



6.4 Community Participation

Participation of resource owners and users in the initial consultation process has been neglected in the past. Examples of this include the Fiji Land Conservation Improvement Act 1953 and the Cook Islands Land Use Act 1969 – they are too rigid and not participatory. Implementation of the two acts is therefore difficult because resource owners do not have a sense of ownership of the exercise of legislating land use. Sustainable development needs to be people centred. Community involvement and the community's active participation should be encouraged in order for people to gain a greater sense of ownership of development policies and programmes.

6.5 Establishment of Landcare Groups

The formation of Landcare groups in local communities can promote the adoption of conservation practices and foster cooperation between communities, land users and government agencies. These Landcare groups can be used to assist in the implementation, monitoring and evaluation of land use policies.

6.6 Participation of Women and Women's Groups

Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.

6.7 New Technologies

One of the lessons learnt since the 1992 Earth Summit is that the transition towards sustainable development is inconceivable without science, engineering and technology.

7. Monitoring and Evaluation

This is often a missing link in project implementation in the Pacific. The issue was aptly put by the Director-General of the Secretariat of the Pacific Community in his foreword to Pacific 2020: *Challenges and opportunities for growth (2006)*:

'Not too often do we have a comprehensive development exercise that looks at lessons of the past and the trends and realities of today to forecast possible developmental scenarios and policy options for tomorrow.'
Dr Jimmie Rodgers, 2006

Stakeholders

The following stakeholders should be directly involved in planning, implementing, monitoring and evaluating and reviewing land use plans: Governments, NGOs, Communities, Resource owners, Land authorities, Private sector

8. Linkage to International Conventions

Millennium Development Goal 1 (MDG1): Opportunity to reduce poverty
Millennium Development Goal 7 (MDG 7): Support sustainable environment
1992 Earth Summit:

- * Integrated approach to planning and management of resources
- * United Nations Convention to Combat Desertification/Land Degradation (UNCCD)
- * United Nations Framework Convention on Climate Change (UNFCCC)
- * United Nations Convention on Biological Diversity (UNCBD)

9. Conclusion

Agriculture and forestry on the higher islands form the basis of PICT national economies, and the demand for land resources is ever increasing. Therefore, there is an urgent need for PICTs to develop national land use policies and national land use plans to guide them in the sustainable use of their land-based resources.

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Web resources

<http://www.iirr.org/saem/page60-63.htm>

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partageons les connaissances au profit des communautés rurales
sharing knowledge, improving rural livelihoods



Land Use Planning in the Pacific

It is thoroughly understood that the control of our land is in our hands, but the owner of property has an important duty to perform ... It is the bounden duty of landowners to utilise what they possess for the benefit of all.

Ratu Sir Lala Sukuna, speech to the Council of Chiefs (1936)

1. Purpose

This policy brief will discuss the issue of land use planning (land use policy, land care and land use planning) in the Pacific Island countries and territories (PICTs) and the need for countries to formulate realistic land use policies as a means to preventing further degradation of our natural assets such that they may be enjoyed by current and future generations.

2. Executive Summary

Agricultural activities form the backbone of many PICTs' national economies, and forestry is important for the high island countries. The demands for limited and finite natural resource are increasing in all communities in PICTs.

If demographic trends continue, there will be increasingly urgent needs to match land systems, soil types and land uses in the most rational way possible, to optimise sustainable land resources development and management to meet the needs of society.

Land use planning is fundamental to this process and with the exception of Fiji, Cook Islands and French Polynesia, PICTs do not have land use policies or national land use plans.

This is a major constraint to achieving sustainable resource allocation and management in the rural sector.

Formation of Landcare groups for community participation in sustainable development that can also be responsible for the monitoring and evaluation of land use programmes at village and district level can help to highlight the importance of land use planning at the community level.

PICTs need to honour international agreements to which their government is a signatory. National policy and regulatory frameworks are also vital for achieving sustainable development and management of land resources.

Mainstreaming of land use planning into Pacific Island governments' national sustainable development strategies and the establishment of national land use planning units can support the development of appropriate rural land use policies and plans. They can also assist governments in complying with international agreements.

3. Background

Spread over almost 20 million square kilometres of ocean, the Pacific region is vast. It is occupied by 14 countries with a total resident population of 7 million (see Table 1).

The islands feature great geographical diversity. Some countries, like Niue and Nauru, comprise a single island, whereas others, such as Fiji and Tonga, comprise hundreds of dispersed islands.

Papua New Guinea is over 460,000 square kilometres, whereas Tuvalu and Nauru are both less than 30 square kilometres.

The island of New Guinea has mountains approaching 4000 metres whereas Kiribati, Marshall Islands and Tuvalu consist of low-lying high tiny atolls above sea level.

Population densities range from eight persons per square kilometre in Niue to 564 per square kilometre in Nauru.

Information on land use in PICTs is summarised in Table 1.

