

CLOTHILDE TRONQUET

From Vunidogoloa to Kenani: An Insight into Successful Relocation

“Today, we launch the first project in Fiji to save an entire village from the rise in sea levels caused by climate change. It is real. It is happening now.” (Bainimarama, 2014).

With this forceful introduction, Commodore Josaia Voreqe Bainimarama, Prime Minister of Fiji began his opening speech on the 16th January 2014 for the inauguration of the brand-new village where the residents of Vunidogoloa were about to move, 8 years after their initial request to relocate. This was a day for celebration, with colorful balloons, traditional outfits and ceremonial rituals, the Vunidogoloa people welcomed the Prime Minister, officials and journalists that had come to officially open their *kenani* (promised land) (PM Bainimarama opens Vunidogoloa Village Relocation Project - 2014, 2014). A far cry from the negatively connoted representations of environmental migration as being emergency-driven and compelled by humanitarian concerns, the Vunidogoloa relocation is the result of a well-thought-out, multilateral and participative process that lasted nearly a decade.

Climate change is a crucial issue for the 30 000 Pacific Islands, especially the smallest and low-lying ones. The intrinsic characteristics of small islands make them highly vulnerable to climate change, sea-level rise and extreme events. Floods, landslides, coastal erosion and storms are expected to increase in frequency and intensity, as a consequence of sea-level rise, thus putting at risk housing, facilities, infrastructure, and also crops and vegetated wetlands. Most of the settlements and infrastructure are located in coastal areas: the IPCC estimates that more than 50% of the population of the islands in the Pacific lives within 1.5 km of the shore, exacerbating the adverse effects of climate change. The small islands' vulnerability also raises concerns related to water resources, reef, agriculture and forest, biodiversity and energy. This high degree of vulnerability is in stark contrast to the emissions produced by these islands: while they only emit an estimated 1% of global greenhouse gases (0.006% for the Pacific Islands only), they are among the most exposed regions to the effects of climate change. They are thus required to dedicate their limited resources to adaptation strategies, representing elevated costs relative to their Gross Domestic Product (IPCC, 2007) (Wilson, 2014).

Faced with sea-level rise and increasingly extreme events, Pacific islanders have no choice but to develop resilience strategies, such as climate risk management programmes. Shore protection measures have been progressively replaced by more flexible strategies: trying to adjust to sea-level rise or backing off, while putting an emphasis on water stress, energy security etc. Permanent relocation, although considered as a last resort, seems inevitable following both slow-onset and disastrous events, although the number of people that will be affected in both the short

and long-term is difficult to estimate. Relocation is a multifaceted process, requiring exhaustive preparation, addressing logistical, construction and economic matters, but also having to take political and social aspects into account.

In this context, the successful relocation of Vunidogoloa has taken on an exemplary dimension. Located on Vanua Levu, the second largest island of Fiji, the small village of Vunidogoloa suffered from a high exposure to sea-level rise and extreme events. The residents took up the challenge of adaptation to climate change, and engaged in a process of relocation that officially started in 2006. Headed by two ministries and the inhabitants of Vunidogoloa, the relocation project involved a wide range of actors: from the funding provided by international organisations to the support given by non-state actors. The resettlement followed a comprehensive approach with housing, economic, and cultural factors all successfully taken into account.

Based on that experience, this study is an attempt to answer the following questions: How did a 150-inhabitant village in Fiji cope with climate-related risks? How did the people from Vunidogoloa manage the relocation process? What levers and actors were mobilised to implement the project? And finally, what lessons can be drawn from this experience for future adaptation to climate change in low-lying islands? The first part will consider contextual elements of the case, and then examine the various aspects of the project. The next part will examine social and cultural aspects of the relocation, before finally analysing the value of the Vunidogoloa experience for adaptation policy making.

The present study is based on the examination of Fijian governmental and local administration press releases and articles in local and international newspapers; blog publications; reports and documentation issued by the International Labour Organization (ILO), the Pacific Conference of Churches (PCC), the Nansen Initiative, and academic literature on climate change and adaptation. On top of this literature, exchanges were conducted by email with a member of the PCC, who held workshops in the village before the relocation, with a member of ILO that took part in the Cash for Work Program, and finally with Brook Meakins, a Californian attorney who visited the village before, during and after the relocation.

1. CONSCIENTIZED INHABITANTS FACING CLIMATE CHANGE

FJI:

The Republic of Fiji is located in Melanesia, in the South Pacific Ocean. It is composed of 333 islands, among which approximately 100 are inhabited. 70% of the barely one million inhabitants live on the largest island of the country, Viti Levu, which hosts the capital city of Suva. Sixty kilometres northeast of Viti Levu lies Vanua Levu, the second largest island with an area of some 5 400 km² and a population of more than 130 000 people. Fiji mainly relies on economic revenue from tourism, but the country also exports sugar, textiles, copra, gold and silver, which make it one of the richest and most developed countries in the Pacific zone. Fiji is also endowed with timber and fish resources. The country has had a military government since 2006 following the coup instigated by the current Prime Minister Commodore Bainimarama and the country was suspended from the Commonwealth in 2009 in the absence of the elections requested by the intergovernmental organisation. The suspension finally ended in 2014. Fiji is highly vulnerable to natural disasters and particularly prone to cyclones, earthquakes and tsunamis, floods and droughts, and landslides.

1.1. traditional village relying on a subsistence economy

The former village of Vunidogoloa is located in the province of Cakaudrove (see Figure 2: Vanua Levu (United Nations)), in the district of Koroalau, 40 kilometers

from Savu Savu (the second largest city on Vanua Levu) and 100 kilometers from Labasa, the main city of Vanua Levu. The main road of Saqani, alternatively called the Natewa Bay road or Savusavu road is situated more than a kilometre away from the village (Figure 3: Vunidogoloa and Kenani before construction (author based on Google Maps) thus obligating the people from Vunidogoloa to travel more than one kilometre to reach the road in order to go to school, hospital etc.

The village is made up of 26 houses in the Natewa Bay (see Figure 2: Vanua Levu (United Nations), with the population cited at between 122 and 150 depending on the sources, 140 inhabitants being the most oft-quoted estimation. Tradition, culture and religion are crucial to the rural community of Vunidogoloa. The inhabitants form a cohesive and homogeneous group: they all share indigenous Fijian origins, they speak the iTaukei language along with English and mostly belong to the Methodist Church, with one or two exceptions of other Christian families. The village is traditionally organised with subcommittees in charge of every single aspect of community life, such as agriculture, religion, and health (Sorowale, Vunidogoloa: climate change induced relocation, 2011). Vunidogoloa's organisation is embedded in the traditional indigenous Fijian organisation, based on chief-ruled hierarchy, with a stratification of chiefs starting from the level of the provinces (*yasana*), to districts (*tikina cokavata*), sub-districts (*tikina vou*), and the village community (*koro*) (Mills, 2014).

