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Pathways for Urban Food Security in the Pacific: Situating the Urban Informal Food Sector in the Context of Urbanisation and Globalisation

Lucas Watt[1], Roxane de Waegh[2] , Greg Watt[3]

Abstract

The urban context is often sidelined in the academic discourse surrounding food security in the Pacific. Yet, for some Pacific nations, cities are the home for most of their citizens. In this thematic literature review, we direct our attention toward the increasingly important topic of food security in Pacific cities. We investigate how the urban informal food sector historically has provided a baseline of food security in Pacific cities. The production, livelihood, and exchange practices that define the urban informal food sector can be traced back to the forms of urbanisation and migration that occurred in the post-independence era in the Pacific. However, we also identify how urban formalisation and globalisation are undermining the key tenets of social relationality that the informal food sector relies upon. As such, the forms of food security provided by the urban informal food sector are being slowly eroded. By identifying these disruptions to the informal urban food sector, we identify pragmatic pathways to develop the basis of a conceptual framework for urban food security in the Pacific. These pathways revolve around invigorating the forms of social relationality within the informal food sector's production, livelihood, and exchange practices.

Keywords: Urbanisation, Globalisation, Formalisation, Food Security, Resilience, Informal Food Security

[1] Corresponding author, Chr. Michelsen Institute, ORCiD: 0000-0001-7599-3586 email: lucas.m.watt@gmail.com
[2] Auckland University of Technology, ORCiD: 0000-0001-7700-3873, email: dw.roxy@gmail.com
[3] Auckland University of Technology, ORCiD: 0000-0001-5814-8962, email: greg@watt.nz

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1. Introduction

For the purpose of this article, we see the Pacific as consisting of Melanesia, Micronesia, and Polynesia. The region is highly diverse in many respects in terms of ecosystems, development levels and demographics. It comprises some of the most sparsely populated countries in the world, and due to their relative isolation in the vast Pacific Ocean, some of the most densely populated ones, such as Tuvalu – 428.7/km² and the Marshall Islands – 406.8/km² (Leeuw et al., 2017). Some of the smallest nations in this part of the world have the highest rates of urbanisation. South Tawara, the capital city of Kiribati, is one of the most densely populated capitals in the world, with a population of more than 50,000 and a total land area of 15.7 km² - a population density like Tokyo or Hong Kong (Britannica, 2018). In addition to their diversity, many similarities between these Pacific Island communities can also be found.

Most small island nations have been characterised by exposure to a wide range of climatic and natural threats. Despite these increasing hazards, Pacific Island communities have survived and thrived for a long period of time prior to European colonisation (Campbell, 2009). Prior to the influences of colonisation, globalisation, and rapid urbanisation, Pacific communities relied on cultural and traditional knowledge to withstand the effects of disruptive events. However, traditions are fluid and change through time (Linnekin, 1983), and thus many of these social phenomena have been transformed due to the cultural change that resulted from the arrival of Europeans in the Pacific. This is compared to many contemporary small island developing states that are increasingly dependent upon centralised government assistance, often based on overseas donor aid, for food security, development, and disaster relief.

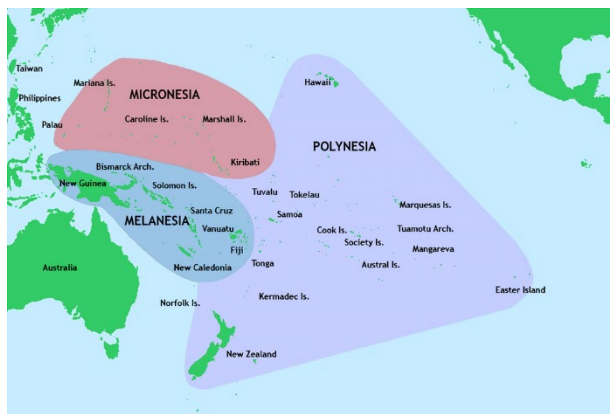

Figure 1- The three major cultural areas of the Pacific: Micronesia, Melanesia, and Polynesia (Finney et al., 2007)

Pacific societies are characterised by strong social and kinship ties. Resources flow across these social and kinship networks, including money, traditional wealth items such as woven mats or whales' teeth, as well as labour. However, one of the most important resources that flow across social networks is food. The local catch of fish, a reared pig, or a collection of root crops from the home garden flow across these social networks. They can be gifted from person to person, expecting that such assistance will be reciprocated in the future. They can be brought together, shared, and consumed with close friends and kin in local ceremonies. They can also be sold across social networks. These various forms of food exchange manifested through social networks are typically associated with the informal food sector or, more broadly, with socialised exchange (Busse & Sharp, 2019; Rooney, 2019). Academic scholars argue that the capacity of the informal food sector to distribute local food to Pacific people during times of hardship provides a globally unparalleled adaptive baseline of food security (Leweniqila & Vunibola, 2020).

There is a general concern that food security in the Pacific is in decline. Much concern revolves around the environmental degradation of agricultural and marine resource bases (Jupiter, Mangubhai, & Kingsford, 2014; Utuk & Daniel, 2015). Such a concern is highly valid; however, the specific urban context is either often ignored or generalised in the academic literature concerning the decline of food security except from select sources (East & Dawes, 2009; Thaman, 1995; Thaman, Elevitch, & Kennedy, 2006; Vasey, 1985). This general absence is questionable since many of the primary users of the informal food sector are undoubtedly urban residents. Urban residents who have urban financial pressures and commitments are forced to divert their time away from agricultural activities. Urban residents rely upon obtaining food from the informal food sector in "normal" circumstances (Thaman, 1995). In times of hardship, they obtain an even greater proportion of their food through the informal food sector due to falling incomes. Urban residents also revert their attention back to agricultural activities in their home gardens or spend more time fishing (Thaman, 1995). The informal food sector provides food security for urban Pacific residents during hardship.

