

Debts, assets and obligations: Gender and Resilience in Fishing Households in Cambodia

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INTRODUCTION

Fishers are often considered as the poorest of the poor, and fishing is seen as the livelihood of last resort for the poor (Bene and Friend 2011). Fishers are often seen as bonded to middlemen through debt. However, as Coulthard (2012) noted, fishers are heterogenous. In the case of Cambodia, many people started to fish after the Democratic Kampuchea period came to an end because fishing provided a stable and sufficient income. With the recent decline in fishing resources, fishing has become a more precarious occupation. However, fishers maintain their livelihood around fishing and make various efforts to continue fishing, including borrowing money, migrating, and going for other non-farm/ non-fish occupations. This paper explores these coping strategies of fishing communities in Cambodia, and how debt is intertwined with other livelihood options to achieve resilience for fishing households. In this paper, debt is understood as one of the large set of social and household relationship, and different members of the family are mobilized to support the existing livelihood. The paper describes cases of fisher households in three different ecological zones in Cambodia to explore this issue. By examining the functions of debt for fishing households, we will be able to better support their resilience in face of declining resources. This will further allow us to understand why and how gender relations remain unchanged despite changing livelihood options.

The study took place in 17 community fisheries (CF) in Cambodia through key informant interviews, focus group discussions and in-depth interviews with 10-15 fishing households in each CF during 2016-2018. In this paper, one CF each has been selected from three different kinds of ecological zones – Tonle Sap Lake, flooded plains and coastal area.

FISHING COMMUNITIES IN CAMBODIA

Although majority of rural population do not consider themselves as fishers, most do fishing (Bene and Friend 2011). Fishing provides full time and part time employment for up to 6 million people in Cambodia (MAFF 2010). Tonle Sap Lake covers an area of 3,000 sq km during dry season and 15,000 sq km during the rainy season. Flood plain of Tonle Sap extends to 40,000 sq km. Coastline of Cambodia is 435 km (Heng Sovannara 2013). Fisheries sector (harvesting, processing and trade) contributes to 8-12% of the GDP (MAFF 2010), which is larger than livestock that contributes only 3.3%. The total marine and freshwater capture fisheries production was around 360,000 to 550,000 tons per year in 2014. Fisheries production is estimated to be worth around USD200-300 million per year, and fish exports is valued at US\$100 million per year (MAFF 2010). Mousset et al. (2016)'s study in 37 villages in Cambodia showed that people consume 3.6 kg of fish per week per household, more than double the amount of meat consumed. Fish provides more than 60% of daily animal protein and around 20% of total protein consumption. The per capita consumption of fish is one of the highest in the world with 40.5 kg per year (FAO 2012). On average, fishing households earn USD333 per year from fishing, which provides a net income of USD170 (Mousset et al. 2016).

Though more than 80% of the fish products come from fresh water capture fisheries, it is in decline. In 2013, 528,000 MT of fisheries products were harvested, which decreased to 487,905 MT in 2015. Marine fish products, on the other hand, has not changed much, producing 100,000 MT in 2013 and 120,500 MT in 2015. Although practically almost everyone in the rural areas are engaged in fishing in one form or the other, full-time fishers are few.

Fishing lots were introduced in 1900 under French colony. Cambodia gained independence in 1953, but fishing lots continued to exist. During the Democratic Kampuchea period from 1975 to 1979, lot system was abolished, but since the 1980s, it has slowly been reinstated. After the DK period, many people have moved to start a living around the Lake by fishing, since the resources were abundant and it was easier to start a living. In the 2000s, conflicts between fishing lots and small-scale fishers started to rise with heavier competition over fish resources at the Lake. In 2012, fishing lot system was abolished. Some areas were handed over to CF for management, and some remained as conservation lots.

Community fisheries was first established in 1998. As of 2014, there are 516 CF (328 officially registered), of which 477 are for inland and 39 for marine. Total number of CF members are 332,168, from 156,628 households. CFs manage around 715,645 ha of fishing area. Kurien (2018) hailed the achievement of establishing the first community fisheries development department in an Asian country: “In 2000, a bold initiative in Cambodia became a trail blazer when individual rights were replaced with community rights” (p.10). Although CFs are designated fishing areas for management, they do not have any budget or power to arrest illegal fishers, and not allowed to start commercial fish related activities on their own. The regulations allowed only family-scale fishing gears, but did not restrict the number of gears, hence it was difficult for CF to regulate overfishing (Chat et al. 2016; Sam et al. 2016).

