

WORKS...
AND...
BLOOMING...
1972

8C/3

CUSTOMARY MARINE TENURE FOR
MANAGING AQUATIC RESOURCES
IN PAPUA NEW GUINEA

DAVID HYNDMAN
Department of Anthropology-Sociology
University of Queensland 4072
Australia

CUSTOMARY MARINE TENURE

Customary Marine Tenure (CMT) is only now being acknowledged and documented in Papua New Guinea (PNG), especially compared to the extensive ethnographic record on land tenure. Mixtures of communal and exclusive individual tenure, or public-access traditions may overlap. Ownership may be tied to specific environments, species or technology - or to some combination of all three (Carrier 1981, 1982a, 1982b; Carrier and Carrier 1983, 1989). Coastal waters in PNG exist under a great diversity of locally defined, informal, exclusive, communal, relative closed or even private tenure arrangements in what has come to be labeled "sea tenure" or CMT (Anell 1955; Baines 1989; Balfour 1913; Cranstone 1972; Kearney 1975, 1977; Moore 1977; Narokobi 1984; Quinn, Kojis and Warpeha n.d.; Spring 1982; Tenakanai 1986).

Sea tenure includes systems of informal, closed, communal, collectively-held coastal marine property and these customs carry special legitimacy that can only be imposed from within by a group on its members. Thus, in Melanesia CMT community membership is small, inter-related and bound by cultural rules which specify who has access to resources (Akimichi 1981; Bergin 1983; Chapman 1987; Cordell 1984; Couper 1973; Johannes 1978a, 1982a, 1989a, 1989b; Johannes and MacFarlane 1986, 1991; Rodman 1989; Ruddle and Akimichi 1984; Schoeffel 1985; South Pacific Commission 1988). Indigenous sea tenure systems are viable, if fragile and still incompletely understood,

limited entry solutions to managing living marine resources. A survey follows of indigenous Melanesian CMT systems in the transboundary Torres Strait Islands region and PNG.

Customary Sea Tenure in the Torres Strait Islands

Subsistence, trade, politics and identity in the Torres Strait flow from the sea (Cordell 1991a, 1991b; Cordell and Fitzpatrick 1987; Harris 1977; Marsh 1986, 1991; Miller and Limpus 1991; Olewale and Sebu 1982). A century ago the Cambridge Anthropological Expedition noted the Islanders intricate system of marine natural history knowledge and use. Islanders assert exclusive ownership of islands, waters and reefs between Cape York Peninsula and the sea territories of the Kiwai and other southwest coastal Papuan peoples (Nietschmann and Nietschmann 1981; Nietschmann 1989). In addition to Islanders' regard for the Strait as a whole as being their territory, each group holds exclusive rights over fringing and adjacent reefs and intervening waters. These are home island claims which are partitioned into areas controlled by specific clans and then further subdivided into individually owned zones. Today named marine tenure locations are still resilient and held in place through culturally defined cognitive maps, even though in some places occupation and resource use beyond home reefs may be attenuated (Fitzpatrick 1991a, 1991b; Johannes and MacFarlane 1990).

Customary Sea Tenure in Papua New Guinea

Well developed ownership of marine ecosystems exist along the south coast of PNG (Frusher and Subam 1981; Gaigo 1977, 1982; Haines 1978/9; Hudson 1986a, 1986b; Kwan 1991; Pulseford 1975; Swadling 1977). Papuan maritime geography is best documented among the Kiwai (Ely 1987; Landtman 1927; Lawrence 1991). Kiwai clans own land, mangrove systems and reefs. Dugong and turtle hunting are preeminent in subsistence and identity construction among the Kiwai.

Sea tenure is also well documented among peoples along the north coast and the islands off the mainland of PNG. From the archipelago waters surrounding the island groups are reports for the Massim area of Milne Bay (Malinowski 1918, 1922; Lauer 1970; Williamson 1989) for New Ireland and New Britain in the Bismarck Sea (Bell (1953-54; Panoff 1969-70) and for Ponam Island off Manus (Carrier 1981; MacLean 1978). From the mainland are reports for the Siassi people (Pomponio 1992), the sea-faring Sepiks (Lipset 1985) and other peoples of the north coast (Cragg 1981, 1982; Keurs 1989).

