

THE CHALLENGES TO HUMAN RIGHTS POSED BY THREATS TO FOOD SECURITY IN THE PACIFIC ISLANDS

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I. INTRODUCTION

International treaties impose a comprehensive range of obligations on states parties and raise the expectations of citizens. Most states, however, cannot give equal effect to all their international obligations, so a hierarchy or preferential ranking emerges. Inevitably there is an uneven playing field. Although increasingly the United Nations has recognised the particular needs of small island developing states (SIDS)¹ and least developed countries (LDCs),² as well as the rights of Indigenous peoples, the right to development gives rise to tensions which may undermine or threaten certain other fundamental rights. Determining the pace and form of development is rarely within the sole control of those states which wield the least power in the international arena despite their constitutional sovereignty. This note is concerned with the most basic of human needs, access to food and the question of food security, providing an overview of a number of issues which have an actual or potential impact on food security in Pacific island states. While food poverty is not absent in developed economies, in many developing countries, food security either is, or is becoming, a key issue for a number of reasons including: the impact of climate change and the related experience of more extreme weather patterns; dependency on imported food and consequential health and nutrition problems; changing patterns of agriculture to meet development agendas; and the introduction of new intellectual property laws as a result of trade agreements, which have the potential to impact on traditional ways of sharing and exchanging food resources. The island countries of the Pacific region experience these aspects of food security in different ways, but increasingly few are escaping the consequences of one or more of these issues. This note argues for a holistic appreciation of the threats to food security in the region and suggests that answers should be informed by a human rights approach.

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1 The following Pacific island countries are listed as SIDS: Cook Islands, Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Papua New Guinea, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Vanuatu.

2 LDCs are defined as “low-income countries suffering from the most severe structural impediments to sustainable development” A Cortez and M Bruckner *The 2015 triennial review of the list of least developed countries* CDP Secretariat/UN-DESA (2015) at 6. In 2013 four Pacific islands countries ranked as LDCs on the United Nations’ list which is produced every three years: Kiribati, Solomon Islands, Tuvalu and Vanuatu. See further, M Shwayder “Poorest of the Poor: UN releases Report on World’s ‘Least Developed Countries’” *International Business Times* (online ed, 19 March 2013).

II. UNDERSTANDING FOOD SECURITY

In most Pacific states, despite the many rapid social and economic changes since independence, many people still rely on subsistence economies, deriving much of their daily food from farming, foraging and fishing.³ Also, while there is increasing urban migration, many people continue to live in rural areas and to depend on the informal economy rather than the monetary economy to meet the bulk of their daily requirements. In countries with minimal if any investment in food research and technology, food security has traditionally been in the hands of Indigenous farmers and fishermen, who have over generations used their knowledge to adapt crops, modify practices, preserve bio-diversity and ensure sustainability. Indeed it has been recognised globally that local farming practices and traditional knowledge make a significant contribution to food security and agricultural diversity and production,⁴ while in the Pacific it has been acknowledged that traditional agricultural practices have provided a degree of resilience to natural hazards.⁵ Nevertheless there is a growing reliance on imported foods, especially among the land-poor urban population,⁶ a shift to commercial mono-crops rather than diverse food crops, and a consequent loss of bio-diversity and food related knowledge, all of which have significance for food security.

A. What is Food Security?

There is no single definition of food security and the concept has evolved over the years. As a policy concern, food security emerged during the 1970s when the focus was on food supply chains and price stability of basic foods in fluctuating markets. This is reflected in the 1974 World Food Summit definition of food security: "Availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices".⁷

3 In particular in Melanesia (Papua New Guinea, Solomon Islands, Fiji and Vanuatu) which has the highest population percentage of Pacific islanders, it is estimated that about 80 per cent of islanders still rely to some extent on subsistence farming, fishing and foraging. See Economic and Social Commission for Asia and the Pacific *Bulletin on Asia-Pacific Perspectives 2003/04* (United Nations, New York, 2004) at 42.

4 FAO "FAO and Traditional Knowledge: The linkages with sustainability, food security and climate change impacts" (FAO, Rome, 2009).

5 J Barnett "Dangerous climate change in the Pacific islands: food production and food security" (2011) 11 (Suppl 1) *Regulating Environmental Change* S229-237 at 232.

6 This varies across the region. For example in its information briefing note on rising food prices prepared for the Pacific Islands Forum Secretariat, the Australian Commonwealth stated: "In PNG and Solomon Islands the vast majority (around 75 per cent to 85 per cent) of calories consumed come from domestically produced food, mostly through subsistence agriculture. Fiji and the Federated States of Micronesia (FSM), on the other hand, rely on imported food for around 60 to 70 per cent of protein consumed". See M Gould, G Dickenson and R Wood "The Second International Food And Fuel Price Shock And Forum Island Countries' Economies" (out of session paper tabled at the Pacific Islands Forum Economic Ministers Meeting, July 2011) at 23.

7 United Nations *Report of the World Food Conference Rome 5-16 November 1974* (United Nations, New York, 1975).

This view of food security shifted in the 1980s to the temporal aspect of food security distinguishing between food shortages at times of crisis brought about by human or natural disasters and food shortages which were enduring due to issues of poverty, low incomes and structural problems. This in turn progressed to considering what type of food was at issue with a growing focus on the importance of a balanced diet and sufficient food for health, so “enough food for an active, healthy life”.⁸ In 1994 the UNDP linked food security to wider concerns of human security which were in turn linked to issues of human rights and development.⁹ In 1996 the World Food Summit stated that food security “is achieved when all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” and the Food and Agriculture Organisation (FAO) Committee on World Food Security adopted a similar definition, adding that food security included “the ability of all people at all times ... to be able either grow or buy their basic food needs.”¹⁰ More recent understandings of food security focus on resilience to natural disasters. For example, the United Nations Development Programme (UNDP) is working on public-private partnerships in the Pacific region to develop food bank projects so that villages have sufficient supplies of food and water which enable them to better cope with natural disasters.¹¹ The Asian Development Bank (ADB) has similarly moved to focus more on resilience to climate change.¹² Linkage between climate change and food security has, however, been slow to emerge and there are still notable gaps. For example, the Pacific Islands Framework for Action on Climate 2006-2015 does not make any explicit link between climate change, food security, biodiversity and intellectual property. Similarly, the Pacific Adaptation Climate Change Programme (PACC) implemented by the Secretariat of the Pacific Regional Environment Programme (SPREP) made no specific link between the regulatory environment and building capacity for adaptability to climate change.¹³

8 World Bank *Poverty and Hunger: Issues and Options for Food Security in Developing Countries* (World Bank, Washington, 1986) at 1.

9 United Nations Development Programme *Human Development Report 1994* (Oxford University Press, New York, 1994).

10 Food and Agriculture Organization of the United Nations *Report of the World Food Summit, 13-17 November 1996* WFS 96/REP (1996) appendix: “Rome Declaration on World Food Security and World Food Summit Plan of Action”.

11 Food banks are part of the Pacific Risk Resilience Programme (PRRP) which is being delivered in four Pacific island countries: Fiji, Solomon Islands, Tonga and Vanuatu. United Nations Development Programme “Food security projects give remote island communities long-term disaster resilience” (27 March 2015) <www.asia-pacific.undp.org>. See also Food and Agriculture Organization of the United Nations *Climate Change and Food Security In Pacific Island Countries* (Rome, 2008).

