

ASIA-PACIFIC FORESTRY SECTOR OUTLOOK STUDY II

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SOLOMON ISLANDS FORESTRY OUTLOOK STUDY¹

by

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**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
REGIONAL OFFICE FOR ASIA AND THE PACIFIC**

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Executive summary

Forests have been described as the most essential *biomes* on the planet because they play an important role in the earth's biophysical system, and support human well-being (Aplin *et al.* 1999; WCFSD 1999). Across the globe, forests have been recognized for meeting the needs of the people for timber, food, medicines, fibre, etc. (FAO 1989; Leakey and Newton 1994a; WCFSD 1999). Traditionally, they have sustained the livelihoods of people, first through hunting and gathering and later through shifting cultivation. However, forests are often now cleared extensively to satisfy the needs and aspirations of rapidly expanding populations and their increasing materialism. Forests are also the domain of hundreds of thousands of plants and animals species, which live in complex and dynamic ecosystems, bound intricately together through food chains and life cycles.

In the Solomon Islands, unsustainable logging has had serious impacts on forest land availability. Commercial logging of natural forests has, over the years, changed the vegetation cover of the main islands of the Solomon Islands. It has been estimated that the forest cover has decreased – from 80% in the 1990s, to 76% today – indicating a significant loss in forestry resources including biodiversity. These logged-over areas have lost significant natural and ecological value in terms of their functioning as habitats for biodiversity, sinks for the sequestration of atmospheric carbon, and watershed catchment areas. Some endemic forest species that are unable to adapt to new environments face possible extinction.

The majority of the forested land mass in the Solomon Islands is under customary ownership. The prevailing traditional system of landownership provides a welfare safety-net for the vast majority of Solomon Islanders. Customary land tenure also supports the country's robust village-based subsistence gardening. At the same time, customary ownership is regarded a major constraint to large-scale development. Often it is problematic, costly and fraught with uncertainty due to the inevitable and often multiple disputes that arise between owners and developers, or between different landowner groups. Equally problematic is when the land is set aside for other public purposes, such as management of watersheds, protection of sites of special interest, or conserving environmentally-sensitive areas.

The Ministry of Forestry of the Solomon Islands Government is responsible for the overall management of the forest resources of Solomon Islands. The Forest Resources and Timber Utilisation Act, which guides the Ministry, provides for the conservation of forests and the improved management of forest resources, control of timber harvesting, encouragement and facilitation of sustainable forestry activities, establishment of plantations, and domestic processing of timber.

The extent to which the forest resources are managed in a sustainable manner is effectively limited. For example, in 2004, it was reported that around 1 million m³ of logs were harvested, in contrast with the sustainable harvest level estimated at around only 200,000 m³. In 2007, round log exports increased by 28% to 1,446,003 m³ from 1,130,365 m³ in 2006 (CBSI 2007). Such rate of log exports should have been a signal to the government to seriously re-visit its forest policy and intervene constructively. Instead the government continues to grant logging licenses to companies and landowners to carry out logging on customary lands. Currently, there are 141 felling licenses and 150 milling licenses granted by the Ministry of Forestry, which are operative throughout the country. In the light of such an appalling scenario, the Solomon Islands Forest Management Project (SIFMP) has recently predicted that the natural forests will be exhausted by 2015.

In terms of forest plantations, the government has planted both indigenous and exotic species since the 1950s at various locations in the country. The total commercial area of plantation

forests in 2005 was estimated to be 28,000 ha. This area covers large-scale-forest plantations established at Alu, Kolombangara, Viru, Gizo, Choiseul Bay, Moli, Allardyce and Santa Cruz. Forest species mostly planted by industrial plantations include *Gmelina arborea*, *Camposperma brevipetiolatum*, *Eucalyptus deglupta*, *Terminalia calamansanai*, *T. brassiai*, *Acacia* spp. and *Swetinia macrophylla*. When replanting after harvesting, *G. arborea*, *E. deglupta*, *Tectona grandis* and *S. macrophylla* appears to be favourites over the other species.

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INFORMATION NOTE ON THE ASIA-PACIFIC FORESTRY SECTOR OUTLOOK STUDY

The Asia-Pacific Forestry Sector Outlook Study (APFSOS) is a wide-ranging initiative to gather information on, and examine, the evolution of key forestry issues as well as to review important trends in forests and forestry. The main purpose of the study is to provide a better understanding of the changing relationships between society and forests and thus to facilitate timely policy reviews and reforms in national forest sectors. The specific objectives are to:

1. Identify emerging socio-economic changes impacting on forest and forestry
2. Analyze probable scenarios for forestry developments to 2020
3. Identify priorities and strategies to address emerging opportunities and challenges

The first APFSOS was completed in 1998, with an outlook horizon to 2010. During its twenty-first session, held in Dehradun, India, in April 2006, the Asia-Pacific Forestry Commission (APFC) resolved to update the outlook extending the horizon to 2020. The study commenced in October 2006 and is expected to be completed by September 2009.

The study has been coordinated by the Food and Agriculture Organization of the United Nations (FAO), through its regional office in Bangkok and its headquarters in Rome, and implemented in close partnership with APFC member countries with support from a number of international and regional agencies. The Asian Development Bank (ADB), the International Tropical Timber Organization (ITTO), and the United Kingdom's Department for International Development (DFID) provided substantial financial support to implement the study. Partnerships with the Asia-Pacific Association of Forest Research Institutes (APAFRI) and the Secretariat of the Pacific Community (SPC) supported the organizing and implementing of national focal points' workshops and other activities, which have been crucial to the success of this initiative. The contributions of many other individuals and institutions are gratefully acknowledged in the main APFSOS report.

Working papers have been contributed or commissioned on a wide range of topics. These fall under the following categories: country profiles, sub-regional studies and thematic studies. Working papers have been prepared by individual authors or groups of authors and represent their personal views and perspectives; therefore, opinions expressed do not necessarily reflect the views of their employers, the governments of the APFC member countries or of FAO. Material from these working papers has been extracted and combined with information from a wide range of additional sources to produce the main regional outlook report.

Working papers are moderately edited for style and clarity and are formatted to provide a measure of uniformity, but otherwise remain the work of the authors. Copies of these working papers, as well as more information on the Asia-Pacific Forestry Sector Study, can be obtained from:

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1. INTRODUCTION

Background

This study on the outlook of forests and forestry in the Solomon Islands was initiated by the Food and Agriculture Organization of the United Nations (FAO), through the Ministry of Forestry (MoF) of Solomon Islands Government, in pursuance of the recommendation of the 21st session of the Asia-Pacific Forestry Commission.

A local consultant was engaged to conduct the study, in consultation with the Ministry of Forestry and key stakeholders of forests and forestry sector in the country. The study examines the current state of forests and forestry and articulates possible scenarios for development of the sector as well as identifying a collective vision for the future of forestry in the Solomon Islands. Furthermore, this study takes into account the most recent National Forest Resource Assessment (URS 2006) and makes projections for the year 2020.

Scope and coverage

The Terms of Reference (TOR) for the study defined the objectives and highlighted the thrust from which the study has been developed. How the study should be conducted and reported (methodology) was also detailed in the TOR.

The study is focused on three main areas: (a) an account of the current state of forests and forestry and the key drivers involved in maintaining the status-quo; (b) an analysis of developmental scenarios in the future and the implications for the forestry sector through to 2020; and (c) the development of key strategies to enhance the benefits of such development in the forestry sector to the people and the environment in which they live.

The methodology

This study was carried out using three approaches: (a) one-to-one consultation with a number of key stakeholders in the country; (b) a desk review of reports and manuscripts obtained from the government ministries and departments and other stakeholding agencies; and (c) inputs from participants in a national workshop that was organised. These three approaches are anticipated to have generated sufficient information and data on which to base this study. However, the author acknowledges that there may still be gaps existing in some areas of importance for forests and the forestry sector in the country.

Presentations on the status of the forestry in Solomon Islands were made by the Forestry Department and the Solomon Islands Forest Management Project during the workshop. In addition, key issues arising from the preliminary work of the consultant were discussed and debated. These early findings were stimulants for further direction and visions for the forestry sector. The workshop participants were engaged to visualise the future of forestry on the basis of the present and past information and the past trends of activities.

Structure of the report

This report is divided into nine sections. Section 1 is an introductory presentation of the report. Section 2 gives a description of the current state of the forests and forestry in the Solomon Islands. Factors that could influence the future of forests and the forestry sector are discussed in Section 3. How forests and forestry are likely to evolve in the future for the

Solomon Islands and implications are discussed in Sections 4 and 5. Discussion on ways in which a better future might be created is presented in Section 6. Section 7 is a summary and provides conclusions. Section 8 contains some recommendations that are important for achieving improved forests and an enhanced forestry sector in the Solomon Islands.

2. CURRENT STATE OF FORESTS AND FORESTRY IN THE SOLOMON ISLANDS

The country

Geography and geology

The Solomon Islands is a double chain of islands located in the southwest Pacific between 155° 30' and 170° 30' W longitude and between 5° 10' and 12° 45' S latitude. The country comprises various islands with rugged mountains and low-lying coral atolls stretching about 1,400 km in a northwest to southeast direction. The eastern outer islands of the Solomon Islands are located close to the northern end of Vanuatu, and the western islands are located close to Papua New Guinea. There are 990 islands in total covering a land area of around 28,000 square kilometres. The six main islands are Choiseul, New Georgia, Santa Isabel, Guadalcanal, Malaita, and Makira (Figure 1). These islands are intersected by deep and narrow valleys and are mostly covered with tropical rainforest (Whitmore 1969).

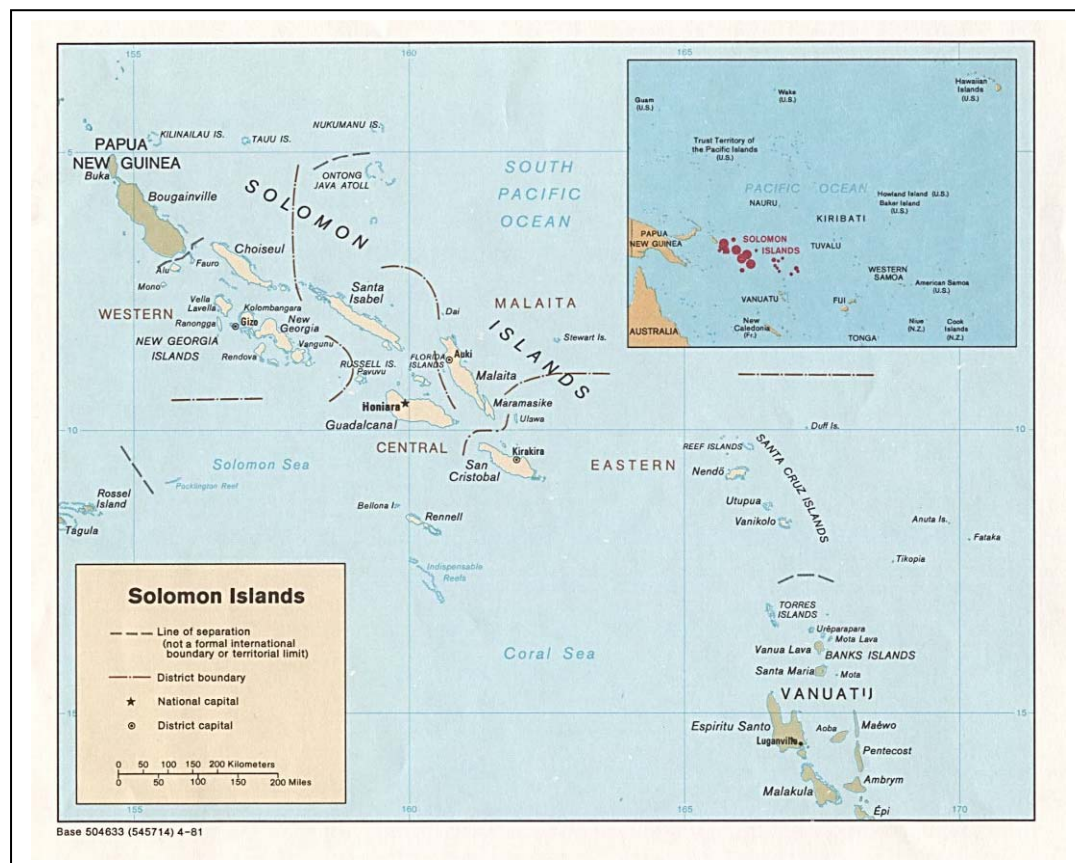


Figure 1. Map of the Solomon Islands, source http://www.lib.utexas.edu/maps/islands_oceans_poles/solomonislands.jpg

In comparison to Papua New Guinea and New Caledonia, the Solomon Islands is considered geologically “young” (Clarke and Thaman 1993). Based on the islands’ geology, Falvey *et al*, (1991) divided Solomon Islands into three major geological provinces (Pacific, Central and Volcanic) and two minor provinces (Oceanic Volcanic and Oceanic Atoll). The islands of Malaita, Ulawa and northeast Santa Isabel are grouped into the Pacific Provinces, whereas Makira, Guadalcanal, the Florida islands, the southeast Santa Isabel and Choiseul belong to the Central Province. The Volcanic Province consists of the New Georgia group, the Russell islands, the Shortlands, northwest Guadalcanal and Savo. The Temotu islands are grouped in

the Volcanic Province, while Rennell, Bellona and Ontong Java islands are within the Oceanic Atoll Province.

Climate

The climate is tropical and similar to other countries in the Pacific with plenty of sunshine, hot, humid and high annual rainfall and temperatures across the region. The mean daily temperature fluctuates between 25°C and 32°C throughout the year. Rainfall varies across the country, higher in the mountainous areas than in low-lying islands, but within the range of 3,000 to 5,500 mm per annum. There are no marked wet and dry seasons, but wet and dry periods do occur with the heaviest rain between November and March. In contrast, two short dry periods occur in April to June and September to October (Solomon Islands Meteorological Service 2002).

The Solomon Islands has experienced some extreme weather events, possibly as a result of climatic change (global warming). For example, a drought that affected the eastern part of the country in 2004, which caused severe food shortages to the people of Temotu Province; the Category 5 cyclone in 2004 which hit Tikopia Island; and more recently the earthquake and tsunami which devastated Western and Choiseul Provinces in 2007. These extreme weather events increase vulnerability and pose a threat to food security as well as the health and survival of the Solomon Islands' biodiversity resources. Impacts on mangrove areas, wetlands, coral reefs and forests would undoubtedly have dramatic impacts on a wide range of marine life, forest plants and animal species. Major shifts in temperature and rainfall may result in the disappearance of fragile ecosystems in these areas and their associated biodiversity.

Economy

The economy of Solomon Islands is principally based on timber, fish, copra, cocoa, oil palm and minerals. Social unrest occurred in late 1998, badly affected the trading in these commodities. Consequently, the closure of Solomon Islands Plantations Limited (SIPL), a company that specialised in palm oil and kernel export, and the Gold Ridge Mining Ltd (GRML), which was exporting gold and silver, further constrained the economy. The logging sector was less affected by the social unrest and was heavily relied on to maintain buoyancy in the economy during this period. In 2000, the Central Bank of Solomon Islands (CBSI 2001) reported a record low in the total exports of individual commodities: logs = 536,000 m³, fish = 21,163 tonnes, copra = 19,004 tonnes, coconut oil = 8,553 tonnes, cocoa = 2,315 tonnes, palm oil and kernel = nil (closed), gold = 49,954 ounces, and silver = 20,744 ounces (before closure). However, the economy has since recovered and, according to a statement made by the Governor of the Central Bank of Solomon Islands during the launching of his 2003 Annual Report (Houenipwela 2004), an economic upturn began in 2002. It was stated also that the productive sector, and others affected by the social unrest, resumed activities well before the introduction of the regional assistance mission to Solomon Islands (RAMSI) in July 2003. Consequently, economic growth of 5.8% in real terms was achieved, and was especially attributed to the dedication of ordinary Solomon Islanders in rural communities participating in small-scale economic activities (e.g. farming and fishing). In 2007, the economy grew by 10.3%, the highest in two decades. The forestry sector remains the largest contributor followed by fisheries and agriculture, especially palm oil products, copra and cocoa.

