TRANSFORMATION OF SUBSISTENCE MEANS IN VANUATU

INTRODUCTION

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Vanuatu is an archipelago in the south Pacific, located between the 14th and 16th parallels. It is composed of more than 80 islands scattered over 900 square kilometres, only some of which are inhabited. The 175.000 people (1989 census) are concentrated along the coasts, having abandoned the interior of the islands. Archaeological vestiges of earlier occupation are still visible.

The archipelago was first settled about 3.000 years ago by Asiatic or Melanesian seafarers whose exact origin is still unknown. Over time, other people from the north, or later on, from Polynesia, also migrated there. When Quiros discovered the archipelago in 1606 there were already a large number of communities. Although contact with Europeans was established at that time, colonisation would only really begin a century and a half later. It would be followed by heavy population losses, significant migration towards the coasts, the opening of trade routes, conversion to Christianity and the creation of schools. Vila, and then Luganville, would experience moderate urbanisation. After 1906 the country came under joint French and British control and was known as New Hebrides. When the country was granted independence in 1980 it remained rural (80% of the population) and traditional.

The power of tradition is as important as that of religion. Nationally, the constitution recognises the traditional powers and tribal chiefs continue to play a role in the country's affairs. Paradoxically, tradition is often less influential on the local level as the young people are drawn to the western lifestyle and value system.

The climate is tropical in the south becoming more equatorial towards the north where rain is more abundant and where the average annual temperature is higher. This leads to differences in vegetation between the islands to the south of Vate and those situated to the north. Endemic species are rare and the flora, relatively poor (less than 1,500 species), exhibit affinities with the Solomon Islands to the north and with Fiji to the south. Here, the floral richness seen in New Guinea has been selectively thinned, favouring useful species. Due to significant human impact, the natural shade-loving forest has been replaced by secondary growth between sea level and 500 metres in altitude.

The islands of Vanuatu are marked both by isolation and by connection to one another. Historically, communities formed extensive trade networks often linking far distant islands, which allowed the easy circulation of objects, plants and ideas. Today, the

country's 101 languages form chains of inter-intelligibility facilitating communication between different groups although locally there may only be, on average, 300 speakers. The peoples of Vanuatu are of diverse origins and have experienced repeated mixing of populations. They form small, fiercely independent communities, characterised by scattered habitations. (Villages with more than 200 inhabitants are rare.) These are compressed into small geographic areas consisting of a few hamlets. In a constant search for identity, villages paradoxically seek connections with the outside world. They are open to new, foreign and, for them, exotic ideas, plants, objects, rituals and dances. Thus, everything new is easily adopted but reinterpreted and assimilated after having been duly tested.

The name and the soil of Santo, Vanuatu's largest island, can be considered as representing all of the country's history. A land of contrasts and a land of trade, it has seen everything -- raids of sandalwood traders and blackbirders, recent logging of large areas of its kauri forest, violent conversion to Christianity, and the emergence of the naked cult. Following dramatic depopulation, there was a period of unprecedented migration as well as the mixing of populations. This social recomposition, in certain places led to the disappearance of some groups as well as linguistic fusions and, more recently, to a violent attempt to secede just as independence was granted.

The oldest known archaeological site, dating from 2.900 - 2.550 BP, is on Malo, an islet situated off the coast of Santo. Rich in lapita pottery, it is to date, the earliest evidence of the original inhabitation of the archipelago.

Big Bay, on the northern shore of Santo is where Quiros first set foot on the land that he was to christen Espiritu Santo (Holy Spirit), mistaking the large island for a continent. This island was only truly colonised after 1853, when sandalwood was discovered in its forests. Conversion to Christianity, long deferred because of malaria-infested coasts and the difficulty of penetrating into the interior, began in 1869. The first Presbyterian training centres for native catechists were built on Malo and Tangoa. Evangelising progressed by fits and starts, finally taking hold by means of recruiting local people, hastily trained but with financial and moral backing.

Mountain peoples began migrating toward the modern world to which they had been recently introduced. Populations moved toward the coast, where there were coconut plantations, missions and access to the first merchant boats. The new concentrations of people fuelled epidemics: malaria in the infested areas and foreign diseases against which the previously unexposed populations had no defence. This created conflict between the coastal and mountain peoples. Their contact, which in the past had been strictly regulated, evolved into violence and disdain. Above all, it resulted in significant depopulation and the disorderly return by communities inland. Their return spread the pathogenic germs and accentuated the population losses in the country's interior. The ravaged and disorganised survivors regrouped as best they could. Choices about where to go were

guided by a number of factors. The first choice was whether to accept or refuse the modern world. Thus some people descended towards the coast while others fled further inland, totally rejecting the white man's world, goods and religion. The second choice was based on religious conviction. In general, those newly Christianised remained close to the coast whereas those who sought to preserve their traditional beliefs settled in the interior valleys. Finally, choices also were influenced by kinship ties and often, but not always, by language. Thus, since the 1950's, a new social order has evolved and today communities are more or less settled in loosely defined territories. Nonetheless, underlying divisions remain clearly present, vestiges of the many social recompositions. Despite the communities' efforts to smooth them over, differences can suddenly erupt, splitting village units, modifying religious affiliations, and renewing migration. As F. Tzerikiantz will describe in Chapter 1, the settlement of the groups on the western coast is recent. While apparently stable, it is in reality fragile and diverse pressures may again cause fragmentation .

