

“Fish Fights over Fish Rights”: Non-Traditional Security Issues in Fisheries in Southeast Asia*

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Abstract

This paper presents the results of ‘Fish Fights over Fish Rights’ project which evaluated conflicts related to overcapacity in the fisheries and those that may pose threats to food, livelihood and environmental security in Southeast Asia (SEA). The case studies of fishing communities and the series of national multi-stakeholder workshops in Cambodia, the Philippines and Thailand; and the regional consolidation workshop altogether present a range of resource conditions, institutions, conflict situations and potential security issues both at the national and regional levels. The study characterized the conflicts in fisheries on the biological, social and economic context; and conflicts were analyzed according to their typology.

One of the key conflicts in all three countries is about fishing operations that violate rules on use of different gears, and scales and zones of operations. By groups, conflicts are rampant between large- and small-scale fishers as they compete for access in contested fishing grounds. The multiple “uses” of the resources and the lack of, if not total absence, of enforceable regulations put pressure on the fisheries. When there is overcapacity in the fisheries, management options often involve choices on who can fish and who cannot. This involves the dilemma of allocating access among industrial and artisanal fishing sectors, gear types, and areas. The interconnectedness of the variables involved in fisheries management also lend to the vulnerability of the fishing environment, livelihoods of fishers and overall food security, especially in conflict situations. Some conflicts arising from competition for access to resources, whose resolution often involve government and police enforcement, seem to remain in the realm of traditional securitization paradigm. The study suggests some fisheries management options and explores alternative interventions including innovations on communication strategies and consensus building, to avert conflicts typical in overfished areas in SEA.

1. Introduction

Southeast Asia is home to 8.5 per cent of the global population. Like other regions, it has its own share of conflicts and a number of security issues ranging from military-related threats, economic underdevelopment, environmental degradation, transnational crime and others. One area where many of these security-related issues intersect and feed into each other is in the fisheries sector. This paper explores the security issues that emerge in the study of conflicts in fisheries arising from overcapacity or excess ability of fleets of fishing vessels to catch fish. It also identifies the areas where these issues are most prominent.

To begin with, it is useful to review the concept of security and the extent to which this has been reconceptualized to reflect the security issues found in many parts of the globe. In the process, we shall locate the kinds of security issues pertaining to conflicts arising from overcapacity in the fisheries in SEA .

The concept of security is a contested one. Traditionally, security has been defined to refer to military threats to the state and the approaches to respond to these threats include deterrence and power balancing. States’ actions were predicated on the assumption that the international

* Updated version of the paper presented at the 2nd Regional Plenary Meeting of Ford Grantees: Ford Foundation Project on Non-Traditional Security in Asia, 3-4 December 2004, Meritus Mandarin Hotel, Singapore.

system was anarchic and that they had to compete to survive.¹ However, many security scholars have contested this narrow definition as lacking in scope and depth and having ignored economic, societal, political and environmental concerns.² This had consequently led to a number of studies that had argued for a widening of the security agenda to include among others, political, economic and ecological security concerns³

The redefinition of security also extended the security referent beyond the state to include individuals and societies. Hence, the nature of security threats is informed by the varying security perceptions of states and societies. In this regard, some of the core questions that arise in analyzing security, or the lack of it—insecurity, include: (1) who/what is made insecure; (2) what core values are threatened; (3) what types of threats are we facing and what is the nature of the problem; (4) how do we manage insecurity and what is the associated cost; and (5) how do we attain security.⁴

In the fishery sector, threats and conflicts arise from the worsening scarcity of resources and competition for declining opportunities in this sector. The scenario is most gloomy for the economically marginalized groups of landless and capital-deprived fishers in SEA. The marginalization has brought about struggle for equity and assertion of rights that are most often viewed in diverging context. While some rules and regulations enacted by national governments were intended to protect the interest and provide access for subsistence fishers,⁵ reality shows that these are often violated and there is insufficient and unreliable support to subsistence fishers who assert their rights. As a consequence, conflicts arise as these subsistence fishers compete with other groups, including state authorities, who do not enforce the rules and regulations. Thus, there is “*fish fights over fish rights*”.⁶

2. Objectives

This paper aims to examine the nature of conflicts related to overcapacity and those that may pose threats to food, livelihood and environmental security in Southeast Asia (SEA). The study focused on conflicts reported in a variety of fishing environments and conditions in Southeast Asia (i.e. inland and riparian fisheries in Cambodia; and coastal fisheries in peninsular part of Asia along the Gulf of Thailand, and in the archipelagic groups of islands in central Philippines). It identifies where and when these conflicts may arise; and who among the stakeholders are involved or affected by these conflicts arising from overcapacity. The study also aims to provide plans to ameliorate these conflicts and identify the potential roles of various stakeholders in reducing conflicts and enhancing national and regional security, with emphasis on non-traditional security measures.

3. Conflicts in fisheries: TS or NTS Concern?

In a move towards a global and civil community, threats to security are broadly categorized into traditional (TS) and non-traditional (NTS) concern. TS include most state-centric national security issues but may also include some human security issues, e.g., a revolution, civil war, or foreign invasion that directly threatens the survival of a large segment of people in a country. NTS issues, e.g., environmental deterioration, uncontrolled migration, and mismanaged national economy, can also threaten the stability of the state as well as the communal values and individual rights of citizens concerned – human security.⁷

In this paper, we focus our discussion on threats to human security that arise from persistent conflicts related to overcapacity in the fisheries sector in SEA. For example, conflicts in fisheries arising from access and misuse of fishing technologies (e.g. use of dynamite) to enhance harvest or access to resource use in an overexploited fishery often result to degradation of fish habitat and the environment in general. Consequently, environmental degradation poses threat to food security and livelihoods, especially among the poor landless and capital-deprived fishers.

