

**UNDERSTANDING LIVELIHOODS
DEPENDENT ON INLAND FISHERIES
IN BANGLADESH AND
SOUTHEAST ASIA**
(DFID/FMSP Project R8118)



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CAMBODIA SUMMARY REPORT

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1. Poverty status

According to the 1998 census, Cambodia population was enumerated as 11.4 million with a rural sector population ratio of 82%.

About 36% of the Cambodian population lives below the poverty line. About 90% of the rural households depend on agriculture as their primary source of income. However, large disparities in poverty distribution exist, with the coastal and mountainous regions having the lowest incidence of poverty (22%), the Tonle Sap Great Lake region having the highest incidences (38%), and the plain region with 29% of the population living below the poverty line (UNDP, 1999).

Households headed by someone working in agriculture and fishing manifest the highest incidences of poverty (46%), followed by construction and mining (37%), transport (31%), and government workers (20%) (UNDP, 1997). Nearly 75% of poor people are engaged in fishing and farming occupations. Poverty incidences are also higher in households headed by someone with no schooling (47.1%) as compared to households headed by someone with secondary education (30.1%) and for those with college/ university degree (0 %).

Absolute Poverty in Cambodia is pervasive (UNDP, 1997; UNDP, 1998; MoP, 1998)¹, with about 39% of Cambodians living below the poverty line of about US\$ 145 per person per year in 1993-4. This has reduced to 36.1% in 1997.

Poverty incidence fell from 37 percent to just under 30 percent in urban areas, excluding Phnom Penh, where it remained at 11 percent, and fell slightly in rural areas from 43 to 40 percent. Growth was also associated with a significant increase in consumption inequality that suggests a lessening of the poverty reduction impact of an expanding economy. While the poorest 20 percent of the population increased their consumption expenditure per capita by 1.7 percent between 1993-94 and 1997 the corresponding increase for the richest 20 percent of the Cambodian population was 17.9 percent (MoP, 1998).

2. Fisheries resource status and importance

Cambodia is an agrarian society with approximately 85% of the workforce engaged in forestry, crop, livestock and fisheries. Fisheries contribute some ten percent of the sector's total output. The annual freshwater fish catch is in the order of 295,000-420,000 tons, and fisheries contribute 8.8-10.3% of GDP. According to DOF (2000), the total inland fish production for the whole country ranges from 279,000 to 441,000 tonnes of which 115,000-140,000 tonnes is landed by small-scale fisheries, 45,000-110,000 tonnes from rice field fisheries, 34,000-91,000 tonnes from large scale fisheries and 85,000-100,000 tonnes from middle scale fisheries. In addition, marine fisheries production contributes 36,000 tonnes and aquaculture contributes 15,000 tonnes to the total production.

Fish consumption rates vary around the country. The highest consumption rates are found in or near fishing villages, particularly near the Great Lake (GL) and the Tonle Sap (TS) where rates may exceed 80 kg per capita per annum. In southeastern Cambodia annual fish consumption per capita is much lower (13.5 kg). The national average consumption per capita is estimated to be 25-30 kg per capita per year.

A huge migration takes place every year to the Tonle Sap to trade rice for Trey Riel (*Henicorhynchus sp.-a small cyprinid*) and other small fish species to make Prahoc (fish past), a key component of seasonal food security for poor rice farmers.

¹The poverty line is defined as an expenditure of US\$ 0.48 per capita per day in Phnom Penh, US\$ 0.37 in other urban areas (district and provincial towns and cities of Sihanouk ville, Kep, and Pailin), and US\$ 0.32 in the rural areas.

The use of electrocution fishing, focusing on snakehead, is widespread throughout the remote wetland region, and is being practiced by all scales of fishing, especially small-scale. This situation is rampant, due to widespread poverty, fish stock decline, inequitable right of access to fishing grounds by small-scale fishers, and the surge of snakehead demand by the Thai market.

Ecological change, due to water development in the upstream countries, has reduced the flood in the entire Cambodian inland wetland system, resulting in fish habitat loss. Further habitat loss is related to destruction of flooding forest for agricultural expansion.