The Pacific urban landscape in which the informal food sector is situated is undergoing change. The population of Pacific cities are rapidly growing. Migration continues to occur from rural provinces to the Pacific city (Keen & Barbara, 2015). The second and third urban generations are growing from the earlier migrants to the Pacific city (Petrou & Connell, 2017b). There is a decreasing amount of space for urban residents to produce food within the city's boundaries (Thaman, 1995). Urban land ownership is becoming more formalised and commoditised (Kiddle & Hay, 2017; Kiddle, McEvoy, Mitchell, Jones, & Mecartney, 2017), disrupting Pacific forms of social organisation and relationality revolving around land and sharing of resources (Watt, 2020). Urban residents are more alienated from their rural islands of ancestral origin (Hobbis & Hobbis, 2021). All these changes that the Pacific urban resident experiences disrupt the informal food sector and its capacity to provide food security in times of hardship.

Through a thematic review of literature on urban food security, we identify the production, livelihood and exchange practices within the urban informal food sector and identify forces that historically and currently influence them (see figure 1). Through this thematic review, we argue that the type of urbanisation that occurred in the post-independence Pacific fundamentally defined these urban informal food sector practices. We further argue that current efforts to formalise land ownership and spatial reform layouts in Pacific cities disrupt the informal food sector. Exposure to the global market forces and the neoliberal technocratic types of resilience thinking advocated in international governance are also eroding the tenets that the local Pacific informal food sector requires to function. As such, the type of food security that the urban informal food sector provides is being progressively undermined.

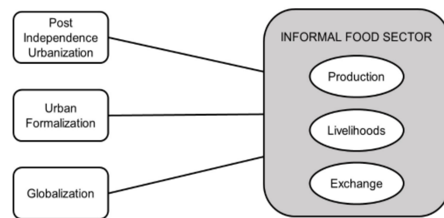

Figure 2- Situating the Urban Informal Food Sector, source: authors

The thematic literature review was conducted based on relevant keywords and themes, such as "impacts to food security in Oceania; urbanisation in Oceania; globalisation in the South Pacific", to develop a deeper understanding of the ongoing disruptions to the informal urban food sector in the Pacific. By identifying these disruptions to the informal urban food sector, we also identify pragmatic pathways to develop the basis of a conceptual framework for urban food security in the Pacific. These pathways are pragmatic as they temper and adjust to the processes of urbanisation and globalisation that are disrupting the informal food sector. These pathways do not necessarily seek to reverse these globally ubiquitous processes. Rather, these pathways provide space for socially embedded relationships relating to food production, livelihoods, and exchange to persist, and even flourish within this contemporary context.

2. The Urban Informal Food Sector

The urban informal food sector is a broad term that refers to a wide array of food **production**, **livelihood**, and **exchange** practices that intersect with urban informal social structures. Here we will define each of these elements of the informal food sector as covered in the academic literature. Much of this literature provides the basis for the argument that the informal food sector provides the basis for food security in the urban Pacific context.

Production

First and foremost, the urban informal food sector refers to growing and harvesting agricultural produce on urban land. Urban profiles have shown urban food production in Pacific cities (Komugabe-Dixson, de Ville, Trundle, & McEvoy, 2019). Urban profiles are highly informative as they show the significant quantity of resources produced within the urban environment. They, however, show the variety of resources produced, with some urban districts specialising in the production of specific food items based on their geographic position in the city. For instance, the geographical position of communities within a city determines its production of salt water and fresh water, marine resources, agricultural resources, forest products, and animal products. These urban profiles indicate that urban food production is ubiquitous across the Pacific, in particular the presence of home gardens where root crops are grown. From a geographical perspective, these studies consider urban food production situated within geographical locations. Locating and graphically presenting food production in the urban environment reveals food production previously uncaptured within formal food production.

Other studies consider urban food production in relation to underlying urban social and spatial structures of the organisation (Jones, 2016; Thaman, 1995; Thaman et al., 2006). These studies indicate that the village-like residential layouts of many urban communities provide an opportunity for agricultural produce to be grown. The residents of urban communities adopt a spatial layout derived from rural home islands whereby there is adequate space for gardens adjacent to their houses. Ample space between houses also allows larger permeant produce-bearing trees to be grown. These urban communities also allocate larger spaces for agricultural fields on marginal grounds such as hillsides or marshes. Waterways are kept clear for communities near the water to ensure that small boats can be launched for fishers or allocated to those rearing pigs. This literature supplementing the more geographically base literature situates food production practices within urban social and spatial structures of organisation within Pacific urban communities. The production of food within these social-spatial structures of organisation, as opposed to commercial settings and structures, defines such production as "informal".

Livelihoods

Various livelihood studies indicate that food grown in the urban environment is first and foremost used for everyday domestic consumption that indirectly contributes to urban incomes (East & Dawes, 2009; Thaman, 1995). The value of crops grown in the home garden is the income not spent on the same produce in local markets. Rather, income can be spent on supplementary food items that can balance Pacific diets or other domestic needs. Fish caught near the urban village provides a similar niche in that fish provides a large proportion of protein lacking in Pacific diets. Like the role home gardens can play in saving income, fish caught locally to limit the need to purchase canned fish or other protein substitutes. Such domestic value is inherently not captured by the formal sector.