12 Asian Development Bank *Food Security and Climate Change in the Pacific: Rethinking the Options* (Pacific Studies Series, Asian Development Bank, Philippines, 2011).

13 See for example Secretariat of the Pacific Regional Environment Programme *Pacific Adaptation to Climate Change: Fiji Islands* available online <<http://www.sprep.org>> at [44]-[45].

B. Food Security and Poverty in the Pacific

From the perspective of human rights, food security is linked to issues of health and wealth. OXFAM New Zealand state that “[p]overty in the [Pacific] region is a significant and growing problem due to more than two decades of weak economic performance, population growth, urban migration and increasing inequalities”.¹⁴ It goes on to point out that 38 per cent of the population in Papua New Guinea live below the National Basic Needs Poverty Line, in Vanuatu this is 40 per cent, in Fiji 25 per cent and in Samoa 20 per cent. The Basic Needs Poverty Line is the measure of income needed to buy sufficient food and meet basic requirements such as housing, transport and school fees.¹⁵ Although these figures may not reflect the whole picture in respect of food, partly because the basic needs measure may not sufficiently take into account access to food that is grown, foraged or exchanged, poverty in the region seems to be clearly established. Five years ago it was estimated that 2.7 million people (out of an approximate 10 million people in the Pacific) were in poverty.¹⁶ In 2014 UNDP reported that one in four people in the Pacific Island countries were living below their national basic-needs poverty line.¹⁷ Similarly, in the same year, the World Bank reported that “over 20 percent of Pacific islanders are unable to meet their basic needs”.¹⁸

In its 2010 report UNICEF identified a number of contributing factors including: poverty and social inequities; inadequate food consumption; inappropriate foods, often imported; food insecurity and dependency; inequitable food distribution; poor sanitary and environmental conditions; and limited access for many to quality health, education and social services.¹⁹ To this may also be added inadequate access to traditional sources of food (whether this is land, fish stocks or produce from gardens) and insufficient

14 OXFAM New Zealand “Poverty in the Pacific” (2015) <www.oxfam.org.nz>.

15 These percentages are taken from D Abbott and S Pollard *Hardship and Poverty in the Pacific: Strengthening Poverty Analysis and Strategies in the Pacific* (ADB, Philippines, 2004) and the UNDP *The State of Human Development in the Pacific: A report on vulnerability and exclusion in a time of rapid change* (UNDP, Suva, 2014) at 3-8. See also L Russell “Poverty, Climate Change and Health in Pacific Island Countries” (policy paper, University of Sydney, 2009). Indeed lack of data has been identified as a real problem in formulating appropriate strategies to tackle poverty: see *Bulletin on Asia-Pacific Perspectives 2003/04*, above n 3, at 52; Matthew Morris “Measuring Poverty in the Pacific” (Discussion Paper 9, Australian National University, 2011).

16 Food and Agriculture Organization of the United Nations and others “A Pacific Food Summit 2010: Facilitating Action for a Food Secure Pacific” (concept paper, World Health Organisation, 2009); See also *Bulletin on Asia-Pacific Perspectives 2003/04*, above n 3.

17 United Nations Development Programme “Nine Steps to cut poverty and inequality in Pacific island countries” (press release, 28 August 2014).

18 World Bank “Praxis Discussion Series; Poverty and Hardship in the Pacific” (March 2014). This figure was also cited by the United Nations Development Programme *State of Human Development in the Pacific: A Report on Vulnerability and Exclusion in a Time of Rapid Change* (UNDP, Suva, 2014).

19 UNICEF *Food and Nutrition Security in Pacific Island Nations and Territories: A position paper with emphasis on food and nutrition security of mothers and children* (UNICEF Multi-country Office, Suva, 2010).

access to the wherewithal in the more modern monetary economy to purchase adequate food, either because the rewards from food growing, farming or fishing are reducing or not keeping pace with needs, or because the necessary supporting environment – whether this is internal political stability, stable markets or donor aid flows, are volatile and unpredictable.²⁰

There is the further issue of culturally appropriate food. Many Pacific island social and ceremonial occasions centre on food and the cultivation and preparation of food is an integral aspect of traditional knowledge and culture: “Culture is an important aspect of the analysis of the right to food of indigenous peoples because ‘food’ is indispensable to shaping indigenous peoples’ lives and indigenous identities.”²¹ The cultural dimension of food extends beyond individual rights to encompass communal rights, including but not limited to, farming, fishing, hunting and gathering practices and food preparation practices of Indigenous peoples. In many Pacific societies food is prepared collectively – especially for important occasions, and plant and animal stocks are maintained and improved through the exchange of resources – either freely and informally, or along kinship lines, or as an integral part of ceremonial occasions. Norah Omot writing about food security in Papua New Guinea states “a household is considered food secure when its occupants do not live in hunger or fear of starvation; being able to access a continuous supply of nutritious food”,²² highlighting that food security is not just an individual issue but a collective one.

III. THE HUMAN RIGHTS DIMENSION

A. International Law

The right to food security is central to human development and to human rights in general. The Universal Declaration of Human Rights (UDHR) enshrines a right to life²³ and other international instruments provide for the right to political and economic self-determination and social and cultural development, including the right of a people “not to be deprived of its own

20 See David Pearce “Overview” in D Templeton (ed) *Food Security in East Timor, Papua New Guinea and Pacific island countries and territories* (ACIAR Technical Report, 2012) at 7 who suggests that food insecurity arises from “an interactive mix of agronomic, environmental, cultural and institutional factors”. See also an illuminating presentation by Gibson Susumu “Highlights of SPC/USAID Project on Building Resilient Food Production Systems in the Pacific” (presentation to LEG Regional Training Workshop on National Adaptation Planning for the Pacific LDCs, Port Vila, 3-7 November 2014).

21 L Knuth *The right to adequate food and indigenous peoples: How can the right to food benefit indigenous people* (Food and Agriculture Organization of the United Nations, 2009) at 9.

22 N Omot “Food Security in Papua New Guinea” in D Templeton (ed) *Food Security in East Timor, Papua New Guinea and Pacific island countries and territories* (ACIAR Technical Report, 2012) at 28.

23 See Universal Declaration of Human Rights GA Res 217 (III) (1948) [UDHR], arts 3 and 26(1).

means of subsistence”.²⁴ The Committee on Economic, Social and Cultural Rights has defined the right to health to extend to “the underlying determinants of health, such as access to safe and potable water and adequate sanitation, an adequate supply of safe food, nutrition and housing ...”,²⁵ while the explicit right to food is recognised in art 11 of ICESCR which refers to the right to “adequate food” and the right “to be free from hunger” and imposes obligations on signatory states to “ensure an equitable distribution of world food supplies in relation to need”. To do this states are expected to take all appropriate steps including the adoption of legislative measures.²⁶ In 1999 the UN Economic and Social Council issued a General Comment on the right to adequate food,²⁷ pointing out that this is a collective right, which entails economic and physical access to culturally acceptable food over the long-term.

