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## RIGHTS TO WATER IN OCEANIA

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### Law and custom both apply to water rights in Oceania

There are two main sources of rights to water in Oceania:

1. Those deriving from **custom**. **Custom is the practice of a community** which has become established (or traditional) through usage. Custom is flexible to some extent, and it changes imperceptibly over time. It was not written (even though in a few cases it is now written down, but most cases in the Pacific it is still not written). The administration of custom, and decisions about custom, are usually made by local community leaders. Disputes are usually settled by the same community leaders. But as everywhere, some disputes never get settled, they just continue unresolved whatever the leaders say (and they may be divided among themselves).

There are lots of customs in the Pacific Islands because there are 1,200 different languages (about one quarter of all the world's languages), and the customs of each language community tend to differ to some degree.

2. Those deriving from **law**. **Law is a decision of a central government**. It is always written. It is formally administered by (or for) the central government by officials. Disputes are settled by courts - at least they are intended to be! Some of those don't get settled either - like the Senkaku Islands, and many equivalents everywhere.

The 6 million people of the Pacific Islands are divided into 14 independent nations, each with its own laws. In addition there are 12 dependent territories (eg. Guam on USA, Tahiti on France, Irian Jaya on Indonesia, Easter Island on Chile).

So there is a great diversity of law and custom in the Pacific Islands.

Today, both custom and law are important in understanding rights to water in any part of Oceania. For most purposes **at the level of local communities, custom remains more important than law**. And for most purposes **at the national level, law is more important than custom**. But both interact, and both are important, and an understanding of how the rights function in practice necessitates understanding both these systems.



It is also necessary to understand that **both systems apply over all areas of water**. It is not that custom applies to some water and law to others. No. Custom is a factor in all water matters, and law is also, at all levels. For example, at the local level where custom is the more important, we must remember that all of Oceania is now under one central government or another, and customs are now in many cases protected by law. But the law never defines exactly what the custom is that it is protecting - that is always left vague.

The law may say that custom will apply, but always it is with qualifications. For example if custom provided that a person may be killed for a serious infringement of water rights (as was the case in some circumstances in some islands), or that they may be attacked, or banished from the village, the law generally does not allow these. Nevertheless, in some cases it does allow banishment - for example, if one commits a serious offence relating to the use of water in Samoa, the village council may banish you from the village and the law and the court of the central government will support the village council. But in most countries this is not so, and customary banishment is no longer allowed. Some "customary" punishments can only be applied with the permission of the central governments courts.

On the other hand, custom often "invades" the law in practice. For example, in many islands the law says that all water in lagoons and the sea belongs to the government, but in fact the government usually cannot control it all, and for most purposes customary practices remain. For example in the Cook Islands, all water belongs to the government according to the law, but the customary owners of the island of Manuae will not allow anyone from outside the right-holding group to fish in the ocean close to the reef there, nor on the reef, nor in the lagoon. The government in practice accepts that, until **100 years ago**, the custom was that the people of the island had those rights. However, even though it has been changed by law for nearly 100 years, the government still will not force its legal "right" over the customary right - because the customary right holders have votes in the election!

In the Pacific Islands, central governments are relatively new. The first central governments were in Hawaii, Tahiti, Tonga and New Zealand in the 1800s. They became possible because of the introduction of metal tools and weapons, and of writing. Before that, all land and water rights were decided by custom. In some cases the new governments made water rights a matter for the new government to decide (as in the Kingdom of Tonga where it was a policy decision of the king; and in the Cook Islands where it was a policy decision of the New Zealand government). In some other cases the governments left water rights to be dealt with under custom.

**The bigger the unit of water the more important is law; the smaller the unit of water the more important custom is likely to remain.**

Let us start with the biggest units of water and work slowly down to the smallest.



The Pacific Ocean is the largest area of water on the globe. From the time of the first humans in the region, most of them claimed the fresh water on the land they lived on, and the sea water close to it. But no people claimed the whole of the Pacific Ocean or any significant part of it.

