic activities, current status of livelihood, ways of resource exploitation, environmental threats, conflicts etc.

Key Informant Discussions (KID)

Key Informant Discussions (KID) was carried out on 03 February 2024, to obtain more specific qualitative data. Separate individual interviews were conducted with Grama Niladharies, Officials of Departments of Fisheries, Agriculture, Wildlife, Coast Conservation, Forest etc.

Focus Group Discussions

A Focus Group Discussion (FGDs) was carried out with 21 community members engaged in coastal fishery, lagoon fishery, agriculture and tourism for their livelihood. This group, which includes both men and women above 18years, was selected with the assistance of state officers and community leaders. Participatory Rural Appraisal tools, such as the Problem Tree Analysis and Venn Diagrams were used to examine existing stakeholder conflicts, resource use patterns of stakeholders, institutional framework and challenges for co-management.

Results and Discussion

Coastal Resource Use by Stakeholders in Rekawa

The major resources of Rekawa are its people, beaches, the lagoon and associated biological resources, mangroves, coral reefs, tanks and rivers draining into the lagoon and agricultural land and home gardens. The sea, lagoon and mangroves comprise the most used marine and brackish water habitats (Ekaratne, Jinendradasa, & Abeysirigunawardana, 2000). The long sandy beache and the Rekawa Lagoon, bordered with mangroves, makes it one of the most beautiful sites in the southern Sri Lanka. The unique natural environment of Rekawa is characterised by range of rich environmental assets, providing a variety of ecosystem services in one location (Oscar Amarasinghe et al., 2003). This SAM area is one of the environmentally sensitive sites in Hambantota (HICZMP, 2000). Hence, Rekawa can be considered as one of the bio-diversity hot spots in the country.

The Lagoon and lagoon fishers

Shrimp is the major resource harvested from Rekawa lagoon by lagoon fishers. and they aim fin fish during the off-season for shrimp.The favourable season for shrimp fisheries in the Rekawa lagoon is from November to April. Fishing in the lagoon is controlled by the Rekawa Lagoon Fisheries Management Authority. Out of the total number of fishing families in Rekawa, only 35% are engaged in lagoon fishing. The release of wastewater from the private shrimp farm, the effluent from nearly all hotels and chemical runoff from paddy fields caused serious issues for lagoon fishers reducing the fish catch. The Rekawa lagoon is bordered by a thick mangroves stand, which provides roosting and nesting facilities to many local and migratory bird species, and for breeding and rearing of the

young. A number of mammalian and reptile species are also found in this environment (Oscar Amarasinghe et al., 2003).

Marine fisheries

Of the seven GN Divisions of the Rekawa SAM area, the coastal strip of Rekawa East and Rekawa West provides the inhabitants with access to marine fish resources. Rekawa is essentially a fishing community engaged in coastal fisheries. Due to the difficulty of anchoring large crafts, only small mechanised crafts and traditional crafts are operated from Rekawa, which are involved in exploiting near-shore fish resources.

Agriculture and the farming community

Agriculture is one of the major livelihoods in Rekawa. Up-Land farming (Vegetable) and Low-Land farming (Paddy) are widely practiced by local people, who mostly cultivate small to medium sized plots to meet family consumption needs and earn cash incomes. The farmers in the area are generally small-scale farmers. The average size of a paddy holding is about 1 - 2 acres, whereas for vegetables/ fruits plot is about ½ - 1 acre. Field crops are not cultivated due to the unpredictability of rainfall.