Complex CMT systems are found among Ponam Islanders and the Siassi. Different Ponam Islander patrilineages own different areas of marine space, resources and exploitative technology (Carrier and Carrier 1983). Under their system of overlapping rights a patrilineage owning a particular technology can use it in another patrilineages domain if permission for the target species is obtained and the various right holders are each

allocated a portion of the catch. A particularly intricate system of tradition and place characterises Siassi sea tenure (Pomponio 1992). CMT among the Ponam Islanders and the Siassi is embedded in gift economies and kinship-ordered modes of production.

Since Malinowski's (1922) classic *Argonauts of the Western Pacific*, Trobriand Islander CMT has been shown to conclusively exist and to be embedded in factors other than biological resources. When Trobriand Islanders fought over sea tenure it was not for scarce resources but for the status of participation in the gift economy (Malinowski 1918). Among the Trobriand Islanders CMT is both resource and territorial based. Coastal village CMT considers coastal areas as connected to the land and maritime ownership includes beaches, estuaries, coastal waters and fisheries resources. Living and non-living resource exploitation, whether subsistence or commercial, is exclusive to the village community (Williamson 1989). Labai villagers, moreover, claim exclusive reef ownership when mullet schools and Kevatariya fishermen own distinct portions of reef claimed as "our gardens" (Williamson 1989). The importance of fishing in the Trobriand economy with various right holders each allocated a portion of the catch has long been noted (Malinowski 1918) and Massim peoples generally spend 17 percent of their work time fishing (Moulik 1973).

The ethnographic record has generally undervalued the use of marine resources by coastal maritime peoples (Pernetta and Hill 1983). Along the western Papuan coast,

the average daily subsistence catch per person is around 80g of fish and 80g of crabs and prawns (Haines (1982). Exploitation of marine resources in coastal New Ireland (Wright 1990) and New Britain (Epstein 1963; Harding 1967) is also extensive. On New Ireland, Tigak Islanders eat on average 23.4g whole weight/day of locally caught fish (Wright 1990), while along the west New Britain coast 11.4g of fresh fish is consumed per person/per day (Green and Saunders (1978). Fish accounts for two percent by weight of subsistence production among Karkar Islanders on the north coast (Norgan and Durnin 1974).

LEGAL OWNERSHIP OF THE SEA AND LIVING RESOURCES

A process of dispossession and disruption of indigenous fishing cultures is a matter of historic record in many parts of Melanesia. Legislating commons status for inshore fisheries was a convenient manoeuvre by colonists seeking to displace or nullify marine tenure claims of indigenous peoples. Johannes (1978b:358-59) points out that: "the value of marine tenure (in Oceania) was not generally appreciated by Western colonisers. It not only ran counter to the tradition of freedom of the seas which they assumed to have a universal validity, but it also interfered with their desire to exploit the islands' marine resources - a right they tended to take for granted as soon as they planted their flags. Colonial governments often passed laws that weakened or abolished marine tenure".

For PNG however, there was implicit historical recognition of customary maritime rights by the previous

colonial administrations. German and British colonial administrators acknowledged customary fishing rights (McCubbery 1969). The commodity trade for pearls, trocus shells and Beche de mer was covered by Colonial Ordinances of the British New Guinea from 1891. The Fisheries Ordinance of the Territory of New Guinea by the British further recognised customary sea tenure with the provision "this Ordinance shall not apply to any native fishing in waters in which by native custom he has any rights of fishing" (Williamson 1989). Later, the colonial Australian Pearl-Shell and Beche-de-mer Ordinance in 1952/3 provided coastal people with exclusive right to all marine animals, except whales, to a distance of 800 metres offshore (Williamson 1989).

After independence PNG signed the 1982 United Nations Convention on the Law of the Sea, which allows claim for a territorial sea of up to 12 nautical miles, an archipelagic sea with exclusive ownership of all marine resources and a 200 nautical mile Exclusive Economic Zone (EEZ). In addition to the Law of the Sea Convention, PNG has signed other international treaties. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) controls taking and export of some maritime species customarily acquired for subsistence and exchange by coastal peoples (Williamson 1989). Australia and PNG cater for the Torres Strait Islanders and the Kiwai and other southwest coast Papuans in a unique international Treaty signed in 1978. Article 10 of this treaty establishes a Protected

Zone in which fishing practices of Islanders, the Kiwai and other traditional owners are protected. Implementing the treaty is intended to accommodate indigenous sea tenure and provide for continuity of the subsistence fishery.