People say that 'small is beautiful', but for PICTs their smallness results in tremendous challenges for their populations:

- Prone to natural disasters
- Narrow production base with limited diversification opportunities due to limited resources (arable land only 0.69% of total land area)
- Unfavourable market conditions due to long distances to world and regional markets and an inability to enjoy economies of scale in production
- Increased rural to urban migration
- Increased reliance on imports
- Rising incidence of lifestyle diseases such as diabetes and heart disease
- Rise in sea levels due to climate change, which will impact available land resources and require people to relocate from low-lying coastal areas



Table 1: Area, Population and Rural Land Use in the Pacific Islands

	Population	Population Growth	Area (sqkm)	Arable	Arable (sqkm)	Permanent Crops	P.Crops (sqkm)	Permanent Pastures	P.Pasture (sqkm)	Forest & Woodland	Forests & W (sqkm)	Other Land	Other Land (sqkm)
Cook Islands	13,527	-1.50%	236	17%	40	8%	20	0%	0	68%	160	7%	16
Fiji Islands	831,612	0.62%	18,274	11%	2,001	5%	851	10%	1,748	65%	10,000	20%	3,674
Kiribati	95,487	1.57%	726	3%	20	0%	350	0%	0	3%	20	46%	336
Marshall Islands	52,701	1.03%	181	11%	20	44%	80	22%	40	0%	0	23%	41
Micronesia FS	110,616	0.47%	702	6%	40	46%	320	16%	110	NA	0	33%	232
Nauru	9,930	-2.37%	21	14%	2.84	0%	0	0%	0	24%	5	3%	0.65
Niue	1,587	-2.31%	260	12%	30	15%	40	4%	10	54%	140	15%	40
Palau	20,154	0.62%	459	9%	40	4	20	7	30	0	0	80%	369
Papua New Guinea	6,332,751	2.25%	462,840	0.005%	2,247	1%	6,500	0.004%	1754	64%	294,370	34%	157,970
Samoa	179,478	0.26%	2,831	21%	600	24%	690	1%	20	47%	1344	6%	177
Solomon Islands	503,918	2.72%	28,896	1%	180	2%	590	1%	400	75%	21,720	21%	6006
Tonga	101,391	0.32%	747	20%	150	15%	110	5%	40	5%	40	54%	407
Tuvalu	9,701	1.42%	26	0%	0	77%	20	0%	0	0%	0	23%	6
Vanuatu	227,146	2.28%	12,189	2%	200	7%	850	3%	420	36%	4400	52%	6319
TOTAL	8,489,999		528,388		5,568		10,440		4,571		332,194		175,593
					1.05%		1.98%		0.87%		62.87%		33.2%

Source: Adapted from FAO/UNDP Consultancy Report; Boydell (2001) as in CIA World Factbook (2000). * Where zero is cited for Federated States of Micronesia and Palau, no data was available.

Population: Secretariat of the Pacific Community, 2007 estimates. For population growth the base year is 2006.

Pacific Regional Statistics Programme. Environment Statistics - Country Snapshots [UN; 2007] http://www.sprep.org/publication/PEIN_Country_Profiles.asp

4. What is Land use Planning?

Land use planning is the systematic assessment of land and water potential, alternative patterns of land use and other physical, social and economic conditions, for the purpose of selecting and adopting land use options that are most beneficial to land users without degrading the resources or the environment, together with the selection of measures most likely to encourage such land use (Leslie & Ratukalou, 2002b). Land use planning should be a decision-making process that *facilitates the allocation of land to the users that provides the greatest sustainable benefit*.

It is based on the socio-economic conditions and expected development of the population in and around a natural land unit (Leslie & Ratukalou, 2002a).

Land use planning is mainly related to rural areas, concentrating on the use of land in the broadest agricultural context, i.e. crop production, animal husbandry, forest management and silviculture, safeguarding of protective vegetation, and biodiversity values.

5.0 Issues

5.1 Population

An increase in population has placed pressure on all environments, especially marginal land and indigenous forests. While there are encouraging signs that population growth in the Pacific Islands is slowing down, current trends are expected to produce an increase from 7 million inhabitants to 10 million in about 15 years' time, with the fastest growth in towns and cities. Given the social, economic and political implications of this growth, population and development are urgent areas of public policy reform for Pacific Island governments (UN/DESA/DSD 2001).

5.2 Environment

The Ministerial Conference on Environment and Development in Asia and the Pacific, held in Kitakyushu, Japan in 2000, identified the following priority environmental problems that are placing pressure on the natural resources, lifestyle and economic development of the Pacific region (UN/DESA/DSD 2001):

- Land degradation
- Loss of forests
- Threats to biodiversity
- Water conservation and water quality
- Degradation of coastal and marine environments
- Global modification of the atmosphere
- Urbanisation and waste management



Coastal erosion (Solomon Islands) Source: NDMO, Fiji



Soil erosion (Savutalele, Naitasiri, Fiji Islands) Source: NDMO, Fiji

5.3 Unsustainable Development

Increased population, low availability of fertile arable land (see Table 1) and encroachment onto fertile arable land for non-agricultural purposes, such as urban expansion, have forced farmers to use sloping marginal steep land. Intensified use of marginal land leads to on-site land degradation, soil erosion, loss of plant nutrients, increased pest and disease infestation, reduction in soil depth, and decreased soil water-holding capacity. These also have negative effects on river systems.