In most cases in SEA, environmental degradation, and fisheries in particular, do not yet fall under existential national problems.⁸ Nevertheless, the Association of Southeast Asian Nations in a 1997 meeting recognized that SEA is a single ecosystem such that impacts of environmental degradation are often localized but problems are evolving to trans-boundary dimension. For example, the problems on use of cyanide in reef fisheries, poaching of fish in neighboring foreign waters and the conflicts in the multitude uses of water resources are typical issues in most maritime environments.

4. Fishery Resources, Regulations, Fishing Capacity, Conflicts and Security Issues in Southeast Asia

The coastal zone in Southeast Asia supports 380 million people (70% of the population) as they live within 60 km of the coast. The underlying cause of this demographic trend is that tropical coasts are ecologically productive, biologically diverse and climatically and physically attractive. People from a wide variety of vocations seek out these features. Similar conditions also motivate populations in inland water bodies to cluster along the peripherals of lakes and river systems. In the Lower Mekong Basin in mainland Asia, around 60 million people inhabit the area in 2000. The attractiveness and accessibility of the coastal zone and shorelines has created its own problems. Over-population on tropical coasts in developing countries is intertwined with poverty, a situation which often forces people to search opportunistically for employment based on unsustainable practices. Regrettably, this case describes the fisheries sector in the Region.

In the midst of such problems in the Region, laws and regulations for fisheries management are nevertheless in place in Cambodia (The Cambodia Fishery Law), the Philippines (1998 Fisheries Code, RA 8550 and RA 7160) and Thailand (Fisheries Act of 1947, amended 1984). The fishery in Cambodia is predominantly inland based and is managed by the state through fishing lots and licensing. Both of these forms are more of a revenue-generating tool for the State where there is no limit to the numbers of license issued.⁹ Subsistence fishing among small-scale and family fishers is allowed throughout the year in any area not used by fishing lots and within the community fishing lots. In the Philippines, the state manages and regulates the fisheries mainly through licenses. The Local Government Code (R.A. 7160), and 1998 Fisheries Code legislated the devolved management of the fishery through integrated management councils at the local government level and re-defined fishing areas for municipal and commercial fishers. The Thai fishery is being managed through a centralized system with some function delegated down to provincial levels. Coastal aquaculture was actively promoted and become a primary growth sector in Thailand. There are also international instruments such as the UN Convention on the Law of the Sea (1982), FAO Code of Conduct for Responsible Fisheries (1996) and relevant technical guidelines, World Summit for Sustainable Development (2002), and other international 'consensus building' guidelines for managing world fisheries that are at least making progress in providing overall guidance to countries for managing fisheries, including Southeast Asia.

The management and enforcement of fisheries regulations in SEA is, however, challenged by the fact that fishing is often the only livelihood among the poor in the Region. The *de facto* open access to the resource has also resulted in too many people fishing and there is scant regard for the effects on the resource for the sake of economic survival. Studies have shown an alarming decline in fishery resources throughout the region, with biomasses down to 5-30% of the levels prior to the notable expansion of fishing capacity in 1970s.¹⁰ The extent of excess fishing in selected coastal areas in SEA is also higher than it should be, resulting in economic losses via rent dissipation.¹¹ There is excess fishing capacity in the Region and conflicts are inevitable in implementing management measure to correct fishing capacity.

In the fisheries sector, a unified perception and understanding of fishing capacity is a requisite for dealing with managing conflicts and security issues. Fishing capacity is defined by the Food and Agriculture Organization (FAO) as *the ability of the vessel or fleet of vessels to catch fish, or more technically, the maximum amount of fish over a period of time (year, season) that can be produced by a fishing fleet if fully utilized, given the biomass and age structure of the fish stock and the present state of the technology*. Thus, excess capacity is defined as the *short-term lower production because of a drop in fish stock abundance, or other market factors*. In contrast, overcapacity refers to the *long term phenomenon when the potential output under normal operating conditions is different from the maximum sustainable yield of the resource*. FAO¹² and cited by the World Bank Agriculture and Rural Development Department¹³ noted that the responses to excess capacity and overcapacity require different options. Accordingly, firms can change their production levels in response to market conditions to eliminate excess capacity, the elimination of overcapacity requires a change in the management.

We note that in any circumstances conflicts may arise due to handling of fishing capacity. Nevertheless, not all conflicts in fisheries are due to excess capacity or overcapacity, particularly those conflicts that evolved from ideological differences or inherent relationships between groups of fishers. And in many cases these conflict types may become security concerns if they ensue “fights over rights” as described earlier. The discussions that follow will deal more intently with conflicts arising from overcapacity in fisheries and the relevant fisheries management options for such conflicts. This type of conflict should be addressed in order to find means for managing overcapacity through appropriate regulation and enforcement of harvesting activities, among other means, to avoid further depletion of valuable fishery resources and considerable economic waste.¹⁴

What are the conflicts related to overcapacity in fisheries in Southeast Asia? This paper classified conflicts in fisheries into five types to facilitate analysis of exit strategies that would complement rather than complicate conflict avoidance and resolution measures.¹⁵ Table 1 shows the fisheries conflicts in countries covered by this study; namely, Cambodia, the Philippines and Thailand. They represent countries in Southeast Asia that face overcapacity problems attributed to increasing population and demand for food and livelihood in the midst of declining fishery resources. The first type of conflict is about who controls the fishery. This type is very common in inland floodplain fisheries in Cambodia and Bangladesh where lot owners or powerful political elites utilizing military or political powers prohibit the local artisan fishers from accessing the resource. Type II is about how it is controlled where either lack or excess enforcement is seen as the primary conflict. This type of conflict is profound in the coastal areas in Cambodia, Bangladesh and the Philippines.

