AN ISLAND CHARACTERISTIC

Derivative vulnerabilities to indigenous and exogenous hazards

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Abstract

Island development policies need to take account of recurrently high proportional impacts of natural hazards that are set to increase. Assistance could best be considered as expiatory measures against perpetrations of former world powers; the occupation and exploitation of islands in history having played a part in present-day vulnerabilities of communities to an impressive variety of indigenous hazards. Exogenous hazards of invasion and appropriation cannot be regarded only as past events because, for some islands, they are continuing, and because aspects of past exploitations continue for today's occupiers as derivative vulnerabilities. One islander describes the heightened significance of events in places of geographic smallness:

For the people in a small place, every event is a domestic event... eventually they absorb the event and it becomes a part of them, a part of who and what they really are, and they are complete in that way until another event comes along and the process begins again...To the people in a small place, the division of Time into the Past, the Present and the Future does not exist. An event that occurred one hundred years ago might be as vivid to them as if it were happening at this very moment. (Kincaid, 1988: 52-54).

Keywords

Vulnerability, indigenous and exogenous hazards

Vulnerability as an island characteristic

Studies of vulnerability to natural hazards have, since the 1970s, related that condition largely to recent and current social and economic contexts. Of those studies that have been geographically specific (Kelman, 2007), a small number examined vulnerability in island states (eg Jeffery, 1982). As small places, all events in islands, exogenous and indigenous, interact in ways not experienced elsewhere - asynchronous interaction being as significant as synchronous. In 1981 Jeffery described how some aspects of colonial history were identifiable in Martinique as contributors to present day vulnerability (Jeffery, 1981).

A study of colonial archives of five other selected island countries assessed the effects upon them of 'natural disasters' since the 17th Century (Lewis, 1982¹), studies of

Antiqua (Lewis, 1984) and, earlier of Tonga (Lewis, 1981), observed how distant historic events might have an impact on present-day vulnerabilities. Vulnerabilities now have a past that they may have accrued or that might have been caused or exacerbated by the actions of others (Lewis, 1999: 18, 48). If it came to be recognised, in all hazard-prone contexts, that present-day vulnerabilities may have accrued from events in historic and recent pasts, it would become more apparent that policies and activities now could affect future vulnerabilities. The historic vulnerability of islands to appropriation and occupation, an exogenous hazard, has in many cases emerged as the root of presentday derivative vulnerabilities to indigenous natural hazards - either real or projected by occupying powers. For example, from the rich pre-history of the Tonga archipelago it has been reliably inferred that earthquakes, volcanic eruptions, hurricanes and tsunamis were as evident in pre-history as in history but, whereas history is written principally by Europeans, otherwise descriptively rich Tongan folklore and legend seemed unconcerned with environmental hazard, with the possible exception of volcanic eruption² (Lewis, 1981: 148). The Kingdom of Tonga became a British protectorate only in 19003 (Fusitu'a and Rutherford, 1977: 173-189) which may explain why, when the 1909 hurricane hit Niua Fo'ou, one of Tonga's northernmost islands, it was actually recorded, albeit as "the Government of Tonga sent in relief but it was not required to any great extent" (Disaster Research Unit, 1975a). The Cook Islands provide earlier examples of indigenous and missionary questioning of post-disaster assistance sent from London (Lewis, 1982: 155-158)⁴.

These brief examples, from places where natural hazards had been a fact of life for previously self-reliant indigenous communities, suggest that 'disaster' itself, as well as subsequent 'disaster relief', were products of 'disaster imperialism' by which response to disaster was used to promote imperial power and beneficence (Lewis, 1984: 190; Lewis, 1999: 146, 160). The negative impact of disaster relief upon self-reliance, a counter to vulnerability, has been shown to be lasting.

In an introduction to a selection of papers on islands (Dommen, 1980a), their histories were acknowledged as a significant factor in ascribing differences between them and their continental counterparts; otherwise, it was stated, there was little to distinguish islands from continental countries other than their size. Cultural background and settlement history were demographically more important than location; island economies differed little from those of continental mini-states; demographic differences between island regions were "more interesting than those between islands and continents in general"; plantation economies were recognised in terms of the problems for their "total social system" in later adaptation to changed political circumstances; and "in so far as island economies differed from others" they did so "as a consequence of the historical, psychological and environmental peculiarities of islands". Numerical comparison of deaths per thousand people resulting from natural hazards in island and continental countries revealed "no significant difference". Proportional differences upon small populations appear not to have been considered at that time (Dommen, 1980b: 929-943). Whatever may be the significant distinguishing characteristics of islands by comparison with continental counterparts, it is combinations of their smallness and remoteness, exogenous appropriation and occupation that, over time, proceeded to islands' derivative, resurgent and overwhelmingly disproportionate generate vulnerabilities to major indigenous natural hazards. What these are and how vulnerabilities to them have been generated is illustrated by the accounts that follow.

