

## **A note on research on «TURFs», sea tenure systems or marine property rights and the management of small-scale fisheries**

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An informal meeting of some of the attendants at the Montpellier Symposium on «Research and Small-Scale Fisheries» met on July 6th to discuss mutual research interests in the regulation, variously referred to as sea tenure, area rights, TURFs and marine ownership take the form of geographically defined rights or claims over marine resource areas by families, user groups, communities, kinship groups or other groups, individuals, and more recently by firms.

Recent studies have revealed the long-standing existence of area-based fishing rights in coastal and inland-water regions around the world, and their continuing importance not only in less developed countries but also in small-scale fisheries in North America and Europe. Increasingly, the arrangements are attracting keen interest among researchers concerned with the social, economic and ecological aspects of fisheries, as well as among policy-makers. This is partly due to the potential capacity of such systems to overcome the problems of open-access fishing and to generate incentives on the part of the holders of the rights to harvest efficiently and conserve and manage the resource. For these reasons, such rights systems may reduce the burden on governmental intervention, regulation and enforcement.

Available information reveals a wide variety of territorial rights systems for the management of aquatic resources. In attempting to identify the potential practical applicability of sea tenure in circumstances where it apparently does not already exist it is important to recognise that the character of the rights must be geared to the circumstances of the particular fishery and the local, social, cultural, environmental, political and economical conditions. Hence, researchers and policy-makers must be cautious about transferring experiences and conclusions from one area or fishery to another. Moreover, while sea tenure undoubtedly offers promising opportunities for improving the management of many fisheries, it is not likely to afford a feasible approach in all cases.

The institutions of area-based fisheries rights or sea tenure systems are fertile ground for multidisciplinary research, converging expertise in anthropology, economics, geography, sociology, law and political science as well as applied ecology and biological sciences.

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During the 6th July meeting, there was lively discussion among representatives of a variety of disciplines including anthropology, economics, sociology, human ecology and biology. The discussion particularly focused on four main issues relating to research and management ; i.e. concepts and terminology, methodology, implementation and institutional change. Listed below are a number of research topics, analytical dimensions and practical orientations recognised by this meeting as being of key importance for future research on sea tenure institutions and for the application of area-based rights systems in the management of small scale fisheries.

1) There is a need for a thorough examination and clarification of the content, utility and cross-disciplinary applicability of concepts and terms central to this research topic, such as «common property», «ownership», «property rights», «TURF» (Territorial Use Rights in Fisheries), «tradition», «small scale», «co-management», etc...

2) The growing literature on sea tenure systems indicates that the principle of open access to fishery resources should not be taken for granted in the approach to any specific small-scale fishery system. Rather, one should look for possible existing elements of territoriality and customary regulations, implicitly imbedded for future spontaneous formulation.

3) Since the available documentation of marine tenure systems is still fragmentary and has considerable regional biases, comparative reviews should be carried out in order to: 1) define regions in need of intensive new research (e.g. Southeast Asia), and ; 2) define regions where accumulated literature at this stage permits attempts at formulating contemporary management models built on traditional systems (e.g. the South Pacific). The question should be asked whether the regionally fragmented literature on sea tenure systems does reflect an actual lack of such systems in certain regions, or whether it reflects a lack of research and documentation effort in those same regions.

4) Research on «traditional systems of aquatic resource management» should build on the recognition that «tradition» is fundamentally dynamic : a «traditional system» is above all characterised by being non-codified and by processes of flexible adaptation to changing circumstances, while retaining firm and long-standing roots in local socio-cultural contexts.

5) Rather than to focus descriptively on detailed structural complexity, research on local area-based fishery management should concentrate on the inherent «generative dynamics» of these institutions, emphasising the processes leading to success or failure in confrontation with larger-scale political and economic systems. Such an approach has a potential for fruitful comparative investigation aiming at the actual practical issues of policy-making.

6) The need for building models necessary for practical fisheries management suggests an analytical approach where local sea tenure institutions are examined with reference to a widely contextualised «resource system»-model, depicting socio-economic and biological flows. Such an approach is a logical step further from the initial «factual accounts» that record existing institutions for posterity.

7) The politics of resource use and allocation should be investigated with a focus on the interrelationships between economic and political micro and macro-levels, with a particular emphasis on the role of the state in processes involving power over local fishery resources. It is important to recognise that virtually any contemporary small-scale fishery system is closely involved in larger-scale processes far beyond the local level, and that processes of institutional change involve micro and macro-levels in continuous interaction.

8) With reference to the possible introduction of local territory-based fishery management systems in areas without a firm traditional precedence, the politics of resource use and allocation are also a crucial importance. Since imposing territorial regulations on a fishery will always entail the exclusion of others fishermen, issues of equity, allocation and autonomy should be important considerations in any policy-making and implementation. Similarly crucial are the issues of compliance and cooperation on behalf of the local fisherfolk involved.

9) The present and future role of TURFs or sea tenure systems should be examined with reference to certain important contemporary topics such as :

- multiple use of areas by several systems of production (e.g. fishing and aquaculture) ;
- integrated coastal zone management ;
- pollution ;
- resource zones neglected by previous research (e.g. mangroves, nearshore zone exploited by women through reef gleaning) ;
- migratory fisheries and migratory fisherfolk populations.

## Interactions pêcheurs / poissons

JEAN-JACQUES ALBARET, ERIC MORIZE

Etaient présents : 2 économistes, 2 anthropologues, 1 démographe, 1 biométricien, 17 «biologistes» (se reconnaissant écologistes, halieutes ou les deux à la fois), (liste des participants en annexe).

Introduction du forum par F. LALOE qui, présentant le point de vue du statisticien, a tout d'abord évoqué les problèmes soulevés par la modélisation en dynamique des stocks exploités «classique». Il existe plusieurs types de modèles, mais en gros on peut :

1) soit considérer que les interactions entre pêcheurs et poissons ne peuvent être décrites; on considère qu'elles font partie du bruit de fond ;

2) soit essayer de les décrire, de les quantifier et de les intégrer dans les modèles qui s'en trouvent alors vite beaucoup plus compliqués.

On peut se poser au départ la question de savoir si la modélisation sert à quelque chose telle qu'elle est faite aujourd'hui. L'hypothèse qu'il y a des situations d'équilibre (modèles qui concluent ou aboutissent à un état d'équilibre) qu'on veut décrire est déjà fautive au départ. Les paramètres injectés dans les modèles changent en permanence, telles par exemple la croissance des espèces et la mortalité. Les stratégies écologiques des espèces évoluent comme la taille à la première maturité, le succès de la reproduction ou autres. On sait donc que les modèles des plus simples aux plus compliqués ne sont pas directement utilisables pour la gestion.

Bien que globalement inefficaces, voire dangereux, les modèles permettent quand même de décrire des tendances et dans la mesure où il n'existe rien d'autre, ils restent considérés comme «utiles» par certains.

Comment pourrait-on les améliorer ? Il semble intéressant d'y intégrer par exemple le comportement du pêcheur devant la dynamique de la ressource. La relation entre pêche et ressource n'est pas seulement un problème d'impact sur la ressource mais aussi un problème d'impact de la ressource sur l'activité des pêcheurs.

Divers exemples de transfert d'activité sont évoqués qui montrent que ce comportement explique certaines

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