PROPERTY RIGHTS, MANAGEMENT AND GOVERNANCE:

Crafting an Institutional Framework for Global Marin Fisheries

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### ABBREVIATIONS USED

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>CCRF</td>
<td>Code of Conduct for Responsible Fisheries</td>
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<tr>
<td>CHHPRR</td>
<td>Common Heritage of Humanity Property Rights Regime</td>
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<tr>
<td>EEZ</td>
<td>Exclusive Economic Zone</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organisation of United Nations</td>
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<td>ICES</td>
<td>International Council for the Exploration of the Seas</td>
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<td>ICFWS</td>
<td>International Conference of Fishworkers and their Supporters</td>
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<td>LOS</td>
<td>Law of the Sea</td>
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<td>PRR</td>
<td>Property Rights Regime</td>
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<td>RFMO</td>
<td>Regional Fisheries Management Organisations</td>
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<tr>
<td>UNCED</td>
<td>United Nations Conference on Environment and Development</td>
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<td>UNCSSHMS</td>
<td>United Nations Conference on Straddling Stocks and Highly Migratory Stocks</td>
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<tr>
<td>UNCLOS</td>
<td>United Nations Conference on the Law of the Sea</td>
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<td>WFF</td>
<td>World Forum of Fish Harvesters and Fishworkers</td>
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**INTRODUCTION**

Property rights, are the sanctioned relationships between human beings in their utilisation of resources. They provide a good example of an institution which Douglas North defines as “humanly devised constraints that shape interactions” and provide “a structure to everyday life” (North 1990:3).

Natural resources are materials found in nature. The word resource is from the Latin word “resurgere” which means to rise again and again. This is particularly true of renewable natural resources. Consequently, if sustainable harvesting of these resources is to be achieved, humans must peg the rate at which they consume these resources to the rate at which the resources renew themselves.1

Human beings interact with natural resources and the environment through a variety of property rights that are embedded and evolve in specific ecological, social, political, cultural and economic contexts. The primary economic function of property rights, in the words of Demsetz, “is that of guiding incentives to achieve a greater internalisation of externalities” (Demsetz, 1967:348). In this process, management and governance of the resource attain direction and purpose.

Management of a natural resource conventionally pertains to the activities of conservation, regulation and allocation. These three aspects of management relate only to the modulation of the rates of flow of resource from the ecosystem in which it exists. There is a fourth dimension of management that we wish to highlight – nurturing of the resource. Nurturing of a natural resource pertains to the concerns for the health of its stocks in the live context of the ecosystem in which it exists. This has also been referred to differently as parametric management. (Wilson and Dickie, 1995)

There is also an increasing acceptance, as well as a greater appreciation about the close interaction between successful natural resources management and the regime of property rights pertaining to them. Given other factors like technology, markets and the knowledge base, the clearer the definition of property rights, the greater will be the scope for sustainable harvest of the natural resource. Ill-defined property rights to a natural resource, more often than not, lead to a breakdown in its management.

Governance deals with the arrangements which are put in place for dealing with matters pertaining to administration, coordination and resolution of conflicts. These are inevitable components in the interplay between property rights and resource management. Governance can be centralised or distributed and overlapping across the realms and levels of property regimes.

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1 Unfortunately, for most resources this rate of renewal is lower than the bank interest rates and in many cases this is at the root of the problem of resource depletion.
The research work of numerous social scientists on the above issues have also highlighted three important caveats which must be stated for a more complete appreciation of natural resource management and property rights questions. First, while the general principles of property right regimes are applicable across contexts, the specific details of the resource as well as the related human context are critical to success in particular applications. Secondly, there is no specific rights regime that is inherently suited to any particular natural resource. Property right regimes co-evolve with human activity, but not necessarily in any set pattern. Thirdly, no single type of property rights regime can be prescribed as a remedy for problems of natural resource use and management. Often a system of overlapping regimes is imperative to address the management and governance questions at different geographic and resource scale.

Against the backdrop of these propositions, the issue of property rights over natural resources is of particular importance in Third World countries where many millions of people, often organised in small, location-specific and occupation-specific communities, depend directly on natural resources for their day to day survival. Such communities have been referred to as “ecosystem people/communities” (Dassmann, 1988) highlighting their close relationship with nature and a deep socially embedded “connectedness” to it. This makes it necessary to view these communities not merely as discrete and evolving interactions have formed exclusive and overlapping linkages, both within themselves and also between themselves and other groups, to form larger “communities”. Indeed, most developing nation states can also be viewed as the grouping together of such communities within certain defined geographic borders.

The present context of globalisation and open economy policies have resulted, among other things, in an increased level of access to, natural resources and an enhanced volume of international trade in them. One important indirect consequence of this process has been the calling into question, or the rupturing of, certain time honoured property relationships between ecosystem communities and natural resources. This has, in several countries, led to socio-ecological movements spearheaded by these ecosystem communities.

Of central concern in this study will be the primacy of “ecosystem people” of the fisheries sector – the small-scale fishworkers – whose secure future depends on the ability to re-establish a property relationships with the oceans and seas in which they seek their livelihood. Since small-scale is a relative term they exist in fisheries world over. Our stress will however be restricted to this sub-sector in the maritime states of the Third World. Here, small-scale fishworkers are those who labour at sea for a livelihood. Very often it is a hereditary occupation. They use craft and tackle which are generally operated straight from the beach. Their operations are labour and skill intensive. They are by no means socio-economically homogenous communities. But there is far greater equity in the distribution of productive assets among them when

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3 The term “Fishworker” includes all men, women and children who earn their livelihood from harvesting, processing or distribution of fish. In this study our focus will be on those who are involved in harvesting in the small-scale sector.
compared to similarly placed agrarian communities. Unlike subsistence agrarian communities, their interaction with the market is more pronounced. Given the perishability of fish, any harvest in excess of a few fish is a “surplus” that must be exchanged or bartered without delay. The role of the trader, along with the associated positive and negative aspects of this nexus, is thus more prominent in their economies.

No accurate estimates exist about their population numbers. But it is a well known fact that small-scale fishworkers account for the largest number of participants in the fish economies of these countries. In South and South-East Asia alone it is estimated that over 10 million people are employed in fisheries, over three-fourths of them being participants of the small-scale sector. Around the mid-1970s the share of the total marine harvest contributed by the small-scale sector varied from country to country. It accounted for 98 percent in Indonesia and China; 80 percent in India; 55 percent in Philippines and 30 percent in Thailand (Platteau, 1989). There have been no recent estimates, but sketchy information from country studies of the small-scale sector suggest a slight downturn in the share of the marine harvest accounted by it. There is little indication of any substantial drop in the number of participants involved.

The key focus of this study will be global marine fisheries management and governance and the property right issues surrounding it. First we will examine, in the context of the fishery resources of the world’s oceans, the three propositions enunciated above in relation to the institution of property rights and natural resource management. Secondly, we will attempt to articulate a framework of property rights that will adequately address some of the key issues of fishery management and governance at various scales of the marine ecosystem. Additionally, we shall also briefly delineate other measures that must be addressed along with the institution of property right regimes if fishery resource management and governance of the seas and oceans is to be a sustainable proposition.

The study is divided into four chapters. At the outset, in Chapter 1, we consider it appropriate to spell out our understanding of the contours of property right regimes. Chapter 2 deals with the specifics of the marine resource in an attempt to highlight its distinguishing characteristics. This is vital for prescribing appropriate property right regimes. The manner in which the property rights over ocean space, and the living resources therein, evolved over time are presented in Chapter 3. The scaffolding for crafting a menu of property rights appropriate for the management and governance of global fisheries is sketched out in Chapter 4. This is followed by some concluding reflections.

4 This is excluding China which has a large numbers of small-scale fishworkers of whom no estimate in available with us.
1
THE CONTOURS OF PROPERTY RIGHT REGIMES

By property we allude not to the thing or object of our interest (in this case natural resources) but primarily to a secure claim to a future stream of benefits arising from it. Kevin Gray points out that “property” is thus not the thing that is “owned” by someone else (Gray, 1995). By rights we imply the capacity of the claimants to the property, to call upon “the others” without such claims, to acknowledge their duty to honour the claim. Such duty may be incorporated in written law or unwritten custom. Regimes are humanly devised norms/constraints that shape and structure interactions.

We can therefore envision property rights regime (PRR) to be composed of a triadic relationship involving (a) the benefit stream from the resource (b) the claimant with rights and (c) the others who dutifully honour the rights of the claimants. Over time, socially sanctioned mechanisms – rules, regulations, norms, laws – gradually surround the triad to ensure the sustenance of the relationships. (See Figure 1) If the triad cannot be completed – usually because of the lack of “the other”, we then have a situation of “open access”. In an open access regime there exist only privilege of access and possession but no property rights.