Population

The Solomon Islands' population of 409,000 people comprises 93% Melanesian, 4% Polynesian, 1.5% Micronesian, 0.8% European, 0.3% Chinese and 0.4% others (Government Population Statistics 1999). According to the 1999 census, the population is growing at a rate of 2.8% per annum. By contrast, an estimate in 2005/2006 showed 4.4% growth. In 1999, the population density varied between provinces (Table 1), but the national average is 13 people per square kilometre. About 84% of the population lives in rural communities.

Table 1. Summary of Solomon Islands' population by provinces (National Census 1999 and HIES National Report 2005/6)

Province	Population		Households 1999	Pop. Density (sq. km) 1999	Average Households 1999
	1999	2005/6			
Solomon Islands	409,042	533,672	65,014	13	6.3
Choiseul	20,008	31,259	3,142	5	6.4
Western	62,739	81,852	9,992	8	6.3
Isabel	20,421	23,638	3,556	5	6.7
Central	21,577	24,491	3,625	35	5.7
Rennell-Bellona	2,377	4,409	432	4	6.0
Guadalcanal	60,275	84,438	10,399	11	5.5
Malaita	122,620	140,569	18,606	29	5.8
Makira/Ulawa	31,006	50,056	4,926	10	6.6
Temotu	18,912	23,800	3,413	22	6.3
Honiara City	49,107	69,189	6,921	2,244	7.1

Trends in forest resources

Natural forest types in Solomon Islands

Six distinct vegetation or forest types are distinguished in Solomon Islands, which vary in magnitude from one province to another (Table 2), and reflect the geological formation, ranging from acidic volcanic origin in the bigger islands to alkaline limestones in low-lying atolls. According to Whitmore (1969), the range and types of plant species present is fairly similar between islands despite their geographical spread. These are, however, affected by six factors: soil type (based on parent rock), climate (e.g. rainfall and temperature), topographical features, altitude, natural catastrophes (cyclone and earthquakes), and human activities.

The six vegetation types are: lowland rainforest, hill forests, montane forests, freshwater swamp and riverine forests, saline swamp forests, and grassland and other non-forest areas (MFEC 1995):

- i. *Grassland and other non-forest areas:* comprise predominantly non-tree species, mainly herbaceous species. Predominant species include *Imperata cylindrica*, *Dicranoptera linearis* and *Themeda australis*. Examples of commonly occurring species are *Mimosa invisa*, *Morinda citrifolia*, *Saccharum spontaneum*, *Polygala paniculata* and *Timonius timon*. Some of these species (e.g. *M. invisa*) are very common in disturbed areas.
- ii. *Saline swamp forests:* are subject to tidal influence as they are found in estuaries and foreshores. Examples of species comprising this vegetation include *Barringtonia asiatica*, *Calophyllum inophyllum*, *Casuarina equisetifolia*, *Terminalia catappa*,

Intsia bijuga, *Inocarpus fagifer*, *Pandanus* spp., *Barringtonia racemosa* and species of mangroves. This group of species is also known as the 'Indo-Pacific Strand Flora' (Whitmore 1966).

- iii. *Freshwater swamp and riverine forests*: are commonly found in poorly drained land at low altitudes with little micro-relief. Species such as *Inocarpus fagifer*, *Mextroxylon salomonense*, *M. sagu*, *Barringtonia racemosa* are found here, although some important timber species are also present (e.g. *Terminalia brassii* and *Dillenia salomonensis*).
- iv. *Lowland rainforests*: include forests at altitudes up to 5-70 m, often with complex structure due to greater number of species from upper or hill forest and patches of freshwater swamp forest. Occasional cyclones and human activities often disturb this forest type as evident in a high incidence of re-growth and secondary species. Species predominant in this vegetation include timber species such as *Camptosperma brevipetiolata*, *Dillenia salomonensis*, *Endospermum medullosum*, *Parinari salomonensis*, *Terminalia calamansanai*, *Schizomeria serrata*, *Maranthes corymbosa*, *Pometia pinnata*, *Gmelina moluccana*, *Elaeocarpus sphaericus* and *Vitex cofasus*. Most indigenous fruit trees are also found in this forest including *Canarium* spp., *Syzygium malaccensis*, *Magnifera minor*, *Spondius dulce*, *Barringtonia procera*, *B. edulis*, *Artocarpus altilis*, *Gnetum gnemon*, and *Burkella obovata*.
- v. *Hill forests*: occur at altitudes of 400–600 m and on well-drained soils and exhibit complex structure with varying tree heights and canopy density. Some species in the lowland forest are also present here, as well as those species commonly found in the montane forest. Species forming this forest include *Pometia pinnata*, *Gmelina moluccana*, *Elaeocarpus sphaericus*, *Camptosperma brevipetiolata*, *Dillenia salomonensis*, *Endospermum medullosum*, *Parinari salomonensis*, *Terminalia calamansanai*, *Schizomeria serrata*, *Maranthes corymbosa*, and *Vitex cofasus*. Fruit tree species such as *Canarium* spp., *Gnetum gnemon* and *Artocarpus altilis* are also present.
- vi. *Montane forests*: refer to forests found generally above 600 m, on ridge tops and mountain summits, but can be found in lower elevations under harsher conditions. These are characterised by a dense and compact canopy with small lighter tree crowns. Species in this forest type include *Callophyllum kajewskii*, *Callophyllum pseudovitiense*, *Eugenia* spp., *Dacrydium* spp., *Pandanus* spp., *Racembambos scandens* and ferns.

It is estimated that there are about 5,000 plant species in Solomon Islands. In 1966, only 1,931 species were described by Whitmore (1966). This rose to 3,210 species in 1988 (Hancock and Henderson 1988). Of the described species, about 500 to 600 are exotic, mainly ornamentals, and have been introduced into the country at different times and for different reasons (e.g. commercial plantations of *Eucalyptus deglupta* in 1960s) (MFEC 1995).

Table 2. General forest types in Solomon Islands³

Vegetation type	Guadalcanal		Central		Malaita	
	Area (ha)	% land area	Area (ha)	% land area	Area (ha)	% land area
Montane Hill	51204	9.6	174	0.3	6612	1.6
Hill	401936	75.1	38765	61.3	354544	84.4
Lowland	58844	11.0	13546	21.4	20144	4.8
Freshwater and riverine	10100	1.9	2700	4.3	10705	2.5
Saline swamp	1328	0.2	3112	4.9	9992	2.4
Grassland and other non-forest areas	10920	2.0	212	0.3	4016	1.0

Vegetation type	*Choiseul		Isabel		Western	
	Area (ha)	% land area	Area (ha)	% land area	Area (ha)	% land area
Montane Hill	704	0.2	10164	2.5	22044	4.4
Hill	286868	87.0	325667	78.7	351436	69.9
Lowland	5932	1.8	17812	4.3	53312	10.6
Freshwater and riverine	10760	3.3	25216	6.1	39888	7.9
Saline swamp	4144	1.3	17852	4.3	10544	2.1
Grassland and other non-forest areas	7128	2.2	8215	2.0	18756	3.7

Vegetation type	Makira		Renbell		Temotu	
	Area (ha)	% land area	Area (ha)	% land area	Area (ha)	% land area
Montane Hill	11204	3.4	-	-	512	0.6
Hill	265466	80.4	23120	33.1	56500	65.3
Lowland	14996	4.5	2200	3.1	6076	7.0
Freshwater and riverine	9096	2.8	280	0.4	200	0.2
Saline swamp	908	0.3	188	0.3	2504	2.9
Grassland and other non-forest areas	8610	2.6	528	0.8	8172	9.4

Commercial logging of natural forests has, over the years, changed the vegetation cover of the main islands of the Solomon Islands. It has been estimated that the forest cover has decreased from 80% in 1990s, to 76% today, indicating a significant loss in forestry resources including biodiversity. This study was unable to access a long-term historical pictorial pattern of vegetation loss. However, work by environmental consultants (URS Corporation) has provided evidence of vegetation loss (Figure 2a-f). Logged-over areas have lost significant natural and ecological value, in terms of their functioning as habitats for biodiversity, sinks for the sequestration of atmospheric carbon, and watershed catchment areas. Some endemic forest species that are unable to adapt to new environments face possible extinction.

³ The total area does not exactly agree with the gross area of the country as not all islands are surveyed and different methods are used (FRIS-ERM-S). *Excludes Rob Roy and Vaghena islands (approximately 15,500 ha). (Source: MFEC 1995.)

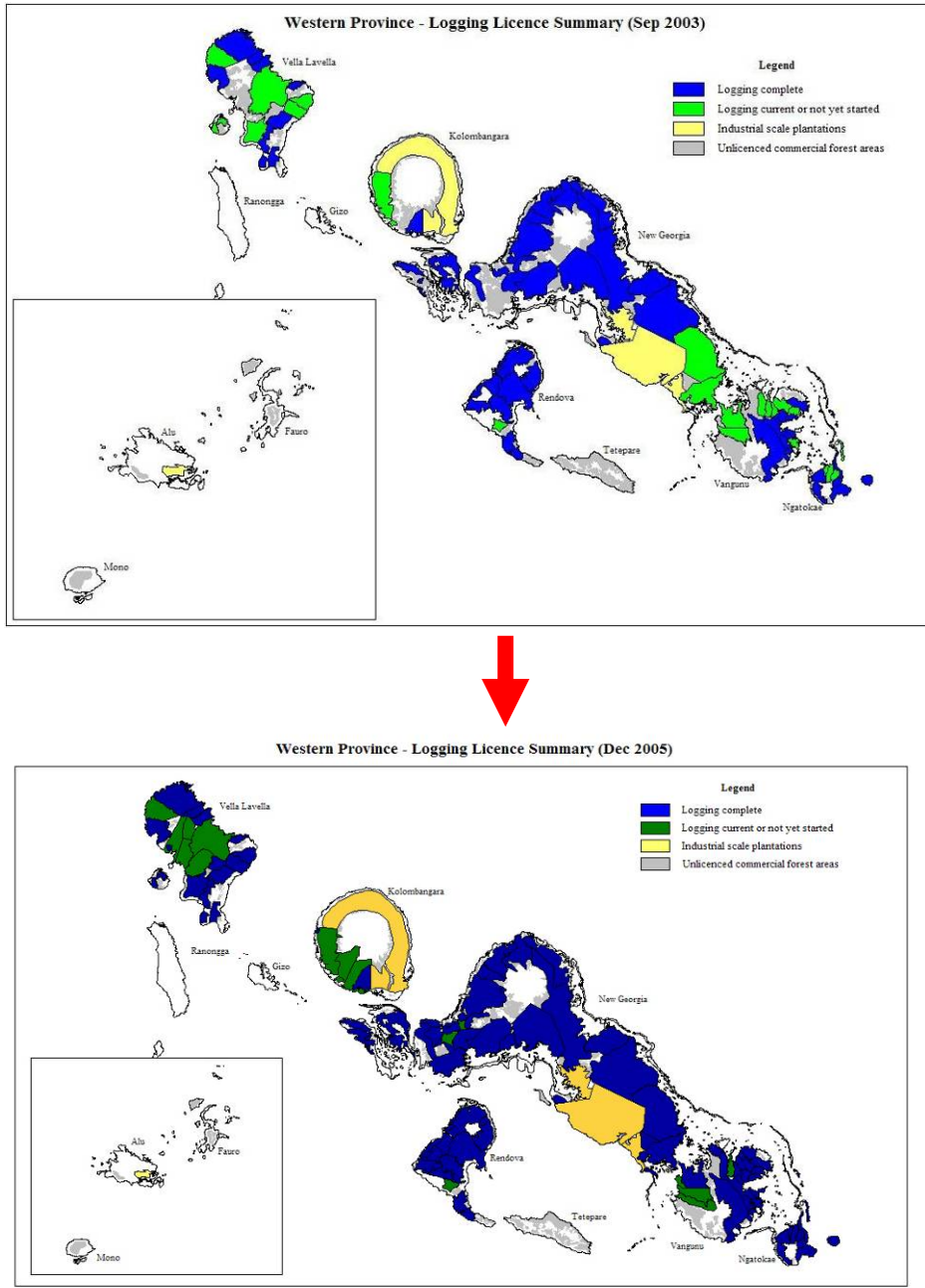


Figure 2a. Pattern of vegetation in New Georgia from 2003 to 2005. (Source: URS, 2003 & 2005)

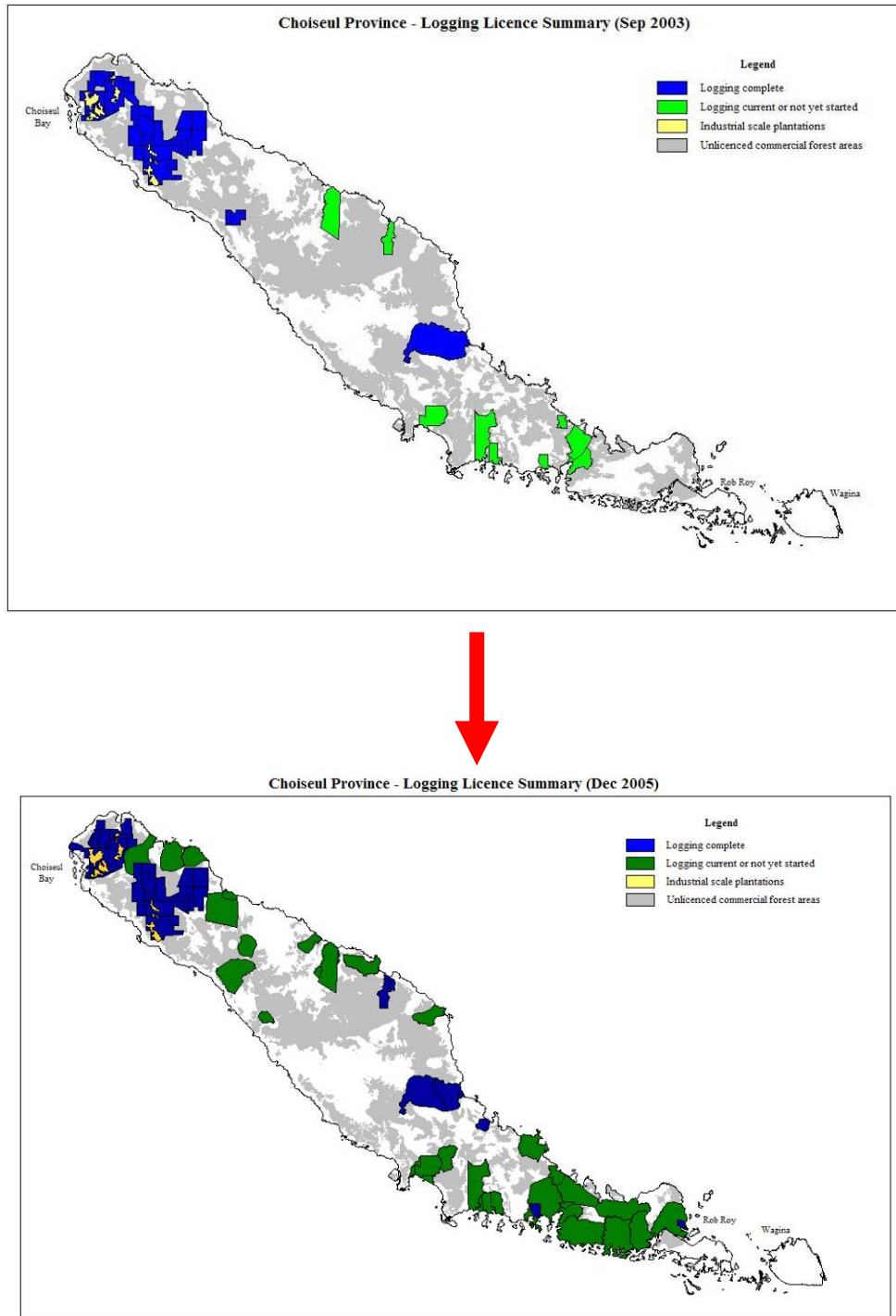


Figure 2b. Pattern of vegetation in Choiseul Island from 2003 to 2005 (source: URS, 2003 & 2005)