Such weak power given to CF has not allowed small fishers to sustainably benefit from the abolishment of fishing lots. Fishing communities do not have the legal power to protect and exclude external developers to access and take over the water bodies nor do they have the authority to arrest illegal fishers. Schwartz et al. (2016) reported that 82% of their respondents have reported decrease in fish resources in the past 10 years. This is also confirmed in our study. Fishers around Tonle Sap during our research have reported that after the fishing lot was abolished, fishing resources protections is not made as rigorously as before, and the catch is declining. Although the fish price is on the increase, so has the price of fuel and fishing equipment. An et al. (2008 cited in Schwartz et al. 2016:2) noted that the increase in fish price is lower than the increase in the price of rice.

With the decrease in catch and subsequently the income from fish, fishing households are compelled to make adjustment to their livelihoods. Gunatilaka (2018) based on the data from Cambodia Socio-Economic Survey 2011, identified higher poverty level among households dependent on fishing. Schwartz et al. (2016) also identified that households with fishing as primary occupation did not adapt successfully to environmental change compared to other households. With the effect of dam construction in the upstream, fishing occupation is expected to be further affected (Baran and Myschowoda 2009). Fishing households might not be the poorest of the poor, as Bene and Friend (2011) said that there is no firm relationship between being poor and being a fisher. But fishers are still a relatively vulnerable group in Cambodia. Bene and Friend (2011) argued that fisheries do not make people poor but the marginalization of fishing communities is what affects their well-being. Below, a conceptual framework to understand these fishers’ coping strategies in the face of decrease in fishing resources is explored.

DEBT AND MIGRATION AS FINANCIAL MANAGEMENT TO ADAPT TO ENVIRONMENTAL CHANGES

Women in Southeast Asia are often the financial manager of the household (Garikipati et al. 2014), and this is also the case for fishing households in Cambodia. Rutherford (2012) argued that low income households manage their finance in three different ways – saving up, saving down and saving through. Saving up is to keep

income that is kept aside for savings. This is done in kind because it is difficult for the poor to keep in cash. Saving down is basically borrowing money. Money lender provides money upfront, deducting a charge, and collects small repayment over an extended period of time. Saving through is seen in pawnbroking as well as rotating saving and credit associations (ROSCA). Past savings (including social capital savings in the case of ROSCA, since this is based on trust among members) is used to get advance on future income. Middlemen advancing money for fishers and getting their repayment by fish, which is a popular practice in Tonle Sap, is also one form of saving through. This concept of saving through is important, since it reflects the convertibility of assets – both physical, financial and social.

How convertible assets work with other types of assets to form a livelihood strategy is explained by Dorward et al. (2001) in their Asset Function Framework. They differentiated four types of processes (production/income, investment, saving/cashing, and borrowing) with four associated functions of assets (productive assets, consumption assets, convertible assets, and debts). Dorward et al. (2001) argues that rural households balance these processes and assets to pursue well-being. For example, when fish resources decrease (production/income decreases), fishing households can decrease their food consumption (that is, decrease their consumption assets), as was pointed out by Mousset et al. (2016) and Schwartz et al. (2016) in the case of Cambodia. Mousset et al. (2016) said that the second popular strategy is to spend cash savings (that is, use convertible assets). The least popular was borrowing from MFI and money lenders (that is, debts).

Debts and convertible assets can overlap, especially noting the relational aspect of debts. Guerin (2014) noted that debt is embedded in various feelings and emotions. Convertible assets also include social capital. That is, like in the case of ROSCA, feelings of trust and obligations can also be converted into assets and be mobilized as part of the coping strategies in the face of resources depletion. In this sense, remittances from migrating children is also a convertible asset (or the children are convertible asset who can be called upon for support when needed). Hours and Ahmed (2015) emphasized the importance of social debt that is a wider circulation than the financial debt. Obligations and ethical bonds (Petchesky and Alexander 2014) are part of the debt and also part of convertible assets.

But the question is where do the fishing households strike the balance between these processes and assets? Where are they aiming to be? As Guerin (2014) noted, it is important to understand the aspirations of the women and men.