Basically therefore, we can talk about a spectrum of property right regimes for natural resources. A “no property” or open access regime with only the privilege of possession; a state property regime; a private property regime and a common property regime. State property and private property regimes are well defined and need no further elaboration here. These are the regimes with the greatest social sanction and accompanied by the most elaborate legal framework that specifies the rights and duties of each regime. There is little confusion about what they entail.

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5 For a more formal exposition of these ideas see Bromley, 1991b
However, in the oft-quoted popular literature on natural resource management, the greatest source of confusion is with regard to the mix up between common property regimes and open access regimes. For example, the world famous piece by biologist Garret Hardin (Hardin, 1968) entitled “Tragedy of the Commons” should rightly have been titled “Tragedy of Open Access” since the triadic structure of Relationships necessary to establish property rights did not exist in the pasture described by him.  

Common property is basically private property of a group of co-owners who have both rights and duties with respect to the use rates and the management of the resource claimed by them. Baland and Platteau (1996) highlight a useful sub-categorisation. They distinguish between an unregulated common property regime, which tends towards open access and a regulated common property regime, which is akin to the private property of a group of co-owners.

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6 Using Hardin’s 1968 article, Dasgupta observes that “it would be difficult to locate another passage of comparable length and fame containing as many errors as the one above” (1982:13) However, Dasgupta himself continues to confuse between common property and open access.
In this study we introduce the concept of a “community property right regime”. One approach could be to treat this merely as a special, expanded case of the regulated common property rights regime. We however follow a different tack for two reasons.

First, the individuals who are claimants in a community property rights regime are not individuals working together collectively as individuals in any context. Rather, they are persons with a history and tradition of working together with a natural resource for survival and livelihood. Such a group of individuals make up an “ecosystem community”. Their actions and choices are contextualised in the natural societal milieu by virtue of inter-generational occupational, associational or geographic identity. They form, what Avner de-Shalit (1995) has called, the “face-to-face community”. They tend to consider the resource as a trans-generational heritage, expressed in an Asian coastal proverb as, “belonging to the dead, the living and those yet to be born” (Kurien, 1998a). This face-to-face community we shall consider to be qualified to participate in a community property rights regime at the micro-local level. This is really going to the roots of the meaning of “commons” as understood in medieval Europe to be “community property subject to community control” (Hanna, 1990)

Secondly, when we view participants in a community property rights regime from the macro-global perspective, we shift from viewing individuals working together by some instinctive feeling of belonging or membership of an association, to those striving towards, what Avner de-Shalit (ibid) calls, “moral similarity.” By this we do not necessarily imply a group with face-to-face relationships, unanimous agreement, cultural homogeneity or coercive unity. We refer instead to some values and attitudes towards moral and political questions made by conscious choice which this group values as constitutive of their collective identity. At a pan-humanity level the community property rights regime can be termed the “common heritage of humanity property rights regime”.

Property right regimes are not static. They evolve, but not necessarily along any linear trajectory. The state, communities within it, or individuals, may decide for a variety of reasons, to restructure their claims over a resource. The state may wish to hand over some of the resources to private agents. Resources in an open access regime may be claimed by the state for purposes of managing them. These may then be handed over to a small group to manage as common property or to an ecosystem community as a community property.

The group/community in turn may confer private rights – or even open access possession rights – to its individual members, within the framework of its common or community property rights regime.

The types of property right regime which evolves, or is put in place, vis-à-vis a natural resource will evidently have its impact on the state of the resource and the ecosystem in which it exists. It will also have a bearing on the economic and social dimensions of those who relate to its management and steer its governance.

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We do not rule out the possibility of individuals who are participants in a micro-local community property rights regime also having “moral similarity”. Though this is not a necessary condition, striving to achieve this will certainly strengthen the regime.
Consequently any choice of a property right regime (PRR) for resource management and governance must be evaluated against a set of meta-institutional criteria.

Some of these can be formulated as questions of the following genre: Does the PRR fit with certain innate characteristics of the natural resource to be managed? Will the PRR ensure a balance between the rate of resource flow (resource productivity) and the state of the resource stock (ecosystem productivity)? Is the PRR consonant with existing national and international law regarding the resource? Will the PRR help to balance the likely conflicts between the multiple economic and social objectives pertaining to the resource use? Will the chosen PRR optimise the costs of monitoring, information gathering, surveillance (transaction costs) of management of the resource? Can the chosen PRR menu foster societal priorities without dampening the fair spirit of individual actions? Will the chosen PRR lead to greater equity and participation among resource users?

We will pick up these threads in Chapter 4. Let’s now examine the specifics of fishery resources and also learn about the manner in which property rights evolved over ocean space. These will provide the essential groundwork for the proposals we wish to articulate in this study.
2
SPECIFICS ABOUT FISHERY RESOURCES

Marine fishery resources are very different from terrestrial resources. There are numerous characteristics about them that deserve to be explained so that some of the innate features of this resource can be understood. The nature of rights and claims that can be made over these resources are conditioned by some of these special features. The scope for management and governance are also greatly influenced by them.

The marine fishery resources of the world are located in 360 million square kilometres of aquatic milieu composed of oceans and seas which account for about three-quarter of the surface of our planet. These resources are by no means evenly distributed in this aquatic space (See Table 1).

<table>
<thead>
<tr>
<th>Zone of Ocean</th>
<th>Upto Continental Shelf end (200m depth)</th>
<th>Continental Shelf end to EEZ (320 km from shore)</th>
<th>High Seas (beyond the EEZ)</th>
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<tr>
<td>Percentage of Ocean Area</td>
<td>6</td>
<td>26</td>
<td>68</td>
</tr>
<tr>
<td>Percentage of Resource Potential</td>
<td>65</td>
<td>20</td>
<td>15</td>
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Note: These are estimates based on a review of data from: World resources Institute, 1990; Remade, 1981, Gulland, 1971

They can be divided into three zones. About 65 percent of the resource is found in just 6 percent of the aquatic terrain located between the coastline and the edge of the continental shelf\(^8\) which is generally located over a water depth of 200 meters. The aquatic zone from this depth of 200 meters until the 320 km (200 nautical mile) boundary of the national exclusive economic zones (EEZ) accounts for a little over a quarter of the ocean area and provides the habitat for about 20 percent of the resource. The remaining 15 percent of the resource is found in the vast expanse of what is termed the “high seas” which stretches outward from the EEZs and account for the remaining two-thirds of the ocean area.\(^9\) The estimated yield of fish in the oceans as a whole is about 100 to 120 million tonnes on a sustainable basis. As much as 64

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\(^8\) The submarine continuation of the land mass extending under the sea to where the sea floor begins to fall off more steeply into oceanic depths.

\(^9\) Oceanographers like Steele (1998) have pointed to the tremendous diversity of the physical and biological structure in the sea and the consequent variations in human impact on its different parts. He has in turn divided the seas into three types of environment: (1) the coastal domain (2) the open waters over the continental shelf and (3) the deep ocean. Our first zone is comprised of Steele’s first two environment types. Our second and third zones are combined in his third.
percent of this potential yield is now well within the sovereign rights of developing states (Bell, 1977:15)

With respect to global marine fisheries, issues of resource management, governance and property right regimes interact in very special ways. This is due to some simple but yet little recognised reasons. We highlight what we consider to be the three most important.

**First**, unlike most other natural resources, fish are located in a fluid milieu and are themselves fugitive and cannot be seen. They straddle across the zones indicated above and also migrate within each zone from coast to coast. One implication of this is that property rights over small areas without reference to the specific physical geography and the nature of the resource has little meaning. Also, property rights over an aquatic terrain may only amount to transient rights over all the fishery resources which pass through it. Cooperation between rights holders may therefore be a necessary condition for effective resource management. Consequently the inevitability of overlapping rights regimes merit consideration.

**Secondly**, as highlighted in Table 1, the pattern of fishery resource distribution in the vast aquatic milieu of this planet is very skewed - a substantial portion of the resource being concentrated shelf and closest to the land. It implies that management practice and the property right regimes pertaining to that part of the sea close to land merits greater attention. There are two additional dimensions to this concentration of the fishery resource in the sea nearer the shore which we need to consider.