Livelihood literature also indicates that urban food production is a more direct income-generating livelihood activity. For many urban residents, food grown in the urban environment can provide supplementary incomes. Produce grown and fish caught in the urban village can be taken to local markets to be sold (Barber, 2003). However, it must be noted that urban residents' sale of urban produce is relatively marginal compared to the total amount of products sold in the informal food sector. Much of the produce sold in the informal food sector originates from rural areas (Reddy, Naidu, & Mohanty, 2003). Furthermore, those involved in the urban informal food sector reside in rural areas where produce is grown and travel to and from the Pacific city with their product to sell. Those who lead these activities informally employ urban residents to sell their products. As a result, much of the income generated in the informal sector by urban residents is through vending (Reddy et al., 2003). At times, urban residents may obtain products from kin from their home rural provinces, which they can then sell; however, this may be inconsistent and infrequent (Campbell, 2015; Petrou & Connell, 2017a). Highlighting the prevalence of these practices emphasises the importance of rural-urban connection in food-based livelihood generation. Access to food and food-based income generation relies upon maintaining rural-urban relationships (Campbell, 2015; Petrou & Connell, 2017a). These rural-urban relationships are "informal" operating outside of the commercial sector.

Exchange

That leaves the question of where does food grown or caught in the urban environment go? Livelihood literature also indicates that produce grown in the urban environment is more likely to be sold from the homes of urban residents than it is in urban markets. Through intra-urban social connections, produce grown in the garden, the afternoons catch fish, or a reared pig will be sold, not at an urban market stall (Jones, 2016). However, the exchange of food is also not necessarily commoditised but rather integrated within Pacific systems of reciprocal exchange. Urban residents primarily contribute locally grown produce or fish in urban gatherings or other domestic settings (Pollock, 2017; Rooney, 2019). Such food contributions will be repaid in kind in subsequent gatherings. The domestic sale and exchange is again a form of exchange not captured in the formal market.

Urban Food Security

This literature, in its constituent parts, culminates in arguing that the informal food sector contributes to food security in the urban Pacific. Produce generated within the urban context, either in a resident's backyard or in a nearby ocean, can provide a large proportion of the sustenance needs of an urban resident in a time of hardship. In a context where such domestic production can be increased in times of hardship, any income losses can be offset. Depending on crises experienced in the Pacific, rural-urban connections in the informal food sector can sustain livelihood activities when other income-generating opportunities dwindle. Rural-urban connections can also provide necessary food to urban communities in need. Lastly, the widespread prevalence of intra-urban exchange through social connection ensures that all urban residents have access to local and affordable food sources. Non-commoditised food exchange ensures that many of the most adversely affected by hardship can obtain food.

3. Post-Independence Urbanisation in the Pacific

The production, livelihood, and exchange systems that the urban Pacific informal food sector currently relies upon emerged from early post-colonial urbanisation processes and urban formatting. Migration was initially limited during the colonial occupation of the Pacific. European administrations frequently imposed movement restrictions that kept Pacific peoples confined to rural villages. Travelling and working in urban colonial capitals were governed by systems of special exemption (Connell & Lea, 1994) as Pacific territories achieved political independence from the 1960s onwards, the colonial policies that restricted rural-urban mobility was progressively removed.

However, much of this rural-urban migration was not necessarily motivated purely by a desire to seize previously unfulfilled leisure opportunities, as often cited. Instead, as Pacific societies moved from European administered colonies to independent nations, they were increasingly integrated into the global economy that required their populations to find sources of cash incomes to pay for everyday public services. For instance, cash incomes were primarily needed to pay for school fees and healthcare. Through the livelihood activities, the urban environment created an increasing need for cash income (Lasaqa, 1983; Shuster, 1979). Rural overpopulation, which left little land for ubiquitous land allocation among the working-age population, was also a driving force of rural-urban migration (Lasaqa, 1983). The capitalist relations that emerged within the post-independence Pacific acted as an impetus for rural-urban migration and have been theorised within Marxist periphery-core migration frameworks (Sofer, 1988, 1993). It was expected that there would be a consistent migration trend from rural provinces to urban centres. Such rural-urban migration initiated by the introduction of the Pacific to the capitalist economy did not entirely conform to expected migratory models.

Rural-urban migration was initially "circular" (Haberkorn, 1989). Rural populations earned cash in urban centres before returning home with their windfall. Active connections between rural and urban provinces were maintained with people living significant periods in multiple locations and, even more importantly, within different communities. Such active mobility between rural-urban locations ensured that social and material relations endured. This form of mobility is a continuation of pre-European forms of Pacific mobility whereby distant islands connections were maintained in ways that sustained the flow of resources (D'Arcy, 2006; Hviding, 1996). Circular migration persists today in ways that sustained rural-urban relations; however, many migrants were compelled to stay more permanently in the Pacific cities (Bedford, 2017; Nair, 1978). This did not necessarily diminish rural-urban connections. Rather, the Pacific city was formatted in ways to sustain such rural-urban connections in the face of decreased rural-urban mobility. The Pacific city was organised so that urban residents assisted and welcomed a steady stream of rural migrants to the city. Many migrants initially stayed in the homes of close kin in the city before seeking out new places to live. This system acted to bridge rural-urban locations.