PNG also enacted domestic ocean resources and marine territorial laws collectively known as National Seas Legislation in 1977. Nothing in the Act, however, establishes how rights to PNG waters are to be divided within the state (Williamson 1989). Neither sovereignty under s 2(2) of the Constitution nor regulation rights within internal waters through the Fisheries Act expressly confer state ownership rights to coastal waters (Williamson 1989). Beach areas belong to the state through the Mining Act. The Fisheries Act regulates the commercial fishery but does not reserve to the state fisheries ownership. It is section 5 of the Customs Recognition Act which implicitly recognises the pre-existence of customary rights to coastal water fisheries according to the customs of the different indigenous peoples. These customary coastal waters and fisheries rights means the existence of property protected from unjust deprivation by section 53(1) of the Constitution (Williamson 1989).

At present there are three statutes which may be used for the establishment of protected areas in PNG. These are the National Parks, Conservation Areas and Fauna (Protection and Control) Acts (Eaton 1985). The objectives of the National Parks Act, 1982 legislation

are: "to provide for the preservation of the environment and of the national cultural inheritance by (1) the conservation of sites and areas having particular biological, topographical, geographical, historical, scientific or social importance". The Conservation Areas Act, 1978 has similar objectives to the National Parks Act. However, conservation areas established under this legislation do not have to be on public land, but can be developed on land or marine space which is privately owned or held under customary tenure. Moreover, it includes provisions for a National Conservation Council to advise on the selection and management of conservation areas and "to encourage public interest in and knowledge of conservation areas and conservation generally". The Fauna (Protection and Control) Act, 1966 is mainly concerned with the protection of certain species of wildlife considered to be endangered through sanctuaries, protected areas and wildlife management areas. In sanctuaries all wildlife is protected except for certain specified animals which may be hunted. In protected areas certain specified fauna is protected and hunting of other types if wildlife is allowed. Wildlife management areas represent an attempt to involve customary land and marine owners in the control of living resource exploitation (Eaton 1985).

About 97 percent of PNG is still held under customary land tenure (Eaton 1985; Pulea 1985; Williamson 1989). Only 1.4 million ha of land, three percent of the total area, had been alienated from customary tenure.

Most of this is held by the government, but 160,000 ha are freehold and 340,000 ha are leased to private interests (Eaton 1985). Last decade it was estimated there were 390,000 coastal people, or 13 percent of the total population, who exercised customary rights and use of marine resources (Frielink 1983). As previously shown, land and sea tenure and ownership of resources are vested in the kinship group and use rights are inherited from a common ancestor. Land and sea tenure provides people with more than subsistence, it gives them their identity and constitutes the basis of their social relationships.

The relationship of indigenous CMT systems to the National government is analogous to the Law of the Sea Convention with respect to the EEZ (Nietschmann and Ely 1987; Williamson 1989). Issues of navigation, criminal jurisdiction, pollution and environmental matters lie with the government, but as in the EEZ of the coastal state, ownership rights of living resources lie with the indigenous people. The granting of fishing licences by the PNG government without consent of indigenous owners over the reef would represent uncompensated expropriation (Williamson 1989). CMT ownership of marine space and species provides a strong cultural and historical base for present-day EEZ claims. When almost all of the tuna fishing grounds in the Pacific were transferred to 200 nautical mile EEZ's the USA became resource pirates until they negotiated an appropriate fisheries treaty with the Forum Fishing Agency in 1986 (Nietschmann and Ely 1987).

THE FUTURE FOR CMT MANAGEMENT OF LIVING RESOURCES

Although the ethnographic record demonstrates that Melanesian CMT systems in PNG and the Torres Strait Islands are diverse, flexible and dynamic and capable of regulating many kinds of subsistence and commercial activities associated with marine fishing, hunting and gathering, Haines (1982:289) has bluntly stated that it is "counter-productive to resurrect the past by entrenching traditional fishing patterns, or rather the modern distortions of them in the PNG administration" and Polunin (1990) and Johannes and MacFarlane (1992) have likewise found little in CMT that offers the potential to mitigate the effects of massive change.

The legal and political fate of CMT practices vital to over 400,000 ethnically diverse coastal peoples of PNG has become a contentious issue. This raises the critical ethical issues of CMT research as to what extent, if at all, do outsiders (anthropologists included) have the right to speak about and represent indigenous peoples' sea tenure systems? The highest standards of professional accountability must apply and CMT studies should proceed only with the consent and active collaboration of indigenous peoples involved. The people themselves should have the final say about what constitutes their CMT system.