That first occurred when the United Nations Law of the Sea was agreed to in the 1970s. That gave national governments rights to 200 mile zones of water which we discuss further later. But it gave the rights to all the rest to the United Nations. This is what they called "The Heritage of Mankind" and what is more commonly called International Waters. That is, it is intended to be cared for the benefit of all people by the United Nations. One problem for the United Nations is that it does not have enough money or other resources - including police and military power - to manage the international waters adequately.

The United Nations does not exercise rights over fishing in international waters. That is open to any person or company, which leaves the oceans vulnerable to over-fishing except to the extent that international agreements are made to share access to fishing rights in international waters. Some fish species in the Pacific Ocean are endangered from over-fishing.

However, the United Nations does have the rights to control the mining of minerals on the seabed. This is done through the International Seabed Authority which is only now being established. It began in New York but the world headquarters is now being shifted to Jamaica. It is headed by a director from Fiji. The International Seabed Authority leases out rights to countries to prospect for minerals on the seabed. The only place where leases have so far been taken up in international waters is in the Clarion-Clipperton area of the eastern Pacific. USA, China, Russia, Poland and several other countries (I think including Japan) have taken leases there, but no one has yet started to mine.

#### **The 200 mile (360 kilometre) Exclusive Economic Zone or EEZ**

One of the key elements of the International Law of the Sea is the 200 mile EEZ. It is comprised of two parts. Adjacent to the land is the 12 mile Territorial Sea, and beyond that is the 188 mile Exclusive Economic Zone, giving a total of 200 miles. Legally, only the 188 miles is the EEZ because the first 12 miles of Territorial Sea belongs to that nation just as though it was land. In the 188 mile EEZ, however, the nation does not have as much right. Rights here are confined to economic uses. However, usually people speak of the whole 200 miles as the EEZ.

The EEZ greatly increased national assets - immediately of fish, and in the longer term also of minerals because some Pacific Islands nations have some of the world's most valuable deposits of cobalt, tungsten and some other valuable mineral on their seabed. It is expected that mining will begin with the next ten years. The technology has been created, but is now being refined. So the Pacific Islands nations benefited more from this new Law of the Sea than any other countries in the world. Japan, because of its many



small islands scattered over a wide area, also benefited greatly from the EEZ, as what is now Japan's EEZ was formerly open fishing grounds for China, Korea, Russia and so on.

The 12 mile Territorial Sea is greater than the effective traditional rights of most Pacific communities. The traditional rights did not usually go to any particular precise distance because there was no point in defining them unless they conflicted with someone else's rights. Sometimes people claimed to have rights "as far as the horizon" - which is not very far but gets further the higher you stand on the land or the further you sail out to sea!

The new opportunity provided by the 12 mile Territorial Sea has led some communities to claim the whole of that area. In international law it is a matter for each government to decide whether to keep the whole of the water rights as a central government power and open to everyone, or whether to "carve up" some areas and acknowledge the rights of local communities to them.

The 188 miles beyond that, being for practical purposes a newly acquired right, is now held by national governments, though in some cases this has been delegated to component local governments at the state, provincial or district level (eg. Australia, where the federal and state governments share in the benefits from marine exploitation; the Federated States of Micronesia, where the rights are held by the component states rather than the federation; Papua New Guinea also adopted a system of sharing between local and central governments).

#### **Water rights contracted last century, then expanded further than ever**

We now turn to rights to water closer to the land - the area where custom used to be very important, and often still is today.

Water tenure, like land tenure, is about rights between people. The rights that exist in any country or society today evolved as a result of influences from the environment, from past history, from the economic system and political and social systems, and by external forces. Tenure systems also influence ecology, society and economy in a continuing process of interaction.

Land and water tenures cannot be totally separated. In-shore rights were clearly defined and generally held by clans or communities. However, colonial law, higher technology, population mobility and alternative sources of protein, all led to the relative significance and clarity of such rights diminishing during the past 100 years. After independence, which came about between the 1960s and the 1980s for most Pacific Islands nations) traditional rights to inland waterways, swamps and coastal waters were reinforced in Fiji, Kiribati and several other countries.

