

Transformations to Fa'amatai [Sāmoan Chiefly System]: Implications for Climate Change Resilience in Samoa

Anita Latai Niusulu, National University of Samoa

Abstract

Being resilient in the face of climate change is important for island societies such as Samoa, which currently face the consequences of rising temperatures, unpredictable rainfall and wind patterns, and sea level rise, yet there is a dearth of academic literature on the subject. This paper argues fa'amatai connections are crucial to the protection and survival of individual Sāmoans and communities. Therefore, understanding the resilience of Sāmoans to climate change requires assessment of Sāmoans' perceptions and actions in the context of their positioning (and related connections, responsibilities and obligations) within this complex system. The author uses a non-equilibrium cultural ecological lens to demonstrate fa'amatai's resilient nature as a social system. In the past two hundred years, fa'amatai has evolved to become a complex system encompassing not just connections within extended families and villages but also churches, central government and non-governmental organizations that operate within and outside Samoa. The multiple and multi-layered connections which currently exist within fa'amatai has provided opportunities for individual Sāmoans and communities to develop resilience to climate change.

Keywords: fa'amatai, resilience, climate change, Samoa

Introduction

Climate change science has shown that the impact of these events is heightened on islands, but there is insufficient information on how island societies are enduring and anticipating climate change. This article draws on non-equilibrium cultural ecological views of the resilience of systems to demonstrate how the Sāmoan institution of *fa'amatai* has enabled Sāmoans to endure environmental challenges and could possibly develop their resilience to future climatic changes. The article first explains why a non-equilibrium cultural ecological view of social systems is appropriate to assess the resilience of Sāmoan society. Next, it provides a snapshot of the *fa'amatai* system, the changes which have occurred since the 1800s and how these changes have been crucial to the development of national frameworks for climate change resilience in Samoa. The final part of this paper proposes conceptualizing the perceptions and activities of Sāmoan individuals and communities within *fa'amatai* structures would yield a more adequate portrayal of their resilience to future climatic and other environmental changes.

Conceptualizing resilience from a 'non-equilibrium cultural ecological' view

Non-equilibrium views of the resilience of systems

Perspectives of resilience in ecology and evolutionary economics have provided useful insights that inform understandings of resilience and provided the theoretical grounding for this paper. The author adapted the 'non-equilibrium' view of resilience in its assessment of Sāmoan society because it provides a more realistic depiction of the nature of systems as well as environmental changes. The non-equilibrium view recognizes the complex and dynamic nature of systems (Holling 1973; 2005; Holling *et al* 1998; Grabher and Stark 1997) and the importance of time and spatial scales in contextualizing such changes (Gunderson and Holling 2002; Pendall *et al* 2007). Furthermore, the non-equilibrium view emphasizes the important role of experiencing disturbances in developing the

buffering capacities of systems to endure future disturbances. Exposure to changes or disturbances is seen here as crucial to developing resilience as it allows the system to 'probe its boundaries' and develop response mechanisms/ buffering capacity. Moreover, exposure to disturbances could enable transformation of the system or its parts. Echoing Holling's ideas, Berkes and Folke 1998 (Folke 2006), in their studies of social-ecological systems, stated resilience concerns the opportunities that disturbances create in terms of the recombination of evolved structures and processes, renewal of the system and emergence of new trajectories. Using the non-equilibrium view of resilience is therefore significant in the context of islands and climate change as it enables one to explore how islands are taking advantage of opportunities created by environmental changes including climatic events. Understanding the resilience of island communities, from a 'non-equilibrium' view requires the knowledge that climate is part of the environment which is continually evolving across space and over a time continuum. Climate events have always interacted in complex ways with other biophysical and human elements to change the character and appearance of the environment at various spatial scales and will continue to do so.

Cultural ecological perspectives of systems and their adaptability

The cultural ecological approach is used because of several important reasons. First, cultural ecology repositions humans into studies of the environment. Here, investigations of resilience emphasize social rather than physical indicators of resilience. Secondly, this approach recognizes the adaptability of human societies. The cultural ecological notion that 'humans have the capacity to adapt' and survive environmental changes (Sauer 1952; Steward 1955; Boserup 1965) is used to challenge the deterministic and hazards-based nature of Western science and the related notion of vulnerability of traditional societies which underpins the literature on climate change and islands (IPCC 2001; Storey and Hunter 2010; Veiayataki 2010; Sutherland *et al* 2001).

Moreover, cultural ecological studies have provided historical evidence and insights which prove that human societies living in extreme environments are highly dynamic, employing various survival strategies. Even though some authorities have argued that the 'crisis effect' of past environmental changes on islands such as Rapa Nui in the Pacific Ocean (Easter Island) (Bahn and Flenley 1992 cited in Barnett 2001; Nunn 2007) the majority of island communities have historically been able to adapt and survive into the current century. Survival strategies include agricultural diversity and various techniques for storing and preserving food (Buck 1930; Watters 1958; Waddell 1975; Thaman 1990; 1995; East and Dawes 2009; Thomas 2015), observing *tapu* [sacred places] (Grimble 1933; Zann 1990; Johannes and Yeeting 2000), occupational multiplicity¹ (Comitas 1963; Frucht 1967; Baldaccino and Bertram 2009), monitoring and anticipating, even predicting, changes in the weather through the behaviour of animals, plants and other physical elements of the environment (Lefale 2010; Hetaraka 2012).

Furthermore, the cultural ecological approach was employed because it asserts the importance of holistic and place based methodologies to exploring how human societies adapt. It is the

¹ These longitudinal studies of islanders reveal individuals who respond to shifting opportunities in different stages of their lives. They revealed most islanders avoid rigid specialization. Instead they would pursue several occupations, either simultaneously or successively, and in a variety of places.

interconnectivity or the combined role of structures, processes and activities which buffer societies from disturbances and which have ensured their survival. For instance, many studies have noted the interplay of island social networks, mobility and capital and how it had sustained island societies over time and space (Keesing 1934; Waddell 1975; Chapman and Prothero 1985; Chapman 1985; Watson 1985; Hauofa 1993). Recent studies argue island societies have expanded internationally with remittances from islander diasporas, such as Pacific communities in New Zealand, Australia and the United States, supporting economic life in the islands which have been particularly crucial to islands enduring natural disturbances such as cyclones and tsunamis (Bertram and Watters 1985; Fauolo 1993; Barnett 2001; Bertram 2006).

Sāmoan society and its institution of *Fa'amatai*

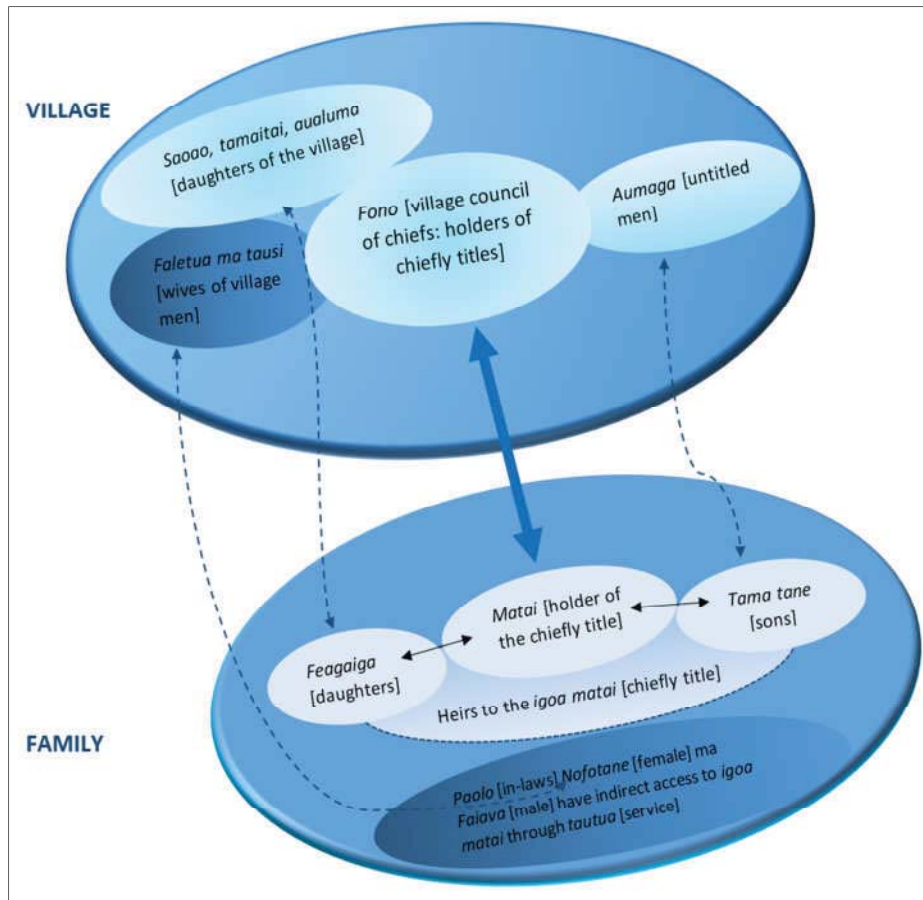
A key aspect of Sāmoan society which is crucial to the assessment of its resilience is *fa'amatai* because the organization and governance of *'āiga* [extended family unit] and *nuu* [village] in Samoa is based upon this system. *Fa'amatai* ensures participation by all related members (refer to Figure 1). Each Sāmoan family comprises *matai* [holders of chiefly titles], *tama tane* [sons], *feagaiga* [daughters], *paolo* [in-laws] and children. The *sa'o* [main chiefly titleholder] is the head of the *'āiga*. In the Sāmoan context, *pule* [authority] over resources is held in the chiefly title, yet the person who holds that title is only the trustee or caretaker (Aiono Le Tagaloa 1992; Vaai 1999). The notion of *suli* [heir through blood connection] means every family member has a right to become a *matai*, upon the agreement of all of the other *suli*. According to Aiono Le Tagaloa (1992: 122), "...the holder of the matai title is either male or female, very young or old, wealthy or poor, western-educated or not..."