Type III conflicts are those that concerns the relations between groups of fishery resource users. Differences in ethnic groups, religion or scale of fishing are the factors that define Type III conflicts. Examples of clashes between semi-industrial and in-shore vessels are found in

Thailand and India. In Bangladesh the conflicts are between traditional fishers and new entrants whose religious and cast backgrounds are different.

Type IV conflicts are those about the relations between fishers and non-fishers, where the latter use aquatic resources for non-fishing purposes such as farming. Type V conflict is found in all the countries where authorities involved are suspected for corruption. Other than corruption, the fundamental belief that seems to lead to weakness among institutions is the idea of profiting from exploitation of natural resources, where states strongly intervene through policies and institutional reforms.

Table 1: Review of prevailing fisheries conflicts in Cambodia, the Philippines and Thailand

Typology of Conflicts ¹⁶	Parties involved and specific conflict issue		
	Cambodia ¹⁷	Philippines ¹⁸	Thailand ¹⁹
Type I Who controls the fishery (access issues)	Large fishing lot owners, medium-scale fishers, community fishers over access rights on designated zones by type of fishery	Small-scale fishers, commercial fishers and fishery regulatory bodies over zoning of fishing grounds to delineate access by category of fishers	Large vs small-scale fishers over rights and access to designated zones by type of fishery and use of light luring and modern fishing gears by large scale fishers
Type II How are the fisheries controlled (enforcement, allocation, management)	Large fishing lot owners, medium-scale fishers, community fishers on over-enforcement by lot owners utilizing military force	Commercial fishers, small-scale fishers, and sea patrols over variable levels of patrolling and enforcement of the latter that favor commercial fishers who can afford penalties	Commercial trawlers, push netters, and regulatory agencies over lack of enforcement to control the number of fishing vessels; and limit entry and operation of destructive gears
Type III Relations between the fishery users (linguistic, religion, ethnic, scale of fishing)	Rivalry between ethnic groups	Local artisanal vs migrant commercial fishermen over access and competition on fishing zones	Rivalry between resident small-scale vs migrant large-scale anchovy fishers over legitimacy of access and destruction of gears
Type IV Relations between fishers and other users of the aquatic environment (fishing vs tourism and similar water resource-based industries)	Lowland farmers vs fishers over access and use of water and inundated forest	Fishery and sectors such as tourism, navigation/docking, sand quarrying and mariculture over varying use of aquatic resources	Rice farmers vs prawn breeders over resource use
Type V Relationship between fishers and no-fishery issues	Fishers vs law enforcement authorities over lack of proper management and poor enforcement due to weak institutional structure	Fishers vs government authorities over variable standards in management and enforcement arising from devolution of functions and overlapping institutional structures	Fishers vs government authorities over lack of proper management and enforcement

5. Conceptual Framework and Methods

The study referred to the Driver-Problem-Issue-Intervention paradigm²⁰ in order to put into context the dynamics of the variables that would potentially address the objectives of the study (Figure 1). With excess capacity as the main problem being addressed in this study, the main drivers were categorized into three groups identified as a) policies, institutions for governance and property rights; b) population increase and poverty; and c) markets and new/improved technology. The state of these variables with reference to the fisheries sector in each country was reviewed in order to identify the circumstances and the causal relations that drive the excess capacity problem in the fisheries sector in Southeast Asia in general.

Undoubtedly, the fisheries sector in Southeast Asia is characterized by the *de facto* common access to the resource, such that studies have shown the failures in policies, institutions for governance and property rights.^{21, 22} Such failures opened some opportunities for the violation of the management rules and regulations that were already in place and hence, the accumulation of capacities in excess of the desirable level. For example, a range of rules for licensing of fishing vessels at various levels were generally established in Cambodia, the Philippines and Thailand.

However, both intended and unintended circumstances limit the enforcement and compliance to licensing of vessels. Such failures provided avenues for the entry of more fishing vessels, often equipped with gears that were not prescribed in the fishery. Violations of fishing area or zones among larger vessel that operate in small-scale fishery zones are classic examples that demonstrate the causes of excess capacity. Similarly, unmanaged population increase, unemployment and poverty drive landless and capital-scarce individuals and household to the coastal and peripheries of inland water bodies where fishing is their ultimate source of meager income and food.

More recently, market conditions including changes in demand and consumer preferences created further resource conflicts in coastal and coral reef fisheries. The increasing demand for live reef fish in high-income countries is a case in point. It has encouraged additional efforts into already deteriorated reef fisheries in the Philippines. Finally, innovations that created more efficient fishing vessels, gears and equipment that likewise made fishing more cost efficient also encouraged extra capacities in most fisheries.

Figure 1 also describes the issues such as overfishing, environmental degradation and resource use and enforcements conflicts brought about by excess capacity. These issues are interrelated and attributed to the currently unsustainable fishing activities in most fisheries which are serious threats to the health of fish habitats and stocks. When the environment such as seabeds is stripped of their flora and fauna by destructive fishing practices, growth of stocks are affected. When there is less fish, the livelihood and survival of particular groups of fishers and other fishery-dependents become at stake. Scarcity drives fishers to competition and conflicts often become crucial social issues.

Finally, the conceptual framework of the study incorporates the management and policy interventions that could potentially address the issues and arrest the main problem. The interventions evaluated in this study are broadly grouped into three categories to include exit strategies; review of policies and institutions; and information, education and communication (IEC). The study focuses on the exit strategies that will mainly reduce excess capacity while at same time not compromising the opportunities for conflict reduction and resolution among stakeholders, and similarly aim for ensuring the absence of threats to security of stakeholders in the fisheries sector.