During the first decade or two of independence, most Pacific Islands states focussed primarily on matters of immediate urgency. Water rights were seldom a top priority (although in Vanuatu returning all alienated land returned to customary owners was given high priority, and traditional customary water rights were fully acknowledged by the



government in principle, even though it could not define them in practice). Nevertheless, with growing populations and increasing exploitation of fisheries resources both for home consumption and for overseas buyers (both of the fish caught by local fishermen, and the purchase by foreign fishing vessels of rights to fish for themselves). Competition for access and use has led to a growth in disputes.

After independence governments hoped to solve all problems by themselves, but they have found that they were not able to do so. Now that governments have faced the early organisational problems, they are withdrawing from the all-embracing role they chose in the early days of independence (by leaving more functions to commercial, religious, voluntary and other non-government organizations). This leaves the governments in a better position to focus on fundamental issues which influence the whole range of questions of productivity, standards of living, equity and justice. Land and water rights, and problems associated with them and symbolized by them, are among the most important of these.

We will consider some major trends, and policy options that derive from them, in the Pacific nations and territories in the past and for the coming decades. They are not exclusive, and their relative significance varies for different places, people and contexts. Nevertheless, every one is important for every country.

#### Tenure adapts to population and environment - but slowly and often painfully

The first people in the Pacific islands (like the first people everywhere), lived by hunting, gathering and fishing. That way of life necessitates very small groups, low population density, and tenure systems which give families access to a range of resources over a wide area. In most conditions in the islands, this would have been about one person per square kilometre or less. In more difficult environments, density in a hunting/gathering economy was much less again.

Some of these earlier hunter-gatherers depended a lot on foods they could gather from water - some from fresh water like prawns and water-cress, but mostly from salt water like shell-fish, sea-weed, and small fish that could be caught with limited equipment.

It is interesting to note that some people who lived near the sea, to a large extent lived from the foods in it. But other people who lived close to the sea did not use it at all and were afraid of it. They lived off the land, and some of them traded land foods with the people who knew how to exploit the sea. So the evolution and exercise of water rights depends on culture as well as on access.

#### **The importance of water (and rights to water) for some key food plants**

Agriculture developed very slowly in the Pacific Islands, though there were surges when new crops such as sweet potato, or new techniques such as taro irrigation, facilitated rapid change. Crops like taro enabled much higher productivity per person and per unit of land. They led, probably imperceptibly in most cases, to progressive changes of tenure of the land, and particularly in the rights to the continuous flow of water which



was necessary to irrigate the taro at all times. That facilitated higher population density, more complex social and leadership systems, and a much more complex set of rights to land and water. Productive agricultural systems using irrigation water, especially for taro, could sustain one hundred or more times the population of hunting/gathering systems, and led to much closer identification of individuals, descent groups and families with specific plots of land.

The water for taro comes from streams running down valleys. In places where irrigated taro is the main source of starch food, therefore, we find that the whole valley was the largest political unit in the days before central governments. A chief or council of chiefs controlled the people of the valley as a single unit, which was essential to manage the distribution of water for taro irrigation. Below the level of a whole valley, smaller clans and families controlled the water they drew off for their taro. Taro requires a lot of hard labour, so almost always the right to the taro itself lay with the household which put in the hard labor to grow it.

On atolls there are no valleys, and no streams, and usually no flowing water. Fresh water is scarce, so it is much more important than on high islands with plenty of water. On atolls, access to water requires different technology and results in different patterns of social organisation from valleys on high islands.

Atolls are heaps of sand (with not much soil), lying on the top of dead coral reefs. But on many atolls the main root crop (pulaka and others are plants with a large single tuber which is high in starch) required irrigation. So on atolls we often find more egalitarian political and leadership systems, because there is no need for the central control of the water supply. (Water is not the only factor, but it is the one we will concentrate on today). Even more hard work is required than with taro in the valleys on the high islands, so it is not surprising that the household that supplies the labor has stronger rights to the land on which it is grown and to the pulaka produced. There are some exceptions to this generalization for other reasons, but as a general principle, this was so.