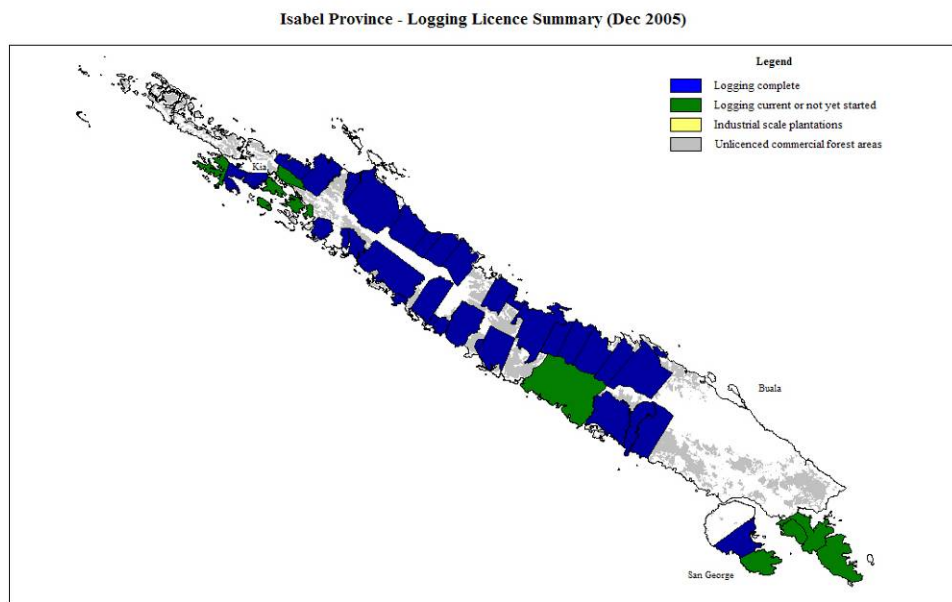
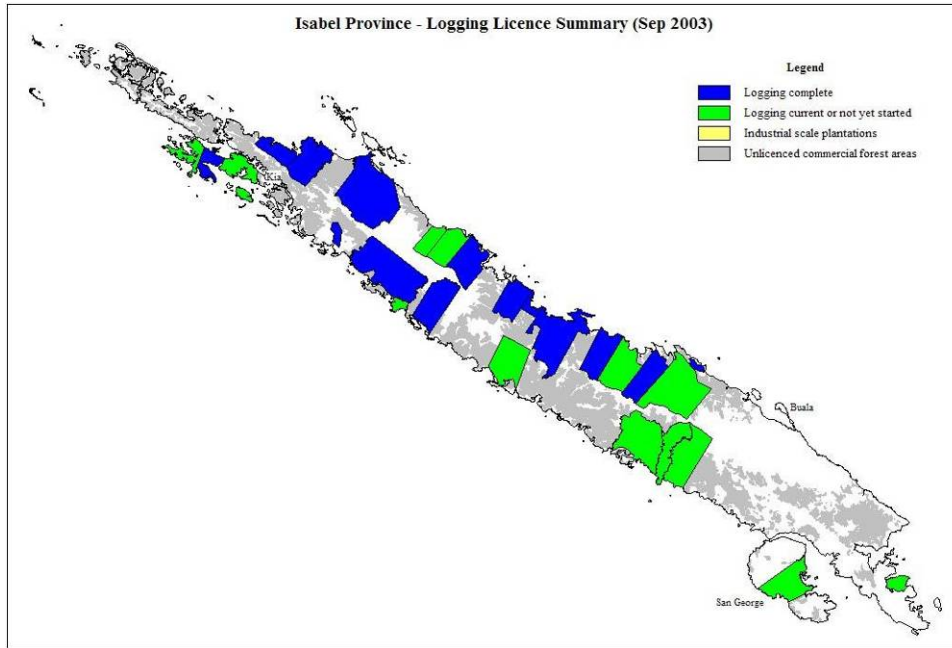


Figure 2c. Pattern of vegetation in Isabel Island from 2003 to 2005 (source: URS, 2003 & 2005)

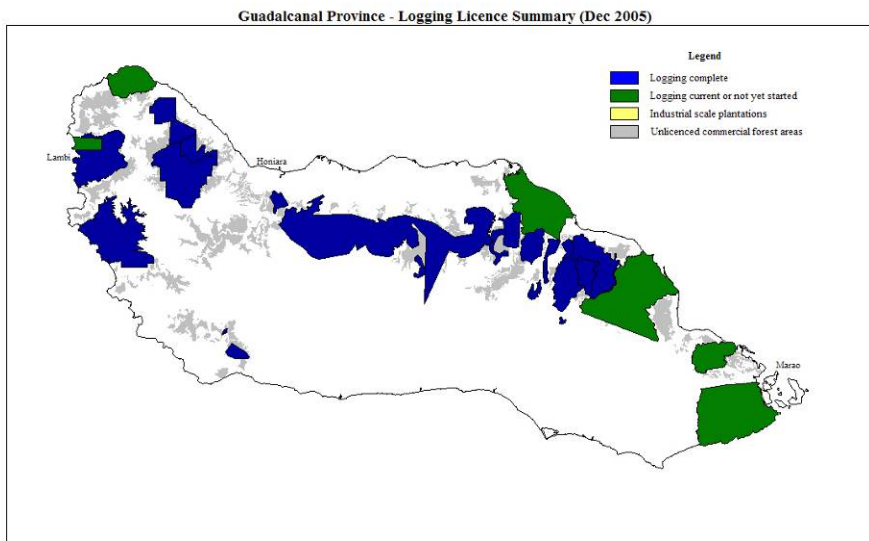
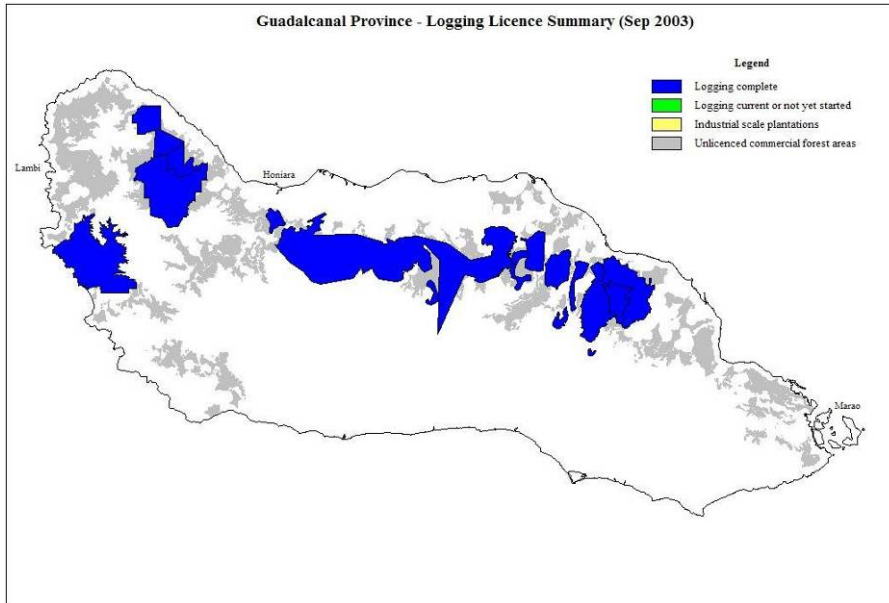


Figure 2d. Pattern of vegetation in Guadalcanal Island from 2003 to 2005 (source: URS, 2003 & 2005)

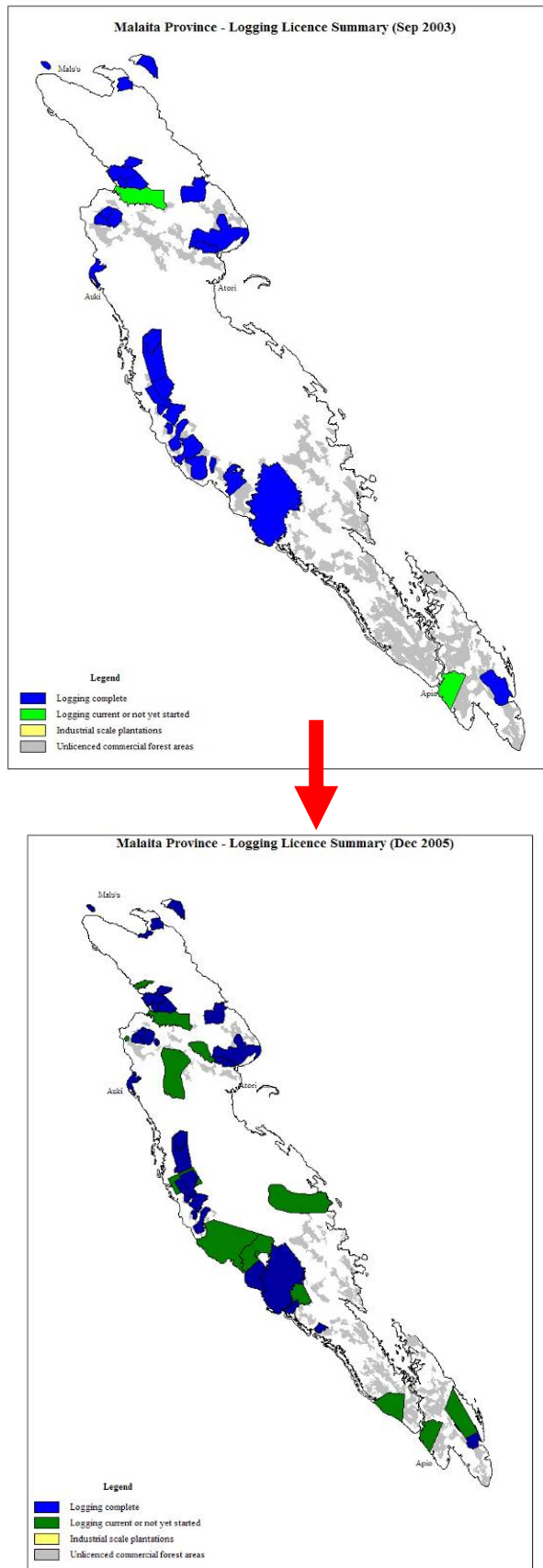


Figure 2e. Pattern of vegetation in Malaita Island from 2003 to 2005 (source: URS, 2003 & 2005)

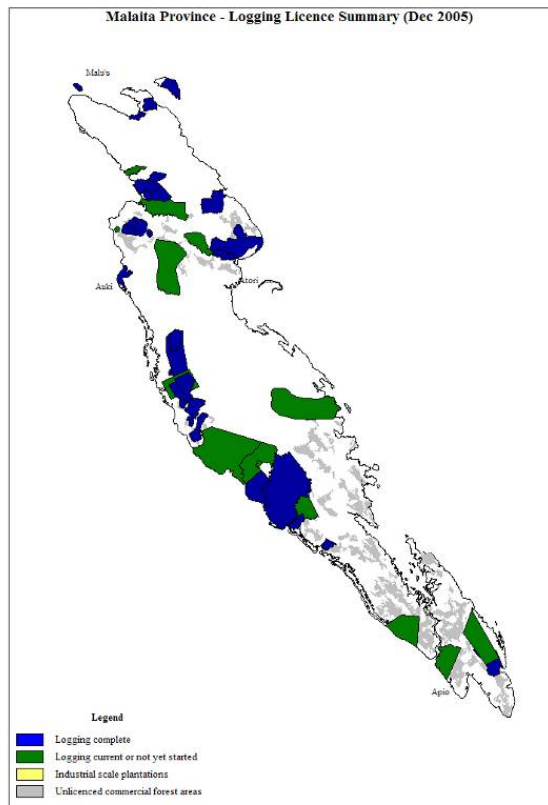
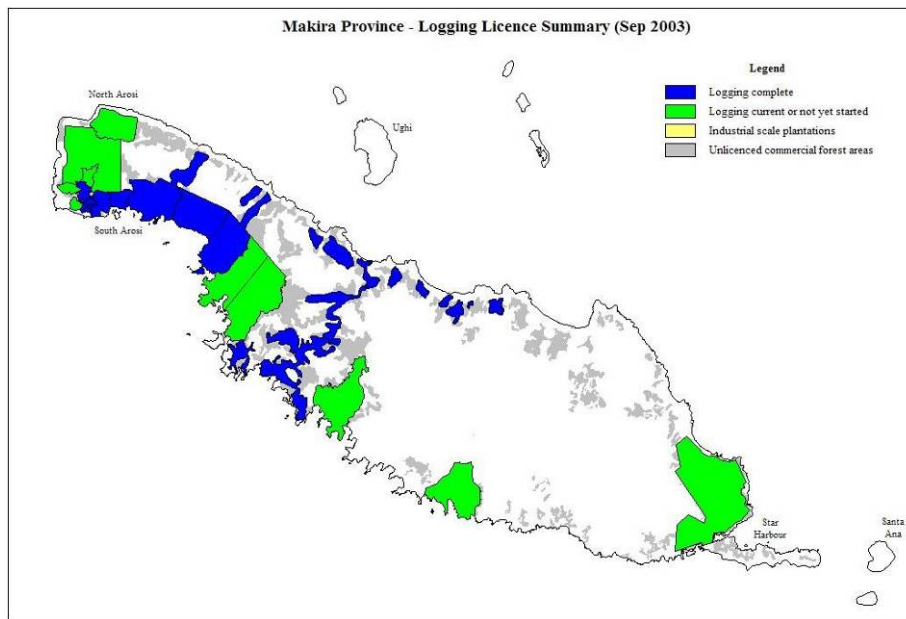


Figure 2f. Pattern of vegetation in Makira Island from 2003 to 2005 (source: URS, 2003 & 2005)

Plantation forests in the Solomon Islands

The Coalition for National Unity and Rural Advancement (CNURA) government’s policy goal for the forestry sector is, “*The harvesting of forest resources at a sustainable rate with fair returns to landowners and the government and the replanting and care for the environment including promoting of all protected areas and to ensure Solomon Islands receives fair returns on the export of round logs that reflect true international market value.*” This policy goal does not really point out the government’s stand on community (smallholder) forestry. However, two of the expected outcomes from this policy goal are relevant to plantation forests: (a) resource owners begin re-forestation on both logged over areas on customary lands as well as in smallholder plantations (*Expected outcome 10.1*), and (b) replanting and re-forestation to ensure trees are available for our future generations (*Expected outcome 10.5*).

The total commercial area of plantation forests in 2005 was estimated to be 28,000 ha, a reduction of 7,600 ha from 2003 data (Table 3). Original planting area as reported by plantation owners in 2003 was 35,600 ha. This area covers large-scale forest plantations established at Alu, Kolombangara, Viru, Gizo, Choiseul Bay, Moli, Allardyce and Santa Cruz. The major forest species planted by industrial plantations include *Gmelina arborea*, *Camptosperma brevipetiolatum*, *Eucalyptus deglupta*, *Terminalia calamansanai*, *T. brassiai*, *Acacia* spp. and *Swetinia macrophylla*. When replanting after harvesting, *G. arborea*, *E. deglupta*, *Tectona grandis* and *S. macrophylla* appear to be favoured over the other species.

Table 3. Summary of large-scale commercial forest plantations (adapted from National Forest Resource Assessment Update 2006)

Province	Owner	Location	Planted Area	Commercial Area 2003	Commercial Area 2005
Western	KFPL	Kolombangara	12,000	12,000	7,600
	Eagon (EPPL)	Viru Harbour	12,500	8,900	10,600
	FD	Shortland Is.	2,100	1,200	800
	FD	Gizo	600	200	0
Choiseul	Eagon (ERC)	Choiseul Bay/Moli	3,200	300	300
Isabel	FD	Allardyce	2,300	2,300	0
Temotu	FD	Santa Cruz	2,900	2,900	2,900
Total			35,600	27,800	22,200

Villagers have also established forest plantations in varying sizes. With the support of MoF and SIFMP, villagers throughout the Solomon Islands have increased their planting since the first village-scale planting was recorded in 1985, with a combined total area of up to 9,000 ha by 2005 (NFRAU 2006). Commercial forest plantation companies, such as Kolombangara Forest Products Limited (KFPL) and Eagon Resources Ltd. have also assisted villagers in Kolombangara and Choiseul respectively to plant trees. Planting in villages concentrates on high valued species and relatively easy to grow species such as teak and mahogany (Table 4).