The organization and governance of the village mirrors the situation at the extended family level. The village is managed by the *fono* [village council], a decision-making body consisting *matai*. Access through blood connections to the *matai* ensures that the authority of the village council is neither supreme nor separate (refer to Figure 1). These connections guarantee a voice for opinions through the family member who holds the title when he or she stands to represent her or his family in a village council meeting. The societal groups that constitute the *fa'amatai*, notably the *aumaga* [untitled men] and *aualuma* [daughters of the village] are integral, connected through blood and impact upon decision making that occurs at the centre rather than at the top. All groups play a role in the process of government and in the provision of goods and services (translated from Aiono Le Tagaloa 1997).

Soalaupule [consensus or consultative decision making] and *autasi* [consensus agreement] are central to decision-making in *fa'amatai*. Both concepts signify the holistic nature of the system and how it enables the inclusion of everyone in the decision-making process. *Soalaupule* refers to the importance of every member of the council being included in the process. Therefore, a decision is not final unless all members of the council agree. Time does not control such deliberations. "Rather the emphasis is on agreement and assurance so that all parties are satisfied. The discussion of an issue...can be postponed for another day if some members do not agree, as in the saying *E sili ona moe le toa*" (Latai 2008: 64). The ultimate decision is that 'sanctioned' by the village council (Meleisea 1987), *afioga tutasi* [council decree] (Tuimalealiifano 2001). Issues such as recognition of land claims, boundaries and fishing rights become effective by the agreement of the *fono*. 'Outsiders', notably *nofotane* [female in-laws] and *faiava* [male in-laws] of village residents are not

directly involved in the decision making process. Their opinions could only be voiced through their spouses and children.

Figure 1: Fa'amatai in the early 1800s (Source: after Aiono Le Tagaloa 1997).



Suspension from village *fono* activities and banishment from the village are the two main forms of disenfranchisement. “In the first form, detractors are cut off from participation in local governance but are allowed to remain on their land and in their houses. The second form is... dislocation from the village” (Tuimalealiifano 2001: 319). According to Meleisea (1987), banishment was reserved for offences that made it impossible for the village to tolerate the presence of the offender. In most cases, when a *matai* was banished, his entire *‘āiga* was sent into exile with him. Refuge is usually sought in another village where relatives live. There, they take on refugee status until, after certain obligations had been met, such as *ifoga* [ceremonial request for forgiveness], they can be re-admitted to their home village. In some cases, exiled families can request to become incorporated into the host village through titles of refugee origin.

The resilient nature of fa'amatai: adapting external influences since the 1800s

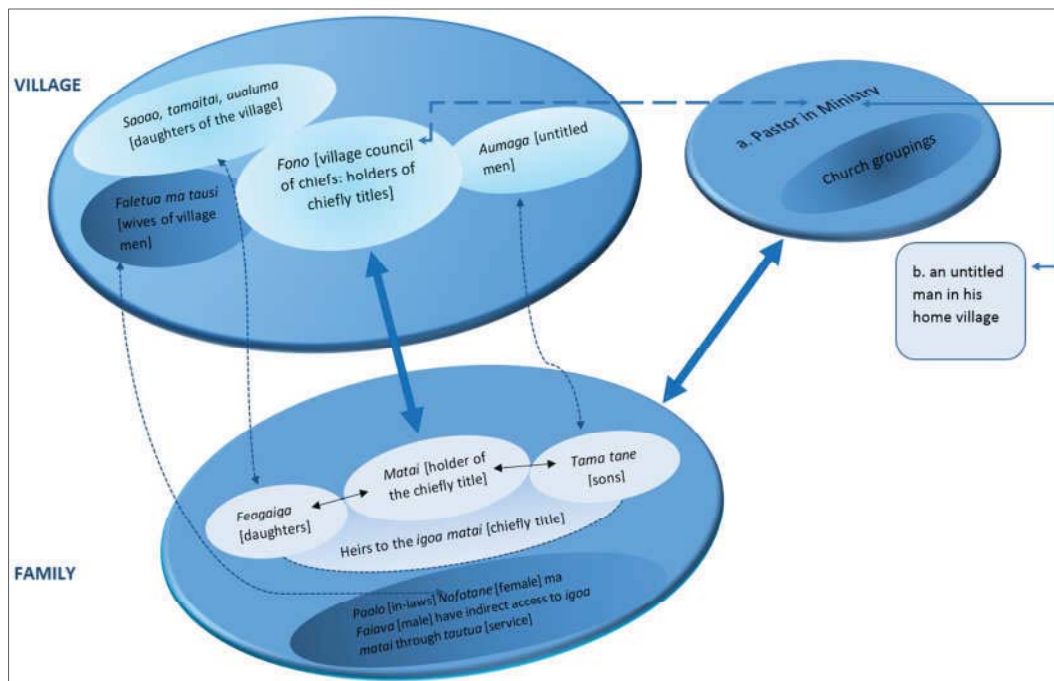
As the next sections demonstrate, the flexibility of *fa'amatai* is demonstrated in how it managed to effect connections with imposed institutions such as Christianity and centralized national institutions which have, since the early 1800s, been established. Moreover, *fa'amatai* practices remain

significant at the village level in contemporary Sāmoan society and its resurgence at the national level has great implications for the development of climate change resilience.

1830s: European missionaries and integration of Christianity into *fa'amatai*

The arrival of missionaries and adoption of Christianity in the 1830s created a new group of people who held honorary positions of high status in the village, but outside *fa'amatai* (refer to Figure 2). When the missionaries arrived they brought in local residents from other villages as pastors, and this selection method is still practised today. The formal Sāmoan word for pastor is *fa'afeagaiga*, with the prefix *faa* meaning characteristic of or like in the manner of the same kind (Milner 1966), relating the relationship between pastor and village to that between a brother and a sister. The sister in the Sāmoan context is the *feagaiga* [covenant and/ or agreement] relating to the *va-tapuia* [sacred space] between a brother and a sister (Latai 2008; Latai 2015). In a similar way *va-tapuia* between the pastor and the village demands caution and mutual respect. The pastor is an outsider, so he does not sit within the circle of the *fa'amatai* of the village he ministers to, though out of respect it is common that the opinion of the pastor will be sought to smooth out any conflict that may arise in the council. This is similar to the role of the sister as the *pae ma le auli* [peacekeeper in the 'āiga]. This does not mean that a pastor is fated to exclusion. He is a participant in the *fa'amatai* of his home village, where he is an untitled man (refer to Figure 2). But, the creation of *fa'afeagaiga* role saw the failure of Christianity to penetrate *fa'amatai*. While religion has become a central part of Sāmoan society, churches exist as separate entities in the village with existing mechanisms for information flow and interaction with village councils (Aiono Le Tagaloa 1986; 1996; Latai 2008; Latai 2015). In any given village, whether there are two or seven different churches, village councils accord the same protection, status and respect to each of those ministers.