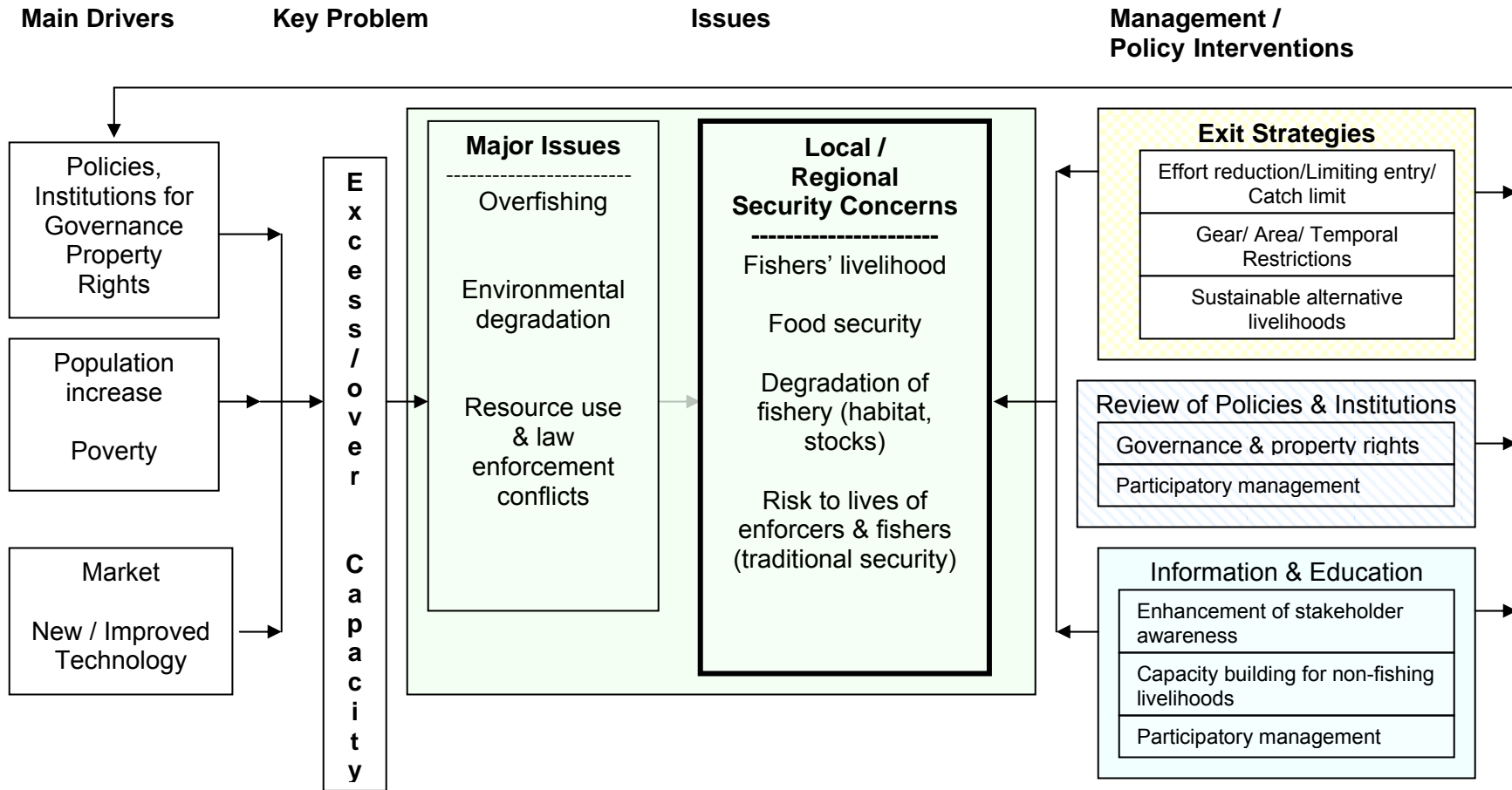


Figure 1.

Project conceptual framework and action plan for addressing excess capacity in fisheries in Southeast Asia with reference to some exit strategies as interventions that consider conflict management measures

The empirical basis of this paper mainly derives from the case studies done in eight fishing communities and from the outcomes of a series of national workshops in Cambodia, the Philippines and Thailand; and a regional consolidation workshop. The case studies in selected communities in Pursat in Tonle Sap Lake represent inland fisheries while Kandal represent riparian fisheries in the Mekong areas in Cambodia. The selected fishing community in Kampot in Cambodia, near the west Thai border, represents coastal fisheries in peninsular part of Asia along the northwest part of the Gulf of Thailand. Bo Daeng and Nathap in Songkhla in Thailand represent the fishing communities in the southernmost part of the Gulf of Thailand where there are conflicts and security concerns on encroachment of neighboring countries and *vice versa*; and ethnic and cultural diversities. The selected fishing communities in Iloilo, Negros and Cebu represent coastal fisheries in the archipelagic groups of islands in central Philippines where conflicts and security concerns are likely to arise from sharing or overlapping fishing groups between neighboring coastal or island municipalities.

The national workshops were participated by groups of stakeholders such as representatives of small and commercial scale fishers whose conflicts prevailed in all case studies and persists in the workshop discussions; fishing community authorities; village, district and provincial level government officers; policy makers; academicians; members of the military or coast guards; religious leaders; non-government organizations; local and national fishery officers in fishery management agencies; and international fisheries research organizations. Each workshop focused on the issues at the national level that may, in fact, have evolved from an aggregation of geographically separate but related provincial and municipal level experiences. A multi-stakeholder regional consultation workshop further verified the empirical findings of the study.