CMT in PNG is not broken down traditions but living customs, which have always transformed and related to basic resource management tasks. Attention is now focussing on documenting and explaining the functions and

uses of CMTs in PNG and the Torres Strait Islands. Moreover, studies of combined land and sea tenure estates such as the Marovo *puava* in the adjacent Solomons (Hviding 1988) demonstrate that Melanesia has some of the most extensive and sophisticated traditional knowledge systems in Oceania for spatially managing and socially regulating coral reef fisheries (Clarke 1990).

Indigenous peoples' choices in aquatic resource use in PNG and the transboundary Torres Strait Islands cannot be explained by common property models and that the terminology itself is misleading and inappropriate (Nietschmann 1989). Common property assumes a model of optimisation, that people act out of self-interest alone without regard for community. Lack of community designates the commons but under CMT, sea tenure holders in PNG are well-defined peoples who do not lack use rights. While it is doubtful that sea tenure systems were designed purely with conservation in mind (Polunin 1990), they do represent important attempts by indigenous peoples to deal with problems of managing resources by controlling and restricting access to entry (Cordell 1989, 1992).

In analysing the potential and desirability of integrating CMT in contemporary fisheries and marine management frameworks, Cordell (1992:122) suggests the following three questions stand out: 1) What happens to CMT patterns during the transition from subsistence to commercial economies? 2) What are the resource management and biological conservation impacts of CMT? 3) What uses,

if any, can be made of CMT systems which work to define user and access rights - in essence, to preserve the social order - rather than the balance of nature?

On the first question Wright (1990) has already described CMT systems in PNG that have successfully negotiated the transition to modernity through commercial fishing ventures and has suggested that directions for utilising CMT in the development of marine resources in PNG may be found in the judicial system used at present to resolve village disputes over land rights. On the second question Johannes (1982b) and Clarke (1990) have already shown that through closed areas and seasons, food taboos, and game restrictions, CMT systems among indigenous peoples of Papua New Guinea have enhanced species conservation. On the last question, what these CMT systems really do is consolidate a peoples control over fishing grounds and defend against encroachment. Management utility of CMT systems should not stand or fall merely on the basis of a conservation test.

More research will enable policy-makers to go beyond documenting general features of CMTs to specifying how they can be integrated with contemporary systems of marine use. In PNG indigenous owners of CMT systems can become involved in the protection of their living land and marine resources through wildlife management areas. Of the 11 wildlife management areas established, the first and largest is Tonda with 5,900 km² in southwest Papua. The management committee regulate outsider hunting and fishing with licences and royalties paid on

deer, duck and fish. Maza is the only completely marine management area and covers 184,230 ha in the transboundary Torres Strait Island region. Indigenous peoples, while having to contend with impositions on their commoditisation of turtle, dugong and fish catches, have expressed concerns over exploitation from commercial fishermen from outside the protected area. The great advantage of wildlife management areas is that sea and land tenure rights are retained by indigenous owners and CMT management is encouraged. The aim is sustainable utilisation of renewable living resources.

Government policies and CMT systems need to accommodate to one another. What seems the imperative is the principle and obligation of the Papua New Guinea government to uphold indigenous peoples' rights and controls over their ancestral marine domain. It is impossible to isolate the sea from the total fabric of maritime economy and culture. It is through customary sea tenure that PNG maritime peoples are progressing with the past and forging their cultural identity in the modern world.

LITERATURE CITED

- Akimichi, T.
1981 "Perception and Function: Traditional Resource Management in the Pacific Islands." *Resource Management and Optimization* 1(4):361-78.
- Anell, B.
1955 *Contributions to the History of Fishing in the South Seas*. Uppsala, Sweden: Almqvist and Wiksells.
- Baines, G.
1989 "Traditional Resource Management in the Melanesian South Pacific: A Development Dilemma." In *Common Property Resources: Ecology and Community-based Sustainable Development*, ed. F. Berkes. Pp.273-295. London: Bellhaven Press.
- Balfour, H.
1913 "Kite Fishing." In *Essays and Studies Presented to Willaim Ridgeway on his Sixtieth Birthday*, ed. E.C. Quiggin. Pp.583-608. Cambridge: Cambridge University Press.
- Bell, F.
1953-54 "Land Tenure in Tanga." *Oceania* 24:28-57.
- Bergin, A.
1983 "Fisheries in the South Pacific." *Asia Pacific Quarterly* 22:20-32.
- Carrier, J.
1981 "Ownership of Productive Resources on Ponam Island, Manus Province." *Journal de la Societe des Oceanistes* 37:205-17.
- 1982a "Fishing Practices on Ponam Island (Manus Province), Papua New Guinea." *Anthropos* 77:904-15.
- 1982b "Conservation and Conceptions of the Environment: A Manus Case Study." In *Traditional Conservation in Papua New Guinea: Implications for Today*, eds. L. Mourata, J. Pernetta and W. Heaney. Pp.39-43. Boroko: Institute of Applied Social and Economic Research.
- Carrier, J. and A. Carrier
1983 "Profitless Property: Marine Ownership and Access to Wealth on Ponam Island, Manus Province." *Ethnology* 22:133-51.

