

Property rights and rights allocation for fisheries co-management in Tam Giang Lagoon, Viet Nam

Tuyen, T.V. et al

Hue University of Agriculture and Forestry

tvuyen@yahoo.com

Abstract

Common pool resources such as lagoon fisheries are often overexploited and in decline due factors such as local poverty and unclear property rights. Overexploitation has resulted from a historically open access system. In Tam Giang Lagoon, Viet Nam, the State rights holders have developed numerous management regulations, but appropriate institutional arrangements are not in place to facilitate implementation. As a consequence, through traditional rights, resource users take opportunities to increase their access to and use of lagoon resources without taking adequate responsibility for protection. Improved management in this context requires a form of governance (such as co-management) which allows active and empowered local communities to play key roles. This type of arrangement needs to involve the allocation of resource rights so that power is shared between the government and resource users and/or their associated organisations.

This paper draws on research from the Tam Giang Lagoon about current property rights regimes and the rights practices in the coastal lagoon areas, to highlight the need for developing fisheries associations and supporting rights allocation. This paper also outlines the processes that were used to implement co-management of fisheries resources in the lagoon area of Vinh Giang Commune, which included initiatives on the allocation of fishing rights to fisheries associations. This was the first application in Viet Nam where fishing rights were allocated to user organisations. This application of rights facilitated the formalisation of a collective/communal property rights regime over fisheries resources and enabled the operation of fisheries co-management between the local government and fisheries associations. The piloting of co-management in the lagoon area in Vinh Giang also put into place appropriate institutional arrangements which increased control over resource exploitation.

Keywords: Common pool resources, fishery co-management, fisheries association, property rights, fishing rights allocation

1 Introduction

Tam Giang – Cau Hai Lagoon system is the largest lagoon of its type in Southeast Asia and covers an area of 22,000ha over a length of nearly 70km along the coast of Central Viet Nam. The lagoon system plays a significant role in the life of coastal communities and the socio-economic development of the whole province of Thua Thien Hue. Thirty-three communes and towns in five districts are located on the coast of the lagoon. On average, each commune has: seven villages; 1,600 households; and a population of 7,650. Of the seven villages, typically one to three are dependent on fishing while the others are dependent on farming activities.

According to the province statistical year book (PCTTH 2007), 17.6% of households located around the lagoon are dependent on fishing for their main source of income. However, non-fishing dependent households also participate in fishing activities, which can be a significant

source of household income. For example, in 2006, 18.9% of what are classed as non-fishing dependent lagoon households had their highest income from fisheries sector (PCTTH 2007). The households around the lagoon which are dependent on lagoon resources all engage in either small scale fishing and/or aquaculture activities. These households can be grouped by the fishing gear types they use, i.e. fixed gear fishing (e.g. stake trap and bottom nets), mobile gear fishing (i.e. gill net and Chinese lu), and aquaculture.

The Tam Giang – Cau Hai Lagoon (hereafter Tam Giang Lagoon) has historically been an open access system (in terms of resource user rights), which has led to the lagoon's resource becoming overexploited and depleted, as resource users compete to increase access and use of resources. Addressing the prevailing problems of the lagoon requires an appropriate and clear property rights regime that: facilitates a better resource management mechanism; improves control over lagoon use; and maintains the livelihoods of the traditional fishing groups. In response, the International Development Research Centre (IDRC - Canada) supported to implement the project 'Common Pool Resource Management in Central Viet Nam' (2008-2011). The purpose of the project is to carry out an analysis of property rights in the lagoon which could then be considered as a basis for fishing rights allocation for development of community-based co-management. This paper contributes to a better understanding of property rights practices and management in dense and diverse, coastal/lagoon areas. This paper also provides guidelines on the allocation of fishing rights to fishers' organisations for the development of community-based co-management.

2 Resource management and formulation of the property rights over the lagoon resources.

Prior to 1975, fishing in Tam Giang Lagoon was managed by local authorities through a system of regulations, bids and various taxes. The villages (lagoon communities) would be invited to bid for the management of lagoon resources. The rights to access the lagoon and undertake fishing were, therefore, administered by villages. The villages then organised bids to allocate rights for using the water surface to fish to households, groups of families or *Van* - groups of fishers. The bid winners had the right to set up fixed gear (fish corrals and bottom nets) in the allocated area and had the right to transfer the fishing gear (together with the right of setting up fishing gear) to following generations.