On the island of Vanua Levu, where Vunidogoloa is located, economic revenues mainly come from the sugar industry, the copra crop and tourism, but, as in the rest of Fiji, the economy is still largely a subsistence economy. Vunidogoloa is no exception, relying on fishing and agriculture for its livelihood. Fishing provides the main economic revenues and the villagers used to grow taro roots, malanga (tubers that resemble sweet potatoes) and potatoes, before the sea destroyed the crops. The villagers also raise pigs. Home gardens containing local crops are essential to the livelihood of small islands. The reliance on ecological resources is widely acknowledged in the Pacific Islands; a report by the Food and Agriculture Organization (FAO) cited Fiji's level of dependence on plant resources at 65%, compared to 37% in Vanuatu, for example (IPPC, 2007).

More anecdotally, the village is known for an alleged gift shared by two families to heal broken bones (Biumaiono, Mysterious gift of bone healing, 2013).

Figure 1. Fiji's main islands: Viti Levu and Vanua Levu (Google Maps)



Figure 2. Vanua Levu (United Nations)



Figure 3. Vunidogoloa and Kenani before construction



Source: author based on Google Maps.

Figure 4. Former village of Vunidogoloa



Source: author based on Google Maps.

Figure 5. Vunidogola's new location before construction



Source: author based on Google Maps.

1.2. village exposed to the elements

The village was formerly located between the Natewa bay and the Tabia river (see Figure 3: Vunidogoloa and Kenani before construction (author based on Google Maps)), exposing it to floods when high tides coincided with heavy rains, increasing the level of the river. In interviews in local media, inhabitants attest to the recurrent flooding in the village. Floods are not a new phenomenon, but their number and intensity have markedly increased in the past decade and the inhabitants observed the rise in sea level. Sea-level rise, flooding and erosion had considerable impacts on the livelihood of community:

- The encroachment of the land by the sea and consequent erosion had already forced the village to partially move: there used to be houses located on the point where the river currently flows into Natewa Bay. The village used to cover a larger area and at that time it sat well above the sea level (Biumaiono, Rebuilding Vunidogoloa, 2013). Even before the relocation of the village, many houses had already had to be moved several times (Sovaraki, 2014).
- The construction of the houses had to be revised: the houses that were destroyed by the encroachment of the village and repeated floods were not rebuilt in the same way. The villagers recall the former houses being bigger and well built in the 1950s (Biumaiono, Rebuilding Vunidogoloa, 2013). Houses were placed on stilts (Meakins, 2012), but the elevation was not sufficient and the houses were systematically flooded.
- The extreme weather even affected the way the villagers sleep. As Julia Edwards explains, the floods have made the floors of houses distorted and irregular, preventing the inhabitants from sleeping on the floor where they found a little freshness (Edwards, Bula Bulletin: Relocation of Vunidogoloa Village, 2012).

Figure 6. Weathered of wood of the stilts houses



Photo by Simi Sorowale)

Figure 7. Repeatedly destroyed makeshift walkway



Photo by Simi Sorowale

Figure 8. Stunted breadtree in Vunidogoloa



Photo by Julia Edwards

- Access to facilities was also complicated. The walking path going up to the main road was systematically destroyed when waves swept through the village and the inhabitants had to repeatedly rebuild it (Sorowale, Vunidogoloa: The Clear and Present Danger, 2012) (See Figure 7: Repeatedly destroyed makeshift walkway (Photo by Simi Sorowale).
- The distance from the main road forced them to use bamboo rafts to get to the hospital (Edwards, Relocation revisited: Vunidogoloa village, Vanua Levu, Fiji, 2014), which the inhabitants were unable to access at high tide.
- Food security was also challenged with a decline in agricultural productivity and the consequent disappearance of home gardens: the floods destroyed the crops the Vunidogoloa people used to grow, and made the soil saline and thus unproductive. Vegetation no longer grew in the salty soil (Meakins, 2012) and only withered fruits grew on the few breadtrees that subsisted (Edwards, Bula Bulletin: Relocation of Vunidogoloa Village, 2012). Moreover, severe drought also affected the yields (Sorowale, Climate Change and Relocation: Vunidogoloa and Nukudamu, 2012).

In addition to flooding and erosion, Vunidogoloa, like the rest of Fiji, is also exposed to other natural risks such as tropical cyclones, an example of which is the intense cyclone Tomas that struck Vanua Levu in 2010. In 2012, the Cakaudrove province was cited as the worst affected by climate change in Fiji during the National Summit for Building Resilience to Climate Change (Fiji Times - PACNEWS, 2012).

Vunidogoloa is a traditional Fijian village, with a small and homogeneous population both in ethnic and religious terms. The village relies on subsistence activities mainly based on fishing and, to a lesser extent, agriculture. In the last decade the environmental degradation caused by sea-level rise, storms and erosion – exacerbated by the village's remote location – affected the villagers' livelihood and living conditions, causing them to think about relocation. The fact that relocation seems to be fully driven by environmental factors makes the residents "environmental migrants", although this term was rarely used in the media. The existence of other intertwined social and economic circumstances as catalysts for the relocation can also be considered; for instance, the remoteness of the village from the main road and the thus complicated access to medical and educational facilities may also have contributed to the residents' request to move. Although exact data on fishing resources is unavailable, it is also possible that overfishing or climate change have made them scarcer, enhancing the inhabitants' desire to move.

2. RELOCATION: A LONG-TERM AND COSTLY PROCESS

2.1. Relocation as a last resort: from the necessity to adapt to relocation

The idea of relocation dates back to the 1950s. Quoting the headman, Sailosi Ramatu, the journalist Ana Sovaraki recalls in the Fiji Sun that the first instance of reaction to extreme climatic events occurred in 1956, when talks put the idea of relocation on the table, even though it was not carried out at that time. According to Mr. Ramatu, the village was not resettled because, unlike today, the villagers were not well-informed with regard to climate change and environment-related risks; the elders were reluctant to relocate (see part III.A.); and the necessary funds to put a relocation process in place were not available (Sovaraki, 2014).

Adaptation to new climatic patterns was first implemented with the inner resources of the village. Firstly, as mentioned above, the most threatened houses were moved, but the sea kept gaining ground. A second strategy consisted in building a seawall in order to keep the high tides at bay. According to the Fiji Times, a wall was funded by the Japanese government (Biumaiono, Rebuilding Vunidogoloa, 2013). In

fact, the still visible seawall was not the first one to be built: as noted in a fieldwork study carried out in the village, the remnants of a former sea wall are located under water 60 meters away from the current shoreline (Sorowale, Vunidogoloa: The Clear and Present Danger, 2012). Even though the seawall was protective for a time, the sea progressively overtook the wall and progressively broke it down. Worse still, the wall now has a detrimental effect on the village, holding water within the village area, preventing it from receding to the sea.

