

GROUP AND COMMUNITY-BASED FISHING RIGHTS

R. Willmann

Fishery Policy and Planning Division, FAO
Viale delle Terme di Caracalla, 00100 Rome, Italy
<rolf.willman@fao.org>

1. INTRODUCTION¹

This paper briefly overviews some important characteristics and features of group and, or, community-based rights in the use of fisheries resources (abbreviated as Group Rights in Fisheries – GRF). In the case of GRFs, important co-ordinating functions required for the management of fisheries are performed by groups or communities of people who have been jointly vested with, or who have jointly acquired, rights to fishing grounds or to fish-stocks. Fishing rights held by individual fishermen or sub-groups of fishermen may be nested within GRFs, but these are attenuated to a varying extent by group or community rules. GRFs are not always characterized by the same extent of exclusivity as is the case with individual transferable quotas (ITQs) either because of the group's inability to ensure and protect such exclusivity (the cost might be prohibitive to do so) or because the group willingly allows others to share in the benefits conferred by the GRFs.

While GRFs of traditional and modern designs are found throughout the world, their current global importance in the management of capture fisheries is limited, though important exceptions exist, in particular in Japan (Yamamoto and Short 1992, FAO 1993) and in several Pacific islands (see Ruddle 1994 and references therein). GRFs are more prominent in the management of inland fisheries including lakes, reservoirs and rivers (e.g. Scudder and Conelly 1985).

With the exception of some recently-established management systems where groups or organizations of fishermen hold catch-quotas, GRFs are primarily based on territorial rights to fishing grounds, fish aggregating devices, natural and artificial reefs, stretches of rivers or sections of bays and lakes. Within such exclusive territories, use rights and/or utilization rules (e.g. type of gear; time of fishing; etc.) may be further defined for specific fisheries and individual fishermen or groups of fishermen. Utilization rules may change in accordance with variability in resource availability and abundance.

The prevalence of territorial rights is likely to be due to the often extra-ordinary difficulty of defining, assigning, monitoring and enforcing rights based on catches. The costs associated with these tasks, commonly referred to as transaction costs, may often outweigh their benefits from greater productivity of resource exploitation, capture of resource-rent and conflict avoidance. In the words of Demsetz (1967), the gains of internalization of externalities may not be large enough to

surmount the costs of internalization. In fact, as long as the exploitation rate of a stock is not high, the major externality arises with crowding and excess pressure on the best fishing locations (Scott 1993). Schlager (in Scott 1993) has shown that several of the self-management groups she studied were able to prevent congestion and arrange for the rotational use of the best fishing spots (see also Berkes [1989], and Platteau and Seki [in press]). The ease and lower costs of defining fishing rights based on territoriality is one of the important arguments in favour of stationary fishing methods (another is energy savings) (Christy 2000b).

Territorial rights have obvious limitations in the management of migratory fish stocks. Where the migratory route is extensive, a GRF encompassing the full range of a stock would likely have many participants and incur high transaction costs in agreeing on management objectives, information collection, implementation and enforcement of management measures.

Scott (1993) argues that another important reason why self-management by fishermen groups is relatively rare is the difficulty of deciding (or the high cost of bargaining) on the distribution of costs and benefits. He notes that contrary to the case in fisheries, in many land-based resources, historically, the distribution of rights often happened quasi-automatically through rules like 'finders keepers' (or 'first-come, first-served'). Consequently, by resolving this major impediment the assignment of catch quotas can be a powerful incentive for self-management by fishermen groups and for accepting increasing responsibility (and cost coverage) for all or most management tasks. There is evidence that the allocation of quotas to individual fishermen or to fishermen groups have indeed encouraged self-management (e.g. Māori fisheries in New Zealand, Scottish producer organizations).