Under this system small scale mobile fishing households did not have to pay tax because it was impossible to collect tax as they did not have a stationary fishing area or residence. Moreover, some of the lagoon area could not be used for fishing as it was used for public purposes, such as for waterways or for traffic (Nguyen Quang Trung Tien 1995; Ton That Phap 2000). It was usually agreed by *Van* members and fishers in the community that allocated fishing areas would be changed annually by drawing lots for the right to choose a fishing area and by relocating the fish corrals. This was the reason why traditionally fishers in the lagoon did not have fixed, long-term fishing grounds (Ton That Phap 2000). In practice, while fixed gear fishers held property rights to an allocated area, the rights were ruled by the fishing community.

During the collectivisation period (1975-1989) (after the American War ended and Viet Nam became reunited), natural resources became the people's property as promulgated by the Government. This property rights regime had been in place in the Northern Viet Nam since 1954. For the Tam Giang Lagoon, the 'co-operativisation' movement meant the reorganisation of existing fishing practices. Local authorities organised the registration of fishing activities and established fishery teams or groups (similar to agricultural cooperatives). During this period, the lagoon was administered by the fishery cooperatives. Principles for equal use of the water surface and lagoon resources and a resource use tax were applied. The tax levied on fixed gear was considered a legal acknowledgement of property rights. The fishers who did not register for fishing and who did not pay tax were likely to lose their property rights if conflicts arose among fishers.

Under the instructions and supervision of local authorities, fishery cooperatives reallocated fishing locations annually by drawing lots and re-arranging fish corrals. If there was no conflict among members, and no new members were admitted, then location rearrangement was conducted every two or three years to reduce the costs. The acceptance of new members was based on the availability of water surface area. If water surface area was available, a meeting of all fish corral owners was organised (although, in practice, only key fishers were invited) to allocate the fishing area for new members and to make decisions on other related issues. The meeting outputs were reported to the commune authority by the cooperative and then approved by the district authority. The district authority would then, approve a list of new members to be taxed (Truong Van Tuyen and Brzeski 1998).

After 1986, when Viet Nam applied market-oriented management mechanisms, lagoon resource use rights became complicated through the privatisation of lagoon resources for aquaculture. During this period, provincial and local policies which promoted aquaculture, conflicted with the traditional views on lagoon resource property rights – i.e. ‘land is private property and fishery ground is common property – and allowed many households to occupy water surface in order to privatise the occupied area.

Some common types of occupation were to build ponds or set up net enclosures for aquaculture. The occupied areas were regulated by local authorities through approved aquaculture development plans or issuance of land use certificates. This process resulted in some common property becoming private.

3 Property rights regimes, rights practice and legitimacy – Tam Giang Lagoon

In Viet Nam, the State holds the rights to all resources (including property), while citizens, organisations and companies can only be granted the right to use an allocated resource. According to the Article 164 of the 2005 *Civil Code of the Socialist Republic of Viet Nam* (Civil Code), when one is allocated property, one is given the right to possess, use and dispose of it. According to Article 192 of the Civil Code, the right to ‘use’ property includes the rights of exploitation and earning income and yield from it.

Table 1 provides an analysis of the property rights associated with main resource use activities in the Tam Giang Lagoon, including analysis of rights formation and legitimacy. Each of the property rights regimes are discussed in more detail in the following sections.

Table 1: A summary of property rights regimes in Tam Giang Lagoon

Resource use activity	Main property rights regime operated	Base for the rights formulation	Legitimacy or legal status of the rights
Fixed gear fishing (i.e. stake trap)	- Open access as available space - (limited) communal/group property over specific fishing location	Customary practices, self-management groups supported by local authority	Low level of legitimacy as rights recognised by communities and local (commune) authorities through approval of zoning plan
Mobile gear fishing (i.e. gill nets and Chinese traps/lu)	Open access	Customary practices “lagoon is a common property”	Very low level of legitimacy as rights recognised by the community only

Navigation and waterways	Communal and public property	Planned by provincial and local authorities	High level of legitimacy as approved by respective local governments
Aquaculture in net-enclosure areas	Private property	Customary practices on fixed gear fishing and farming	Illegal practice. Rights recognised by communities and orally approved by commune government but against provincial regulations
Aquaculture in earth pond area	Private property	Customary farming practice and zoning plan for aquaculture	Full legitimacy – with official land use certificate.