Tourism

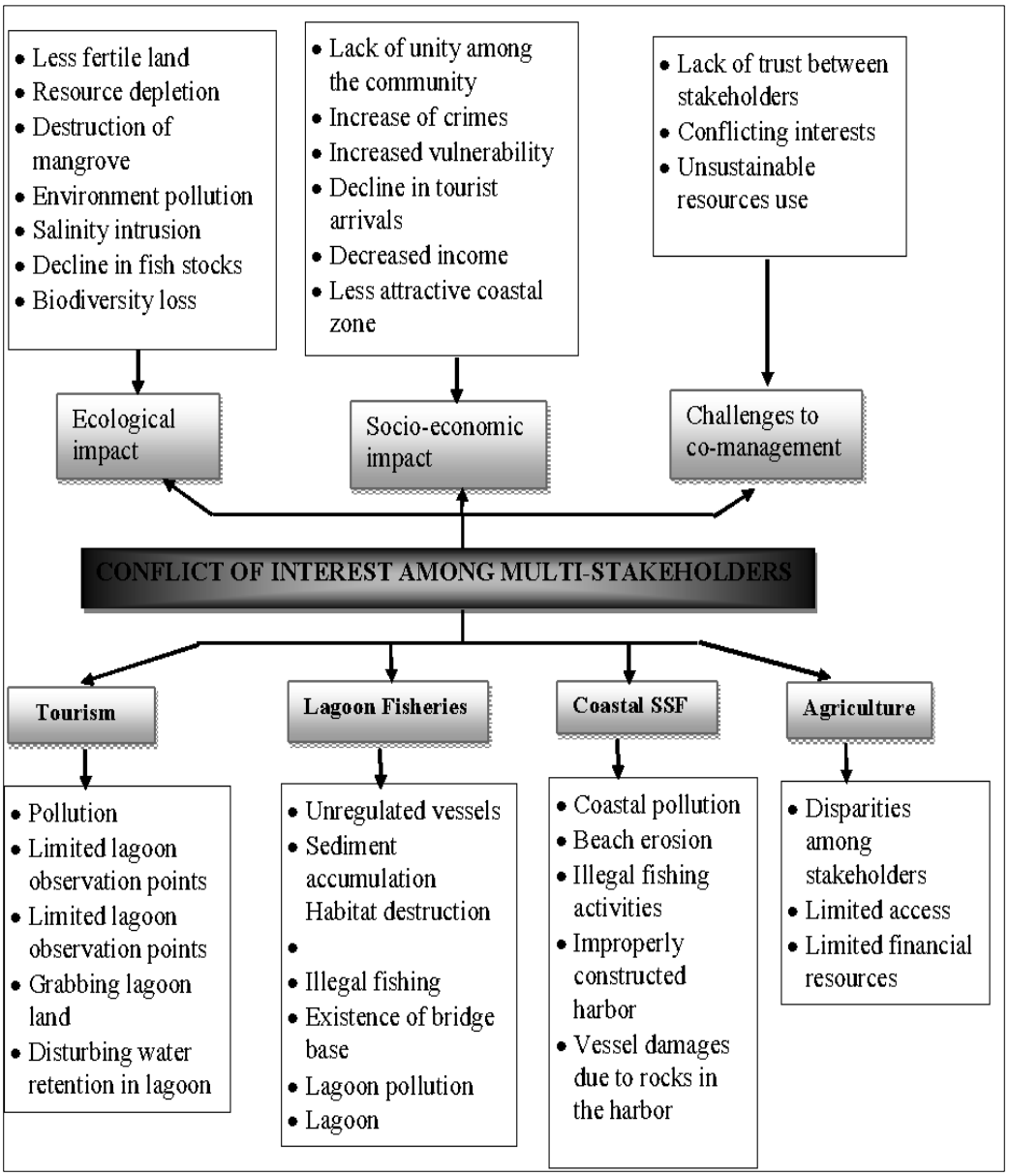
Tourism is primarily centered on the natural beauty and the Turtle Sanctuary. Being a key attraction for eco-tourism, Rekawa Turtle sanctuary focuses on protection and conservation of endangered sea turtles. It offers visitors an opportunity to witness nesting and hatching in their natural habitat (R. Rathnayake, 2015; R. M. W. Rathnayake, 2016). The local community is concerned on sustainable practices to protect their environment and to preserve their cultural heritage. The major tourism services provided include eco-tourism practices, such as mangrove watching, canoeing trips around the lagoon and bird watching.

Stakeholder Conflicts in Rekawa

Resource use by diverse stakeholders in Rekawa has given rise to a number of conflicts among them, as depicted in figure 3. Both fishers and hoteliers use coastal and lagoon resources. Unsustainable practices in tourism related activities lead to pollution, habitat destruction and degradation, affecting fish stocks and livelihoods of fishermen. Ultimately this leads to conflicts among fishermen, hoteliers and tourism operators. Hence, fishers consider hoteliers and tourism operators as those posing threats to their livelihoods.

There is notable competition between fishers and farmers over water resources. The abandonment of farmland due to salinity intrusion severely affects the livelihoods of farmers. Further, the excess water diverted to the lagoon during floods significantly lowers its salinity, adversely impacting lagoon fishers. Artificial breaching of the sandbar to protect farmland during floods, without informing the fishers, further exacerbates conflicts between fishers and farmers.

Figure 3: Problem Tree Analysis for Rekawa community



Source: Rekawa PRA Workshop, February 2024

Conflicts between coastal and lagoon fishers primarily arise over access to shared fishing grounds and resources. Also activities in the lagoon area have a significant impact on ecological balance of the coastal belt, and vice versa, aggravating conflicts. Moreover, some stakeholders, such as the less-powerful socially and financially.

Fisher folk have failed to reap benefits equitably from government development efforts. Conflicting situations have also emerged among the community and the government officials, in all sectors; fisheries, agriculture and tourism, over enforcement of environmental regulations and resource management policies.

Despite environmental regulations and strict permit-granting process in the tourism sector, law enforcement has been weak. Furthermore, unsustainable practices in coastal and lagoon resource use and inequitable sharing of tourism revenue with local communities have seriously affected the well-

being of the local community generating conflicts among tourism operators and government officials hindering tourism development.

Though NGOs play a considerable role towards certain activities such as Turtle conservation. Yet they are not invited to the decision making table, due to differences in perspectives. Hence conflicts arise among NGOs and government officials in implementing environmental policies and regulations and in conserving the coastal ecosystem.

This reveals a situation where there exist an innumerable number of conflicts among diverse stakeholders who use coastal resources for different purposes. There is no mechanism to resolve these conflicts which pose a threat to sustainable management of the coastal resources. Yet, this situation provides an opportunity to institute a co-management mechanism which will facilitate collective decision making, resolve conflicts and improve the wellbeing of participating stakeholders.

