Poverty and Social Assessment

PART I: Land Transport Infrastructure Subproject (St. Martin Road)

Project Number: 41171-02
November 2010

SOL: Transport Sector Development Project

Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
AIDS	–	Acquired Immune Deficiency Syndrome
AOA	–	Agricultural Opportunity Area
BNPL	–	basic needs poverty line
CDO	–	Community Development Officer
COL	–	Commissioner of Lands
CPIU	–	central project implementation unit
DAL	–	Department of Agriculture and Livestock
EMP	–	environmental management plan
FGD	–	focus group discussion
FPL	–	food poverty line
GAP	–	Gender Action Plan
HIES	–	Household Income and Expenditure Survey
HIV	–	Human Immuno-deficiency Virus
IEC	–	information, educational, and communication
IEE	–	initial environmental examination
IP	–	indigenous people
ISMID	–	Institutional Strengthening for Ministry of Infrastructure Development
KGA	–	Kastom Garden Association
LBES	–	labor-based, equipment-supported
MDGs	–	Millennium Development Goals
MID	–	Ministry of Infrastructure Development
NERRDP	–	National Economic Reform, Recovery and Development Plan
NGO	–	Non-governmental organization
NPGEWD	–	National Policy on Gender Equality and Women's Development
PCAE	–	per capita adult-equivalent expenditure
PCERP	–	Post-Conflict Economic Recovery Project
PSA	–	poverty and social assessment
RAMSI	–	Regional Assistance Mission to Solomon Islands
RRA	–	rapid rural appraisal
RTC	–	Rural Training Centre
RF	–	resettlement framework
SD	–	standard deviations
SDO	–	Social Development Officer
SI$	–	Solomon Islands dollar
SIRIP	–	Solomon Islands Road Improvement (Sector) Project
STC	–	Save the Children Fund (NGO)
STI	–	sexually-transmitted infection
TA	–	technical assistance
TPPD	–	Transport Policy and Planning Division (of MID)
UNDP	–	United Nations Development Program
WAC	–	ward advisory committee

TABLE OF CONTENTS

I. INTRODUCTION

A. Background of the Project

1. The Solomon Islands is an archipelago of nine groups of islands (provinces) in the south-west Pacific, located between latitudes 5°S and 12°S and longitudes 152°E and 170°E and lies east of Papua New Guinea and north of Vanuatu, as shown in **Error! Reference source not found.**.

Figure 1- Solomon Islands

2. Between 1999 and 2003, ethnic tension and civil unrest in Solomon Islands led to a breakdown of government services, with maintenance of major infrastructure unable to be undertaken and important access routes (roads, shipping and air services) falling into disrepair. The Government of Solomon Islands (the Government), with assistance from a number of development partners is improving the efficiency of the national and provincial transport network and services.

3. The Asian Development Bank (ADB) has provided assistance to the Solomon Islands since the 1990s, in particular, ADB has engaged in a partnership with the Government in the transport sector, as the lead donor, through provision of substantial policy, institutional and legal reform support, and contributing to creation of an enabling environment for public sector development and participation.

4. The ADB's Solomon Islands Interim Country Partnership Strategy 2009-2011 seeks to reduce poverty by promoting equitable private sector led economic growth through improved

transport infrastructure and services and a stronger business encouraging environment. Capacity development and promotion of good governance are guiding priorities.

5. As part of its support, ADB has agreed to assist the Government by providing a project preparatory technical assistance (PPTA) for preparing the Transport Sector Development Project (the project) - TA 7335-SOL.[1] MID is the executing agency (EA) for the project and overall coordination of the project will be coordinated by Transport Policy and Planning Division (TPPD) with oversight from the Project Steering Committee - an inter-agency group including representatives of Government.[2]

6. The objective of the project is to contribute to improved sustainable accessibility through enhanced land, sea and air transport in the Solomon Islands, by creating feasible investments for the transport sector to be financed through subsequent grants. Institutional and capacity development needs will also be identified for the preparation of a technical assistance associated with the investments, for expected financing on a grant basis from the Japan Fund for Poverty Reduction.

7. The project is developing subproject eligibility and prioritization criteria, based on criteria proposed in the National Transport Plan (NTP), and using the criteria, MID will determine the list of potential road, wharf and airstrip investments/subprojects. Investments could include some construction of new facilities, and rehabilitation/improvement of existing facilities. Maintenance, as an integral activity, is assumed for all investments.

8. The PPTA is preparing two subprojects (selected from the long-list) as sample subprojects to establish the overall process and frameworks to be adopted during identification and implementation of subprojects/investments. The process is based on what is currently being used by MID on other projects being implemented in the transport sector, and is therefore building upon the training delivered to date and processes within safeguards, economic, and technical sectors etc that MID is already familiar with. [3]

9. The two sample subprojects being prepared during the PPTA include:

- St. Martin Road (8.5 km), Guadalcanal Province; and
- Gizo (Nusatupe) Airstrip, Western Province.

10. This poverty and social assessment (PSA) has been prepared for the St. Martin Road subproject.

B. The Subproject

11. The subproject is located in Guadalcanal Province, which ranges between 9.24-9.95 ^{o} south and 159.52 and 160.93 ^{o} east and which is the location of the national capital, Honiara.