Figure 9. Broken seawall



Photo by RCommuser on Flickr

Having noted the inadequacy of moving houses to different but equally precarious sites within the village and building seawalls, the inhabitants strongly considered relocation as a last resort. Relocation was discussed for years before the village finally resolved to ask for the government support. The villagers approached the government and formally asked for relocation assistance in 2006, at a time when the impacts of floods and erosion were becoming harsher. With this request, Vunidogoloa set a precedent, as it was the first village to ask to relocate due to climate change related-events. The government accepted the proposed relocation but the project did not start straight away. Numerous discussions and consultations were held among the villagers and the project commenced once the inhabitants had given their consent. During the discussion process, the 2010 cyclone Thomas had a marked impact on the debates by making climate-related events more visible, raising awareness both in the village and within the government (Datt, 2014).

Indeed, the awareness raising process was not only occurring at the village level, but also at the government level as evidenced by the holding of the first National Summit for Building Resilience to Climate Change in October 2012. The meeting illustrated new concerns and political will to address the impacts of climate change. It also had an educational dimension, seeking to inform the population about their changing environment. The manager for the Provincial Services iTaukei Affairs Board, Timoci Namotu, reported that provincial officers had launched a training programme and information work targeting the population of Cakaudrove (Vunidogoloa's province)

at the district and village level (Fiji Times - PACNEWS, 2012). The dissemination of information most probably contributed to the growing awareness of the population, including in Vunidogoloa. Indeed a striking feature in the interviews transcribed in the press from 2012 onwards, is the fact that inhabitants were clearly aware that the slow-onset events and extreme natural disasters that struck them were caused by climate change, a feature that was confirmed by Brook Meakins.

2.2. The relocation project: location and progress

In 2012, Vunidogoloa officially received the support of the government and was selected to be the first village to relocate. As such, the relocation process had an experimental element. The relocation plan initially covered the building of 30 houses and water and energy facilities, with government assistance focusing on funding, technical support and advice.

2.2.1. Kenani, the chosen and promised land

The selection of a site for the relocation was crucial in the process. The fact that the site was chosen rapidly by the inhabitants certainly constituted a factor of the success of the relocation. Newspaper reports make no mention of any other potential site that might have been considered for the relocation, and, as reported in the Fiji Times, the site had first been identified as early as 1952 in the perspective of a potential relocation (Biumaiono, Rebuilding Vunidogoloa, 2013).

The site lies on higher ground, nearly two kilometres inland from the original village site, but still within Vunidogoloa boundaries (see Figure 5: Vunidogola new location before construction (Google Maps). One house already stood alongside the new site (Meakins, 2012). It is a 5-acre parcel, which belongs to one of Vunidogoloa's residents: Mataqali Nadawa and it was apparently donated without compensation (Taleitaki, 2014). The absence of land-related issues greatly facilitated the project; as a member of the national disaster management office stated, the acquisition of a new land would have extended the relocation process and involved far higher costs (Wilson, 2014).

The villagers named it Kenani, after the Fijian word for Canaan, the Biblical Promised Land. As the headman declared to the Methodist mission partner Julia Edwards "after many years our prayers have finally been answered"; "God has allocated a special place for us" (Edwards, Climate justice and the Pacific Conference of Churches: moving the relocation agenda in the Pacific, 2014). The religious dimension of the relocation of Vunidogoloa should not be underestimated; the fact that the villagers consider their new village as a place given to them by God imbues the relocation process with meaning in the eyes of villagers and highly contributed to their approval of and commitment to the project (see part III.B.).

2.2.2. A delayed but successful implementation, based on local participation

The project was only officially launched in 2012, when Vunidogoloa received the government confirmation that they had been selected for relocation. The relocation plan covered the building of 30 identical houses, in accordance with the choice of the villagers that everyone would be treated equally. All houses were to be equipped with their own separated kitchen, with running water, provided by a natural system through gradient drainage, requiring the construction of a water source and tanks. The houses were also planned to have a proper bathroom with inside toilets and a shower, which was not the case in the former village. Finally, the plan included an energy supply with solar panels for each house. It also planned to implement income-generating activities to ensure the livelihoods of the community. From the beginning, the relocation process has been driven by equality concerns and has been based on a consensual and participative decision-making process. The provision of basic facilities and economic opportunities demonstrates the comprehensive character of

the relocation: it is not simply about moving people from one place to another, but also aims to ensure better living conditions and to serve the community's livelihood.

Due to a lack of evidence, it is very hard to distinguish the elements of the project which directly stemmed from the villagers' will from those which arose from government input, as well as the changes that were made to the project during its implementation. It should be noted that all reviews of the project emphasise its participative and inclusive aspects, underlining the fact that villagers had a central role in the decision-making process. It was decided, seemingly by the villagers, that each married couple would have its own house; the former village only had 26 houses and some married couples used to share their house with up to three families (see part I.A.) (Edwards, Relocation revisited: Vunidogoloa village, Vanua Levu, Fiji, 2014).

Although not greatly commented upon in the media, the implementation of the project was delayed in several regards, firstly from its confirmation in 2006 to an official launch in 2012. Subsequently, the construction of the houses was due to be completed by the end of 2012 (Silaitoga, Sea level woes, 2012), but was only finished at the beginning of 2014. In August 2012, the divisional planning officer north Alipate Bolalevu justified the delays in the local press by citing the time needed to fulfil all of the requisite procedural stages before the construction could actually start: *"The villagers will inform government through district and provincial council meetings of the situation they face in their villages as a result of climate change. Then they will have to identify a new piece of land for relocation and liaise with the mataqali for consent. When that is done, the villagers together with the consent from the mataqali will inform their provincial council offices and then it will come to the Ministry of Provincial Development where assistance and other relocation details would be attended to."* (Silaitoga, Sea level woes, 2012). An initial delay can be attributed to the earthwork the parcel required. The site was located on the top of a hill, which needed to be lowered and earthen tiers were constructed (Silaitoga, Works delay village relocation, 2012). After heavy rain, the recently levelled ground was then found to be prone to erosion and landslides, which gave rise to new work. The villagers planted long-rooted vetiver grass – locally known to stabilise the soil – on the advice of agricultural officers (Silaitoga, Villagers put down roots, 2012). Then, the delivery of the building material was planned for the beginning of September 2012 (Silaitoga, Sea level woes, 2012), but by the end of 2012, the soil had not yet been sufficiently stabilised, and timber had been cut for only two houses (Edwards, Climate-induced relocation: a first for Fiji, 2013).

Figure 10. Villagers planting grass at the new village



Photo by Serafina Silaitoga

Contradictory information arises from the different press reports, government press releases and international organisations concerning the tempo of construction of the houses, which research work for the present study did not manage to clarify. In March 2013, according to the Fiji Sun, 3 houses were reported to have been built in the new village (Tuimoala, 2013). In September 2013, according to the Fiji Times, 14 houses had been built thus far and 16 others had been planned (Moceiwa, 2013). This affirmation closely corresponds to ILO information of September 2013, according to which 16 houses had been built in 7 months (ILO, 2013). But in December 2013, the government stated in a press release that only 10 had been built, including 8 completed with 24 still to be completed (Fiji government, 2013). The construction resumed at high speed with 4 houses being built in 15 days (ILO, 2014). The houses were finally completed by the very end of 2013 (New homes to open soon with income generating provisions for Vunidogoloa residents, 2013).