Table 4. Summary of plantation species planted by large-scale commercial forest plantations and villagers (adapted from National Forest Resource Assessment Update 2006)

Industrial Plantation		Village Plantations	
Species	Proportion	Species	Proportion
<i>Eucalyptus deglupta</i>	28%	<i>Tectona grandis</i>	67%
<i>Gmelina arborea</i>	19%	<i>Swetenia macrophylla</i>	12%
<i>Camptosperma breviopelatum</i>	14%	<i>Eucalyptus deglupta</i>	11%
<i>Swetenia macrophylla</i>	14%	<i>Gmelina arborea</i>	9%
<i>Terminalia</i> spp.	9%	Other	1%
<i>Agathis</i>	7%		
<i>Tectona grandis</i>	3%		
<i>Acacia</i> spp.	2%		
Other	4%		
Total	100%		100%

Forest ownership

Approximately, 88% of the total area of Solomon Islands is under forest cover, and the majority of this forested land mass is under customary ownership. The prevailing traditional system of landownership provides a welfare safety net for the vast majority of Solomon Islanders. Customary land tenure also supports the country’s robust village-based subsistence gardening. At the same time, customary ownership is regarded as a major constraint to large-scale development. Often it is problematic, costly and fraught with uncertainty due to the inevitable and often multiple disputes that arise between owners and developers, or between different landowner groups. Equally problematic is when the land is set aside for other public purposes, such as management of watersheds, protection of sites of special interest, or conserving environmentally-sensitive areas. While the national government has the power of compulsory land acquisition, using this power is regarded as undermining values of customary right of the people and gains political unpopularity. Thus this authority has only been used occasionally, to acquire property for such purposes as roads, schools, and health centres.

Land in the Solomon Islands is a treasure and the people regard land as their ‘true’ identity and like a mother who provides them with the basic necessities of life such as food, water, fodder, raw materials, firewood and a place within which to live. Thus, anyone who has no land or is caused to have no land is regarded as “matter-of-fact” poor.

There are two land tenure systems in Solomon Islands: (a) the customary land tenure system, and (b) the registered (alienated) land tenure system. Under the customary land system, land is not normally surveyed for registration, although the landownership is recognised by law. However, because land boundaries are not properly demarcated with survey pegs, people have often disputed the land boundaries based on their knowledge of the area. As such, it has been invariably problematic when it comes to mapping of the area to fulfil legal requirements to obtain a logging license and the right to log a forest. A number of timber rights hearings have been held to resolve tribal and land disputes in this pursuit.

Under the registered land system, the land is surveyed to determine the legal boundaries before it is registered. If the land belongs to the government (i.e. for some known reasons has already been acquired), the perpetual ownership of the said land belongs to the government, which is represented by the Commissioner of Lands. In the case of individual persons or companies who have bought the land from original landowners and thus have a freehold title

(as practiced during the colonial era), the said land becomes theirs in perpetuity or for a specified period of time.

Box 1. Land Title Issues in the Solomon Islands: The Case of Kolombangara Island

A good example of disputed landownership is on Kolombangara Island, whereby the Government of the Solomon Islands (then British Solomon Island Protectorate) acquired a large part of the Kolombangara Island as state land. The Government then granted it to the Pacific Islands Company through a certificate of occupation in 1903. Lever Brothers of the United Kingdom purchased the Certificate from the Pacific Islands Company in 1905 and occupied the island under a 999 year occupation licence (Whitmore 1974). When Lever Brothers began clearing areas in the southeast of the island for copra plantation, tribes from land in the southwest objected.

A Lands Commission was established in 1919 to try to settle disputes (KFPL 1999). Following this, some lands were given back to indigenous people, but Lever Brothers occupied about 66% of the island. In 1972, this 'alienated' land reverted to the Solomon Island Government, but the logging rights over the natural forest were licensed to an associate of the Unilever Company, Lever's Pacific Timbers Limited (LPT). Since 1968, LPT has exploited rainforests of Kolombangara Island, predominantly for timber extraction for log exports, mainly to Japan. The logging operations by LPT were very thorough and efficient, removing *Calophyllum* spp.; *Camposperma brevipetiolata*; *Dillenia salomonensis*; *Endospermum moluccana*; *Gmelina moluccana*; *Parinari salomonensis*; *Pometia pinnata*; *Schizomeria serrata*; and *Terminalia* spp (KFPL 1999). Even trees with a diameter of 35-45 cm (graded super smalls) were felled, leaving very few trees standing between the coast and the 400 m contour, although substantial blocks of primary forest remained above this altitude towards the central core of the island.

After about 10 years of operation, LPT left Kolombangara Island in 1978. Instead of the land being returned to the indigenous people, the Government of Solomon Islands (SIG) retained the land title. In 1988, SIG initiated a joint venture with the Commonwealth Development Corporation (CDC) of the United Kingdom and formed the Kolombangara Forest Products Limited (KFPL) company. An Investment and Co-operation Agreement was signed in 1989 for a 75 year lease to KFPL. Through these commercial transactions, there has been one clear message to the indigenous people – that the land is unavailable for them to use. Thus, from the beginning of the 20th century, there has been pressure from the indigenous people of Kolombangara on the SIG to return all alienated lands to customary control. In 1992, the SIG agreed to give the Perpetual Title to the people of Kolombangara, but the Commissioner of Lands currently holds this in trust. Even if they finally get the Perpetual Title, it is unlikely that the land will be available for small-scale activities unless the commercial operations of KFPL are discontinued.

State of forest management

The Ministry of Forestry of the Solomon Islands Government is responsible for the overall management of the forest resources of the Solomon Islands. Further, the government produced an item of legislation – the Forest Act 1999 – which provides for the conservation of forests and the improved management of forest resources, control of timber harvesting, encouragement and facilitation of sustainable forestry activities, establishment of plantations, and domestic processing of timber. The Forest Act 1999 was passed in Parliament, but was not gazetted, thus it cannot be enforced. A review of the Act was carried out and the Forests Bill 2004 was produced, but is yet to be presented in Parliament. Once the Forests Bill 2004 is enacted, it will repeal and replace both the Forest Resources and Timber Utilisation Act and the Forest Act 1999.

The Forest Act 1999 provides for penalties when individuals or corporate entities are in breach of provisions of the Act. Some of the most significant provisions are as follows:

Section 23. (1) No person shall harvest or remove any timber from any land or enter on land for the purpose of harvesting or removing timber otherwise than -

- (a) under and in accordance with the provisions of a valid timber harvesting licence granted under this Act;
- (b) for domestic purposes;
- (c) for purposes which do not involve the sale of the timber or any product of the timber; or
- (d) for traditional purposes

(3) No person shall acquire or dispose of timber that has been removed except in accordance with subsection (1)

(4) A person who contravenes subsection (1) or (3) shall be guilty of an offence and liable -

- (a) in the case of an individual, to a fine not exceeding \$250,000 or to imprisonment for a period not exceeding five years or to both such fine and imprisonment; or
- (b) in the case of a corporate entity, to a fine not exceeding \$1,000,000.

Section 41. (1) No person shall process timber otherwise than -

- (a) under and in accordance with a timber processing licence;
- (b) under and in accordance with local timber harvesting licence or a community forestry scheme licence;
- (c) for purposes which do not involve the sale of the processed timber; or
- (d) in a timber processing facility which is of a class that is exempt.

(2) A person who contravenes subsection (1) shall be guilty of an offence and liable -

- (a) in the case of an individual, to a fine not exceeding \$25,000 or to imprisonment for a period not exceeding five years or to both such fine and imprisonment; or
- (b) in the case of a corporate entity, to a fine not exceeding \$100,000.

Section 92. Before declaring any area to be a forest reserve the Minister shall -

- (c) cause to be made such enquiries as he may, in his discretion, deem fit for the purpose of ascertaining -
 - (iii) in respect of the extent to which the exercise of such rights could not be so permitted, what reasonable alternative arrangements could be made or what compensation would be appropriate,

and shall, in respect of such rights which cannot be permitted to be exercised, cause such arrangements as aforesaid to be made or such compensation as aforesaid to be paid, within one month of the making of the declaration under section 91.

Section 93. - (1) Any person not permitted to exercise any of his right in a forest reserve who aggrieved by the amount of the compensation paid or offered or the alternative arrangements made or offered to be made under section 92, may within three months of the declaration of the forest reserve, appeal to a Magistrate's Court, which may make such order as it considers just.

Section 94. - (1) Any person who within a forest reserve otherwise than under and in accordance with a valid permit issued under section 28 -

- (a) fells, cuts or removes any forest produce otherwise than for his own personal or domestic use;
 - (b) clears or breaks up any land for cultivation, or any other purpose;
 - (c) resides or erects any building, shelter or structure; or
 - (d) grazes or permits to be grazed any livestock,
- shall be guilty of an offence and liable -
- (a) in the case of an individual, to a fine not exceeding \$10,000 or to imprisonment for six months or to both such fine and imprisonment; or
 - (b) in the case of a corporate entity, to a fine not exceeding \$50,000.

The extent to which the forest resources are managed in a sustainable manner is effectively limited. For example in 2004, it was reported that around 1 million m³ of logs were harvested, in contrast to the sustainable harvest estimated at around only 200,000 m³. In 2007, round log exports increased by 28% to 1,446,003 m³, from 1,130,365 m³ in 2006 (CBSI 2007). Such a rate of log exports is a reflection of the heavy reliance on the forest sector through logging by successive governments. Moreover, the Forest Resources and Timber Utilisation Act which was consolidated in 1969 is outdated and does not cater for modern conventional logging practices. The Ministry of Forestry continues to grant logging licences to companies and landowners to carry out logging on customary lands. Currently, there are 141 felling licences and 150 milling licences granted by the Ministry (Table 5). However, only about 20 felling licences are operative. Given the prevailing environment, the Solomon Islands Forest Management Project (SIFMP) has recently predicted that the merchantable natural forests will be exhausted by 2015 (URS 2006).

Table 5. Summary of licences granted by the Ministry of Forestry (MoF database, 2008)

Provinces	Type of licence	Number of active licences
Western	Felling	45
	Milling	29
Choiseul	Felling	23
	Milling	9
Isabel	Felling	18
	Milling	16
Guadalcanal	Felling	14
	Milling	19
Central	Felling	5
	Milling	11
Renbell	Felling	2
	Milling	1
Malaita	Felling	19
	Milling	47
Makira	Felling	14
	Milling	11
Temotu	Felling	1
	Milling	7
Total	Felling (round logs)	141
Total	Milling (sawn timbers)	150

In terms of forest plantations, the government has planted both indigenous and exotic species since the 1950s, at various locations in the country (see Table 3). In 1989, KFPL took over government plantations on Kolombangara Island, whilst Eagon Resources Ltd. purchased Arara plantation in Viru Harbour, South New Georgia Island in 1995. Both plantations are located in the Western province. KFPL plantations were certified by the Forest Stewardship Council (FSP) in 1997, following a satisfactory assessment of both the physical outlook of the

plantations and the management policies put in place by the company. Since then, KFPL maintains its certification until the present time. This award has helped KFPL to broaden its market opportunities, especially in Europe, as well as fetching a premium price for its plantation logs.

Further to the efforts to sustainably manage the country's forests, the Government of Solomon Islands introduced a Code of Practice for Timber Harvesting (CPTH) in 1996, specifically designed to improve and minimise negative effects of large-scale logging. The code incorporates best practices within the forest industry and promotes high environmental standards. In terms of land degradation and the objectives of the convention, the code has a land use management requirement and seeks to minimise soil damage (erosion, compaction, fertility decline); prevent downstream flooding due to increased run off; prevent land slips; maintain stream systems and water quality, marine and freshwater aquatic habitats, forest habitats and their regenerative capacities, and rare species and biodiversity.

The scope of the CPTH is to define practices and provide guidelines that:

- Protect the environment and promote forest development consistent with the principles of sustainable development
- Recognise and respect the rights and knowledge of resource owners
- Protect sites of cultural, historical, archaeological, geomorphological, biological or spiritual significance
- Promote conservation measures for flora and fauna
- Maintain forest regenerative capacity and species diversity
- Promote the growth of merchantable timber
- Ensure that all harvested merchantable timber is accurately scaled, removed and accounted for
- Ensure the health and safety of forest workers
- Optimises the economic return from the forest
- Ensure that forest owners receive a fair return from the harvesting of their resources

The CPTH is a dynamic document requiring regular review and, where necessary, amendments must be made in the light of research and operational findings to reflect changing circumstances and experiences. Whilst the CPTH is an excellent guideline, it will not in itself deliver ecologically sustainable forest management unless it is integrated with wider forest and sustainable development policy initiatives, coupled with a participatory approach involving all concerned parties such as both National and Provincial Governments, responsible government agencies (e.g. Ministry of Forestry), resource owners, industry and local communities.

The code was revised in 2002 with focus on key standards, which have been identified as the highest priority. These include: location of roads and landings, width of roadlines, rules for roading, landing size, felling and skidding within buffers, temporary crossings, rules for skidding, maximising log value and avoiding timber waste, weather restrictions, decommissioning of skid tracks, landings and log ponds, and monitoring of logging operations. Lack of capacity in the Ministry of Forestry in the past affected field monitoring and evaluation of the industry's compliance to the code, as well as enforcement of relevant regulations and legislation. Consequently, the CNURA Government recognised this and put as one of its policy outcomes for the forest sector, the improvement of capacity in the Ministry. This has led to the establishment of a forestry extension network of village-based officers to carry out field extension, auditing and monitoring work throughout the country.

In the past, due to limited logistical support and capacity within the Ministry of Forests, some logging companies did not fully comply with the CPTH. Hence this not only adversely

impacted on the environment but also on revenue capture. According to a Special Audit Report in 2005 into the Financial Affairs of the then Ministry of Forestry, Environment and Conservation there were inconsistencies in the payments of royalties (Table 6). The account of one of the logging companies revealed SBD884,189 was owed to the Solomon Islands Government in 2003 and 2004, a further SBD319,026 was lost in unauthorised payments in 2001 and 2003, and SBD334,736 was unaccounted for in 2002. A statement of monthly payments and details of royalty calculations should be submitted to the Commissioner of Forest each month according to Clause 32 of the Agreement. However, these statements were not found.

Table 6. Timber royalty payments

Year due	Amount due	Year paid	SIG	Customs	Unauthorised advance	Arrears at the time of audit	Not accounted for
2000	195,697	Nov. 02		195,697			
2001	432,583	Oct.02	324,318	55,932	52,320		
2002	1,729,583	Sep. 02 Mar. 03	880,398 111,772	402,677			334,736
2003	2,731,640	Mar. 03 Sep. 03	2,388,684		266,716	76,240	
2004	807,949					807,949	
Total	5,897,439		3,705,172	654,306	319,026	884,189	334,736

Source: Special Audit Report 2005.

Economic viability of forest management for wood production

URS studies (2003 and 2006) suggest that an unrestrained increase in natural logging activity has resulted in an unsustainable rate of harvest. This high rate of harvesting was predicted to exhaust the natural timber trees by 2015, well before the time at which regrowth in natural forests and forest plantations can make a significant contribution towards the woodflow of the country. Essentially, this would be the point in time whereby domestic sawlogs would be in short supply. Until then, timber for general construction is likely to be imported if the demand keeps rising. This situation is challenging the economic viability of forest management for wood production, at least in the short term.

However, in the longer term, the combined potential woodflows from both natural and plantation forests are promising. Although, the projection identifies the period 2015 to 2038 as a period when insignificant volumes of timbers are likely to be produced from natural forests, the village-scale forest plantations would begin to contribute to the national woodflows. High value species such as teak and mahogany, which villagers are mainly planting, have the potential for lucrative financial return. Growth data estimate a mean annual growth increment of 5 m³ per hectare per year, with crop rotation of 30 years and an estimated yield of 150 m³/ha. These yield figures provide a solid basis for a viable industry, assuming efficient processing and marketing.