(Source: CPRMP 2008)

3.1 Open access rights regime

In terms of lagoon resources, an open access rights regime is created through the absence of defined property rights, leaving people free to access and use the resources. This type of rights regime fits in with traditional thoughts and customs which regard fishing grounds as common property. By this way of thinking, every household has the right to access the lagoon to fish or collect resources. However, open access cannot be practiced by all fishers/households. For example, while mobile fishing households are free to choose fishing grounds, gears and fish species following the rule of 'first come, first serve', fixed gear fishing households are restricted in choosing favourable fishing locations as the open access areas are occupied by other fixed gear fishers. This competition and premium on space has lead to fixed gears fishing households forming groups to claim exclusive rights to an area, which are then recognised by commune authorities. Within these groups, access to fishing grounds is discussed and agreed upon by group members who then decide the amount of fixed fishing gear to be used in that area.

The establishment of specific property rights has reduced the amount of open access area which can be used by mobile fishing households. The decline in open access areas has impacted the livelihoods of these mobile fishing households and some of them have started looking for alternative livelihoods, while others have adapted their fishing practices to increase the resource access and effectiveness. For example, the recent adoption of Chinese *Lu*, a type of mobile net-iron-frame trap, has enabled mobile fishers to fish 'everywhere', i.e. areas that they could not previously access.

3.2 Communal/collective property rights

Communal/collective property rights refer to the property rights shared by the members of a community or group, mainly fixed gear fishing groups, such as professional groups, villages, cooperatives, and fisheries associations. Communal/collective property rights are established and maintained through customary practices and receive oral recognition from local authorities, which means that their legitimacy is very low. Until very recently, fishing rights were not officially granted to any partnerships, such as communities, organisations or fishers. In practice however, local authorities auctioned the rights to communities (villages) and/or groups without official allocation.

Fixed gear owners share and maintain the rights to access, set up fixed fishing gear (stake traps, fish corrals) and fish in specified locations of the lagoon. The fixed fishing gear is usually arranged in rows for monitoring and rotation. Fixed gear owners register their occupation and number of fishing gear with the commune government in order to pay tax.

In some cases communal/collective property rights can generate collective actions/activities – such as community based resource management – which bring common benefits for communities or groups. Monitoring, surveillance and prevention of destructive fishing activities are all organised by these community based groups themselves. The groups that undertake these activities are popularly called self-management groups. Authorised by the commune authority, these groups control access and use of the lagoon in order to generate the group benefits. In practice, the local government provides support to strengthen the collective actions/activities and thus collective rights.

While communal /collective property rights are still in the early stages of development, early application of these rights has proved effective. For example, granting rights to a fishing group to undertake restrictive fishing practices in an area, stops others from having undue access to that area and also prevents destructive fishing activities. Further, the control of pond water supply by certain aquaculture self-management groups has helped reduce pollution of waterways and subsequent disease spread. Box 1 outlines the types of holders of communal/collective property rights in Vinh Giang Commune.

Box 1: Holders of communal/collective property rights in the lagoon area of Vinh Giang Commune

- i) *Production group and village:* The Production Group of Giang Xuan was established in 1975 and is in charge of managing the fishing activities of the community. In 1997, the group became one of the administrative units for the village of Nghi Xuan in Vinh Giang Commune. Nghi Xuan is administrated by the village leader. The village authority manages the lagoon resources within its boundaries and the use of lagoon by households. The rules on fishing activities are set up by village authorities and recognised by the Commune People's Committee (CPC). It is required that all households involved in fishing in the lagoon area comply with the rules for managing fishing activities.
- ii) *The cooperatives of Vinh Giang:* After 1975, two agricultural¹ cooperatives were established in Vinh Giang (namely Giang Dong and Giang Nam cooperatives). The cooperatives were in charge of organising and managing fish corrals. Upon the growth of shrimp farming, a third cooperative was established to organise the households participating in shrimp culture and to provide fisheries services, such as market information and feed supply. Since 2004, due to the failure of shrimp farming, the cooperative has ceased to play an active role in household-scale production. The three cooperatives were merged into one to form the Integrated Cooperative of Vinh Giang, which took charge of the management of both agriculture and aquaculture activities. The cooperative is responsible for: 1) provision of agriculture services (i.e. fertilizers, pesticides, irrigation services; 2) development of agriculture and aquaculture plans; and 3) collection of aquaculture fees.
- iii) *Group of fish corral owners:* This fixed gear fishing group was formed by fish corral owners themselves to protect their fishing locations. The group and its fixed gear fishing locations were recognised by the Commune People's Committee, who allocated rights to manage and use the lagoon's water surface to the group and its members. Though this allocation did not provide full legitimacy, the practice created a basis for establishing the collective property rights regime currently being used by fixed gear fishing groups. As part of being allocated the rights, it was agreed by group members that unplanned fixed fishing gear (i.e. fish corrals) would not be set up and spaces for waterways would remain unoccupied. Through this rights regime, individuals and groups contribute to the management and protection of resources by stopping internal

¹ It was common that households practiced both fishing and farming at the same time and therefore agricultural cooperatives covered both activities

violations and preventing external intrusion.