6. Empirical Results: Case Studies in Cambodia, the Philippines and Thailand

Table 2 presents the summary of conflicts that were gathered from case studies and workshops. All five categories of conflicts following Bennett's typology were identified and were equally prevalent in Cambodia, the Philippines and Thailand. Figure 2 shows the location of the case study sites in these countries. Conflicts about access to the fishery (Type I) comprise the contentions between small-scale vs medium/commercial fishers. The conflict is rooted on the competition for the fish that they could potentially partake had the other group of fisher not been operating in one's fishing ground. In another context, Type I conflicts also borders on propriety or ownership as raised by "local" fishers vs the other districts' fishers or foreign national fishers,

depending on the level of exclusivity as basis for argument. Clearly, property rights, its enforceability and recognition by relevant groups would determine order on access to the fishery.

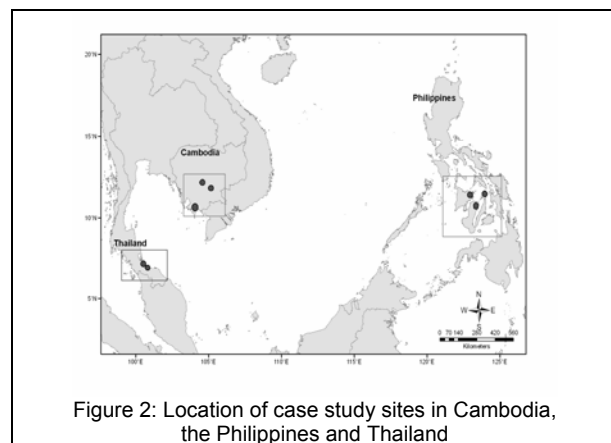


Figure 2: Location of case study sites in Cambodia, the Philippines and Thailand

Table 2. Types of conflicts, causes of conflicts and potential security concerns obtained from on-site case studies and stakeholders discussions in national workshops, June-November 2004

Type of conflict / Parties in conflict	Cause of conflicts	Nature of security concerns
<u>Type I - Who controls the fishery</u>		
Community member vs Community committee officer (Cambodia)	Selling access rights to the fishing ground including deep fishing areas	Food security of community fishery (CF) members mainly in Pursat & Kandal
Small-scale fishers vs medium-scale fishers (Cambodia)	Competition on access to resources	Fishing ground/resource security
Local fishermen vs migrant fishers (Cambodia, Philippines)	Resources use and catch competition as migrant fishers use illegal gears	Health of fishery resources as water is pumped with fish stocks
Local fishermen vs foreign national fishers (Cambodia)	Poaching in national waters Foreign fishermen use modern fishing gears	Health of fishery resources as migrants use modern gears in shallow areas including mangroves; Livelihood of local fishers as foreign fishers often have better fishing skills & gears
<u>Type II - How are the fisheries controlled</u>		
Fishers vs enforcement officers on lack of political will to enforce existing rules and regulations (Philippines)	Inefficient / lenient enforcement by local sea patrol officers	Livelihood; food security; degradation of fishing environment.
Small-scale fishers vs marine protected areas (MPA) proponents (Philippines)	Unclear policy & purpose of MPA; Fishers cannot access usual fishing areas converted to MPA	Livelihood; Food security
Commercial vs municipal fishers on encroachment of commercial fishers on fishing zones municipal zones due to weak zoning policy implementation (Philippines)	Zoning was designed not to address overcapacity problem rather to protect municipal fishers	Livelihood; threat to lives of designated local enforcement officers; degradation of environment; negative effect on the fisheries resources; social peace
<u>Type III - Relations between the fishery users</u>		
Municipal fishers use prohibited gears & methods (Philippines)	Some municipal fishers use baby trawl, danish seine, purse seine	Threat to stocks and habitat
Medium scale fishers encroach in municipal fishing zones (Philippines)	Gear & vessel of medium scale fishers are more efficient than municipal fishers; Destruction/entanglement of passive gears used by municipal fishers	Livelihood of small-scale fishers
Anchovy fishers & small-scale fishers (Thailand)	Gears & vessels of large-scale fishers are more efficient than small-scale fishers, resource depletion	Livelihood (income) of the small scale fishers; Fish production (food security)

Type of conflict / Parties in conflict	Cause of conflicts	Nature of security concerns
Push net & small-scale fisheries	Resource depletion	Environmental degradation, Livelihood (income) of the small scale fishers, Fish production (food)
Ethnic group conflicts (Cambodia, Thailand)	Competition for fishing ground	Livelihood; Food security
Type IV – Relations between fishers and other users of the aquatic environment		
Fishing lot owners vs farmers (Cambodia)	Wetland areas used for agriculture; water also used for irrigation of crops	Loss of fishing ground as they are converted for agricultural use
Fishers vs seaweed culturist	Seaweed fishermen conserve the areas from fishermen	Fishing ground – reduced fishing area
Fishers vs fish culturist (Cambodia)	Collect fingerling from wild Fish feed collection	Loss of fish stocks and potential loss of natural/wild species
Fishers vs lotus farmers (Cambodia)	Competition for fishing / fish breeding area vs farming area; Increase sedimentation	Loss of fishing area; Sedimentation
Fishers vs other users (cutting) of flooded/inundated forest (Cambodia)	Shrimp farming in wetlands Charcoal production Fuel wood gathering Construction material Farming Wetland bushes used for fish refuge Poaching wild animal	Loss of flooded forest and fish habitat
Type V – Relationship between fishing and no-fishery issues		
Fishers vs law enforcement authorities over lack of proper management and poor enforcement (Cambodia, Philippines)	Weak institutional structure; corruption; politization of policies and lack of will to enact and implement laws	Livelihoods; survival of the fishery in general; national sovereignty

Table 2 also shows that Type I conflicts tend to create threat to the overall health of the fishery resources. That is, the stakeholders believe that if Type I conflicts would not be addressed, then, the “non-owners” or outsiders who gain access to the fishery will conduct illegal and “harmful” practices to obtain maximum benefits using intensive exploitation levels. In addition, food security concerns are evaluated to be at threat when fishing community officers sell access rights or license to fishing grounds to ‘outsider’ fishers. Organized fishing communities in inland fisheries in Cambodia are intended to give access to poor household to fish at subsistence levels (for home consumption only) throughout the year. Obviously, selling the ‘rights to fish’ in the community fishing ground to outsiders will mean loss of fish, the meanest source of survival for poor household in Tonle Sap Lake.