Indigenous hazards

Used loosely, 'indigenous' and 'exogenous' are useful indicators of the origins of events of their time. Earthquakes and volcanoes affect a minority of islands, tsunamis affect small island landmasses the least⁵, and islands can be missed by tropical cyclones that proceed catastrophically to impact upon continental countries. Islands, as physical entities, may not be more vulnerable to natural hazards than anywhere else, the often overwhelming proportional impacts upon them, their inhabitants and their economies (Lewis, 1990a) being the more accurate representation of the part played by natural and other hazards in any assessment of island vulnerability (Lewis, 1979a: 119-122; Lewis, 1991: 39-41; Lewis, 1999: 3-4). As examples, 22% of all housing in Tonga was destroyed and 50% of the national population made homeless by hurricane Isaac in 1982 (Lewis, 1999: 3), and in 1990, on the Caribbean island of Montserrat, Hurricane Hugo damaged or destroyed more than 90 percent of all buildings (Clay et al. 1999; 16-17). When Mount Soufrière erupted on St Vincent in 1979, temporary evacuation of 20,000 people within the island resulted in the survival of the entire population (oral source: 1991). During the eruption of another Mount Soufrière, on Montserrat, between 1995 and 1997, nineteen people died "within minutes, killed by a force hotter than the inside of a kiln. No person, no animal, could outrun the Soufrière Hills volcano" (Pattullo, 2000: 1). Pyroclastic flows affected more than 15% of the island, more than 70% of all buildings were destroyed or made inaccessible, most of its south and western parts were covered by "massive ash and rock fall deposits", and the capital, Plymouth, and the airport, were abandoned (Clay et al. 1999: 16-17). The country was fragmented by migration and relocation, and two thirds of a population of 10,000 left the island. In 1999, returnees had increased the population to 4,500.

Tonga has recorded some of the world's largest earthquake magnitudes, for example: the R8.7 earthquake of 1917 raised the bed of the lagoon in the island of Niua Topatapu causing it to dry (Angenheister, 1921). In the Tonga archipelago, there are currently six active volcanic islands⁶, two of which are inhabited; one of these, Niua Fo'ou in the far north, is again inhabited after the entire population of 2,500 were evacuated due to an eruption in 1946 (Lewis, 1979c: 148; Rogers, 1986).

Exogenous hazards

When the European powers began their imperial enterprise, small islands were for the taking, islanders were overwhelmed and their lands appropriated, occupied, colonised and governed for the purposes of greater powers. Antigua supplied sugar and on the same island, Nelson's Harbour was an important 18th Century British naval base. Vava'u, in the northernmost group of Tongan islands, was a coaling station for shipping, first for Germany until the end of World War 1, and then for Britain. The Gilbert and Ellice Islands⁷ in the South Pacific, made a British protectorate in 1892, annexed Ocean Island (Banaba) in 1900 to gain access to phosphate-rich guano deposits, and the entire group became a British colony in 1916 (BBC News, 2006). Labour was shipped from the Gilbert Islands until mining expired in 1979 (de Silva, 2000: 11).

From a European point of view, the great explorers 'discovered' many islands but, within islanders' own regions, indigenous exploration, trade, and sometimes warfare, had continued for many years. The desired protection of ports and trade, and control of shipping routes, was sufficient to create vulnerabilities to possession, occupation and

subjugation of numerous small islands long before the arrival of British, Dutch, French, Portuguese or Spanish explorers (Bell, 1931). From the start of European expansion in the 16th Century, in the Caribbean for example, major powers fought each other for territories. Large numbers of Caribs, who had lived in the Caribbean for thousands of years, were killed or expelled. Driven by potential financial gain, prospective plantation owners and merchants moved into the region, private estates being formed on appropriated land. Indentured servants and political dissidents provided labour, augmented by more than three million slaves shipped across the Atlantic between 1662 and 1807 - a massive forced migration. Islands were defended by contingents of armies and navies and used against anti-slavery protests until emancipation in 1834. Rebellions by enslaved people occurred, for example, in Antigua, Barbados, Grenada and Haiti, and in Jamaica's major 1831 slave revolt (National Archives, 2007).