Santo is also one of the few islands of Vanuatu whose mountainous interior is inhabited. The two highest peaks of the country (Tabwamasana and Santo) are located there flanked by kauri forests, highly coveted but protected by traditional law. The inland communities, voluntarily cut off from the world (and increasingly from anthropologists) border westernised areas (eastern coast) as well as very isolated areas (western coast).

The agricultural systems of Santo are also extremely varied -- vast hydraulic systems for irrigating taro plantations, slash and burn techniques for cultivating yams, and on coral islets, seasonal cultivation of breadfruit. In the past, there were communities whose subsistence system was based on the cultivation of sweet potatoes (Cape Quiros peoples).

Access to the modern world is growing year by year. Luganville is becoming more urbanised and previously isolated regions are being opened up through the construction of new roads or the organisation of motorboat transport networks.

As D. Greindl will show in Chapter 2, the development of Luganville has been modest. This noted, Luganville is certainly more than an urban concentration. Covering a large coastal area, it has become a magnet for inland inhabitants. To live on an island, while remaining linked to the rest of the world, there must be access to transportation networks and other modern infrastructures: hospital, schools, harbour, state and financial institutions, shops and an (international) airport. These structures form the heart of the urban centre, from which connecting roads have contributed to development along the southern coast as far as Tassiriki and up the eastern coast to Big Bay.

Tassiriki, once a centre of early missionary activity, is now the outermost point on the road to Luganville and the modern world. Travellers from communities on the western coast reach Tassiriki only by motorboat, which is difficult in bad weather, slow (four hours) and expensive (400 FF). Inland people must travel, often on foot, until they

intersect the road into Luganville.

Taking advantage of their easy access to Luganville by road, Tassiriki and the other villages on the southern coast have started market gardens and sell surplus produce there.

Big Bay, where Quiros first landed on Vanuatu more than 300 years ago, was recently connected to Luganville by road, by way of an existing transport route from Luganville to Olry. The older road permitted the development of a large area to the east. The new road will open another region that has been very isolated until now. Inland dwellers are moving closer to this road, a symbol of the riches they seek, as F. Stroebel shows in his elegant study of Wusiroro.

Cumberland Cape and its villages were opened in the early 1990's with the completion of an airport. The prohibitive cost of air freight inhibits any substantial trade between this region and Luganville.

In summary, Santo is an island with three distinct regions. The eastern zone and touristic islets -- long ago converted to Christianity and western culture -- interact continually with Luganville and provide it with fresh foodstuffs. The more isolated and drier west, is also Christian but remains culturally more traditional. Its inhabitants, small groups recomposed after colonisation, are subject to outbreaks of malaria. Finally, there is the interior which remains wild and inaccessible. It is covered by a forest that is stewarded by local peoples. Both useful and commercial species (sandalwood and kauri) flourish there and are the source of much envy. Along the more populated coasts, especially to the west, the soil is poor and badly eroded. Careful management of the environment and its rich biodiversity is essential for the development of the island.

The next three chapters will treat respectively the communities of the western coast, the development of Luganville, and two rural communities on Malo and their relationships with Luganville.

Fabienne Tzerikiantz will demonstrate how the communities in the west, formed from the post-colonial migrations and mixing of peoples, have enhanced their present environment, combining their traditional knowledge of mountain farming with the constraints presented by the environment. She then will show the risks looming over the futures of these communities and the solutions they have begun to implement.

In the second chapter, Delphine Greindl will treat the development of Luganville, an artificial town reclaimed by communities from the north of the archipelago. Using observations of a specific neighbourhood, she will demonstrate how the town is 'feeds itself' through subsistence gardening and trade. She will also examine the relationships between the town and the forest. It will be seen that the development of the town governs the evolution of the coastal zone and may indirectly lead to the transformation of the interior.

Finally, Matthew Allen will describe the current state of development of two communities on Malo, based on the islet's trading relationship with Luganville. He will

recount the communities' transition to market gardening, and their increased use of commercial products bought with the proceeds from selling their fresh produce in Luganville. As a result, their daily diet is increasingly diverse and no longer subject to environmental conditions.

RESULTS AND RECOMMEND ATIONS

1. Santo's communities are well established in their limited territory. They have never lived in isolation and have always incorporated new plants, techniques and ideas into their subsistence system.