- iv) *Nghi Xuan Fisheries Associations*: The Nghi Xuan Fisheries Associations were established under the *Decision No. 34/QD* (dated 12/12/2008) of the Provincial Fisheries Association of Thua Thien Hue (HUEFIS). HUEFIS is a social-professional organisation which has 110 members and three sub-associations – aquaculture, stake traps, and mobile fishing gears. As stated in Article 5 and Article 136 of *Decision No. 4260/2005 QD-UBND* (dated 19 December 2005) of the Provincial People's Committee of TT Hue, the Nghi Xuan Fisheries Associations have been delegated to hold fishing rights.

(Source: CPRMP 2008)

3.3 Public property rights

Areas in Tam Giang Lagoon which are used for public benefit, such as waterways, waterway transport areas and public service areas, have been designated as public property and public property rights have been given to local authorities (at varying levels) and government departments (such as the Department of Agriculture and Rural Development, the Department of Natural Resources and the Department of Environment and Transportation). Any area in the lagoon which remains unallocated is also considered to be public property. The commune government directly manages these areas and can use them to raise government funds by organising bids for resource use, or leasing the area out to individuals/groups under short-term contracts (one to three years). Box 2 outlines the holders of lagoon public property rights in Vinh Giang Commune.

Box 2: Holders of public property rights in the lagoon area of Vinh Giang Commune

- i) *The district Department of Agriculture and Rural Development of Phu Loc* (district DARD): The district DARD is the agency that is responsible for the management of aquaculture planning and fishing in the district. Article 52 of the *Fisheries Law* (2003) states that the People's Committee at different levels is responsible for state management of fisheries. According to Article 13 of the *Decision No. 4260/2005* of the Provincial People's Committee (PPC) of TT Hue, the District People's Committee (DPC) is authorised to allocate rights for fishing management to fishery organisations. To assist the DPC in allocation of these rights, the district DARD has been assigned as adviser to the DPC for defining the approach for rights allocation, as guided by the PPC.
- ii) *The district Department of Natural Resources and Environment of Phu Loc* (district DONRE): The district DONRE was established in 2003 with a mandate of land administration, and represents the DPC in issuing certificates of land use and water surface use. Concerning the allocation of rights of water surface management in Vinh Giang Commune, the district DONRE acts as a counsellor to DPC in allocating fishing rights to the Giang Xuan Fisheries Association.
- iii) *The Communes People's Committee of Vinh Giang*: The Vinh Giang CPC is the agency responsible for administrative management and resource management at the commune level. The Vinh Giang CPC takes the leading role in making plans for aquaculture and fishing, and provides support to VGFA such as legal, resource and security (aids for surveillance control), and support in plan development and implementation.

(Source: CPRMP 2008)

3.4 Private property rights

Private property rights are the exclusive right of a household or individual to an area in or around the lagoon. In Tam Giang, private property rights have been given for three main types of activities: agriculture; fishing/aquaculture in pens/enclosure areas; and aquaculture in earth ponds (refer to Box 3).