Fresh water is obtained by digging in the sand down to the fresh water lens. Fresh water is lighter than salt water, so when rain falls it permeates through the sand and floats on top of the salt water. Under the atoll below the surface of the sand, is the dead coral which grew on top of the sinking volcano and created the atoll. This dead coral is porous, and fills up with salt water to the level of the surrounding sea. It is hard to imagine, when you stand on the solid rock base of an atoll, that within the rock is an enormous reservoir of water.

Since the fresh water is lighter it floats on top of the salt water, pushing the salt water down. That causes the salt water to sink in a curve which is deepest at the centre of the land on the atoll, and gets shallower towards the edge of the atoll. For this reason the land in the centre of atoll is more valuable than the land at the edges, because the accessibility of more fresh water makes it potentially more fertile and productive.



The fresh water lens provides a reservoir because there are no rivers or streams, but by digging a well below sea level in the centre of the atoll, one can get fresh water. Since the fresh water comes only from rain, the volume of water stored in the fresh water lens reduces in dry weather when people and plants use too much of the fresh water. The line between the fresh water and the salt water is never perfectly clear, and the fresh water gets mixed with more salt the lower it is.

Digging wells is hard work - especially before the introduction of metal digging tools last century. Before that the wells had to be dug with wooden and shell instruments, which was even harder work. So wells are very valuable and always belong to the family which dug them.

But much harder than digging wells was digging pits to create gardens for root crops. Coconut palms have roots deep enough to reach down into the fresh water lens. Pandanus roots reach into the coastal area where the fresh and salt water are mixed, because pandanus can tolerate a high concentration of salt water. Therefore pandanus survives in droughts when other plants die or wither, so pandanus is a valued food for emergencies on atolls. Pandanus leaves are also used for weaving baskets and mats and for thatching houses.

Root crops cannot reach the fresh water lens so it is necessary to dig pits down to the fresh water lens and plant the root crops. Because there is only sand at that level, it is necessary to create soil, so people bring leaves and food remains and surface soil from other parts of the atoll. It is extremely hard work, and each single tuber has to be cultivated individually by hand, with soil and mulch packed around it as it grows. This is exceedingly hard work, and this is reflected in the value of that crop and the degree to which rights to it are concentrated in the man and his family who put all the work in to get access to the water and to nurture the plant. Breadfruit has shallow roots so it is also often planted in these pits.

Atolls are an extremely difficult environment for human habitation. Archaeological digging has shown that when the first people tried to live on atolls they often died out. But slowly over generations they developed skills for surviving in that environment, which necessitated mastery of both the fresh water and the salt water.

Even far inland on big islands like New Guinea, which is bigger than Japan, even where there is plenty of fresh water, customary rights to it are very detailed. They cover who may draw drinking water from where, who may bathe and where, who may catch fish and prawns and where and when, who may divert water for irrigation or other use, and so on.

#### **The impact of cultured pearls on the rights to lagoon waters**

Natural pearls could be found in many of the atoll lagoons in the Pacific Islands, but they were rare. Whether or not you found one was a matter of chance. People liked them for gifts and ornaments but they were not as valued as they are today with a world market for black pearls. In fact when I first went to Manihiki atoll over 40 years ago the friend I



stayed with offered me a huge basin full of natural pearls to keep. He had just put them aside when he or one of his family found one in an oyster. I was shy and would only take one!

The techniques for culturing pearls were evolved by Japanese earlier this century but were not tried in the South Pacific Islands until the 1960s. Pearl culture has led to a great increase in income for the island where it has been successfully introduced, but it has also led to other changes. One is the great gap in rights between rich and poor. Until the time of pearl culture, most atoll people had much the same levels of income as they lived on fishing and coconuts and root crops in pits, all of which were mainly subsistence. In many cases they also dived for pearl shell and dried copra to sell to supply their needs for cash.