The British slave trade officially ended in 1807, making illegal the buying and selling of slaves from Africa, but established slavery ended only in 1834. Former enslaved people received no compensation and had limited representation in the legislatures. Most available work was on the same plantations; wages were low, there were inadequate rights to land, and rent, taxes and unemployment were high. Another rebellion in Jamaica in 1865 was one protest against such conditions. After slavery ended, Indian and Chinese indentured labourers were imported to work on Caribbean sugar plantations (National Archives, 2007).

One account of South Pacific colonial history has been provided by an indigenous islander:

As traders, missionaries and settlers moved out from Europe to Africa, Asia and the Pacific in the nineteenth century their governments gradually followed them... where the citizen went the flag was not far behind. And when one nation got involved in an area it was commonly followed by other, rival, nations. Of all the countries in the Pacific, only Tonga managed to avoid being annexed by some foreign power - and even then it did not completely escape... To protect her interests in these areas Germany persuaded Britain in 1856 that they should divide most of the western and central Pacific between themselves⁸. Each, therefore, claimed a 'sphere of influence', and agreed not to seek political influence in the 'sphere' of the other. Kiribati and Tuvalu, along with the southern Solomons and Banaba fell within the British 'sphere'. Britain had already in 1877 given the Governor of Fiji the additional title of High Commissioner for the Western Pacific... Under both labels, protectorate and colony, Tuvalu was subject to a Resident Commissioner based in Kiribati⁹, who was responsible to the High Commissioner for the Western Pacific, who was in turn responsible to the Colonial Office in London. But while the colonial authority structure developed, the indigenous one declined." (Noatia P. Teo in Laracy, 1983: 127, 129)

Tuvalu, Polynesian for "group of eight", is a 580 kilometre (362 miles) lomg chain of nine coral atolls comprising numerous very small *motu* (islets). Eight of the atolls are permanently inhabited, the largest and principal of which is Funafuti. During Word War 2, island appropriation was perpetuated:

On occasions during 1943 there were more than 6000 Americans¹⁰ based in Tuvalu... To the people... those of them whose islands were occupied by the Americans, the war brought much excitement and material prosperity... Many did not bother to cultivate their lands and pulaka pits, preferring to rely on the Americans to supply them - by way of both gifts and wages... Nine times between 27 March and 17 November 1943 Japanese aircraft attacked Funafuti... The first offensive blow from Tuvalu was struck on 20 April 1943 when twenty-two B-24s took off from Funafuti to bomb Nauru. Other airfields were later built on Nanumea and Nukufetau, in time to be used in November 1943 by aircraft engaged in the battle for Tarawa. (Melei Telavi in Laracy, 1983, 140-141)¹²

Strategic significance increased for numerous islands during World War 2, by becoming airstrips or naval bases and frequently the focus of intensive battles. For some, their strategic value continues: Ascension Island in mid-Atlantic for communications facilities, and the "Isle" of Portland, on the south coast of England, for institutional, scientific, military and commercial establishments (Lewis, 1979: 26).

Epidemics were serious infestations initially caused by explorers, missionaries and colonists. In Samoa 13, diseases newly introduced by explorer and trader Europeans recurred from the 18th to the early 20th centuries. Influenza first occurred in Samoa around 1830 and recurred almost every following year for a long period, an especially severe attack occurring in 1847. Whooping cough reached epidemic proportions in 1849, mumps in 1851, measles in 1893, dysentery in 1907 and measles again in 1915. Inter-tribal warfare involving the destruction of crops and intermittent hurricanes and occasional infestations of caterpillars (Lewis, 1982: 153) exacerbated food shortages induced malnutrition and caused the Samoan national population to decline by almost 40% between 1838 and 1886 (Lewis, 1982: 160). During the worldwide 1918 influenza epidemic, 8,400 people died in Samoa, one fifth of the national population, with 7,000 more deaths than registered births for that year (Lewis, 1982: 160-162). "While true isolation constitutes protection, it also makes the isolated population unusually vulnerable once the isolation is breached" (Brookfield, 1980: 23). Rigorous attention to public health, endemic diseases and incoming vessels eventually brought epidemics to an end after 1923 (Lewis, 1982: 160-162). Infections carried by visiting ships and causing epidemics have been recorded in the Tokelau islands (Prior and Stanhope, 1980: 998) and in Tonga where, in 1893, a ship from Auckland carried a measles infection, a new disease in Tonga at that time that, that within one month, spread through the entire archipelago. One thousand people died, 5.25% of a national population of 19,000 (Rutherford, 1977: 176). The deprivation and underdevelopment that ensued from these events and experiences became a root cause of continuing present-day derivative vulnerabilities.

