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**THE VALUATION OF SUBSISTENCE USE OF TROPICAL
RAINFOREST ON THE ISLAND OF CHOISEUL,
SOLOMON ISLANDS:**

**A COMPARISON BETWEEN SUBSISTENCE VALUES AND LOGGING
ROYALTIES**

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To the villagers of Nukiki:

*For I was hungry and you gave me something to eat;
I was thirsty and you gave me drink;
I was a stranger and you took me in.*

Matthew 25:35

ABSTRACT

This thesis values village subsistence use of tropical rainforest and examines the socio-economic impact of rainforest logging on the island of Choiseul in the Solomon Islands.

The destruction of tropical rainforest has become a matter of major international concern. Despite strong opposition to it, tropical rainforest clearance continues at an alarming rate. Economically one of the reasons for this continued destruction is that the immediate financial benefits to be gained from the exploitation of the forest often appear to far outweigh the perhaps greater long term benefits to be gained by a lesser, but more sustainable, form of use. Considerable environmental and social costs are often incurred through forest destruction but these are not always borne by those who have profited from the destruction.

Very little research has been undertaken in the Pacific to quantify the impact of tropical rainforest logging on rural village communities. In an attempt to redress this, some four and a half months were spent in the Solomon Islands during 1991 researching and then valuing the subsistence use of tropical rainforest. The field work was undertaken in the villages of Nukiki and Kuku on the island of Choiseul. The villagers were heavily reliant on the subsistence use of the rainforest for their livelihood. Values calculated for these uses were quite substantial at \$10,512.15 per annum for the average sized (seven member) household.

Using information from Nukiki and applying it to the village of Kuku, where a logging operation had trespassed on village land, it was clear that the villagers had been severely disadvantaged when their land was logged. For example, one area of 41 hectares near Kuku village, was calculated to have yielded 2,018 cubic metres in merchantable logs. The villagers were to be paid \$9.00 per cubic metre which would give them a once-only royalty payment of \$18,162.18. Subsistence losses from the same area were reported to be four garden sites, six nari and sulu nut trees, 21 betel nut trees, 346 sago palms and approximately 25 percent of the villagers' other useful trees such as those used for housebuilding, canoe making, medicine and food. This loss in subsistence production would be sustained over many years and was calculated to have a present value of \$176,613.13. The net loss suffered by the village as a whole was therefore \$158,450.95, or a substantial \$7,545.28 for each of the 21 households.

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PREFACE

This thesis attempts to identify and value the subsistence use of tropical rainforest by the people of a Solomon Island village. Values derived are applied to subsistence losses suffered by a second village during logging. The value of these losses are then compared with estimated logging royalty payments.

In Chapter 1, tropical forestry as an environmental issue, is discussed in global terms whereas in Chapter 2 the tropical rainforests of Melanesia, and man's use of these forests, are examined more closely. The Solomon Islands government's efforts to develop forestry policy appropriate to the needs of an emergent nation are summarised in Chapter 3 and in Chapter 4 the research location and research methods used in the study are introduced. Chapter 5 identifies subsistence use of the forest by the villagers of Nukiki and in Chapter 6 these uses are valued. The socio-economic impact of logging on the nearby village of Kuku is examined in Chapter 7 by applying valuation data from Nukiki to the subsistence losses suffered by Kuku villagers through logging. These losses are then compared with estimated logging royalty payments. Finally, a short conclusion and summary of the thesis is provided in Chapter 8.