“The way debt is interpreted also depends not only on the identity of the borrower but also on what he or she aspires to become. Debt is not only a marker of identity but is also constitutive of social aspirations and hope, both for the purpose of expenses.....” (Guerin 2014:49)

Coulthard (2012) maintained that in the face of resource depletion, fishers show their resilience by responding to such shocks. They strive to retain the pre-shock situation and its essential functions. Improving their resilience and well-being often go together, but it is not necessarily the case. When discussing resilience, it is important to explore which state the women and men are trying to restore their livelihood to. In the case of fishers, it is often the case that continuing fishing is the state that they want to remain back to (Coulthard 2012). Even among farmer-fishers, fishing is considered to be an indispensable supplementary income that is not abandoned even with the decrease in resources (Pollnac et al. 2001). Xi et al. (2017) argued that households tend to stay in the same livelihood strategy if they are not forced to change by external factors. This is based on their Cambodian rural study, but their study did not include fishing. Our study found similar phenomenon among fishers. Especially for Cambodia, fishing has provided good income and nutrition to the household to the extent that there has been people who moved to become fishers or selected to move to towns where they can do fishing. The serious decrease in fish catch has been experienced only in the last 5 years, and they are still adjusting to the low catch rather than abandoning fishing altogether. In order to supplement the fishing occupation, fishing households manage their household finance, which is normally done by women.

Going back to the household financial management and asset function framework, what we argue in this paper is that there is a gender differences in what assets are managed by whom in fishing communities. Even though in Cambodia, women do fish, still fishing is predominantly a men's occupation, and productive assets are dominated by men. Borrowing money is often women's responsibilities, especially since it can be a degrading experience. Garikipati et al. (2014) called it a social hierarchy of debt. One can get scolded or given rude words when borrowing or when defaulting debt, and often women are assigned to go through the experience. Women are expected more to contribute through convertible assets. The social expectation assigns daughters to remit more during migration. Women are expected to convert their time that they spent for household work to productive asset, by taking up home-based work. In the following, we demonstrate how women and men play different roles in maintaining fishing as an occupation despite the fall in fishing resources.

FISHING COMMUNITY AT TONLE SAP

Fishing community in Village A is a floating village in Tonle Sap Lake. There are 220 households in this village, and people live on boats on the Lake, moving their houses following the level of water of the Lake. They are full time fishers, and do not have land (they do small farming on land areas when the water level subsides). These fishing villages started to grow since fish resources used to be abundant and provided good income. They used to be able to catch 50-100 kg of fish per day in 2012. In 2017, their catch dropped to 15-25 kg per day. Even though fish price used to be low when they were able to catch a lot of fish, the drop in fish catch was much larger than the rise in price, and they now earn 10,000-54,000 riels per day compared to 2012 when they earned 20,000-200,000 riels per day. In this village, both women and men fish, although women tend to stay at the home boat more often than men especially when the children are small. Supervision of children is important in this village, since they need to make sure that small children do not fall into water and drown. Children in this village start schooling late, because of difficulty in attending school. Children need to take a boat to commute to school. Parents often wait till children are old enough to be on the boat on their own to start sending them to school. Such difficulty in access together with financial problems lead children to have less education in this village.

Living on boat is not cheap. They need to repair their house boat every year, otherwise, it will disintegrate. They also need a fishing boat as well as fishing net and traps in order to continue their livelihood in fishing. Fishers need to buy new fishing equipment every year. When they do not have enough money to buy new fishing equipment, they will buy on credit from middlemen and repay back in fish.

Even though this village is heavily dependent on fishing, and fish resource has decreased to more than half, villagers are keen to stay in this village.

“We are fishers. What can we do outside fishing? We cannot stop fishing. Even when fish decreases, we will continue to fish..... It is easier to live in this village, since it is easy to make a living through fishing and collecting other things. I was born in this village, so I know many people, and if I do not have enough, I can always borrow from others. There is fish in this village, and this is my birth place. I would like to die in this village.....If we stay here only, we can only do fishing. If children are educated, they can do oher things. But what children will do is up to them. If children do not want to go out to work in other places, they can stay at home and fish together” (Ms. C, 44 years old)

Such attachment to fishing might be because the decrease in catch has been a relatively recent phenomenon and they might still be under the impression that fisheries can provide for their needs. When they face drop in fish resources, they increase their fishing efforts as well as decrease consumption, as has been identified by Schwartz et al. (2016).

