

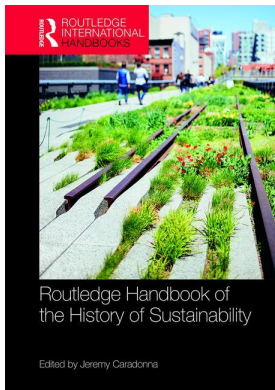
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PART III

Sustainability, resilience, and collapse in historical societies



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WHAT IS SUSTAINABLE?

Some views from Highlands Papua New Guinea

Andrew Strathern and Pamela J. Stewart

The answer to the question posed in our title here must be that this depends on two issues. One is the framework of time and space that is in focus; the other is whether we are regarding sustainability as a state of simple continuity or as a state that adjusts to, or incorporates change into, itself. A framework of time and space needs to be specified, or at least sketched-out, bearing in mind the aphorism that nothing lasts forever. Correlatively, the concept of sustainability needs to include some recognition of adaptation and change because in order to maintain some variables, or patterns of behavior and practice, as well as the values of the social actors involved, change has to come into play in order to sustain these values. For example, if an agricultural regimen that depends on a certain crop is rendered at risk by the entry of a disease that attacks this crop, people may seek to find a comparable crop that can replace it as a major source of subsistence.

In this chapter, we will address the question of sustainability using some perspectives on Highlands Papua New Guinea. Given the fact that Highlanders have continuously inhabited the area for approximately 50,000 years, the set of cultures in the Highlands provide a useful basis from which to consider successful approaches to long-term resilience.

In one sense, the history of sustainability must be coterminous with (at least) the history of human occupation of parts of the Earth, since all such histories of populating places depend on the availability of ecological niches for people to practice their ways of life in, and those niches vary in their capacity to sustain such ways of life. The crucial factor is whether there is an overall growth in population over time or whether there is a stable state. Where the idea of economic development takes hold and is coupled with a rise in population levels, the issue of sustainability becomes crucial. This is obviously why sustainability has come to the fore as a key global issue nowadays. Huge cities demand vast amounts of energy. Large populations require to be fed. All this in turn is driven by the mere fact of biological reproduction and the values associated with it in human kinship systems that continue to underpin inter-generational growth and change.¹ In state-based structures these biologically underpinned processes are also greatly affected by government policies and programs that look to the continuity of an available work force in order to sustain the economic system and to provide producers and consumers of goods. Sustainability as such is lost or mired in such secondary imperatives of adaptation, and the growth of population levels is taken as axiomatic, rather than contingent on choice and planning.

It is useful, in such a context, to look at the practices, and the results of practices, among pre-industrial peoples studied by anthropologists around the world. Do, or did, such people practice sustainable ways of living, and if so by what mechanisms? There have been many important works on the history of societal collapse, but less has been written on what might be called the long-term history of sustainable resilience. Hunter-gatherer populations generally consisted of groups, spread over large ranges of land, with clear divisions of labor and only limited capacity to increase either their population sizes or their sustainable resources. The cultivation of crops in garden patches or larger fields at once modified this pattern, bringing people together in a more sedentary pattern and increasing the capacity to sustain levels of production over long periods of time.

Practices related to reproduction are involved here. Contraception or induced abortions can help to reduce population growth, as can of course illness conditions or killings resulting from conflict. Reduced fertility can be a result of poor nutrition and disease loads. Among settled agriculturalists, such as are found in the Central Highlands of the island of New Guinea, we find the spacing of children customarily occurs as a result of lengthy post-partum taboos on intercourse between partners and long periods of lactation and breast-feeding on the part of the mothers. Such taboos obviously conduce towards preservation of the bodily health of mothers as well as their children. However, they tend to be supported not by any ideology of conservation as such but by ideas of a ritual kind. People explain that a man's sperm, which is instrumental in the production of children, can be lethally harmful to an unweaned child, acting as a kind of toxin that spoils the mother's breast milk. This is an automatically self-reinforcing taboo, predicated on the generally correct presumption that the genitor will not wish to inflict bodily harm on his young child, and the mother likewise will not wish to engage in sexual relations that would have such an effect. This long-established, traditional taboo contributes to the sustainability of the population as a whole by limiting the rate of population growth. The interpretive argument here is functional in character but does not imply that there is any overt or conscious effort by the persons involved to justify their practices in functionalist terms.

Similar considerations apply when we move to the related issues having to do with settlement patterns, warfare, and the putative pressure on resources of land that would result from population growth.