Pacific island people are also brought within more recent human rights developments notably the Declaration on the Rights of Indigenous Peoples.²⁸ Adopted in 2007,²⁹ this Declaration includes very specific recognition of the need to respect and promote the inherent rights of Indigenous peoples which derive from their political, economic and social structures and from their cultures, spiritual traditions, histories and philosophies, especially their rights to their lands, territories and resources. It states in art 31(1):

Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.

Consequently, the right to food is multi-faceted, involving rights to self-determination, democratic participation, rights to culture and identity, to non-discrimination and the exercise of sovereignty by independent states in determining their own pace and form of development and the right to health.

24 International Covenant on Economic, Social and Cultural Rights 993 UNTS 3 (opened for signature 18 December 1979, entered into force 3 September 1981) [ICESCR], art 1; International Covenant on Civil and Political Rights 999 UNTS 171 (opened for signature 16 December 1966, entered into force 23 March 1976) [ICCPR], art 1.

25 Based on ICESCR, art 12(1) Committee on Economic, Social and Cultural Rights *General Comment 3: The Nature of States Parties' Obligations* E/1991/23 (1990) at [2].

26 ICESCR, art 2.

27 Committee on Economic, Social and Cultural Rights *General Comment 12, Right to Adequate Food* E/C.12/1999/5 (1999).

28 United Nations Declaration on the Rights of Indigenous Peoples GA Res A/Res/61/295 (2007) [UNDRIP]. There is no fixed definition of “indigenous” in the Declaration. For a working definition see Convention Concerning Indigenous and Tribal Peoples International Labour Organization C. 169 (opened for signature 27 June 1989, entered into force 5 September 1991).

29 Australia, Canada, New Zealand and the United States voted against the Declaration at the time but subsequently retracted their opposition. Only Samoa (which abstained) is listed as a PIC present for the vote.

B. National Law

Within the Pacific region, individual human rights are also protected at a national level through the inclusion of written statements of rights in national constitutions.³⁰ Like the UDHR,³¹ almost all the constitutional statements of rights include recognition of the right to life,³² although few go so far as to link this to a right to food.³³ A number of constitutions also recognise the importance of culture, heritage and custom, either in their preambles³⁴ or specifically,³⁵ and the role of indigenous customary law as a source of law.³⁶

Despite this plethora of rights instruments which would suggest that the right to food security is almost axiomatic to the enjoyment of a range of human rights, Pacific islanders face a number of different threats to food security.

IV. FOOD SECURITY AND CLIMATE CHANGE

The fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) identified small island states as being among the most vulnerable to the adverse impacts of climate change.³⁷ Although people in developing countries are often familiar with the vicissitudes of natural disasters – earthquakes, cyclones, drought and floods, there is some evidence to suggest that these have become more acute in recent years.³⁸ One of the immediate consequences of climate associated disasters is food availability and accessibility.

While humanitarian aid may assist with food security in the immediate aftermath of natural disasters, often it is the longer term consequences which create food vulnerability, for example, the destruction of tree crops and cash

30 Apart from that of Niue, which following the New Zealand model at the time, incorporates no bill of rights.

31 UDHR, art 3.

32 The Constitution of the Republic of the Marshall Islands does not, but does recognise a right to health in s 15.

33 The Constitution of the Independent State of Papua New Guinea however includes the right to food in the first goal of the constitution which is aimed at “integral human development”, in “the improvement in the level of nutrition and the standard of public health to enable our people to attain self-fulfilment” Preamble 1.

34 For example that of the Federated States of Micronesia, the Republic of Kiribati, Marshall Islands, Papua New Guinea, Solomon Islands, Tuvalu and Vanuatu.

35 See for example, Part V of the Federated States of Micronesia Constitution 1975, the Constitution of the Independent State of Papua New Guinea 1975, schedule 2 and the Constitution of Tuvalu 1978, ss 27(7) and 29.

36 See for example provisions relating to the underlying law in Papua New Guinea or reference to custom and customary law in the Constitution of the Republic of Vanuatu 1979, ss 95(2) and 95(3).

37 Intergovernmental Panel on Climate Change *Climate Change 2007: Synthesis Report* (Intergovernmental Panel on Climate Change, Geneva, 2007).

38 Karl Mathiesen “Climate change aggravating cyclone damage, scientists say” *The Guardian* (online ed, 16 March 2015); M K Van Aalst “The impacts of climate change on the risk of natural disasters” (2006) 30 *Disasters* 5; I Guerrero “To the Brink: Climate Change Will Increase Frequency and Severity of Disasters, Stress Food and Energy Production in South Asia” (24 June 2013) The World Bank <<http://www.worldbank.org>>.

crops such as coffee, which take longer to recover. In June 2015 delegates from across the Pacific met to consider humanitarian action in the region noting that “[m]ore people are affected by disasters, more frequently, and for longer than in previous decades. At the same time, humanity is dealing with new challenges, such as climate change, an urgent concern for many low-lying and coastal communities in the Pacific”.³⁹ Indeed UNDP is now entering into partnerships with various organisations to support long-term disaster resilience focussing on food security.⁴⁰

It also seems to be generally accepted that climate change will have an impact on the ability of Pacific islands to grow a sufficient range of foods which meet the micro nutritional needs of a healthy balanced diet.⁴¹ This in turn is likely to make Pacific islanders more vulnerable to infectious diseases such as malaria and tuberculosis and in the case of children, malnutrition and intestinal infections. Moreover, it is forecast that climate change will affect different communities in different ways. In coastal areas erosion, saltwater incursion, storms surges, cyclones and drought may undermine agricultural production. In river catchment areas flooding is a particular risk, and inland extreme rainfall and deforestation may impact on soil fertility and result in erosion.⁴²

There is also concern that climate change impacts on fish stocks particularly those accessible to coastal fishing. Barnett suggests that “degraded reefs, mangroves and the turbidity salinity and temperature of water is due to climate change” and that “these changes may make it difficult for Pacific islanders to sustain fish catches”.⁴³ The Asian Development Bank has indicated that the destruction of coastal habitats, coral death and the acidification of seawater will also have negative effects of fish stocks, while overfishing due to population increase and density is likely to be a side effect of urbanisation.⁴⁴ The FAO has noted that loss of coral reefs and mangrove forests which fish depend on are likely to impact on this important nutritional source.⁴⁵ As the per capita consumption of fish in Pacific islands is historically high (an average of 70kg of fish per person per

39 United Nations Office for the Coordination of Humanitarian Affairs “Pacific: Lessons learnt from natural disasters and climate change” (29 June 2015) <www.unocha.org>.

40 “Food Security projects give remote island communities long-term disaster resilience”, above n 11. See similarly the FAO which is working with Pacific island countries to develop “Value Chains for Food Security and Nutrition” Food and Agriculture Organization of the United Nations Regional Office for Asia and the Pacific “country focal Points in the Pacific Islands” (2015) <www.fao.org>.

41 J Barnett “Food Security and Climate Change in the South Pacific” (2007) Pacific Ecologist 32; UNICEF *Food and Nutrition Security in Pacific Island Nations and Territories: a position paper with emphasis on food and nutrition security of mothers and children* (UNICEF Pacific Multi-country Office, Suva, 2010).

42 Barnett, above n 41, at 32.

43 At 34.

44 Asian Development Bank *Food Security and Climate Change in the Pacific: Rethinking the Options* (ADB, Mandaluyong City, 2011) at ix.