Conflicts arising from questions on how the fishery is controlled (Type II) included those that manifest due to lack of enforcement and implementation of regulations. The lack of

clarity and purpose of regulations was listed as reasons for violations and conflicts. For example, the establishment of marine protected areas as conservation measure is a trend in the Philippines. However, the lack of well-explained purpose and effort to inform those affected created conflicts as marine protected areas (MPAs) restricted access and limited fishing grounds for most fishers. Thus, uninformed fishers perceived that the security of livelihoods and food source became at threat.

Furthermore, conflicts arising from poor enforcement of laws may pose threat to social peace and lives of designated local enforcement officers who fall victim to more powerfully armed private guards of capital-rich industrial fishers. Weak enforcement of law may also result to degradation of fishing environment as in the case of dynamite fishers in the Philippines who remain at large in spite of the illegality of the practice. Overall, Type II conflicts were reported to pose security threats to livelihoods, food, fishing environment, social peace, and human lives.

Type III conflicts are rooted on the relationship between fishery users in all three countries. These conflicts arise due to the identified categorization by scale of operations. Thus, small-scale fishers tend to be indifferent to medium and commercial scale fishers; and *vice versa*. The perceived indifferences could result to constant accusations on the misdoings of the other groups of fishers and questions the legality and appropriateness of the other parties' operations and gears. Similar situations explain the conflicts rooted on ethnic differences. Inter-national ethnicity is not reported as a source of conflict in the study sites in central Philippines. For Type III conflicts, the trend showed that livelihoods of the less equipped fishers would be at threat, and if the perception that other parties are using illegal and destructive gears is valid, then fishery habitat and stocks are under threat if conflicts are not resolved.

In view of the declining productivity and degradation of the fishing environment, other uses of the fishery resources and environments are emerging. Consequently, driven by weak property and ownership rights, other groups of resource users come in conflict with fishers. This Type IV conflict is prevalent in Cambodia as the shoreline environment with rich fertile soil for agriculture and aquaculture; and hosting a variety of forest, timber and wildlife resources attracts other forms of livelihoods from innovative near-shore dwellers. Overall, this type of conflict between fishing and non-fishing uses posed security threats to livelihoods of fishers arising from the decline in fishing ground areas and habitat for fish, particularly for juveniles and breeders that utilizes the valuable functions offered by wetlands and inundated forests. In the Philippines, where the study sites are in coastal marine areas, multiple uses also prevail but conflicts were not explicitly enumerated during the study, perhaps some forms of "ownership" and legal instruments are relatively in place such that decisions to use resources for non-fishing activities are not breeding conflict with other "non-owners". Furthermore, there is some level of success in strengthening community organizations to take part in the management and decision-making on coastal resource use in the Philippines.

Type V conflicts are rooted on the relations between fishing and other non-fishery issues and not directly using the resources but is significantly affecting the fishery. These conflicts were reported in Cambodia and in the Philippines where fishers run into conflict with law enforcers, including government fishery officers, who are expected by fishers to protect the fishers' interest as mandated by law. This breeds disrespect for the law and the law-makers and enforcers. Furthermore, politization of policies and lack of political determination would indeed be perceived as posing threats to livelihoods of the

'unfavored' fisher groups. The destructive/illegal fishing operations of the politically favored groups are perceived as threats to the survival of the fishery. Thus, overall, the lack of confidence on law enforcers is likely to breed threat to national sovereignty.

7. Fisheries Management Options

Table 3 summarizes some recommended fisheries management options and potential non-military interventions to mitigate conflicts arising from overcapacity in the fisheries and security threats in the study areas. These suggested technical solutions to the fisheries conflicts are generally in place as decided consensually among stakeholders representing various groups and levels during the national workshops. However, compliance and proper enforcement, and strong political support are the key concerns raised by the stakeholders. They also noted that these concerns originate from, but not exclusively limited to, the following issues: (1) implementation of a regulation e.g., zonation is not consistent and favors some influential groups; (2) lack of alliances or coordination among management bodies; (3) regulations are not followed because fishers are not aware of or simply do not recognize the law; (4) some regulations are not appropriate to local conditions because these are designed from the national level.

Table 3. Non-traditional security (NTS) threats and recommended management options obtained from on-site case studies and stakeholders discussions in national workshops, June-November 2004.

NTS Threats	Management Options	Policy Interventions
A. Cambodia		
Fishing livelihood	Define rights and rules system for community fisheries Implement fishery law among fishing lot owners	Information campaign
Food security of fishers and community fishery members	Annual monitoring systems to regulate fishing capacity in accordance with changing water level	
Environmental degradation	Ban use of certain gears; protect breeders in the fishing lots	
B. Philippines		
- Fishing livelihood	Limiting new entrants; review provisions on zoning; alternative livelihood options Political support in implementation of legislated regulations	Local Government Unit (LGU) Alliances (e.g., Northern Iloilo Alliance for Coastal Development (NIACDEV))
- Food security of fishers and country	Family and population planning	
Environmental degradation	Closed season; ban certain gears	Need for harmonization of laws
C. Thailand		
- Fishing livelihood	Fishing zones; promote community-based management; limitation of fishing effort (improved licensing system)	Public awareness; collecting opinions of fishers
- Food security of fishers	Promote community-based management	
- Environmental degradation	Fisheries resource rehabilitation; setting conservation area	

To overcome the above limitations arising from the implementation of fisheries management options, some policy interventions are recommended to complement such management options. These include: (1) a wider information and dissemination campaigns; (2) formation of alliances e.g., by local government units; and (3) adoption of the co-management process that will spur participation and cooperation of fishers and other stakeholders. In addition, there are challenges for clearly defining rights and rules system in Cambodia, as well as the need to harmonize laws in the context of the Philippines.