A lively debate concerning the effects of land pressure on the incidence of warfare between clan groups in the Highlands emerged during the 1960s when relatively early detailed studies were undertaken by a wave of researchers during a period of colonial pacification by Australian government forces in what were then the two separate administrative areas of Papua and New Guinea. Government officers had patrolled the central belt of populations straddling these two administrative divisions and everywhere had sought to eliminate armed aggression between groups and gradually to introduce cash cropping (mostly through coffee) and institutions of elected local government councils that could preside over road-building and inform people about political and economic change in general, linked to the collection of council taxes and their disbursement on public projects.

Central Highlands groups were fairly intensive gardeners and at the time they first came into contact with explorers and government officers from the outside world they had developed flourishing systems of wealth exchanges linked in one way and another to both warfare and peacemaking. The tools of both gardening and fighting were relatively simple, consisting of wooden spades and digging sticks used by men and women respectively, and bows, arrows, spears, and shields deployed by men in concerted aggressive encounters. Production relied largely on the mounding and draining of fertile garden areas. The staple crop was (and is) sweet

potato, which had replaced an earlier suite of ancient crops within the last thousand years and perhaps for only a few hundred years.

A clear gendered division of labor operated. Men turned the soil and made drains with these long wooden spades, and women employed digging sticks to till, plant, and harvest sweet potatoes and taro (the older and much longer established crop.) The land in many places is fertile, especially where the soil is volcanic, and the sweet potato is a hardy tuber that can be grown at altitudes higher than the older staple (*Colocasia taro*).

Sweet potato can also be fed to pigs and its advent in the Highlands led to the development of the complex of activities recorded by early observers from the outside world in the 1930s onward; high density populations of pigs and people, the pigs being used for life-cycle and ceremonial exchange events in the sphere of local politics.

Origin stories of groups in the Mount Hagen area stress the power of fertility channeled through male ancestors and granted to them by transcendent spirit powers of the cosmos. An explicit aim of groups was to increase their numbers and correspondingly to migrate out from their original place and colonize new areas. With such an underpinning ideology it is clear that conflict between groups would be likely to emerge, with competition for land resources. In that case the groups would run into problems of sustainability, because warfare can be harmful and destructive to crops. Indeed, the Highlanders gained a reputation as warriors keen to maintain their standing and hold on to their resources. So how was conflict between groups controlled or contained?

The answer is that it was limited by a number of social mechanisms, but these mechanisms were by no means perfect. Narratives of the fortunes of groups often contain episodes of the group being routed and dispersed, seeking to live with extra-clan kinsfolk with whom there were ties resulting from inter-marriage.² An elaborate segmentary structure of degrees of enmity and alliance between groups operated to define the fields of social relations. Among allies and minor enemies, transfers of pigs served to repair conflicts and maintain or renew friendly ties. With major enemies, marriages were infrequent and compensation for deaths by planned violence or imputed as a result of covert sorcery was not paid. This outer structure defined the limits of solidarity. Within the circle of solidarity, especially close relations held between groups named as paired alliance sets, and disputes over resources within these same ambits of sociality could be settled. Inside such ambits, there was no driving out of people from their land and access to it could thus be accommodated, keeping sustainability within the security circle. If a severe conflict with major enemies arose, and people were driven out, as happened historically to the Kawelka people, they were able to find refuge with an extended network of kin and to consolidate their recovery by entering into a new pairing with a host group that took them in, within a territory that was perhaps sparsely occupied prior to their arrival as refugees.

These fluid arrangements for sustainability in the face of conflict contrast somewhat with the classic picture painted by a stream of notable figures in the history of anthropology, centered on the Highlands fringe population of the Maring living north of the area occupied by the Melpa speakers of Mount Hagen in the Western Highlands of Papua New Guinea. Prominent among anthropologists who studied the Maring were Roy Rappaport and Andrew Vayda, both engaged in ecological work and in seeking functionalist accounts of how periods of war and peace among groups, strictly calibrated in terms of ritualized sequences, played out over time. Rappaport worked with a very small group, the Tsembaga, numbering some 200 people.³ He showed how political and ecological time was divided between a period of peace (or suspended hostilities) and war (open declaration of hostilities) and that the division was regulated by a complex series of rituals. Warfare was pursued in order to take revenge for deaths inflicted in

previous bouts of conflict, and was inaugurated by the collective uprooting of red cordyline plants described as the spirits of men (*yu min rumbim*). Peace was marked when hostilities were suspended, pigs were sacrificed, and the sacred cordyline plants were rooted again in the soil of the group's territory. During the ritual time of peace people bent their energies to making gardens and building up numbers of domesticated pigs, destined to be sacrificed, after some years, at the next pig festival (*kaiko*). The ecological part of Rappaport's argument was that as the numbers of pigs increased, caring for them became more arduous, and the decision to hold the *kaiko* was triggered when the burden became too great for the workers, especially women who fed the pigs, to bear. The "system" of pressure on resources was thus brought back to a sustainable level, in the same way as a thermostat regulates temperatures and maintains them within a range.