Figure 2: Position of the pastor in traditional Sāmoan society (a) in the village he ministers, and (b) in his home village (Source: Latai Niusulu 2017).

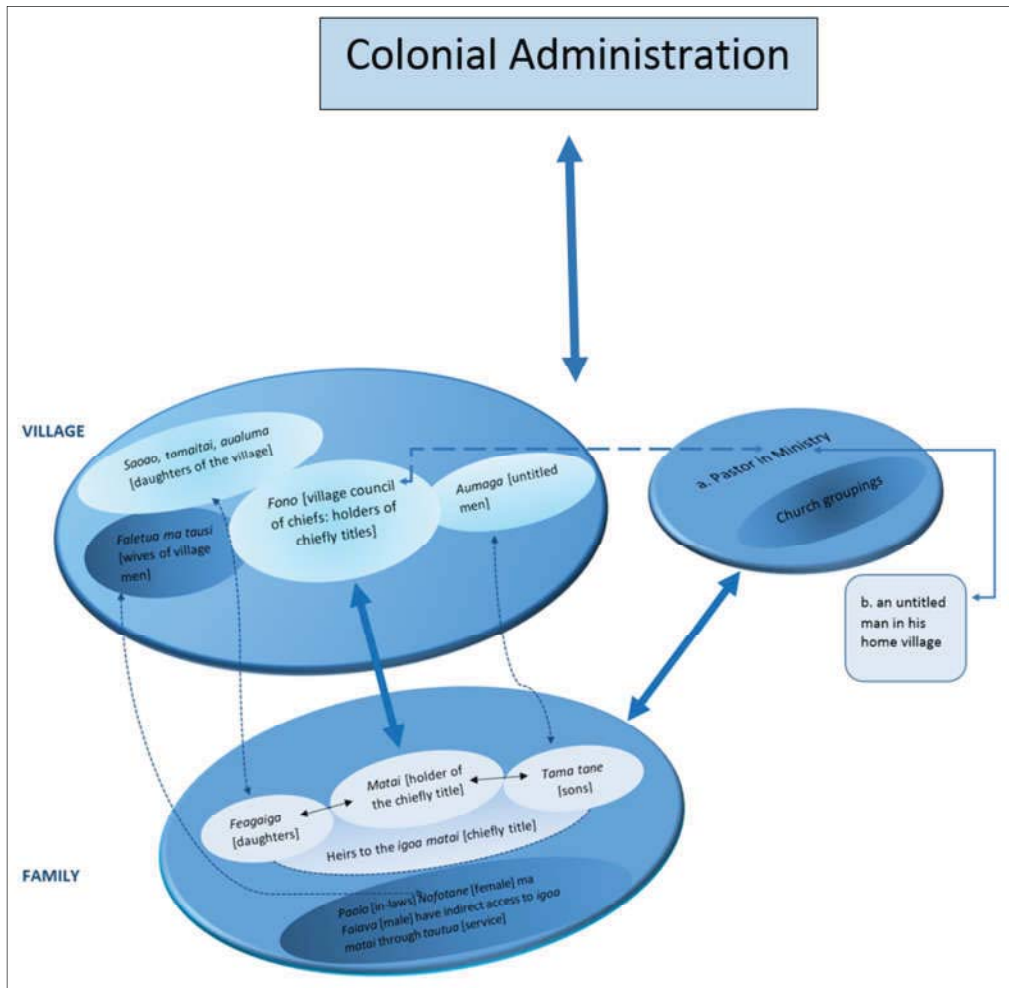


1900- 1961: Colonial governments- Germany (1900- 1914) and New Zealand (1914- 1961).

In addition to missionaries, colonial administrations of Germany and New Zealand were established and led to the creation of a centralized national governance system. Between 1830 and 1900 Germany, Great Britain and the United States competed to establish spheres of influence and control in Samoa. This period of actively competing influences was succeeded by the colonial administrations of Germany from 1900 to 1914, and New Zealand from 1914 to 1961 (Vaa 2006). In February 1900, the municipal organization of Apia was abolished, and German centralized rule penetrated to the sphere of the village council. The appointment of Sāmoans as *pulenuu* [government officials] in this new German government enabled a centralized bureaucracy to penetrate *fa'amatai* (Meleisea 1987: 54), where a member of the village council now had responsibilities to the colonial regime. This is vastly different from the situation in *fa'amatai*, where the matai is loyal to his *'āiga*, the source of his authority. The role of *pulenuu* still exists today. The establishment of the Land and Titles Commission (in 1903), later the Land and Titles Court (in 1937), saw authority over land given to an external agency that operated according to German law (Aiono-Le Tagaloa 2009). This conflicted with the caretaker role that lies with the holders of *igoa matai* who make up the village council. The court became the first institution to effectively legalize traditional processes involved in the conferring of titles and regulating land transfer in Western Samoa. Instead of relying on the traditional style of consensus, the court decided what was to be done when conflict arose. Contrary to holistic notions of *soalaupule* and *autasi*, this system ensured the governor had a strong, even deciding, voice in the processes involved in *matai* title conferring and land transfer (Meleisea 1987; Vaai 1999). These changes continued throughout the New Zealand administration from 1914 until 1962.

Even though colonization established a centralized government which adopted a legislated approach to resource use and management and created *pulenuu* government officials within village councils, *fa'amatai* largely influenced activities at the village level (refer to Figure 3). Studies of Sāmoan material culture conducted in the early 1900s noted the flexibility of *fa'amatai*, in that while it allowed for variations these would eventually be accommodated and subsequently submerged in the resilient and ongoing culture. Most activities at the village level in the 1900s (Buck 1930; Keesing, 1934) were largely similar to the situation observed during the period of initial European contact (Wilkes 1852; Turner 1884; Krämer 1901; Watters 1958).

Figure 3: Fa'amatai was maintained at the local level although subordinated in national governance during German and New Zealand colonial rule (Source: Latai Niusulu 2017).



1960s onwards: Political independence and the resurgence of fa'amatai

Recognition of matai titles and customary ownership of land

The national framework that existed at the time of political independence in 1962, and related changes that followed thereafter, fostered greater recognition of *fa'amatai* in national governance. In 1962, a Westminster-based government was established with the Head of State, executive, parliament, judiciary, finance and the public service. At the same time, the District and Village Government Board, which comprises senior chiefs from around the country, served as a mediator-advisor between the central government and village councils (Toleafoa 2006). In addition, Samoa's electoral system accommodated the country's traditional political districts. The Sāmoan suffrage, or the Sāmoan way of voting, means *matai* who are the elected representatives of all the heirs of *matai* titles, are the ones eligible to stand for election into government. The village council validates that the intending candidate has rendered service to and is recognized by the village². A *matai* with

² "The Land and Titles Court only registers a new title after the traditional title-conferring ceremony (at which the village government plays the most important role) has taken place. It is the traditional prerogative of a village to accept (or reject) a new title-holder from being a member of its council of *matai*...the village council

several titles from different villages may choose the parliamentary constituency associated with the village for which he or she stands (Meleisea *et al.* 2015). Up until 1990 *matai* were the only ones eligible to vote³ (Aiono Le Tagaloa 1992). According to Soo (2012) the provision under the Electoral Act (1963, 1991) that only *matai* can be candidates for parliament's 47 seats, indirectly legalises the existence of village governments.