Deforestation is occurring throughout Melanesia (see Table 2) as government and resource owners strive to realise money quickly, with the perception of an inexhaustible supply of typical rainforest timber providing a ready source of cash.

Table 2: Key Environmental Issues

Cook Islands	None cited
Fiji Islands	Deforestation, soil erosion
Kiribati	Lagoon pollution, ground water at risk
Marshall Islands	Inadequate potable water
Micronesia FS	Overfishing
Nauru	Limited water, phosphate wasteland
Niue	Conservation, compared to slash and burn
Palau	Waste disposal, sand and coral dredging
Papua New Guinea	Deforestation, mining pollution
Samoa	Soil erosion
Solomon Islands	Deforestation, soil erosion, drying reef
Tonga	Deforestation for agriculture and settlements
Tuvalu	Soil erosion, no potable water
Vanuatu	Deforestation, lack of potable water

Source: Adapted from CIA World Factbook (2000)

development process, increased inter-ministerial friction and in many cases promoted unsustainable resource use. Currently, different stakeholders do not interact with each other well. NGOs are doing very effective work in some PICTs and their effectiveness can be significantly increased if they are included in the policy development process. Most PICTs (with the exception of Fiji Island, Cook Islands and French Polynesia) do not have rural land use policies.

Land use planning and management are lacking in all Pacific Island countries. The current knowledge of the extent of the environment impacts of land degradation is limited in terms of figures but the physical effect is observable throughout the Pacific countries.

UNCCD Workshop, Apia, Samoa, 2001

5.5 Integrated Land use Planning Process

A participatory 'bottom up' planning process should begin at the local level and involve active participation by the local community. The experience and local knowledge of the land users and local technical staff are mobilised to identify development priorities and to draw up and implement plans.

The land use planning process for the Pacific should be based on the FAO *Guidelines for Land-use Planning* (1993) but modified according to the needs of the countries.

Steps	Land use planning process
Step 1	Establishment of goals and terms of reference
Step 2	Organisation of the work
Step 3	Analysis of the problem
Step 4	Identification of opportunities for change
Step 5	Land suitability evaluation
Step 6	Appraisal of alternatives: Environmental, economic and social analysis
Step 7	Choice of best option
Step 8	Preparation of land use plan
Step 9	Implementation of the plan
Step 10	Monitoring and revision of the plan

Source: FAO, 1993

5.4 Integrated Land use Planning

A major limitation to sustainable rural development is the lack of data and information on rural land use in the Pacific. Most Pacific Islands' administrative and institutional frameworks responsible for resource allocation and management are highly sectoralised. Attempts at coordination have often proved ineffective. These factors have constrained the

5.6 Land Tenure

Customary ownership of land is deeply embedded in Pacific culture. A high proportion of land is held under customary tenure (Table 3).

	Land tenure			
	Registered %	Customary %	State %	Free %
Melanesia				
Fiji	Most	83	8	9
Papua New Guinea	Very little	97	2	1
Solomon Islands	12	95	-	-
Vanuatu	Very little	97	-	-
Polynesia				
Cook Islands	Most	100	<1	0
Samoa	-	81	16	3
Tonga	Most	-	-	-
Tuvalu	Most	-	-	-
Micronesia				
Kiribati	Most	-	66	-
Micronesia, Fed. States of	Very little	100	-	-
Marshall Islands, Rep. of	Little	Most	-	-
Nauru	Most	-	-	-
Palau	<10	-	70	-

Source: Pacific Islands Forum Secretariat, Pacific 2002-2006 (2001)

Land tenure issues play a crucial role in resource allocation in the Pacific. Most land in Melanesia has not been registered, and this can lead to conflicts about ownership and problems in making decisions about the land's development or conservation. The establishment of permanently protected or conserved areas is complicated by these issues and needs to be viewed in a thoroughly integrated way. Traditional values are no match for unscrupulous logging companies, as customary chiefs often have no legal powers of enforcement. Similarly, potential loggers who get frustrated by the traditional system may exploit it and buy their way around it. Most logging companies are working outside the confines of legislation and on customary land. As approximately 97% of the land is under customary tenure, this is a significant problem.

6.0 Solutions

6.1 Promote Sustainable Development

In order to effectively address the regional challenges, all Pacific Island nations must agree to work towards sustainable patterns of production and consumption – meeting their individual and collective economic, social and environmental objectives through efficient use of resources (Koshy, Lal & Mataka 2005). The development of a sustainable development framework through partnerships of key stakeholders, including landowners, government offices and regional development agencies, can facilitate good decision-making regarding land use practices.

6.2 Institutionalise Land Use

The establishment of national land use units can help to coordinate and facilitate land use issues between national and grassroots levels. The mainstreaming of land use planning into PICTs' national sustainable development strategies can help to raise the profile of land use issues.

6.3 Capacity Building

National capacity building of public sector, NGO and community groups in all aspects of land use and sustainable development is essential.