“Now that the fish resources is decreasing, my husband now fish longer hours than before”
(Ms. S, 31 years old)

They will also borrow money, and look for other income sources. But borrowing money is not easy. One needs to have certain relationship with the creditors to borrow, as Petchesky and Alexander (2014) noted. Those who do not have credit cannot go into debt.

“I do not borrow money. I do not have the credit to allow me to borrow money. Even middlemen will not lend me money” (Ms. C, 44 years old)

If they want to borrow money, fishers will go into a subordinate power relation with middlemen. There is no written contract for such debt, but the obligation for repayment is heavy. As Ms. C expresses below, they will be scolded by middleman if they do not, meaning that they need to endure degrading experience of being reminded that they are in a lower position vis a vis the middleman.

“I borrow money from middleman and so I have to sell fish to her. I cannot sell to other merchants. If we sell to other merchants, she will be very angry” (Ms. C, 44 years old)

The relationship between middlemen and fishers are of unequal power relations, but it is also a relationship that fishers want to maintain.

“It is not good to sell collectively, since each person has her own regular buyer. If we have to fix our buyer, we would not be able to sell in a better price, so would not like to sell with them.” (Ms. K, 56 years old)

This means that each fishing households have special relationship with middlemen, and if they sell collectively, each would like to give priority to their own middlemen. That is why it is difficult to make collective sales.

Aside from getting advance from middlemen, youths go for labor migration to cities and to Thailand and Korea. This village has a relatively long history of migration to other cities in Cambodia, including Siem Reap city and Phnom Penh. Recently they are going more for cross-border migration. Their remittances allow fishers to continue fishing, rather than to move out of fishing. Migrating children also come back from time to time, and some return back to continue fishing.

“Life was good when fishing lot was there. But it has become better when my daughter went to Siem Reap to work. I use remittances from daughter to buy rice as well as net and fishing equipment” (Ms. C, 44 years old)

Daughters are the ones whom the parents depend on for remittances. Daughters earn to support other siblings to study. Daughters are not considered as core contributor to fishing households, so they are expected to contribute by earning outside. Ms. K, who is living with her son who are engaged in fishing, talks about her daughters as follows:

“The two daughters in Siem Reap will send remittances to us around 20 USD per time, 2-3 times a year. I use this money for living expenses, repairing boats, and sending money to children who are studying. But I am not dependent on the remittances. Even if the daughters do not send any money, I will be able to make ends meet. Daughters do not fish, so even if they are here, it will not be any help for fishing. So it is better to send them to study and let them work outside” (Ms. K, 56 years old)

Respondents are relying on daughters more than sons for their elderly care.

“When I am old, I would like to depend on my daughter. Sons will be earning on their own. Daughters are the ones who will stay with parents to look after them.” (Ms. C, 44 years old)

It is the daughters who are expected to contribute to support the fishing livelihood but not the wives. Wives' roles are limited to supporting the current livelihood directly, through being a fishing helper for husbands as well as carrying out household work.

“I really want to go to work in Thailand, but my husband does not agree and does not allow me to work in Thailand. He does not agree because there will be no one to look after children.” (Ms. E, 31 years old)

Fishing as a livelihood in this village is sustained by women borrowing money and daughters migrating and sending remittances. So livelihood resilience is both gendered and generational effort.

FARMING-FISHING COMMUNITY IN THE FLOODED PLAIN

Village B is a village in the flooded plain of Tonle Sap, towards the Thai border. There are around 400 households in this village, among which 250 households are fishers. Villagers do rice farming as the main occupation, and fishing is a secondary occupation, but still fishing is very important as the source of nutrition and as secondary income. Almost all the households are engaged in fishing in one form or the other. They will go to water body either by motorbike or bicycle and fish without a boat. They fish in ponds, rivers and paddy fields. There are more than 100 natural ponds in the village. A few people have boats, and they can go into the pond and river for fishing. Farming in this village never provided enough for family to eat, and they relied on fishing to make ends meet.

A canal was constructed in 2015, and water demand for dry season rice production has reduced water in the water reservoir that affected fish habitat. Fish catch is decreasing and so has the cash income from fishing. Respondents noted that in 2007, they were even able to earn from fishing 126,000 riels per day. In 2014, they were still earning 60,000 riels per day. In 2017, this has reduced to just for home consumption to 25,000 riels per day as maximum. Hence, fishing has weakened its role as a source of supplementary income.