Some of these rural-urban went on to rent subsidised public housing from their governments. However, such housing estates were often too expensive or in limited supply (Lasaqa, 1983; Walsh, 1978). Even more pertinent is that these formal housing estates did not satisfy how many rural-urban Pacific migrants wanted to live. Instead, many rural-urban migrants opted to build houses on unused marginal land to form "settlements". Depending on varying contexts in the Pacific, agreements with other local native villages and landowners would need to be established before settling on such land. Such agreements were solidified by exchanging traditional wealth items, fuel, and sometimes cash (Jones, 2016; Kiddle, 2010; Naidu & Matadradra, 2014). These settlements were organised to reflect traditional rural ways of living and not arranged in a western grid format. They are clustered according to kinship and social relations, where space is retained for agricultural production. Some houses act as central meeting places for social gatherings and ceremonies. These settlements are defined as *"informal settlements"* by national governments and development organisations because their inhabitants do not hold formal secure tenure to the land they occupy. Jones (2016) has re-classified these settlements" as *"urban villages"* because they are socially organised based on traditional principles and kinship relationships imported from rural locations. The latter of these terms is what we prefer to use. Urban villages account for most of the population growth in Pacific cities (Keen & Barbara, 2015).

The establishment of urban villages since the early independence era in the Pacific provides the basis on which the informal food sector is based. *Firstly*, the social-spatial layout of urban villages ensures that food is continuously produced in the urban environment. *Secondly*, such rurally inspired social organisation within the city's bounds lubricate the flow of food

through social connections across the rural-urban divide. In the urban village, socialised exchanges of urban and rural goods can occur according to Pacific forms of sociality, as opposed to through formal commercial settings. Through the urban village, part of a surplus rural harvest could be exchanged to an urban resident who had previously gifted some urban clothing to their family in the rural village. This exchange could have some monetary component attached to it; however, it is firmly rooted in the social relations that are the basis of the transaction. The norms of social relationality that the urban village is imbued with enable rural-urban food flows. *Thirdly*, it is this same form of social relationality that the urban village holds that sustains the forms of intra-urban food exchange that is characteristic of the informal food sector. The urban village retains norms of reciprocal exchange between its residents that allow food to flow to those most in need in times of hardship. Jones (2016) even argues that a network of social connectivity binds residents of the numerous urban villages spread across the city in what he defines as the *village city*. Such networks in the village city offer food assistance citywide and are not confined to urban villages' boundaries. The roots of the urban informal food sector and food security can be traced back to the process of urbanisation and rural-urban migration in the post-independence era in the Pacific.

4. Urban Formalisation

Pacific urban villages are currently undergoing a process of formalisation. This formalisation has come in the form of "upgrading" projects as part of a broader New Urban Pacific Agenda led by UN-Habitat with support from the Pacific Community Secretariat (PCS) and Pacific governments. These upgrading projects first entailed recognising residents' rights to settlement by granting formal land tenure (Kiddle, 2011; Phillips & Keen, 2016). The recognition of residents' rights of inhabitancy and ownership has opened the possibility of "upgrading" infrastructures of urban villages, which was prohibited to previously categorised illegal squatters. Now formally recognised, urban villages are better connected to state-based electricity, water, and garbage collection services previously provided through residents' informal systems (Phillips & Keen, 2016). The recognition of urban villages has also opened the possibility for the organisation of local international partnerships to "upgrade" settlements. International Non-Governance organisations (NGOs) are now better able to conduct projects in informal settlements in dialogue with both urban village residents and a state that now recognises them (Kiddle & Hay, 2017). These upgrading projects can significantly elevate the general living standards of urban village residents in the Pacific. However, the urbanisation and formalisation of urban villages impact the informal social systems of organisation that residents have used up until this point.

The upgrading of urban villages is directed towards transitioning towards this more formal model to offset the uncertainty of informal resilience systems in the urban context. Nonetheless, as Dornan (2020) argues, formalisation may entail dismantling or displacing informal systems that allow urban village residents to get by and preserve in a Pacific city. As urban village residents progressively become included under the jurisdiction of the welfare state, informal systems that previously filled the gap will be less relied upon and potentially fall into disuse. Displacing such relied upon systems may potentially harm resilience, especially if formal systems do not match the needs or the adaptability of previous informal systems. Kiddle et al. (2017) indicate that the pursuit of more formal resilience systems is justified within the *New Urban Pacific Agenda* based on the notion that informal systems are already falling into disuse in the urban context. There is the perception that second and third-generation migrants who have never visited their home islands lack the knowledge and appropriate social networks to maintain traditional informal resilience systems. However, setting upon an exclusive route of formalisation may significantly disrupt informal systems of resilience that would have otherwise been adaptive to emerging challenges in the urban context (Dornan, 2020).

This upgrading of urban villages impacts the informal food sector and, specifically, urban food production. The formalisation of urban villages entails formalising land tenure, which on face value, offers greater land security, enabling residents to invest in and grow to produce in their home gardens with certainty that they will benefit from it (Thaman, 1995). However, formalising land tenure also often entails losing land they can use for agricultural purposes. Part of the formalisation of the tenure process entails the relocation of residents to smaller plots of land to ensure that Pacific governments can maximise the number of residents than can include. The amount of garden space that immediately surrounds their homes is therefore reduced. Furthermore, the marginal spaces in which informal crop fields are located are increasingly cleared and reallocated as formal residential plots. This can be seen in the general reductions in urban agricultural land available in Pacific cities (Connell, 2015; Thaman, 1995). Urban fishing is also disrupted in this formalisation process. Coastal locations where urban villages are located are under threat of being repurposed into tourist resorts or high-end residential property by the governments, native landowners, or freehold landowners who own the land they occupy. Such coastal gentrification restricts access to local waterways where boats are launched and coastal land where marine resources are obtained (Bryant-Tokalau, 2010). This disruption of urban food production jeopardises the basis upon which urban mutual assistance networks rely. Without locally produced food and its flows within kinship and social networks, the established social connections that informal resilience systems rely upon may not be there when needed.