45 Food and Agriculture Organization of the United Nations *Climate Change and Food Security in Pacific Island Countries* (FAO, Rome, 2008) at 8.

year in the early 1990s),⁴⁶ with fish estimated to supply 50-90 per cent of the animal protein of those living in coastal communities,⁴⁷ it is clear that fish makes a vital contribution to food security in the region.⁴⁸ In some areas of the Pacific there may be sufficient coastal fish stocks for some time, but in countries such as Papua New Guinea, Vanuatu, Solomon Islands, Kiribati, Nauru and Samoa there are likely to be increasing shortfalls in meeting nutritional requirements.⁴⁹ Ironically while there is frequent focus on how to derive greater benefits from off-shore tuna fishing for Pacific islands, the health benefits of access to fresh tuna is denied to most Pacific islanders, despite evidence that eating more tuna and local fish could contribute to combatting the poor health consequences of diets dependent on imported and processed food.⁵⁰

V. DEPENDENCY ON IMPORTED FOOD

UNICEF indicates that while lack of food is one indicator of food insecurity, Pacific islanders are vulnerable to other forms of food insecurity: inappropriate food. In particular, food may be imported which is either unhealthy and contributes to the high rate of non-communicable diseases (NCDs) in the region such as diabetes, heart disease and obesity,⁵¹ or food which is potentially dangerous because it is contaminated, out of date or is labelled in such a way so that ingredients cannot be ascertained.⁵² Imported food travels in containers and may be stored either before departure, in transit or on arrival, in less than optimum conditions. By the time these foodstuffs reach distant stores they may well be past their best but with virtually no consumer education, legislation on food safety and labelling, or alternative choice there is little to protect the consumer.

Traditional Pacific diets are dependent on starchy root crops, supplemented by leafy vegetables, fish, coconut and occasional meat. In sufficient quantities these provide a nutritious and healthy diet, low in sugar and fat. Changes of

46 At 8.

47 Secretariat of the Pacific Community *Pacific island fisheries and climate change* Policy Brief 24/2004 (2004). See also Robert Gillett "Hot Issues on Pacific island coastal fisheries" *SPC Fisheries Newsletter* (online ed, May-August, 2014).

48 See World Fish Center *Planning the Use of Fish for Food Security in the Pacific* Policy Brief 1865 (2008).

49 David Hayes "Pacific Island countries urged to increase tuna consumption" *World Fishing and Aquaculture* (online ed, 7 May 2015).

50 Hayes, above n 49.

51 Examples are white rice, carbonated drinks, instant noodles, lamb flaps, turkey tails, tinned meat and imported processed foods. See Russell, above n 15, at 16 and 20; and Pacific Institute of Public Policy *Food for Thought* (Discussion Paper 19, 2011) at 2.

52 J Parry "Pacific islanders pay heavy price for abandoning traditional diet" (2010) 88 Bulletin of the World Health Organization 481 stating "[n]utrition labels are not only inconsistent but often not in English" and that "ingredient labels are really important for monitoring food safety and quality". See also W Snowden and others "Processed foods available in the Pacific Islands" (2013) 9 *Globalization and Health* 1.

lifestyle, aspirations towards different forms of status marked by consumer wealth and lack of access to many traditional foods in urban areas all impact on this dimension of food security.⁵³ Many traditional foods are being replaced by imported foods such as white rice, refined flour, processed tinned meat and fish, oil and sugar.⁵⁴ This change of diet has two consequences: a rapid increase in non-communicable diseases (NCDs) and increasing urban poverty due to the cost of this diet.

A. Food Security and Health

Turning to the first, due to the transition to imported foods and less active lifestyles the Pacific region faces an epidemic of non-communicable diseases.⁵⁵ For example it has been indicated that diabetes affects more than 40 per cent of adults over 25 in Tokelau and the Marshall Islands, and the World Health Organization (WHO) expects this figure to double by 2025.⁵⁶ The World Bank has indicated that Pacific Islands are in the top ten countries globally for rates of diabetes and obesity and that non-communicable diseases “account for 70-75% of all deaths” many of which are premature.⁵⁷ Although diet is not the only contributing factor, among the strategies recommended for addressing NCDs are “reducing consumption of food and drink directly linked to obesity, heart disease and diabetes such as sugar-sweetened drinks, salty and fatty food”.⁵⁸ The problem is that not only do these NCDs lead to early death they impose huge burdens on already struggling health service sectors and have an economic cost.

B. Food Security and Cost

The second problem related to dependency on imported food is cost. For many Indigenous peoples in undeveloped countries, the increasing cost of food makes it unaffordable. In a Situation Monitoring Report in 2011, UNICEF found that the poorest households living in urban areas were adversely impacted by rising food prices and that the more remote import-dependent island countries were the most vulnerable to increased food prices caused by global factors such as rising fuel costs and inflation.⁵⁹ Although recent drops in crude oil prices may bring some benefits to Pacific islands the

53 Parry, above n 52.

54 This trend is supported by observations from the Asian Development Bank, above n 44, at iix.

55 In 2011 Pacific Island Leaders declared that NCDs had become a “human, social and economic crisis” Pacific Islands Forum *Forum communiqué*, Forty-Second Pacific Island Forum Auckland New Zealand, 7-8 September 2011 cited in R Magnusson and D Patterson “How can we strengthen governance of non-communicable diseases in Pacific Island countries and Territories?” (2015) 2 *Asia and the Pacific Policy Studies* 293 at 293.

56 Pacific Institute of Public Policy, above n 51, at 2.

57 The World Bank “Pacific Islands: Non-communicable Disease Roadmap” (12 July 2014) <www.worldbank.org>.

58 The World Bank, above n 57.

59 UNICEF *Pacific Situation Monitoring: Food Price Increases in the Pacific Islands* (Working Paper, Suva, 2011).

knock-on effect to food prices is likely to take much longer.⁶⁰ While trade agreements between Pacific island countries and those providing much of the imported food consumed in the Pacific may reduce the costs of food through the reduction of tariffs, they are also likely to make unhealthy food more cheaply available and make it more difficult for Pacific island governments to adopt and enforce policies aimed at tackling NCDs such as banning various harmful foods and substances.⁶¹

VI. CHANGING PATTERNS OF AGRICULTURE TO MEET DEVELOPMENT AGENDAS

The right to development is recognised as a human right⁶² and the UNDRIP states that the “Charter of the United Nations, the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights, as well as the Vienna Declaration and Programme of Action, affirm the fundamental importance of the right to self-determination of all peoples, ‘by virtue of which they freely determine their political status and freely pursue their economic, social and cultural development’”.⁶³ This may be more ideational than reality because the power-politics of agenda setting may be driven by stronger players.

Two recognised pillars of food production in the Pacific are subsistence agriculture and inshore fisheries.⁶⁴ In developing economies, especially where there is very little manufacturing or industrial base, the resources necessary to support these two pillars are under pressure to meet developmental goals. For example Sharma has argued that not only is the continuation of subsistence farming important to food security, as well as access to marine resources, but that “increased productivity is crucial for improving agricultural performance through government investment in rural infrastructure, agricultural research and extension, irrigation and appropriate price incentives.”⁶⁵ Similarly, the Asian Development Bank in its concern about food security and climate change highlights that prospects and threats present “potential areas for more active assistance, investments, and interventions from ADB and

60 Catherine Wilson “Falling Oil prices Trigger Initial Economic Gains for Pacific Islanders” (6 May 2015) *Inter Press Service* <ipsnews.net>.