3. Policies and institutions

There is no specific national policies directly relate to management of aquatic resources. The National Program to Rehabilitate and Develop Cambodia (NPRD) sets a cohesive package of objectives of:

- establishing the rule of law,
- ensuring economic stabilization and implementing structural reforms,
- strengthening capacity building,
- fostering rehabilitation and construction of physical infrastructures and facilities,
- integrating Cambodia's economy into the region and the world,
- promoting rural development and sound environmental management, and
- optimizing the use of natural resources.

The RCG's agricultural development strategy features a two-pronged framework: (i) one that embraces rapid, sustained and equitable agricultural growth; and (ii) empowerment of the poor. The first strategy is the growth-mediated approach with its main thrust to invigorate and modernize the agricultural sector, generate employment, enhance household incomes and improve the access of the less privileged to food. The second strategy is the entitlement-mediated approach which empowers farmers, rural poor and other vulnerable groups to enhance their ability to participate in the growth process. It focuses on improving these groups' access to land, water and other production inputs for sustainable livelihood, food security and overall socio-economic development.

Since 1979, the main policy of the Fishery Department has been to sustain landings. To the present, the national fisheries policy is still concerned with managing and conserving the natural aquatic resource in order to supply sufficient food to people.

The fishing concession system remains the primary means by which DOF manages Cambodia's fisheries, but reforms started in October 2000 under initiative of Prime Minister Hun Sen, are beginning to challenge and reshape this management approach. The key elements of reform include the reduction of concession fishing lot areas and promotion of community fisheries management through the establishment of community fisheries development office and sub-decree as the legal framework for this management approach. It can be an invaluable tool to improve governance and ensure more equitable and sustainable natural resources allocation by involving communities in decision-making process. The development of transparent and participatory decision-making can assist conflict resolution, peacefully resolving situation where communities have felt compelled to resort to protests and petition. In early 2001, 56% of fishing lot areas was released to communities, which in conjunction with local authorities will manage, conserve, develop and sustainably use fisheries resource in order to protect rights and benefits of the people. However, a key note of caution for the Royal Government of Cambodia's policy reform is that there is no guarantee for an improved management without legislative structures, funding or training to support the establishment of community fisheries in these areas. They can effectively

become open access areas, leading to confusion over access rights, alleged uncontrolled exploitation and illegal fishing. Concerns have been raised that there has been undue haste to develop community fisheries in order to fill the gap after removal of lot ownership. In the absence of immediate action this could lead to problems due to poor understanding of the concepts, vital information such as maps, fish catch and stock, fisher's need and environmental considerations, together with a failure to develop and implement effective regulation and structures.

4. Livelihood Analysis

The livelihood strategy is slight or quite different from one place to the others. The results of PRA conducted at three different sites revealed that livelihood strategy is slight different in these fishing villages. People's living depends very much on fishery resources. At the great lake and down stream river, fishing is their first/main occupation for the family. In the great lake there is more fishery stakeholders such as full time and part time fisher, fish trader and fish processor, where in down stream and main stream river most of them are full time or part time fishers. There is few households involved in fish trade and fish processing. However, the poorest fishing people are the full time fishers in the great lake because fishing is their only livelihood strategy and they operate by using small scale fishing gear with not enough gear for the whole year. While the full time fishers in main stream river is better off because they do larger scale of fishing and have enough fishing equipment for the whole year. In addition, most of these fishers have land for other farming activities, or having other business income for their living. Therefore, people living along the Mekong River are much better off than the others, because there are alternative livelihood strategies in this area in term of natural fertilized soil quality for farming, water bodies for fishing and other alternative livelihood strategies, where poor people living in fishing village/flooding village is much poorer since they have no land for other farm activities. Most of them depend on fishing as the only livelihood strategy.

In terms of capital asset, the natural fisheries resource is richer in the great lake than in the main river or down stream river. Human capital is rather poor in the great lake, with the lack in accessibility to schools due to the distance from the village and the lack of schools in the flooding village (Figure 1, 2 and 3).

Out of the three sites for the PRA studies, community fisheries or co-management approach exist only in down stream, Prey Veng province. However, communities in the other two sites are willing to create community fisheries in their areas in order to participate in natural resources management and development. This approach was initiated by the government for decentralization management approach from grass roots level.