“Before, it was possible to live only on fishing in this village. Even without migrating, only by fishing, one could live in this village. But now, living only on fishing is not possible. By only fishing, we cannot repay back loans and so we need to go for labor migration.” (Ms. H, 38 years old)

Many do not make much effort to increase the fish catch but adapt to decrease in fish by reducing food consumption as was found also by Schwartz et al. (2016).

“[Decrease in fish catch] affect my family. I reduce the amount of fish to eat everyday. I do not do anything else. We never change the number of trips to catch fish.” (Ms. S, 48 years old)

They do not go for gleaning, since gleaning is considered to be a lower occupation and are looked down on as an activity for the poorest people. When we asked questions on gleaning, the respondents looked a bit embarrassed and told us that they just do gleaning for home consumption, and it is not something that one does for commercial purpose.

Because of the proximity to Thailand, there are many people who go to Thailand for labor migration. Now that the fishing income is decreasing, more go for labor migration. Around 90% of households migrated to Thailand. Migration increased between 2011 onwards. Income from remittances have become a crucial source

for household survival. Financial management centers around migration. They borrow money for building houses and repay by remittances, or borrow money to make legal documents to go to Thailand.

“Cause of migration are poverty, less fish and [the hope that they] might earn more money to support family. My children send remittance 5000 baht per month for living expenses and for paying back the loan to bank.” (Ms. P, 59 years old)

The remittances are used for fishing investment when men are still around in the village.

“Before, my income was from fish and farming. Both were almost the same. With remittances from children, I bought extra land and boat. With this, I am now able to increase income from farming and fishing.” (Mr. S, 58 years old)

Migration can be seen as a form of social debt. Children especially daughters are expected to earn and send remittances, as a form of filial piety. In return, parents take care of their grandchildren. For example, Mr. C (58 years old) has three packages of gill net, ten fish traps, which he spends 1000 baht per year to buy fishing equipment every year. He has one pumping machine, which he bought in 2017, one walking tractor in 2010, and motorbike in 2017. All these he was able to buy with remittances from his six children who migrated in 2008. Currently 60% of his household income is from remittances, and fish and rice income constitute only 10% each. In return for the children’s remittances, he and his wife are taking care of their children. He is currently looking after five grandchildren.

COASTAL FISHING COMMUNITY

Village C is a coastal village. There are 747 families and 80% are fishers. They catch crabs, fish and shrimp. Average income of members are 50,000-100,000 riels per day through fishing. Most people in this village do rice cultivation and livestock raising along with fishing. Only around 20 families do not have rice field. There is a gender discrimination in wages when they work as hired labor in fishing. Men are paid 40,000 riels per day while women are paid only 20,000 riels.

This village has suffered from income decrease from fishing compared to around 5 years ago. For very small fisher who do not have boats and rely on scoop, they used to get 55,000 riels per day, but now earn only 20,000. Some with boats used to earn 450,000 riels per day, which is now decreased to 150,000 riels. Some used to catch shrimp and sell dried shrimp and earned 18 million per year, but now they can earn only 3.45 million per year.

Even though income from fishing decreased from before, still it is better than earnings from factory wage labor. The relatively good income from fishing encourages fishers to continue fishing, but supplementing income from other sources. Fishers do not want to abandon the fishing profession, saying that fishing gives quick money.

“Although the fishery resources is declining, we still go fishing because if we do not go, there will be nothing to eat. If we depend on rice cultivation and remittances from children, it is not enough.” (Ms. I, 57 years old)

“Fishing can also make life better, since it gives daily income. It gives both food and income every day” (Ms. S, 32 years old)

The decrease in fish resources occurred alongside with establishment of garment factory and casino around the area. Young people work in factories and casino nearby, which income is also provided to the household. But the income from fish is still considered better than these wage work. Often, women work in these

factories and men fish, and men's income is larger than that of women. Factory work is not considered as an "occupation" (*kangie chabah roah* – established work) and considered as a lower status than fishing.