61 World Health Organization *Report of the Sub-Regional Workshop on Trade, Trade Agreements and Non-communicable Diseases: Trade, Trade Agreements and Non-communicable Diseases in the Pacific Islands* (Nadi, 11-14 February 2013). See also M Sahal Estimé, B Lutz and F Strobel “Trade as a structural driver of dietary risk factors for noncommunicable diseases in the Pacific: an analysis of household income and expenditure survey data” (2014) 10 *Global Health* 1, and W Snowdon and A Thow “Trade Policy and obesity prevention: challenges and innovation in the Pacific Islands” (2013) 14 *Obesity Reviews* 150.

62 See for example, ICESCR, art 1.

63 UNDRIP, art 3.

64 Pacific Institute of Public Policy, above n 51.

65 K L Sharma “Food Security in the South Pacific Island Countries with Special Reference to the Fiji Islands” (Research Paper, United National University, 2006).

other development partners.”⁶⁶ This presents something of a conundrum. On the one hand the value of traditional food production and traditional knowledge in dealing with climate events and sustaining bio-diversity may be acknowledged;⁶⁷ on the other hand commercial agriculture, fishing and mining are all advocated for advancing the economic development of Pacific island countries.

For several decades there has been a tendency across the region to look to extractive industries and the licence fees and royalties generated by allowing others to take natural resources (such as timber and fish) and to encourage the cultivation of cash crops or mono-crops which may have little or no food value – for example palm oil, sugar cane and coffee. Development is also impacting on food security in so far as a shift to mono-cropping may change patterns of crop rotation, soil fertility and infrastructure as well as having a negative impact on crop diversity,⁶⁸ while land based extractive industries often cause environmental degradation which can extend considerably further than the site of immediate logging, mining or quarrying activities. This changing use of land leads to land disputes and social disruption. Indeed the shift to cash-crops does not have to be large-scale, even small scale developments such as seaweed harvesting or prawn-farming can take villagers away from their gardens and the cultivation of food crops, so that most of the money earned from these activities may be spent on buying imported food, such as rice, tinned meat and fish.⁶⁹ The shift on some larger islands to commercial crops and livestock production means that local food crops are being squeezed out due to lack of ground.⁷⁰ These shifts also result in Pacific islands being vulnerable to changing markets and fluctuating demands for produce over which they have no control. In part this is related to the cycle of trade in which Pacific islands are involved. As OXFAM New Zealand has observed “[m]any Pacific island countries are being pressured by rich countries through the World Trade Organisation to make commitments to further open their economies to foreign goods and services ... they will ... lose control over trade policies that will help them develop their economies and end poverty”.⁷¹ Therefore, in the context of food security trade agreements also play a role.

66 Asian Development Bank <www.adb.org>.

67 See for example “Food security projects give remote island communities long-term disaster resilience”, above 12 which includes the provision for agricultural training “including traditional knowledge approaches”.

68 See Barnett, above n 41.

69 See for example M Kronen and others “Gender and seaweed farming on Wagina Island, Choiseul province in Solomon Islands” *SPC Women in fisheries Information Bulletin* (online ed, 21 December 2010) at 9.

70 Food and Agriculture Organization of the United Nations and others *Pacific Islands Food Safety and Quality Consultation* (FAO, SPC, WHO, Nadi, 2002).

71 OXFAM New Zealand, above n 14.

VII. THE IMPACT OF TRADE AGREEMENTS ON FOOD SECURITY

A. Aid for Trade

Despite these potential downsides, over the years Pacific island states have entered into a number of bi-lateral or multi-lateral trade agreements for example, the Pacific Agreement on Closer Economic Relations (PACER) and PACER Plus,⁷² WTO and European Union-Africa-Caribbean-Pacific (EU-ACP) agreements.⁷³ While these may have the value of opening up trading opportunities for Pacific island states,⁷⁴ the increasing focus on close links between aid and trade mean that developing countries have little choice. The “Aid for Trade” initiative was launched by the World Bank and International Monetary Fund in 2006 and endorsed in the Doha Development Agenda.⁷⁵ Although the Doha round of trade negotiations with developing states collapsed, the linkage persists. According to Ban Ki-moon the initiative is “to help developing countries, particularly the least developed, develop the necessary trade-related skills and infrastructure to carry out and benefit from WTO agreements and to expand their trade”.⁷⁶ The aid-for-trade policy has been challenged,⁷⁷ particularly in respect of its contribution to the alleviation of poverty, nevertheless it continues to be integral to official aid donor policy⁷⁸ and the mantra has been taken up by the major development partners such as WTO and ADB.⁷⁹

72 Details can be found online <www.forumsec.org>. It is aimed at “trade liberalisation and economic integration in the Pacific region”. PACER Plus was launched by Forum Trade Ministers in 2009 and negotiations are intended to be concluded by July 2016. There is, however, increasing opposition to PACER Plus, see “Pacific Network on Globalisation Launches Anti-PACER-Plus Campaign” *Post-Courier* (online ed, April 2015).

73 Some of these are more advanced than others, compare for example PACER-Plus negotiations with EU-ACP ones. See Jane Kelsey “Going Nowhere in a Hurry? The Pacific’s EPA Negotiations with the European Union” (2007) 38 *Victoria University of Wellington Law Review* 81; Jane Kelsey “Free Trade Agreements – Boon or Bane? Through the Lens of PACER” (2006) 37 *Victoria University of Wellington Law Review* 391.

74 Roman Grynberg, however, suggests this is not the case for small island states. See R Grynberg “The Pacific Island States and the WTO: Towards a Post-Seattle Agenda for Small Vulnerable States” in D Peretz, R Faruqi and E Kisanga (eds) *Small States in the Global Economy* (Commonwealth Secretariat, London, 2001).

75 International Monetary Fund and World Bank *Doha Development Agenda and Aid for Trade* (Washington, 2005).

76 Ban Ki-moon “Global aid for trade efforts vital for boosting development, Ban says” (19 July 2011) UN News Centre <www.un.org>. See also Tuiloma Neroni Slade “Outlining the challenges and potential for increased trade for Pacific economies” *International Trade Forum Magazine* (online ed, 1 October 2013).

77 See for example Frederick Mayer and William Milberg *Aid for Trade in a World of Global Value Chains: Chain Power, the Distribution of Rents and Implications for the Form of Aid* (Capturing the Gains Working Paper, 2013) who point out that benefits tend to remain with the more powerful players; Olivier Cadot and Jaime de Meolo (eds) *Aid for Trade: What Have we Learnt? Which Way Ahead?* (Centre for Economic Policy Research Press, London, 2014).

78 See for example the policy statement by the European Commission “Aid for Trade” on its public website <ec.europa.eu>; Australia Ministry for Foreign Affairs “Five billion dollar aid budget to focus on the region” (media release, 18 January 2014) cf however “Effectiveness of ‘aid for trade’ reviewed by donors and recipients” 10 July 2013, *The Guardian* online <theguardian.com>.