The Sāmoan Constitution, which became the basis of national law, acknowledges the importance of the Sāmoan custom, *matai* titles and the customary ownership of land. The preamble and Article 11 of the Constitution refers to custom as a source of law. Article 100 under part IX of the Constitution, refers to *matai* titles, while Article 102 prohibits the alienation of customary land (Government of Samoa, 1960). Article 102 states, 'No alienation of customary land. However, should there be a move to alienate, then two thirds of the people whose names appear on the Sāmoan electoral roll (i.e two thirds of the *matai*) must vote to pass such an alienation (Aiono Le Tagaloa 1992)'. Matters relating to *matai* titles and authority of *matai* titles over customary land are dealt with at the Lands and Titles Court. *Matai* titles, customary lands and related disputes are registered at the court. The inseparable connection between chiefly titles and land and communal ownership of resources, whereby an individual cannot claim ownership of the chiefly title and related lands, had restricted further alienation of land. While commercialism and centralization established the notion of individual ownership and subsequently led to the alienation of some land in the 1800s, about 80 percent of the land still remains under customary authority.

Fa'amatai within the national governance framework

Significant efforts towards integrating *fa'amatai* into the national governance framework were made in the 1990s with the enactment of the *Village Fono Act 1990 (Village Council Act)*. The *Village Fono Act* provided for the exercise of chiefly authority in accordance with Sāmoan custom and to recognize the primacy of village rights. The act recognizes and empowers village councils to develop and enforce village rules regarding the development and use of village resources such as lands, sea and water sources and the maintenance of hygiene in the village. In addition, to direct any person or persons to do any work (as defined under the Act) required for the village. The act also empowers village councils to impose punishments when village rules are breached. Punishments normally include fines paid in money, fine mats, live animals or food, and imposition of orders for an offender to undertake work on village land. The punishment is levied against the *matai* of the family of an offender, who is held responsible for the conduct of his *'āiga* in the village. In most cases, all members of the family would assist, by giving whatever they can afford to the offender in paying the fine. It is also common practice to exclude from participation in village governance a *matai* who does not abide by village rules. The legislative powers of the village council are limited because everyone in Samoa is bound by national criminal and civil laws. Disputes over matters of customary law are normally taken to the Samoa Lands and Titles Court. In extreme cases, village councils may order an offender to leave the village, but if taken to court the civil courts will usually over-rule such orders on the grounds of individual or human rights under the Constitution (Meleisea *et al.* 2015: 23).

may deny the new titleholder entry to the village council by refusing to participate in the title- conferring ceremony (Soo 2012: 134)."

³ "In 1990 Tofilau Eti's government decided to change the qualification of the voter on the electoral roll by giving the right to vote to everyone over 21 years of age (Aiono Le Tagaloa 1992: 130-131)."

In 1995, the Internal Affairs Act was passed which aligned local village government to central government via the establishment of the Division of Internal Affairs (refer to Figure 4). Mediators mainly the *sui o le nuu* [village council representative] and *sui o le malo* [women's group representative] report to government and vice versa through this Division. A representative for young people also exists. Holders of these positions are nominated by members of the council and women's committee. They are paid an allowance and report to the Division of Internal Affairs (Latai 2008; Tauaa 2014; Meleisea *et al* 2015).

Both the *Village Fono Amendment Bill 2015* and registration of village by-laws signal an opportunity for Sāmoan individuals and communities to re-invigorate *fa'amatai* and its principles of *soalaupule* at the *'āiga* and village levels. Moreover, to empower individuals to take ownership and responsibility of resources within their jurisdiction and participate in related decision-making processes regarding their use or protection. The proposed amendments to the *Village Fono Amendment Bill 2015* would give legal recognition to the authority of the village council to protect Sāmoan customs and traditions, and to safeguard village traditions, norms and protocols. These will also strengthen the definitions of village authority in relation to defining *faiga faavae* [village council policy and procedures] to be followed in making *iugafono* [village council decisions]. Village by-laws are being prepared under the Good Governance Project of the Internal Affairs Division of the MWSCD. An important part of this process is that village councils are receiving assistance in enhancing understanding of their roles and responsibilities according to the constitution and the current legal system. For instance, they were advised that only the sections of the by-laws which are compliant with the constitution would have the full power of the law. The finalized by-laws must be approved, with signatures, by the main social groupings in the village (Meleisea *et al* 2015).

Figure 4: National and local governance framework (Source: Latai Niusulu 2017).

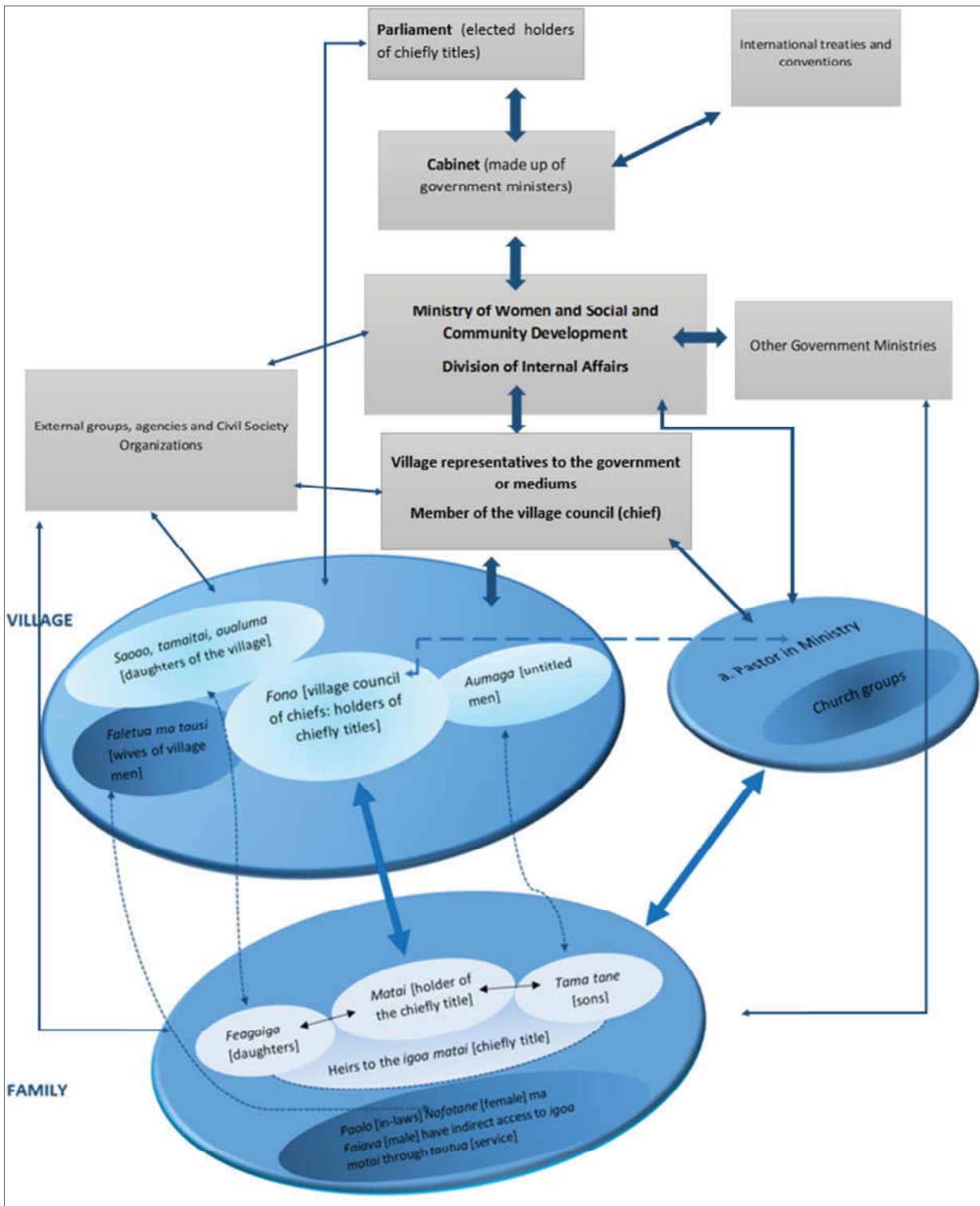
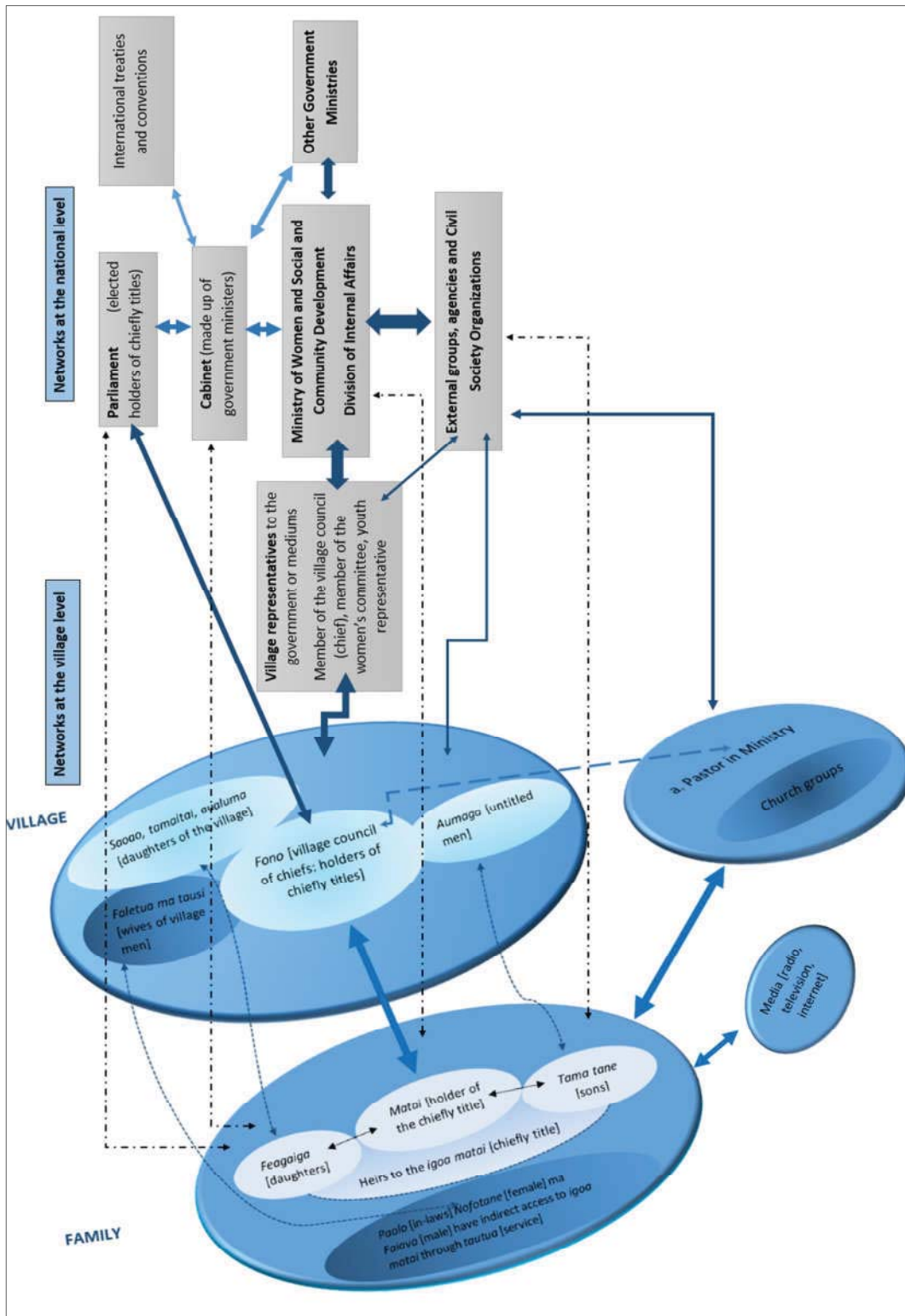