Derivative vulnerabilities

As I have briefly discussed elsewhere (Lewis 1999: 5, 16), vulnerability applies to places as well as to people - occupants of a place adopting its vulnerability. What was done to - or with - land by people in distant pasts can affect those that follow on (for many years and, often, for centuries). Some people's present-day vulnerabilities have derived from activities of other people before them who owned or occupied the same place or who

influenced what was done with it. Vulnerability can thus be derivative, as demonstrated in the examples that follow.

Exploitation, oppression and domination by slavery and by colonial powers resulted in eventual independent government knowing no other system but "how to take the wealth of our country and place it in Swiss bank accounts [and] how to corrupt our societies and how to be tyrants" (Kincaid, 1988: 34)¹⁴. In many cases, underdevelopment has resulted and has been vulnerability perpetrated (Disaster Research Unit, 1975: 33-34).

After its European discovery by Columbus in 1502, Martinique remained uncolonised until 1635 when French forces defeated the indigenous Caribs and drove them to the island's Atlantic side, increasing their exposure to storms and hurricanes, 17th Century maps show a formal division of the island with a terre des Français to the west, with its sheltered harbours, and a terre des sauvages to the east. Later, all Caribs were expelled, slaves being imported to work on land thus appropriated. The greatest exposure and vulnerability to storms continues for today's inhabitants of eastern Martinique (Jeffery, 1981: 5). In one region of Martinique¹⁵, where large areas of land continue to be owned by descendents of the early French settlers, an "extremely unequal distribution of landholding" has resulted where more than 90% (1,244 ha) belongs to six of those owners, the remaining 60 hectares being divided among 221 other owners (ibid: 26). The "monopoly of key resources" held by this "elite group" created additional vulnerabilities "for waged labour in the north of Martinique" (ibid: 27). The vulnerability of small landholders to storms and hurricanes was proportionally greater than that sustained by larger landholdings. Similarly, in the Dominican Republic, large scale cashcropping was identified as responsible for the displacement of small landowners who were obliged to relocate to marginal exposed land, and were rendered, in consequence, more physically and economically vulnerable (Jeffery, 1982), Fragmented land and segmented society are two characteristics of "plantation islands", identified with others as leading to "chronic underdevelopment" (Lamusse, 1980: 1036, 1039) - again, a key indicator of vulnerability to natural hazards (Disaster Research Unit, 1975b: 33-34).

Nine years after the abolition of slavery, the 1843 earthquake on Antigua caused extensive destruction and damage, especially in the capital, St Johns (Lewis, 1982: 98-104; Lewis, 1984), where an eyewitness account recorded that numerous "free villages", built by former slaves, were destroyed:

Many of the estates that have fallen prey to the earthquake have been established since emancipation, by men who have exerted themselves to the utmost... and how they will be able to rebuild them it is impossible to say. Indeed, it will take many years to restore Antigua to its former position. (Woodcock, 1843: np¹⁶).

The cost of reconstruction after the earthquake was aided in 1844 by a government advance from London. This had to be repaid, creating a substantial public debt not paid off until 1868. Only in 1867 was construction able to commence on a "waterworks" with a capacity of 500,000 gallons: "This measure of attention to recurrent drought had to wait until the burden of the earthquake loan had disappeared" (Lewis, 1984: 194) - vulnerability to drought prevailing in the meantime. The 1974 R6.7 earthquake in Antigua was a reminder, if a reminder was necessary, that island vulnerabilities were not confined to history. Extensive damage in St Johns occurred to similar (in one case the same) public buildings as in 1843; another similarity was that: "[h]ousing losses were

sustained mainly in the rural areas, and mostly to buildings of traditional construction inhabited by the lowest income earners" (Tomblin and Aspinall, 1975: 1559).