79 Asian Development Bank *Aid for Trade in Asia and the Pacific Driving Private Sector Participation in Global Value Chains* (ADB, Philippines, 2013).

B. Trade, Intellectual Property and Food Security

This aid-for-trade agenda is usually driven by the global North and underpinned by a belief that trade in a Western capitalist sense, drives economic growth and is therefore good for development.⁸⁰ These trade agreements, therefore, come with strings attached. These include the assumption of obligations by trading partners to put in place a facilitative or supporting legal framework, integral to which are likely to be certain mandated intellectual property regulations.⁸¹ This is particularly true of membership of the World Trade Organization, which some Pacific island countries are members of and others are being encouraged to join.⁸² The WTO requires members to put in place laws which are compliant with the Trade Related Intellectual Property Agreement (TRIPS) including regulating genetic resources and plant varieties.⁸³ The TRIPS requirement is for patents protection or a *sui generis* scheme which satisfies TRIPS (or a combination of these).⁸⁴ A *sui generis* regime that has found considerable support is that of UPOV.⁸⁵ UPOV, protects the rights of plant breeders to claim exclusive intellectual property rights provided they develop plant varieties which are new, distinct, uniform and stable.⁸⁶ The conferment of exclusive rights, under these regimes, has food security consequences in terms of costs and availability of plant materials and related products developed as a result of research. Patents, for example, make it much more expensive to have access to agro-chemicals, especially where, as is the case in

- 80 See for example A Leftwich *States of Development – On the Primacy of Politics in Development* (Polity Press, Cambridge, 2000); E Stiglitz “Participation and Development: Perspectives from the Comprehensive Development Paradigm” (2002) 6 *Review of Development Economics* 163; S Pahuja *Decolonising International Law: Development, Economic Growth and the Politics of Universality (Cambridge Studies in International and Comparative Law)* (Cambridge University Press, New York, 2011); W Eastley *The White Man’s Burden – Why The West’s Efforts to Aid The Rest Have Done So Much Ill and So Little Good* (Penguin Press, New York, 2006).
- 81 See S K Sell “The Rise and Rule of a Trade-Based Strategy: Historical Institutionalism and The International Regulation of Intellectual Property” (2010) 17 *Review of International Political Economy* 781.
- 82 WTO members are Fiji, Solomon Islands, Papua New Guinea, Samoa, Vanuatu and Tonga.
- 83 Pharmaceuticals are also included and while these are clearly relevant to the right to life, are beyond the scope of this paper.
- 84 The provisions of art 27(3) of TRIPS can be construed quite broadly and so a number of possible *sui generis* regimes are possible: D Robinson “Sui Generis plant variety protection systems: liability rules and non-UPOV systems of protection” (2008) 3 *Journal of Intellectual Property Law and Practice* 659.
- 85 *Union Internationale pour la Protection des Obtentions Végétales*. This Convention originated in 1961 but has gone through several amendments, notably in 1972, 1978 and 1991. Although a *sui generis* framework itself, UPOV is a TRIPS Plus requirement, but may be mandated by WTO accession negotiations.
- 86 See G Dutfield “Turning plant varieties into intellectual property: the UPOV Convention” in G Tansey and T Rajotte *The Future Control of Food: A Guide to International Negotiations and Rules on Intellectual Property Biodiversity and Food Security* (Earthscan, London, 2008) 27.

most Pacific island states, countries lack their own research and technology institutions, while plant-breeders rights can have the same effect for access to climate-change or disease-resistant hybrid plants or seeds.

At the same time these intellectual property regimes may be inadequate for protecting valuable food resources in the Pacific.⁸⁷ This is because the framing of intellectual property laws is poorly adapted for accommodating traditional practices of cultivation, for acknowledging the intergenerational transfer of knowledge or for recognising multiple and ill-defined rights in resources.⁸⁸ Patentability, for example, requires a novel invention, process or method and excludes products of nature or natural processes, so unless the patent legislation is very broadly worded many plants and natural resources will fall outside the scope of the existing legislation. For food growers in the region the need for novelty in relation to the invention presents challenges because this is measured against the prior art base. In the case of plants, the use and knowledge regarding that use is often in the public domain already, within the community or island of the region. It is only once an outsider, such as a pharmaceutical or agricultural company, expresses an interest in the exploitation that a need arises to protect the knowledge or process of Indigenous people regarding that plant – and there are plenty of global examples of pharma- and agri-corporations exploiting indigenous traditional knowledge and bio-resources.⁸⁹ One of the problems here is that unless a patent application is challenged the grant of patent confers exclusive rights on the patent holder for a number of years. In order to bring prior art to the attention of either the Patents Office in the country of registration or a third party challenger it has to be accessible, searchable and verifiable.⁹⁰ Where records are primarily oral, or practice-based there will be insufficient evidence to establish this prior art.⁹¹

87 See B Binkert “Why the Current Global Intellectual Property Framework under TRIPS is not Working” (2004-2006) 10 *Intellectual Property Law Bulletin* 143, who stresses the point that traditional knowledge is not sufficiently protected under the TRIPS framework.

88 See M Forsyth and S Farran *Weaving Intellectual Property Policy in Small Island Developing States* (Cambridge, Intersentia, 2015).

89 See for example the exploitation of the hoodia cactus patented as an appetite suppressant by the Council for Scientific and Industrial Research, South Africa, although used for this purpose for generations by the San people in Southern Africa and the fight to obtain an equitable distribution of benefits: R Wynberg and R Chennells “Green diamonds of the south: An overview of the San-Hoodia case” in R Wynberg, D Schroeder and R Chennells (eds) *Indigenous Peoples, Consent and Benefit Sharing* (SpringerLink, New York, 2009) 89; S Vermeylen “Contextualising ‘fair’ and ‘equitable’: the San’s reflections on the Hoodia benefit-sharing agreement” (2007) 12 *Local Environment* 423. See also, contests over research involving the neem tree in India, for developing a fungicide: S Kadidal “Subject-matter Imperialism-biodiversity, Foreign Prior Art and the Neem Patent Controversy” (1996) 37 *Idea* 371.

90 See for example the practices of the European Patents Office in E Luzzato “Traditional knowledge and patents: a brief summary of the EPO’s perspective” (2013) 36 *Pacific Studies* 14.

91 In Fiji a project is currently under way to establish a National Inventory of all its cultural heritage, including traditional medicine. See K Teaiwa and C Mercer *Pacific Cultural Mapping Planning and Policy Toolkit* (Secretariat of the Pacific Community, Noumea, 2011).

