

RESEARCH ARTICLES

Variations and Parallels in Climate Change-Induced Migration Models: Customary Land Tenure in Francophone Pacific Islands

Elisabeth Worliczek^{1a}¹ University of Natural Resources and Life Sciences, Vienna

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It is tempting to assume that across all Pacific Islands, potential climate change-induced migration (PCCIM) due to sea-level rise can be approached in a unified manner. However, the diversity of the Pacific Islands requires an in-depth analysis in order to establish culturally coherent migration models. The possibilities and limits that customary land tenure can offer in this context on islands of the three Pacific French overseas territories Wallis & Futuna (Wallis, Futuna), French Polynesia (Rangiroa) and New Caledonia (Lifou) are analysed through four lenses: the intergenerational transfer of land rights, the distribution of land plots (geographically and between families), the extent of power exercised by customary authorities, and the different types of ownership or usufruct. The examination of common threads and variations shows that guiding principles (access to land in the interior of a respective island, strength of land rights on a certain plot, infrastructure issues, concepts of mobility, importance of primary land ownership, importance of primogeniture, and potential inter-island access) are shared to different degrees across the islands. The fourfold matrix allows a robust analysis of the possibilities in the context of PCCIM in different locations through examining parallels, differences, advantages, and disadvantages of the different systems.

1. Introduction

The effects of climate change on the Pacific Islands—notably rising sea levels—have been discussed internationally for quite some time (Barnett & Campbell, 2010; Lazrus, 2009; Rudiak-Gould, 2012; Worliczek, 2013). The islands are portrayed as “sinking ships” with inhabitants that have to move somewhere else and that are dependent on the hospitality of other countries due to water submersion. The diversity of the Pacific Islands is often not represented in this public discourse and alarmist discussions of the “sinking islands” related to climate change dominates (Farbotko, 2005; Farbotko & Kitara, 2022). This discourse does not acknowledge that this perspective may apply to some of the islands (Mycoo et al., 2022), whereas others may be in a completely different situation (Walsh & Stancioff, 2018). The Pacific Islands as a homogeneous group do not exist. There is a variety of factors that have to be taken into consideration when discussing the impacts of climate change and sea level rise on a specific island: not all islands correspond to the image of the sinking, isolated small atoll that has to be abandoned by its inhabitants. There are other configurations such as bigger islands or island groups (Worliczek,

^a elisabeth.worliczek@boku.ac.at; corresponding author

2011) that offer the possibility of internal, culturally coherent migration (defined here as primarily voluntary movement of people as well as a planned relocation) when the day comes, which is a primarily hypothetical option at the moment (Mortreux et al., 2023).

The objective of this article is to see what lessons can be learned from customary land tenure systems, and what opportunities or constraints these systems offer when rising sea levels require people to leave their current place of residence. We will examine different configurations and have a look at common threads and differences between islands. Lessons from past successful practices could lead a way in this endeavour, taking a close look at how these islands have been managed in the past and if parts of this past can be applied to the present. As Mondragón wrote, “One of the most widely repeated arguments emerging from anthropological commentaries to adaptation is that policy design has to be sensitive to specific cultural values and should aim to incorporate indigenous environmental knowledge as part of the effort to involve local actors” (2014, p. 133).

We will examine the issue of potential climate change-induced migration (PCCIM) in the Pacific Islands caused by rising sea levels through two lenses: (a) French overseas territories (the term “territory” is used regardless of their current political status), which have received relatively little attention at an international level in climate change discussion, thus addressing a gap in the literature identified by Grydehøj (2017), and (b) the role of customary land tenure on islands in the three Pacific French overseas territories. In Wallis and Futuna, both the islands of Wallis and Futuna will be analysed. In French Polynesia, we will focus on the atoll Rangiroa. In New Caledonia, Lifou Island is of interest. This contribution looks at the corresponding land tenure systems in order to draw conclusions from the comparison across the three territories. Special attention will be given to Lifou, in order to complement material regarding Wallis, Futuna, and Rangiroa published elsewhere (Maurizot et al., 2018; Worliczek, 2011, 2013; Worliczek & Allenbach, 2011). Lifou cannot be considered representative of the entirety of New Caledonia; in fact, even on Lifou there are local variations of how land tenure is exercised, and the practice is in transition (Herrenschmidt & LeMeur, 2016). However, Lifou was chosen for a number of reasons, the most important aspect being that land tenure is under the customary authorities’ (CA) responsibility.

The French Republic is present to varying degrees in daily life on the three inhabited French overseas territories in the Pacific Ocean. New Caledonia, French Polynesia, and Wallis and Futuna often evoke an idea of paradise or of a very exotic place at the other side of the planet. However, taking a closer look at the three French Pacific territories, differences between them become apparent. Island size, island type, geomorphology, culture, economy, demography, history, relations to other countries, and mobility patterns vary between them. The degree of presence of the French Republic (in the form of the presence of administrative bodies and their local competences) varies considerably among these entities: from a type of administration like in metropolitan France where

laws are executed by elected representatives and the population is used to and agrees largely with this process (e.g., in the case of spatial planning, flood risk area, etc.), to practices of customary land tenure, which may follow completely different rules. Without a land register or written law, where oral knowledge and genealogical ties are decisive in land tenure issues, the administration is not allowed to interfere. In practice, the situation on each of the islands in this article is located somewhere between these two contrasting configurations.