The timber industry in the Solomon Islands has in the past been dominated by large-scale operators, using fixed-base band and circular saws for timber milling. Over time, the situation has evolved towards increased use of a portable chainsaw mills and Lucas sawmilling. Individual licensed operators have used the opportunity to harvest and mill their own timbers. Purchase prices for sawn timber are high and people have been engaged in milling of natural forests.

Frequent occurrence of cyclones is a threat to both natural forests and forest plantations. Climate change is a global challenge and the Solomon Islands is no exception and so must be prepared. Large-scale plantations on state-owned land are limited, suggesting the need to encourage customary landowners to plant woodlots. Schools throughout the country could be encouraged to plant woodlots, which would be consistent with the government policy.

Wood and wood products

Current level of production and consumption of wood and wood products

It is difficult to obtain information on current log and sawn timber production and volumes of export in the country, despite many attempts to do so. Both the Ministry of Forestry and the Customs & Excise were contacted but admitted not being able to provide historical data on the commodity on time for this report due to poor record keeping. However, a report by URS based on the Ministry of Forestry export database in 2006 had 11 years of historical information (Table 7). Further, the Central Bank of Solomon Islands (CBSI) reports log export data of 2006 and 2007, revealing that the round log exports have increased substantially from 1.1 million m³ in 2006 to 1.4 million m³ in 2007 (CBSI 2007).

Data on sawn timber is not available for this report. A timber mill on North Guadalcanal owned by Pacific Timbers Limited, a subsidiary of the Earthmovers Group of Companies, was closed down during the ethnic tension (CBSI 2005), and has not been opened since. However, there are other companies and individuals who have actively engaged in sawn timber production and export. Data for such activities are not available at the Ministry of Forestry.

Table 7. Natural forest round log exports by province 1995-2005 (m³)

Year	Central	Choiseul	Guadal canal	Isabel	Makira	Malaita	Western	Total
1995	19,900	88,400	55,100	102,700	40,300	38,400	392,200	737,000
1996	34,000	87,500	76,500	81,200	31,000	37,900	457,800	805,900
1997	16,700	83,000	75,200	126,100	11,500	12,300	284,800	609,600
1998	17,000	89,100	99,900	130,200	11,600	4,500	234,500	586,800
1999	41,900	35,700	21,800	82,600	23,100	13,100	397,700	615,900
2000	5,100	44,100	14,100	101,300	16,100	17,700	322,900	521,300
2001	15,900	8,200	0	167,400	1,500	34,100	282,300	509,400
2002	9,500	21,000	0	171,800	7,200	17,400	357,300	584,200
2003	14,100	46,000	0	188,500	19,300	0	471,000	738,900
2004	30,600	113,200	0	144,300	35,200	20,000	625,500	986,800
2005	34,300	76,400	9,800	93,600	77,500	50,200	725,500	1,067,300
Total	239,000	692,600	352,400	1,389,700	274,300	245,600	4,551,500	7,745,100
Average								
04/05	32,450	94,800	9,800	118,950	56,350	35,100	675,500	1,018,100

State of forest industries

The number of companies and individuals involved in commercial timber extraction, either for round log export or sawn timber production is at a record high. Currently, 141 logging (felling) licences and 150 milling licences have been granted by the Ministry of Forestry. About 15% of these licences are current and active today. It is noted that there are companies with multiple licences, suggesting that they have permission to operate in more than one area in the country. In addition to these natural forest commercial logging companies, there are two plantation companies operating in the country (see Table 3).

Timber milling is for both local and export markets. Small-scale timber millers in rural areas sell sawn timber to buyers in Honiara, although some small producers do export directly. There are a couple of kiln drying facilities in Solomon Islands; one is operated by KFPL. Other than this, for general construction, timber is sold and used without further processing.

Trade of forest products

Round log exports from Solomon Islands are significant; as stated above. By contrast, total exports of sawn timber are understandably lower, although the exact volume is not available. Local timber consumption is also estimated to be significant, although data on this are again not available for this report. However, housing construction, with sawn timber as the major component was recorded to be more than SI\$20 million (Household Income and Expenditure Survey 2005/6).

Solomon Islands does not currently import sawn timber, but does import furniture from overseas, especially from Asia. Unless something is done about the rapid decline of merchantable natural forest, the Solomon Islands is likely to import timber from overseas in the future, to meet its domestic demand.

Tourists' admiration of wood carving in Solomon Islands is noted with interest, and it provides a niche market for these products. No data are available on the quantity of carvings sold locally, nor those exported, but production seems, generally, to be gathering momentum, especially as the tourism industry is picking up in response to law and order restoration and people's increasing confidence.

Wood as a source of energy

Traditionally, wood is the main source of fuel for open fire cooking and stone ovens. Modern cooking uses electricity and liquefied petroleum gas (LPG), and to a certain extent coconut shell charcoal for charcoal ovens. In rural villages, cooking is still by and large based on fuel wood. Even in urban areas, especially provincial centres, people are still highly dependent on wood for fuel. Thus, the demand for wood fuel in homes is significant and is unlikely to be reduced in the foreseeable future. The changes in lifestyles do not have a particularly significant impact as people still prefer traditional ways of cooking – due to taste, value and affordability. Statistics on wood fuel production and consumption are not collected, although stacks of firewood are seen at the central market and on roadsides in and around Honiara.

Non-wood forest products

Non-wood forest products refer mainly to fruits, nuts, seeds, barks, roots and leaves. These tree products are used for food, crafts, dyes, resins and medicines. Whitmore (1969) documented 1,931 species of plants in the Solomon Islands, but this amount has increased by 1,279 species (Hancock and Henderson 1988) who classified species into five main groups:

(a) food plants, mainly collected and cultivated, (b) cultivated plants of agricultural significance, e.g. those known to influence soil fertility, (c) plants that fulfill a basic need, e.g. firewood, (d) custom and craft purposes, and (e) medicines. The potential of these native species being commercialised and traded for export is already evident, for example, *Canarium indicum* (locally called ngali nut), *Morinda citrifolia* (or noni) and *Calamus hollrungii* (rattan or lawyer cane). The need to develop indigenous species with commercial potential should be seriously considered by the government as an option for the diversification of income-generating opportunities for resource owners.

The service functions of forests

Forest-based recreation

There is limited forest-based recreation in Solomon Islands. Further, there is also virtually no formal record kept of those using forests for recreation such as bush walking or hiking, trekking, outdoor camping, bird watching and so forth. The reason for this may be related to limited managed areas such as National Parks and designated recreation forests. Honiara Botanical Garden in Guadalcanal appears to be the only area recognised at the present time. Areas allocated for Reserves and National Parks have, over time, been encroached. In 1990, a number of forest areas were identified and proposed for reserve, for example; the Marovo Lagoon in Western Province, Mount Maetambe in Choiseul, Casuarina Swamp (Ortega Channel) in Isabel, Itina-Popomanaseu in Guadalcanal, Lake Te Nggano in Rennell, Bauro Highlands in Central Makira, the highlands in Central Malaita and Kauri Reserve in Temotu (Lees 1990). Most of the areas allocated for reserves and national parks appear only as “paper reserves”, but have received very little attention and meaningful management to make them attractive for both local and overseas visitors to enjoy.

Because there is no record kept, it is impossible to assess peoples’ attitudes towards the use of forests as a place for recreation. Most locals visit the Honiara botanical garden for leisure and use the footpath to get to and from town. Occasionally, newly wedded couples choose the scenic view of the garden to pose for photographs. It is rare for school students and researchers to use the garden for educational and scientific purposes. Overall, it is apparent that the extent of public appreciation of parks or forests for recreation is very low. The situation might change in the future when the government better recognises the importance of these public amenities and takes steps to ensure they are developed for public use.

To date, the government has done little in terms of identifying new areas for national parks. Perhaps the underpinning rationale for the establishment of parks needs to be clearly stated; either for the protection of fragile areas and ecosystems, or for recreation, or both. Building appreciation of the recreational value of forests among politicians, government planners and land managers remains a challenge in the Solomon Islands. Otherwise, the “business-as-usual” will see the designated reserves and parks unmanaged with diminished value.

The development of ecotourism, based on marine and terrestrial ecosystems, must be actively promoted as growth and popularity of this subsector will promote public appreciation of the value of unique and pristine forest ecosystems as areas for paid recreation. Conservation areas – with a particular ecological sensitive ecosystem such as coastal and mangrove forests – must be designated for the protection of ecosystems and species. These areas can also generate income from foreign tourists and local visitors alike.

Forests and water

Many rivers and streams are present on both the larger and smaller islands. These flow out of the rainforests through the intersection of rugged mountains, run through valleys and flow

downwards to the coast. The quality of water from these rivers and streams varies between villages and islands and is significantly affected by rainfall incidences and intensity as well as human activity disturbing their catchments. Increased large-scale logging threatens the integrity and the natural composition of watershed areas in the country. The Solomon Islands has many watershed areas located on various islands. The role of forests in protecting water sources is well recognised and in the policies and management plans of the Water Resources Division in the Ministry of Natural Resources. Vegetation cover is an indicator for watershed health. However, there is little effort by responsible government agencies to rehabilitate watershed areas by replanting with trees, especially to assist recovery from tree damage caused by seasonal cyclones.

The management of watersheds in the Solomon Islands is the responsibility of the Water Resource Division of the Ministry of Natural Resources. The need for good quality water for drinking and other domestic use is of paramount importance. Such important regard for water should be accorded priority status within the ministry's work programme and budget.

Conservation of forest biodiversity

The strategy for environmental management in the Solomon Islands is contained in the National Environment Management Strategy (NEMS). Whilst this document is outdated it remains useful in the absence of any new strategy. Twenty-nine strategies were designed and have been grouped into ten objectives (see below) collectively pointing towards sustainable development in the Solomon Islands.

1. Integrating environmental considerations in economic development
2. Improving environmental awareness and education
3. Strengthening the resource database
4. Protecting areas of high ecological, wilderness and cultural value
5. Improving waste management and controlling pollution
6. Land resource management (excluding forestry)
7. Sustainable use of forest resources
8. Sustainable use of marine resources
9. Ensuring the coastal environment is well managed
10. Ensuring that exploitation of non-living resources is environmentally safe

The establishment of the Ministry of Environment, Conservation and Meteorology (MECM) by the present government is an appropriate forward step, with envisaged responsibility of it being the leading mechanism in enhancing environmentally-friendly and sustainable development in the country. The MECM has produced a Cooperate Plan which outlines major strategies proposed by the present government, with the aim of fulfilling sustainable livelihoods from 2008 to 2010. In pursuing these strategies, the constraints affecting the management of protected areas can be addressed properly at national, provincial and local levels. The strategies will strengthen and improve the capacity of the MECM in its drive to achieve environmental sustainability in the country. However, the financial resources needed to pursue these strategies within a near-term timeframe, in order to achieve immediate sustainability, are lacking and have resulted in a step back from carrying out proposed activities.

The Solomon Islands is recognised as one of the world's "Hotspot" areas for marine and forest biological diversity. Protecting these hotspot areas from damage and degradation as a result of human-induced activities such as unsustainable logging and fishing must be a priority. Guarding these hotspot areas against potential risks associated with Genetically Modified Organisms (GMOs) which can easily get into the country undetected by way of food, agricultural feed and processing, and pharmaceuticals, must also be a priority.

Forest cover in the Solomon Islands has decreased from 80% in the 1990s to 76% today indicating a significant loss in biodiversity. The need to protect or conserve forests is imperative to ensure that the biodiversity of the Solomon Islands is maintained. Currently, there are about 42 protected areas covering less than 0.5% of land and seascapes. The Solomon Islands is known to have a wide range of animal and plant species that are endemic and unique. For instance, of the 163 land bird species found in the Solomons, 72 are found nowhere else in the world and another 62 are represented by unique races or subspecies. In addition, there are numerous endemic species of lizards, snakes, snails, insects, butterflies and plants species such as orchids, indicating a rich historical environment resulting from dispersal, isolation, and speciation. The ecosystem types and habitats protected include:

- Evergreen forests
- Montane forests
- Lakes, rivers and streams
- Highlands, e.g. Bauro Highlands
- Coastal areas, e.g. Arnavon Island

As well as a few larger and formally-established protected areas, the Solomon Islands also has a number of smaller protected sites that have been set up with assistance from NGOs, resource owners, and community groups. These areas include such sites as the Bauro Highlands, an area with transitional forest ecosystems in central Makira, set up with assistance from Conservation International.

The Solomon Islands is a party to a number of international conventions on the environment including the Convention on Biological Diversity (CBD). The vulnerability and fragility of the country's environment and ecosystems is recognised across all sections of the community including the highest political level in the country. This recognition is seen in the significant strides made by the Solomon Islands Government through the adoption of a number of laws and regulations pertaining to NPA management, including, among others, the Environment Act 1998 (came into force on 29 August 2003 under legal notice No.76), Wildlife Protection and Management Act 1998 (came into force on 29 August 2003) under legal notice No.77), Fishery Act 1998 and Ministry of Environment, Conservation and Meteorology's Corporate Plan 2008-2010. These laws were put in place not only to create a legislative framework from which to implement regulations to improve NPA management, but also to ensure the long-term sustainability of NPA systems is secured.

Forests and climate change

It was recognized that there is a link between forests as carbon sinks and climate change. As a party to the Framework Convention on Climate Change and the Kyoto Protocol, the Solomon Islands has actively contributed at the global level to the debate on ways and means of ameliorating this problem. At the national level, however, outside of the context of public education and awareness activities wherein climate change is discussed, this has yet to translate into real practical action. The issue of carbon credits and carbon sequestration are mere theoretical concepts yet to be concretised into anything tangible and beneficial. It is apparent at the present time that the Solomon Islands is taking a wait-and-see attitude towards the development of carbon trading regimes in larger and developed countries.

Policy and institutional framework

General trends as regards forest policies and legislation

The importance of a sound policy and institutional framework in forestry cannot be overemphasised. This sector is so important for the economy of the Solomon Islands, accounting for about one-third (3.9 percentage points) of the overall economic growth of 10.3% in 2007. It also contributes significantly to employment creation, revenue generation, and development of infrastructure in rural areas. However, the rapid decline in natural forests due to unsustainable logging has negative consequences; not only in terms of serious economic implications, but it also results in widespread adverse environmental impacts (e.g. soil erosion, and sedimentation, water quality impacts, loss of habitat and biodiversity, and loss of future opportunities for alternative sustainable livelihoods). Thus, as a consequence, it reduces income-generating opportunities from land-based resources.

The Forestry Bill 2004 is a draft bill that is the result of more than two decades of efforts to put in place a new law to replace the outdated and unpopular Forest Resources and Timber Utilisation Act 1969, which – with all its confused amendments – has been the main source of the problems currently experienced in the forestry industry. The Forestry Bill 2004 provides for the conservation of forests and the improved management of forest resources, control of timber harvesting, encouragement and facilitation of sustainable forestry activities, establishment of plantations, and, domestic processing of timber.

Even though the bill has been subjected to considerable public consultation, it has been seen as lacking satisfactory landowner consultation, and thus has been perceived as lacking local ownership, including a perception that it has been driven too much by foreigners. It has therefore suffered undue political dissection.

Key issues and an overview of the overall state of forests and forestry

The critical issue facing forestry in the Solomon Islands is the rapid depletion of its natural forest resources and the rather late proactive programme of replacement plantation forest resources to sustain the local industry. Wood flows from the natural forests are in rapid decline with exhaustion earmarked to begin to occur in 2011 (Figure 3). This issue has serious implications for the sustainability of the forest industry, trade in forest products and rural development generally. The impacts are already felt, with the industry adapting to the resource situation by re-entering previously logged areas to extract super-small grades of natural timber and reverting to portable sawmilling technology to stay viable. The downside to this, however, is the loss in milling efficiency, and of value-added processing that only larger economies of scale allow. Further, neither industry nor smallholder plantation forest resources are coming on stream to sustain local sawmills. KFPL and Eagon Resources Pacific Limited are involved mainly with round log exports, rather than on-shore sawmilling of logs from their plantations.