One thing that is certain is that the lack of materials was at least partially responsible for the slow progress of the work

and its suspension for 4 weeks in August and September 2013. As was confirmed by a member of ILO, the volunteers that built the houses had to share the same building tools, which considerably slowed down construction; although a few months beforehand a journalist suspected that the delays were caused by the recurrent stability problems of the ground (Pareti, 2013).

Figure 11. Houses under construction in April 2013



Photo by Julia Edwards

Figure 12. Houses under construction in August 2013



Photo by RCommuser -Flickr

The houses were built according to the initial plan, and were effectively endowed with a supply of water and renewable energy, and although the construction suffered some delays, the postponement of the move does not seem to have caused any kind of conflict. On the contrary, Reports bear witness to the enthusiasm of the villagers and their gratitude regarding the government involvement at all stages of the construction process (Silaitoga, Villagers put down roots, 2012). Although the houses were built gradually, the villagers moved together to the new site of Kenani over a three-day period in January 2014.

The question of property rights has not been addressed in the media, but as confirmed by a member of ILO, the inhabitants not only benefit from the usufruct of the houses, they also own them.

2.2.3. Shared costs revised upwards

As of 2012, it was acknowledged that the Fijian Government would cover two thirds of the relocation costs, corresponding to the building materials, the construction of the houses, the construction of the infrastructure related to income-generating activities and labour. It was planned that the villagers would contribute the remaining third of the cost that would be provided through wood supply and labour (Meakins, 2012). This division of the financial burden, suggested by the government, seemingly won unanimous approval.

It is hard to establish an exact estimate of the costs of the relocation, as the figures communicated varied a great deal depending on the stage of the relocation and the source, but it can be clearly asserted that the actual expense exceeded the expected costs. Thus the 2/3-1/3 equation was exceeded, turning into a 75% governmental 25% local split according to the media, and in truth the governmental part probably exceeded 75% of the costs. The landscaping work was not planned at the beginning of the project and generated new expenses. In March 2013, the director of environment of the Commissioner Northern's office, Jope Davetanivalu indicated to the press that the FJD 310,000 made available by the government had to be increased by an additional FJD 50,000, mostly because of the irregularities of the location site. In 2013, the director treaties of the Foreign Affairs Ministry, Esala Nayasi, evoked a FJD 200,000 surplus for the excavation work of both Vunidogoloa village and Narikoso (another village engaged in a relocation process), without giving any detail on the precise sharing of the costs by each village (PCC, 2013). In another article, the planning officer north Alipate Bolalevu explains that the cost of the Kenani site levelling was about FJD 130,000, which would match the figures of Esala Nayasi with 65% of the earthwork expenses for the two villages dedicated to Vunidogoloa.

At the launch of the project, in 2012, the estimated cost of each house was around FJD 15,000 (Rawalai, Village relocation begins, 2013), amounting to FJD 450,000 overall for the 30 houses, with two thirds (FJD 300,000) supposedly covered by the government. In 2013, the press communicated that the allocated budget for the relocation amounted to \$360,000 (Pareti, 2013). But, despite the fact that the infrastructure for income generating activities has to be added, this figure is far below the actual cost. By the end of the process, in January 2014, the government communicated that it had spent FJD 879,000 (some USD 432,206) on the whole relocation process (Silaitoga, Villagers to move into new homes, 2014). However, according to the IPS news agency, the cost of the relocation process reached FJD 978,000 (Wilson, 2014). Finally, at the Conference of the Parties in December 2014 in Lima, the figure was put at FJD 988,228.89 (SPEREP, 2014). It can thus safely be said that the actual cost of the relocation amounted to nearly three times the original cost planning.

The village contribution, as mentioned above, was provided in the form of timber and labour. A logging license was issued by the government for the village to cut down part of the forest on their own territory, with the logging handled by a local company, Vitiana Timber Limited, owned by the recently deceased local businessman Bhadur Ali (Edwards, Relocation revisited: Vunidogoloa village, Vanua Levu, Fiji, 2014) (Biumaiono, Rebuilding Vunidogoloa, 2013). The financial contribution corresponding to the timber was estimated at FJD 250,000 (Edwards, Relocation revisited: Vunidogoloa village, Vanua Levu, Fiji, 2014), namely 22% of the total project (excluding the valorisation of the labour).

Beyond the financial distribution between the government and the villagers, the distribution reflected a process of task sharing: the villagers were in charge of logging the wood and were expected to take part in the construction process and the

government covered the remainder of the expenses. The access to timber resources within the community was therefore a key element of the relocation's success.

3. A COMPREHENSIVE PROCESS REQUIRING MULTILATERAL MOBILISATION

3.1 Relocating: from construction to economic empowerment

As observed above, the relocation process went hand-in-hand with an improvement in living conditions thanks to the provision of basic facilities and through the development of income-generating activities, building a true comprehensive framework for the relocation. From the construction of the houses to the establishment of new economic activities, a wide range of actors were mobilised in the relocation process. The villagers undoubtedly played a fundamental role in the relocation but they were closely supported by the local and national governments and they also benefited from assistance from international organisations.

The project was a joint venture between the villagers, the local government with the support of the Commissioner Northern's office, the national government with the assistance of the Ministry of Provincial Development, National Disaster Management and the Ministry of Labour, in particular through the participation of volunteers from the National Employment Centre (Vunidogoloa cashes in, 2013).

3.1.1. Construction of the houses

The construction of the houses was undertaken by volunteers identified by the Ministry of Labour among the unemployed people registered at the National Employment Center (NEC). After a selection process, 12 qualified unemployed people were selected out of 28 to work on clearing the parcel, crop planting and construction of the village. All of them followed an Occupational Safety and Health training course and attended a session on the traditional values and good practices and behaviour (ILO, 2014). For the work completed, they received a weekly allowance from the Ministry of Labour in addition to board and lodging. Observing that construction was advancing at a slow pace due to the lack of tools, the Ministry of Labour requested the support of the ILO within the framework of an adapted Cash for Work Plus Programme. After the conclusion of an agreement in November 2013, the ILO provided safety equipment and additional tools to the volunteers, which sped up the construction of the houses, with 4 houses being built in 15 days.