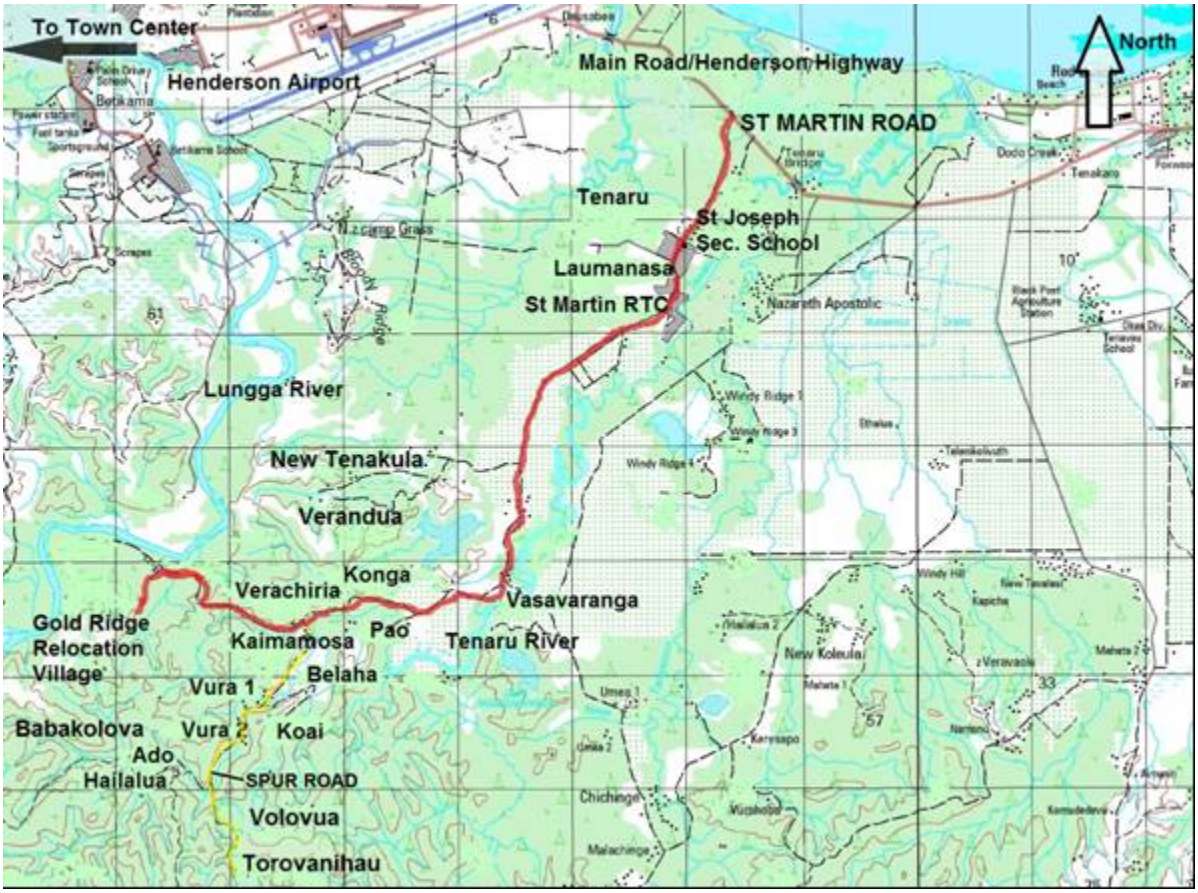
[1] The purpose of the project is to prepare transport sector activities to be implemented through the National Transport Fund and other possible sources (development partners). Activities include: rehabilitation, repair and improvement, and construction of transport infrastructure (roads, wharfs, airstrips); maintenance works, including labour-based, equipment-supported (LBES) activities implemented by community groups or small-scale contractors; and, institutional strengthening.

[2] Including the Permanent Secretaries of Ministries of Planning, Finance, Infrastructure Development, Commerce, Rural Development, as well as representatives of other development partners.

[3] Solomon Islands Road Improvement (Sector) Project (SIRIP) and Domestic Maritime Sector Project (DMSP) have established procedures for technical and economic analysis as well as safeguards assessment of subprojects. Road and wharf subprojects have also been selected, feasibility studies prepared, and currently being implemented under Solomon Islands Emergency Assistance Project (SIEAP). The SIRIP and DMSP procedures have been reviewed and adapted for subsequent use in the project.

The Main Road (Henderson Highway) is located on the northern coast of the island, and the subproject road is located 4.4 km east of the Henderson Airport, and 13.7 km east of the town centre, as shown in Figure 2.

Figure 2 – St. Martin Road Location



12. The subproject road, located to the east of the Honiara International airport, connects the Main Honiara-Aola Road with several communities, two schools, a clinic, gardens, cocoa and coconut plantations, and two Rural Training Center (RTC) rice cultivation demonstration projects.

13. The works proposed for the subproject will rehabilitate the road to a more serviceable and maintainable condition, and allow passage of the main vehicles which use the road all-year round. This road is on the priority list of MID for rehabilitation and maintenance.