The first dimension relates to the varying habitats of fish in the sea. There are two broad classifications for this: fish which generally move in the upper surface waters called the pelagic species and fish which generally dwell at the sea bottom called the demersal species. The pelagic species inhabit all the three zones and straddle across them. They are prone to both oceanographic fluctuations and heavy fishing pressure. The demersal species are largely distributed over the continental shelf and less prone to adverse impacts from oceanographic factors like changes in the temperature, oxygen levels and salinity. Changes in their stock levels are more sedentary demersal species are easier to establish, manage and govern.

The second dimension is a special feature of the tropical waters off developing countries. They harbour a far greater diversity of fish species. This makes for greater inter-specie interaction within the aquatic milieu. The stock of each specie are lower and they exhibit significant seasonal variations in availability. These factors provide for a strong nature-bias against harvesting technologies that are non-selective, large scale and foster a tendency for highly centralised perennial activity. These innate nature – determined factors make conflict inherent between any mix of property right regimes. The role of governance becomes imperative.

**Thirdly**, the various claimants to the resource view it in different ways. Some see it as material existing in nature waiting to be strip-mined by human ingenuity, solely for

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10 Despite this, such technologies have been adopted in tropical waters for economic reasons. Experience shows that this leads to short run increases in the resource output but tend to affect the integrity of the eco-system in the long run.
economic considerations such as maximising short run profit. To this group, resource management boils down to regulation and allocation, achieved either through market mechanisms or state fiat. Other claimants see the resource as an ever-renewing regenerative gift of nature with which humans enter into a relationship of responsibility, restraint and reciprocity in order to make a decent livelihood. To this group the nurturing aspect of resource management comes more intuitively and naturally. However, their ability to give expression to this may presently be greatly constrained by the first category of claimants who normally exercise greater power through the state and/or market.

These bio-spatial realities and socio-economic motivations behind the resource use are important constraints that condition the nature of property rights that can be established over the resource, they also have implications for the possibilities and limits of resource management and governance.

Against this backdrop, it will be worth undertaking a historical review to understand that extent of which these realities and motivations conditioned the evolution of property rights over ocean space and the resources in them.
The Evolving Rights over Ocean Space

It is inaccurate to talk about any “linear evolution” of property right regimes in the oceans. The structure, perception, and actual implementation of these rights were temporally and spatially specific. Over the centuries, it has been the changing socio-economic and political interests which determine the rights over ocean space as a medium of transport and a source of food. We shall briefly sketch this out below.

Rights Over the Ocean at Large

Evidence suggests that freedom of navigation was the norm in the Indian Ocean when flourishing maritime trade links between India and Babylon were at their zenith in 600 BC (Saigal, 1996). Some centuries later and taking a different tack, the Roman Emperor Antonius claimed (referring to the Mediterranean Sea), “I am the master of the land but the law is the master of the sea.”

Until the 14th century AD, maritime trade and travel was unhampered. No property right claims seem to have been made, by any group of traders or empire, to the open seas beyond the narrow coastal area. The colonisation efforts by the European countries commencing in the 15th century changed this scenario radically. The principal economic interest in the sea arose from the terrestrial riches to which control of the sea lanes gave access. By the end of the 15th century Spain and Portugal divided up the oceans between themselves. Spain took western Atlantic and the Pacific. Portugal claimed the South Atlantic and Indian Ocean. The partitioning of the Atlantic Ocean was sanctioned by Pope Alexander VI and concluded at the Treaty of Tordesillas in 1494 between Portugal and Spain.

Almost a century later the Dutch challenged the Spanish-Portuguese monopoly in a rather dramatic manner. A Dutch captain called Heemskirk attached a Portuguese galleon called the Santa Catarina in the Straits of Malacca. In order to defend the action, the Dutch asked Hugo Grotius a well-known juridical expert of the time to write a treatise defending the Dutch action and arguing for their right to participate in the trade in the East. As a good consultant Grotius spent time in the archives where he was inspired by the earlier prevalent rights regimes and maritime traditions in the Indian Ocean. A little book was first published anonymously in 1608 under the title “The Freedom of the Seas, or the Right which belongs to the Dutch to take part in the East Indian trade”. That it was written by Grotius was an open secret. It was however a real secret until as late as 1868 that this book was indeed a chapter of the 1604 treaties of Grotius entitled “De Jure Praedae” (On the Law of Prize). This chapter entitled “Mare Liberum” (open sea) had challenged the “Mare Clausum” (closed sea) policies of other European nations.¹¹

Grotius wrote in eloquent prose with great scholarship. He argued for the freedom of the oceans. He referred to the oceans as the property of all – *res communis* – and wrote passionately:

¹¹ The details given in this paragraph are taken from an English translation of Mare Liberum undertaken in 1916 by Ralph Van Deman Magoffin on behalf of the Carnegie Endowment for International Peace. I am grateful to Dr. M. Bavinck for providing me with this document. It is referred to as (Grotius, 1916) in this study.
The question at issue then is not one that concerns an inner sea... No! the question at issue is that outer sea, the ocean, that expanse of water which antiquity describes as the immense, the infinite, bounded only by the heavens, parent of all things; the ocean which the ancients believed was perpetually supplied with water not only by fountains, rivers, and sea but by the clouds, and by the very stars of heaven themselves; the ocean which, although surrounding this earth, the home of the human race, with the ebb and flow of its tides, can be neither seized nor inclosed (sic); nay, which rather possesses the earth than is by it possessed. (Grotius, 1916:37)

...... since the sea is just as insusceptible of physical appropriation as the air, it cannot be attached to the possession of any nation. (ibid :39)

...... is it not vastly more just that the benefits from the enjoyment of common things should be given to the entire human race rather than to one nation alone? (ibid : 47)

Such arguments and the greater naval prowess of the Dutch, and later the English, put an end to what was essentially an aberration of the traditional freedom on the high seas.

Rights Over the Coastal Sea
Contemporaneous with the conflicting claims for access to the ocean at large, there also arose claims for control over the coastal sea immediately contiguous to land. These rights were intended for the purpose of protection of merchant ships from pirates, neutrality protection, control of infectious diseases and, not the least, for fishing purposes. The basis for deciding the physical extent of this “Jurisdiction” over the coastal sea, varied from country to country. It also underwent considerable change between the fourteenth and seventeenth centuries. In Scotland it was called “land kenning” and referred to the line of sight distance that was estimated to be 14 miles. The Swedes argued for a distance out at sea capable of being covered by two days journey; Italian jurists argued for distances proportionate to the requirement of the adjoining state. By the dawn of the eighteenth century, this stretch of coastal sea came to be termed the “territorial sea.” There was a considerable shrinkage in the maximum extent to which jurisdiction was actually claimed. In concrete terms this translated to a distance between one to three miles and came to be called the “cannon-shot rule”. Another Dutch jurist Cornelius van Bynkershoek provided the maxim for this by stating:

Wherefore on the whole it seems a better rule that the control of the land (over the sea) extends as far as cannon will carry; for that is as far as we seem to have both command and possession (quoted in Scott, 1923:44)
By the middle of the 19th century the major maritime powers adopted a three-mile territorial sea but continued to retain limits beyond this for special purposes. By the early part of the twentieth century, other considerations, particularly the control over the fish stocks, contributed to raise this limit. It first rose to six and then twelve miles. The question as to whether these were claims of jurisdiction or sovereignty remained unresolved.

The North Sea Fisheries Convention of 1982, the founding of the International Council for the Exploration of the Sea (ICES) in 1902, as well as the 1911 Bering Sea Fur Seals Convention among others, contributed to convening the League of Nations Conference for the Codification of International Law in 1930.

This conference provided the first real opportunity for the developed maritime nations of the time to seriously address the question of the maximum permissible limit of the territorial sea. However, the conference failed to agree on any conventions which would establish a law for the seas. Jose-Leon Suarez of Argentina, a rapporteur of the conference, made some interesting comments which are worthy of consideration in the context of our discussion.

Suarez argued for a new jurisprudence for the oceans because the regulations of his time (of ours too?) disregarded the “Biological-geographical solidarity of the oceans”. He argued that since fish are internationalists ignorant of jurisdictional frontiers, the sea for them is a single realm. He was therefore of the opinion that all this calls for a counterpart in legal solidarity in international law. However, important developments in North and South America after this plea of Suarez put his ideas to rest.

During the early part of the 20th century the ocean attained importance as a potential source of vast mineral resources on and under the ocean floor. The United States of America quickly perceived these opportunities. In 1945 President Truman took unilateral steps to proclaim rights over resources located in the continental shelf proclaiming state property rights over them (Juda, 1975). Significantly there was no protest to this proclamation from other nations. Nevertheless, it provided the political motivation for a spate of new claims for “sovereignty” (a term avoided by the Truman Proclamation), in the subsequent decade.