This argument, as far as it went, was obviously correct. However, after the *kaiko* was over, the group would go to war with whoever had killed one of their own in a previous bout of fighting. The effects of war were also regulated, but perhaps not so predictably or clearly. Rappaport's analysis most convincingly portrayed the ritual alternation between war and peace, ensuring longish periods of peace and build-up of resources and shorter periods of fighting with loss of life and occasional temporary displacement from land. Andrew Vayda's work carried this mode of analysis more widely into a general argument that warfare itself could be seen as an ecological mechanism by which, over time, land was redistributed among groups in response to population pressure. In a later recantation of this thesis, Vayda noted that his previous assumption of population pressure as a condition affecting or potentially affecting all Maring groups was unwarranted, and indeed rested on just two particular case histories, centered on the Kauwatyí and the Kundagai groups. These two groups had large areas of grassland and secondary forest in their territories, and were thus short of the fertile primary forest they needed for new gardens and for pigs to root around in.⁴ Correspondingly, they had population densities greater than any others of the many Maring groups.

Tension over gardening land was clearly exhibited in the fighting histories of the 1950s that Vayda collected. The pattern of fighting in which a group might be driven off their land usually resulted in their later return to their territory, but in a few cases led to annexation. The conflict between the Kauwatyí and the Kundagai also broke custom in its fierceness and disregard for formalities, and appears not to have been marked by the holding of any *kaiko* in advance of it or by an uprooting of the *rumbim* plants. Only the external force of the colonial Australian patrol officers, who reinstated the original landowners on their land and forbade warfare, halted the fighting and annexation of land. As an aside, but a significant one, Vayda here notes that one of the groups attacked, the Tyenda, gave a considerable portion of their territory to their allies, the Kundagai, in return for their giving them help. The Kundagai, in turn, had been the other group that had aggressively intruded on the land of their own neighbors, the Ambrakui, who had been weakened by population decline. In other words, warfare was in fact correlated in these two cases with a complex pattern of transactions in land. Vayda, therefore, is right to point out that territorial conquest was an intentional aim in the actions of the Kauwatyí and the Kundagai; but, in systemic or processual terms (*pace* Vayda's rejection of process as a concept) it is equally interesting that a voluntary gift of land to allies was a part of the broader picture, and indeed falls into line with the importance of allies both in the Maring case and in Hagen. From the point of view of ritual analysis it is also important to note that the case of the Kauwatyí shows that a fine-tuned ritual regulation of war and peace and of controlled modes of fighting may be abandoned if circumstances dictate this. Ritually managed homeostasis, then, works well until it does not; and when it does not, the way lies open for more and more lethal encounters. This is indeed what happened in Hagen with the introduction of guns into warfare.⁵

In his life work, Andrew Vayda moved from “ecological functionalism” (as in his first take on Maring warfare) to what he calls “event ecology,” that is, the study of empirically identifiable actions and events that have ecological results—and therefore, we can add, also bear upon sustainability.

In promoting event ecology, Vayda, working with Bradley Walters, also took a stand against a popular spin-off from activist ecological studies, or political ecology, which in turn is deeply informed by critical political economy theorizing.⁶ Basically, these theorists adduce political factors and influences from outside as major explanatory factors in ecological studies. Clearly, there is some truth in this perspective, which is akin to the perspectives found in critical medical anthropology. However, from his own research-focused perspective, Vayda wishes to examine local details, and he proposes event ecology as his term for this endeavor. In other words, instead of backing supposed “laws” of processes, he is scrutinizing the contingences of local histories as sources of ecological results and causes of results. Such contingencies can provide needed clues to the sustainability or unsustainability of practices.