3.1.2. Installation of solar panels

Figure 13. Solar panel in Kenani



Photo by Julia Edwards

The use of solar power systems is part of a wider energy policy to which Fiji has committed. With the aim of reducing emissions and in pursuit of energy independency, Fiji has already become a “renewable energy island” with more than half of its electricity being produced by renewable energy sources (IPCC, 2007). In the case of Vunidogoloa, the installation of solar panels was facilitated by the existence of a UN Women-funded rural empowerment programme, which trained 10 Fijian women in solar engineering at the Barefoot College in India for 6 months in 2012. Thanks to this capacity-building programme, trained women took responsibility for the electrification of the new houses, as was the case for a dozen Fijian villages, and the villagers could benefit from up to 3 solar lights, for the price of the wiring (Edwards, *Relocation revisited: Vunidogoloa village, Vanua Levu, Fiji*, 2014) (Rawalai, *Woman lights up homes*, 2014) (Fiji Government, 2014).

3.1.3. New economic opportunities

The development of income-generating activities was included in the project from the beginning but elements of the economic activities to be developed in the new village changed over time, such as the modalities of support. As recalled by a member of ILO, it was initially planned that the inhabitants would receive a cash grant amounted to FJD 200 per family for their own economic development, however it was later decided that the income generating activities would be developed at the community level jointly with the assistance organisations. The activity of rice farming, mentioned in 2012 (Kumar, 2012), disappeared from the project later on, aquaculture and pineapple farming were mentioned from the beginning and remained in the project, and finally, the installation of copra drier and the planting of banana shoots was added by the end of 2013. These different activities were implemented through close cooperation between the Ministry of Agriculture, the Ministry of Fisheries, and the ILO.

Figure 14. Pineapple tops and ponds in Kenani



Photo by Julia Edwards.

After surveying the area, the Ministry of Agriculture recommended the planting of banana and pineapple tops, which were provided by the ILO, and staff from the Ministry of Agriculture assisted the villagers with the planting of the crops and advised them on farming practices. Finally, the ILO also provided copra dryer (ILO, 2014).

Considering the extended distance to the sea, the promoters of the project also considered aquaculture as a complementary activity to fishing. Four fish and prawn ponds (out of the 8 initially announced in 2013) were built by the Ministry of Fisheries (Silaitoga, Villagers to ready eight new ponds, 2013). During the visit of the Methodist church in November 2014, only one pond had been stocked with fish (Edwards, Relocation revisited: Vunidogoloa village, Vanua Levu, Fiji, 2014). Cattle farming infrastructure, such as paddocks have also been built (Wilson, 2014).

The Vunidogoloa relocation was not a mere population movement; it was accompanied by structural changes aiming to improve living conditions and make the community more sustainable and more resilient to climate changes. The Government and the ILO supported the relocation so that Kenani would offer new economic opportunities, supporting a transition from fishing-based revenues to agricultural-related activities more broadly speaking and creating new economic opportunities. The villagers received material assistance, technical advice, and training in order for them to tackle the new activities. A lack of information precludes an evaluation of the actual appropriation of the agricultural crops and aquaculture infrastructure and the effective economic benefits derived from them.

3.2. Post relocation observations: improved quality of life in an on-going project

The move to Kenani has taken place and the available reviews of community life in the new village are very positive. The villagers seem very grateful to the government for having funded and managed the relocation. As summarised in the report undertaken by the Methodist church in November 2014: *"life is easier"*. The relocation has facilitated an alleviation in the daily life of the villagers: the proximity of the road has simplified access to facilities; now the children are able to go to school by bus and the hospital can be reached easily. Fishing activities have continued in conjunction with the new activities, the only drawback being that the fishermen are now forced to commute back and forth to the sea to go fishing. No trace seems to remain from the concerns evoked in 2012 about children's safety arising from the proximity of the new site to the main road (Edwards, Bula Bulletin: Relocation of Vunidogoloa Village, 2012). The village has even become an attraction on the island and school children frequently visit it (Edwards, Relocation revisited: Vunidogoloa village, Vanua Levu, Fiji, 2014). This pedagogical role of the village could potentially turn Kenani into a tourist attraction.

However, in January 2014, the relocation was still not complete. The exposure to landslides and erosion necessitated the implementation of a second phase of the project, as further landscaping was needed, in conjunction with the installation of waterways, drains and footpaths. An evacuation centre was also built during this second part of the project. The second phase has further increased the overall cost of the relocation: in September 2014, the government estimated that the additional cost amounted to FJD 200,000 (Fiji Government, 2014).

4. COPING WITH THE SOCIAL CONCERNS RELATED TO RELOCATION

4.1. Leaving home: acceptance and memory work in a traditional society

Leaving home is never an easy process and Vunidogoloa was no exception to that rule, as the headman confirmed in 2014: *"It was not easy for the village community to relocate"* (UNOCHA, 2014). The vast majority of the villagers took part proactively in

the relocation process and, as mentioned above, the residents consider the new site to be a holy land. But the move was particularly difficult to accept for others, as highlighted by Brook Meakins who visited the village before its move in 2012, and who observed that the relocation process aroused various issues ranging from property rights¹, lack of financial means, to cultural loss (Meakins, 2012). The elderly were particularly sensitive to this loss, as they had spent their entire lives in the village and felt it to be part of their existence and identity: *“This was especially true for older people that had lived in the village all their life, because the land is part of their culture and identity.”* said the headman. He described the relocation process as *“a very emotional period for us as there was a lot of waiting, insecurity, and questioning.”* (UNOCHA, 2014).

Distancing themselves from their home village raised significant concerns among the inhabitants, especially in the traditional Pacific context, where ties to the land are especially close, strong and meaningful. Indeed, the concept of land (*vanua* in Fijian) is imbued with traditional significance that goes far beyond the economic value of the land. *Vanua* refers to the profound link between the people and the land, the land steeped in cultural heritage, transmitting identity to the people through their ancestors. This connection rules as a leading principle in the management and sustainable use of natural resources (IPCC, 2007). Understanding the *vanua* concept makes the trauma of leaving one’s homeland more intelligible, as relocation may be understood as a threat to the villagers’ identity and cultural heritage. This approach also makes the concerns that were raised regarding the cemetery of Vunidogoloa more understandable: the inhabitants refused to leave the remains of their ancestors in a place vulnerable to the sea and chose to move them to the new location, which finally seemed to suit the villagers: *“The new cemetery is now more convenient, and we save time going to visit there compared with accessing the old site”* said an elder, quoted by Julia Edwards (Edwards, Relocation revisited: Vunidogoloa village, Vanua Levu, Fiji, 2014).

However, the relocation of a community to a nearby site, in the case of Vunidogoloa a site on the community’s own land, remains the least disruptive type of migration (Campbell, 2010): the community moved altogether, preserving their identity, tradition and even the structure of their neighbourhood, with neighbours from the former village remaining neighbours in the new one (Edwards, Relocation revisited: Vunidogoloa village, Vanua Levu, Fiji, 2014); and the move was made within village-owned land boundaries. The old village was not removed and still stands where the river Tibia and the Natewa Bay meet. As some articles report, the villagers still regularly visit it. As stated in the reports made by visitors, the vast majority of the population accepted the move, often with enthusiasm. Nonetheless, Vice mentions a striking anecdote in a photo report published in March 2015: the case supposedly recounted by the headman, Sailosi Ramatu, is the story of an old man who reportedly returned to the old village to be left to die there (Tan, 2015).