In 1946 the Republic of Argentina extended its jurisdiction not only over its continental shelf but also over the fish in these waters. Chile followed in 1947 extending protection and control over a maritime zone extending 200 miles from its coastline. In 1952 the Declaration of Santiago followed. Here Chile was joined by Ecuador and Peru in proclaiming exclusive sovereignty and jurisdiction over a maritime zone of a flat 200 miles, including the fish, the subjacent soil and subsoil.

The national initiative of Washington and the initial reactions by states in South America transformed the nature of property claims over the continental shelf dislocating what had long been international space.
Towards the Law of the Sea

After World War II the UN General Assembly, sensing the potentials for anarchy over the status quo on ocean governance, instructed the International Law Commission in 1950 to prepare draft articles and convention for a law of the sea. These conventions then formed the base for discussions at the first and the second United Nations Conferences on the Law of the Sea (UNCLOS I and II) in 1958 and 1960. Two concepts which engaged the attention of states in the preparatory technical meetings as well as during the course of the discussions at UNCLOS I and II are worthy of closer examination.

The first was the concept of the “special interest” of a coastal state with regard to the maintenance of the productivity of the living resources in any area of the sea adjacent to its territorial sea. This concept represented a significant advance in the field of rationalisation of use and management of the living resources of the sea. Though the concept was first mooted by the International Law Commission in the early 1950s, it was further strengthened by the participation of coastal states in an FAO Technical Conference on the Conservation of the Living Resources of the Sea held in 1955 at Rome.

The Principal objective of conservation of the living resources of the seas is to obtain the optimum sustainable yield so as to secure a maximum supply of food and other marine products. When formulating conservation programmes, account should be taken of the special interests of the coastal state in maintaining the productivity of the resources of the high seas near its coast. (Report of the Technical Conf. : UN Doc A/conf. 10/6 p.2)

The second concept was the “preferential right” due to coastal states vis-à-vis other states in respect of allocation of fishery resources of their adjacent water under certain specified conditions. The concept of the “preferential rights” over coastal waters also had its origin in the same FAO Technical Conference. Certain Latin American states stressed the matter in the context of the allocation of jurisdiction over the sea’s living resources stating that the success of fishery resource conservation and management depends on its use as food for coastal populations:

...in determining the objectives of conservation...many social and economic factors must be taken into account. The principal task of conservation was to harmonise the interests of coastal states with those of the remaining countries. The food situation of the human populations living nearest the resource must be the first to benefit from it, since otherwise the whole programme of conservation would be doomed to failure (Doc.A/CONF.12 p 3)

12 All references to UN and FAO conference documents in this section are taken from Extavour, 1979.
It is noteworthy that the concept of optimum sustainable yield (OSY) and the importance of social factors in management were stressed at these early negotiations.

In UNCLOS I and II the special interest of coastal communities in fish as a source of livelihood and food and the need to grant such communities preferential rights to manage the territorial sea were further stressed. Philippines and Vietnam subsequently argued at UNCLOS I to the effect that this preferential right over coastal waters may be specially applied when an element of acute dependence upon such fisheries exists. This right could extend beyond the territorial sea. Their submission stated that:

if the inhabitants of a coastal state who engage in fishing do so mainly on the coasts of that State, and derive their subsistence as well as that of other inhabitants largely from such fishing, they shall have a preferential right to fish in any area of the high sea adjacent to its territorial sea...
(Doc.A/CONF/13/C.3/L.60)

The proposals of Iceland at both the UNCLOS I and II backed the position of those coastal states with overwhelming dependence on fishery resources by stating that:

where a people is overwhelmingly dependent upon its coastal fisheries for its livelihood or economic development and it becomes necessary to limit the total catch of a stock or stocks of fish......the coastal state shall have preferential rights under such limitations to the extent rendered necessary by its dependence upon the fishery

UNCLOS I in its resolution on “Special Situation Relating to Coastal Fisheries” took special note of fish as a source of livelihood and food, especially when it was undertaken by small-scale operators. The UNCLOS I noted with concern:

the situation of countries or territories whose people are overwhelmingly dependent upon coastal fisheries for their livelihood or economic development.... (as well as) the situation of countries whose coastal population depends primarily on coastal fisheries for the animal protein of its diet and whose fishing methods are mainly limited to local fishing from small boats. (UN Official Records of the UNCLOS Vol II Doc A/CONF.13/38p.144)

UNCLOS I finally adopted four international conventions (called the Geneva Conventions) covering the territorial Sea; the high sea; the continental shelf; and fishing and conservation of living resources. No agreement was obtained on the breadth of the territorial sea. UNCLOS II in 1960, for want of the required two-thirds majority voting in favour, also failed to produce any agreement on the limits of the territorial sea and the exclusive fisheries rights of coastal states.
This stalemate was followed by a spate of unilateral declarations by more Latin American and Caribbean countries expanding their sovereign rights beyond the territorial sea into what they called the “patrimonial sea”. Under this concept the main emphasis was again place on the notion of “sovereign rights” and “economic jurisdiction”

These unilateral actions were a matter of great concern to states and statesmen alike. Their sentiments were articulated best by Ambassador Arvid Pardo of Malta to the 22nd General Assembly of the United Nations in 1967. According to him,

> the oceans involve the interests of all, and all must therefore work together to establish an equitable regime beneficial to all.....only the concept of the ocean space and its resources as a common heritage of humanity can provide a satisfactory framework for an equitable international order and, at the same time, insure the preservation of the marine environment and the management of living and non-living resources in the interest of all (Pardo, 1975)

The Twenty-Fifth General Assembly of the United Nations in 1970 adopted the Declaration of Principles which described the seabed area beyond the limits of national jurisdiction as “the common heritage of mankind.” The world body then called for the third United Nations Conference on the Law of the Sea (UNCLOS III). UNCLOS III began in 1973. It concluded nine years later with two of the most far reaching concepts: the common heritage of humankind and the Exclusive Economic Zone (EEZ). Both have a bearing on ocean governance and property rights and management over living marine resources.

The UNCLOS III was by no means only a legal conference. Although it was conducted during the peak of the Cold War, the hallmark of the conference was the lack of alliances along conventionally accepted ideological postures. The United States delegation always consulted with the Soviet delegation before taking major stands on issues. Castro’s Cuba always voted with Pinochet’s Chile on matters relating to seabed minerals. India did not see much in common with the rest of the developing countries. It was nature’s resources and physical geography that formed the basis for the alliances among nations (Sanger, 1986). The conference thus became one long debate over resources, their management and the nature of property rights over them. The UNCLOS III might have more informatively been titled the United Nations Conference on the Uses, Management, Property Rights and Governance over the Ocean and its Resources.

The United Nations convention on the Law of the sea (hereinafter LOS Convention) signed at the end of UNCLOS III took twelve years (1982-94) to get sufficient number of ratifications for it to enter international law. So far it is mainly the developing countries that have ratified the Convention. Under the Convention the oceans and seas of our planet have been demarcated into a mosaic of state property right regimes – the EEZ’s. The ocean areas outside this realm – the high seas – remain a large “no property” open access regime. Though this radical rearrangement of the structure of rights in the oceans was not entirely a matter of transfer of resources from the rich to the poor, it certainly placed a very large share of the planets
resources under the control of developing countries. The largest gainer were, however, the developed countries like United State of America, France, Australia, Canada, New Zealand by virtue of their own large size or by the location of their overseas dependencies. (See Table 2)

<table>
<thead>
<tr>
<th>Country</th>
<th>Area of EEZ (in million sq.kms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>9711</td>
</tr>
<tr>
<td>Canada</td>
<td>2939</td>
</tr>
<tr>
<td>Norway</td>
<td>2025</td>
</tr>
<tr>
<td>Japan</td>
<td>3861</td>
</tr>
<tr>
<td>France</td>
<td>10263*</td>
</tr>
<tr>
<td>Senegal</td>
<td>206</td>
</tr>
<tr>
<td>Ghana</td>
<td>218</td>
</tr>
<tr>
<td>Madagascar</td>
<td>1292</td>
</tr>
<tr>
<td>South Africa</td>
<td>1553</td>
</tr>
<tr>
<td>Mexico</td>
<td>2851</td>
</tr>
<tr>
<td>Brazil</td>
<td>3168</td>
</tr>
<tr>
<td>Chile</td>
<td>2288</td>
</tr>
<tr>
<td>Peru</td>
<td>1027</td>
</tr>
<tr>
<td>China</td>
<td>1356</td>
</tr>
<tr>
<td>India</td>
<td>2015</td>
</tr>
<tr>
<td>Indonesia</td>
<td>5409</td>
</tr>
<tr>
<td>Philippines</td>
<td>1786</td>
</tr>
<tr>
<td>WORLD</td>
<td>115484</td>
</tr>
</tbody>
</table>

* includes dependencies in Pacific
Source: World Resources Institute, 1990

There was one major weakness of the Convention with regard to fisheries. It did not adequately consider the management of the living resources (pelagic species) which straddled and migrated back and forth from the open access high seas into the state property regimes (EEZs) of nation states. This issue was raised at the United Nations Conference of Environment and Development (UNCED) at Rio in 1992. A subsequent UN General Assembly passed a resolution to convene an intergovernmental conference on the issue. Consequently, a United Nations Conference on Straddling Stocks and Highly Migratory Stocks (UNCSSHMS) was convened in 1993. Unlike UNCLOS III, the UNCSSHMS witnessed a polarisation of interests, between coastal states and distant water fishing states, over the question of rights over these fishery resources.