In terms of general theories and discussions about sustainability, a number of sites or venues of investigation emerge. One is the theme of global and regional climate change and its relationship to the incidence of adverse physical events that produce conditions which people experience as disasters. This theme feeds into the study of such disasters and how people are able or not able to recover from them. A second theme lies in the importance of maintaining an ecological viewpoint on the question of sustainability. Ecology is concerned with the total mix of environmental relationships among different biota. From the perspective of human ecology this focus narrows down to the effects of human interactions with the environment. In turn, such effects have largely to do with the creation, maintenance, and exhaustion of resources for sustaining life, and the major message here is that there is an intricate web of relationships among species, leading to a balance or imbalance between them based on symbiosis. Imbalance leads to the destruction or disappearance of certain species as they are outcompeted by others or are deliberately targeted by others.

With the development of sophisticated and powerful tools of technology that both generate and require huge amounts of energy to operate, it is obvious that the question of the finite character of natural resources swings into view. It is urban civilization and its massive artificial built environments that causes this problem to be severe, along with another dynamic factor—the steady growth in population numbers throughout the world. Birth control and limitations on reproduction thus become crucial factors of ecology and sustainability, but a concern to limit population growth runs counter to prevailing capitalist values that envision persons as consumers and producers of commodities that generate monetary income. It might seem inevitable, then, that there is a contradiction between sustainability and the ideology of economic growth. The technological answer to this contradiction is that with new, more efficient technology, sustainability of food production can be achieved. An example would be urban, indoor hydroponic gardens that can produce crops without the cultivation of large areas of land. Such a technology, however, itself depends on a high consumption of energy.

Global climate change further complicates this picture. Such contemporary change is due to the expansion of industry and the release of toxic elements into the atmosphere. The climate changes that are currently being observed do not have a benign appearance but rather seem connected with increasingly fierce and destructive storms, hurricanes, tornadoes, tropical cyclones, flooding, and the like. Meanwhile, tsunamis resulting from earthquakes in regions of the world that are in zones of turbulence between tectonic plates continue to cause havoc, along with volcanic eruptions in seismically active arenas. All of these processes cause large numbers of deaths, material destruction, and the displacement of people into supposedly safer areas of occupation.

Intensive capitalist-style use of resources is usually signaled as instrumental in disrupting sustainability, although here we must note the problem of scale. For example, in many parts of the world, large-scale dams have been built to supply water for cities and/or to provide hydro-electric sources of power for the same purpose. This process occurred earlier in the US, and has been happening currently in mainland China. The Aswan dam in Egypt is another well-known example, and one that destroyed one of the most stable agricultural regions on Earth. In almost every case, such large-scale developments have had unfavorable effects for some animal species and/or for some indigenous peoples on whose traditional lands these large-scale installations have been imposed. Operations of this kind provide temporal sustainability for the cities they serve. By the same token, they cause unsustainability for the peoples whose riverine and riparian resources are destroyed. So our general question in this survey of “what is sustainable?” can be parsed as “what is sustainable for whom?”

An alternative vision of sustainability is provided by a set of studies by Anne Ross and collaborators, with the title of *Indigenous Peoples and the Collaborative Stewardship of Nature*.⁷ The basis for this volume is the idea that an indigenous stewardship model provides the foundation for the sustainable use of nature. In turn, the hypothesis here is that indigenous peoples, living in close proximity to and symbiosis with nature, have enshrined in their cultures a respect for these resources that precludes them from harmfully overusing them. This interpretation certainly could be applicable in Highlands Papua New Guinea, where resources have been used sustainably for tens of thousands of years. That said, there is no reason to suppose that this model applies universally. Maori people in Aotearoa (New Zealand), for example, seem to have hunted the large indigenous birds known as Moas into extinction prior to the European colonization and the more powerful ecological changes that it brought in its wake. Further, several indigenous societies experienced precipitous collapse prior to contact with Europeans. The model works best, however, in areas where colonial influences have had deleterious effects, and strategies of conservation and regeneration are built on the premises of a cosmic world-view of respect for living species. Summarizing their overall argument after a survey of complex data from many different indigenous peoples in Australia, America, and Asia, the authors conclude that indigenous stewardship models represent the agency and efforts of indigenous peoples themselves to revitalize their traditional knowledge systems in the service of caring for the environment.⁸ In our view, it is valid for industrial society to look to indigenous societies for wisdom and inspiration, but this must be done cautiously and in a non-exploitative manner.

A related approach is found in the literature on eco-tourism. The volume *Ecotourism and Sustainable Development: Who Owns Paradise?* explores this theme in depth, using studies from the Galapagos Islands, Costa Rica, Cuba, Tanzania, Zanzibar, Kenya, and South Africa.⁹ The overall aim of ecotourism is to sponsor tourist visits to natural areas where the habitat is special and may be at risk, fostering respect for the environment and helping to provide resources to protect and conserve it. Whereas indigenous stewardship is often centered on areas that have already suffered considerable adverse change, ecotourism, in the best of cases, focuses on bringing money into protected areas or areas that may need protection, in order to conserve some aspect of a pristine or intact ecosystem.