Figure 5: Resurgence of fa'amatai where multiple and multi-layered connections are evident between village and nation-wide institutions (Latai Niusulu 2017).



Contemporary fa'amatai and climate change resilience in Samoa

Fa'amatai and resilient activities at the national level

Changes which have occurred in the past centuries have seen the resurgence of fa'amatai characterized by a merging of centralized national institutions and fa'amatai at the local level (refer to Figure 5). This was crucial to the development of responses to future climate change. Since the 1990s, climate change has been high on the national agenda and there have been many efforts by the government towards environmental management and disaster preparedness. This commitment is evident in not only national reporting and ratification of various global and regional conventions relating to climate change, but incorporating these principles into national planning frameworks (Romilly et al 2013). A National Climate Change Country Team (NCCCT) and National Task Team (NTT) were established and helped prepare Samoa's first communication to the UNFCCC in 1999 (Government of Samoa: Department of Lands, Surveys and Environment (DLSE) 1999).

In the 2000s, the availability of external funding enabled the government to develop a framework of strategies, plans and governance structures to develop and coordinate climate change adaptation and mitigation activities. The Global Environment Facility (GEF) through UNDP funded the preparation of Samoa's National Adaptation Plan of Action (NAPA) in 2005. The NAPA provided an overview of climate change impacts and vulnerabilities, identifies adaptation strategies and outlines the process used to select and prioritise specific adaptation projects for priority sectors. The areas that were prioritised included securing community water resources, reforestation, rehabilitation and community forestry fire prevention, climate health cooperation programme, climate early warning system, agriculture and food security sustainability, zoning and strategic management planning, CIM-Plans for highly vulnerable districts, conservation programmes in highly vulnerable marine and terrestrial areas of communities, sustainable tourism adaptation. GEF funded the implementation of adaptation projects in key economic sectors, including agriculture, health, forestry, tourism and coastal communities. These projects provide a mix of policy advice, capacity building, early warning systems, community demonstration activities and knowledge management (Ministry of Natural Resources, Environment and Meteorology (MNREM) 2005).

In 2007, the National Policy of Combating Climate Change was developed and provided a national framework for climate change adaptation and mitigation of Samoa's contribution to global greenhouse gas emissions. The policy was drafted to implement Samoa's international obligations under the UNFCCC and Kyoto Protocol. The National Policy Statement on Climate Change (2007) and NAPA (2005) are implemented by the climate services and climate change sections under the Meteorology Division of MNRE. The Ministry serves as the secretariat for the National Climate Change Country Team (NCCCT). The NCCCT, the key members of which are the CEOs of relevant government ministries, is the key coordination mechanism for Samoa's response to climate change (MNRE: Government of Samoa 2010; 2013; Romilly *et al* 2013). The Ministry of Finance has been recently designated as the National Implementing Entity for the Adaptation Fund. Environment has become one of the priority areas in the 2012–2016 SDS. The key outcomes of this priority area are environmental sustainability and disaster risk reduction. The Strategy highlights the importance of integrating climate change and disaster risk management into national and sector plans to ensure that appropriate response mechanisms become part of the national development framework (Ministry of Finance (MOF) 2012).

The shift to a management framework that includes local villages was evident in the development of the Coastal Infrastructural Management Strategy (CIMS) 2001 and district CIM Plans, 2001–2007. The Samoa Coastal Infrastructure Management Strategy (2001 updated in 2007) defines national and local priorities for coastal management and sets policies and implementation methods for disaster risk reduction and climate adaptation measures. CIM-plans exist for each of the 41 districts (283 villages) in the country which state community concerns most of which relate to climate change and some proposed adaptation methods (Latai 2008; Daly *et al* 2010). In 2011, the CIM Strategy was reviewed and revised again to include the whole reef-ridge area.

Many reports have noted the growth of government initiatives to enhance community adaptability to climate change in recent decades. Strategies undertaken by MNRE as part of the CIMS project included the building of seawalls, upgrading of roads, development of coastal hazard maps and replanting of mangrove areas (Latai 2008; Daly *et al* 2010; Williams and Faasau 2015). In the past few years, the ‘Climate Resilience Investment Project (CRIP)’ funded by the Climate Investment Funds (CIF) and the World Bank (WB) has been proposed. A major part of this project is the construction of a 30 kilometre road along the inland parts of northern Upolu to connect Apia and Faleolo airport. The project would also implement strategies proposed in the CIM plans of 16 selected districts. In 2015 the East Coast inland route was completed. This 5.2 kilometre road runs from Samusu to Lalomanu, connecting the inland parts of villages on the southeast coast of the island and facilitating movement of those that had shifted inland due to the 2009 tsunami (Romilly *et al* 2013).

Efforts towards disaster management include activities by the Disaster Management Office such as tsunami evacuation drills, identification of evacuation routes for coastal villages, installation of warning sirens and first aid training. The government through the MNRE and the Ministry of Agriculture and Fisheries (MAFF) also helped establish village fish reserves (King and Faasili 1999), Marine Protected Areas (MPAs), mangrove and wetland conservation areas, forest reserves (both on village and government lands), turtle conservations and tilapia farms in a range of villages.