14. The length of the subject road is approximately 8.5 km, and traverses an area between the Main Road (Henderson Highway) and two rivers; Lungga River and Tenaru River. The running surface, pavement thickness, road condition, and width vary from section to section. The first section from the Main Road to St. Joseph Secondary School (Km 1.4) averages approximately 5.5 m in width and includes structured drains on one or both sides. The next section, from the school to the junction where the road separates into a track to the Lungga River (unused for many years[4]) and a road to the Gold Ridge Relocation Village at Km 7.7, is

[4] This section of the road used to serve two Malaitan communities (Veradoma) living in the vicinity of the Lungga River, these two communities departed during the tensions and have not returned, since that time the section of

about 4 m in width. There are drains in some sections of this latter section which have become overgrown and require clearing. In other cases, the road shoulder has eroded below the level of the drains and drainage of the road is ineffective.

15. The vertical alignment is almost flat with occasional rolling spots. Locations where road damage occurs where the road has eroded or there are depressions where water accumulates after rain. The existing pavement was constructed with river gravel mixed with sand and clay over most sections of the road. Pavement thickness also varies but is an average in the order of 150mm.

16. Results of the road condition survey indicate that the travel speeds range between 20 km/hour and 30 km/hour, mostly as a result of large pot holes and depressions filled with water.

17. The main objective of the road subproject is to improve access to the local communities and services (school, health centre and RTCs). It is part of the overall objective of improving the transport networks of the country as stipulated in the National Transport Plan (NTP). Short term benefits include better accessibility (for both vehicles and pedestrians), reduced road safety hazards, and immediate improvement in service delivery.

18. In general, with suitable repair, the existing road is maintainable and trafficable albeit at a reduced speed at locations where road damage requires more extensive rehabilitation (such as digging out the running surface, replacing and compacting the base-course and re-surfacing with gravel). The proposed works include the following:

- For the first 2 km section of the road, provide a new pavement surface dressing with standard camber of at least 5%, excavate/clear existing side drains and where required provide cross-drainage pipes;
- For the remainder of the road, the proposed works include spot improvements such as reshaping, re-grading using river gravels from Lungga River[5] and drainage improvements by clearing debris from existing drains and where required, excavate the earth drains where they have become densely overgrown;
- Periodic maintenance including filling of pot holes and ruts/corrugations and grading of gravel at yearly intervals; and
- Vegetation control (clearing overgrowth, remove vegetation and other obstructions blocking drainage channels and fallen branches) at six monthly intervals.

II. PROVINCIAL CHARACTERISTICS

19. This chapter describes the main features and characteristics of the province in which the subproject road is located.

A. Geography and Land Use

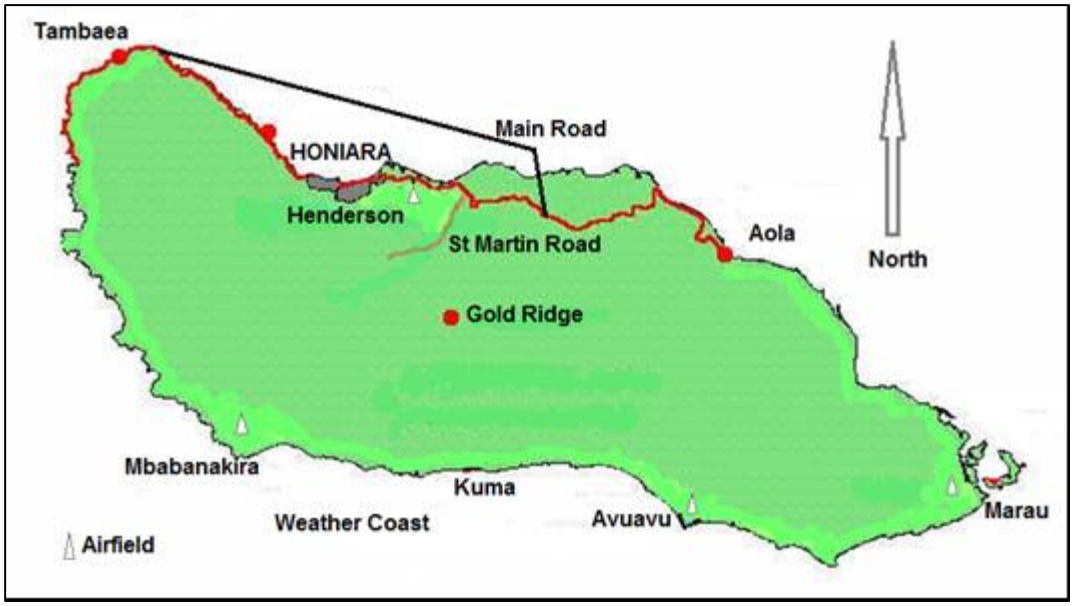
road has received no maintenance and has become overgrown with grass and shrubs and resembles little more than a walking track.

[5] MID already has in place a number of agreements with the resource owners along the Lungga River for use of river gravels for road maintenance.

20. The Solomon Islands has a land area of approximately 28,000 km^2 and comprises nine island provinces and somewhere in the order of 900 smaller islets and atolls. Honiara Town[6] is a separate administrative unit from the rest of Guadalcanal.