Costa Rica is one area, Honey writes, that has a relatively long-established track-record of ecotourism operators. One of the founding figures there was Michael Kaye, who shifted from nature and adventure tours into the ecotourism sphere by trying to prevent the building of a particular mega-resort in Costa Rica. Failing to do so, he began to build eco-lodges himself in competition with bigger operators. Such efforts, Honey indicates, have received much money from the US Agency for International Development (USAID), contributing to an international “enterprise-based” approach to conservation.¹⁰ The World Wildlife Fund and the Nature

Conservancy are also involved. Such efforts at combining tourism with conservation of the local environment and cultural practices are not without their contradictions. Local people are not always happy with backpackers who somewhat intrusively try to learn from their hosts and also live in cheap accommodation. Honey perceptively notes that achieving the most acceptable balance in relationships and “authentic cultural exchange” between hosts and visitors is a difficult task.¹¹ In the majority of cases, the eco-tourists are paying money for their experience, and the hosts may or may not be ploughing this back into the development of their business and/or the environment in which it operates. A beneficial factor generally provided by government is the provision of official park areas within which tourists can both seek adventure and learn about the landscape, history, and contemporary concerns of the park itself, as a managed environment accessible to visitors. Since Honey’s book was published in 1999 many more ecotourism projects have been launched. Honey provides figures that suggest why this may be so, since eco-tourism generates a considerable amount of money while doing less damage to the natural environment than some other economic activities in many of the areas studied.¹² The reason for this would seem to lie in the fact that eco-tourists are able to pay more for their experience than their hosts can make from other sources of income. In other words, the money comes from outside and if visitors do not come there is no income at all, since eco-tourists like to visit areas free of other kinds of development, areas with putatively pristine or unaltered environments (although such an assumption may not be grounded in historical fact). The sustainability of eco-tourism thus rests on the effectiveness of marketing it to the outside world and on attracting visitors with enough resources to pay for it. There must also often be a fine line between adventure tourism that incorporates a modicum of learning about the environment and eco-tourism that incorporates a certain degree of adventure, if only because of the difficulties of reaching the areas visited.

Eco-tourism is likely to be pursued in areas where aspects of the environment are traditionally regarded as sacred and therefore not to be disturbed because of the offense that such disturbance would give to guardian spirits who might in turn enact punishment or revenge on those who violate their taboos. The whole concept of “taboo” as such stems from Polynesian practices whereby a chief could forbid the use of a certain natural resource for a period of time, lifting the taboo perhaps when the resource was needed for acts of ritual feasting. A parallel to such impositions by chiefly authority is to be found in the famous ritual complex of the *kaiko* among the Maring of Papua New Guinea, in which peace held in a group as long as the red cordyline plants that contained male life force remained planted in the ground and war was initiated by uprooting these plants and triggering a sequence of rituals leading to warfare.¹³ While the sacred cordylines remained planted, pigs were intensively reared over a period of years, with the ultimate aim of killing these as sacrifices to spirits and unleashing warfare in order to revenge the deaths of kinsfolk in previous bouts of fighting. The ritually configured alternation between peace and war obviously contributed to limiting the damages of war as well as ensuring that pig herds were reduced before they became seriously parasitic on human occupation of the land.¹⁴ Of course, while the sacrifices of pigs that constituted central ritual acts in the *kaiko* cycle generally took place before the environment was placed at risk, there is assuredly a likelihood that the Maring aimed at rearing and killing an impressive number of these animals in order to earn the approval of both the spirits of their dead and the minds of their living allies in warfare. Practical and cosmic considerations flow together in such processes. But the salient point is that the *kaiko* cycle, intentionally or not, helped maintain social and ecological balance.