The study validated stakeholders' acknowledgement that indeed laws & regulations for fisheries management are in place in Cambodia (The Cambodia Fishery Law), the Philippines (1998 Fisheries Code, RA 8550 and RA 7160) and Thailand (Fisheries Act of 1947, amended 1984). However, review and updating is necessary as evidenced by the conflicts discussed in this paper. The workshops also recognized that international instruments such as the UN Convention on the Law of the Sea (1982), to the FAO Code of Conduct for Responsible Fisheries (1996) and relevant technical guidelines, to the more recent World Summit for Sustainable Development (2002), among other several international 'consensus building' guidelines for managing world fisheries. The workshops also noted that these instruments are at least making progress in providing overall guidance to countries for managing fisheries.

8. Conclusions and Recommendations

The "*Fish Fights over Fish Rights*" case studies and the series of workshops involving Cambodia, the Philippines and Thailand affirm the need for developing approaches and guidelines for managing conflicts arising from overcapacity and the need for NTS interventions to avert potential security threats to food, livelihood and the environment. This research has implications for all stakeholders, including policy makers, and regulatory and law enforcement agencies in national fishery government offices.

Empirical results showed that conflicts are often due to competition for access to the fisheries among various groups, either with similar economic interest or diverging use of fisheries, land and water resources. Laws and regulations for fisheries management have long been enacted in Cambodia, the Philippines and Thailand. However, review and updating is necessary as conflicts arise due to lack of or poor law enforcement and relevance. The conflicts could escalate and evolve into security concerns in the form of food security, fishing livelihoods, resource and environmental security.

However, approaches to address these concerns have differed. In Cambodia, the use of the military to handle these conflicts in the country's fishing lots still prevails. Whereas in the Philippines, deputized fish wardens in villages empowered through municipal regulations seem to operate in a less militaristic manner since they are not supposedly armed by law. However, fish wardens report violations to the municipal police office and violators are, by law, apprehended (i.e. charged with fines or imprisoned depending on the nature of violations). In southern Thailand, the military are also involved in the enforcement of fishing zone regulations. In such cases, countries in Southeast Asia, where population growth and poverty put pressure on continuously declining fishery and aquatic resources, are compelled to explore more innovative approaches to meet these non-traditional security challenges.

Given the compounded nature of security challenges confronting poor fishers, violent approaches must be averted to give way to more consultative, inclusive and cooperative approaches. These may include mechanism for implementing co-operation in the midst of conflicts and impending security threats to fishing livelihoods; food security; and fishery habitat and stocks. These mechanisms include exploring tools in conflict management such as communication planning and consensus building. These approaches could be extended or modified to incorporate social norms, such as peaceful resolution of conflict and consultation with elders in the community. Such norms had prevailed in developing countries arising mainly from the geophysical and economic constraints, i.e. archipelagic and lack of financial resources for centralized judicial and legal procedures for resolving fisheries conflicts. Future research involving cross-border conflicts in various 'fishery hot spots' in Southeast Asia that was not covered in this study should be developed. It intends to enhance the lessons from the current study and better understand the nature of conflicts in inland and coastal fishing communities in the region and craft appropriate mechanisms to manage and resolve these conflicts. Example would be a study on the up-scaled implementation of the 15-km municipal "territorial" fishing areas in the Philippines which has fundamental similarities as the implementation of the Exclusive Economic Zone (EEZ) by countries that exploit trans-boundary resources such as pelagic species (e.g. tuna).

Acknowledgement

The authors thank the research partners on the "*Fish Fights over Fish Rights*" project, namely; Inland Fisheries Research and Development Institute (IFReDI) of the Department of Fisheries, Cambodia; University of the Philippines Visayas (UPV), Philippines; Coastal Resources Institute (CORIN) of the Prince of Songkla University; and Southern Marine Fisheries Development Center (SMDEC) of the Department of Fisheries, Thailand. The Project was executed and funded by the WorldFish Center, with research grant from Ford Foundation. Dr Mely Caballero-Anthony of the Institute of Defence and Strategic Studies in Singapore; and Dr Robert S. Pomeroy of the University of Connecticut provided comments that enlightened critical issues in this version of the paper.

Notes

¹ For a comprehensive discussion on development of security studies, see Barry Buzan, Øle Waever and Jaap de Wilde (eds), *Security: A New Framework of Analysis*, (Boulder, CO: Lynne Rienner, 1998).

² L. Elliot, *Regional Environmental Security: Pursuing A Non-Traditional Approach*, in A.T.H. Tan and J.D.K. Boutin, (eds) *Non-Traditional Security Issues in Southeast Asia*, Singapore: Institute of Defence and Strategic Studies, 2001, p. 438-467.

³ See, for example, Richard Ullman, "Redefining Security", *International Security*, Vol. 8, No.1, (1983), pp. 129-153;

⁴ T. Akaha, '*Non-Traditional Security Issues in Northeast Asia and Prospects for International Cooperation*'. Paper presented at "Thinking Outside the Security Box: Non-traditional Security in Asia: Governance, Globalization, and the Environment," United Nations University Seminar, United Nations, New York, March 15, 2002. p. 1-25.