Different forms of customary land tenure are important on most of the Pacific Islands, and internal migration cannot be successful without acknowledging it and the cultural context in place. From a Western perspective, the local land tenure systems may seem like an non-transparent, arbitrary choice of land distribution that may hinder Western land use planning due to the absence of a land register, no visible limits, complicated structures of joint ownership, a different conception of what ownership actually means, the seemingly random land succession and distribution of usufruct, the long decision-making processes regarding the distribution and use of land where the outcome may be reversible, etc. However, there is an inherent logic in these systems, which is challenging to comprehend from the outside, but that have proven to be largely successful in the islands' history. Furthermore, the role of land and land ownership is the structuring element in Pacific societies. It is the land that gives identity and meaning. This goes beyond simply owning land, as described by Doumenge, "The control and the value of land are subject to a heated debate because their affective value remains, in the eyes of the indigenous population, largely superior to their monetary value" (2014, p. 15). Nonetheless, there is no intention to romanticise traditional land tenure systems, as in any system, there are weaknesses and failures, and conditions that can increase or undermine efficiency. An analysis that examines the strengths and weaknesses of customary land tenure in the context of PCCIM offers opportunities for approaches that differ from a Western administrative approach.

For this contribution, islands across the three French Pacific territories are compared, all of them are part of the French Republic, yet they are different from each other. Additionally, land tenure and customary implication are heterogeneous within each of the three territories, especially in New Caledonia and in French Polynesia.

The data presented in this contribution was retrieved through participant observation and qualitative interviews of more than 108 hours that were analysed. The collection of data took place between 2009 and 2016, partly during extended fields stays for the completion of a PhD (Wallis and Rangiroa, see Worliczek, 2013), partly in the context of follow-up projects (Futuna and Lifou), adding up to approximately ten months of field research.

The challenge of an anthropological approach is that it usually provides insights into only one field site; the longer the anthropologist stays, the deeper the knowledge of the local culture and dynamics becomes. This contribution, however, takes up the challenge to make a pan-Pacific cross-cultural analysis

by attempting to identify cultural differences and similarities across the entire region, an approach that Favole (2014) also took concerning Futuna. It will help us to answer the following question: “Can there be a unique migration model based on customary land tenure across the three concerned territories?”

2. The three Pacific territories

The Territory of the Wallis and Futuna Islands is the last official French overseas territory in the Pacific. Wallis has 8,333 inhabitants and a surface area of 78 km², whereas Futuna has 3,225 inhabitants across 64 km² (STSEE, 2018). Wallis ('Uvea) consists of hills with the highest peak at 151m, and a protective coral barrier around the lagoon. Due to its relatively high elevation, Wallis is not a flagship case for islands being threatened by sea level rise. However, the majority of the population lives on the east coast at almost sea level. Futuna, with a very mountainous interior (highest peak: 522m), is inhabited almost exclusively on the coast, which is a rather small strip between the ocean and the mountains. There is no coral barrier and the inhabitants are very exposed to the ocean including climate change induced sea level rise and tsunamis.

Regarding social structure, Wallis and Futuna are quite similar: Both are part of the French Republic, but with one king in Wallis and two kings in Futuna. The *Grande Chefferie* (a term also used in Lifou, with a slightly different meaning) consist of the respective king's ministers and district chiefs. Local power is complemented by the French administration and the Catholic Church. The customary structure plays a major role in the management of everyday issues. There is high mobility between Wallis and Futuna and New Caledonia, in addition to a high emigration rate.

Rangiroa is the biggest atoll in French Polynesia and is the administrative centre of the municipality of Rangiroa. It has 2,709 inhabitants (ISPF, 2017) living mainly in two villages and a surface of 79 km² with a lagoon of more than 200 km in circumference. Being a typical flat atoll, most of the land surface is just above sea level. There is a lot of mobility between Rangiroa and the main island Tahiti.

In French Polynesia, the customary structure has been replaced by the French administration since the 19th century. The creation of the French Pacific Nuclear Test Centre in the south of the Tuamotu Archipelago in the 1960s and the nuclear testing profoundly changed Tuamotu society. Currently, Rangiroa is known as a tourist destination for diving.

Lifou is the biggest of the Loyalty Islands of New Caledonia with a surface of approximately 1150 km² and 9,195 inhabitants (ISEE, 2019). Lifou is around 60m above sea level at its highest point. Villages are distributed both on the coast and in the interior. Historically, like in other places in the Pacific, missionaries assembled inhabitants around their churches on the coast. Prior to Christianisation, the interior of the island was populated. The large majority of the population is Kanak, while arrivals from Europe and from other Pacific islands have also left their traces in Lifou's population.



Table 1. Location of the islands Rangiroa, Wallis, Futuna and Lifou (image modified by author, based on Skirgård & CartoGIS, 2020)

Missionaries defined the current division of three districts each with its own customary authority (CA). In pre-Christian times areas of influence varied. CA consists of a *Grand Chef* and a number of other people with well-defined places in the social hierarchy. CA is based on a system of checks and balances with different roles and responsibilities. The guiding principle is the dualism between oldest and youngest, which penetrates all aspects of life in the social sphere, especially relationships between siblings, lineages, and clans. Life in Lifou revolves around this customary system despite the strong presence of the French administration and frequent mobility between the New Caledonian capital Nouméa and Lifou.