21. Guadalcanal Province consists of the main island of Guadalcanal and a few smaller islands that are located mainly on the eastern and south-eastern sides of the main island. Guadalcanal is located between latitudes 9^o and 10^o south and between longitudes 159^o and 160^o east. It is 160 km long and 45 km wide at its centre. Its total land area is 5,336 km^2. Honiara, the capital city of the Solomon Islands, and Henderson Airfield, the main international airport in the Solomon Islands, are both located on the Main Road.

Figure 3 - Guadalcanal Province



Source: Solomon Islands Department of Lands.

22. As described in the Smallholder Agriculture Study, the island consists of five distinctive physiographic regions.[7]

- A north-west to south-east trending mountainous spine, lying close to, and parallel with, the southern coast. The mountainous areas contain steep-sided valleys and two of the highest peaks in the country – Mt. Popomanaseu (2,330 m) and Mt. Makarakomburu (2,450 m - the area of this region is 2,240 km^2;
- Immediately north of the southern mountains is an east–west aligned band of ridges and hills (the Central Hills) covering an area of 1,440 km^2;
- The above region merges northwards with the northern foothills, which extend over an area of 620 km^2;
- North of the foothills are the northern plains of Guadalcanal which extend from the Lungga River in the west (east of Honiara) to Kaoka Bay in the east, with an area of 460 km^2. The subproject area is included in this region; and
- The fifth region is the north-western volcanic area of 540 km^2 and which occupies the north-western corner of the island. The subproject is located in this area.

[6] Also referred to as the Honiara City Council area.
[7] AusAID a; *Solomon Islands Smallholder Agriculture Study – Volume 4 Provincial Reports* (2006)

23. There are large variations in both total rainfall and its seasonal distribution on the island. The mean annual total rainfall is in the order of 2,000 mm on the north coast, and about 5,000 mm on the south coast. The estimated mean annual rainfall in the mountainous interior is about 8,000 mm.

24. In terms of administration of land, the country is divided into nine provinces which include a central island (larger land mass) and usually several smaller islets and atolls. Each province has a provincial town which includes representative Government agencies as departments and offices. Provinces are divided into wards which are further divided into villages.

25. The subproject road is located in the Malango ward and passes through parts of seven enumeration areas.

26. The most important land use activities on the northeast, north and northwest coasts included Solomon Islands Plantation Limited on the Guadalcanal plains, the Gold Ridge Mining development behind Honiara and the prawn farm at Ruaniu in the northwest. All these were closed down and most infrastructure destroyed by the Guadalcanal militants during the social crisis (1999–2003).

27. Cocoa and coconut plantations that are scattered round the island are the main land use, and prior to the ethnic tensions there were copra buying points at Manikaraku (Marau Sound) Mbalo (southeast Guadalcanal), Haimarao and Marasa, (south Guadalcanal) and in the subproject area at Lambi (north-west Guadalcanal). The Livestock Development Association (LDA) holding grounds were also set up at Manikaraku (Marau Sound), Tangarare (on south-west Guadalcanal), and at Aruliho and Mamara (north-west of Honiara).[8]

28. Honiara city may be regarded as one of the major land uses on Guadalcanal. It occupies a large part of the northwest coastal side of the island. The Guadalcanal Provincial office is situated in Honiara, and Henderson International Airport is located east of Honiara, outside the town boundaries.

29. In terms of potential land use, the Land Resources Study conducted in 1974 identified six agricultural opportunity areas (AOA) on the island, with a total area of 746 km^2. All are located on the northern side of the island, with the plains being the largest at 337 km^2 (45% of the AOA).[9] Also, the Forestry Division has noted that the ideal conditions for growing vanilla are found between Visale and Ruavatu in the northeast of the island.[10]

30. Most land on the island is non-registered customary land (83%), 14% is registered alienated land owned by the Government (under Perpetual Estate), some of which is leased to individuals, and the remaining 2% is freehold land.

B. Population, Settlements and Culture

[8] AusAID b; *Community Sector Program – Community Snapshot Final Report*, Honiara (2006).
[9] AusAID a; op cit (after Hansell & Wall, 1974).
[10] Ibid.

31. At the 1999 Census, the total population of the province was 60,275, with 49,000 people in Honiara.[11] Based on the 1999 Census figure and using a 2.8% growth rate, the provincial population in 2010 is estimated to be in the order of 78,300, with about 63,000 people living in Honiara.[12] Most of the people outside Honiara live in rural villages, although those in close proximity to Honiara have a more urban lifestyle.

32. There was a large outflow of people in 2000, during the ethnic tensions, when nearly 13,000 people in Guadalcanal were displaced. Since Regional Assistance Mission to Solomon Islands (RAMSI) force restored security in mid-2003, people have returned to Honiara and other parts of Guadalcanal (mostly on the northeast and northwest areas of the island).

33. The population density of the Solomon Islands at 13 persons/km^2 is considered relatively low. The population density on Guadalcanal (11 persons/km^2) is lower than the national average. In terms of the whole island, there is a concentration of people on the northern coast, along the Guadalcanal Plains, which is where the three major economic and residential areas are located.[13] Much of the mountainous interior of the island is uninhabited although there are some isolated villages in the central hills south-east of Ruavatu near the Mbokoibo and Nggurabibusu rivers. Most settlements, as well as the more populated settlements, are located along the northern coast because of its more favorable environmental conditions.