Box 3: Private property rights activities in Tam Giang Lagoon

- i) *Fishing*: The exclusive private right of fishing in Tam Giang Lagoon was established during colonial times (before 1945). These private fishing rights are associated with fixed gear fishing (e.g. fish corral and bottom nets) but are not legally recognised. They are however, historically recognised by the community, or through customary rules. By holding this right, the right holders can stop mobile fishing households from accessing their area.
- ii) *Aquaculture in pens/net-enclosures*: During the early 1990s, fish pens or net enclosures were set up in the lagoon for aquaculture purposes. This practice did not meet any legal difficulties and net enclosure owners were, in effect, able to privatise the occupied area (Truong Van Tuyen *et al.* 2006). The establishment of net enclosures allowed net enclosure owners to show their exclusive property rights, however it also narrowed the fishing area available in the lagoon for mobile fishers. In order to stop the development of net enclosures and recover the fishing grounds, the provincial government started planning intensive aquaculture areas. In 2008, while many net enclosures still belonged to private/individual property rights holders, their legitimacy had diminished.
- iii) *Aquaculture in earth ponds*: According to the Fisheries Department of Thua Thien Hue Province (2006), in 2005, aquaculture earth ponds occupied an area of 5,350ha in Tam Giang Lagoon². This shows that the lagoon area under private property right is relatively large. The private property rights given to this activity have varying levels of legitimacy. The area which is allocated with a license (Land Use Certificate or the Red Book) by the district government is fully recognised by law, whereas an area which is allocated by a commune authority has a lower level of legitimacy and cannot be accepted by law. The *Land Law* (2003) of Viet Nam states that a Red Book indicates that an owner has use rights which include the right to transfer, mortgage, rent, capitalise, give and exchange. This private ownership is granted at the household level.

4 The process of fishing rights allocation to fisheries association for community-based co-management in Tam Giang Lagoon

From the outcomes of the rights analysis in the lagoon, the IDRC supported the implementation of the project 'Common Pool Resource Management (CPRM) in Central Viet Nam' by Hue University of Agriculture and Forestry which facilitated the government allocation of fishing rights over an area of 1,000 hectares of lagoon to the Fisheries Association of Vinh Giang Commune (*Decision 942/2009* issued by the People's Committee of Phu Loc District). This can be seen as the first piloting of fishing rights allocation to a fishers' organisation in the lagoon, and in Viet Nam. The allocation formalised communal property rights and enabled the operation of fisheries co-management between the local government and the Vinh Giang Fisheries Association (VGFA).

Figure 1 highlights the involvement of linkage partners in fishing rights allocation in the Tam Giang Lagoon. The targeted rights regime established was collective rights, in which the fisheries association (FA) at the community level is the rights holder. Three levels of local

² The actual culturing area in Tam Giang Lagoon may be smaller than this as some ponds have been abandoned due to water pollution

government undertake key roles in specifying guidelines and making decisions on rights allocation. These roles are carried out particularly by DARD and DONRE. The Fisheries Association of Thua Thien Hue Province serves as a focal point for interaction with policy makers and provides legal support to the grassroots/community level fisheries association.

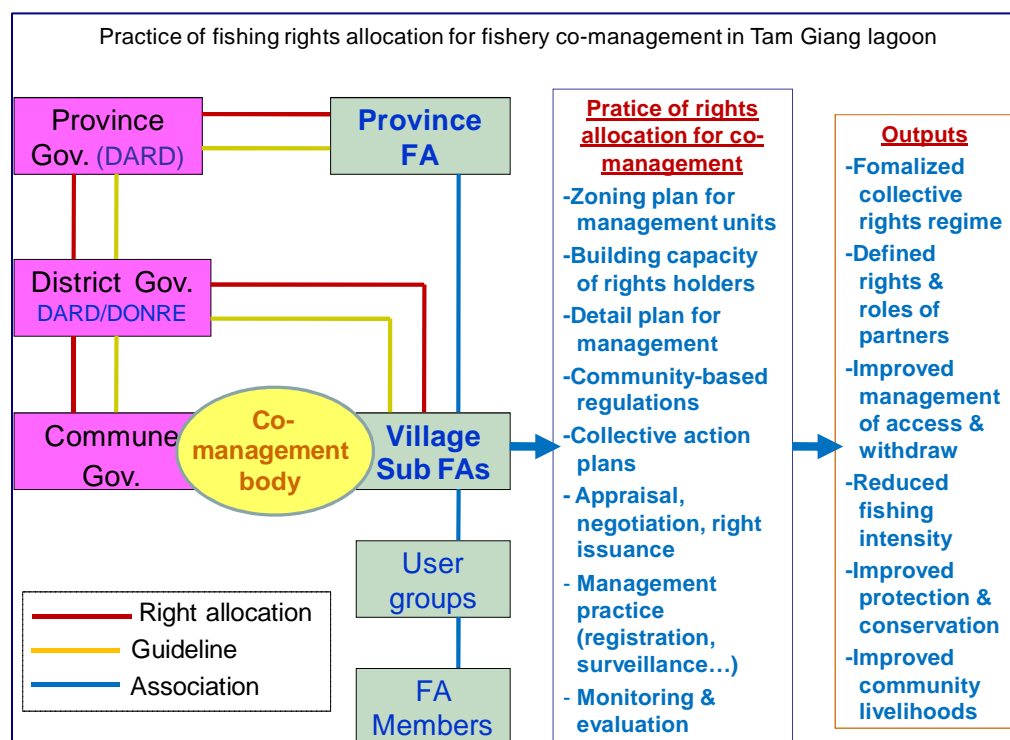


Figure 1: Partners and process of fishing rights allocation in Tam Giang Lagoon

The facilitation of fishing rights allocation in Vinh Giang Commune followed the steps outlined in the sections below.