Where an ITQ-regime is imposed in a non-participatory manner on a fishery, it may however, undermine the social fabric on which the success of collective action in natural resources management largely hinges. All traditional GRFs rely significantly on so-called social capital, which comprises, *inter alia*, group or community values, behavioural norms and social networks.² Norms of trust and reciprocity lower the costs of bargaining, contracting, monitoring and enforcement (Baland and Platteau 1996, Ostrom 1990). Social networks can reduce the cost of information collection

¹ The views expressed in this paper are those of the author and do not necessarily represent the views of the Food and Agriculture Organization of the United Nations (FAO).

² Samuel Bowles (1999) argues that 'capital' refers to a thing possessed by individuals. For that reason, he dislikes the use of the term 'social capital' to describe trust, commitment to others, adhering to social norms, punishing those who violate them, etc., *i.e.* relationships among people.

and sharing and provide insurance mechanisms against the adverse effects of economic shocks (accidents, natural disasters, etc.). The role of local-level social capital is even more important under conditions where general trust in a society is low (Platteau 1994, Putnam 1993)³.

There are several issues related to the introduction of ITQs that can potentially erode the social fabric of fishing communities. Arguably, a fully participatory and transparent process of introducing ITQs, and qualifications and/or temporary restrictions on transferability, might often avoid social disruptions. A first concern is the method and criteria for the initial allocation of quotas. Historical catches and the current level of investment in the fisheries often form the basis for quota allocations. In some instances, quotas are allocated to the highest bidder. Where data on past catch performance are poor, or may be subject to manipulation, the allocation process may not only result in much litigation in the courts but also spread mistrust, envy and conflict among fishermen, fishing communities and industry. Moreover, these two criteria ignore other factors such as family size, dependency on fishing for livelihood, the requirement to care for disabled and old people, etc., that might be considered were allocation is done at the community level.

While public auctioning of quotas might guarantee a high degree of transparency in the allocation process, it could exclude many current operators from acquiring quotas because of lack of access to capital. Inadequate access to capital is especially pervasive in developing countries as the fishermen usually lack collateral assets. In fact, some people may have privileged access to capital because of extraneous reasons that could cause strong misgivings among those unable to obtain capital and successfully bid. If that were to occur, the propensity could be large among the latter to disrespect the ITQ regime. As a consequence, enforcement could become prohibitively expensive or even impossible.

A further concern is the transferability of quotas. While transferability ensures that the price-mechanism comes to bear in the management of the fishery, unconstrained quota transfers could cause profound and rapid structural changes in a fishery that could greatly disrupt the existing social and economic fabric in fishing communities and the fishing industry.

Last, at the psychological level, the individualization of fishing rights may weaken other 'regarding behaviour' such as income and knowledge sharing, and assistance to the less able and weak members of the community. The latter often perform indispensable insurance functions in poor communities of developing countries.

³ Note however, that traditional norms and social ties may not be unequivocally positive for local-level management and development. Customary rules and behaviour may discriminate against certain groups in the community and the traditional power structure may prevent fair and equitable treatment of participants in the fisheries.

2. CHARACTERISTICS AND EXAMPLES OF GRFs

Excellent analyses and case studies of the role of communities in natural resource management are provided by Baland and Platteau (1996), Proceedings of the Conference on Common Property Resource Management (1986), Ostrom (1990), Berkes (1989) and Pickerton (1989)⁴. More detailed treatments of many of the issues can be found in papers presented in these proceedings, (e.g. Christy 2000a,b, Kurien 2000, McCay 2000 and Campbell 2000).

For examples of GRFs in the countries of Asia and the Pacific, I refer the reader to the guide on traditional community-based fishery management by Ruddle (1994) and to the papers presented at the FAO/Japan Expert Consultation on the Development of Community-based Coastal Fishery Management Systems for Asia and the Pacific. Kobe, Japan, 8-12 June (FAO 1993). For examples in Africa, I refer the reader to papers listed in the annotated bibliography on community-based and traditional fisheries management in Africa by Brainerd (1991), to Weigel (1985) and to Horemans and Jallow (1997) for West Africa. For the Caribbean region, the reader is referred to the work and papers by the Caribbean Natural Resources Institute (CANARI and Panos Institute 1994) and its director, Yves Renard (e.g. 1991). As the literature is vast and growing rapidly, these references are only some of many in this field.