The Solomon Islands is thus at the crossroads in terms of forest development. It must decide if it will maintain the status quo, and eventually be forced into depending on timber imports. Alternatively, the Solomon Islands may opt to strengthen both industry and smallholder plantation forest resources from which to supply local demands and for export. The Solomon Islands exports of round log and sawn timbers are significant, primarily because it has the genetic material, technical expertise and the climate to produce world class timber species such as mahogany, teak, rosewood, taun (akwa) and several others.

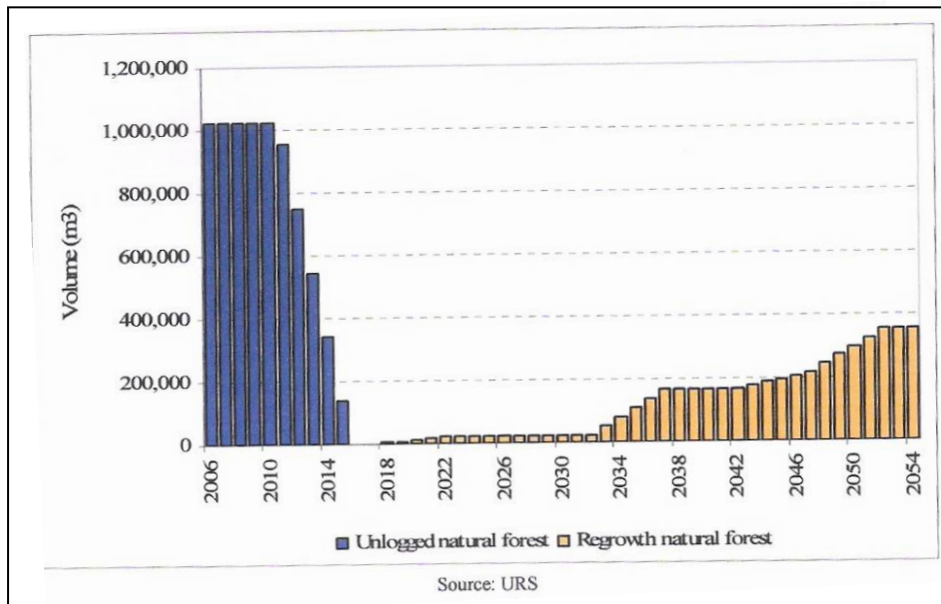


Figure 3. Predicted natural forest wood flows, 2006-2054

The role of forests in water resources management is fully appreciated and work in protecting the important watersheds is one of the government’s priorities. The forest areas already designated for protection as national parks contribute significantly to this purpose, and demonstrate the benefits of the Solomons’ integrated multiple-use approach to forests and water resources management. The challenge, however, is maintaining this integration and balance, in the face of growing threats of factors such as agro-deforestation and forest degradation from land clearing for development and infrastructure development, as well as the traditional practice of bush clearing.

The conservation of biodiversity faces challenges, despite significant additions to the protected area system over past years; the recent work on Programme of Work on Protected Areas (PoWPA) reflects this. Many high priority conservation sites remain unprotected and under serious threat of degradation and permanent loss. Many are on customary-owned lands and will therefore require the use of innovative approaches to conservation area management. The general success of community-based conservation approaches in the Solomon Islands shows that a working model exists. In this model, it is essential that the income-generating potential from ecotourism of forests and pristine terrestrial ecosystems is utilised, to sustain community interest and commitment to conservation objectives.

3. WHAT WILL INFLUENCE THE FUTURE STATE OF FORESTS AND FORESTRY?

An overview of the changing characteristics of society highlighting key trends

Evolution of the social, cultural and economic scenarios in the Solomon Islands has occurred over recent years. As a young and developing nation, the Solomon Islands is facing these changes, which result from a combination of different factors, and have impacted on people's values, perceptions, livelihoods and uses of forests. These factors include – but are not limited to – population growth, people's expectations and aspirations in health and education, a move from a subsistence and semi-subsistence economy to a cash-based economy, globalisation, and increased dependence on modern technology. The changes these factors have influenced have direct and indirect implications and links to natural resources including forests. For example, there is increased demand for the use of forest products such as timber, firewood, fruits and nuts, medicines, water and services such as recreation and spiritual nourishment

The direct impact of population on forests is significantly evidenced in the country. According to the 1999 census report, the population is about 400,000 persons and is increasing by 2.8% annually. With this growth rate, the country's population is expected to be more than 500,000 persons in 2014, an increase of 43% since the 1999 census. Deforestation as a result of agricultural activities, new settlements and timber harvesting is real and is likely to intensify. The 1999 census also recorded 65,014 households, compared with 43,841 households in the 1986 census. The number of households grew by 48 percent, corresponding to an annual household growth rate of 3.1 percent. Increase in households means an increase in the number of constructed buildings in which people live. Today, people want better quality houses, an indicator of people striving for an improved standard of living. This move towards better living standards will in turn fuel demand for sawn timber and other wood-based construction items.

Urban population is also growing. Since the 1986 census, the Solomon Islands' urban population increased substantially, from 36,919 to 63,732 persons in the 1999 census. The 73% increase implies an annual growth rate of 4.3%, with which urban growth far outpaced national (2.8%) and rural (2.6%) growth rates. This brings with it changes in lifestyles. More households are likely to use gas and electricity rather than firewood for cooking. Demand for open spaces and forest parks as areas for recreation, picnics and relaxation will increase as individuals and families will want to have time out from their confinement in their homes or urban apartments.

The issue of the environment in relation to climate change and the increasing frequency and intensity of cyclones, earthquakes and tsunamis experienced in recent times, indicates that the Solomon Islands is vulnerable to these natural disasters and its people living in coastal and low-lying areas are constantly at risk. In response to these risks, both in terms of coastal asset management and security for local populations, the SIG is currently embarking on a National Adaptation Plan of Action that addresses climate change issues, particularly for the most vulnerable communities. The plan may include the relocation of coastal populations to elevated inland areas.

Development of the tourism sector, especially ecotourism elements, has a strong link with pristine environments including forests and mangrove ecosystems. As the opportunities for cash generation are appreciated, peoples' attitudes and perceptions of pristine forests, mangroves and lakes will definitely change for the better. Recognising such values of the forests and the surrounding environment is a significant step towards good stewardship and long-term sustainability of our forest resources.

The political and institutional environment

The Government of the Solomon Islands

The Solomon Islands adopts a Westminster system of governance with three independent entities: legislature (Parliament), executive (Government) and judiciary (Court). Through a democratic process, the people elect their representatives into parliament every four years. Elected representatives then choose a government to govern the affairs of the country. This is done through the process of electing a prime minister (PM). The PM then chooses his ministers to form a Cabinet. The Cabinet is the central decision-making body of the government. Established ministries of the government are responsible for the implementation of policies and decisions made by the government. For example, the Ministry of Forestry is responsible for issues related to forest laws, administration and management, licences, research, extension and development.

The Ministry of Forestry

The Ministry of Forestry (MoF) has recently been separated from the government's Environment and Conservation Agency, but it remains the most significant body in promoting sustainable forest management in the country. Functions of the MoF involve monitoring, auditing and inspection of logging operations and shipments and improving coordination and information-sharing with customs and the CBSI. It is also responsible for the enforcement of the Code of Logging Practice and drafting, enacting and implementing new forestry legislation and a new forest policy. Placing a moratorium on issuing of new logging licences is a function that is not always easy as the country is heavily dependent on log exports. The MoF supports family-based reforestation initiatives and encourages community-based portable and small-scale sawmilling and ecotimber production.

Ministry of Agriculture and Livestock

The Ministry of Agriculture and Livestock (MAL) is responsible for both large and smallholder agricultural activities including plantations. Agriculture will continue to be the predominant land use in as long as food security, diversification of income-generating opportunities for farmers, and the development of new crops remain a high priority of the government. These activities effectively contribute towards increasing deforestation, for which the MAL must take some responsibility in ensuring negative environmental effects are minimised.

As one of the 'beneficiaries' of deforested areas, the MAL should promote sustainable land use practices. Agroforestry is a land use system recognised worldwide for its long-term sustainability. It can be defined as "*a dynamic, ecologically based, natural resources management system that, through the integration of trees in farms and in the landscape, diversifies and sustains production for increased social, economic and environmental benefits for land users at all levels*" (ICRAF 1997). Essentially, agroforestry systems protect and maintain soil productivity and reduce the need to clear new forest areas. To successfully promote agroforestry, the MAL and MoF must collaborate in planning and implementing it.

The forest industry

There are more than 140 foreign and locally owned logging companies in the Solomon Islands. Furthermore, there are 150 small- to medium-sized timber milling companies. The milling companies that rely upon natural wood supply may soon face shortages in supply. They will then look at alternatives, such as plantation timber or coconut timber for their mills.

Whether or not the market for these products is in their favour is a matter for them to investigate. However, the reality of scarce log supplies is catching up and it is predicted to be 30 to 40 years before the regrowth natural forests will reach harvestable stage.

Local communities

Landownership is by far and large tribal-based. A tribe has a chief who oversees the affairs of the people and their resources. The chief, however, does not make decisions on his or her own in relation to the disposal or development of any tribal property, especially land and sea resources. Communally-owned properties require tribal consent before exploitation. The SIG recognises the roles and responsibilities of traditional tribal chiefs. Such recognition has been demonstrated through the empowerment of the Chiefs' Committee at the village level, which hears dispute cases in respect to landownership and the right to harvest forest (timber) resources. However, current laws do not empower a Chiefs' Committee to pass by-laws for resource management purposes such as imposing a ban on tree felling on riverbanks and erosion-prone areas. These concerns are addressed by the Ministry of Forestry through the Code of Logging Practices.

In terms of logging of the forest, many landowners have engaged commercial logging companies to carry this out. Others have ventured into portable sawmilling and chainsaw milling, which is known locally as "cubic" milling. In regards to portable sawmilling and chainsaw milling, a general observation is that villagers have been circumventing the legal requirement for forest licences under the Forest Resources and Timber Utilisation Act. This practice remains alive to this day.

Villages with strong conservation ethics are also known to have protected their forests. Good examples of these protected forests include Tetepare in the western province, Chivoko in Choiseul Province, and Bauro Highlands in central Makira. These forests have had a permanent ban from logging and seasonal bans on hunting of wild pigs and birds imposed on them. Increases in areas of protected forests are envisaged in the future, thus these existing protected forests could be a force for positive forestry development if they can be harnessed.

Within a tribe are several clans each made up of several family groups. Each family has user rights to tribal land through inheritance and/or special allocation to mark some significant events or undertakings. Unbroken cultivation of such lands by successive generations of the same family effectively results, by default, in acquisition of user rights to that land. Such user rights remain valid unless a collective resolution by elders warrants them to be forfeited. This would normally come about as a result of a serious wrongdoing. Given the complexity and variation in user rights to land, the most effective and workable unit to use for any form of development – e.g. establishment of woodlots on customary lands – is the household.

Overall trends/ tendencies in governance

The Ministry of Forestry is the responsible authority of the government to oversee and manage the forest resources of the country. It draws up policies, which are then submitted to the Cabinet for approval. Once approval is granted, the Ministry then implements such policies. Thus, the Ministry of Forestry is the main driver of policy changes within the forestry sub-sector, although the Cabinet has the final decision. Earlier discussions have highlighted trends in the forestry sub-sector, including emphasis on greater involvement of the private sector and smallholders in the development of forest plantations. Landowners are

also encouraged to have a holistic and integrative approach to developing their land, forest and water resources, and be mindful of the need to protect and conserve biodiversity.

Economic changes

The Solomon Islands' economy has been badly hit by five years of ethnic tensions. So much so that the country has been regarded a failed nation by outsiders. However, the economy has shown resilience and bounced back with growth of 10.3% in 2007, the highest in two decades (CBSI 2007). Such economic recovery has been largely due to rural villagers continuing their economic activities such as making copra and cocoa, and fishing. The arrival of the Regional Assistance Mission (RAMSI) in 2003 has hugely improved the law and order situation in the country. This has created a much safer environment for increasing economic activities. Re-opening of large commercial companies such as those growing oil palm on Guadalcanal Plains and Gold Ridge Mining Ltd. has made a positive impact on the economy. For the four years since 2003, the economy has recorded positive growth and log production remained the single-most important driver for growth production in 2007 (CBSI 2007). This growth is also manifested through increased timber utilisation in building construction and furniture-making in Honiara, provincial centres and rural villages. However, 6.0% GDP growth is estimated for 2008, a drop of 4.3 percentage points from 10.3% in 2007, largely due to an anticipated zero growth in logging activities (CBSI 2007).

There will be inevitable structural changes in the Solomon Islands' economy over time. The forecasted decline in natural forest harvesting will affect the economy, thus, the need to emphasise other productive sub-sectors. The mining industry has been considered by the government as a likely major booster to the economy. Continued growth of tourism is encouraging and must be further promoted. Reinvigorating the agricultural sub-sector is an expressed priority of the government (CNURA policy statement). Oil palm development in the Aluta Basin, Vangunu, Waisisi and North-East Choiseul is on the government's agenda as a priority. In addition, the government has also considered rehabilitation of cocoa and coconut plantations, as well as reviving the cattle industry, as priorities. Various projects on rural development such as infrastructure, health and agriculture funded by the World Bank, EU and AusAid are expected to further revive and strengthen the rural economy. The extent to which all these will be achieved remains to be seen. However based on consultations done for this report, the need for proactive interaction between the Ministries of Infrastructure, Forestry and Agriculture is extremely important if any practical outcome is to be realised. The emphasis on community forestry is also challenging existing farming practices in rural villages. Where land is scarce, the need to adopt a sustainable farming system is crucial. Promoting agroforestry systems is envisaged as a viable and productive proposition. Through agroforestry, timber species are interplanted with short-term crops and grazing for animals, based on well-designed models which take into account factors that may have negative effects on the performance of farm components.

With regard to changes in employment, a general increase in unemployment is expected in and should be in parallel with the magnitude of school drop-outs. Unless something is done to enhance employment prospects, the situation will be worsened in the foreseeable future. However, within the forestry sub-sector, some positive changes are envisaged, and should involve a change of emphasis from natural timber to forest plantations. Such a change would have implications for the level of employment in the country. Essentially, as more smallholder plantations are established there should correspondingly be an increase in employment in rural communities. Employment in the wood processing industry should also increase as demand for timber increases – in parallel with population growth. An improved ecotourism focus is envisaged – to treasure different ecosystems, especially those that offer income-generating opportunities. Villagers' participation as tour guides, and similar positions, offers an employment opportunity. There are on-going government efforts to make customary

lands more accessible for development, for example the passing of the Customary Land Recording Act 1995 in parliament. This Act allows people to record ownership of customary lands so as to minimise land disputes, or avoid them altogether. Whilst the implementation of this Act has been slow, it is hoped that by recording landownership, there will also be increases in the confidence of commercial banks in financing projects located in customary lands. Accessing customary land will definitely boost development initiatives and tourism is one of the sectors likely to benefit, as this will impact positively on ecotourism and forest conservation.

Impacts of globalisation

Impacts of globalisation on forestry development are significant for the Solomon Islands because of its forest resources. The Solomon Islands exports round logs and sawn timber, mainly to Asian countries such as Malaysia and China. However, the natural timber harvest is rapidly declining and the main hope to maintain supplies is through forest plantations. Hence, the need to better manage the remaining natural forests and increase the volume of plantation timber. China is likely to be the major importer of Solomon Islands' timber in the future, although certified forest plantations such as KFPL will find markets in European countries where a "green label" is profoundly significant for importation of logs and timber. Increases in the demand for certified timber products will inevitably force both the industry and smallholder plantations to move towards forest certification.

Technological changes within and outside the forest sector

The Solomon Islands has a standard logging agreement introduced in 1984, which provides guidelines and procedures for logging and timber milling operations. Prior to the advent of chainsaws, people used metal axe to fell trees in their endeavour to clear forests for food gardens. Natural timber species were felled to rot as there was no technology to extract timber. As chainsaws were introduced, tree felling for timber extraction became significant in the 1960s, which led to vast areas of deforestation throughout the country. In much the same way, portable Lucas sawmills have enabled individuals and private companies to exploit the forests, including areas of low density that previously were considered inaccessible and non-merchantable. Logged-over areas that were previously left for later harvesting are now logged earlier than desired.