3. Systems of land tenure in the Pacific Islands

Marcellin Abong, Director of the Vanuatu Cultural Center, stated: “The issue of land management and attachment to the land is paramount in Melanesia. It reflects our identity and thereby the different aspects of our rich and diverse culture, built into a true art of living. At a time when globalization impacts the most remote places, most often characterized by a globalized capitalism with targeted interests and following a cold and uniform logic of the notion of property, it is absolutely necessary that the Melanesians continue to assert their right to be different” (translation by author) (Angleviel & Abong, 2014, p. 13). The relationship with land provides a linkage to put the issues explored in this article in a larger pan-pacific context. Abong spoke about “Melanesians,” but the researcher assumed that if Abong’s words are true for most parts of Melanesia, they could also resonate in other Pacific societies. This discourse would also match the perception of a significant portion of the population of Wallis and Futuna.

These words illustrate the importance of these land tenure systems, not only for the management of the land itself, but also for the question of identity and self-determination. Abong stated that a “globalist approach” has been rejected in Vanuatu. Hence, if PCCIM must happen in the Pacific, it has to be in line with these systems.

Generally speaking, hierarchy and power in traditional Pacific societies are defined by two factors: ancestry and the type of land ownership a person possesses. Ancestry defines the distance and type of relationship with the CA. However, across the Pacific Islands, the role of ancestry, genealogy, and how history defines social identity, varies considerably and should be mentioned here only briefly. Land ownership, usufruct, and other types of land use define a person’s legacy in a certain place. At a moment in history (sometimes linked to a mythical event), an ancestor was the first to clear a piece of land. He (usually, it was a man) thus had primacy over this land. As land rights were passed on, the piece of land became collective property of a family (Doumenge, 2014). Later, land plots can be split between different branches of a family, which, if done wisely, contributes to a harmonious cohabitation. Places often carry the name of a person or an event in the past, which serve as markers of identity and can remind people of social ties, obligations, and privileges. Hence, land also represents affective ties and is a reminder of history and power.

In the past, the concept of selling land did not exist. Across the Pacific Islands, this has partly changed. On the islands analysed in this article, land can only be sold to foreigners on Rangiroa. On the other islands, traditionally owned land cannot leave the family through a financial transaction. However, there are different types of leases usually applied to foreigners and commercial purposes. Even in Rangiroa, inhabitants try in general to keep their family land together.

There are different forms of land use rights. The first to arrive is generally recognised as the land owner. He (or his descendants) can then grant new arrivals land use rights or even give land away, a practice with local variations, discussed below. Usufruct varies in degrees and can be a source of conflict. After a few generations, people may ‘forget’ the initial agreement between the original land owner and the new arrival. This is why genealogical knowledge is crucial. Traditionally, there would not be a land register and a land plot’s history, limits, and ownership structure were passed on orally. This is still the case in large areas of the Pacific Islands and it is key to adaptive measures of PCCIM.

In the islands investigated, the existence of a land register and land tenure under customary authority are mutually exclusive. In Lifou, and Wallis and Futuna, there is only land tenure under CA. In Rangiroa, administrative procedures and a land register replaced CA, which had elaborate practices of customary land distribution before the arrival of the Europeans. These two systems vary greatly in regards to their flexibility and adaptability.

In this paper, the issue of land tenure is analysed through four lenses: the intergenerational transfer of land rights, the geographic distribution of land plots, the distribution between families, the extent of power exercised by CA, and the different types of ownership or usufruct. We chose this approach to give a balanced view of different aspects of land tenure.

4. Land ownership on different islands

4.1. Wallis & Futuna

Land tenure is under customary control and the French Administration is not permitted to interfere. There is no land register, land cannot be sold and the CA are the final decision makers. In the interior of both islands, there is a rather barren land area (*toafoa*) under exclusive customary control, even though large parts of the *toafoa* have been distributed to the population in Wallis.

Intergenerational transfer of land rights

Ambilineal rules dominate the intergenerational transfer of land rights, whereas titles in the social sphere tend to be transferred from father to son. The oldest male member of a generation in a *kaiga* (extended family, as well as land belonging to the social unit) is usually the head of family and in charge of internal land affairs. The residence pattern does not follow one strict rule, rather questions of space and convenience are the decisive factors in post-marital residence. The same applies to the rights over plots for agriculture. Usually, land plots are distributed within a family after a few generations. Land-splitting clarifies the state of ownership. However, there is an inherent flexibility to this system since people usually have access to many different land plots that they share with family members. Questions of land use and ownership are usually settled at family reunions, where the head of the family makes the final decision about the distribution of land plots. Distribution is supposed to be permanent.

Distribution of land plots (geographically and between families)

There are different land plots under customary authority, but this study focuses on family land plots. In Wallis, most families own land plots on the coast and in the interior of the island. As a general rule, plots on the coast are used for housing and plots in the interior are used for planting crops. However, the interior of the island is becoming increasingly inhabited, mainly due increasing population density on the coast, emerging infrastructure (roads, water, electricity) in the interior, and changing family structures (Worliczek, 2013). Plots are distributed across the island, but people usually identify with one village. This uneven geographical distribution may be rooted in the ambilineal residence pattern. Ownership and access can be negotiated within the extended family (Worliczek & Allenbach, 2011).