The Conference produced a convention that in principle stressed the co-responsibility of both coastal and distant water fishing nations to ensure management of these resources. It called for the relevant fishery resources to be managed on a region by region basis by Regional Fisheries Management Organisations (RFMOs) which are
to be created by collaborating states. A precautionary approach to management was made mandatory. The convention covers over two thirds of the world’s ocean but only about 15 percent of the living resources. It can, however, claim to be an important highlight in the history of international fishery legislations. It actually provides a good model for national legislations within EEZs since several species of fish harvested by different sizes of fishing units straddle back and forth from the outer edge of the EEZ and into the coastal waters. (Kurien & Mathew, 1996)
The literature on property rights, management and governance in marine fisheries has been a subject of concern among economists for nearly half a century now. It began in the 1950s when the political discussions which we have sketched out above, among the modern nation states commenced. The debate was launched by Scott Gordon through his classic work, published in 1954 titled “The economic theory of a common-property resource: the fishery” (Gordon, 1954). The moot point of Gordon was that “the overfishing problem has its roots in the economic organisation of the industry” (ibid:128) and that this can only be solved by “methods which make them private property or public (government) property in either case subject to a unified directing power” (ibid:135)

Gordon’s suggestion regarding property rights and governance has both a general and a specific dimension to it. The general dimension of Gordon’s argument is that sound management and proper governance of the fishery can be achieved only when we move away from a “no property regime” to a “property rights” framework. The specific dimension is that sole ownership in particular and resource management and governance in general. Others (Scott, 1955 and 1989; Keen, 1983) have further developed this suggestion. The currently topical subject of introducing individual transferable quotas (ITQs) as a solution to marine resource depletion is an offshoot of this dimension and has received much attention and support (Christy, 1973; Moloney & Pearce, 1979; Scott & Neher, 1981) while remaining equally controversial (Copes, 1986).

It is against this backdrop that we venture to define an institutional framework of property rights for resource management and governance in the context of global marine fisheries. Our attempt is to take a micro-global approach to the question. We suggest a nested institutional framework for the global, national and the local levels. We situate our efforts keeping in mind Susan Hanna’s remarks that:

Institutional design for marine ecosystem management poses difficult challenges. Not the least of these is the design of management structures and processes that meet the requirement for the coordination of social objectives with ecosystems. This coordination takes place through several functions, including the definition of multiple objectives, the cost-effective coordination of organisational tasks, the establishment of socially appropriate time horizons, and the creation of legitimate and flexible processes (Hanna, 1998: 173)

Our framework is also built against the background of the three earlier chapters. Central to it are two features. First the concept of overlapping property rights regimes. Secondly, the importance of a community property right regime which

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13 Following our manner of defining property rights in this paper, Gordon also has made the error of confusing an open access regime with a common property regime. It may be appropriate to say that his theory is applicable to an unregulated common property regime.
starts from land and moves outward to sea. We start the task of developing the framework from the “macro” (global) level, then move down through the “mezzo” (national) to the “micro” (local) level.

The Macro Global Level
It is a well known fact that life on this planet owes its past, present and future existence to the Oceans. It is the ocean that unites us.

The landmasses indeed divide us. The “bio-geographical solidarity” of the oceans, its gigantic size and the nature of the living resources within it (see Chapter II) make sole ownership subject to a unified directing power difficult to achieve and inappropriate as the institutional arrangement for management and governance. It makes ecological, economic, social and political sense to subscribe to the primary principle of crafting a macro-global common heritage of humanity property right regime (CHHPRR) as the all-encompassing regime for the oceans as a whole. In reality, such a regime would be operative only over the ocean space which falls outside the realm of the Exclusive Economic Zones of nation states. However, as pointed out earlier (Chapter II) this accounts for two-thirds of ocean space though only for 15 percent of the living resources.¹⁴

The CHHPRR triad will compose of the benefit stream from the whole ocean space and its living resources at the apex. In a salient reversal of roles, the future generations are the “claimants” of property in this and the present generation form the “others” who have the onus to stand behind this claim. [See Figure 2] This reversal of roles in the proposed overarching triad is significant. Following the suggestions of Bromley, implicit in such an arrangement is an inter-temporal contracting which will ensure the continued integrity and viability of certain essential ecological processes and circumstances in the ocean ecosystem as a whole. It calls for a certain regard for the future in the form of a social bequest that is concerned about “what” rather than “how much” to leave for those who follow (Bromley, 1998). This is the only possible way to create a regime that will ensure sustainable management of the living resources of the oceans.

This regime call upon the present generation to exercise forbearance and also control the present provisioning of the ocean ecosystem and its resources until the claimant, the next generation, is able to assume control.

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¹⁴ The non-living resources of the ocean such as the metallic substances are found in great quantities in this realm. In the future, these could account for the most valuable resources from the ocean for humanity.
The fact of the matter is that there are no magic solutions to creating new international property rights regimes for management and governance. Nor is there at present any all powerful supra-state institution to enforce one. New regimes will not be formed spontaneously or by force. They need to be negotiated and crafted.

The question immediately arises as to who in the present generation should take the lead role for this? Since future generations do not vote in the political arena or the market, one is tempted to suggest that the role of traditional statesmen, politicians, international civil servants and economists in crafting the norms for this CHHPRR is indeed highly circumscribed. Also, this is certainly not a task for which a dominating role can be given to the governments and institutions of the First World. If we do, we then run the risk of the ocean resources of this planet being bequeathed by the rich to their yet-to-be-born rich grandchildren.

In our opinion, the onus of responsibility for upholding and developing the CHHPRR therefore falls squarely on the vast sections of concerned civil society in all our nation states. Those with the greatest “connectedness” with the oceans and its living resources, those numerous “face-to-face communities”, should take the leadership in this matter. The working women and men in the coastal communities world over, as “beacons of the ocean” shoulder this great responsibility. They have made a small beginning on this count by coming together globally to form the World Forum of Fish Harvesters Fishworkers (WFF). Networks such as this need to be actively and creatively supported in this task by solidarity groups and networks of concerned citizens with “moral similarity”. It will be the prime responsibility of such stakeholders of the present to bring pressure on their national governments to work together for the long term sustainability of global marine resources. Some of the provisions of UNCLOS III with respect to ocean minerals, such as the International

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15 It is at this interface that the two community property right regimes: that of the micro-local “face-to-face community” and that of the macro-global community of “moral similarity” link together.
Seabed Authority, give some insights for possible institutional arrangements. The only global institution that we have today - the United Nations – needs to be activated to assume this responsibility. Writers such as Ciriach-Wantrup and Bishop have expressed similar sentiments as early as 1975 when they state:

*....following those who believe that the high sea fisheries should be treated as the common heritage of all mankind, one might well wonder if the ultimate solution is to treat these resources as a giant commons managed as a trust by some international agency such as the United Nations.*

(Ciriacy-Wantrup & Bishop, 1975 ; 724)

Following UNCLOS III and the extension of national jurisdictions over 200 miles of ocean territory, it is the remaining two-thirds of ocean area which merits cautious management and governance. The CHHPRR proposed can be crafted to meet the requirements of the criteria spelt out be us (Chapter 1). Once the UNCSSHMS which deals with the living resources of this realm of the oceans receives sufficient ratifications by nation states, an important legal framework for management and governance will be in place. The compulsion under the Convention to form Regional Fisheries Management Organisations (RFMOs) acts as a leveller. When situated within the CHHPRR it provides the degrees of freedom for fostering concerns for economic and ecological sustainability without placing unwarranted curbs on initiatives by nation states or corporate enterprise from having access to the resources.