With the depletion of natural forests, and the abundance of matured coconut stems, the Solomon Islands should be looking at the technologies applied in Fiji, Samoa and elsewhere to mill high density wood from coconut. This proposition could have a synergy with the government's initiatives to rehabilitate old coconut plantations, so creating the opportunity for income generation in rural communities and utilization of coconut timber in the country.

Environmental issues and policies and their impacts on the forest sector

Loss of biodiversity is a major global issue, and it has direct implications on the way we look after our environment and forests. In the Solomon Islands, there are several unique ecosystems that are under threat, such as mangrove forests, wetlands and coastal forests. Natural timber species are a part of these ecosystems and their unsustainable exploitation threatens the overall ecosystem health.

Severe disturbances and destruction of the forests threaten the existence of many bird species, reptiles and flying foxes that play important ecological roles in the dispersal of forest tree seeds. Success in natural forest regeneration depends on many factors and the interdependency of different species in a common ecosystem is but one of the most important. Thus, the dwindling numbers of any of these species, due to habitat destruction, should be a

concern. Similarly, highly invasive weeds, such as *Merremia peltata* in disturbed forests, are degrading soils and the ecosystem. There is also an increase in popularity of many ecologically sensitive forests such as mangroves. These ecosystems must be protected by communities as they will help to boost ecotourism in the country and local people can earn income from tourists who visit these places.

The emphasis of successive governments on the environment and conservation has been documented in various policy statements they produced. Regarding the environment, the government produced Environmental Impact Assessment Guidelines and a Logging Code of Practice in 1990. These two documents were intended to help control or minimise the effects of developmental activities, such as logging, on the environment. The government – through the Ministry of Environment, Conservation and Meteorology – is currently embarking on work to expand the protected areas system, with a review of existing strategies. It has identified 16 goals for the programme of work on the protected area systems.

The Environment Act 1998 requirement for environmental impact assessments for development projects is giving planners the opportunity to influence the design of projects to minimise the degradation of local environments, including forests. The Act also establishes an Environmental Advisory Committee whose function is to advise the Environment and Conservation Division on environment and conservation matters referred to it by the Director or the Minister. The Act also requires that a *State of the Country's Environment* report be produced every three years: to be submitted for parliamentary debate.

In considering the controls on development activities – and for purposes of pursuing sustainable development – the Act incorporates four basic sustainable development principles: (i) the precautionary principle; (ii) fairness to future generations (*intergenerational equity*); (iii) conservation of biological diversity and ecological integrity; and (iv) improved valuation and pricing of environmental resources. Even though seen as being mostly reactive, the Act is also proactive in that it can issue advice and performance targets to public authorities on matters that may have direct or indirect bearing on the functions of the Division.

The Act is a powerful piece of legislation as it prevails in circumstances where there are inconsistencies with other Acts. The regulations to the Act are yet to be completed and enforcement issues have not improved due to reduced capacity within the Environment and Conservation Division and a lack of resources.

4. PROBABLE SCENARIOS AND THEIR IMPLICATIONS

Successive governments of the Solomon Islands have been talking much about rural development, yet very little has materialised and rural people remain struggling with their own affairs at the subsistence level. The CNURA government recognised that it is only when Solomon Islanders benefit from “development,” that the government can say it is addressing national needs. In other words the people should be at the centre of development. In launching of its policy statements, the CNURA government defines its vision for Solomon Islands as follows:

“A peaceful, united and God fearing society that respects and actively builds community that is honest, trustworthy and forward looking. As a sovereign state, a Solomon Islands that is determined to progress positively with confidence and high ethical standards based on its values, cultures, traditions, resource base with respect and credible leadership. A Solomon Islands whose positive contributions to the betterment of its people is also a contribution to the global community.”

With this vision, the government is, in actual fact, endeavouring to provide an enabling environment for the enhancement of “improved quality of life for all” through creating opportunities for self development to be accessed by all. The implications of this policy statement are that the achievement of the vision is dependent on the effective implementation of a number of priority areas including reconciliation and rehabilitation, national security and foreign relations, infrastructure development, the social services sector, the economic and productive sector, and civic affairs.

Forestry is grouped into the economic and productive sector, and the government is determined to see forestry further developed, with maximum benefits going to landowners. However, Solomon Islands forestry is rather a “mixed bag” at the moment, with the future outlook insecure, and this remains a challenge to overcome. Truly, forestry is a complex and sensitive issue in the Solomon Islands. Developing the forests and the resources therein will have to address issues in the political and operational realm, and from local to international levels. At the local level, there is the issue of the land tenure regime, which has been regarded as a key constraint to the development of customary land. With respect to logging, the tenure system is apparently providing opportunity for direct interaction between self-appointed chiefs and timber contractors, which in turn is leading to distortion of traditional governance and sharing of benefits; and to land disputes. By contrast, at the national level, the concept of a centralised state is weak. The reasons behind this include a mismatch between Westminster-style democracy and traditional governance; the failure of the state in providing basic services, whilst at the same time the economy is characterised as a subsistence economy so there is no demand for the state to provide such services; patron-client relations are apparent leading to corruption; and specifically related to forestry, the foreign logging industry has a strong hold over politics and decision-making. This has hindered the development and implementation of legislation. At the international level there is the existence of the regional assistance mission (RAMSI). The RAMSI Mission is also trying to grapple with the political pressures that the country is under in terms of local tensions and pressure from the foreign timber industry.

The present forest legislation is the Forest Resources and Timber Utilisation Act which was enacted in 1969. This Act has been amended a total of nine times, most notably in 1989 and most recently in 2000, when processes and procedures for the exploitation of forest resources were incorporated, including licensing provisions. The Act sets out the processes required to acquire a licence for tribal lands. It stipulates that trees can only be felled for sale under either a logging licence or a mill licence. A logging licence can only be issued over customary land if the Standard Logging Agreement has been entered into with the customary owners. Trees

felled under a mill licence must be milled and protective provisions apply to rainfall catchment areas, land required for flora or fauna conservation, and land liable to soil erosion.

The Forest Act 1999 was suspended in December 2000 by the Sogavare government. More recent legal reform (the Forests Bill 2004) has yet to pass through the legislature. The current forestry legislation can be characterised as lacking consistency and coherence due to the frequent amendments referred to above. Whilst the forest legislation has focused primarily on timber supply from the nation's natural forests, future emphasis will have to be given to setting the appropriate regulatory framework for forest plantations. Forest plantation development occurs at two levels of scale: (i) at an industrial level, where two companies (KFPL and EPPL) have considerable plantation areas, and (ii) a much larger number of small-holders. Each scale of operation requires its own regulatory attention.

In terms of protection forestry, there is no target percentage of Solomon Islands' total land area that is desired for protection, as a goal. However, the Solomon Islands is currently conducting a study to review existing legislation and strategies and to determine whether they are adequate to allow for a robust and proactive programme for the development of protected areas systems. One of the outcomes of this study is to determine the proportion of land areas considered ecologically reasonable for protection.

Rationale for scenario definition

It is important and appropriate to know more about the past, present and future of our forests and forestry sector in the country. Scenario definition provides an opportunity for this as it gives a snapshot of how the forests and forestry sector are likely to evolve into at a pre-determined point in the future. This is made possible with in-depth understanding and by applying lessons learnt from past and present situations. This prognosis of the future is a constructive and useful approach only if it is based on sound facts and understanding of the subject matter. With a clear picture of the situation, planners and policy-makers may have the opportunity to ponder over whether the scenario projected is consistent with the espoused vision and whether there is a case for interventions to enhance and improve on it. This is the rationale for which the scenarios are defined and examined in this report.

Elements (parameters) used in defining scenarios.

What the future scenarios hold is best determined by the extrapolation of the present situation, based on trends now emerging and realities that are likely to continue into the future. With respect to Solomon Islands forestry, production and protection are key aspects. Each of these aspects has elements which deserve attention. In production forestry desirable elements include: (a) sustainability of wood flow from both natural and commercial plantations, (b) how this may be achieved, (c) forest certification – is it a worthy cause to strive for? and (d) downstream processing of wood – who is doing it and at what economy of scale is it feasible? For protection forestry desirable elements are: (a) assessment of existing strategies and plans (b) the development of a protected area system, (c) understanding mandates of different stakeholders involved in managing protected areas and (d) the manner in which these priority needs will be pursued.

The business -as -usual scenario

Production forestry

Natural timber harvest: A recent study by USR (2006) predicted the exhaustion of natural timbers by 2015 – five years from year 2020 focused on in this report. There will be a couple of years with virtually no sawlog supply from natural forest, perhaps no large-scale logging

operations will exist then. There might be a few portable sawmills in operation, but they could be harvesting from already logged areas.

Plantation timber harvesting: Forest plantation is the “sunrise” industry and is the hope for the country to maintain wood flow for domestic and overseas consumption. KFPL began harvesting from its plantations, especially *Gmelina arborea* plantings in the 1980s and 1990s.

Forest plantation development: A number of programmes have been implemented, e.g. ACIAR, SPRIG, FMPI & II. in the Solomon Islands in response to the need for ensuring forest resources are better managed for long-term sustainability. One area of development is the establishment of forest plantations throughout the country. Plantings by industry and smallholders are progressing and will certainly increase national wood flow, although contributions from these plantations will not be significant until 2020.

Trade in wood products: Solomon Islands is currently importing value added wood products from overseas, mainly in Australia and China. Locally made furniture and other wood products are mainly sold at domestic market. In the event of the collapse of the timber industry as a result of supply shortage, Solomon Islands’ sawn timber requirements for general construction purposes will be imported. Trade in composite wood products is likely to continue in parallel with probable increase in home take-away earnings, remittances and involvement into contemporary lifestyle. Such high aspirations will mean increasing demand for sawn timber and other wood items for home construction and other domestic use.

Protection forestry scenario

Protected area network: The Ministry of Environment, Conservation and Meteorology is responsible for the protection and conservation of biodiversity in the Solomon Islands. In its policy statement, the CNURA government is determined to educate the people to be aware of their potential contribution to environmental damage and that they need to take action to assist environmentalists and the authorities to protect the environment. A study has commenced to provide background information on the existing strategies and plans and to further develop the Solomon Islands protected area system. An up-to-date survey to identify a nationally representative and implementable system of protected forest areas was conducted previously (Lees *et al.* 1990). This survey reported only 0.2% of the country is formally protected. This is not impressive at all for a country with more than 80% of its land mass under forest cover. Some formally protected areas include: Queen Elizabeth National Park at Mount Austin, Tekolea Forest Reserve, Vila Nature Reserve and Tombulu Forest Reserve in Kolombangara Island, Komarindi Catchment Conservation Area and Honiara Botanical Garden in Guadalcanal and Arnavon Conservation Area located between Choiseul and Isabel Islands. Other areas recently included are Tetepare Conservation Areas, Lake Tenago and Chivoko Conservation Area. The status of areas of high conservation value identified by Lees *et al.* (1990) needs to be verified as the challenge for their protection will require the cooperation of villages and customary landowners before protection is possible. Otherwise, these areas are likely to be degraded if not progressively lost in value for conservation purposes.

Forests for recreation: There is no record of recreational use of the forests in any formally protected forest areas in the Solomon Islands. At the Honiara Botanical Garden, people were seen passing through the garden and even stopping by to enjoy the scenery. A proactive management programme of protected area systems should expect to increase utilisation of protected forests for recreation over the next 20 years. Further, a strong push in the ecotourism development should provide an opportunity for significant increase in forest recreation. Obviously, urban population boom will find value for recreation in reserves and parks.

Forests for water resources

Water is life and so efforts to ensure water resources are properly managed should be an undisputed priority. The Water Resources Division in the Ministry of Mines, Energy and Rural Electrification is responsible for ensuring water resources are protected from all forms of pollution including wastes and poisonous substances, and that Solomon Islanders have access to clean and safe water supplies. The Solomon Islands Water Authority (SIWA) was established to take charge of urban water supplies and the government, through the Rural Water Supply and Sanitation Project, has been assisting rural communities to access water supply from the rainforest. Increase in population will proportionately increase demand for water and thus put pressure on water supply systems. Unless authorities are prepared for such surge in the demand, water scarcity may be an issue in the future. Greater efforts will be made to protect key watersheds and to rehabilitate them through replanting, riverside protection and other conventional measures.

Probable shifts and alternative scenarios

The way forward in the forestry sector is a shift from natural logging to plantations by both industry and smallholders. However, establishing woodlots alone may not be the best alternative for smallholders as they need to maximise return to their land. An integrated approach through agroforestry systems should be considered the best way with comparative advantages. Agroforestry addresses issues such as land scarcity, sustainable land use and the diversification of income-generating opportunities for people. Indigenous multipurpose trees have the potential to impact on peoples' livelihoods but they need to be developed as complementary to forest plantations. This approach will create a conciliatory scenario for the production of wood, fruits and nuts.

5. WHAT WE MAY SEE IN 2020

Forest resources in the next two decades

Unless the SIG is serious about making fundamental changes to rules and regulations governing forests and the forest sector, rather than maintaining the business-as-usual scenario, the future outlook for Solomon Islands' forestry is unlikely to be bright. Natural forests will be completely logged, with the remaining part in Choiseul the last to go within 5-10 years. The forest cover will continue to diminish, but at a slower rate, because there is not much merchantable forest left and a fair amount of the remaining high altitude forests has been locked up due to their inaccessibility. These areas may be incorporated into new national parks, managed watersheds, conservation areas and reserves.

The situation then would see an increase in protection forests and less natural production forests. Incremental increases in wood flows from the production forest would come from plantations, with a combined effort from both the industry and smallholders. Given assistance from the government and donor partners, smallholder woodlots created by local people will increase in numbers, though mostly at a very small scale i.e. less than 2 ha plots. However, lucrative agricultural opportunities, e.g. cocoa, vanilla and kava will provide competition to tree planting and are likely to blunt planters' interest and limit areas planted.

Companies such as KFPL have begun harvesting their plantations, but most smallholder plantations are not yet ready for harvesting. The volumes will not be significant because of the low levels of planting in previous years. Based on existing plantings, a sustained yield will be possible with an annual allowable cut of about 500 m³ per annum from village-scale plantations. Combined with plantations from industry such as KFPL and Eagon Resources Ltd, the annual cut is expected to be tripled. This level of annual harvest is not large enough to attract any significant investment in sophisticated wood processing and there remains a large risk of a high quality, but small resource being processed inefficiently.

Wood and wood products

If there is no significant improvement from the current business-as-usual pathway, then a downward spiral in supplies of wood and wood products will be a real issue by 2020. This scenario would seemingly lead to inevitable importation of sawn timbers for construction purposes and other domestic uses, because there would be enough produced locally to meet consumption demands. Already, an increase in imported furniture and other wood products has been observed, because people desire high quality wood and high quality finished products. Local carvers need quality wood from specific species to produce their superb finished products. Traditional artifacts such as clubs, shields, paddles, axe handles and spears require native timber species. Under the circumstances whereby natural timbers are in short supply or exhausted, carvers will be looking at alternative wood species and coconut wood is one they can utilize. Furniture makers and carvers may use their skills to capture a niche local market in hotels, resorts and offices, but they will find it difficult to compete in export markets, which are likely to be dominated by cheaper Asian exports.

Wood as a source of energy

The urban population will continue to increase as people migrate from rural areas in search of employment and a better life in urban centres. This increase will put pressure on supply chains from rural to urban centres for local foods and raw materials; including wood for domestic use. The pressure to meet these basic human needs will become a much greater

challenge in the future. Wood as a source of energy – which is currently common and is economical to use, especially for lower income earners – is likely to decline as effects of price and wood supply triumph. For example, the current price for a bundle of firewood (ranging from \$15.000 SBD to \$25.00 SBD) will soar and be much less affordable in the future. The price, coupled with shortages in wood supply, will drive the demand for wood as an energy option to a lower level, especially in urban centres. Inexorably, this scenario will force changes in the lifestyles of people, and will lead them to turn to presently more expensive methods of cooking, e.g. gas or electricity. However, in rural areas, the demand for wood as fuel is not expected to decline, despite alternative energy sources, e.g. solar energy may be introduced as sustainable and relatively cheaper for people.