In Futuna, the situation is different due to the configuration of the island. Families live on a small coastal strip. Historically, people also lived in the higher parts of the island, plateaus behind and connected to the coastal villages, and under the responsibility of the village chief. In some areas, people have started to move to these higher zones again, and there are diverging understandings

about their ownership. The toafa itself is not inhabited. In the coastal villages, a family land plot usually stretches in a strip from the sea to the mountains with the crops planted closer to the mountains. Plots are managed within the extended family (Vladyslav, 2005).

Extent of power exercised by CA

The CA have a consultative role when families cannot solve land disputes internally. They are also supposed to know the limits and the history of land plots in their area of responsibility. In general, the way land disputes are dealt with varies depending on the scale of the issue, which may range from internal family issues to questions regarding the whole island. In recent years, tensions about royal succession in Wallis in particular and disagreements about the constitutions of the Grande Chefferie in all three kingdoms have weakened the authority of the CA. In general, they believe that chiefs should be considered as role models whose word is to be respected. This may be challenged by the younger generation. However, within their own land plot, a kaiga has relative autonomy towards their CA.

Different types of ownership or usufruct

Distribution of land plots within a family is usually permanent. However, usufruct can be given to another family member or even a foreigner. These rights are granted temporarily, for example, for the purpose of planting crops, and cannot be transferred to the next generation. Furthermore, there are types of arrangements similar to a lease for the housing plots. Initial ownership does not change and there is not necessarily financial compensation for land use except for transactions with foreigners or for commercial use. Questions of primary land ownership may arise between different branches of a family, hence the need to split the kaiga's land after a few generations in order to avoid conflict. Generally speaking, these kinds of conflicts based on historical land rights are not as present as they are elsewhere in the Pacific.

4.2. Rangiroa

Rangiroa is quite different to the other islands in this article. Firstly, it is an atoll. Secondly, traditional land tenure was abolished in 1866, the year the Civil Code was adopted in Rangiroa. This dramatically impacted land tenure and family structures. As space is limited on an atoll, land is a major source of tension. Currently, there are official land titles and a land register, which is often contested. Since 1933, through new legislation, land plots became difficult to split within families, leading towards land expropriation and a pushback of the traditional system of land tenure. However, Rangiroa residents insist that despite the introduction of the Civil Code and subsequent laws, the ancient system of land tenure was still very common until the 1960s. It continues to influence land tenure decisions within families creating a "legal pluralism" in Rangiroa and other parts of French Polynesia (Bambridge, 2009). Rangiroa is the only island in this contribution with an official Western land

tenure system in place. We analyse the traces and practices of the customary system in order to explore the opportunities offered by traditional land tenure in the context of PCCIM.

Intergenerational transfer of land rights

In the past, ambilineal residence patterns prevailed (Ottino, 1972). The choice of locality defined the affiliation of an individual to an *'ati* (similar to an extended family that is linked to a defined place). A person born to a family in a certain place, would have ambilineal land rights associated with it. The current system of written land titles allows ownership claims over land plots even when people are absent, a development that is not in line with the traditional system where land has to be used and a person has to show presence to establish ownership. Simultaneously, and this may seem like a contradiction, a land claim can be made through genealogical ties, even if a person has been physically absent for a long time.

Distribution of land plots (geographically and between families)

Rangiroa is a large atoll, with only two villages and a large *secteur* (areas with coconut plantations, spread across the whole atoll away from the villages) which is, apart from a few exceptions, not permanently inhabited. In the villages, land is scarce, and land rights are a pressing issue. According to Ottino (1972), land plots in the villages were preferably located close to the lagoon, however, some land plots stretch from the lagoon to the ocean. The ancestry of Rangiroa's inhabitants is not limited to the atoll itself, but spreads as a large network across different islands, primarily to the Îles sous le Vent, but also to the area of Mihiroa in the North-West of the Tuamotu Archipelago (Worliczek, 2013).

Extent of power exercised by CA

The Civil Code replaced the CA. Currently, the mayor is considered the most powerful person on the island. However, within families, the *matabiapo* (head of an extended family and in charge of land questions) is still considered the final decision maker. This system does not uniformly apply; some families rely more on it than others. In French Polynesia there is public discussion of traditional management of resources and territories within the movement toward reclaiming Polynesian culture (Bambridge, 2016). Currently, these intellectual debates have yet to visibly impact Rangiroa.

Different types of ownership or usufruct

Some families are considered "founding families" with their genealogy rooted in the history of the atoll. They have strong claims to their family plots in Rangiroa's villages. Since subsistence agriculture does not play as major a role as it does on the other islands, the question of usufruct is mainly limited to residential areas in the villages. However, people usually try to stay on the land of their extended family. Usufruct in this context is more complex since the inherently temporary character is questioned more easily when there is a house

on the land. In addition, since land can be purchased and monetary value plays an important role in housing and tourism infrastructure, the practice of usufruct is not spread as widely as on other islands.