This theme of the relationship of ritual practices and ecology finds resonance with a much larger, global theme, on the importance of sacred sites that are often loci of valuable biodiversity

because the plants in them are protected from being destroyed. Gloria Pungetti and collaborators have extensively documented the importance of this point across the globe, and interestingly enough include English churchyards in their purview.¹⁵ Another chapter in this same volume recounts a situation extremely common in the history of struggles between indigenous peoples and settlers. Joseph S. Te Rito, a member of the Ngati Hinemana kin group of Maori in the province of Hawkes Bay in Aotearoa (New Zealand), tells of the struggle of his people to regain control over Puketapu, a sacred hill that had been renamed Fernhill by settlers in 1879. A hundred years later, in 1989, the Maori revived the ancient name, meaning “sacred hill,” and opposed the local Council’s attempts to build a housing section on it or to sell it to vineyard operators.¹⁶ In this way, cultural sacrality acted as a rampart against urban sprawl or sudden land-use changes.

Puketapu gained its name as a result of a battle between Maori groups that entailed bloodshed and deaths. After that the Hinemanu banned residence on the hill, considering that their warriors’ bones were buried in its soil. In spite of the historic provisions of the Waitangi Treaty in 1840, incoming settlers obtained control over Maori lands by pressuring the Crown’s representatives to release it for division among settler families. From 1989 onward, the Maori leaders organized a movement to oppose the sale of land on the hill to outside interests and to prevent the Council from dividing it into residential lots. Interestingly, the Maori won over numbers of non-Maori local people and they started the Puketapu/Fernhill Reserve Trust together, with the aim of keeping the land as a conservation area and free of dwelling houses like those occupied by the descendants of settlers who had obtained parts of the hill much earlier.

The author records that little of the original vegetation remains on the hill, and it has been turned into sheep pasture.¹⁷ However, he notes that the Trust members hope to replant it with indigenous species and to concentrate on “ecological restoration” turning Puketapu into a nature reserve for the general public, following the award of a certificate of title to the Trust on February 22, 2011.¹⁸

Te Rito’s narrative is one of hundreds around the world where indigenous people turn to promoting reserves and parks, either for themselves, or for themselves and a wider public, as a way of keeping indigenous land out of capitalist development projects. Rights to the land are central in the struggles to reclaim heritage areas, and partnerships with benevolent aims are a way to mediate the struggles on behalf of shared wider values. In large part this pathway has opened up because of the institutions of creating parks and reserves that have come to be a part of government policies. If we turn to the US or the UK for examples, we find that national or general ordinances have been instrumental, as well as state authorities in the US. The philosophical background to the provision of parks feeds to some extent off the radical traditions embracing solitude and reflection generated by Henry David Thoreau in the mid-nineteenth century and expounded in his book on Walden pond near Concord, Massachusetts, where he lived from July 1845 to September 1847.¹⁹ Thoreau wanted to get completely away from the way of life of people in the developed urban world and to immerse himself totally in a remote rural locality, living and studying the environment around him, and writing about it in step with the seasons. Thoreau consciously sought to emulate a simpler, pre-industrial mode of existence, and took inspiration from indigenous Native American cultures. The microcosm of Walden stood for him as an icon of the wider world of nature untrammelled by industrial influence. He observed everything closely and wrote about it on a regular basis. His book on his experience was published in 1854, and shows the influence on his thinking of the philosopher Ralph Waldo Emerson. Thoreau’s sensibilities were in harmony with Emerson’s theory of “transcendental revelation,” a mystical experience stemming from deep contemplation of the world and the spiritual meanings that are immanent in it.

Thoreau's ideas influenced a figure who became very influential in founding and promoting wilderness parks areas in the USA, for example Yosemite. This was John Muir, an extraordinary explorer with a remarkable, if not uncanny, ability to survive in difficult places without any elaborate food supplies, weapons, or camping gear.²⁰ Brought up strictly, first in Scotland in Dunbar not far from the Lammermuir Hills, and later, from the age of ten onwards, in America where his father took the family in search of religious freedom, Muir struck out from the family farm in Wisconsin, executing a number of strenuous traverses on foot over mountains and maintaining a prolific record of his experiences in a series of journals. He spent time at Yosemite from 1871 onward, exploring all its canyons and peaks. Much later, in 1889, he mapped out, with Robert Underwood Johnson, a plan to preserve Yosemite as a natural park, and in 1903 he went on a trip with President Theodore Roosevelt and presented him with a successful plan for preserving several wilderness areas.