Future of non-wood forest products

Diversification of agricultural activities to contribute towards meeting and sustaining the livelihoods of the people has been a focus of successive governments' policy statements. Indigenous fruits and nuts (non-wood forest products) in the wild have received little scientific attention, yet have been used by people of the past, present and will be in the future, to support their survival. Some of these tree species have potential for commercialisation and will generate cash incomes for the local people. A good example is ngali nut (*Canarium indicum*) which offers promise as an export crop for food and pharmaceutical products. The Solomon Islands must strengthen its research capacity in the agricultural sector to address issues relating to domestication of new crops, which have potential to impact positively on peoples' livelihoods.

Service and social functions of forests

The service functions of forests will continue to accrue importance into the future as the value of forests for recreation is increasingly appreciated. Proactive approaches such as regular public campaigns, forums and workshops leading to establishment of additional national parks, reserves and pristine ecosystems in conservation areas should be a positive direction to create an eye-open opportunity and promote the service functions of forests. Increased popularity and frequency of visits by foreign tourists and locals alike to parks and reserves is then expected.

Although, the term “conservation of biodiversity” is relatively new, the nature of associated activities is profoundly traditional. As time has passed, the traditional importance of nature and forest resources has gradually decreased as contemporary Solomon Islanders choose to enjoy new sceneries, views and perspectives on life. Unfortunately, it will take time for the new generations to appreciate our nature and what it offers. The expansion of the protected area system of parks, conservation areas and reserves will ensure the protection of rare ecosystems, habitats for threatened endemic birds and watershed values. Several sites of high conservation values that need to be protected are located on customary land. Opposing conservation on these sites is the opportunity provided to landowners by logging companies to log their land in return for cash. The challenge then is to convince customary owners to surrender their land, or the user rights, for conservation purposes. This is not simple to understand and unravel, but all those involved must do something about it. The growth expected in tourism may offer opportunities for ecotourism, which should facilitate forest protection. Government agencies such as the Ministry of Environment, Conservation and Meteorology (MECM) and the Solomon Islands Tourism Authority should be quick to seize and make the most of opportunities that do arise. Obviously, some of these unique ecosystems are likely to degrade beyond reversible thresholds and become extinct.

The issue of carbon sequestration and carbon trading will continue to be topical and the Solomon Islands must be involved to learn more about them. A government-driven approach

is a possible strategy and landowners would benefit from it in the long term. Information regarding climate change, carbon sequestration and carbon trading is not widely disseminated at the moment and only a handful of people are well-informed about these phenomena. The responsible authorities need to be proactive and educate the public about these issues, and give people an opportunity to make their own decisions. To remain in silence about these issues and take a wait-and-see approach may seem prudent, but is not useful for a country like the Solomon Islands to prepare for the future.

6. HOW COULD WE CREATE A BETTER FUTURE?

A case for greater government involvement in plantation forestry

The economy of the Solomon Islands has been described as a dual economy because of the importance of its large informal sector. Given the very low level of formal employment, the informal sector caters for the vast majority of people, who derive their livelihoods from their own land and labour resources. The informal sector may therefore be regarded as the backbone of the Solomon Islands' economy. There are very limited prospects in the short to medium term for significant employment generation outside Honiara and other urban areas. Thus most employment growth will have to occur in the informal sector, in rural locations, and be driven by forestry, agricultural production and marketing.

The difficulties that successive governments have faced in delivering services to rural people reflect the enormous development challenges facing the Solomon Islands. Populations are highly dispersed across a vast double-archipelago of islands. Inter-island transport and communication services are inadequate, and the road networks on most islands are very limited. The mountainous terrain of the larger islands creates highly isolated communities, some of which are relatively large. Most of the country is continuously wet and, in many places, excessive rainfall is a constraint to agricultural production and infrastructure development. Any development programme in the Solomon Islands needs to take into account these significant physical constraints and should seek to build upon existing systems and capacities that already function, despite the difficult physical conditions.

About 76% of the total area of the Solomon Islands is under forest cover, and the majority of this forested land mass is under customary ownership. Traditionally, there is no distinction between land and forest ownership, since forests are considered an integral part of the land. Thus, it is generally appreciated that anyone who has no land – or is caused to have no land – is a poor person. Provisions protecting customary ownership are enshrined in the Solomon Islands Constitution.

Commercial logging has occurred on almost all the islands over many years. Such logging activity has caused significant destruction of the natural flora and fauna, polluted rivers and streams, and degraded soils. Equal concern underpins the fact that natural timber harvesting is at an unsustainable level and is leading to a rapid decline in natural forest wood flows. Perhaps the best alternative option for the Solomon Islands is to encourage villagers to engage in forest plantations, especially in the smallholder sub-sector. Forest plantations are regarded as an important 'sunrise industry.' To get this sunrise industry thriving, however, will require appropriate and enhanced policy, institutional and regulatory frameworks to be put in place, so as to take into account the move from logging of natural forest to planting – by both the private sector and by smallholders. In fact, the CNURA government in its policy statement has strongly emphasised reforestation of logged areas and establishment of smallholder plantations.

Trees and forests are important for human survival. They provide products such as timber, medicine, fibre, food and fuel and services such as shade and shelter, and the amelioration of soil fertility; they are hosts to birds and animals, including mammals. Because of these important provisions, the people have always planted and protected trees on their land. However, a shift in focus to production, and maximising production from a single marketable species or commodity, has been a recent priority in many parts of the world, including contemporary Solomon Islands. This shift in focus overshadows the importance of trees and forests as a cornerstone in the livelihoods of the rural majority. Thus, instead of being

protected, trees and forests are increasingly destroyed through large-scale logging and agricultural development.

Recent studies revealed that unsustainable harvesting has increased significantly, from 645,000 m³/year in 2003 to over 1,000,000 m³/year in 2005 (URS 2006). Increases in issuance of new logging licences, some of which were overlapping existing licence areas, suggests that the unsustainable harvesting trend is perpetuating. Consequently, the natural forests have been considered as a rapidly declining resource, with commercial exhaustion predicted by 2015. With the exhaustion of natural forests, the timber industry will be in short supply of sawlogs and so is likely to collapse. Unless a meaningful intervention is made, the Solomon Islands timber industry will have to import sawn timbers from elsewhere to meet domestic demand.

As demand for sawn timbers increases with increased population, Solomon Islands must prepare itself to provide sufficient sawlogs for the timber industry. Clearly, the rapid decline in natural forests signals a doom-laden situation that cannot be left unattended. The country must seek ways to meet the challenge and provide opportunity to reduce any severe consequences associated with commercial timber exhaustion, such as economic, social and political disparities. A practical solution is necessary to provide a positive way out from this juncture.

Overcoming possible wood supply shortages will require the will and participation of key stakeholders in managing the forests and forestry sector. Our ability to stop further destruction of the natural forests and allow regeneration in logged over areas of natural forests is a crucial undertaking. In addition, investments in forest plantations by both industry and smallholders will increase wood flow significantly. While planting by industry would be limited by land availability, the expansion in village-scale planting is unlikely to be affected by this and is expected to continue. A conservative wood flow estimate of 500 ha/year is likely to come from village-based plantations (URS 2006).

Supporting a better future must be translated into the establishment of woodlots in rural villages, including schools throughout the country. Undoubtedly, policy support in this direction would increase the volume of wood from small-scale forest plantations. Over time, policy support to plantation establishment would contribute significantly to total wood flows in the country.

Production forestry

A sustainable flow of the broadest range of services and products from forests is most desirable. A sound future for the Solomon Islands would include capitalising on its comparative advantage by producing high quality hardwood timber to be fully utilised in both domestic and overseas markets. This should be coupled with fair trading and aimed at achieving parity in value terms. This wood-based industry will also generate other socio-economic benefits in rural communities and create opportunity to diversify the rural economic base.

Protection forestry and forestry for social services

In the Solomon Islands, this topic has gained moment over time, especially through significant contributions from non-government organisations. Security for values such as ecosystem services and functions, water, biodiversity, soil quality and general environmental health are addressed. The challenge confronting the country is to maintain and enhance what has been established to date.

On the regional and international front, the Solomon Island's active participation in regional and global fora on issues impacting on the use of forests is likely to continue. Climate change, biodiversity conservation, and the *Extended Program of Work on Forest Biodiversity* are among the issues engaging both representatives of the government and civil society. Close monitoring of issues such as carbon trading and intellectual property rights are particularly relevant given Solomon Islands' potential in both areas. In the case of the latter, the wealth of knowledge in traditional medicine that is linked to ngali nut and noni potential as pharmaceutical commodities is particularly significant.

Non-wood forest products and agroforestry products

The potential of Non-wood Forest Products (NWFPs) and Agroforestry Products (AFPs) becoming major contributors in the Solomon Islands' economy is huge. Products of this kind are abundant in the wild and are a part of the rich forest resources that have been constantly under threat from large-scale logging activities. The contribution of these products in sustaining the livelihoods of the people in terms of food, medicines, dyes, resins and fuel is overwhelming and traditionally significant.

The need to recognise the important roles played by NWFPs and AFPs in contemporary Solomon Islands is a vital consideration for a better future. A policy decision needs to be made to seriously undertake to explore and develop NWFPs and AFPs to become not only a source of food and medicine, but also significant income generators. A better future for the Solomon Islands will entail development of a broad-based economy, and rural people need to be given the opportunity to venture into activities that diversify and strengthen their income-generating abilities. Promoting NWFPs and AFPs through *in-situ* conservation and tree domestication to add value to agroforestry is the way forward to achieving this.

Forest plantations

The SIG recognises the importance of plantation forestry as a "sunrise" industry to meet increasing demands for wood consumption from both local and overseas customers. This reality is extremely vital in the short to medium term, until regeneration of natural forests has reached a commercial level – a cycle estimated to take 40-45 years. The need to have a proactive programme to encourage both industry and smallholder plantation forests is crucial to meeting this expectation.

Carbon trading

Carbon trading is a relatively new concept worldwide, although it has the potential to revolutionise the world in terms of mounting collective global efforts to reduce carbon emissions. Many countries with huge tropical rainforests have, over time, lost them; at least partially as a result of large-scale commercial logging. The need to protect the remaining forests, as well as pursuing plantation forestry for carbon trading, is a task for the Solomon Islands to seriously consider. The wait-and-see approach as alluded to earlier in this report needs to be weighed against availability of technical information on carbon trading and a strategic awareness programme targeting, especially, the resource owners.

Intellectual property rights

The ownership and the user rights over land and forestry resources in the Solomon Islands are largely held by the people. However, the state has the responsibility to ensure that the land and forest resources of the country are sustainably managed. Since the forests provide not

only timber resources, but also various non-timber products and services that sustain the livelihoods of the people, and to which the people have legitimate rights, the government must provide legal means to safeguarding such property rights from foreign influence and intrusion. Intellectual property rights are also based on indigenous knowledge, user-rights and ownership of the resources of the people. Recently, the Solomon Islands has lost the intellectual property right attached to *Canarium* oil as a foreigner has successfully applied to hold patent over it. This kind of practice must come to a halt.

Conservation of biodiversity

In 2008, the SIG, with financial assistance from UNDP through the GEF, undertook a study to assess the existing strategies and plans relating to developing a protected area system for the Solomon Islands. The establishment of the MECM by the present government is an appropriate forward step, with envisaged responsibility of it being the leading institution in enhancing environmentally-friendly and sustainable development in the country. The MECM has produced a Corporate Plan which outlines major strategies proposed by the present government, with the aim to fulfill sustainable livelihoods from 2008 to 2010.

Effective management of the protected areas is crucial for the long-term sustainability of the country's forest resources. To achieve this involves an effective and efficient monitoring system – this has received little attention from successive governments. This is partly to be blamed for the sporadic intrusion and deforestation of some existing protected areas, for example, the Queen Elizabeth Park at Mount Austin. An effective monitoring strategy is needed, and a review and re-designing of the existing monitoring strategy is necessary to ensure that the goals of PoWPA are upheld at national, provincial and local levels.

Stakeholders' participation and collaboration in the management of protected areas needs strengthening, and the government needs to develop a framework to seek ways of improving the coordination and collaboration between its agencies, NGOs and communities. It is important to encourage local participation to enhance sustainable management of protected areas.

Legislation

The law governing the management and utilisation of forest resources of the Solomon Islands is, at present, the Forest and Timber Utilisation Act . This Act is outdated and now commonly unpopular, and with all its confused amendments creates many of the problems currently experienced in the forestry industry. In 1999, the government passed the Forestry Act 1999, but was not gazetted, thus it cannot be enforced. The Forestry Bill 2004 was then drafted with provisions for the conservation of forests and the improved management of forest resources, control of timber harvesting, encouragement and facilitation of sustainable forestry activities, establishment of plantations, and domestic processing of timber. Even though the Bill has been subjected to considerable public consultation, it has been seen as lacking satisfactory landowner consultation, and thus has been perceived as lacking local ownership as well, with locals perceiving that it has been driven too much by foreigners. It has therefore suffered undue political dissection.

For a better future, the SIG urgently needs to put into force a comprehensive and thoughtful Forestry Act to govern the management and utilisation of its forest resources.

Overall priorities and strategies

The Solomon Islands' priority in forestry is to put in place measures to minimise – or even better, to stop – timber harvesting in natural forests, and to pragmatically pursue the development of forest plantations by both industry and villagers. It must be acknowledged that tree planting at the village level has progressed well. However, the need for further activities and to involve others, such as the Rural Training Centres (RTC) and High Schools and Institutions (e.g. SICHE) would be a better attitude than complacency.

Watershed protection and protection of areas with significant ecological sensitivity is another priority, but one wherein government commitment is assured and the direction is clear. The critical need going into the future is the ability of technical officials to implement management plans, particularly when challenged by customary land issues. Key activities are in capacity building and training, and replanting of vulnerable areas. The expansion in the protected area system is an issue the government must consider. However, further work is needed to bring ecosystems and habitats of national and global significance under conservation management. The purpose of national parks is to protect ecosystems and species that make up the Solomon Islands' natural heritage. This is the next challenge for Solomon Islands' protected area system.

7. SUMMARY AND CONCLUSIONS

The outlook for Solomon Islands' forestry consists of major challenges within the production forestry sub-sector, where the imminent depletion of natural forests will leave a gap in wood supplies that replacement plantation forests are unable to replace in time to avoid severe shortfalls and economic consequences. The Solomon Islands will be a net importer of forest products for the foreseeable future, unless practical action is taken to materialise the government's policy towards forest plantations. Unless stepped up, current efforts to replenish depleted forests with community and individual plantings are insufficient and will generate low volumes that will most likely only perpetuate a low-technology and inefficient forest industry such as that existing today. It would be a shameful way to waste the potential inherent in the timber species that the Solomon Islands has and can easily produce. Thus a business-as-usual approach to forest creation is irresponsible and short-sighted.

Forest protection is making good headway, with an expanded protected area network, protected and managed watersheds, and community-based conservation areas. There is a commitment to an integrated and holistic approach to resource management that is refreshing and encouraging. The institutional framework under which water, land and forest resources are placed needs to work interactively so as to provide a promising platform for effective resource management. The challenge is in making it happen by providing the Ministry of Forestry with the needed technical capacity, additional staff and appropriate budget.

8. RECOMMENDATIONS

1. The Solomon Islands' vision for production forestry needs to be revisited and better clarified. Assuming the Solomon Islands is interested in using its comparative advantage in the production of highly demanded and marketable timber species to achieve some parity in value terms in its timber trade, the vision should define the size of a forest estate that should be established, identify timelines, the products to be produced and provide a glimpse of the type of industries that should be encouraged to process the future forest resource.
2. The Solomon Islands must continue to increase its focus on plantation forestry development. The national planting target, excluding forest plantation industry currently at 500 ha/year, should be increased to 600 ha for the next ten years. Plantation industries should be encouraged to increase production and venture into downstream processing.
3. Expansion and upgrading of the Solomon Island's protected area system should be considered; including areas of high conservation value previously identified in the recent report on the Protected Areas Systems.
4. The integrated approach to the management of land, water, and forests should be facilitated and supported.

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