Furthermore, there have been a range of government programmes to develop livelihoods. These include weaving programmes and annual *faalelegapepe* [public display of fine mats] conducted by the MWSCD for village women. MAFF has helped develop food supplies by providing assistance to some villages to develop vegetable gardens, plantations and farming and fishing activities. These activities culminate with the ‘Agriculture and Fisheries Shows’ for farmers which are held twice a year on both Upolu and Savaii. Taro breeding programmes, developed in partnership with regional agencies, have produced significant results since the taro blight. New varieties of taro were introduced in 1994 and subsequent years (Taylor and Iosefa 2013).

Fa’amatai and resilient activities at the village level

Most contemporary studies of Samoa indicated that despite changes which have occurred *fa’amatai* remains largely intact with village councils operating autonomously. An emerging trend is that more Sāmoan women have taken up *matai* titles. A growing number of Sāmoan women hold Chief Executive and Assistant Chief Executive Positions in the public and private sector and the majority of them have *matai* titles. It is not a pre-requisite for the job, but it is an indicator of their status (heir) in the Sāmoan social organization (Aiono Le Tagaloa 1986; Latai 2015; Meleisea *et al* 2015).

Extended families, the village councils, untitled men's groups, women's committees and churches are still central aspects of Sāmoan village life. Aiono Le Tagaloa (1992: 132) stated;

"But in the heartland of *fa'amatai*, i.e. the *fono a le nuu* and the social groupings of the *tamaitai*, *aumaga*, and *faletua ma tausī*, confidence in the ability of the *fa'amatai* to cope, to survive and continue to maintain peace within each village, district, and island, remains strong and persistent".

Fauolo (1993) and Paulson (1993) stated the important roles these groups played during and after the 1990s cyclones in directing replanting and expansion of food crops, rebuilding of houses and village clean-up. The strength of these networks was also demonstrated by the quick and proactive response to the 2009 tsunami. The structure of land ownership and customary land rights enabled families to relocate to family land and many were able to start rebuilding immediately after the tsunami (International Federation of Red Cross and Red Crescent Societies (IFRC and RCS) 2011).

Many religious denominations have developed structures according to the village model. For example, most churches have women's committees, church committees, youth groups and Sunday schools. Most members of the villages are part of these groups and participate in their daily and weekly activities.

Today, the majority of Sāmoans still *tautua* [serve] their family. Remittances from immediate and extended relatives living on freehold land and abroad connect villages to the outside world. These relationships are cultivated through caring, giving, reciprocating and participating in every social-cultural obligation such as funerals, bestowal of matai titles, weddings, dedication of church buildings, and fund raising activities. Sāmoan pride and loyalty to family, church and village are demonstrated whenever there is a village fund-raising call for the building and dedication of a new church, church hall, and pastor's residence, or any major village project. Anecdotal evidence suggests numerous *malaga sue tupe* village fund-raising travels to New Zealand after cyclone Heta (2008) and Evans (2012) for various village projects ranging from new church buildings to schools and a *fautasi* [long boat] for the Teuila and Independence boat race. The large Sāmoan diaspora overseas has contributed significant changes to people's consumption patterns, social expectations and taste for modern goods (Macpherson 1985; Macpherson 1988; ILO 2006; Macpherson and Macpherson 2009; Tauaa 2014).

Studies of Samoa's material culture reported that despite widespread changes in techniques and materials, people still operate within the framework of *fa'amatai* and enduring traditions. According to Neich (1985: 6) "...most Sāmoans still work with a strong mental concept of the traditional artefact...often with a resurgence in the popularity of older forms...he is able to select and generate a 'performance' best suited to changing external circumstances". Some old techniques are being forgotten, but in many cases people are aware and knowledgeable about the old techniques, while making the conscious choice to employ more modern and more convenient, streamlined techniques. Sāmoans have proved repeatedly that they are able to appreciate and capitalize on the advantages of new crop species, technologies, and market opportunities. Some villages have adopted new crops and techniques and have achieved very high levels of agricultural production, which suggests that there is nothing inherent in their organization that leads to an inevitable resistance to innovation (Macpherson 1988; Macpherson and Macpherson 2009). Lefale (2010), in his study of traditional Sāmoan knowledge regarding weather and climate, concluded that Sāmoans

have an extensive knowledge of cosmology, which they use extensively to predict environmental changes, including changes in climate and weather.

Conceptualizing the resilience of Sāmoan individuals and communities to future climatic changes within the multiple and multi-layered system of *fa'amatai*

A holistic and multi-layered conceptual framework

The previous section has demonstrated that contemporary Sāmoan society is characterized by the multi-layered arrangement of extended families, villages and churches, as well as government and external agencies (refer to Figure 5). Therefore, in order to gain a deeper understanding of the resilience of Sāmoans to climate change, one must conceptualize them within the context of these social layers which I propose 'buffers' the individual during environmental challenges. This approach as illustrated by Figure 6 situates the Sāmoan, and his or her perceptions and actions, within the context of his or her extended family, villages, church and nation. The approach is informed by the Sāmoan concept *gafatia* [endure], which speaks of a person's or a community's ability to deal with and endure challenges. *gafatia* provides a more in-depth understanding of non-equilibrist nature of Sāmoan beliefs associated with one's capacity to cope with challenges. The term can be split into two terms *gafa* [lineage] and *tia* [hunting ground or ancestral burial place] which hint at the Sāmoan association of endurance with lineage and means of survival. Moreover, it is grounded on previous socio-cultural studies (Aiono Le Tagaloa 1997; Liki 2015; Lilomaiava-Doktor 2015) which have highlighted the holistic and evolving nature of Sāmoan society and interdependent 'kinship networks' "...within which the individual is nurtured or cocooned" (Liki 2015: 130).

Figure 6: The 'individual within *fa'amatai*'. Social connections 'buffer' the individual from external challenges (Latai Niusulu 2017).

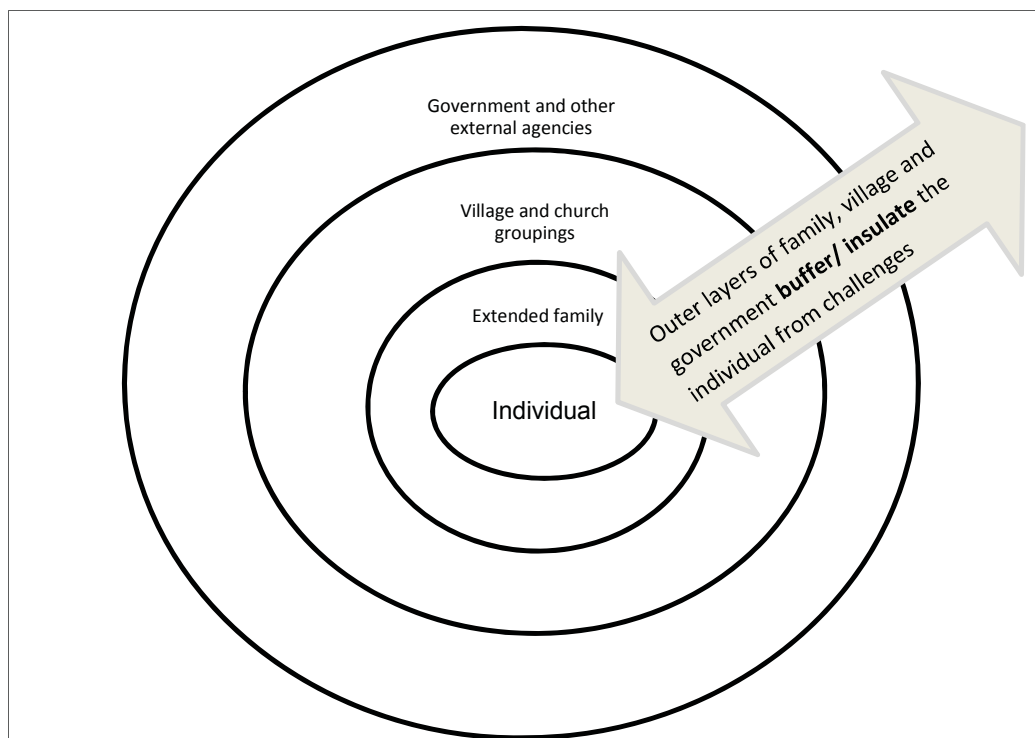


Figure 6 is an expression of a traditional structure whereby the individual is at the centre of a set of complex social connections. The system is not hierarchical and highly flexible and there are complex interactions within the circles and between the circles. A resilient system is where all of these layers are present and are working harmoniously. Once born, a Sāmoan becomes heir to family chiefly titles and has automatic access to lands on both his or her mother's and father's side. At different stages of the individual's life, he or she would gain membership to village groupings such as the untitled men's group or women's committee. Once the individual takes on a chiefly title, they would become a member of the village council and may run as a parliamentarian for the district. Any individual may develop more connections and links by participation in the related activities of whichever groupings they are a part of. These sorts of people are family elders, youth leaders, church ministers, parliamentarians, government representatives, government officers, chiefs and school principals. As illustrated by the concentric rings (refer to Figure 6) these connections buffer the individual from any challenges that may arise. There is a choice for the individual to maintain or sever these connections should they wish.