Should Rangiroa's residents decide to leave Rangiroa, an obvious destination would be Tahiti since there is an established mobility pattern between Rangiroa and Tahiti, and family ties between the islands are strong. However, for a number of reasons (Worliczek, 2013), Tahiti is not always the first choice, and it does not work within the traditional system of land ownership as it is still, in part, practiced in Rangiroa. There are alternative destinations (see above) where they could claim land through their ancestry, some of which are not atolls, for example, Makatea.

4.3. Lifou

In 1875, a tsunami hit the South-east coast of Lifou. The Southern district of Lösi, notably the coastal *tribus* of Luengoni, Joj, Mou, and Ahmelewedr were severely impacted. Prompted by this historical event, LeDuff (2018) studied the risk of tsunamis and the associated factors of vulnerability and resilience in Lifou. As a consequence of this tsunami, the Chefferie of Mou, including the clans attached to it, relocated from the seashore to higher ground. The story of the tsunami is widely known, and people remember that it led to migration in response to a threat coming from the sea.

Land tenure is under the authority of the customary chiefs. There are variations within Lifou, but there are shared practices in Lifou that extend across vast areas of Southern Melanesia. In this article, there is a particular focus on the Southern district of Lösi. For the sake of clarity, details will be omitted in order to identify the factors that are determining for potential migration movements.

Jean-Marie Tjibaou, a charismatic political leader and important figure in New Caledonian history, is associated with this quote: "The land does not belong to us, we belong to the land." On the Loyalty Islands of New Caledonia, land is almost entirely considered as customary land "Incommutables, insaisissables et inaliénables" in the Governor's decree from 22 January 1868 on indigenous ownership. This means that land cannot simply be purchased and land tenure questions are managed by the respective CA. Knowledge of ownership and limits are primarily passed on orally and the respective *Chefs de Clan* are considered specialists in land planning (Herrenschmidt, 2004, p. 242) within their areas of responsibility.

A written land register exists only in fragments for the inhabited zones. It does not seem to be deemed an urgent requirement at this point and may even cause unnecessary tensions. In Lifou the question of the availability of space is not dominant since the island is reasonably large compared to its population. The limits of land plots only become visible when neighbouring plots are actively used. Landmarks such as trees or rocks identify boundaries and are memorised by the owners. This practice may lead to conflict if there are

divergent understandings of boundaries or the stories of ownership. However, the most important question is usually to determine who was the first occupant, hence the “traditional owner” of a land plot.

Intergenerational transfer of land rights

Similar to clan membership and inherited titles, the intergenerational transfer of land rights in Lifou is patrilineal. There are exceptions which may be applied under certain circumstances. Land plots are distributed between a married couple’s sons, always taking into consideration the relationship between the oldest and youngest.

Distribution of land plots (geographically and between families)

Land ownership is always linked to historical events that give descendants of a certain ancestor the respective rights and land cannot be sold. Around the year 1800, most of Lōsi’s inhabitants lived in the interior of the island, where most of the yam fields are currently. People would only come to the coast for fishing. The arrival of the missionaries in Lifou restructured the spatial distribution of the inhabitants and people moved to the coast. Hence, they had to ask the coastal land owners for permission to reside on their lands. This is an example of land owners granting residential rights to new arrivals. This mechanism could potentially prove useful in the context of PCCIM. Generally speaking, many of people who now live on the coast also have access to land plots in the interior even though in the past, the distinction between the “coastal clans” and the “terrestrial clans” determined land access and their customary role and status.

Extent of power exercised by CA

The extent of power of the CA in land questions depends on the situation. The Chef de Clan decide on land distribution within a clan. The Grand Chef decides land issues between clans and on a district level. Historically, he does not belong to the families being the first occupants, rather he occupies the role of a judge. However, if someone requires a plot of land, he will consult the Grand Chef who will direct him towards one of the land owner’s clans. It is then the Chef de Clan who deals with the requester regarding the land plots that are under his responsibility.

Different types of ownership or usufruct

Throughout history the power of and the respect for “kings” (with local areas of influence) were continually reconfirmed through rights and obligations that were defined through a distinguished social structure. These structures are not immediately visible to outsiders, and the missionaries also interfered in these social structures. However, they still play an important role in everyday life of the people of Lifou. Everyone knows exactly the clan and lineage of a person in addition to the rights and obligations associated with their position.

Generally speaking, there are two types of land rights in Lifou. The first are traditional landowners tracing their genealogy back to the first occupants of the island. Their land rights are usually not disputed and they can give land use rights to other families. These other families arrived later and have the second type of land rights for a number of reasons including: strategic alliances, war, immigration or other reasons. They often have a right to usufruct, usually rooted in historical events either in a distant or recent past. These two categories of clan land tenure are predominantly, but not always, distinct. The relationship between these two categories is individual. Land can be given for reasons of alliance, as a sign of appreciation, or for practical reasons. In the past, land ownership was sometimes handed over definitely. In recent times, however, granting usufruct is more common, hence the majority of land arrangements fall under this second category.