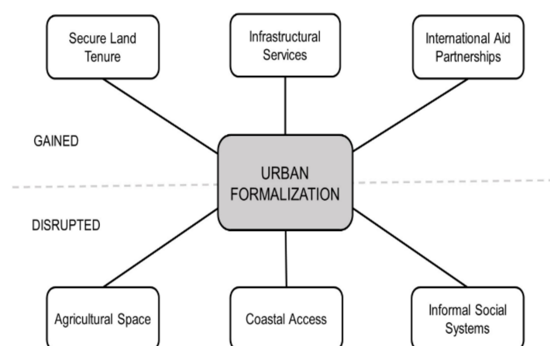

Figure 3- Urban Formalisation, source: authors

Formalisation in the Pacific city is not achieved at the same rate across the region, with countries like Fiji having a track record of significant upgrading in the last decade, while countries like the Solomon Islands have limited capacity and political will to pursue such upgrading projects (Kiddle & Hay, 2017; Rooney, 2021). Each urban village within a particular city also has its unique context of land ownership, resident willingness to participate in upgrading, and environmental challenges to overcome, causing different incorporation rates into formality. As such informal and formal systems of resilience interact and overlap with significant frequency and

are not exclusive binary systems. Subsequently, just as Pacific peoples across large temporal scales feel shock events, the interacting informal/formal systems of resilience similarly change across large temporal scales.

5. Globalisation

While Pacific Islands nations are perceived to be geographically remote and isolated, the islanders and communities themselves are interconnected, dynamic, and highly susceptible to agents of change such as colonial education systems (Graves & Graves, 1978), capitalistic economic markets (Martin, 2013), and global media (Wiseman, Sunday, & Becker, 2005). New social values, which were quickly spread by the colonial education system and the cash economy, are today reflected in all aspects of islander life, including food security and labour mobility. Over time, such changes led to (1) an increase in neoliberalist ideas around economic growth, maximisation, and profit-seeking entrepreneurship within the school system, (2) a decrease in the practice of traditional knowledge and skills such as fishing, food storage, and agriculture, and (3) an progressively increasing dependence on imported products and remittances (McLennan, 2013). Such emergent social values reflect the capitalistic philosophy underlying Western economies and education systems, perpetuating the monetisation of livelihoods in Pacific Island communities. A clear example can be seen in the shift from subsistence-based agriculture practices to export-oriented cash crop production (Guell et al., 2021). Locally grown, nutrient-rich agricultural products are being exported for cash, and the money earned from this international monetised exchange is spent on nutrient-poor imported foods. The consumption of nutrient-poor imported foods also contributes to a sense of belonging in a cash-based economy since these foods align with a capitalistic economic rationale of low cost and high volume (McLennan, 2013).

The drive for money does not stop with the export markets of cash crops or the desire for imported goods. The fisheries sector is also exposed to the boom-and-bust cycles linked to tourism and the luxurious marine foods market, such as shrimp, shark fins, and sea cucumbers (Blythe, 2015; Eriksson & Clarke, 2015). New technologies, larger engines, and more efficient gear introduced by global markets have led to initial increases in marine landings, followed by a market decline and marine resource depletion (Kittinger et al., 2013). Increasing fuel prices driven by exogenous geopolitical global processes and lower incomes resulting from the absence of tourism have caused fisherfolk to fish for longer hours in increasingly dangerous conditions (Tuler, Webler, & Polsky, 2013).

The push for small-scale fisheries to export to dominant global markets (Shedrawi et al., 2014), the commodification of peoples and nature through tourism (Kirtsoglou & Theodossopoulos, 2004), the privatisation of commons and the transformation of communities and agricultural land into tourism destinations (Higgins-Desbiolles, Carnicelli, Krolikowski, Wijesinghe, & Boluk, 2019) are all manifestations of the impacts of global processes. These have rendered small island developing states relatively powerless in international trade policy and negotiations. Under neoliberal globalisation, the power of the informal food sector to manage, control, or benefit from the commercial activities of export services and imported goods, is undermined by the superseding control of external global markets (Higgins-Desbiolles, 2020). This has resulted in outward migration and the loss of the local labour force in many Pacific Island communities.

In addition to the exports of agriculture and fisheries, the labour force of many remote island communities is also being exported in exchange for remittances, which perpetuates the monetisation cycle of island economies (Morales-Muñoz et al., 2020). Migration and food security are important issues concerning the social-ecological wellbeing of Pacific Island nations. However, they are treated separately from an institutional perspective, and there is limited existing literature that explores this connection (Crush, 2013). Migration has been used as a strategy to achieve household food security by sending remittances to buy food in many small islands and developing states worldwide (Vargas-Lundius, Lanly, Villarreal, & Osorio, 2008). However, this global migration strategy leaves urban and rural households with less labour for the local agriculture and fisheries sector (Crush, 2013; Zezza, Carletto, Davis, & Winters, 2011). Recent studies from the World Food Programme show that high rates of food insecurity are a migration driver, where most migrants are young men coming from agricultural sectors in regions characterised by high unemployment rates and low paid wages (*At the Root of the Exodus: Food Security, Conflict and International Migration*, 2017). The study demonstrates that outward labour migration reduces the available local workforce and, if not offset by remittances, typically results in increased food insecurity. The social changes are driven by colonial influences, urbanisation, and global processes that have led to the monetisation and exportation of labour, the replacement of food crop production with cash-crop production for exports, and an ideological shift in the education system that promotes economic growth, maximisation, monetary profits, and individualism (Figure 4).