Those who may leave the sites of their families will always have the same rights and responsibilities as the 'individual' located at the heart of the system. "One is born as kin and remains as kin regardless of one's changing circumstances in life... kin... defines belonging and underpins rights and access to support and resources within the kinship network. The relationship also guarantees economic and social security...in difficult times, as in *e malu ia te oe 'āiga, e malu foi oe i 'āiga* [you carry 'āiga and 'āiga carries you]" (Liki 2015: 130). However, in leaving, there is a possibility of getting detached and losing connection to the centre, to family, identity, belonging and place. Therefore, as discussed in the previous section, evidence shows a continuous effort by many to maintain these connections.

Conclusion

The article has demonstrated that Samoa is a highly dynamic place. Samoa's physical landscape had not only evolved due to biophysical but also human related changes. All of these had continuously posed challenges to the residents in the past 200 years. In response, Sāmoan society and its institution of *fa'amatai* demonstrated resilience in the face of these changes. The system had adapted connections to external influences such as Christianity and the German and New Zealand colonial administrations, while at the same time retaining its original structures of the extended family and village council. As indicated in the previous section, these structural changes, as well as exposure to environmental challenges, would be crucial to the development of resilience to climate change. Evidence shows there have been government efforts to develop a coherent national framework where climate change is integrated in all its sectors. Furthermore, there is evidence of commitment towards implementing a range of activities to minimize environmental risks as well as ensure sustainable livelihoods. A holistic approach to assess the resilience of Sāmoans to climate change is proposed and is described at the end of the article, considering the structural changes that have occurred to *fa'amatai* in the past two centuries.

References

- Aiono Le Tagaloa, F. 1992. "The Samoan culture and government." Pp. 117–138 *Culture and Democracy in the South Pacific*, eds R. Crocombe, U. Neemia, A. Ravuvu and W. Vom Busch. Suva: University of the South Pacific Institute of Pacific Studies.
- Aiono Le Tagaloa, F. 1996. *Motugaafa*, Apia: Le Lamepa Press.
- Aiono Le Tagaloa, F. 1997. *O le Faasinomaga: le Tagata ma lona Faasinomaga*, Alafua: Le Lamepa Press.
- Aiono-Le Tagaloa, F. 2009. The lands and titles court of Samoa, 1903–2008: continuity amid change, Unpublished Ph.D thesis, Dunedin: University of Otago.
- Baldaccino, G. and Bertram, G. 2009. "The beak of the finch: insights into the economic development of the small economies." *Round Table* 98 (401): 141–160.
- Barnett, J. 2001. "Adapting to climate change in Pacific island countries: the problem of uncertainty." *World Development* 29(6): 977–993.
- Berkes, F. and Folke, C. 1998. *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*, Cambridge: Cambridge University Press.
- Bertram, G. 2006. "Introduction: the MIRAB model in the twenty-first century." *Asia Pacific Viewpoint* 47(1): 1–13.
- Bertram, G. and Watters, R. 1985. "The MIRAB economy in South Pacific microstates." *Pacific Viewpoint* 26(2): 497–519.
- Boserup, E. 1965. *The condition of agricultural growth: the economics of agrarian change under population pressure*, Chicago: Aldine.
- Buck, P.H. 1930. *Samoan material culture*, Honolulu: The Bernice Pauahi Bishop Museum.
- Chapman, M. and Prothero, R.M. 1985. "Circulation between 'home' and other places: some propositions." Pp1–12 in *Circulation in population movement: substance and concepts from the Melanesian case*, eds M. Chapman and R.M Prothero. London: Routledge.
- Comitas, L. 1963. "Occupational multiplicity in rural Jamaica." *Proceedings of the 1963 Annual Spring Meeting of the American Ethnological Society*, Seattle, WA, 41–50.
- Conaty, J. 2009. "National policy on combating climate change, 2007." *National Summit on Climate Change: May 28–29*, Apia: MNRE.
- Daly, M., Poutasi, N., Nelson, F. and Kohlhase, J. 2010. "Policy arena. Reducing the climate vulnerability of coastal communities in Samoa." *Journal of International Development* 22: 265– 281.
- East, J.A and Dawes, L. 2009. "Homegardening as a panacea: a case study of South Tarawa." *Asia Pacific Viewpoint* 50(3): 338–352.
- Fauolo, K.O. 1993. *Afa fuifao o le 1991: disaster awareness and tropical cyclone response in Western Samoa*, Unpublished M.A thesis, Hamilton: University of Waikato.
- Folke, C. 2006. "Resilience: the emergence of a perspective for social-ecological systems analyses." *Global Environmental Change* 16: 253–267.
- Frucht, R. 1967. "A Caribbean social type: neither peasant nor proletariat." *Social and Economic Studies* 16(2): 295–300.
- Government of Samoa. 1960. *The constitution of the Independent State of Western Samoa*, Apia: Government of Samoa.
- Government of Samoa: Department of Lands, Surveys and Environment (DLSE). 1999. *Government of Samoa first national communication to the UNFCCC*, Apia: Government of Samoa.
- Government of Samoa. 2015. *Village Fono Amendment Bill 2015*, Apia: Government of Samoa.
- Grabher, G. and Stark, D. 1997. "Organizing diversity: evolutionary theory, network analysis and postsocialism." *Regional Studies* 31: 533–544.
- Grimble, A. 1933. "The migrations of the Pandanus People; as traced from a preliminary study of food, food- traditions and food- rituals in the Gilberts Islands." *Polynesian Memoir* 12.
- Gunderson, L.H. and Holling, C.S. 2002. *Panarchy: understanding transformations in human and natural systems*, Washington D.C: Island Press.