These granted land rights are associated with a number of obligations. Land must be used for farming or for the construction of a house. If land is not used, claims weaken over time, a phenomenon that can be observed elsewhere in the Pacific (Worliczek, 2013). In the case of Lifou, this applies in particular to families that are not the traditional landowners. Both categories (with a number of nuances with different roles, rights, and obligations within these categories) are, in the case of Lösi, loyal to the Grand Chef Boula, considered the guardian of the district. Ties between the different types of families and towards the Grand Chef are repeatedly reinforced through customary offerings. The most visible is the *iölekeu*, where special yam roots are offered in a ceremony that follows strict rules and that displays the social hierarchy. The *iölekeu* is part of a complex system of customary offerings across the social fabric, always taking into consideration the guiding principle of eldest/youngest which permeates social relations in Lifou. This principle is applicable between different lineages of families as well as between siblings.

This description simplifies the complex reality of the system in Lifou for brevity. The article concentrates on the type of social ties that impact where people live in line with their social ties. This is relevant because it underlines that a place of residence is not chosen randomly and cannot be changed without considering these principles. Hence, migration is not a random act.

For the purpose of this article, we will examine a few more aspects relevant for implementing inland migration in Lifou:

Access to land in the interior while having a house at the coast vs. general mobility

Similar to other Pacific Islands, people often have multiple places of residence. Land is used for housing and for planting crops, often in a different location. This may require travel between the coast and the interior, but both places are considered as being part of a person's identity. Furthermore, it is common that (in particular unmarried) family members live temporarily with members of their extended family. The degree of mobility is in general quite high.

Loyalty to a chief

Traditionally, a resident cannot simply move out of the area of influence of a chief. History defines the identity of families and this hierarchy is not easily breached. If a person wants to respect custom and contribute to the social coherence of society, simply moving without a chief's consent must be avoided (this concerns primarily movements within Lifou and less strongly moving to Nouméa for work or study). This is particularly relevant when permanent relocation is planned. Even people from Lifou living in Nouméa may want to claim their identity in Lifou at some point by cultivating yam or constructing a small house. Neither action happen randomly. The place where these actions take place are in line with the genealogical claims of the family of origin with the chief's approval. If this principle is not respected, conflict arises.

Infrastructure

Another aspect is determining physical access to a land plot for reasons of convenience. The interior of the island is naturally dense with vegetation and crop gardens can be conveniently located close to a road, or further inland. Cars and paved roads have eased access to the interior. The road network in Lösi connects the major tribus, which also have access to drinking water and power as convenient commodities. This infrastructure can be extended by the authorities of the Province of the Loyalty Islands, but only through the collective demand by a critical mass of people desiring to construct their houses in an area, a situation comparable to Wallis.

PCCIM in Lifou: Land tenure as an evolving system and the "customary responsibility of wellbeing" as key

Social change is also taking place in Lifou. Historically, the idea of "ownership" was associated with taking one's place in a succession of past and future generations; Monetary value was not important. To a certain degree, this still applies to Lifou. Land is used in two different categories: the place where a man (because usually, it is a man) builds his house, and the place where he plants his yam (Herrenschmidt, 2004). It is only through the practice of actively using the land and taking care of it that a person can create the character of a land plot, while knowing its history and its limits. A growing number of people originating from Lifou currently live in Nouméa or have jobs with a regular salary in Lifou. However, they continue to plant yam if they are able and contribute to the customary fabric, not only in the case of the iölekeu, but also on other occasions such as weddings or funerals. Furthermore, they may articulate their land claim in Lifou even when they do not live there permanently.

People have learnt to navigate between the customary system of Lifou and the requirements of a westernised society. This also impacts an individual's notion of land tenure. In general, however, this customary system of land tenure is widely respected and practised. Land-related conflicts arise, often related to people's different versions of history that insinuate different versions of land rights. In this case, the CA are consulted. This, of course, presupposes

a stable chieftainship. This system of customary land tenure may be challenged by some residents who would prefer a land register which would, from an administrative point of view, facilitate the planning of PCCIM. However, this does not consider the social and cultural reality or illustrate the complex reality of the interwoven ties between land and people that are decisive in questions of land tenure. Legeard wrote, “the implementation of a customary land register and land tenure depend on historical facts as well as on the complexity of interpersonal relations within clans, tribus and districts” (2014, p. 44).

The system currently in place creates a space of opportunity regarding questions of PCCIM. The aspects, described above, illustrate that several factors play a role in the context of PCCIM in Lifou. These factors are to be found in the social sphere of the customary fabric. The key concept of resilience through migration lies in family lineages and loyalty to a Chef. There is a “customary responsibility of well-being.” The respect for and recognition of a Chef is reciprocal and is well embedded in the dualist organisation of the society (e.g., older / younger and first to arrive / later arrived) in the temporal dimension. If the *iölekeu* is the visible symbol of this social contract and a public sign of the recognition of hierarchy and social order, it also reaffirms the responsibility of a chef towards his “subjects” or clan. This responsibility becomes visible when the Chef has to mediate a conflict or when someone asks to use a piece of land. His decisions are to be respected, which requires that the concerned people trust their Chef. This trust is a big responsibility, decisions are not made easily and a number of factors have to be taken into consideration.

Transferred to a scenario of PCCIM away from the coastline, this responsibility comes into effect. If a Chef is respected, people trust that in case of need, he will find a spot to place them.

5. Guiding principles for a migration model

Given the context covered in the previous sections, we now return to the initial question: Can there be a migration model based on customary land tenure across the three concerned territories? So far, there are several guiding principles that have been investigated.