⁵ Subsistence fishers are those fishing mainly for food for household consumption and occasionally derive small income from sale of catch. They may either use artisanal fishing boats and/or gears. In contrast, industrial fishers are those operating for commercial purposes typically equipped with high-powered fishing vessels and efficient gears. Categories of fishers are almost similar in Southeast Asia, but with some variations due to a range of differentiation either according to engine power, boat tonnage or gear utilization.

⁶ What is "*fish fights over fish rights*"? Fight is defined as a combat, battle, a hostile encounter or engagement in a dispute while 'rights' is defined as a legal, equitable, or moral title or claim to the possession of property or authority, the enjoyment of privileges or immunities that which justly accrues or falls to any one. "*Fish fight over fish rights*" is about

conflicts in fisheries and the associated security threats to human survival if these conflicts are not resolved or a compromise has not been achieved.

⁷ Akaha, p.1.

⁸ Elliot, p.439, 446.

⁹ P. Degen and T. Nao, *Inland Fishery Management in Cambodia: Is the Fishing lot system the basis for improved management or should it be abolished?* Working paper for project for the management of freshwater capture fisheries of Cambodia, 1998.

¹⁰ G.T. Silvestre, L.R. Garces, I. Stobutzki, M. Ahmed, R. Valmonte-Santos, C.Z. Luna, and W. Zhou, South and Southeast Asian Coastal Fisheries: Their Status and Directions for Improved Management - Conference Synopsis and Recommendations. In: Silvestre, G., L. Garces, I. Stobutzki, M. Ahmed, R.A. Valmonte-Santos, C. Luna, L. Lachica-Aliño, P. Munro, V. Christensen, D. Pauly (eds) *Assessment, Management and Future Directions for Coastal Fisheries in Asian Countries*. WorldFish Center Conference Proceedings 67, 2003, pp. 1-40.

¹¹ A. Cruz-Trinidad, Socioeconomic and bioeconomic performance of Philippine fisheries in the recent decades. In: Silvestre, G., Garces, L., Stobutzki, I., Ahmed, M., Valmonte-Santos, R.A., Luna, C.Z., Lachica-Aliño, L., Munro, P., Christensen, V., Pauly, D. (Eds.), *Assessment, Management and Future Directions for Coastal Fisheries in Asian Countries*. WorldFish Center Conference Proceedings 67, 2003, p. 543-576.

¹² FAO, Report of the Technical Working Group on the Management of Fishing Capacity. April 15-18, La Jolla, California, USA. FAO Fisheries Report No. 586. Rome, Italy, 1988.

¹³ The World Bank Agriculture and Rural Development Department, *Saving Fish and Fishers: Toward Sustainable and Equitable Governance of the Global Fishing Sector*. Report No. 29090-GLB, 2004.

¹⁴ S. Pascoe, J.E. Kirkley and D. Gräboval and C.J. Morrison-Paul. Measuring and assessing capacity in fisheries, Vol 2. Issues and Methods. FAO Fisheries Technical Paper 433/2, 2003.

¹⁵ E. Bennett, A. Neiland, E. Anang, P. Bannerman, A. Atiq Rahman, S. Huq, S. Bhuiya, M. Day, M. Fulford-Gardiner, W. Clerveaux, Towards a better understanding of conflict management in Tropical Fisheries: Evidence from Ghana, Bangladesh and the Caribbean, *Marine Policy*, 2001, (25) p.365-376.

¹⁶ Typologies are based on Bennett *et al.*

¹⁷ Conflicts in Cambodia are as reported in K. Seng, S. Lim Song, H. Navy, N. and S. Leang, *Fish Fights over Fish Rights: Report of a Case Study of Conflicts in Inland and Coastal Fisheries in Cambodia*. A collaborative project between the WorldFish Center, Malaysia, and the Inland Fisheries Research and Development Institute-Department of Fisheries (IFReDI- DoF Cambodia); with funds from Ford Foundation, December 2004.

¹⁸ Conflicts in the Philippines are in I.M. Siason, A.J. Ferrer, and H.M. Monteclaro, *Fish Fights over Fish Rights: Report of a Case Study on Conflict over Use of Municipal Waters in the Philippines*. A collaborative project between the WorldFish Center, Malaysia, and the University of the Philippines in the Visayas (UPV); with funds from Ford Foundation, December 2004.

¹⁹ Conflicts in Thailand are reported in A. Nissapa, A. Masae, P. Khemakorn, A. Kongpro, W. Sanitmatjaro, and S. Salaemae, *Fish Fights over Fish Rights: Report of a Case Study on Conflicts between anchovy and small-scale fishers in Thailand*. A collaborative project between the WorldFish Center, Malaysia, and Southern Marine Fisheries Research and Development Center-Department of Fisheries (SMDEC-DoF Thailand) and Coastal Resources Institute-Prince of Songkhla University (CORIN-PSU); with funds from Ford Foundation, December 2004.

²⁰ This paradigm is based on the DPSIR Model adopted by the European Environment Agency. DPSIR: driving forces, pressures, states, impacts, responses, is a causal framework for describing the interactions between society and the environment – an extension of the PSR model developed by OECD.

²¹ R.S. Pomeroy and M.J. Williams, *Fisheries Co-management and small-scale fisheries: a policy brief*. ICLARM, Manila, Philippines, 1994.

²² K.K.Viswanathan, J.R. Nielsen, P. Degnbol, M. Ahmed, M.Hara, N. M. Raja Abdullah, *Fisheries Co-management Policy Brief: Findings from a Worldwide Study*, WorldFish Center Policy Brief 2, 2003, 26p.