4.1 Establishment of fisheries association and capacity building

Establishment of the VGFA and capacity building was a critical step for identifying a (collective) rights holder for fisheries resources and creating an entity capable of managing the rights. The VGFA establishment was carried out in line with the regulations on management of fisheries resources, which were promulgated under *Decision number 4260/2005* of the Thua Thien (TT) Hue People's Committee. Establishment and capacity building activities were designed to strengthen the VGFA with the followings:

- Legitimacy: FAs are recognised by law, represent fisheries communities and work as a social-professional organisation;
- Organisational structure: The fisheries community found the VGFA structure (members, sub-associations, executive board and rules/regulations) to be appropriate and felt free to join to work together in exploitation and protection of fishery resources;
- Capability to achieve objectives and conduct fisheries management activities: The activities undertaken by the VGFA include: assisting local authorities in the re-arrangement of fish corrals; organising training courses to improve VGFA members' skills to participate in community activities; encouraging members to pay membership fees; proposing plans on fisheries resource management and exploitation; developing regulations on fishing activities in sub-zones; carrying out patrols to

manage illegal fishing activities and protect resources; and raising awareness among the community (and VGFA members) about VGFA activities and resource management; and

- Capability to mobilise funds and resources for operational and resource management activities. The VGFA is self-financed to undertake operational and resource management activities.

4.2 Participatory planning for fishing and resource management

Making detailed fishing and resource management plans is essential when specifying rights allocation. Detailed plans can also be used to address the current problems associated with unplanned and/or unfeasible planning of fisheries exploitation. The detailed plans developed by the VGFA aim to: control (reduce) the fisheries exploitation capacity; maintain livelihoods for fishery communities; and define solutions for community-based resource conservation and livelihood development.

The detailed plans were made with active participation and involvement from the designated rights holders (i.e. VGFA), which is in line with current plans, such as the *Master Plan on Management of Fisheries Exploitation in Thua Thien Hue Lagoons by 2010* (promulgated under TT Hue People's Committee *Decision No. 3677* in 2004) and the *Decision No. 142/2008* of the Phu Loc DPC on adjustment of the number of fish corrals.

To strengthen the detailed plans and their feasibility, technical assistance was provided by organisations such as the Faculty of Extension and Rural Development, Hue University of Agriculture and Forestry, who provided technical support for the preparation of the fisheries management plan in Vinh Giang Commune. Table 2 shows the fishing rights allocation developed under the detailed plan for Vinh Giang Commune.

Table 2: Planning and fishing rights allocation to Giang Xuan Fisheries Association, Vinh Giang Commune

Functional sub-zone	Area (ha)	Current use status (2009)		Planning and allocation of fishing rights		
		Fish corrals	Mobile HHs	Fish corrals	Mobile HHs	Other regulations
Fish corral	543	90	47	56	47	6 rows arranged as planned by provincial master plan
Waterway	324		64	-	64	Max 80 Lu/HH
Navigation lanes	26		5	-	-	Max load of boat/ship is 10 tons.
Buffer zone (capture and aquaculture)	50		7	-	7	
Breeding ground	40		7	-	4	Fishing is forbidden from December to March (lunar year).
Seaweed	10		4	-	-	Fishing is forbidden from December to June

habitat area						(lunar year).
Total	993	90	134	56	122	

(Note: *Lu* (called Lừ Trung Quốc) is the bottom fish traps made of nets and a steel frame. One unit has a length of 8-10m and composes 15 traps: HH is household)

The Lagoon area has been divided into different functional zones for different purposes. This zoning creates a base for the development of management solutions, for example, the development of regulations or the organisation of self-managed groups. According to the detailed plan, the lagoon area in Vinh Giang Commune is divided into different sub-zones including: fixed gear fishing sub-zones (six sub-zones); waterway combined with mobile gear fishing sub-zone; lagoon traffic area sub-zone; breeding ground sub-zone; and recovery of ecology system sub-zone. The classification of zones was based on local experiences and knowledge of lagoon resources, current lagoon use and legal status. Based on the sub-zones, sub-fisheries associations (sub-FAs) were established – for example six sub-FAs for fixed gear fishing and one sub-FA for mobile fishing. It is planned that these sub-FAs will self manage their allocated lagoon area.