2. Throughout time, communities have introduced and adapted plants to the islands' environment. They have also transformed the environment to accommodate their staple and imported crops. Santo's territories are thus closely managed, and the residential and forest zones are both rich in useful species.

3. Previously, the patterns of settlement and habitation followed two models. In the first model, as on the coral island of Malo, a group occupied a territory that extended from the coast to the mountainous interior. They cultivated and exploited the diverse biotopes. In the second model, as on the west coast of Santo, some groups occupied the coasts, others the mountainous interior. Exchange between groups allowed everyone access to the available resources from the different environments.

4. Westernisation has deeply modified, as least on Santo, settlement patterns and social organisation. In particular on the western coast, all of the communities are composite groups arising from the populations mixing at the time of European colonisation. When the coastal groups disappeared, the inhabitants of the interior expanded into the territories on the edge of the sea by following the rivers downstream. These migrants continued to maintain contact with the sites of their former homes. It is possible that this movement will be reversed in the future, with communities returning upstream towards the interior. This will depend on which new economic possibilities develop and on the resources of the present territory.

5. Westernisation has also disturbed the previous maritime trade network and has left isolated those communities that lack access to new transport infrastructures: roads, harbours or airports. Today, it is these lines of communication that influence the population movements on the island and the type of agrarian system that is used. In moving closer to the roads, the communities must adapt to new environmental conditions, sometimes favouring the cultivation of a plant that is sure to sell well.

6. The subsistence systems themselves have been profoundly transformed over the centuries. On Malo, where yams were the staple crop, the agricultural system was initially intensified through the cultivation and diversification of breadfruit. Later, vast, commercially-oriented coconut plantations were started. In western Santo, where taro was the staple crop, intensification occurred through the planting of coconut palms on the walls of the irrigated taro plantations. At the same time, yams were exploited in small slash and burn gardens. Today, the cultivation of yams is increasing as a first step in the preparation of vast cleared zones on which coconut plantations will be grown. The coastal forest is thus threatened with extinction to benefit plantations whose income remains unproved.

7. A common effort of all groups has been to improve the security of the food supply in their own territories. To free themselves from dependency on seasonal staple crops and climactic uncertainties, they have adopted two approaches -- to maintain and increase diversity, especially within species, and to trade foodstuffs with other communities. As examples, the communities on the western coast of Santo introduced year-round crops, such as Fiji taro (macabo) and manioc. The peoples of Malo opted for seasonal succession, planting yams followed by breadfruit. Communities close to the market and shops of Luganville have recently converted to market gardening. The income allows them to buy products such as rice and tinned goods. Two issues emerge from this strategy -- the preservation of forest that otherwise would be clear-cut for yams, and restoring fallow periods to allow enough time for regeneration.

8. Among the more isolated communities of the western coast, where the land’s resources are poor, a growing population faces an uncertain food supply. Particularly at Wusi the soil is becoming impoverished, and the site will not feed its population for much longer. Inhabitants have sought other remedies for the insecurity. Residential groups have begun to fragment. Some family units are migrating north toward the road leading to Luganville and its potential markets. Others are returning upriver to start irrigating new taro plantations. Groups remaining on the coast are attempting to increase yields of coconut palms by opening new plantations.

9. Whatever the solution, the communities living traditionally in the forest have respected it and increased the number of useful species. Even slash-and-burn agriculture was never allowed to lead to deforestation. When yams were cultivated, fallow times of thirty years or more ensured regrowth. At taro plantations, the hydraulic system was maintained for twenty to twenty-five years. Fields then were left to rest for a period that was at least equivalent to the forest fallow time, again allowing ample regeneration.

10. One risk to the future of the forested mountain regions would be depopulation followed by acquisition of these lands by groups that are less scrupulous than the current inhabitant-farmers. In the absence of people committed to defending their resources, exploitative mining and lumbering projects would be far more likely to prevail, with the all-too-familiar environmental consequences. In this regard, the fragmenting of human communities (as noted in Vanuatu) is an indirect method of protecting the environment. None of these widely spread groups wishes to degrade the territory on which it depends for survival. The forest and its biodiversity will never be better protected than by the people who live there and draw on its resources.

11. In order to maintain populations on their home territories, income and living standards must improve. The peoples of Santo's western coast feel isolated and poor. It is difficult for them to provide for the health and education of their children. Perhaps the very act of opening up the region – the creation of clinics, schools and waterways to carry food to Luganville – will ensure the protection of the forest.

1 For more information about the settlement and Christianisation of Santo's west coast see: Galipaud and Walter: "De la forêt vers le rivage" in Galipaud and Walter (eds), 1997 - Forêts insulaires, rapport intermédiaire du programme Se nourrir à Santo, ORSTOM/APFT, pp.11-42.

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