5. Trend and Changes

5.1 Environment and human use

Due to the population growth and poverty in the country, the population at large attempts to seek alternative livelihood strategies to improve their living. As a result, resources are destructed which has created bad impacts to the environment. However, most fishers have not considered such impacts, in particular how this would affect their livelihoods in the future. The environment has been changing from year to year, with increasing natural disasters such as flood, drought, etc. This has created negative impacts to people livelihoods, especially to the poorest communities who are the most vulnerable.

Fish catch have been decreasing due to changes in environment such as deforestations (cut of flooded forest which affect fish habitats, etc.), hydraulic conditions, etc.. The results of the

PRA conducted in the three sites revealed that decreasing fish catch from year to year are due to many factors such as over use of resources, over fishing, illegal activities that have created negative environmental impacts, etc.. Conversion of flooded forest to agriculture land have been carried out without considering the negative effects to their livelihoods in the future. The population were concerned on the current potential livelihood strategy than the future due to the high incidence of poverty. Therefore, livelihood strategies among the poor have been changing from time to time according to the potential conditions of the natural resources available for their livelihoods.

5.2 Key macro/ exogenous challenges (threats/prospects)

Resource use have been changing without considering its impacts on the environmental in general. This has inevitably affected the livelihoods of the people, with the poorest and poor as the most vulnerable groups, in addition to negative impacts to national productivity.

Fisheries resource is one of the major contributions to national income (GDP), in addition to households' consumption at the micro level. Decreasing fish catch reduces its contribution to national GDP. The finding of this study shown that fishery resources have deteriorated in all three-study sites over the years. This is caused by high poverty incidence and poor law compliance among fishers, , poor law enforcement from the government and lack of knowledge in resource management. The other obstacle is lack of nationwide information dissemination through mass media which led to lack of access to information. This leads to the problem of illegal fishing and also cause conflicts between fishers themselves, and between lot owners and fishers, and with other stakeholders.

The government provided a prospect of fisheries policy reform aiming to reduce those threats and problems by encouraging people to participate in natural resource management and development based on community based-fisheries management. There are more than 200 community fisheries established in Cambodia. This is a good prospect of fisheries management in Cambodia to manage, protect and conserve fisheries resource for the sustainable use through fisheries co-management. This approach is one of the potential factors to improve livelihood strategies of the community in the future. The results of the study revealed that other communities have requested for the community fisheries establishment and arrangement after learning the benefits of the management scheme (Figure 1, 2 & 3).

6. Problem Analysis

Problems encountered by fishers varied from one area to another. In Kampong Cham province, as revealed in the main river PRA, all stakeholders defined the most serious problem is the lack of road. Availability of roads also signifies the means of communications and transportation which have serious implications on their livelihoods and daily activities. Roads availability also implies various forms of communications between the village and communities outside. This problem can be solved or improved with development project or program for rural development. The next problem listed is on the small fishing ground for the public fishing area released from the lot system. It is followed by the problem of lack of clean drinking water in the village, which is a serious problem that would lead illness and health problems. The last problem prioritized from the PRA is the problem of declining fish catch. This is due to the overuse of the natural resources that have resulted in degrading environment. It appears that solutions to the first problem would be critical to solving the other following problems on the list with assistance from other development project and program in the province.

Two main problems prioritized by stakeholders in down stream of Prey Veng province were low agriculture (rice) production and low fish catch. Local communities believed that the

main cause of the decreasing fish catch is due to the fish migration down to channels. The livelihood strategies in this area mainly depend on rice farming as the first occupation in the family and fishing activities as the second. Agriculture and fisheries technical awareness intervention programs appear to be the most effective solutions to these problems.

Three main problems were identified in the PRA conducted at the great lake of Pursat province. Insufficient fishing gears for fishing activities was the first problem that affects the poor full time fishers. The likely solution is to have development project providing credits with low interest to the poorest fishers. Local villagers also requested for the establishment of community fisheries or fisheries co-management in this area in order to manage, protect and conserve the fishery resources sustainably. The second problem prioritizes in the PRA was the lack of school in the village which affect mainly the poorest villagers who have no excess money to send their children to schools outside the village. The villagers hope to establish their own school in the village through cooperation with neighbouring communities in development projects upon the organization of community fisheries. The third problem was the lack of healthcare center in the village, which lead other difficulties when they are sick. They have to spend more money to visit health center outside the village. Healthcare availability is also one of the root causes of poverty in this area. Therefore, development projects on healthcare in this area need to be implemented immediately.