34. Nearly 90% of Guadalcanal people live on customary clan (sometimes referred to as a line) land. Traditionally, Guadalcanal societies are matrilineal where land and property are inherited from the mother and the mother's family. It is a traditional practice that a male marrying into a line or clan will have rights to use the maternal clan land, and while a male member of a clan marrying a woman from another clan has the right to bring his wife to live on his clan's land, the wife and children will not have land owning rights on the clan land.

35. There are eighteen different, but related, dialects spoken on Guadalcanal. The dialects are of the one prototype of Guadalcanal language and it is relatively easy for people from one language group to understand and talk to people from other groups using their own dialect.

C. Economy

1. Impact of the Ethnic Tensions

36. The ethnic tension that affected Solomon Islands between 1999 and 2003 has had a profound impact on many people in Guadalcanal. Many people on the Weather Coast fled the fighting and moved inland or closer to Honiara.[14] On the north coast, much economic activity collapsed, including the closure of oil palm plantations, Gold Ridge mine, and many expatriate-owned plantations and industry were abandoned. Many facilities were destroyed, or left un-maintained and have since deteriorated, and delivery of services were severely affected. Thousands of migrants left the province, particularly those from Malaita; this includes the two large Malaitan settlements at the end of St. Martin Road (Veradoma 1 and Veradoma 2) which were completely deserted and never re-established.

[11] SIG a; *Report on the 1999 Population and Housing Census*, Statistics Office, Honiara (2002).
[12] As a result of migration which is not tracked, the population of Honiara is not known. Some estimates consider it much higher than 63,000, placing the figure at between 80,000 and 120,000 (World Bank, REP reports, April 2010).
[13] Ibid.
[14] AusAID a; op cit.

37. Although security was restored by the RAMSI force from July 2003 onwards, the economic, social, and demographic impacts continue in all parts of the province. As a result, Guadalcanal province is considered to be about ten years behind in terms of socio-economic development.[15]

2. Economic Activity

38. According to the Census, the number of people on Guadalcanal of working age, i.e., 15 years accounted for 60% of the total population. Some 22% of the working age population was engaged in paid work, 65% had been undertaking unpaid work, and about 13% had been looking for paid employment.[16] These statistics imply that about 70% of the population may be categorized as dependent; however, part of this group would be included in the informal subsistence economy and contribute to small-holder activities. These data portray a serious picture of the quality of life and the long-term livelihood of the people of Guadalcanal in terms of income earning and distribution.

39. Despite the island being large, economic activity is concentrated on the north coast and in other locations with access to Honiara. The main sources of cash income for villagers and settlers are sales of fresh food and animals at Honiara market and other locations, as well as copra and cocoa production. There has previously been significant agricultural development in North Guadalcanal with both small-holder agriculture and large-scale estate development. The latter includes production of copra, cocoa, rice, cattle, and oil palm. In the more remote villages, subsistence food production is important, with the main crops being sweet potato, cassava and banana.

40. Overall, about 40% of households are engaged in fishing for trade (40% fish and 39% shellfish), while on Guadalcanal 14% of households are engaged in the sale of fish products (16% sell fish and 5% sell shellfish and crabs).[17]

3. Cash and Plantation Crops

41. Copra and cocoa are both produced and sold in North Guadalcanal, with copra produced by more households than cocoa. In 1999, most copra (60%) was transported for sale by truck, and most of the rest (39%) by canoe with an outboard motor. After the collapse of copra exporting in 2001, the industry revived, and in 2003, some 3,314 tonnes of copra were produced in the province, which represented 23% of national production and is comparable with the volume produced in the mid-1990s when Guadalcanal provided about one-quarter of total production. North Guadalcanal is the most important cocoa-producing region in the country, although there are no statistics available on actual production levels, it is known that the main producing regions in North Guadalcanal are similar to those of Malaita, Makira and Isabel.[18]

42. There has also been substantial investment in plantation tree crops on the Guadalcanal Plains, the main crops being coconuts, cocoa, and oil palm. A major oil palm development included 6,000 ha of plantation, and represented the second largest source of export income for Solomon Islands prior to the ethnic tension. The palms are still intact, but most of the physical infrastructure has been destroyed. Hence, there was little incentive to re-establish the plantation

[15] Ibid.
[16] SIG a; op cit.
[17] UNDP et al; *Common Country Assessment Final Report*, Suva (March, 2002).
[18] AusAID a; op cit.

crops after the destruction caused by Cyclone Namu in 1985 and further disruptions to production caused during the ethnic tensions.