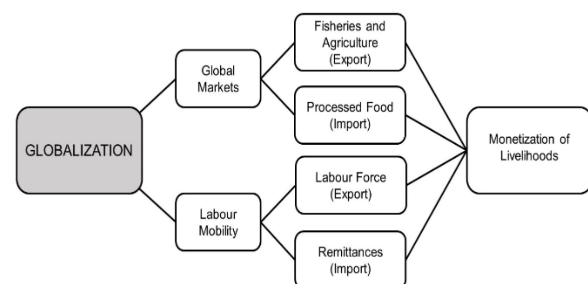

Figure 4- The monetisation impact of globalisation on the livelihoods of Pacific Island communities, source: authors

Resilience thinking and social capital

One response to the increasing challenges of a rapidly changing and interconnected world is the concept of resilience thinking (Folke, Biggs, Norström, Reyers, & Rockström, 2016). Resilience thinking is a collection of concepts that offers unique ways of dealing with the dimensions of uncertainty and complexity (Cumming & Peterson, 2017). It draws attention to the importance of change (gradual, rapid, or unexpected), the role of feedback and multiple system states, and the importance of diversity and redundancy in buffering disturbances (Holling & Gunderson, 2002). However, despite considerable theoretical advances in resilience thinking, the concept's utility for informal food sectors and remote island communities has remained largely underdeveloped (Stone-Jovicich, Goldstein, Brown, Plummer, & Olsson, 2018). Critics of resilience thinking argue that these concepts and ideas are conceptually complex and are becoming increasingly rhetorical as they gain popularity (Grove & Chandler, 2017). Furthermore, resilience

has not been studied from a local's perspective, perhaps because the term is not well understood amongst remote coastal communities (Stone-Jovicich et al., 2018). Yet, the concept of human wellbeing, which is the core factor of social capital (Yamaguchi, 2013), is well understood across geographic, cultural, and socio-economic borders (Sterling et al., 2017), and, therefore, may offer a contextually appropriate surrogate for resilience (Carpenter, Folke, Scheffer, & Westley, 2009).

For over two decades, scholars have argued that the adaptive strategies of many rural developing areas of the world, faced with climatic and other exogenous globalised risks, are directly linked to social capital, local-level social networks and evolving indigenous management practices (Adger, 2010; Aldrich, Page-Tan, & Paul, 2016; Bebbington, 1999). It has also been contended that social capital brings with it an inherent capability to gain access to resources and hence explanatory power, specifically in the area of food security (Diedrich, Stoeckl, Gurney, Esparon, & Pollnac, 2017). Local strategies based on social capital could become more prevalent and necessary, especially for Pacific cities in remote coastal communities where governments do not have the resources or frameworks to provide food security to marginalised groups in the face of unknown globalised risks (Aldrich et al., 2016; Chan, Roy, Lai, & Tan, 2018; Meyer, 2018). Although important for coping and critical to resilience, social capital has been criticised as a misnomer. Critics of social capital are sceptical about the efficacy of the concept and argue that social capital does not share the fundamental characteristics of other forms of capital – precisely because it cannot be sold or bought (Arrow, 2000; Meier, Favero, & Compton, 2016). However, this criticism reflects one of the most significant influences of globalisation on the informal food sectors of Pacific cities, which is to monetise livelihoods by equating the wants and needs of people with economic substitutes (Reed, Barlow, Carmenta, van Vianen, & Sunderland, 2019). This western perception, which emphasises monetary value above all else, ignores the complexity of social and informal networks in remote island communities and their adapting strategies to continuous urbanisation and globalisation.

6. Pathways for Urban Food Security in the Pacific

It is difficult to predict how the food security of Pacific livelihoods will be maintained under increasing urbanisation and globalisation (Campbell, 2015). Much depends on differentiated forms of formal and informal Pacific economies. Future urban food security is partly influenced by institutional and governance strategies, and in part, despite them. The former has adopted a Retroliberalism approach, reminiscent of the post-war period (50's and 60's), where economic growth, market forces and the private sector envisaged lifting living standards through increased monetary incomes (Stronge, Scheyvens, & Banks, 2020). This pathway represents a reversion to top-down development and ignores the viewpoint of Pacific peoples (Kavaliku, 2005). These strategies see investment at scale in large food sector industries aimed at export earnings as a primary objective. Production based on the monetary value of goods on global markets exposes livelihoods to cyclic fluctuations and dependence on monetary forms of exchange. Here, people in settlements will fulfil the lowest-paid jobs and be further marginalised through entrapment within commercialised distribution and exchange systems. Being increasingly drawn into a globalised world, imported foods largely supplant subsistence production, with many in urban villages unable to purchase them (Connell, 2015).