In recent years the International Centre for Living Aquatic Resources Management (ICLARM), the Institute for Fisheries Management (IFM) at the North Sea Centre in Hirtshals, Denmark, and local research partners have investigated the performance and outcomes of fisheries co-management arrangements in a series of Asian and African countries. A summary has been provided by Kuperan (2000) for the *Fishrights99 Conference* that also contains a list of references.

2.1 Types of GRFs

Territorial rights are at the core of most traditional fisheries management regimes. They are the principal characteristics of the Japanese fisheries management regime and are increasingly claimed by small-scale fishermen's unions and organizations in many countries around the world⁵. In India and Sri Lanka customary rights continue to exist in some lagoon fisheries. In the Philippines, the recently promulgated local government code has assigned exclusive fishing rights up to 15km from the shore to municipalities. Territorial fishing concessions, however, have already a longer history in Philippines municipal fisheries (Smith and Panayotou

⁴ An excellent source for the latest research findings and for information exchange is the International Association for the Study of Common Property:

<http://www.indiana.edu/~iascp/index.html>

⁵ The International Collective in Support of Fishworkers (ICSF), Chennai, India, is a strong advocate of assigning exclusive inshore fishing rights to coastal fishing communities, and campaigns for the better monitoring and enforcement of existing reserved inshore zones. More details on the ICSF can be obtained from its web site: <http://www.icsf.net>

1984). Recently, with the introduction of artificial reefs in some areas in Kerala, India, exclusive fishing rights around these structures are claimed by the communities or groups of fishermen who erected them (Kurien 2000). In the Philippines and Indonesia territorial rights are claimed around fish aggregating devices in tuna fisheries (FAO 1991).

In a few localities of Indonesia, traditional territorial fishing rights continue to exist and there is evidence that many more existed in the past. Here, as well as in many Pacific island fisheries, territorial rights are often derived from an extension of land rights into nearshore waters. They are more likely to occur where valuable sedentary resources in confined areas such as bays, lagoons, reefs, etc. exist and which can be easily demarcated and, or, observed.

Examples of *output-based GRFs* are found in the Netherlands, New Zealand, Philippines, Senegal, UK and USA. In the case of Netherlands and UK, producer organizations have been given the right to distribute quotas among their members. In New Zealand, Māori have been assigned both territorial and quota-based fishing rights. In the USA, community development quotas have been allocated as part of ITQ regimes. Recently in Senegal, local fishermen's organizations have introduced catch-quotas per vessel and fishing trip for high value demersal resources (Gaspart and Platteau) in some areas. An objective of similar schemes in Argentinean and US fisheries is to influence the market price.

Examples of *input-rights* or controls are found in The Gambia, India, Japan, Norway, Senegal and Sri Lanka. Rights to place anchors or to fix tidal stake-nets for the capture of shrimp in the Gambia River are assigned and regulated by local communities (Leendertse 1995). Japanese fishing cooperatives hold rights to assign fishing licences for the capture of non-sedentary coastal resources. Moreover, limits on the number of vessels and of fishing-trips and hours-fished are common management measures within the exclusive fishing territories of Japanese cooperatives. Recently trip-limits were introduced in some villages in Senegal for the canoe purse-seine fishery for small pelagic fishes (Gaspart and Platteau, in press). In the Norwegian Lofoten fishery, fisheries cooperatives undertake various regulatory functions, primarily based on input-limitations as well as technical management measures such as closed seasons and areas (Jentoft and Kristoffersen 1989). In India and Sri Lanka territorial rights in lagoons are usually complemented by input regulations concerning the type and size of the fishing gear and the time of fishing.

Mixed nested rights systems that prevail in Japanese inshore fisheries have been typical for most traditional and informal fisheries management systems. They may also comprise individual harvesting quotas which may only be transferable with the consent of the group or cooperative.