Muir's life work represents one salient side of conservation efforts, to preserve wilderness for its own sake. Another side is the aim of introducing conservation efforts into the world of agriculture itself, as shown in the environmental regulations of the European Union today via its Common Agricultural Policy, with provisions for setting aside areas for wildlife on field edges and its designation of Sites of Special Scientific Interest for conservation.²¹ John Muir would also have been interested to know about the creation of the Cairngorms National Park in the Grampians area in Central Scotland, as reported by Kathy Rettie in the volume we have just mentioned.²²

Conservation efforts around the world have taken on a new urgency with the threat to the global environment implicated in climate change. Sustainability has often most effectively been both studied and promoted on local and regional scales of time and space. However, global climate change raises the stakes to the widest level of life on Earth, so that the question of what is sustainable is swallowed up in the question "Is life on Earth sustainable for humans and the species whose lives are interwoven with those of humans?"²³ Of course, the long-term geological history of the emergence and disappearance of land areas outruns the current concern with human-induced climate change, but there is little doubt that the dangers of rising sea levels affecting low-lying islands in parts of the Pacific are very real and are likely to make necessary the displacement and migration elsewhere of some of the islanders whose intrepid seafaring ancestors first discovered and colonized these specks of land in the ocean.²⁴

In the context of ecological crisis, it is instructive to consider the Highlands of Papua New Guinea and other areas where indigenous societies have survived and thrived over tens of thousands of years—especially when one considers that industrialism is a mere 250 years old. The reverence for the natural world, the concept of the sacred, and a whole host of social and ecological practices helped the Highlanders live comfortably within their ecological limits. Given how little has been written on long-term social resilience, it would be useful to flip around Jared Diamond's focus on collapse and ask an equally important question: How have some societies been able to live resiliently and sustainably for such long periods of time?²⁵ What Western industrial society can learn from this question remains to be seen, but learning from sustainable indigenous societies would be a potential means of reversing global power dynamics that impose unsustainable practices on the indigenous societies of the world.

Notes

- 1 See Andrew Strathern and Pamela J. Stewart, *Kinship in Action* (Upper Saddle River, NJ: Prentice Hall, 2011).

- 2 See, for example, the history of settlement among the Kawelka people of Mount Hagen detailed in Andrew Strathern, *One Father, One Blood. Descent and Group Structure Among the Melpa People* (Canberra: Australian National University Press, 1972).
- 3 See Roy Rappaport, *Pigs for the Ancestors* (New Haven, CT: Yale University Press, 1968).
- 4 Andrew P. Vayda, *Explaining Human Actions and Environmental Changes* (Lanham, MD: Alta Mira Press, 2009), 214.
- 5 See, for example, Andrew Strathern and Pamela J. Stewart, *Peace-Making and the Imagination: Papua New Guinea Perspectives* (St Lucia: University of Queensland Press, 2011).
- 6 Vayda, *Explaining*, 130.
- 7 See Anne Ross et al., *Indigenous Peoples and the Collaborative Stewardship of Nature* (Walnut Creek, CA: Left Coast Press, 2011).
- 8 *Ibid.*, 260.
- 9 See Martha Honey, *Ecotourism and Sustainable Development. Who Owns Paradise?* (Washington, DC: Island Press, 1999).
- 10 *Ibid.*, 76.
- 11 *Ibid.*, 90.
- 12 *Ibid.*, 391.
- 13 Rappaport, *Pigs for the Ancestors*.
- 14 Compare, for further details and discussion, Susan Lees, “Kicking Off the Kaiko: Instability, Opportunism, and Crisis in Ecological Anthropology” (pp. 49–63) with Andrew Strathern and Pamela J. Stewart, “Rappaport’s Maring: The Challenge of Ethnography” (277–90), both in *Ecology and the Sacred: Engaging the Anthropology of Roy A. Rappaport*, E. Messer and M. Lambek, eds. (Ann Arbor, MI: University of Michigan Press, 2001).
- 15 Gloria Pungetti, Gonzalo Oviedo, and Della Hooke, eds., *Sacred Species and Sites: Advances in Biocultural Conservation* (Cambridge: Cambridge University Press, 2012), esp. ch. 7 by Nigel Cooper on Rivenhall in Essex.
- 16 Joseph S. Te Rito, “Struggles to Protect Puketapu, a Sacred Hill in Aotearoa,” in Pungetti et al., *Sacred Species and Sites*, 165.
- 17 *Ibid.*, 176.
- 18 *Ibid.*, 177.
- 19 Henry David Thoreau, *Walden; or, Life in the Woods* (Boston, MA: Ticknor and Fields, 1854).
- 20 Edwin Way Teale, ed. *The Wilderness World of John Muir* (Boston, MA: Houghton Mifflin Company, 1954), xii, an introduction to Muir’s own autobiographical accounts.
- 21 See discussion in ch. 1 of Pamela J. Stewart and Andrew Strathern, eds., *Landscape, Heritage, and Conservation* (Durham, NC: Carolina Academic Press, 2010), which reports on our own field studies in Scotland and Ireland since 1996.
- 22 Kathy Rettie, “Place, Politics and Power in the Cairngorms National Park: Landscape, Heritage, and Conservation,” in *Landscape, Heritage, and Conservation: Farming Issues in the European Union*, P. J. Stewart and A. Strathern, eds. (Durham, NC: Carolina Academic Press, 2010), 107–39.
- 23 See Susan A. Crate and Mark Nuttall, eds., *Anthropology and Climate Change From Encounters to Actions*, 2nd edition (New York: Routledge, 2016).
- 24 For an overview, see Patrick D. Nunn, *Vanished Islands and Hidden Continents of the Pacific* (Honolulu, HI: University of Hawai’i Press, 2009).
- 25 Jared Diamond, *Collapse: How Societies Choose to Fail or Succeed* (Penguin, 2005).