4. Forestry

43. The *Small-holder Agriculture Study* notes that there is little or no small-scale forestry on Guadalcanal. In one community (just east of Honiara), villagers were earning some money from the sale of timber. In terms of large-scale forestry, even though much of the island is forested, many of the trees are in areas that are unsuitable for logging operations as forestry regulations forbid logging on slopes above 400 m. However, the presence of substantial forest resources attracted a renewed interest in logging after the 1960s when some operations took place in the northern, central and north-east regions of the province. By the mid-1990s, there were 28 sawmill or chainsaw operations in the province; only six were still active by early 2000s.[19]

5. Markets and Commercial Activities

44. The people of North Guadalcanal have good opportunities to sell food and other products in and near Honiara. There is a large food market in Honiara, and two smaller markets located to the east at Kukum and at White River on the western side of the town. There are also numerous small and informal markets that operate in villages, settlements, teaching and health institutions, and roadsides. The most common items on sale were sweet potato, banana, coconuts, fruit (including pawpaw, mango and citrus), various green vegetables, other vegetables (including pumpkin and capsicum) and nuts, particularly ngali nuts.

45. Also offered for sale were significant quantities of cut flowers, coconut oil, jewelry, processed foods (especially popcorn and baked or fried flour-based foods), chickens, fish and other seafood. While the majority of sellers (approximately 80%) were women, this is difficult to assess because many vendors operate as family groups.

D. Transport Infrastructure and Services

46. Guadalcanal is served by land, sea and air. Henderson International Airport is the largest airfield in the province, and is located just outside of Honiara. There is an operational airfield at Marau located at the eastern end of the island which has scheduled flights four days per week (but is not always reliable) and is used as the service for people travelling to and from the Tavanipupu Resort, as well as access to the Weather Coast and eastern Guadalcanal. There are two non-operational airfields located along the weather coast (Mbabanakira and Avuavu).

47. Major international and industrial wharf facilities are located in Honiara at Point Cruz and this is the main embarkation and disembarkation point for all shipping in the Solomon Islands. All coastal parts of Guadalcanal are connected by sea transport, mostly by simple beach landings with people and cargo being transferred at sea into tenders or outboard motorboats. This can be particularly dangerous during storms or rough seas. There are three wharves located at the eastern end of the island (Marau, Makina, and Manikaruku).

48. There are approximately 320 km of road in North Guadalcanal, although many stretches are in a poor state of repair, some of which are the subject of a repair and maintenance program under SIRIP and MID's routine maintenance works. There is no road that completely

[19] AusAID a; op cit.

circumnavigates Guadalcanal. According to MID's database, the main trunk roads are the East Road (79 km) between Honiara and Aola but in very poor condition beyond Ruavatu, and the West Road (69 km) from Honiara to Lambi.[20] It is these two roads which together are known as the Main Road.[21]

49. In terms of access to the main urban centre of Honiara, Guadalcanal can be divided into four units; east, west, north and south. The north, and to some extent the eastern and western areas have comparatively better access than regions in the south. The East-West Road provides for the main transport route and market access for those areas.

50. There are approximately 11,000 vehicles in Solomon Islands, of which 90% are on Guadalcanal (three-quarters in Honiara), 8% in Malaita, and 1% in Western Province, and the remainder spread throughout the other provinces.[22] Outside of Honiara, traffic volumes are very low, and the main form of transport is by boat.

E. Health and Education Services

1. Health Services

51. Solomon Islands health service system mostly operates through preventative primary health care services, with patient referral when necessary from local to area to provincial to national levels of service. Health facilities in Guadalcanal include the National Referral Hospital (in Honiara), six area health centers, 13 rural health centers, nine clinics, and 23 nurse aid posts. Some health facilities are staffed with only a nurse aide and/or malaria diagnosis technicians.

52. Based on information provided in the most recent health survey, it can be seen that Guadalcanal has the largest proportion of women receiving antenatal care from either a doctor or nurse aide compared with Honiara or other provinces but a smaller proportion of women receive care for a nurse or midwife. Overall, 94% of women on Guadalcanal receive care from a trained or skilled provider compared with 95% of women from rural areas and 96% of women from other provinces.[23]

Table 1 - Women Receiving Antenatal Care

Location	Provider from whom women receive antenatal care (%)						
	Doctor	Nurse/ midwife	Nurse aide	Community health worker	Traditional birth attendant	Other	Receiving care from a skilled provider
Honiara	3.9	79.9	9.7	0.4	0.1	3.1	93.4
Guadalcanal	4.0	63.0	26.7	0.4	1.1	0.1	93.7
Other provinces	0.0	75.4	20.9	0.1	0.0	1.1	96.3

Source: SIG - Demographic and Health Survey (2007).

[20] Data made available from MID.

[21] On some maps the East-West Road is shown as Henderson Highway or indicated as sections including Mendana Avenue where it passes through Honiara, and Kukum Highway to the east of the town.

[22] ADB a; Report and Recommendations of the President: Proposed Asian Development Find Grant - Solomon Islands: Road Improvement (Sector) Project, Project No. 39581, Manila (July 2006).

[23] SIG c; *Solomon Islands Demographic and Health Survey 2006 - 07 – Preliminary Report*, Statistics Office, Honiara (2007).