2.2 Objectives of GRFs

GRFs usually attempt to achieve a number of objectives whose relative importance depends on the particular management situation. These include:

- i. conflict avoidance and resolution: an important reason for sometimes violent conflicts between large-scale and small-scale fisheries is that no exclusive zones have been created, or when they are defined by the law, they are not enforced
- ii. fairness in access to resources and net benefits: the group or community is often better able to take into account the specific situations of individuals and families when sub-dividing rights
- iii. protection of return on investment, e.g. in the case of FADs and artificial reefs
- iv. resource conservation: this objective is not always met, partly because the knowledge about resource abundance is insufficient and partly because people cannot afford to 'save for the future'
- v. exertion of market power among more recently created GRFs, e.g. in Senegal and Argentina (This is often the primary motivation for fishermen to claim rights and introduce self-regulations.) and
- vi. capture of resource-rent: this is rarely a priority and is usually only partially achieved.

2.3 Legal status of GRFs

GRFs may exist in a number of legal forms depending on the management regime. These forms include:

- i. codification in formal law, e.g. as in Japan, Norway and elsewhere where countries have assigned exclusive inshore zones for small-scale fisheries
- ii. informal and of recent origin, e.g. in Senegal and for artificial reefs in Kerala
- iii. customary and protected under formal law, e.g. in Sri Lanka, Vanuatu, Micronesia, Kiribati and other Pacific Islands and
- iv. customary, but not codified in formal law, as is the case for most traditional GRFs.

2.4 Rights holder or authority of GRFs

As with the objectives and legal status, the identity of the stakeholder who is assigned the rights or authority to impose the rights varies depending on the particular management regime. Among the possible forms are:

- i. multi-functional fisheries cooperatives, e.g. Japan, Canada, Turkey, Senegal and USA
- ii. producer organizations (UK and Netherlands)
- iii. fishermen's organizations and guilds, e.g. Gambia, Sri Lanka (Negombo lagoon), India (Pulicat lake), Indonesia and Spain (When a resource is exploited by fishermen from several fishing communities, an organization is needed that can represent fishermen from different communities.)
- iv. local administrative units, e.g. municipalities in the Philippines – which had exclusive rights to the collection of milk-fish fry which they usually auctioned, and now have additional rights (see Section 3 above)

- v. villages, communities, *e.g.* Senegal, India and Sri Lanka (These apply primarily to local sedentary resources)
- vi. village headmen, chiefs of tribes and clans *etc.*, *e.g.* in some South Pacific islands.) and
- vii. NGOs, *e.g.* Bangladesh – in the case of some flood-plain and reservoir inland fisheries. Earlier government policy had been to auction rights which then were acquired by rich people who employed labourers or sub-leased their rights to local fishermen.

2.5 Rights defining or accompanying rules

Rights in fisheries are subject to a variety of rules. These rules determine how a rights-based management regime will function and they reflect the political, legal and social circumstances in which the rights-based regime has developed. There are many characteristics of rights regimes that affect the nature of operational rules. These include (see also Ruddle 1994):

- i. eligibility criteria for group membership, *e.g.* residence, birth, clan, tribe, caste, gender and marital status (a detailed study is that on the Pulicat Lake fisheries by Mathew 1991)
- ii. rules on transferability-rights are often not transferable or are restricted to intra-group transfer through bequest, sale, lease or marriage dowry
- iii. secondary or temporary rights for non-group members, usually in exchange for a fee or gift, *etc.*
- iv. gear rules, *e.g.* for non-permitted types or relating to their technical specifications
- v. species rules, *e.g.* reserved or taboo species
- vi. conservation rules, *e.g.* for closed seasons, buffer zones or non-fishing zones and
- vii. sharing rules, *e.g.* for fishing rotation; lotteries for participation, income/cost-sharing rules as in the Japanese pooling systems.