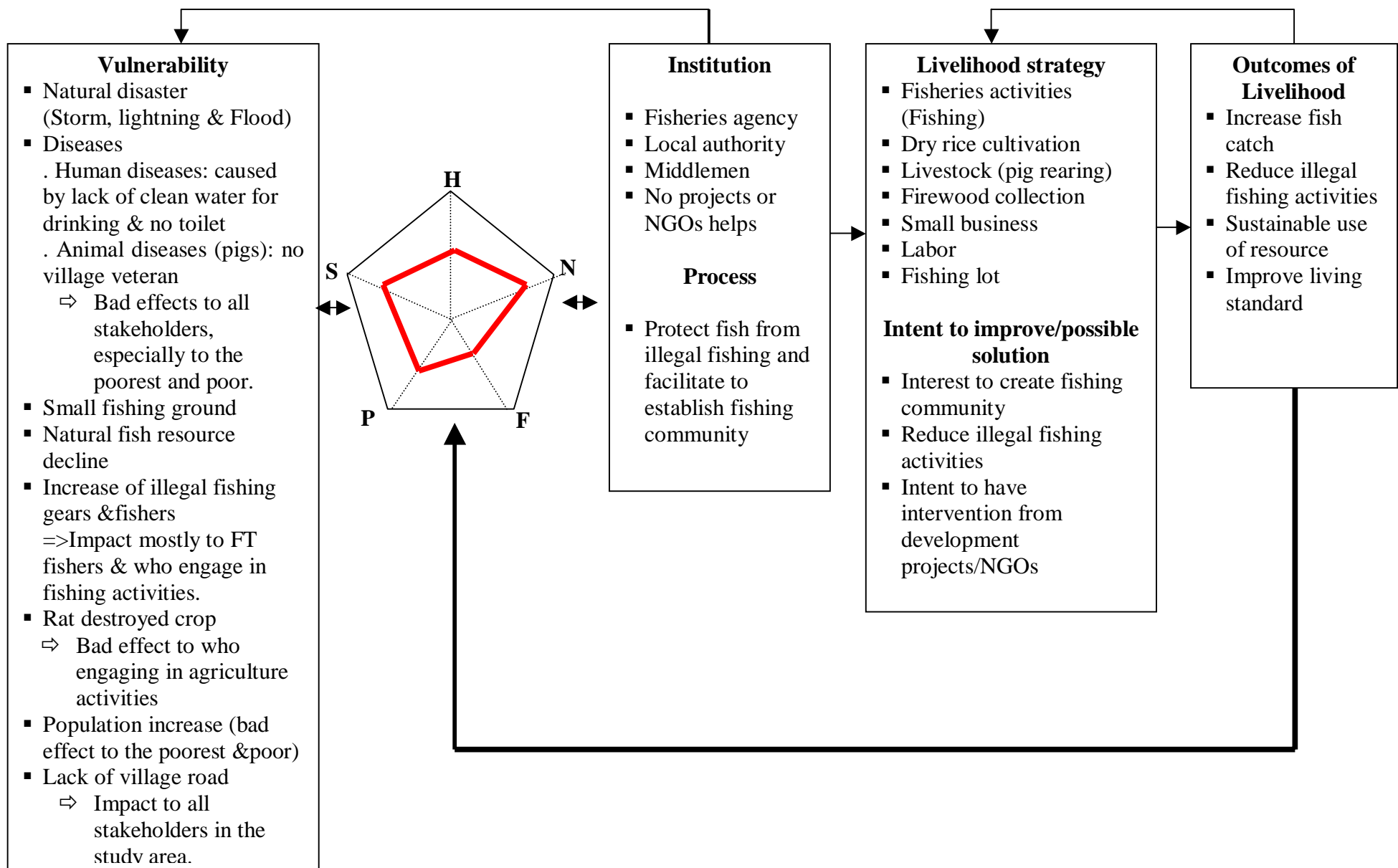


Figure 1: Summary of Livelihood Analysis in the Main Tream River, Kampong Cham province