53. The *Demographic and Health Survey* also provided data on overall, vaccination coverage for children age 12-23 months, who should be fully vaccinated against the six preventable childhood illnesses. Overall, some 83% of children are fully vaccinated with BCG, measles and three doses of DPT and polio. However, only 78% of children on Guadalcanal have been fully vaccinated compared with 84% in Honiara.[24]

54. The HIES statistics show that only 15 % of the population has access to modern toilet facilities. The problem of sanitation is closely related to the lack of availability of adequate permanent water supplies. Only 40 % of the population has access to a Rural Water Supply Scheme (RWSS) or a Solomon Islands Water Authority (SIWA) service. The majority of people still obtain their drinking water from wells, springs and rivers. Not only is this supply irregular, but women must walk long distances daily to fetch water for the family.

2. Education Services

55. There are four national secondary schools and three provincial secondary schools in Guadalcanal. Junior secondary schools (also known as community high schools) are less accessible and entry depends on a good grade six result. There 30 junior secondary schools which offer classes from form one to form three levels only. Most villages in the province have access to primary schools within an hour or so walking distance or less, there are 81 primary schools in total. These are scattered throughout the province. There is also one Bible School on the island.

56. There is a primary school at the end of St. Martin Road, which was moved to Gold Ridge Relocation Village from Belaha, and a national secondary school (St. Joseph) which is a boarding school located at St. Martin.

F. Agricultural Support and Services

57. There are currently less than 20 Department of Agriculture and Livestock (DAL) staff working in Guadalcanal, compared with 30 staff prior to the ethnic tensions at which time DAL maintained a dozen field stations throughout the island, with main stations being located at Marau, Avuavu, Lambi and Mbabanakira. There is almost no support for village agriculture on the Weather Coast with only one DAL officer posted there.

58. There are six Rural Training Centers (RTCs) operating in North Guadalcanal, all with an agricultural component to their curriculum, two are located within the subproject area and are Taiwanese-funded demonstration rice cultivation projects. Three RTCs are operated by the Catholic Church and three by the South Sea Evangelical Church. The Don Bosco Technical Institute also provides some limited agricultural training and is in the process of developing a small RTC at Tetere which will focus on agriculture.

G. Livelihoods, Income and Poverty

1. Livelihoods

59. According to the Agriculture Smallholder Study, there are two livelihood strategies adopted on Guadalcanal. The main strategy for most people on the Weather Coast is subsistence food production. This is derived from food gardens, coconuts, fishing and some fruit

[24] Ibid.

and nut trees. Sweet potato is the staple food, and cassava is also important. Before the disruption associated with the ethnic tension, some copra was produced and sold. However, cash income is currently minimal; very minor amounts are derived from the sale of copra, betel nut and fresh food, but most people are effectively outside the cash economy.

60. There is some variation in livelihood strategies, depending on access to Honiara market and local resource endowment. Subsistence agriculture continues to provide most food for most villagers, with food coming from gardens, coconuts, other fruit and nut trees and some fishing.

61. The main garden foods are sweet potato, cassava and banana. However, consumption levels of imported food, particularly rice and flour-based foods, are high for many people. Cash income is derived from the sale of fresh food (and other produce including betel nut and firewood) into Honiara, and from copra and cocoa.[25]

62. Subsistence agriculture is the main livelihood for most of rural households in Solomon Islands. Complete subsistence, i.e. total self-reliance at household level, is rare and possibly may not occur at all, semi-subsistence is the norm and is probably a more accurate definition, and includes consumption by the producers themselves (almost all are family based), as well as sharing, exchanging and selling food in the local area. Subsistence food production involves cultivating, harvesting and managing foods from different environments, the most important being shifting cultivation gardens.

63. In the subsistence food production system, food comes from gardens cultivated under shifting cultivation, as well as forest (primary forest), fallows (secondary forest), mangroves, reef, deep sea, rivers, plantations, nut groves, swamps, and agro-forests (planted tree crops of mixed usage, including food and timber) around the village and in the bush. A wide variety of crops are grown for both subsistence and cash but the main items are sweet potatoes, cassava, banana, and vegetables. Statistics indicate that 70 – 90% of rural households in Guadalcanal grow pana, yam, taro, pineapple and fruit trees for subsistence use. A further 61% grow betel nut and 10% grow chilies and rice.

64. More than 58% of households raise pigs and 40% have a range of livestock such as pigs and chickens. Fishing for home consumption is undertaken by 60% of households in Guadalcanal, those who harvest shellfish, crabs and lobsters represent approximately one-quarter of the rural population.[26]

2. Income and Poverty

65. Based on the results of the Household Income and Expenditure Survey (HIES) 2005/06 the major source of income in Solomon Islands is derived from home production (37%) followed by income from salary and wages (26%). However, these figures obscure marked differences between rural and urban households as shown in Table 2.

[25] AusAID a; op cit.
[26] SIG a; op cit.

Table 2 - Proportion of Income by Sources

Income Source	Total Households (%)	Urban Households (%)	Rural Households (%)
Salary and wages	25.9	48.3	12.8
Self employment/business	7.8	5.5	9.1
Home production	36.9	4.8	55.9
Benefits, welfare	8.8	10.3	7.9
Rent	5.5	12.4	1.5

Source: SIG - HIES (2006).