Most people have access to land at the interior of the island. Should they face the situation of having to leave the coastline, there are potential destinations that residents are already linked with. On the islands, excluding atolls, most inhabitants have both access and land rights to land on the coastline (where most people currently live) and to land in the interior, which is usually located on higher ground. This land is used mostly for crop cultivation. However, the factors of access and infrastructure is important. In Wallis and Lifou, the interior is relatively accessible with a few major roads and partly with a water and power supply. On Futuna, the plateau is more difficult to access, and the customary chiefs hesitate to make it accessible to the population. Rangiroa as an atoll is in a completely different situation. The rights of land use associated with land plots at the interior vary, they can be practiced in different configurations: Families can have a role as customary owners, or have usufruct

but no ownership, the customary chiefs can be the guardians, and variations between these different types. However, the practice associated with these land plots indicates that most families have ties to one or more plots in the interior.

Land rights have to be reaffirmed in order to claim them. So how strong are the land rights on a certain plot?

Is the family the traditional owner or guardian, or is the claim traditionally based on the right of usage? Ownership varies with the purpose of the piece of land. It may be temporary in some cases, or one may be allowed to cultivate yam, but not to build a house on this very piece of land. In Lifou, with few exceptions, land ownership is patrilineal. Wallis and Futunais currently predominantly ambilineal. In Rangiroa, written property titles are necessary and, at least officially, the inhabitants have to follow the French administrative system.

The existence of infrastructure is important, land rights alone are not enough.

When land is only used for cultivation, a small path through the dense vegetation is enough to make use of the land. However, if people were to live on this piece of land permanently, other issues arise. There is the question of access. Particularly in Lifou, it is crucial to make sure that the physical access to a piece of land is granted by the owner of an adjacent land plot that has to be crossed in order to reach the piece of land. This can be a source of conflict if not settled clearly. This issue may increase if it would lead to a permanent state through roads, a water supply, and power lines. In general, there has to be a critical number of people that intend to live permanently in an area in order to be granted power and a water supply. On all islands considered, there are some people who live secluded and that do not have access to these amenities, but the general tendency is that a basic supply is demanded and can be crucial in the decision whether or not to settle in a location.

Mobility: people are already moving between coast and interior

In Lifou and Wallis, there is already a noticeable tendency of particularly young people moving to the plateau. The fear of rising sea levels is usually not the driver, rather the size of the land plots and the existing infrastructure.

The importance of primary land ownership: in the case of PCCIM, these historical linkages have to be considered where they are determining social factors.

The issue of primary land ownership is not as important of an issue in Wallis and Futuna compared to Lifou where it is the all-structuring principle. A hypothesis for this difference is that the first settlement on Lifou dates back longer than in Wallis and Futuna. The interference of the missionaries would also be an interesting point to consider, since Herrenschmidt (2004) stated that in the Northern Lifou district of Wetr, there are patterns of land strips belonging to one family reaching from the sea to the interior. This spatial division was initiated by the missionaries and it is a pattern that can be observed in Futuna as well. In Rangiroa, the question is different because of the configuration of an atoll where the population historically had the tendency to live oriented towards the lagoon.

The importance of primogeniture is very high in different sorts of social interaction and can play a major role in PCCIM.

Primogeniture is strongly pronounced in Lifou, but not as much in Wallis and Futuna, and Rangiroa. In Lifou, the balance between the oldest and youngest assures a reciprocal relationship, which structures society to give every person / lineage a precise place.

The potential for inter-island land access: People may have land rights on other islands belonging to the same political unit that need to be confirmed.

In Rangiroa there is no possibility for internal migration, but there are other options within the same political unit as ancestry spreads across a vast area that includes other islands. In theory, a Rangiroa resident could ask a relative on another island for a piece of land, however, as land rights are reconfirmed through presence and use, it is likely that this procedure would be not simple.

In addition to the guiding principles mentioned above, the last few decades have brought a major shift in land use practices on the islands investigated in this study, which reflects a change in life style and demography. In Wallis and Futuna, and Lifou, where land cultivation was and continues to be an important source of nutrition and identity, there is a decrease in land cultivation. This is due to a number of factors, such as population decline (Wallis and Futuna), a change in occupation patterns (from land cultivation towards paid jobs), and a shift towards western imported foods. In Rangiroa, the cultivation of land has never held this central place, except for the commercial cultivation of coconut. Land, however, plays a major role in terms of identity, not always in practical terms, but in symbolic terms to affirm land rights for future generations.

Across all four islands considered, the interplay between confirming land rights through presence, usage, and claims through ancestry allows a number of possible outcomes in the context of PCCIM.

6. Parallels, differences, advantages and disadvantages: the fourfold matrix

Current local land tenure systems are strongly interlinked with the social structure in place. Cross-referencing different elements is a requirement and adapting them to the “contextual need” of PCCIM (Worliczek, 2013, p. 154). We propose four determining factors to develop a model to compare the concerned islands. The factors are parallels, differences, advantages, and disadvantages of each island in the context of PCCIM. These four factors are cross-referenced with the four lenses discussed above: the intergenerational transfer of land rights, the distribution of land plots (geographically and between families), the extent of power exercised by the CA, and the different types of usufruct.