References

- Crate, Susan A., and Mark Nuttall, eds. *Anthropology and Climate Change from Encounters to Actions*, 2nd edition. New York: Routledge, 2016.
- Diamond, Jared. *Collapse: How Societies Choose to Fail or Succeed*. Penguin, 2005.
- Honey, Martha. *Ecotourism and Sustainable Development. Who Owns Paradise?* Washington, DC: Island Press, 1999.
- Lees, Susan. “Kicking Off the Kaiko: Instability, Opportunism, and Crisis in Ecological Anthropology.” In *Ecology and the Sacred: Engaging the Anthropology of Roy A. Rappaport*, E. Messer and M. Lambek, eds., 49–63. Ann Arbor, MI: University of Michigan Press, 2001.
- Messer, E. and M. Lambek, eds. *Ecology and the Sacred: Engaging the Anthropology of Roy A. Rappaport*. Ann Arbor, MI: University of Michigan Press, 2001.

- Nunn, Patrick D. *Vanished Islands and Hidden Continents of the Pacific*. Honolulu, HI: University of Hawai'i Press, 2009.
- Pungetti, Gloria, Gonzalo Oviedo, and Della Hooke, eds. *Sacred Species and Sites: Advances in Biocultural Conservation*. Cambridge: Cambridge University Press, 2012.
- Rappaport, Roy. *Pigs for the Ancestors*. New Haven, CT: Yale University Press, 1968.
- Rettie, Kathy. "Place, Politics and Power in the Cairngorms National Park: Landscape, Heritage, and Conservation." In *Landscape, Heritage, and Conservation: Farming Issues in the European Union*, P.J. Stewart and A. Strathern, eds., 107–39. Durham, NC: Carolina Academic Press, 2010.
- Ross, Anne, et al. *Indigenous Peoples and the Collaborative Stewardship of Nature*. Walnut Creek, CA: Left Coast Press, 2011.
- Stewart, Pamela J., and Andrew Strathern, eds. *Landscape, Heritage, and Conservation*. Durham, NC: Carolina Academic Press, 2010.
- Strathern, Andrew. *One Father, One Blood. Descent and Group Structure Among the Melpa People*. Canberra: Australian National University Press, 1972.
- Strathern, Andrew, and Pamela J. Stewart. "Rappaport's Maring: The Challenge of Ethnography." In *Ecology and the Sacred: Engaging the Anthropology of Roy A. Rappaport, E. Messer and M. Lambek*, eds., 277–90. Ann Arbor, MI: University of Michigan Press, 2001.
- Strathern, Andrew, and Pamela J. Stewart. *Kinship in Action*. Upper Saddle River, NJ: Prentice Hall, 2011.
- Strathern, Andrew, and Pamela J. Stewart. *Peace-Making and the Imagination: Papua New Guinea Perspectives*. St Lucia: University of Queensland Press, 2011.
- Te Rito, Joseph S. "Struggles to Protect Puketapu, a Sacred Hill in Aotearoa." In *Sacred Species and Sites: Advances in Biocultural Conservation*, Gloria Pungetti, Gonzalo Oviedo, and Della Hooke, eds., 165. Cambridge: Cambridge University Press, 2012.
- Teale, Edwin Way, ed. *The Wilderness World of John Muir*. Boston, MA: Houghton Mifflin Company, 1954.
- Thoreau, Henry David. *Walden; or, Life in the Woods*. Boston, MA: Ticknor and Fields, 1854.
- Vayda, Andrew P. *Explaining Human Actions and Environmental Changes*. Lanham, MD: Alta Mira Press, 2009.