- International Labour Organization (ILO). 2006. *Social protection for all men and women: a sourcebook for extending social protection coverage in Kiribati: options and plan*, Suva: ILO.
- Hau'ofa, E. 1993. "Our sea of islands." Pp 2–18 in *A New Oceania: Rediscovering our Sea of Islands*, eds E. Waddell, V. Naidu, and E. Hau'ofa, E. Suva: School of Social and Economic Development, University of the South Pacific.
- Hetaraka, M.M. 2012. Natural hazard planning: the contribution of Cook Island Maori traditional knowledge, Unpublished M.A thesis, Dunedin: University of Otago.
- Holling, C.S. 1973. "Resilience and stability of ecological systems." *Annual Review of Ecology and Systematics* 4: 1–23.
- Holling, C.S. 2005. "From complex regions to complex worlds." *Minnesota Journal of Law, Science and Technology* 7(1): 1–20.
- Holling, C.S., Berkes, F. and Folke, C. 1998. "Science, sustainability and resource management." *Linking social and ecological systems: management practices and social mechanisms for building resilience*, Cambridge: Cambridge University Press.
- International Federation of Red Cross and Red Crescent Societies (IFRC and RCS). 2011. *Samoa: earthquake and tsunami. Interim final report*, Apia: IFRC and RCS.
- IPCC. 2001. *Climate change 2001: Impacts, adaptation, and vulnerability*, McCarthy, J.A., Canziani, O.F., Leary, N.A., Dokken, D.L. and White, K.S. (eds) Cambridge: Press Syndicate of the University of Cambridge.
- Johannes, R.E and Yeeting, B. 2000. "I- Kiribati knowledge and management of Tarawa's lagoon resources." *Atoll Research Bulletin* (489).
- Kay, R. and Adler, J. 1999. *Coastal planning and management*, New York: Routledge.
- Keesing, F.M. 1934. *Modern Samoa: its government and changing life*, London: Allen and Unwin.
- King, M and Faasili, U. 1999. "Community-based management of subsistence fishing in Samoa." *Fisheries Management and Ecology* 6: 133–144.
- Krämer, A. 1901. *The Samoa islands volume I*, Hawaii: University of Hawaii Press.
- Latai, A. 2008. Toe timata le upega: a critique of coastal governance in Samoa, Unpublished M.A thesis, Dunedin: University of Otago.
- Latai, L. 2015. "Changing covenants in Samoa? From brothers and sisters to husbands and wives?" *Oceania* 85(1): 92–104.
- Lefale, P. 2010. "Ua afa le aso- stormy weather today: traditional ecological knowledge of weather and climate. The Samoan experience." *Climatic Change* 100: 317–335.
- Liki, A. 2015. "Women as kin: working lives, living work and mobility among Samoan Teine uli." Pp126-159 in *Oceanian Journeys and Sojourns*, ed J. Bennett, Dunedin: Otago University Press.
- Lilomaiva-Doktor, S. 2015. "Journeyings: Samoan understanding of movement." Pp 66–92 in *Oceanian Journeys and Sojourns*, ed J. Bennett, Dunedin: Otago University Press.
- Macpherson, C. 1985. "Public and private views of home: will Western Samoan migrants return?" Pp243–262 in *Mobility and identity in the island Pacific: a special issue of Pacific Viewpoint*, eds M. Chapman and P. Morrison.
- Macpherson, C. 1988. "The road to power is a chainsaw: villages and innovation in Western Samoa." *Pacific Studies* 11(2): 1–24.
- Macpherson, C. and Macpherson, L. 2009. *The warm winds of change: globalization in contemporary Samoa*, Auckland: Auckland University Press.
- Meleisea, M. 1987. *The making of modern Samoa: traditional authority and colonial administration in the modern history of Western Samoa*, Suva: Institute of Pacific Studies, University of the South Pacific.
- Meleisea, L.M., Meredith, M., Chan Mow, I.M., Schoeffel, P., Lauano, S.A., Sasa, H., Boodoosingh, R. and Sahib, M. 2015. *Political representation and women's empowerment in Samoa Volume 1: Findings and Recommendations*, Apia: Centre of Samoan Studies, National University of Samoa.

- Ministry of Finance (MOF). 2012. *Strategy for the development of Samoa 2012–2016*, Apia: Ministry of Finance.
- Ministry of Natural Resources, Environment and Meteorology (MNREM). 2005. *National Adaptation Programme of Action (NAPA) Samoa*, Apia: UNDP and GEF.
- Ministry of Natural Resources and Environment (MNRE). 2010. *Samoa's second national communication to the UNFCCC*, Apia: MNRE, Government of Samoa.
- Ministry of Natural Resources and Environment (MNRE). 2013. *Samoa's state of the environment report 2013*, Apia: MNRE, Government of Samoa.
- Neich, R. 1985. *Material culture of Western Samoa: persistence and change*, Auckland: National Museum of New Zealand.
- Nunn, P.D. 2007. *Climate, environment and society in the Pacific during the last millennium, Developments in earth and environmental sciences*, Amsterdam: Elsevier.
- Paulson, D.D. 1993. "Hurricane hazard in Western Samoa." *Geographical Review* 83(1): 43–53.
- Pendall, R., Foster, K.A. and Cowell, M. 2007. *Resilience and regions: building understanding of the metaphor*, Working Paper 2007- 12, Berkeley: Macarthur Foundation Research Network on Building Resilient Regions.
- Romilly, G., Solofa, D. and Bentin, S. 2013. *Samoa Climate Resilience Investment Programme (CRIP): situational analysis- policy, institutional and legal framework for a climate resilient Samoa*, Apia: Climate Investment Funds, Government of Samoa and The World Bank.
- Sauer, C. 1952. *Agricultural origins and dispersals*, New York: The American Geographical Society.
- Soo, A. 2012. "Political development." *Samoa's journey 1961–2012: aspects of history*, in M. Meleisea, P. Schoeffel and E. Meleisea, Wellington: Victoria University Press.
- Steward, J.H. 1955. *Theory of culture change: the methodology of multilineal evolution*, Illinois: Board of Trustees of the University of Illinois.
- Storey, D. and Hunter, S. 2010. "Kiribati: an environmental 'perfect storm.'" *Australian Geographer* 41(2): 167–181.
- Sutherland, K., Smit, B., Wulf, V. and Nakalevu, T. 2005. "Vulnerability in Samoa." *Tiempo*, 54.
- Tamasese, T. 2007. "Bio-ethics and the Samoan indigenous reference." *Sunday Samoan Observer* 13 November: 18–23.
- Tauaa, S. 2014. "The Samoan fa'amatai system: social protection and governance issues." *Journal of Pacific Studies special issue: corruption, transparency and good governance in the Pacific* 34: 59–76.
- Taylor, M. and Iosefa, T. 2013. *Taro leaf blight manual*, Noumea: Secretariat of the Pacific Community (SPC).
- Thaman, R.R. 1990. "Kiribati agroforestry: Trees, people and the atoll environment." *Atoll Research Bulletin* No.333.
- Thaman, R.R. 1995. "Urban food gardening in the Pacific Islands: a basis for food security in rapidly urbanizing small island states." *Habitat International* 19(2): 209–224.
- Thomas, F.R. 2015. "Marginal islands and sustainability: 2000 years of human settlement in Eastern Micronesia." *Economic and ecohistory: Journal of Economic History and Environmental History* 9(11): 64–74.
- Toleafoa, A. 2006. *Strengthening local village government*, paper presented at the 9th Measina Conference, National University of Samoa, September.
- Tuimalealiifano, M. 2001. 'Aia tatau ma afioga tutasi: Aiga versus Tama a Aiga. Manipulation of old and new practices: an MP for Falelatai and Samatau in Samoa's 2001 elections,' *The Journal of Pacific History* 36(3): 317–325.
- Turner, G. 1884. *Samoa, a hundred years ago and long before*, London: Macmillan.
- Vaa, U.L.F. 2006. "The faa-Samoa." Pp. 113–116 in *Samoa Human Development Report 2006: Sustainable Livelihoods in a changing Samoa*, eds A. Soo, A. U. Vaa, T. Lafotanoa and J. Boon, Apia: The Centre for Samoan Studies, National University of Samoa.
- Vaai, S. 1999. *Samoa faa-matai and the rule of law*, Apia: National University of Samoa.

- Veiyataki, J. 2010. "Chapter 17: Climate change adaptation issues in Small Island Developing States." *Climate Change Adaptation and Disaster Risk Reduction: Issues and Challenges, Community, Environment and Disaster Risk Management* 4: 363–385.
- Waddell, E. 1975. "How the Enga cope with frost: responses to climatic perturbations in the Central Highlands of New Guinea." *Human Ecology* 3(4): 249–273.
- Watson, J.B. 1985. "The precontact northern Tairora: high mobility in a crowded field." Pp 429–443 in *Circulation in population movement: substance and concepts from the Melanesian case*, eds M. Chapman and R.M. Prothero, London: Routledge.
- Watters, R.F. 1958. "Cultivation in old Samoa." *Economic Geography* 34: 338–351
- Wilkes, C. 1852. *Narrative of the United States exploring expedition during the years 1838, 1839, 1840, 1841, 1842 Volume 1*, London: Ingram, Cooke and Company.
- Williams, S. and Faasau, O. 2015. *Final report, status review of the National Coastal Infrastructure Management Plans in Samoa*, Apia: GEOL and IPA.
- Zann, L. 1990. "Traditional management and conservation of fisheries in Kiribati and Tuvalu atolls." Pp. 77–102 in *Traditional management of coastal systems in the Asia and the Pacific: a compendium*, eds K. Ruddle and R.E. Johannes, Jakarta: UNESCO.