World War 2 bypassed many island communities but, for others, brought long-lasting derivative vulnerability. In Tuvalu:

In the construction of the airfield (on Funafuti) a large portion of the land formerly used for growing pulaka and taro was covered up. The local people were later compensated yet they suffered an enduring loss. Pulaka is no longer a staple food, although during the war it did not matter. The American occupation brought them more food - as well as cigarettes, soap and kerosene - more than they had ever had before. Many still think of that as the best time of their lives... Indeed, most of the damage done on the island (Nanumea) was done by its defenders. The airfield took up one sixth of the land area, and to make it the Americans destroyed nearly half of the coconut trees, 22,000 out of 54,000. Moreover, efforts to replant that land have not been very successful. The coral is packed too hard for the trees to grow properly (Melei Telavi in Laracy, 1983: 140, 141).

In 1968, the entire population of Diego Garcia, one of the Indian Ocean Chagos Islands, was moved to Mauritius and the Seychelles to make way for the island's use as an airbase, which has continued for almost 40 years. On hurricane-prone Mauritius, Chagossians have lived in vulnerable poverty, a series of legal claims only recently concluding that remaining islanders should be allowed to return (BBC News 2002: online, Burge, 2007: online). What vulnerabilities will transpire on Diego Garcia from this episode in its history remain to be observed. Not all islands of a group are equally vulnerable, as noted in Fiji:

Within Fiji, the eastern islands are more vulnerable than the nation as a whole, because the effect of natural events tends to be more serious on small islands dependent on only a few sources of livelihood than on larger islands with a more diverse resource base. (Brookfield, 1977: 165 quoted in Lewis, 2003: online).

Expiatory measures

Islands and vulnerability are correlative. Their vicissitudinous histories expose events within them, that impinge upon them: invasion, seizure, occupying forces, internal and external warfare, slavery, rebellion, inward and outward forced migration, infestation, epidemic, fire, famine, drought, floods, cyclones, volcanoes, earthquakes, erosion and sea level rise – to which could be added tourism, 'development', post-disaster assistance and 'disaster imperialism'. Islands' strategic usefulness to others has resulted in demonstrations of their appropriation in penitentiaries, prisons, quarantine stations, hotels, private residences, monasteries, lighthouses, fortifications, military and naval bases, weapons testing, airfields, fuelling stations, ports, trading posts and communications facilities. This usefulness has not always been of service to indigenous populations, neither at the time nor subsequently.

Derivative vulnerabilities ferment, and former vulnerabilities recur in invasion¹⁷, transshipment of populations, and acquisition of land and sea territories for access to fishing, minerals or for deep-water waste disposal¹⁸. New vulnerabilities emerge in private purchase, housing development, tourism, refugee landings and security management. One conclusion has to be that, whereas island populations possess an extraordinarily traditional resilience against exposure to hazards of an indigenous natural kind, they continue to be at severe risk to hazards of an exogenous human-made kind.

Whereas natural hazards in islands may once have been regarded as a 'normal fact of life', the treatment of small islands by greater powers as if they were useful flotsam in their oceans, surely has to end. Towards this objective, initiatives such as the UNESCO Island Agenda (UNESCO, 1994) and organisations uniting islands in their common purposes, such as Small Island Developing States (SIDS), the Alliance of Small Island States (AOSIS), and Commonwealth initiatives (eg Lewis, 1990b) are not only good for islands but for the global common good as well. Especially when island histories are recalled, the current responsibilities of world powers must include responsiveness to issues represented on islands' behalf. Island development programmes, inclusive of coordinated community based adaptation (eg Jones and Rahman, 2007), are necessary to counter the exacerbation of natural hazards by climate change and sea-level rise. Resilience is best reinforced by adaptation of traditional skills and coping systems within development programmes aimed at removal of the causes of vulnerability. Longestablished practices of mutual self-help between those affected and those not, in many cases have become eroded by neglect and by dependency on external assistance. In the Tonga island group, for example, inter-island exchange had become incompatible with a centralised colonial government; the redevelopment of local fishing, provision and maintenance of boats, and reconstruction of local jetties, being one recommendation to be achieved by micro-funded development projects (Lewis, 1981: 156-157).