Similarly, with plant breeders rights the UPOV requirements of stability and uniformity tend to operate to exclude varieties developed by indigenous farmers because these are more likely to be variable and not uniform.⁹² Further, many food crops are not grown from seed but from plant-stock propagation and the exemptions which may be available under UPOV (farmers' rights, research and public interest) may be of limited help. For example, the "farmers' rights" exemption under art 15 of UPOV permits states to restrict breeders' rights "in order to permit farmers to use for propagating purposes, on their own holdings, the product of the harvest which they have obtained by planting ... the protected variety," but does not extend to the sharing or exchange of propagating material. Furthermore, utilising this exemption requires governments to take positive steps to restrict plant breeders' rights which, when TRIPS-Plus requirements are assumed (as in the case of Vanuatu's accession to the WTO) may be more difficult. Similarly, the "research exemption" which allows national legislation to make exceptions for "acts done privately and for non-commercial purposes [and] for experimental purposes" is of little relevance to countries with minimal research and development capacity.⁹³ The only exemption which could be of use is the public interest exemption. Resistance on the grounds of public interest based on the need to protect farmers' rights, indigenous cultural practices and respect for traditional knowledge, as well as to safeguard biodiversity and promote food security has been used successfully in India to resist TRIPS Plus obligations⁹⁴ and is potentially of considerable relevance in the Pacific. However, securing this exception and using it to its full potential requires effective lobbying by farmers, civic society and others and political support from national government. Unfortunately, until very recently Pacific governments have tended to under-invest in food growing and basic agriculture⁹⁵ and subsistence farming in scattered rural areas presents challenges for developing coalitions for collaborative action by stakeholders which is sufficiently forceful to persuade governments to resist these international pressures.

92 Others are also critical of UPOV see for example S Sahai "Protecting plant varieties: UPOV should not be our model" (1996) *Economic and Political Weekly* 2788; A Ravishankar and S Archak "Searching for Policy Options: Is COFAB a suitable alternative to UPOV?" (1999) *Economic and Political Weekly* 3661.

93 UPOV 1991, arts 15(1)(i) and 15(1)(ii).

94 In India the Protection of Plant Varieties and Farmers Rights Act 2001, is partially UPOV based but departs from UPOV by giving farmers rights similar to those of commercial plant breeders. See generally P Cullett and R Koluru "Plant Variety Protection and Farmers' rights: towards a broader understanding" (2002) 24 *Delhi Law Review* 41; S Ragavan and J O'Shields "Has India Addressed its Farmers' Woes? A Story of Plant Protection Issues" (2007-2008) 20 *Georgetown International Environmental Law Review* 97.

95 Not least because trade liberalisation is likely to impact adversely on small-scale farming. As pointed out by Margaret Mulua in a case study on Samoa "[p]roblems relating to food security and increasing poverty, mainly at the grassroots level, will increase if Pacific Island economies totally commit to the requirements of the WTO Agreement on Agriculture." United Nations Conference on Trade and Development *Turning Losses into Gains: SIDS and Multilateral Trade Liberalization in Agriculture* (United Nations Conference on Trade and Development, 2013).

C. Illustrating the Intellectual Property Dilemma

While not all forms of food cultivation and production are constrained by intellectual property regimes, the possibility of this is illustrated through considering the case of the banana.

A wide variety of bananas are cultivated in the Pacific and other tropical and temperate countries. Along with yams, sweet potato and cassava, bananas are a staple food for many Pacific islanders and some varieties of banana are closely associated with Pacific culture and heritage. Many bananas are sterile and although they can produce fruit without fertilisation they need human intervention to multiply. Traditionally, they are propagated by taking basal suckers from a mature parent plant and replanting. Bananas are however prone to a variety of pests and diseases and also damage very easily in Pacific cyclonic weather or as a result of salt water inundation or tsunamis. When one person's crop is flattened by bad weather or decimated by disease, it is important that they can get new plant stock from elsewhere. However, most consumers, especially in the markets of the developed world, have a limited palate for bananas and prefer one type of desert banana: 'Cavendish', strains of which are found occurring naturally in the region.⁹⁶ Consequently most research on bananas done outside the region is focussed on developing either a successful alternative to this banana-type or developing a more resistant hybrid.

Because bananas are a global food source, the research is international, with research centres in Australia and New Zealand linked with those in Europe and America.⁹⁷ These in turn are linked with the major agro-chemical producers, because efficient production requires the use of pesticides and insecticides. While much of the research is conducted on gene banks built up from native species taken *in situ* from the islands where they are cultivated – including from the Pacific islands,⁹⁸ the traditional knowledge and agricultural practices which have nurtured this bio-diversity are largely ignored. Indeed multi-national banana companies are less concerned with the regional or local grower than with the chemical companies. These later may in turn provide technical advice to growers about their patent-protected products. While there are some local initiatives, such as the Centre for Pacific Crops and Trees (CePaCT), based in New Caledonia, which in 2009 distributed over 8,000 free plantlets of sweet potato, banana, cassava, yam, Irish potato, taro, breadfruit and vanilla to Pacific island countries for evaluation and use,⁹⁹ most of the benefits of banana research are not reaching

96 T Osborn *Banana Research and Development in the Pacific: Status Report 2002* (Secretariat of the Pacific Community, 2002).

97 For example, the Australian Centre for International Research and the French Agricultural Research for Development which has a presence in New Caledonia.

98 See for example, the gene bank now held by Biodiversity International Banana and Plantain Section.

99 Secretariat of the Pacific Community: The Centre for Pacific Crops and Trees. See also the development of the Pacific Agricultural Plant Genetic Resources Network, which aims to provide a platform for sharing agricultural problems and solutions across the region and which has encouraged the development of a regional inventory for existing germplasm collections.

Pacific island countries. Also, even if they wanted to participate in the banana export trade, most Pacific island countries would be unable to do so because of the prohibitive cost of obtaining and using patented agro-chemicals to produce trade-acceptable crops. In a free-trade environment, if a Pacific island banana grower chose to aim for the niche organic banana market they would compete with the big international producers. If one of the commercial research consortia developed a hybrid banana that was resistant to pests and diseases in all probability this would be protected under UPOV or similar legislation. Any Pacific island farmer acquiring such a plant variety would be unable to propagate it by basal suckers or to support communal or kinship networks through the exchange or gifting of banana plant material. In the meantime, some of the bio-diversity of bananas which has been nurtured in the region for decades and which could be vital to food security and health in the region,¹⁰⁰ is increasingly under threat, either because of restricted markets or because of pests and diseases.

This is not to suggest that there is no banana research in the region. Germplasm collection, distribution and evaluation and field trials for cultivation are wide-spread,¹⁰¹ and this is promising for local markets, but these initiatives are reliant on technology transfer and donor funding. Moreover, should the current small-scale research which is being coordinated by the regional organisation the Secretariat of the Pacific Community in Noumea (SPC), lead to potentially commercially exploitable outcomes there are likely to be questions of who “owns” this knowledge.¹⁰² Such questions are not merely speculative.

Ownership was an issue that arose in a collaborative taro project which was instigated to address the problem of taro blight which had been particularly devastating in Solomon Islands and Samoa.¹⁰³ In 1996 it was decided as a result of an ACP agricultural ministers’ meeting that a taro breeding programme should be implemented. The programme was a collaborative venture between the School of Agriculture at the regional University of the South Pacific (USP), based in Samoa, the Secretariat of the Pacific Community in Noumea, the Samoan Ministry of Natural Resources and the Environment (MNRE) and Samoan farmers. SPC, through its Centre for Pacific Crops and Trees (CePaCT) supplied the taro germplasm – lines of which came from Palau, the Philippines, Niue and South-East Asia; USP bred and produced seedlings of new varieties of taro with funding from SPC and technical assistance from Australia. The Samoan MNRE and Samoan farmers were responsible for raising the seedlings

100 For example some types such as the Fe’i banana are rich in vitamin A. See Osborn, above n 96, at 1.

101 T Osborn “Advancing banana and plantain R & D in Asia and the Pacific” (2001) 10 *Biodiversity International* 77.

102 This is an issue which has recently surfaced regarding kava as it has been reported that Tonga has secured European markets for kava which those in Vanuatu claim came originally from one of their islands (Eromanga).