2.6 Means of monitoring and enforcement of rights

For a right to have meaning in a fisheries system, it must be enforceable. Enforcement is usually achieved through a system of monitoring and the prosecution and punishment of trespasses. Monitoring may be done by rights holders themselves (*e.g.* many traditional systems), specially assigned staff employed by the group or community of rights holders, or in cooperation with a government enforcement agencies (*e.g.* Japan). In traditional GRFs, little enforcement may be needed because of voluntary compliance based on mutual trust of rules. More commonly, however, rule-compliance is based on the threat of social, economic, physical and supernatural sanctions, *e.g.* shaming, ostracism, banishment, corporal and supernatural punishment, and monetary and in-kind fines (Ruddle 1994).

3. ADVANTAGES OF GROUP AND COMMUNITY-BASED RIGHTS

The advantages of GRFs derive principally from the fact that essential management functions are performed by the rights holders themselves and not by a central management authority. These functions may encompass all or several of the following:

- i. decision-making on management objectives
- ii. conflict avoidance and resolution
- iii. decisions on distribution of net benefits
- iv. monitoring of abundance with management rules and
- v. sanctioning of trespasses against management rules.

Easier and more complete access to critical information and the use of embedded social capital are the primary advantages rights holders have over a centralized management authority in performing these functions. Through their multifarious interactions and social relations, rights holders usually know much better about their individual and collective needs and preferences. For management decision-making rights holders can, through their direct participation in the fishery, draw upon their individual and collective knowledge on the location and abundance of fishery resources, observations of catches and catch rates and seasonal and annual changes, technological changes, economic returns and other information. This facilitates achieving mutually satisfactory management objectives. Better and more up to date information and less 'red tape' also engender greater flexibility and adaptability in fisheries management. Moreover, there is greater likelihood that rights holders respect and comply with management rules that were designed and agreed upon by them. The rights holders are also able to monitor each other's behaviour and detect trespasses against management rules.

It is obvious that the size of the community, or group of rights holders, has a strong bearing on the ease, or difficulty, of information sharing, collective decision-making and mutual monitoring. Where the number of rights holders is large and spread out over a wide geographical area, direct information-sharing, decision-making and monitoring by group members may become impossible. Moreover, large groups tend to undermine the incentive for each member to act in the collective interest because (a) the internalization of externalities diminishes with increasing group size, and (b), the threat of losing one's reputation - high in regular and repeated close interpersonal relationships - is less among large groups (Baland and Platteau 1995).

Where group size is large, rights holders would have to elect individuals who represent their interests in management decision-making bodies and confer information acquisition and monitoring functions to specially employed agents or rotate such functions among group members. Both types of solutions can be found in some traditional management systems (*e.g.* McKean [1986] on the management of common land in medieval Japan).

While there is wide agreement among social science researchers that successful collective action is more likely to occur in small groups (*e.g.* Olson 1965, Baland and Platteau 1996; Orstrom 1990) the influence of group heterogeneity on the outcome of collective action is less clear. By distinguishing different sources of heterogeneity (*i.e.* heterogeneity in endowments, socio-cultural characteristics or objectives) Baland and Platteau (1995) have shown that under certain conditions heterogeneity in endowments may be conducive rather than an obstacle to

successful collective action. Failures in collective action, therefore, should not be unquestionably attributed to inequalities in wealth as heterogeneity in objectives may be the real culprit.

In summary, in economic terms, the advantages of GRFs lie in the potential of lower transaction costs in the management of a fishery compared to centralized management or individual property rights (*i.e.* savings in information, monitoring and enforcement costs through the use of information held privately by fishermen and the use of social-capital embedded in local and professional organizations and institutions). Abdullah, Kuperan and Pomeroy (1998) demonstrate some evidence for lower transaction costs in fisheries co-management regimes compared to centralized management.

4. FREQUENT SHORTCOMINGS OF GROUP AND COMMUNITY-BASED RIGHTS

All or most of the shortcomings of GRFs, as evidenced from the study of traditional fisheries management regimes, derive from the fact that group rights as well as individual rights embedded in GRFs are insufficiently specified, exclusive and protected. The consequence of insufficiently specified rights (*e.g.* the GRFs do not encompass the full range of the fish stocks) is the existence of significant externalities that undermine the incentive of rights holders to seek long-term resource conservation. Similarly, GRFs not recognized in formal law and, or, inadequately protected from encroachments are under the continuous threat of new claimants that erode long-term stewardship and legitimacy.