Planning for the management of capture capacity must meet the twin objectives of reducing capture capacity, while – at the same time – maintaining the livelihoods of the fisheries community. Defining fishing activities, the number of households involved in fishing, the scale of fishing gears, and fishing periods, were all critical steps because they have a significant bearing on local livelihoods. The detailed plans were made by conducting discussions and consultations with different stakeholders at varying levels (including fishing groups, and authorities at the village, commune and district level) in order to gain mutual agreement. In Vinh Giang, two considerations which aided in a mutual agreement being reached were:

- Number of fish corrals (*Tro*) defined for inclusion in the detailed plan was based on the number allocated to Vinh Giang by the Phu Loc DPC in the provincial master plan; and
- Number of mobile fishing households identified for inclusion in the detailed plan was based on existing number of mobile fishing households in the allocated lagoon area.

In the detailed plans the requirements relating to scale and quantity of fishing gear have either remained unchanged (the fixed gear like fish corral) or been reduced (the mobile gear like bottom traps), depending on the diversity of fishing activities of a household. For example, a fish corral owner could have a maximum of 40 units of bottom traps and 20 units of gill-nets, while a mobile fishing households (who don't have fish corrals) could have a maximum of 80 units of bottom traps and 40 units of grill-nets.

The plan on re-arrangement of fish corrals (from 90 units to 56 units) was prepared as per the requirements of the district plan on rearrangement of fish corral (2008-2010). A number of solutions to reduce the quantity of fish corrals were discussed and reviewed. However in the end, it was decided that: the reduction would be shared among six sub-FAs and the VGFA would re-arrange the fish corrals; the members of sub-FAs would work together to set up larger scale fish corrals; and the VGFA would find alternative and/or more diverse livelihood opportunities for their members. The financial support for fish corral re-arrangement would come from the provincial government programme on the fish corral re-arrangement and other sources.

4.3 Development of community-based fishing regulations and protection

The co-management 'Regulations on Fisheries Resource Exploitation and Protection in Vinh Giang' form part of a community-based system that gives a foundation for the community

and local authorities to manage the allocated lagoon area effectively. A critical requirement of this system is to set up feasible, community-based regulations that do not contradict current laws. The establishment of the regulations has showed the complexity in harmonising and balancing benefits among resource user groups, e.g. between fish corrals owners and mobile fishing groups. Therefore mutual agreement must be considered and gained as a top priority. One effective practice for achieving this is to discuss equity and benefit-sharing principles (sharing responsibility for protection of common livelihoods) among different groups with an identified aim of achieving mutual agreement. The co-management 'Regulations on Fisheries Resource Exploitation and Protection in Vinh Giang' cover the following points:

- Criteria/conditions for fishing in allocated areas including maintenance of existing fishing households and allocation of fishing rights linked together with the responsibility to manage resources by conforming to agreed rules;
- Rules on the number and type of fishing gear, based on type of fishing or household group;
- Detailed rules on fishing activities and resources management in sub-zones;
- Rules on the fishing location, time and species;
- Rules on paying fees for protection of fisheries resources and environment;
- Rules on using inputs and funds for the protection of fisheries resources and environment;
- Rules on task assignment for carrying out patrols;
- Rules on handling conflict over fisheries exploitation and/or management; and
- Rules on dealing with regulation violators.

Defining action plans is also very important because these help specify activities and/or the course of action. By preparing and implementing actions plans, the management capacity of the VGFA was improved. In Vinh Giang, action plans were developed for:

- Organising fishing registration and collecting fees for protection of fisheries resources and environment;
- Community awareness raising about co-management;
- Training on management for VGFA and other local officers and;
- Patrolling;
- Implementing regulations on fishing and resource protection;
- Producing VGFA annual financial plans;
- Producing plans for the protection of seaweed; and
- Producing plans for developing alternative livelihoods in conjunction with the re-arrangement of fish corrals.