Alternate bottom-up pathways can be more directed towards urban villages by promoting informal means of production and the recognition of social capital as a valid means of exchange. Here social capital is interpreted as the praxis of shared norms, understandings and values inherent within groups of people and their associated networks (Balachandran, 2018). The dualistic means of exchange, already in existence, is enhanced, providing dexterity to run side-by-side. The concept is not new, and the movement towards Kastom Ekonomi in Vanuatu in the 1990s and 2000s introduced the notions of national self-reliance and sustainability through the adoption of subsistence food production and the exchange of traditional wealth as a developmental way forward (Regenvanu & Geismar, 2011; Rousseau & Taylor, 2012). Economic growth appeared not to be making much impact on the lives of the majority of Ni-Vanuatu (Cox et al., 2007), contradicting the tenets of neoliberal development. Kastom Ekonomi was seen as a way of engaging more Ni-Vanuatu in broader socio-economic processes (Westoby & Brown, 2007).

The mechanisms through which food environments are manifested provide important clues regarding future food pathways, as illustrated by a study of food production and exchange in the Solomon Islands (Bogard et al., 2021). Rural households accessed cultivated (home-produced) and wild (sea, rivers, bush and forest) along with kin and community (remittances, social and cultural gathering, along with family and community) almost ubiquitously. In a rural setting, exchange consists mainly of sharing and gifting, allowing the livelihoods of most people to exist outside of the monetary system. By comparison, only 54% of urban households accessed cultivated food sources and 21% of wild, with kin and community contributions remaining high at 71%. Formal and informal retail environments dominate food exchange, with monetary exchange involved in the former and some trade contributing to the latter (Bogard et al., 2021). From an exchange perspective, increasing cultivated, and wild, along with kin and community contributions, would incentivise local production and relieve households of a significant monetary burden. Bolstering urban and peri-urban production could also decrease reliance on global supply chains (Farrell et al., 2020).

The potential of urban food production is widely recognised as urban gardens have always produced a wide range of staple root crops, tree crops and medicinal plants. However, the ability of urban gardens to supply increasing volumes is questioned (Campbell, 2015; Connell, 2015). The range of garden spatial distribution across properties varies greatly, and while some possess only a few scattered plants, others have around 50% cultivation, and intensively cultivated properties have up to 75%. (Thaman, 1995). Fish are also critical to food security across all livelihoods, supplying between 50%-90% of animal protein for coastal communities, with most coming from small-scale enterprises (Bell et al., 2018). Fishing methods include spearfishing around reefs, hook and line fishing in lagoons and reef slopes, gathering around intertidal regions, and trolling for larger pelagic fish. Horticulture and fishing are significant activities within urban villages because many people have rural backgrounds and possess the necessary skills, along with a low cost of participation.

Individual ownership of the means of production is generally absent, and a high value is placed on the community, with sharing of activities, income and assets (Duncan, 2008). However, for many, livelihoods revolve around a perpetual state of impermanence with constant uncertainties hindering the resources and effort able to be committed.