Even where GRFs are recognized in formal law and well protected from external threats, they may fail to achieve effective fisheries management because of weak internal governance. A frequent weakness is that management rules are not able to accommodate technological progress and, or, natural population growth. This is often a direct consequence of the manner in which the entitlement to participate in the fishery is specified. Where the entitlement is based purely on membership in a household of the community (or group of rights holders), fishing power and effort may grow beyond sustainable levels with technological progress and increase in the number of households and their members. The pressure for accommodating excess fishing capacity and effort is often especially high where there is a dearth of alternative livelihoods in other sectors of the local economy. As a consequence, stocks may become over-exploited and the community (or group) is unable to capture resource rents. There are examples of traditional GRFs that have been able to devise rules to overcome these problems but they are rare in fisheries. McKean (1986), for example, reports that each household was allowed to send only one member to harvest common forestry resources in Japan (and only as much as she/he could carry) and that there were impediments to the establishment of new households in the communities. In fisheries, a common response has been to halt, or retard, technological progress but this comes at the cost of loss in efficiency. This cost may not be very high where labour costs are low and capital is

dear as is the case in many small-scale fisheries of developing countries. The loss in potential efficiency would also need to be weighed against the difficulties and costs of defining, allocating and monitoring compliance with more specific entitlements such as catch quotas. These difficulties are likely among the reasons why entitlements in terms of catch quotas have rarely been observed in traditional GRF regimes but they are of growing importance in modern rights-based management regimes.

5. DIFFICULTIES IN ESTABLISHING GROUP AND COMMUNITY-BASED RIGHTS

There are formidable difficulties to overcome in establishing group and community-based fishing rights that would usually require long and consistent efforts on the part of national and local governmental and non-governmental organizations and on the part of the communities themselves. A pre-requisite is the political will to decentralize decision-making power and fisheries management functions to the local level. In recent years, there is evidence in many countries (*e.g.* Philippines, Thailand and Malaysia) that such political will is indeed forthcoming but current fisheries law may not yet allow in all instances conferring exclusive fishing rights to communities, groups or individuals.

Efforts for the introduction of GRFs would generally benefit from the existence of prior traditional community organizations and management arrangements. Indeed, one of the first steps in any such effort would usually be to enquire and appraise in a participatory manner past and existing structures and arrangements for collective action by the community in the provision of various kinds of collective goods. Such an appraisal would indicate current strengths and weaknesses of the community in performing collective tasks and provide guidance on the kind of external support that might be required to foster successful collective action. Current weaknesses at the community level may include the absence of a viable organization or authority to hold and administer fishing rights, insufficient awareness on the need and potential benefits of improved fisheries management and large membership that necessitates the build-up of complex collective decision-making structures.

The fact that many fisheries are already heavily over-exploited and over-capitalized is a great impediment to the introduction of GRFs. Currently, while many countries have in place provisions that assign exclusive fishing rights to small-scale fisheries in inshore zones, these are hard to enforce as long as industrial fishing fleets are excessively large and dependent for economic survival on infringements of inshore waters. Thus, in many instances, the process of specifying and conferring exclusive fishing rights would likely have to go hand in hand with measures that are geared towards reducing fleet sizes and the number of participants in the fisheries. Such measures may include the cessation of economic incentives (*e.g.* subsidies, tax rebates) that enhance fishing capacity and fishing effort, the provision of incentives and direct investments to create alternative

employment opportunities for displaced fishermen, and possibly too, the provision of economic compensation for the owners of decommissioned fishing vessels.

Christy (2000a) provides a more extended discussion of the critical issues that need to be considered when endeavouring to establish a GRF (or to rejuvenate a traditional system).

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