Islands may be small but within them are ancient civilisations and cultures without which the world would be a poorer place. One quarter of the world's countries are island states, 51 of which are UN classified Island Developing Countries, with a combined population of forty million (Lewis, 1991: 39; UNDESA, 2007). Climate change and rising sea levels¹⁹ exacerbate current island vulnerabilities (Sem, 2007; Lewis, 2007: 12). Amid consequent pessimistic forecasts for some islands' futures, however, have been the preliminary findings of wave action simulations, with the indication that "reef islands will physically adjust to sea-level change and will not totally disappear" and that "changes in sediment supply... can also cause physical alteration of small islands by an equivalent or greater magnitude than sea level alone". The authors continue, however:

While the study does not project wholesale devastation of low-lying reef islands, it would be incorrect to infer that small island nations should not be concerned about the possible consequences of sea-level rise. (Kench and Cowell, 2002: 6-12)

Demand for development assistance to island states has sometimes been said to be disproportionate to their population numbers. Enhanced international regard for island populations, their cultures and risk ecologies (Kelman and Lewis, 2005), however, could result in donor assistance measured in accordance with proportionally assessed vulnerabilities, not only with population totals. Derivative and recurrent vulnerabilities to natural hazards will reduce when they are recognised as long-term processes and

when appropriate measures for their amelioration are made an integral part of island development programmes.

Endnotes:

¹ Based upon research into the archives of the London Missionary Society held at the School of Oriental and African Studies, London; archives at the Arquivo Historico Ultramarino and the Sociedad de Geografia, Lisbon; and at the Foreign and Commonwealth Office, London.

- ⁶ Tonga's six active volcanoes are Fonualei, Kao, Late, Niuafo'ou, Tofahi and Tofua and there are numerous additional submarine volcanoes. Information updated and confirmed by the Global Volcanism Programme, Smithsonian Museum of Natural History http://www.volcano.si.edu/world/region.cfm?rnum=0403 accessed August 2007.
- ⁷ At independence in 1979, the Gilbert Islands became Kiribati and in 1978 the Ellice Islands became Tuvalu. Between 1850 and 1875 islanders were kidnapped for forced labour on plantations in Fiji and Queensland (a process known as 'blackbirding') and in 1863, Peruvian slave traders kidnapped 400 islanders nearly two-thirds of the population of the islands of Funafuti and Nukulaelae (BBC, 2006).
- ⁸ By a treaty of 1899, Tonga was retained by Great Britain, becoming a protectorate in 1900 and Samoa was retained and annexed by Germany (Rutherford, 1977: 180, 182).
- ⁹ Tarawa, the principal island of Kiribati (Gilbert Islands) and the place of residence of the Resident Commissioner once responsible for Tuvalu (Ellice Islands), is 1300 kilometres (800 miles) from Funafuti, the principal island of Tuvalu.
- ¹⁰ Tuvalu's indigenous population in 1943 cannot have been much more than a similar figure. In 1998, it was recorded as 11,000 (*Commonwealth Yearbook*) having increased by a third since independence in 1978 (Lewis, 1988; 41).
- ¹¹ Tarawa is the principal island of Kiribati, formerly the Gilbert Islands and was the site of one of the first Pacific battles of World War 2.
- 12 From the mid 1950s to the early 1960s, Christmas Island, now part of the Kiribati island complex, was used as a base and site for the testing of nuclear explosions and the island of Gan, in the southernmost Addu Atoll of the Maldives, was used as a British air base from 1957 until 1967.

 $^{^2}$ This statement was corroborated in Tonga by The Honourable Ve'ehala, the Acting Minister for Works and Education, Governor of Ha'apai, Cabinet Minister and Chairman of the Tonga Traditions Committee, and with Dr Garth Rogers of the University of Aukland, whose advice was sincerely appreciated.

³ Tonga was the only independent Pacific island kingdom not to be annexed and colonised (Rutherford, 1977; ix).

⁴ Letters dated 31 December 1841 and 30 June 1847.

⁵ Since the waves can flow round them, rather than being forced up over larger coastal masses.

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¹³ Formerly Western Samoa, now Samoa.

¹⁴ Jamaica Kincaid was born and spent her childhood in Antiqua.

¹⁵ Fieldwork undertaken in 1980; for example, the Macouba district of Martinique.

 $^{^{16}}$ Page reference unavailable (quotation from the publication in the Foreign & Commonwealth library, transcribed in 1994, which now appears to have been relocated elsewhere).

 $^{^{17}}$ As examples, Grenada was invaded by the USA in 1983 and the Falklands/Malvinas islands were invaded sequentially by Argentina and the British in 1982.

 $^{^{18}}$ Letter referring to Matthew and Hunter islands off Vanuatu and New Caledonia (Crennan et al, 2007).

¹⁹ Sea flooding in Male, regarded as an indicator of rising sea levels, had been experienced prior to 1989, when the Maldives government hosted the Small States Conference on Sea Level Rise at which AOSIS was initiated.

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