- Cragg, S.
1982 *Coastal Resources and the Umboi Logging Project*. Waigani: Office of Environment and Conservation.
- Cranstone, B.
1972 "Fishing." In *The Encyclopaedia of Papua New Guinea*, ed. P. Ryan. Pp.425-27. Carlton: Melbourne University Press:
- Eaton, P.
1985 "Land Tenure and Conservation: Protected Areas in the South Pacific." *South Pacific Regional Environmental Programme/Topic Review 17*. Noumea: South Pacific Commission.
- Epstein, A.
1963 "The Economy of Modern Matupit: Continuity and Change in the Gazelle Peninsula, New Britain." *Oceania* 33:182-215.
- Ely, T.
1987 *Hunters of the Reefs: The Marine Geography of the Kiwai, Papua New Guinea*. Ph.D. Thesis. Department of Geography, University of California, Berkeley.
- Fitzpatrick, J.
1991a "Maza: A Legned about Culture and the Sea." In *Proceedings of the Torres Strait Baseline Study Conference*, ed. D. Lawrence and T. Cansfield-Smith. Pp.335-47. Townsville: Great Barrier Marine Park Authority.
- 1991b "Home Reef Fisheries Development: A Report from Torres Strait." *Cultural Survival Quarterly* 15(2):18-20.
- Frieling, A.
1983 *The Coastal Rural Population of Papua New Guinea*. Report No.83-11. Port Moresby: Department of Primary Industry Fisheries Division.
- Frusher, S. and S. Subam
1981 "Traditional Fishing Methods and Practices in the Northern Gulf of Papua." *Harvest* 7:15-158.
- Gaigo, B. 1977 "Present Day Fishing Practices in Tatana Village." In (ed.) *The Melanesian Environment*, ed. J. Winslow. Pp.176-181. Canberra: Australian National University Press.

- 1989 "Marine Tenure and Economic Reward on Ponam Island, Manus Province." In *A Sea of Small Boats*, ed. J. Cordell Pp.94-121. Cambridge, Massachusettes: Cultural Survival.
- Chapman, M.
1987 "Traditional Political Structure and Conservation in Oceania." *Ambio* 16(4):201-05.
- Clarke, W. C.
1990 "Learning from the Past: Traditional Knowledge and Sustainable Development." *The Contemporary Pacific* 2(2):233-53.
- Cordell, J.
1984 "Defending Customary Inshore Sea Rights." In *Maritime Insitutions in the Western Pacific*, eds. K. Ruddle and T. Akimichi. Pp.301-26. Senri Ethnological Series No.17. Osaka: National Museum of Ethnology.
- 1989 *A Sea of Small Boats*, ed. Cambridge, Massachusettes: Cultural Survival.
- 1991a "Lines in the Water: Sea Tenure as Custom Today in Western Oceania." In *Proceedings of the Torres Strait Baseline Study Conference*, eds. D. Lawrence and T. Cansfield-Smith. Pp.507-16. Townsville: Great Barrier Marine Park Authority.
- 1991b "Negotiating Sea Rights." *Cultural Survival Quarterly* 15(2):5-10.
- 1992 *Managing Sea Country: Tenure and Sustainability of Aboriginal and Torres Strait Islander Marine Resources*. Canberra: Report on Indigenous Fishing, Ecological Sustainable Development Fisheries Working Group.
- Cordell, J. and J. Fitzpatrick
1987 "Cultural Identity and the Sea in Torres Strait." *Cultural Survival Quarterly* 11(2):15-17.
- Couper, A.
1973 "Islanders at Sea: Change and Maritime Economies of the Pacific." In *The Pacific in Transition*, ed. H. Brookfield. Pp.229-47. New York: St. Martins Press.
- Cragg, S.
1981 *The Subsistence Economy of Umboi Island with Special Reference to the Role of Mangrove Swamps*. Waigani: Office of Environment and Conservation.