103 See Anne Moorhead “Lesson in diversity from Samoa’s taro blight” *ACIAR Partners* (online ed, March-May 2011).

and assisting with the evaluation and selection. Although the programme was funded by regional and donor funds, there were no agreements concerning the programme and in particular there were no specifications as to who had the right to benefit from the new blight-resistant varieties which were produced. Consequently there were divergent views on this with the breeders and those at CePaCT holding the view that the programme was a regional one intended to benefit everyone in the region – Samoan or not.¹⁰⁴ However, Government officials in agriculture departments in both Samoa and Fiji asserted a more national interest in the ownership of the plant varieties that had been developed, especially if there were to be economic benefits, on the grounds that considerable time and effort had been expended by government officials and farmers. In Samoa, the market advantages that Fiji had managed to secure while Samoa recovered from taro-leaf blight were keenly felt. Fijian participants however felt that Fiji's national interests needed to be protected and the role of USP (which has its main campus and administrative centre in Fiji) had been key to the programme. At the same time Samoan farmers felt that they too should be rewarded, especially where their cultivation had been successful.¹⁰⁵ In one case, village farmers refused to give genetic material back to the MNRE without payment, preferring instead to permit the distribution of the new, successful taro genetic material along traditional social networks within the village, on the basis that as they had laboured to raise, evaluate and select varieties they should derive a benefit from this.

While it might be thought that a regional approach to food security was the obvious answer to the problems raised by threats to food crops, the above example shows how complex the situation can be. In the taro case no one went as far as trying to register a patent or plant breeders' rights, nevertheless issues of entitlement to benefits and controls over resources did emerge and while the commercial advantages of the new crops had yet to be established it was clear that the greater the commercial gain, the more likely it would be that there would be continuing friction.

The UN Special Rapporteur on The Right to Food has observed “[n]o State should be forced to establish a regime for the protection of intellectual property rights which goes beyond the minimum requirements of the TRIPS Agreement” and has expressed the view that “free trade agreements obliging countries to join the 1991 UPOV Convention or to adopt UPOV-compliant legislation, therefore, are questionable”.¹⁰⁶

Achieving a balance between food security and trade is not easy. While UPOV, TRIPS or any other trade related obligation does not directly impact on the rights of Pacific islanders to grow, harvest and prepare food in

104 See “New taro varieties belong to the Pacific region” *Samoa Observer* (27 January 2014) <www.samoanobserver.ws>.

105 See H Jaenicke “Indigenous agricultural knowledge in the Pacific: (with special reference to article 9 of the International Treaty for plant genetic resources for food and agriculture)” (Secretariat of the Pacific Community, 2011) at 11.

106 *Report of the Special Rapporteur on the Right to Food* GA A/64/170 (2009) at [41].

traditional ways, their ability to do so may be negatively impacted by climate change; loss of traditional knowledge; dwindling or changing demand; shortage of land and so on.

VIII. CONCLUSION

In August 2015 the *Vanuatu Daily Post* carried a story about the death of a two-year old child from starvation and dehydration.¹⁰⁷ The child had been fed on a rope root crop called Nipatem, a tuberous weed which can be eaten when roasted. The mother had no other food to feed her on. There may of course have been other contributing factors such as the failure of the mother to take the child to a health centre, but the point of the story is that although this could reach the national press, food could not reach that child. Part of the problem was climatic, following a cyclone earlier in the year, food had not grown, there was a water shortage due to an El Nino weather pattern, and the soil lacked fertility; part was lack of access to other resources; the absence of sufficient support networks or perhaps ignorance of what was available; and the remoteness of the locality. Policy makers refer to the four pillars of food security: food availability, physical and economic access to food, the stability of supply and access, and food utilisation. In the Pacific there is also a fifth pillar: “safety and nutrition” – “food that is fresh or properly preserved and contributes to a healthy diet”.¹⁰⁸ In the case of this child none of these were in place and the most fundamental of human rights – the right to life – was breached because of the lack of food security.

As indicated above, there are various aspects to food security in the region and the vulnerabilities are multi-dimensional. However, the Special Rapporteur on the Right to Food has stated: “Ensuring the right to food requires the possibility either to feed oneself directly from productive land or other natural resources, or to purchase food. This implies ensuring that food is available, accessible and adequate,”¹⁰⁹ and has specifically recommended the adoption of a human rights framework, observing:¹¹⁰

A human rights framework ... obliges us to ask not only which policies may maximize yields – agricultural outputs – but also, and primarily, who will benefit from any increases achieved by whichever policies are put in place. The right to food requires that we place the needs of the most marginalized groups, including in particular smallholders in developing countries, at the centre of our efforts.

It might also be argued that a human rights approach provides an overarching rationale for inter-sectoral approaches to food security. For example, it is important that the health consequences of free trade and lower

107 G Willie “Food shortage, Drought Endanger Communities” *Vanuatu Daily Post* (online ed, 25 August 2015).

108 SPC and CSIRO *Food Security in the Pacific and East Timor and its vulnerability to climate change* (2011, Noumea) at 2.

109 *Report of the Special Rapporteur on the Right to Food*, above n 106.

110 At [3].

tariffs are considered in any trade negotiations; that initiatives to expand deep water fishing take into account the impact on coastal fisheries and consider releasing discarded by-catch to local people to meet their protein needs; that agricultural policies are viewed holistically and in such a way as to balance food crops with cash crops and that land is managed in an environmentally sound way so as to enable people to grow food. If ministries were to ask whose human rights are likely to be impacted by this policy, project or plan and how might food security be affected if we go ahead with this, the longer term consequences of some development initiatives might be reconsidered. More importantly, human rights considerations impose obligations on states to act in the best interests of their citizens and raise expectations that citizens will consider their obligations to each other. If food security is to be achieved in the region it is clear that motives other than economic gain or political superiority need to be foregrounded. Clearly the role of law is only one dimension in a very complex picture. However, its relevance should not be discounted.

In his contribution to the 37th session of the Committee on World Food Security in October 2011, the UN Special Rapporteur on the Right to Food quoted Amartya Sen's remark that "the law stands between food availability and food entitlement".¹¹¹ While the people of the Pacific are not the world's poorest, the current direction of many development trends is facilitated by legal frameworks. Often these do not assist in fostering food security and by contributing to food insecurity offend the very human rights which the law should uphold. The law cannot stand aloof from these problems. There is the opportunity to use the law to better advance food security in the region ranging from improved consumer safety in the labelling of imported food, including health warnings; stronger advocacy of public interest in resisting exclusive plant-breeders rights; to the inclusion of an obligation to deliver by-catch to local markets in fishing licences; and the consideration of fundamental rights should be central to this.

111 O de Schutter "Achieving the right to food: from global governance to national implementation" (presentation at 37th session of the Committee on World Food Security, Rome, 17-21 October 2011).