"Factory jobs can earn 300 USD per month, or a minimum of 150 USD. There are more women who work in the factory than men. ... But the income at present, work is paid only once a month, while fishing can give daily income." (FGD with women)

"After dropping out of school, young men are working as fishermen with their parents and some young men are working with other fishermen as laborer. Whereas young women work as factory workers and workers at wedding ceremony. Young men could get average salary of 1.5 million riels (375 USD) per month and young women who work as factory workers earn 170 USD per month." (FGD with youths)

In the coastal area, gender gap in earnings is large, although it has improved than before. Earlier, widows had few options to make a living. Like in the case of Ms. S, when her mother became a widow, the only way she could earn income was by working in the salt fields and collecting krill. Working on salt field is considered a degrading work – no local people will work on salt field, since it is heavy work and low pay. She said that "Nowadays, women can work in factories, hotels, restaurants, migration". Women's livelihood choices has increased, and their role is supporting the family has also increased.

"Nowadays, women go for earning income. Before, women did not go. But nowadays, they think that if both husband and wife work, then, they can get double income. So, both of them go together. In construction work, women's wages can be lower than that of men's. But in some work, women can earn more than men. Nowadays, men rest during Saturdays and Sundays, but women work every day. Before, women used to be at home, but now women are going out to earn money more than men." (FGD with women)

Women are taking up more work to support the fishing livelihood of the household. Again, this can be seen as women converting their time for household work to production work, or they squeeze their time to create convertible assets.

CONCLUDING DISCUSSION

Fishing resources are going down and fishers are able to catch less fish in all the areas. However, the memories of abundant fish resources are still vivid in the fishers' mind, and fishers still perceive fishing to be a quick money and the best options available for them. This is especially the case for coastal areas, where in spite of the availability of other wage employment, the income from fishing still provides the largest income. In the inland fishing areas, fishing income has decreased and are often less than remittances, but still fishers continue to fish depending on the remittances from children to support their livelihood.

By following Dorward et al. (2001)'s Asset Function Framework, we can understand the nature of coping strategies in these villages. When productive assets (fisheries resources) have decreased, fishers have taken various coping strategies. In Village A, they borrowed money and also migrated. This is to convert their social capital (credit with middlemen) to asset (fisheries). In Village A, this has been a popular approach, since there are less options for other income generation, unlike in Village C. The marginalization of Village A in terms of access to services (health and education) has led to Village A fishers to take up a conversion strategy that subordinates them vis a vis middlemen. It is noted that women are the ones who enter into such relationships and manage the debt.

For Village B, the coping strategy was largely migration. This was also seen in Village A, but the extent of this strategy was much larger in Village B. For Village B, remittances have replaced income from fish, and some

have stopped fishing altogether. Thus, for this village, faced with resource depletion (decrease in productive asset) lead to conversion of the filial piety into consumption asset. Again, daughters are expected to bear this social capital to consumption much more than sons.

For Village C, there are many cash earning options, including working in factories and casinos nearby, while fishing remains to be the most lucrative income generating activities. However, with the decrease in fishing resources also encouraged fishers to look for additional income. Working in factories and casinos have been carried out more by women. Earlier, women stayed at home. Now they are working in these factories. However, the income is still lower than men fishers and their income is considered a minor contribution to the household. This is, again, converting women's time resources into consumption. It is not that women have an elastic amount of convertible time and effort assets, but the gender norm worked to ensure that women contribute to consumption.

As discussed earlier, debts and convertible assets overlap. Social debt (Hours and Ahmed 2015) is converted for consumption and for production assets. What we see here is that the conversion of assets for consumption is a form of repaying social debt.

Regardless of the productivity of fishing, fishing activities are supported by two things: one is by mobilizing debt (and the source of obligations in that matter) and women's wage work. The fishers' preference to maintain the current livelihood lead by men are carried out by daughters and wives. Since the whole purpose of these income is to support the current livelihood, their income does not necessarily lead to their recognition or their empowerment or their freedom in expanding their economic activities. This explains why in spite of the changing livelihoods, gender division of labor and relations are stubbornly kept intact. Many respondents, when asked of domestic violence replied that it is allowed for men to beat women if women do not perform their wifely tasks of cooking and cleaning. When asked of the changes in women's status, women replied that there are now more women leaders than before. However there has been no woman who have referred to changes within the household or in the community.

The analysis of fishers' coping strategies in face of diminishing resources through the concept of debt and assets shows that resources are mobilized from women to support the existing livelihood system. Since the mobilization of resources are for the purpose of maintaining the status quo, changes in roles and activities do not have change or challenge existing gender relations. The study suggests that what and whose assets are converted to support the livelihood in the face of environmental change need to be grasped correctly in order to understand the impact of diminishing resources on women and men, and to support the development of alternative livelihood.

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