An awareness-raising workshop was held in Vunidogoloa before the relocation took place in 2012. It was organised by the Pacific Conference of Churches (PCC) and the Nansen Initiative. The workshop provided an opportunity for the oldest villagers to tell their stories and discuss the history of Vunidogoloa. The villagers also reported the progressive environmental changes that had occurred over the past few decades and were able to voice their fears and hopes regarding the relocation process. Despite the fact that research for this study did not unearth any villager feedback on the workshop, it can be confidently stated that this forum for

1. Indeed, the customary tenure of 80% of the land in the Pacific did not make the relocation any easier as it renders any land transaction at the community level almost impossible (Anderson & Lee, 2010)

dialogue and exchange was valuable for the villagers, as a communal act to discuss and come to terms with a major change in the life of the community.

Lastly, it should be recalled that migration and displacement in general are not new features for Pacific Islanders. The case of the Banabans, forced to migrate to Fiji in 1945 (Edwards, Phosphate mining and the relocation of the Banabans to northern Fiji in 1945: lessons for climate change forced displacement, 2014) is only one of a number of examples in the history of Pacific mobility; mobility runs in the Pacific islanders' veins (Hau'Ofa, 1994). This tradition of mobility is also present in Vunidogoloa. Indeed, during the 2012 awareness-raising workshop, a previous displacement of the community was evoked: their ancestors had already had to move from the inland mountain of Vanua Levu to the coastal area when their settlement was flooded (Edwards, Bula Bulletin: Relocation of Vunidogoloa Village, 2012). The recollection of a past experience of displacement may also have enhanced the adaptive capacity and resilience of the community.

4.2. Religion and the role of the Pacific Conference of Churches

Christianity is the main religion across the Pacific, but the region offers a multitude of syncretism. At the regional scale, the Pacific Conference of Churches (PCC) brings together the Christian churches of the region and has a membership of 6.5 million people. In Fiji, 80% of the population are Christian and most of them belong to Methodist churches, which corresponds to Vunidogoloa's case where the whole population is Christian and the vast majority belonging to Methodist Church (see part I.A.).

Religion is a major feature in the life of Pacific islanders and Vunidogoloa is no exception. The faith of the villagers accompanied them all along the relocation process. As early as 2007, when the relocation had just been confirmed by the government, the villagers devoted the first Friday of each month to prayers and fasting for the relocation process (Edwards, Climate-induced relocation: a first for Fiji, 2013). The choice of the name Kenani, meaning "promised land" is also very indicative of their Christian devotion.

The significance of religion in the life of the Pacific islanders confers a primary role to the churches in terms of day-to-day support. In light of the environmental-related events suffered by the Pacific Islands, it seems obvious for the church to take up the issue of climate change. At the regional level, the PCC is a recognised actor and expert on climate change. The Conference has developed advocacy work to frame environmental displacements, in conjunction with governments, civil society and regional organisations. It has also developed assistance programmes to help Pacific communities and their local churches to cope with climate change (UNOCHA, 2014).

In the case of Vunidogoloa, the PCC became a key stakeholder regarding the social aspects of relocation. According to the Climate Change Officer of the PCC, Peter Emberson, the villagers asked for spiritual guidance in 2012: *"Basically they wanted to know where the church stood in relation to their displacement", "They wanted to hear from someone in authority in the church, so we helped facilitate that for them."* (Pareti, 2013). The Methodist Church General Secretary, Reverend Dr Epineri Vakadewavosa then visited the village and reassured the inhabitants.

The PCC first heard about the relocation of the village through local news. They contacted the Methodist Church of Fiji and Rotuma (a member of the PCC), who arranged a first visit in March 2012. Later in 2012, the PCC organised a 3-day awareness-raising workshop in conjunction with the Nansen Initiative in order to brief the villagers on climate change issues, and undertook work on the community history (see III.A.). In April 2013, the PCC returned to Vunidogoloa with the assistant general secretary of the Methodist Church, and held a learning exchange session that pursued the historical work started the previous year. Three other visits were subsequently organised, the latest of which took place in February 2015. During the whole process,

the PCC provided expertise to the villagers and helped them to prepare for relocation. The Church acted as a forceful cohesive stakeholder and a substitute for public social services in the process. A particularly remarkable facet of the Church's contribution to the process was its ability to directly interact with the community but also to interact with superior authorities; indeed, the PCC was asked by the government to run the Climate Change related discussion group in national conferences.

Lastly, a year and a half after the move, a project to build a church is now underway, with the crowdfunding campaign Indiegogo Vunidogoloa, led by the Californian attorney Brook Meakins, who visited the village several times, following requests from the villagers for this kind of assistance.

5. POLICY IMPLICATIONS: THE LESSONS LEARNT FROM VUNIDOGOLOA CASE

5.1. Appraising the Vunidogoloa relocation

Although the relocation of the village of Vunidogoloa was successful in the sense that the inhabitants moved under favourable circumstances with a good level of support and that they themselves are happy about the relocation, some elements of the process itself may be questioned and also with regard to the way in which it could be replicated.

The presence of land and timber resources was a crucial aspect of the relocation. The villagers had internal resources that meant they were able to move within their own land boundaries, avoiding major concerns regarding land property rights. These resources also considerably reduced the financial cost of relocation, and the principal contribution on the part of the villagers was the provision of timber that they already owned. It is difficult to say what might have happened had the community not owned a sufficient and appropriate area of land, especially in the context of customary tenure that complicates land transactions and often make them impossible. It is unclear whether the government would have been able to assist the community in land transactions or contribute to the purchase of timber. It is hard to say if a community deprived of resources, even one as exposed as Vunidogoloa, would have succeeded in moving. The sustainability of the timber resource can also be questioned; there is no information on how the wood was cut, if sustainability standards were applied and if – in the hypothesis of a multiplication of relocations on the island – the constructions standards, involving land clearing and wood cutting, would ensure sustainable management of land and forests.

Moreover, the issues of erosion and landslides that were discovered late in the process of Vunidogoloa's relocation call into question the planning of the relocation: should geographical and biophysical considerations not have been taken into account earlier in the project, and, in the case of a risky choice of location, to what extent should the will of the inhabitants prevail? In this sense, the Narikoso case provides another example of a relocation site exposed to environmental-related risks (see part IV.B.).

Last but not least, the social concerns of the relocation were addressed through the voluntary assistance from religious organisations. Although they are highly implicated on climate change-related matters, the sustainability and durability of such arrangements can be questioned, and it could be argued that the State should incorporate the role currently assumed by the church?