**The Mezzo National Level**

At the mezzo level we deal with the reality of the nation state. While we rightly talk of the global village we cannot really wish away the reality of national boundaries. In the context of the oceans we saw how these boundaries have expanded seaward over the years particularly after UNCLOS III. The promulgation of the EEZs has given nation states sovereignty over this ocean space and the resources therein. These are state property right regimes. The fishery resources of the EEZ are at the apex of the triad; the concerned nation state is the “claimant” of the resource; and all the other nation states represent the “other”, who by virtue of the rules and regulations of the LOS Convention, stand by this claim. [See Figure 3]

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16 Christopher Stone has made several other suggestions for defending global commons like the oceans. These include negotiating more and stronger multinational treaties tailored to protect the oceans and establishing a system of guardians who would be legal representatives for the oceans which in turn would obtain the legal standing of a sovereign state. In the United State for example, the National Oceanic and Atmosphere Administration is designated trustee for fish, marine mammals and their supporting ecosystems. (Stone, 1995)
As we have learnt above (Chapter 2, Table 1), this mosaic of state property rights accounts for a third of the space and a phenomenal four-fifths of the living resources within our planet’s oceans. It has been pointed out by political and legal experts (Borgese, 1995) that a closer reading of the relevant articles of the LOS Convention shows that it actually reinterprets and refines the concept of sovereignty of states over the EEZ in a variety of ways. It limits sovereignty. This is achieved by subjecting rights to the duty of conservation, the need to share and the duty to cooperate with other states on matters such as resource management, research etc. It transforms sovereignty. This is made possible by disaggregating the concept into a bundle of rights (sovereign rights; exclusive rights; jurisdiction). In our framework, situating the state property rights regime, we also transcend the concept of sovereignty by making nation states stewards and custodians of the biggest share of the common heritage. Consequently, we need to view this national sovereignty more as functional sovereignty or sovereignty for sustainable use.

To operationalise this concept will require greater regional cooperation between contiguous states to accommodate the reality of fish being “internationalists” paying scant regard to boundaries of the nation state. Given the largely unchangeable biological and ecological characteristics of marine resources, such regional cooperation between nation states and between territories within large nation states will become inevitable. Nation states need to take cognisance of this fact. Moving towards such institutional arrangements is a major challenge for coastal states and all the stakeholders of the living marine resource (Johnson, 1978). A good example in this regard is the South Pacific Fisheries Forum which is a regional fishery management institution of a group of developing South Pacific island nations.

The LOS Convention makes a state property rights regime the inevitable choice for management and governance of the EEZs. It does not necessarily lead to appropriate or sustainable management and governance. Within the EEZs, there exists the flexibility to adapt a property rights regime menu. The regime mix chosen will depend on a variety of factors that vary according to ecological, economic,
technological, social and ideological considerations. Any one of these factors or a combination of them will prevail. In New Zealand it is the private property rights regime in the form of individual transferable quotas (ITQs) to fish stocks in a specific area that dominates. In India the EEZ is divided into the territorial sea and the area outside it. The latter is under federal jurisdiction. The former area comes under the jurisdiction of each of the nine maritime states. Within these, subject to certain weakly enforced zoning regulations, it is virtually an open access regime – no quotas of any sort; only possession rights not property rights.

Can the state property rights regime for the EEZs balance the multiple, and often conflicting, economic and social objectives pertaining to living resource use? Will it optimise the transaction costs of management of the resource? Will rights regimes chosen within the EEZ lead to greater participation of resource users in management and governance? A positive answer to these questions will depend in great measure on the manner in which the property rights regime for the more resource-rich territorial sea are allocated. We will examine a proposal for this below.

The Micro Local Level
At the micro-level, which is within the larger state property right regime described above, we have a radical proposal to make. For this we draw our inspiration from the numerous struggles of coastal fishing people around the globe in their efforts to preserve the integrity of the coastal resource (ICSF, 1994). In the developing countries, for those who have been fishing traditionally or taken to it as an employment of last resort, the alternative livelihood options are likely to be few in the next decades. For example, in large countries like India where economic growth has been insufficient to absorb more people into industry, those in fishing today are likely to continue there for another generation. In countries like Indonesia and Thailand, with the bubble of the economic miracle bursting, the flow back of labour to the relatively open access marine fishery is likely to increase. In this context special lessons can be drawn from the history of coastal fishing communities in the developed maritime states of the world today. We shall consider here the case of Norway.

Norwegian coastal fishing communities who today live scattered along the fjord-filled coastline, have had a close economic, social and cultural “connectedness” to the fishery resource. In the early part of this century, they faced problems very similar to those being experienced by many Third World fishing communities today. These included economic exploitation leading to poverty; lack of employment opportunities in other sectors of the economy; competition over resources and fishing grounds with outside investors adopting more capital-intensive technology. As a response to this situation, in 1930s the coastal communities organised interlinked “face-to-face communities” with a high degree of “moral similarity.” They then made claims for the establishment of community property rights regime over coastal fishery resources for the owner-workers involved in coastal fishing (Meloe, 1997). Following this, they also fought hard to establish the right to decide the mode and the floor price of the first-sale transaction of the produce of their labour and preserved these rights from
being usurped by others. It is important to note that in their struggle they obtained the empathy and support of the public and the politicians.\textsuperscript{17}

The early Norwegian coastal fishing communities understood the close links between technology choice, environmental destruction and the structure and nature of rights. When opposing the ingress of trawlers, owned by Norwegian industrial interests, into the coastal waters of Norway during the 1930s, the coastal fishermen forwarded three interrelated reasons for doing so. Firstly, they opined that allowing trawlers into the coastal waters would exterminate the cod brood. Secondly, it would quickly lead to the overexploitation of the stocks; and thirdly, it would result in capitalists taking over the fishery (Brochmann, 1983).

Fishworkers of developing countries have opposed many fish harvesting technologies – particularly trawling introduced as part of the “modern” fisheries development programmes – on the grounds that they would harm the fish stocks and the ecosystem. Such actions have been pictured as “resistance of traditional communities to new technologies.” However, the experiences of stock collapses in many temperate water countries and the ecosystem overfishing in many tropical developing countries, vindicate the argument of both the fishing communities in the developing countries as also the arguments forwarded by the Norwegian fishing communities in 1930s. It is now clear that their opposition to indiscriminate trawling was based on their intricate and holistic understanding of the fishery resource dynamics in the context of the marine ecosystem. In the 1990s, the Canadian fishery which was faced with totally ruined cod stocks that immediately marginalized the coastal fishing communities has further exemplified this point (Finlayson, 1994).

With the compulsions of globalisation the phenomenon of capitalists taking over the coastal fishery, (the third reason forwarded by the Norwegian fishermen for opposing trawlers), is becoming an increasingly important rallying point in the struggles of coastal fishing communities in the Third world (Kurien, 1995). It must be seen as their opposition to the establishment of private property rights – the hallmark of capitalist relations – from taking root in the fishery.

The impetus for affirmative collective action by small-scale fishworkers around the world, particularly in the developing countries, must in large measure be attributed to factors endogenous and exogenous to their own communities. For one, even in their existing context; there is a far greater socio-economic equality among them compared to similarly placed communities in the agriculture setting. This makes for a quicker, more widespread and consensual perception of common opportunities and threat to their livelihood. The task of translating this awareness into collective action to address the issues has been on the rise since the early 1980s. A new organisational structure has been emerging from among their midst. In many countries these initiatives have been actively supported by social activists and other non-governmental support groups. Unlike state sponsored cooperatives, or even the more traditional communitarian institutions, this new genre of organisations are fashioned

\textsuperscript{17} Meloe (1997) quoting Ottar Brox explains that this was the beginning of a period of social democracy in Norway during which time laws as well as political and economic institutions were crafted which “made it difficult for people to live off other people’s labour.”
more along the lines of trade associations or unions primarily concerned with matters central to their occupation and livelihood. More often than not, the adversarial action mobilised by these organisations have been against their respective governments. They have demanded state intervention for protection of the marine environment from harm caused by the excessive use of certain destructive modern fishing techniques, often inappropriate for use in tropical coastal seas. Allocation of zones in the coastal sea for exclusive use by small-scale fishing units has been a complementary claim. Positive discrimination in earmarking of state development assistance for promoting their ways of fishing have been another demand.