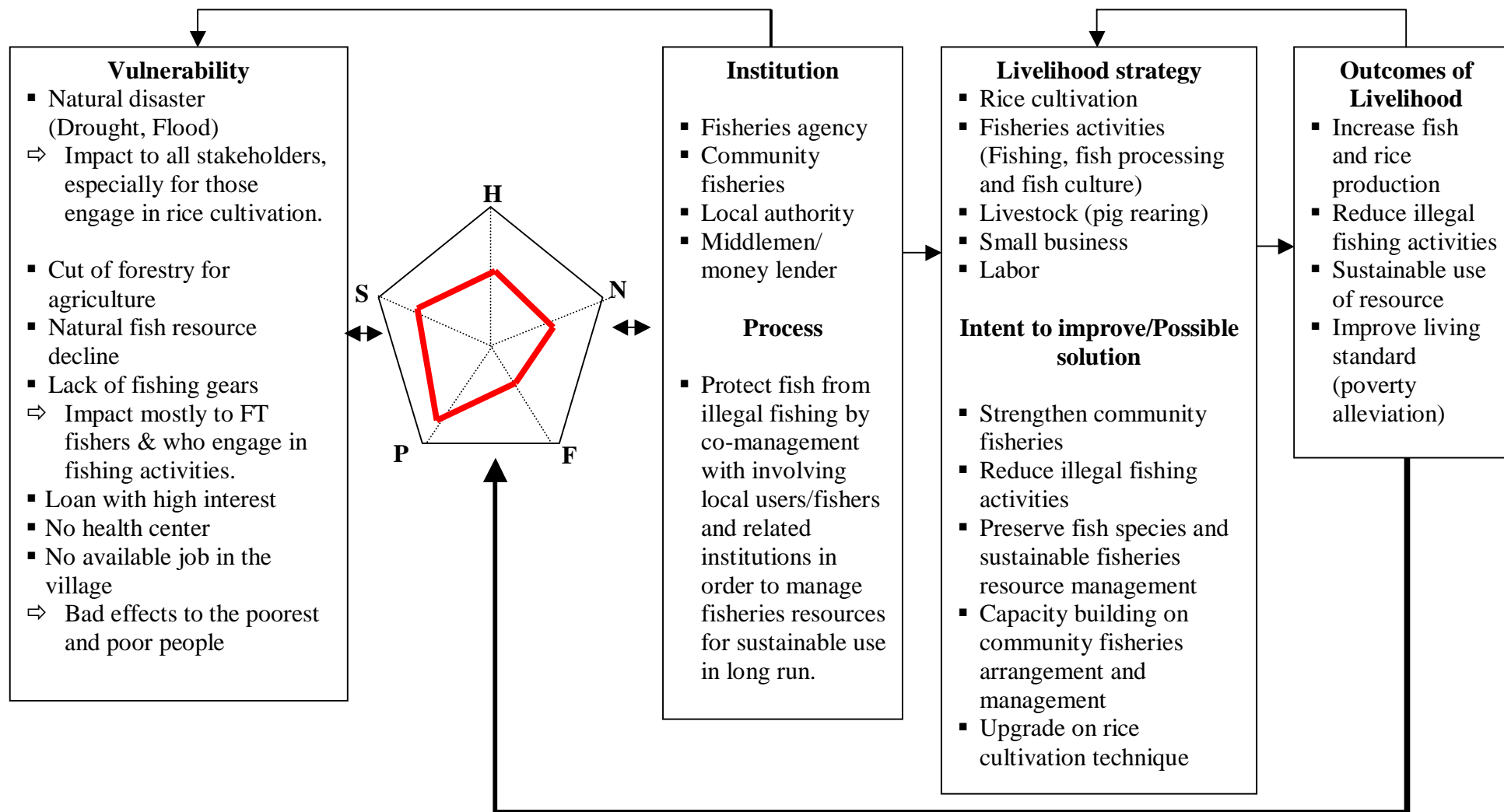


Figure 2: Summary of Livelihood Analysis in the Down Stream, Prey Veng province