The timeline and cost of the relocation are also matters of concern. The project was confirmed in 2006 but only implemented in 2012, with the actual move taking place in 2014, a period of at least 8 years for the project to come to fruition. Even if relocation seemed to be the most appropriate and, in fact, the only solution left for Vunidogoloa, the question of what can actually be offered to other communities in

emergency situations should be posed. The government's administrative ability to concurrently lead various projects of this kind is questionable, especially regarding its financial capability. From an initial 2/3 governmental-1/3 local division, the government ended up covering more than three quarters of the costs of the relocation, which in all probability were three times higher than the original estimate. More than 1 million Fijian dollars were spent on the Vunidogoloa relocation, and this substantial cost casts doubt on the viability of the project to be replicated elsewhere.

5.2. Narikoso and other future relocations in Fiji

Vunidogoloa is not a unique case in Fiji. The mean sea level has risen by an average of 4.6mm per year since 1993 according to the Lautoka tide gauge in western Fiji, putting numerous communities at risk. As early as 2012, the Vunidogoloa villagers reported visits of other village leaders seeking advice in the perspective of their own possible relocation (Meakins, 2012).

Other relocation projects have taken place, such as those in Narikoso and Denimau. Narikoso is located on Ono Island, about 280km from Vunidogoloa, and shares similar characteristics with Vunidogoloa: a population of more than a hundred inhabitants, about 30 houses, a location in a coastal area that was flooded in the case of high tides, with a seawall that no longer helped to limit the damage. The village requested assistance for relocation from the Government in 2011. A site has been designated for relocation, and here again, the land is owned by locals. But the Narikoso villagers have not been as lucky as their counterparts in Vunidogoloa: the lowering and stabilisation of the land was not sufficient to make the site hospitable and the Government provided an engineering team to help stabilise the site. Just as in the case of Vunidogoloa, the process was consensus-based and participative, and the relocation was a multilateral process: the government supported the relocation in conjunction with the Secretariat of the Pacific Community (SPC) – an intergovernmental organisation – and the German development agency GIZ (UNOCHA, 2014). The PCC also assisted the process of relocation.

Other villages in Fiji are concerned by relocation processes. In this regard, the Vunidogoloa relocation has acted as a catalyst for other processes and helped to raise awareness; in its wake the Government has conducted assessments of the impact of climate change on the island, and it was announced at the beginning of 2015 that about 800 communities had already been affected by the impacts of climate change in Fiji. From this assessment it was evaluated that some 45 villages need to be relocated over the next 5 to 20 years (Naivua, 2015) (Susu, 2015).

5.3. Fiji's guidelines for relocation: leading the adaptation debates at the local and international level

The perspective of multiple relocations in a short time period has been accompanied by the drafting of guidelines on climate change adaptation and relocation in particular. The adaptation plan has evolved over time in Fiji and relocation is now a preferential adaptation strategy. As has been observed above, the Fiji government is working to disseminate information in the communities. The formerly feted seawalls are no longer considered as an effective means of combating sea-level rise, and are thus now only regarded as temporary facilities (PCC, 2013).

Since the Vunidogoloa relocation, the Fijian Government has been developing a relocation policy in order to be able to respond to community requests in a systematic and ordered way. The German agency GIZ is assisting the Fiji government with this effort. General guiding principles on community ownership, participation, equity and equality should be established. Climate change concerns will be integrated into national government planning and thus budgeted for. It is also expected that relocation guidelines will be drawn up to complement the 2012 national climate change policy. The guidelines are still to be formally discussed, and as far as their

legislative implications are concerned, no appropriate legal framework addressing environmental-related displacement has been established as of yet (Wilson, 2014).

This legislative and governmental ambition is at risk of being confronted with limited resources in terms of human capital, and technical and financial capabilities. This is especially the case due to the low accessibility to international funds, and in particular to the Climate Change adaption fund due to the complexity of the application procedures and an overall lack of funding. This concern is shared by all Small Islands Developing States (SIDS) that are on the front line of the impacts of climate change and sea-level rise. The national relocation strategy is closely linked to the UNFCCC process and its discussions related to environmental migration.

The Fijian Government has already integrated relocation as an adaptation tool to deal with climate change, but anticipation is not sufficient, especially considering the uncertainty related to climate change projections. Increasing the resilience of small islands should be considered as a comprehensive process, and a holistic approach should be favoured, taking into account cross-sector considerations, from socio-economic concerns to environmental systems. In the case of Fiji and Vunidogoloa in particular, the creation of alternative economic activities was crucial, especially considering the adverse impacts of climate change on marine ecosystems and therefore on traditional fishing activities (IPCC). Numerous challenges remain to be overcome, particularly the financial burden that relocation represents: finding sustainable funding for future relocations is key to the development of the adaptive capability of Fiji and other small islands.

CONCLUSION

The example of the Vunidogoloa relocation highlights the viability of internal and international migration as an adaptation policy, disavowing the negative image that is often associated with it. The village of Vunidogoloa in Fiji has set an exemplary precedent in climate-related relocation. Suffering from slow-onset and disastrous events, the residents engaged in a relocation process supported by the Fijian authorities after a long period of internal discussion.

The project was undertaken with the successful ambition of ensuring better living standards for the population. The success of the relocation was based on: i) a proactive and participative attitude of the population, facilitated by the procedures followed by the government; ii) a comprehensive approach increasing the resilience of the community, improving its living conditions but also offering new economic opportunities, ensuring both food security and new income-generating activities; iii) social support provided by the local and regional religious authorities. Nevertheless, as with all experimental projects, the relocation of Vunidogola has encountered obstacles: the project was delayed, the projected budget for the relocation tripled and the biophysical characteristics of the new site necessitated further work.

At the time of the request for relocation, the project was the only one of its kind; it was not the result of an adaptation policy, but, quite on the contrary, initiated one. What was a first time innovative experiment turned out to be a basis for framing permanent voluntary internal displacements in the country. Indeed, the multilateral and inclusive experience of Vunidogola served as a catalyst for a national adaptation policy. As a result, Fiji has become one of the voices for the cause of low-lying islands for relocation and an advocate for international mechanisms to facilitate relocation processes.

REFERENCES

BOOKS

- Anderson, T., & Lee, G. (2010). Understanding Melanesian customary land. In AID/WATCH, *In defense of Melanesian customary land* (pp. 2-4). Sydney.
- Campbell. (2010). Climate Change and Population Movement in Pacific Island Countries. In Burson, *Climate Change and Migration: South Pacific Perspectives* (pp. 29-50).
- Edwards, J. (2014). Climate justice and the Pacific Conference of Churches: moving the relocation agenda in the Pacific. In L. Andrianos, J.-W. Snee, & G. Kerber, *Sustainable Alternatives for Poverty Reduction and Eco-Justice ..., Volume 1* (pp. 208-224).
- Edwards, J. (2014). Phosphate mining and the relocation of the Banabans to northern Fiji in 1945: lessons for climate change forced displacement. *Le Journal de la Société des Océanistes*, 121-136.
- Hau'Ofa, E. (1994). *Our Sea of Islands. The Contemporary Pacific*.
- Mills, I. (2014). *Fiji 408 Success Secrets 408 Most Asked Questions*.