The response of governments to these collective action initiatives of small-scale fishworkers has been mixed. As custodian of all the marine resources in the EEZs, governments are weary of upsetting the “status quo” with regard to resource appropriation norms within it. Many have tended to highlight the disruption of law and order consequent to the occasional militant show of strength by the fishworkers as unacceptable. However, the prospect of a discontented coastal population does not seem to be a proposition which governments are willing to contend with for long, irrespective of the character of state power. Conciliatory postures have therefore been the general rule. We may surmise from this that both the small-scale fishing community and governments are in the throes of a search for redefining their relationships with the marine resources and also with one another.

Against this background, and invoking the concepts of “special interests” and “preferential rights”, (See Chapter 3 above) but applying them to coastal fishing communities within a nation state, we would argue that the resources in the territorial sea or over the continental shelf upto a depth of 200m (whichever is convenient/appropriate) should be managed under a network of community property right regimes with the coastal fishworkers as the co-owners of the fishery resources being “claimants”. The “others” in the triad are all the competing fishery interests which operate in the country’s EEZ [See Figure 4]. This regime would account for the smallest share of total ocean space (5 to 6 percent) but for two-thirds of the living resources.

This proposal takes coastal fisheries, particularly of the developing countries, midway between its present “open access regime” and the now much advocated need for moving marine resources towards a regime of private property rights in the future.

The growing publicity given for conferring individual transferable quotas (ITQs) in the coastal waters is evidence of this latter trend; the unwillingness to examine the merits of a rights based fishery goes to reinforce the former. Our suggestion for a community property rights regime by definition requires co-owners to engage in community consultation and participation to seek common approval of certain actions that they may thereafter mutually agree to undertake individually. These would include, among other things, decisions on the nature and the quantum of capital to be invested in the harvesting activity; the norms regarding

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18 See Kurien 1988 for an account of these initiatives in India, Indonesia and Philippines.
19 though the EEZs are unambiguously a state property right, many governments in developing countries, have be default allowed it to degenerate into an open access regime with respect to their nationals who wish to enter it.
20 A recent article by Francis Christy examines both these propositions (Christy, 1996)
the extent of effort to be expended in this activity; the norms regarding the extent of effort to be expended in this activity; and the manner in which the produce of one’s labour will be disposed. Consequently, this community property rights regime does not usurp the crucial role played by individuals. It only circumscribes it within the confines of collective norms. Since the basic motivation is pursuit of a decent livelihood, the participants tend to also have a keener ecosystem perspective.

![Network of Community Property Rights Regime Triads](image)

Given the nature of the fishery resources (Chapter 2) this combination of individual enterprise under a rubric of community norms helps to take advantage of the skill variations (human capital) among fishworkers which acts as a great motivator of benign competition in coastal fishing. Yet it keeps in check the ills of unbridled freedom which lead to excessive capital investments, the bane of even the ITQ systems which assign private property rights to the fishermen. This certainly puts a cap on excessive private accumulation possibilities. But the benefits in terms of equity of opportunity and freedom to modulate effort in keeping with the highly diverse fishery resource in the tropical seas result in optimising the social accumulation of wealth from the coastal fishery.

There have been systematic efforts by fishworkers organisations, as well as support networks and individuals who espouse their cause, to argue for such community property rights regimes in the coastal waters. The concept of an exclusive economic zone for small-scale fishworkers, where they will have community property rights,

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21 Where ITQ systems are in operation, excess investment takes the form of “capital stuffing.” Sophisticated electronic devices to search and find fish; equipment for faster deployment and retrieval of nets; and communications instruments which enable quicker decisions at sea and even facilitate forward trading of fish are examples of such investments. This takes place though there is no apparent increase in the size or the ability to catch and sell fish in shorter periods of time increases sharply. Those who can afford these stand to benefit.
was voiced at the International Conference of Fishworkers and their Supporters (ICFWS) in Rome in 1984. Continued efforts were made to lobby for this by the International Collective in Support of Fishworkers (ICSF) during the UNCED at Rio in 1992 and the negotiations of the FAO Code of Conduct for Responsible Fisheries (CCRF) (hereafter FAO Code of Conduct).

In the UNCED process the proposal for “reserving inshore fishing grounds for the use of small-scale fisheries” was rejected at the third PrepCom as several delegations had difficulties in agreeing on a common limit. However, an ICSF formulated statement, which received endorsement by several country delegations, was modified and incorporated into the General Principles (6.18) of the FAO Code of Conduct for Responsible Fisheries. It states that:

Recognizing the important contribution of artisanal and small-scale fisheries to employment, income and food security. States should protect the rights of fisheries and fishworkers, particularly those engaged in subsistence, small-scale and artisanal fisheries, to a secure and just livelihood, as well as preferential access, where appropriate, to traditional fishing grounds and resources in the waters under their national jurisdiction. (emphasis added) (FAO, 1995: 7)

This is undoubtedly rather far short of what has been proposed by us. The reference is still only about “access”, and to be applied by states “where appropriate”. Despite these limitations, the adoption of this principle in the FAO Code of Conduct is proof that pressure from fishworkers and their supporters does play a significant role in influencing global opinion. Now the task must devolve downwards to the state and community levels to translate this voluntary, moral commitment of the FAO Code of Conduct into a legally binding community property right regimes within the national context.

Granting property rights to a community of co-owners is a necessary condition for fisheries management. It is however not a sufficient one. Explicit property rights must be accomplished by an agenda of other enabling measures which will enhance the capability of the individuals who will be given the access to the resource. The most important of these is an aquarian reform package. A primary measure of this must be that those who own fishing crafts should necessarily be at sea on them. However, it would not be necessary that all who work at sea should own assets. It is only such a collective community of owner-workers who will exercise both precaution and responsibility with regard to managing the fishery resource. A second enabling measure must be that the legal right to make the decisions regarding the first sale transaction of the fish they harvest be vested with the community of co-owners and workers. This is crucial element in ensuring that the returns from fishing are commensurate with the labour and capital invested. It is vital if increased physical productivity should translate to high economic returns. It is also a good insurance against the tendency for “collective overfishing”. A third measure is the desirability

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22 An alternate agenda for sustainable small scale fisheries development has been spelt out elsewhere (Kurien, 1996a)
of greater social control over the export of fish and fishery products. This will be an important step to ensure that excessive commercialisation, prompted by international market forces, do not place undue external pressure on the community property rights regime of the micro-level.

Such a package can bolster the foundation of a community property rights based fisheries management and governance. Irrespective of whether it is applied in a developed or developing country context, there will be important wealth redistributional implications. These need not be restricted to the fishworkers alone. Boat and net makers and fish buyers may also be affected by the implications of such a change from an open access to a community property rights based regime.

Needless to say, such a management agenda can hardly be exercised without the governance support of the state. This is particularly true for small-scale fisheries in developing countries because coordination of the network of community property right regimes in the territorial waters will require involvement of governmental administrative structures at various levels. Striving for co-management of the coastal waters – in the context of a community-state-market framework – will be an effective, efficient and equitable solution. (Kurien, 1996b, 1998b). One way to ascertain this would be to assess the cost effectiveness with which the objectives of management and governance are met. These transactions costs are an inevitable part of resource management and governance. However, their magnitude can vary according to the structure and the level of the organisation of resource management and governance. As Susan Hanna has argued

> the increased amount of coordination, consultation and monitoring required to manage at the ecosystem level suggests that transaction costs of management may be lowered by moving toward decentralised, cooperative management structures that incur higher costs at the “front end” but realise lower costs at implementation (Hanna, 1998; 172)

Baland and Platteau, after making a survey of community initiatives for management of natural resources, reflect on some of the conditions under which co-management could work:

> If these groups are not solid or autonomous enough to dispense with significant from the state, if they need to be protected against the encroachments and the damage caused by broad-level forces and the powerful interests of other economic sectors, if there are sever intergroup conflicts which cannot be settled in a decentralised way, or if it is imperative that local action takes place within national resource policy framework, some sort of co-management contract between government and user groups many appear as the most promising arrangement for management of local-level common property resources. (Baland and Platteau, 1996:379)
It is obvious that there could be a wide range of forms of co-management contexts. They will depend on a variety of technical, social, economic and political parameters relevant to both community and state in a given ecological setting. These dimensions need to be assessed carefully and the form and context of the management and governance structures tuned to suit the specific context. As we mentioned earlier, evidence from around the globe suggests that coastal fishing communities are getting better organised to take responsible action to manage the coastal resources, with governments also becoming more open to involving them in the process.23

**Linking the Macro-Micro Levels**

The three regimes which we have examined are at three levels of the ocean ecosystem. The “bio-geographical solidarity” of the oceans may make the divisions ecologically arbitrary. However, they are in a sense inevitable due to the gigantic size of the ecosystem and the realities of international law. In our descending spiral of regimes (See Figure 5) the global legal sanction accorded to the state property right regimes at the mezzo levels (EEZs) provide the present political demarcating lines. The course of action regarding property rights within them is largely a matter of national concerns and priorities. What evolves outside depends essentially on the level of international commitment which can be fostered toward that cause.