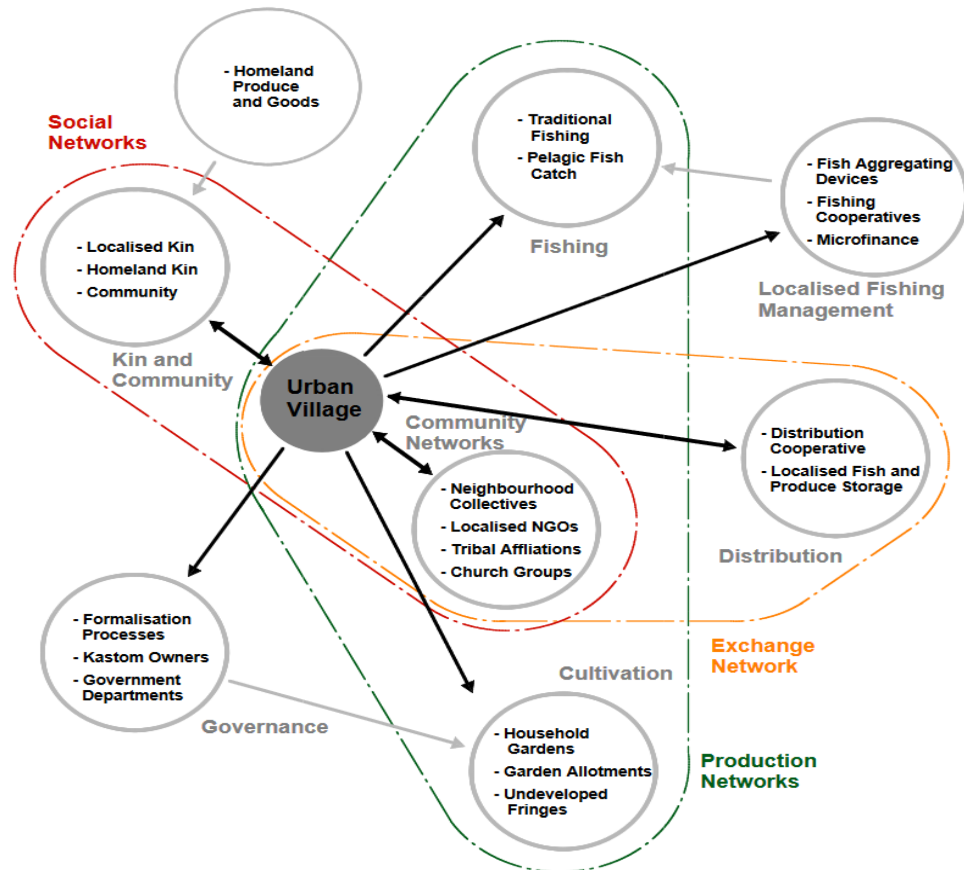

Figure 5- An Architecture for the Informal Food Sector, source: authors

Left on their own, households are unlikely to want or are capable of taking on more intensive means of production nor diversify into more beneficial crops or fishing methods. Even if production is lifted ad hoc, variability in capacity, access to technologies, services and micro-finance remain (Farrell et al., 2020); still, engagement of communities with local synergies and the development of co-operative interaction may lift production. There is the opportunity through social networks already in existence, such as churches, tribal affiliations, and small locally formed NGOs, to help through organising, informing, financing and empowering urban village communities. The development of hybrid forms of community interaction (Westoby & Brown, 2007) may lead to better coordination between participants. Improvements in production and exchange could be accomplished without creating grand schemes associated with Retro-liberalism. Noteworthy examples include (1) better land utilisation, (2) higher quality and more diversified food varieties, (3) urban fishery allocation, and finally, (4) reinvigorated kin networks. We detail these four improvements below. Figure 4 represents the implementation of these improvements within an overall architecture of the informal food sector, which could ensure future urban food security in a context of urban formalisation and globalisation.

In the *first* instance, a more coordinated production system may incentivise residents to become more involved in informal food production (Figure 5). Undeveloped land lying fallow in urban and peri-urban settlements, such as road frontages, empty adjacent allotments, riverbanks, valleys, hillsides, and swampland, can be utilised for food production (Thaman, 1995). When urban villages are formalised and legal titles issued, there is the potential to designate portions as community garden allotments that settlements could use as urban food baskets and micro commercial food production. The creation and uptake of garden allotments in Europe as it experienced its own process of urbanisation from the late 1800s onwards (Lorbek & Martinsen, 2015) can be modified to suit.

Secondly, the introduction of new crops and better seedling distribution systems can provide a pathway for increased urban agricultural production. The traditional starchy stables of yams and taro typically take a full year to mature but are deeply seated social, cultural and spiritual values (Campbell, 2015). There is significant resistance to shifting away from these traditional food crops; however, sweet potato has been successfully introduced, increasing production through a much shorter growing time. Further promotion of crop diversity through quick-growing vegetables, intercropping, and crop rotation are ways to accomplish greater food security. The establishment of community seedling growing areas organised through social networks can help uptake.

Thirdly, in regard to coastal fisheries, the transition into fishing for tuna and other large pelagic fish in nearshore waters is seen as an alternative resource (Bell et al., 2018). Further, fishing of smaller pelagic fish such as mackerel, anchovies, pilchards and sardines appears to be sustainable (Bell et al., 2018). the role of local NGOs could provide necessary development support, helping with fish aggregating devices that can be anchored a few kilometres offshore, boat safety measures and partnering to help the availability of suitable fishing craft. The introduction of fishing zones exclusively for use and management by urban residents, akin to the allocation of agricultural land in formalisation, can also redirect food resources towards them.

Fourthly, better use of the relationships existing with home islands could be engendered. There is the notion that rural food production could replace much that is imported (Campbell, 2015). Rural-urban kinship partnerships could benefit both if better means of transporting perishable foods could be introduced. As a result, entrepreneurs in urban villages could bring in valuable income that would filter through their socio-economic networks.

7. Conclusion

We have argued in this thematic literature review that the urban informal food sector emerged from Pacific-led social connections, mobility, and principles that flourished in the post-independence era in the Pacific. The urban informal food sector has successfully provided local food security because it was a natural extension of the social systems of mutual assistance and care that characterise Pacific societies.

Urban formalisation is undoubtedly restructuring how urban pacific communities operate. The urban formalisation will introduce positive change by providing secure land tenure and governmental recognition to those living in urban villages. However, urban formalisation also undermines the informal social systems and socio-spatial layouts that have historically defined these urban villages. Globalisation has fundamentally entailed the monetisation of everyday livelihoods and local exposure to fluctuating market forces. These globally ubiquitous processes are inherently difficult for Pacific Island States and local communities to contend with. We present a pathway that accounts for these unwavering processes while asking how the informal food sector's production, livelihood, and exchange components can continue to exist and provide food security to Pacific urban communities. We argue that these components of the informal food sector can continue to endure if bottom-up social wellbeing and social capital focus are incorporated into urban policy instead of adopting more retro-liberalist approaches. This requires a shift in resilience-type thinking that currently dominates policy revolving around food security. This resilience type of thinking favours technocratic solutions in ways that underappreciate local systems that are embedded in historical processes of adaption. Our theoretical pathway advocates enabling already present locally embedded systems in a contemporary context.

Overall, the theoretical pathway we advocate for is the formal allocation of urban space for agriculture. The cross-fertilisation of traditional and foreign cropping techniques can boost productivity in such allocated spaces. Access to coastal space should be maintained, and allocation of near urban ocean space for fishing should be allocated to urban communities. Similarly, to what we propose in urban agriculture, a merging of techniques and technologies can be utilised to balance harvest and conservation while maximising benefit for urban residents. Not all food and food security can come from urban areas, and we advocate facilitating rural-urban food flows by maintaining island transportation and communication infrastructures. Most importantly, however, is sustaining norms of social relationality that lubricate the flow of food resources. This requires more seriously considering ideas of *kastom ekonomi*, and/or ensuring that monetised commodity exchange continues to be rooted in social relations in ways that don't reject monetisation but domesticate it to local principles. Combined, this pathway contributes to a locally embedded architecture that would allow the urban informal food sector and the food security it provides to continue to flourish in a contemporary context.

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