REPORTS

- Edwards, J. (2012, april-may). *Bula Bulletin: Relocation of Vunidogoloa Village*. Retrieved from Methodist Church: <http://www.methodist.org.uk/downloads/wcr-julia-edwards-fiji-newsletter-aprilmay2012.pdf>
- Edwards, J. (2013, january). *Climate-induced relocation: a first for Fiji*. Retrieved from Methodist Church: <http://www.methodist.org.uk/media/757401/wcr-pcc-relocation-policy-fiji-jan13.pdf>
- Edwards, J. (2014, november). *Relocation revisited: Vunidogoloa village, Vanua Levu, Fiji*. Retrieved from Methodist Church: http://www.methodist.org.uk/media/1395086/relocation-revisited_vunidogoloa-village-fiji-nov14-je.pdf
- ILO. (2013, september 13). *Fiji: A village forced to move by rising seas*. Retrieved from ILO: http://www.ilo.org/global/about-the-ilo/newsroom/features/WCMS_221135/lang-en/index.htm

- ILO. (2014). *Cash for Work: Pilot Programme 2013-2014 Fiji and Solomon Islands Experience*.
- UNOCHA. (2014, september 11). *Fiji: Building resilience in the face of climate change*. Retrieved from <http://www.unocha.org/top-stories/all-stories/fiji-building-resilience-face-climate-change>

PRESS ARTICLES

- Biumaiono, S. (2013, december 15). Mysterious gift of bone healing.
- Biumaiono, S. (2013, december 15). Rebuilding Vunidogoloa. *Fiji Times*.
- Datt, H. (2014, january 17). Climate Change forces villagers to relocate. *Fiji One*.
- Fiji Times - PACNEWS. (2012, october 24). Evidence of climate change in Fiji: Chief.
- Kumar, R. (2012, june 27). Rising seas prompt move. *Fiji Times*.
- Meakins, B. (2012, september 17). An Inside Look at the One of the First Villages Forced to Relocate Due to Climate Change. *Alternet*.
- Moceiwa, S. (2013, september 10). Construction of new homes to resume. *Fiji Times*.
- Naivua, S. (2015, february 9). More villages to relocate due to rising sea levels. *FBC*.
- Pareti, S. (2013, May). Climate Refugees? *Islands Business*.
- PCC. (2013, August 13). International community accused of selfishness, \$34million needed for climate change in Fiji. *Islands Business*.
- PCC. (2013, april 3). Seawalls are not an option to stop rising sea levels. *Islands Business*.
- Rawalai, L. (2013, may 21). Village relocation begins. *Fiji Times*.
- Rawalai, L. (2014, january 18). Woman lights up homes. *Fiji Times*. Retrieved from Fiji Times.

- Silaitoga, S. (2012, august 29). Sea level woes. *Fiji Times*.
- Silaitoga, S. (2012, march 5). Villagers put down roots. *Fiji Times*.
- Silaitoga, S. (2012, march 21). Works delay village relocation. *Fiji Times*. Retrieved from Fiji Times.
- Silaitoga, S. (2013, november 7). Villagers to ready eight new ponds. *Fiji Times*.
- Silaitoga, S. (2014, january 2014). Villagers to move into new homes. *Fiji Times*.
- Sorowale, S. (2011). Retrieved from Vunidogoloa: climate change induced relocation: <http://simisorowale.blogspot.fr/>
- Sorowale, S. (2012, may 1). *Climate Change and Relocation: Vunidogoloa and Nukudamu*. Retrieved from Climate change and relocation in Fiji: <http://climatechangeandrelocationinfiji.blogspot.fr/>
- Sorowale, S. (2012, may 8). *Vunidogoloa: The Clear and Present Danger*. Retrieved from Climate Change and relocation: <http://climatechangeandrelocationinfiji.blogspot.fr/>
- Sovaraki. (2014, august 20). Vunidogoloa relocation mooted in the 50s. *Fiji Sun*.
- SPEREP. (2014, december 5). *Upheaval of Fiji communities as climate change impacts are felt*. Retrieved from SPEREP: <http://www.sprep.org/climate-change/upheaval-of-fiji-communities-as-climate-change-impacts-are-felt>
- Susu, A. (2015, february 12). 800 Communities Under Threat. *Fiji Sun*.
- Taleitaki, S. (2014, january 2014). Vunidogoloa relocation praised. *Fiji Sun*.
- Tan, J. (2015, march 17). *Photographing Fiji's Sinking Island Communities*. Retrieved from Vice: <http://www.vice.com/read/photographing-fijis-sinking-island-communities>

CLOTHILDE TRONQUET

FROM VUNIDOGOLOA TO KENANI: AN INSIGHT INTO SUCCESSFUL
RELOCATION

- Tuimoala, J. (2013, March 16). More money for Vunidogoloa relocation. *Fiji Sun*.
- Vunidogoloa cashes in. (2013, december 13). *Fiji Sun*.
- Wilson, C. (2014, May 25). Fiji Leads Pacific Region on Climate Adaptation Efforts. *IPS News Agency*.
- Government press-releases
- Bainimarama. (2014, january 16). *Speech at the launch of the Vunidogoloa village relocation project*. Retrieved from Fijian government, Public Service Commission : <http://www.psc.gov.fj/index.php/psc-news/speeches/829-prime-minister-commodore-j-v-bainimarama-speech-at-the-launch-of-the-vunidogoloa-village-relocation-project>
- Fiji government. (2013). *New homes for Vunidogoloa residents*.
- Fiji Government. (2014, march 28). *Solar engineer shares skills*. Retrieved from Fijian Government: <http://www.fiji.gov.fj/Media-Center/Press-Releases/SOLAR-ENGINEER-SHARES-SKILLS.aspx>
- Fiji Government. (2014, September 1). *Vunidogoloa relocation 2nd phase underway*. Retrieved from Fiji Government: <http://www.fiji.gov.fj/Media-Center/Press-Releases/VUNIDOGOLOA-RELOCATION-2ND-PHASE-UNDERWAY.aspx>
- *New homes to open soon with income generating provisions for Vunidogoloa residents*. (2013, december 12). Retrieved from Fiji Government Blog: <http://fijiblog.gov.fj/blog/2013/12/12/new-homes-to-open-soon-with-income-generating-provisions-for.html>
- *PM Bainimarama opens Vunidogoloa Village Relocation Project - 2014*. (2014, January 16). Retrieved from Fijian Government: <http://www.fiji.gov.fj/Photos---Video/Photo-Gallery/PM-Bainimarama-opens-Vunidogoloa-Village-Relocatio.aspx?imagepath=/Photos---Video/Photo-Gallery/PM-Bainimarama-opens-Vunidogoloa-Village-Relocatio/>