The lagoon belonged to the people of the atoll, and some rights (such as rights of access across it by canoe) were shared equally by all people. But other rights were more complex. The water in front of a village was primarily the right of the people of that village. In some cases the lagoon was divided into sectors for fishing rights. In some cases even individuals might have rights to a particular rock in the lagoon where that individual or family had the right to catch certain fish.

When central governments took over in most cases they declared that the lagoon was public property and could be share by everyone. Usually custom continued to some extent, but it was usually less emphasised than before. Then came cultured pearls.

Cultured pearls need several things. They need a designated area of the lagoon for each person who is going to culture the pearls. And they need it for a long time, and because of the danger of theft of pearl oysters they want exclusive rights to that area. In the beginning that was no problem because those who wanted some space just put their oysters there and it was theirs to use. But as the good spaces filled up, competition started to get keen. And as some people were clearly going to be rich, jealousy became a problem.

Many people who originated from atolls that were developing pearl culture had left to find jobs in town. A lot of them now came back. And some who had never been on an atoll, but whose parents or grand-parents came from there, came and claimed an area of water (and some space for living on the land) to cultivate pearls. And some strangers from other islands came in because in law the lagoon was public property for any citizen of the nation - not just the island. Disputes over land and water have become serious throughout the Tuamotu Islands (which is the biggest source of the high value black pearls in the world) and the northern Cook Islands.

In fact, in Manihiki, in the Cook Islands, some people now carry guns in a situation where no one ever carried a gun before. Fights and disputes have become common. The government gave the rights over the lagoon to the Island Council of that island to manage in the hope of reducing disputes. The Council did stop anyone who had no blood ties to



that island coming in, but it could not stop the disputes among local people. The population trebled as people who had left came back in the hope of making a fortune from pearls.

Pearl culture requires a lot of hard work, and precision, and persistence. So some people are good at it and succeed with large pearl farms, but most people fail or have small farms with little success. What to do about water rights in the lagoons is constantly discussed, but little progress has been made and some disputes continue.

### **Changes in rights to coastal waters**

This varies a great deal according to country and locality. Even in the Kingdom of Tonga, where by law all water rights belong to the king and are open to any member of the public, customary practice still influences use in some cases. It is a good example of a law being in place for 150 years, and generally observed, but with some customary practices persisting because the people find them useful and convenient.

In most of the Pacific Islands we find that the community which has rights to land, usually has rights to the water adjacent to it. But the rights to the land are usually subdivided much further than the rights to the water. If the water area is large and the foods in it plentiful, there will be little subdivision, most rights will be held by the community as a whole. But several communities may have rights of access through the passage through the reef, even though only the one where it is located will have the rights to the fish in it.

Where there is an input of labour, such as in making fish weirs, those who put the labour in will usually have stronger rights to use of it than those who do not, even though all have rights to the area as a whole.

On the other hand the law in many countries provides that the coastal waters shall belong to the customary owners and that custom shall determine their use, but in fact much has changed. For example if what was a quiet village becomes a town and a harbour, the water rights and practices are going to adapt, whatever the law or the custom says.

And if a product that was regarded generally as rubbish (such as sea cucumber) becomes a commercial product (it is now dried and sold to China) then the tenure of the water where it is harvested is likely to change in practice if not in principle. Likewise if people who fished for subsistence begin fishing commercially. Technology influences tenure too, for in practice people will not exercise water rights very far when they have to paddle canoes, but they can and do exercise them over much longer distances once they have outboard motors, high technology fishing gear and coolers to keep the product.

### **Conclusion**

We have to live with reality, not with law or with custom. Both of those are guidelines, frameworks, that guide the way we live in varying degrees. Never do people follow the



law exactly, never do people follow custom exactly, and in the Pacific (as in most places) they always interact. So if in your work you have to deal with water in the Pacific region - or any other -

1. Learn the laws that apply to water.
2. Learn the customs that apply to water.
3. And watch carefully to find out what actually happens, because all three are important, and all three are different.