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23 The noteworthy examples of initiatives by fishworkers organisations to claim rights to coastal resources and take positive steps to manage the resources therein include: the Maritime Fishermen’s Union in Canada; the Confederation Nacional de Pescares Artesanales de Chile; the National Fishworkers’ Forum of India; the Collectif National des Pecheurs Senegalais of Senegal and Pamalakaya and Bigkis-Lakas of Philippines.
Considered from the perspective of resource plenitude, it is the regimes within the EEZs which need to be stressed at present. But viewed from the perspective of overall resource sustainability, a careful combination of overlapping regimes can hardly be wished away beyond an immediate future. This future will depend in large measure on the proactive efforts of various sections of humanity in (re) defining the manner in which they relate to this ecosystem and its living resources. In this context our effort to grapple with a scaffolding of rights regimes, though a literal drop in the ocean, is but one positive pointer in that direction.
CONCLUDING REFLECTIONS

In the next century, the focus of attention on our planet will turn to the oceans and seas that cover most of its surface. The natural resources that abound within it are phenomenal and the ecosystem services provided by it are vital for life to continue on this planet. The living resources found in this global ecosystem form but a small part. Yet, their importance and relevance to human beings as a source of food and livelihood will continue well into the next millennium.

Our modest effort in this study was to highlight the crucial role of a clearly defined framework of property rights. This is a necessary condition for the management and governance of living marine resources and the ocean ecosystem in which it is locate. Moving towards building this framework required a clear understanding of the nature of the resource and the ecosystem, as well as the history of the evolution of rights over it. This is what provided specificity to our endeavour. We have also described the specific nature of marine fishery resources that distinguish it from other natural resources of the planet which are also in need of management and governance. Like the mobility and invisibility of the resource, the millions of human beings, that depend on it as their sole source of livelihood, are also hardly visible on the global socio-economic centre stage. For them, asserting property rights to the resource that has sustained them through generations, is now a matter of crucial priority.

Taking a deviation from the standard fare of property right regimes, we have articulated the need for a “community property rights regime” as being most appropriate for the micro-local level of management and governance. Within the context of a “community-state-market” reality, it provides the greatest degree of intra-community flexibility for disaggregation of rights to the individuals. Similarly, at the macro-global level, the need to evolve a “common heritage of humanity property rights regime” puts the onus of responsibility for the future of the ocean ecosystem on the civil society of today. Sandwiched in between are the mosaic of state property right regimes in the form of Exclusive Economic Zones which have the sanction of international law. The spatial overlap of the three regimes in thus a pre-requisite for addressing the management and governance questions posed at the different scales of the marine ecosystem. In a fluid milieu, it reminds us of the need for less rigidity and greater flexibility with regard to evolving institutional frameworks for natural resource management and governance. There are no inherently suitable institutions – we have to craft them as we evolve in our understanding of human-nature interactions. Sometimes the politics and economics of human society prevails. Sometimes the overarching compulsions of nature.

To utilise the resources of the oceans for the greatest social good of its harvesters and consumers our concerns must move beyond the realms of narrow economic efficiency associated with private property rights. It is possible to evolve several “efficient” solutions based on different property right regimes. These will be very resource and situation specific. The need to factor in priorities such as social equity for the present and ecosystem sustainability for the future, emphasise the relevance of looking to a horizon of greater options. Whatever the regime of property rights, some externalities always tend to remain. We cannot be categorical even about our best possible solutions. Keeping this in mind and crafting the appropriate mix of property right
regimes point to possible solutions for just, participatory, self-reliant and sustainable resource management and governance for fisheries and other natural resources as well.
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The Centre for Development Studies (CDS) is an autonomous academic institution established in the year 1971 in Thiruvananthapuram, Kerala State, India. The CDS is formally affiliated to the Jawaharlal Nehru University (JNU) in New Delhi. The main objective of the CDS is to promote research and teaching in the disciplines relevant to social and economic development. Over the years the CDS has established a tradition of interdisciplinary research work in numerous areas. These include agricultural and natural resource economics; industrial economics; labour economics; social and economic history; economics of health and nutrition; population and gender studies; economic theory; statistics and econometrics. The teaching programmes in the CDS include an M.Phil programme in Applied Economics affiliated to JNU, a Ph.D programme affiliated to both JNU and the Kerala University and a Post-Graduate Diploma Programme in Population and Development affiliated to the JNU. The later is an international programme conducted in collaboration with the United Nations Population Fund (UNFPA). The CDS has a core academic staff engaged in teaching and research. These activities lead to a range of research projects, lectures, workshops and seminars, as well as M.Phil and Ph.D dissertations on problems related to development. A considerable amount of this output takes the form of publications brought out under the CDS publications programme. The academic staff also involve themselves on collaborative research and teaching with other academic institutions and also participate in activities of other social action organisations. Many serve as members on various advisory bodies, task forces and expert committees which relate to research, planning and policy making at the state, national and international levels.

The South Indian Federation of Fishermen Societies (SIFFS) is an apex body of a three-tier structure of autonomous organisations of small-scale fishworkers. These organisations have links in several coastal districts in the maritime states of Karnataka, Kerala, Tamil Nadu, Pondicherry and Andhra Pradesh in South India. At the base level in the coastal villages there are over 100 primary and cater to the credit requirements of over 8000 small-scale fishworkers. These village organisations are in turn affiliated to independent district federations which monitor and support the village level activities. They also undertake a number of commercial, technical, educational and welfare activities which are beyond the scope of the village level. At the apex level SIFFS focuses its attention on technology for small-scale fishworkers and assists in the coordination and management of the district level federations. The marine plywood boat produced and diffused by SIFFS after a decade of R&D has been a major contribution to small-scale beachlanding fishing craft design in South India. The Information Division of SIFFS undertakes data collection and publication of documents of relevance to the small-scale fishing sector.
About the Author

John Kurien is presently Associate Fellow at the Centre for Development Studies (CDS), Thiruvananthapuram, India. He is a post-graduate in business management and holds a doctorate in social science. For many years he lived and worked with small-scale fishing communities assisting to organise fish marketing and thus helped initiate the village cooperatives which culminated in the formation of the South Indian Federation of Fishermen Societies (SIFFS). He is a member of the Board of Directors of the SIFFS that has its headquarters in Thiruvananthapuram. In 1984, his efforts with others, brought together in Rome, fishworkers and their supporters from around the globe. He was secretary-general of that conference, In 1986, as a combined initiative of the CDS and SIFFS he played a lead role in founding the International Collective in Support of Fishworkers (ICSF) with offices in Brussels, Belgium and Chennai, India. He is Vice-Chairperson of the Advisory Committee on Fisheries Research (ACFR) that reports to the Director-General of the Food and Agriculture Organisation of the United Nations. He was recently appointed as member of the World Humanity Action Trust Commission of Fish Resources. His articles and monographs on small-scale fisheries development and management, collective action, property rights and related topics have been published in leading international journals and as technical papers of FAO, UNRISD AND UNDP.
This study attempts to examine how the nature of property right regimes have a bearing on the management and governance of natural resources. To examine this interrelationship the study considers the particular case of global marine fisheries in its entirety – at the global, national and local levels. In the broad spectrum of natural resources, the living resources of the oceans are a class apart. They possess several characteristics – their fugitive nature and invisibility, to name but two – which distinguish them from terrestrial ones. Keeping in mind these and other specifics, the study sketches out the evolution of property rights over the seas and oceans. It then proceeds to suggest a new framework of property rights which is most appropriate for the management and governance of marine fisheries. At the local level the focus is on the situation of the “ecosystem people” in marine fisheries. These are the millions of individuals living in coastal communities, undertaking fishing largely in pursuit of a livelihood, with little other alternatives. Private property, state property and common property are the three most commonly discussed property right regimes. This study proposes a fourth – the community property regime – for local level management of fishery resources by ecosystem people. The focus of the study is to spell out a multi-level framework of property rights which is practical to implement rather than the most ideal to be achieved. Being the International Year of the Oceans, this study is a small contribution to the debate as to how the present generation, by crafting new and innovative institutions, can leave behind for future generations a more bountiful ocean full of fish.

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