This four-fold matrix is the appropriate tool to assist in asking the right questions and to compare the possibilities on different islands in the context of PCCIM. The matrix facilitates a robust analysis of the possible PCCIM

outcomes in the different locations. Rangiroa is, in many ways, an exception due to the superposition of legal systems and we consider what is still practiced and known of the pre-European system of land tenure.

Explanations of the four determining factors:

A) Parallels

1. Intergenerational transfer of land rights

On all islands land is inherited to a group of descendants, not one single person.

2. Distribution of land plots (geographically and between families)

Through diverse ancestry, families tend to have access to land plots both at the coast and at the interior where this is geographically possible.

3. Extent of power exercised by CA

With the exception of Rangiroa, CA are in charge of land affairs. They take the final decisions in land issues. Depending on the type of ownership, the degree of their intervention varies.

4. Different types of ownership or usufruct

A land claim gets stronger through the actual use of the land; presence is important. Usufruct can be granted by a land owner on a temporary or permanent basis if the original ownership status is respected.

B) Differences

1. Intergenerational transfer of land rights

In Lifou land rights are patrilineal, on the other islands they are ambilineal.

2. Distribution of land plots (geographically and between families)

In Lifou and Wallis, people have access to different types of land plots, while in Futuna it is limited. In Rangiroa, people could make use of a wider network of ancestors spreading over several islands.

3. Extent of power exercised by CA

In Rangiroa, this authority has disappeared. On the other islands, its presence is quite strong. In Lifou, there is an emphasis on clan membership that strongly influences social interaction, which is less visible in Wallis or Futuna.

4. Different types of ownership or usufruct

The distinction between first occupants and new arrivals determines ownership. In Rangiroa, land plots for crop cultivation are secondary. Furthermore, land can be purchased through a financial transfer, which is not the case on the other islands.

C) Advantages in connection with PCCIM

1. Intergenerational transfer of land rights

In ambilineal systems people theoretically have a wider range of access to land plots (both from the paternal and maternal side). However, at the same time there are more people claiming rights to these plots, which makes distribution more complicated.

2. Distribution of land plots (geographically and between families)

The diversified access to different types of property within families allows for unpragmatic adjustments in residence on family lands. CA have to be consulted where necessary, but the chances of finding internal solutions are high.

3. Extent of power exercised by CA

The absence of administrative procedures is a clear advantage. The authorisation to move to another land plot can (in theory) be obtained quite quickly through asking permission, even though this mechanism is executed slightly differently on each island. The principle of “contextual need” is crucial and can be applied.

4. Different types of ownership or usufruct

Since the practice of granting usufruct to other people is widely practiced, this system can logically be advantageous in the case of PCCIM.

D) Disadvantages in connection with PCCIM

1. Intergenerational transfer of land rights

The lack of public documentation, except in the case of Rangiroa, may be considered a lack of transparency.

2. Distribution of land plots (geographically and between families)

Most families have access to land. Social hierarchy and history define the individual situation. Families with insufficient access to different types of land plots would have to consult other channels, notably through CA.

3. Extent of power exercised by CA

If oral agreements are not remembered the same way by all people involved, they may lead to disagreements. The absence of a land register may complicate technical planning for the future.

4. Different types of ownership or usufruct

The social order which is also prescribed in space may not in all cases be transferable on new grounds. The social order of first occupants and new arrivals would potentially be impacted.

7. Conclusion

The fourfold matrix of parallels, differences, advantages, and disadvantages reveals that the customary systems on the islands have many aspects in common. However, they vary in their details and in practice, and these details impact how land issues are dealt with. In the case of PCCIM, it is advisable to concentrate on the flexible nature of customary land tenure systems. History has shown that, with the exception of Rangiroa, the respective islands have defended their right to decide on land issues without the involvement of foreigners.

The balance between a population reconfirming respect for their CA and the latter taking responsibility can result in rapid actions in response to a “contextual need,” should the situation require. Decisions can be taken locally and adapted to the current situation. Clearly, such a process has the potential for friction, but it is the most appropriate approach with good chances of being successful on the longer term.

In this paper, four islands (Wallis, Futuna, Rangiroa, and a special focus on Lifou) have been investigated through four lenses: the intergenerational transfer of land rights, the geographic distribution of land plots and between families, the extent of power exercised by CA, and the different types of ownership or usufruct. Consequently, an analysis of the land tenure system in place and its potential in case of PCCIM returns us to the initial question of this paper: Can there be a unified and culturally coherent migration model? The answer is no. There will not be one model that fits all Pacific Islands due to their differences. Every island, or island group, has to be treated individually, taking into consideration local culture, history, social structure, mode of administration, and geomorphological configuration. However, the analysis of the common threads and variations shows that guiding principles (access to land at the interior, strength of land rights on a certain plot, infrastructure issues, concepts of mobility, importance of primary land ownership, importance of primogeniture, and potential inter-island access) are common across the islands. The fourfold matrix of parallels, differences, advantages, and disadvantages shows which elements have to be considered in a given place and how examples can be drawn from other islands. The results of this study and the observations revealed by the fourfold matrix provide valuable insight on PCCIM processes and other adaptation measures in order to develop locally appropriate and culturally coherent models.

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