4.4 Appraisal and allocation of fishing rights

Appraisal and allocation of fishing rights is mainly undertaken by the Peoples' Committee at the commune and district level and local government departments. Specifically the VGFA and CPC prepare proposals on the allocation of fishing rights in line with the DPC's guidelines, which the DPC use to appraise proposals and make decisions. The process applied is designed to ensure that the allocation of fishing rights to VGFA has a solid legal basis. The legality is further supported as the proposed management plans – including

zoning and regulation rules – are in line with the current master plans of district and province and other effective laws.

5 Final Remarks

An analysis of property rights shows a mixed function of property rights regimes as opposed to the seemingly clear categories often found in literature. This mixed function varies among specific activities and across points in time. The State rights holders have developed numerous regulations, but institutional arrangements are not in place to facilitate implementation. In this context, the private and collective rights holders claim opportunities to increase access and resource use, rather than taking responsibility for management.

Current property regimes in the lagoon (open access, private and communal) were formulated from customary practices and changed over time. With a low legal basis, the current property right regimes do not specify the rights of the resource users and partners involved (e.g. households, collective-groups, and even state departments). These systems do not ensure access to the resources and create difficulty in management and control of the exploitation levels. Consequently, resources are declining, which threatens community livelihoods.

Until very recently, neither fishing households nor collective partners were allocated legal fishing rights. However in practice they did assume and practice some level of management rights, though they did not have clear (legal) rights or responsibilities. It is widely recognised that appropriate fishing rights allocation coupled with the issuance of management regulations can be an effective response to the situation. The pilot fishing rights allocation to the Vinh Giang Fisheries Association in May 2009 highlighted the high interest from local stakeholders, while also highlighting the feasibility of strengthening collective property rights for community-based co-management of the coastal fisheries. The pilot co-management operation has had the following initial results:

- The plans and regulations are realistic and feasible for implementation. This was achieved by ensuring that the planning and development of regulations was done through a participatory approach, with active participation from VGFA members;
- The number of fishing households, including mobile gear fishers and the amount of fishing gear per household, has been controlled;
- Fisheries breeding grounds have been protected. These were the first conservation activities put into practice after many conservation efforts were developed but not implemented;
- Resources used for the management and fisheries association activities, such as the budget, have been improved. Revenue from fee collection has improved as fees are now based on the scale of fishing. As parts of rights allocation, in areas designated for fish breeding and conservation, the VGFA have been able to protect and sustainably harvest seaweed, which has increased the associations funds and had a follow-on effect for the Commune;
- Generally, electric fishing (i.e. the most destructive form of fishing) has been banned in the lagoon area allocated to the VGFA;
- VGFA members have gained some direct benefits, such as maintained livelihoods due to secured access to the fisheries resources. In addition, VGFA members also enjoyed other material and moral benefits by participating in VGFA activities such as VGFA meetings, annual fishing festival, and seaweed production;
- Fishing and aquaculture production has increased. Production in 2009 was recorded as being better than previous years. The implementation of co-management has

partly contributed to this improvement due to increased fishery stock and the ban on destructive fishing activities.

References

- Nguyen Quang Trung Tien 1995: *Vietnamese Fisheries in the early half of the 20th century*. The Thuan Hoa Publisher. Hue City
- Common Pool Resource Management in Central Viet Nam Project (CPRMVP) 2008: *Reports on the Field Group Discussions*. CPRMVP, Thua Thien Hue
- Fisheries Department of Thua Thien Hue Province. 2006: *Annual report on fishery development for 2005*. Fisheries Department of Thua Thien Hue Province. Hue City
- Ton That Phap 2000: Fishing in Sam Chuon, An Truyen, Thuan An area. In: Brzeski, V.J., Newkirk, G.F. (Eds.): *Lessons from the Lagoon: Research towards Community Based Coastal Resources Management in Tam Giang Lagoon Viet Nam, Coastal Resources Research Network*. Dalhousie University, Halifax, Canada.
- Truong Van Tuyen and Brzeski, V.J. 1998: *Property right issues in Tam Giang Lagoon, Viet Nam*. International Association for Study on Common Property Workshop (IASCP), Canada.
- Truong Van Tuyen, Ton That Chat, Chau Thi Tuyet Hanh, Duong Viet Tinh, Nguyen Thi Thanh, Nguyen Thi Tuyet Suong, Le Thi Nam Thuan and Ton That Phap 2006: *Participatory local planning for resource governance in the Tam Giang lagoon, Viet Nam*. In: Tyler, S.R. (Ed.): *Communities, Livelihoods and Natural Resources. Action Research and Policy Change in Asia*. The International Development Research Centre. Ottawa, Canada