Implications for establishing a Co-Management mechanism to address the conflicts

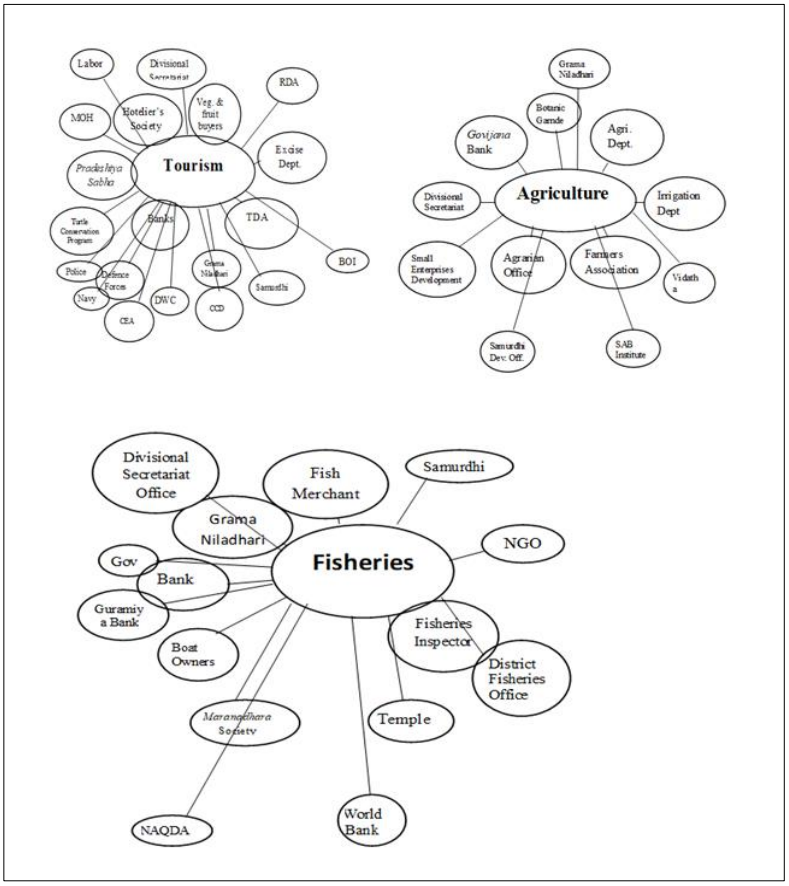
Role of institutions in addressing conflicts

"Institutions are the rules of the game in a society; more formally, they are the humanly devised constraints that shape human interaction, structure incentives in exchange, whether political, social, or economic" (Douglass North, 1992). An adaptively efficient institutions are a requirement for a successful economic change (Faundez, 2016).

The tool, 'Venn Diagram' was used to find out community relation to various institutions, by sectors. In Figure 3, the size of the circle shows how strong the institution in the development and management of the sector, while the length of the lines shows how close people are to the relevant institution. It is quite evident that stakeholders belonging to different sectors are strongly linked to the key institutions in their sector; fishers to the Department of Fisheries; tourism stakeholders to the Tourism Development Authority, and farmers to the Department of Agriculture and the Irrigation Department.

When people are closely linked to respective key institutions it will be easier to introduce management regulations through such institutions. Findings of this study reveal that sectoral integration, or bringing people, belonging to different sectors, together is quite feasible with the existing strong institutional framework and people's strong links to them. The existence of such a framework is quite conducive in instituting a co-management mechanism. Because state officers operating the different institutions are in contact, and participating in diverse decision-making platforms. This will facilitate bringing all the stakeholders together for collective decision-making, which will benefit all.

Figure 3: Venn diagram related to Rekawa Fisheries, Tourism & Agriculture Community



Source: Rekawa PRA Workshop, February 2024

Conclusions

The above results have important implications for co-management. This study has shown that coastal resources are being used by multiple stakeholders, each stakeholder group trying to reach its objectives of coastal resource use, which are different from that of others. By doing so they generate a host of negative externalities on others creating conflicts. These conflicts have led to declining health of the ecosystem and well-being of the human system. This study also shows that there is a strong institutional structure in the coastal region, with the authority to manage the relevant sector and working towards the interests of the diverse stakeholders. Further, the results reveal that, effective sectoral integration could be easily achieved as all stakeholders maintain quite close links with the most important institutions which support their resource use. Integration is one of the essential components of co-management. However, resolving mismatches in mandates of different institutions is a pre-requisite for sectoral integration. While sectoral integration is a necessary condition for co-management, it has to meet other requirements such as inclusiveness (inclusive of all including women and marginalized groups), active participation of all and holistic approach to management (consider the system as a whole) in order to ensure co-management is fully effective. Capacity building and training of all participants in a co-management platform need to be undertaken, so that participants will understand the concept of co-management, sustainable use of resources, and the process of collective decision making which is very supportive activity for an effective co-management mechanism.

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