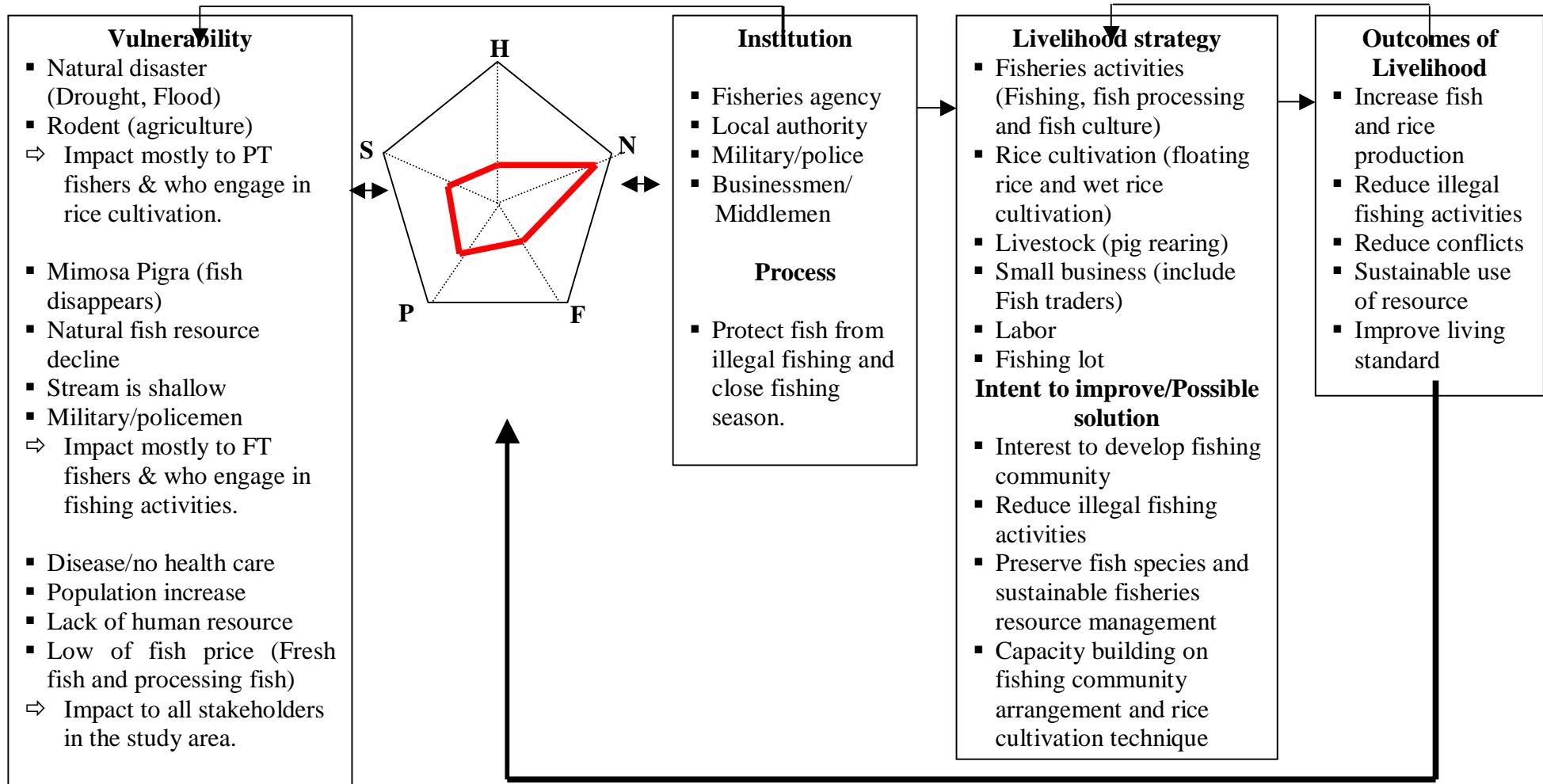


Figure 3: Livelihood Analysis in the Great Lake, Pursat province