66. Households can receive one or more incomes from small commercial activities, for urban households, this includes self employment or small business activity (24%) and production of root crops (19%) and for rural households, this includes production of root crops (27%) and production of other vegetables and fruits (22%). Urban households receive higher annual incomes than rural households. In terms of income sources on Guadalcanal, 57% from home production, 14% from self-employment or small business activity and 13% of income is received from wages and salary. Home production and small business activity is very important to households; producing root crops (34%), producing other vegetables and fruits (31%), sale of fish or other seafood (6%), sale of handicraft or shell products (5%) while other small business accounts for 16% of households.[27]

67. An analysis, funded by UNDP, of the HIES has been undertaken to estimate poverty lines in order to provide some measure of hardship, assess the basic costs of a minimum standard of living, and measure the numbers of households and proportion of the population in Solomon Islands, that are deemed unable to meet these needs.[28] The analysis defined poverty in the Solomon Island context as not meaning hunger or destitution, but rather struggling to meet daily or weekly living expenses, particularly those that require cash payments.

68. The definition further included households (i) constantly having to make choices between the competing demands for household expenditure and the limited availability of cash income to meet that expenditure; (ii) having to make trade-offs between one bill and another, food or school fees, utilities or bus-fares; (iii) borrowing regularly from "loan-sharks", who charge very high interest rates, for small unsecured loans in order to meet family commitments and community obligations; and, (iv) that are frequently, and occasionally constantly, in debt. Households deemed to be experiencing basic needs poverty are therefore facing hardship on a daily basis; they struggle to pay bills and purchase adequate and suitably nutritious food.

69. Poverty lines were calculated for Honiara, provincial-urban, and rural households. A food poverty line[29] (FPL) was calculated from actual food expenditure patterns recorded for households in the lowest three deciles of per capita adult-equivalent expenditure (PCAE). For

[27] Ibid.

[28] UNDP & National Statistics Office of Solomon Islands; Analysis of the 2005/06 Household Income and Expenditure Survey: A Report on the Estimation of Basic Needs Poverty Lines, and the Incidence and Characteristics of Poverty In Solomon Islands, UNDP Pacific Centre, Suva Fiji (July 2008).

[29] The food poverty line represents a basic, low-cost, minimally nutritious diet and is measured in terms of the minimum daily calorie intake required for basic human survival. This is an international benchmark of around 2,100 calories/day per capita (as recommended by FAO/WHO as the daily minimum adult calorie intake for a moderately active adult).

Honiara, market prices were used to cost local foods, either own produce or purchased items while in provincial urban and rural areas values for local foods were based on householders' estimates of their worth. This resulted in the costs of local foods being much higher in Honiara (by about twice and in some cases by nearly three times) and reflects the fact that in the rural areas a far greater proportion of food is home grown and markets, as such, do not really exist.

70. A basic needs poverty line (BNPL) was also estimated, this poverty line included the FPL plus an allowance for essential non-food expenditure (such as housing/shelter, clothing, utilities, school fees, other education related costs, health, and transport). The study found that the amount spent by households on non-food essentials varies widely based on location and are much higher in urban areas. Table 3 presents the poverty lines as derived in the analysis.

Table 3 - Food and Basic Needs Poverty Lines

Location of household	**Food poverty line** (SI$)		**Basic needs poverty line** (SI$)	
	Week	**PCAE**	**Week**	**PCAE**
National	182.27	32.59	265.77	47.37
Honiara	446.40	62.17	998.32	139.04
Provincial urban	249.04	42.33	465.11	79.11
Rural	156.17	27.48	225.02	39.59

Source: UNDP (2008).

71. Based on the estimation of the poverty lines (as above), the study showed that the average national incidence of basic needs poverty was 19% of households and 23% of the population, and for rural areas 15% of households and 19% of the population suffered basic needs poverty (Table 4).

Table 4 - Incidence of Poverty

Location of household	**Households** (%)		**Population** (%)	
	FPL	**BNPL**	**FPL**	**BNPL**
National	8.6	18.8	10.6	22.7
Honiara	1.7	24.6	2.6	32.2
Provincial urban	0.6	11.2	0.8	13.6
Rural	6.4	15.2	8.7	18.8

Source: UNDP (2008).

72. The study also showed that gender plays a role in determining the incidence of poverty in Solomon Islands. The HIES analysis suggests that female-headed households are over-represented in the lowest three expenditure deciles. In rural areas female-headed households are particularly over-represented in the lowest income quintile (20%) of households, suggesting that these households are amongst the very poorest in these areas. Overall, female-headed households are estimated to account for 6.5% of all households but account for 7.3% of those below the basic needs poverty line.

H. Human Development

73. Life expectancy in the Solomon Islands is 61 years for males and 62 years for females. The infant mortality rate is 66 per 1,000 live births and the maternal mortality ratio is 2.1 per 1,000 live births. The *Demographic and Health Survey* concludes that data on neonatal

mortality child mortality and under five mortality rates implies that all have increased over the past decade. For example, under-five mortality has increased from 30 deaths per 1,000 births 10-14 years before the survey to 37 for the 5-year period before the survey.[30]

74. Malnutrition places children (< 5 years old) at increased risk of morbidity and mortality and has also been shown to be related to impaired mental development. Children who fall more than two standard deviations (SD) below the reference median are regarded as undernourished, while those who fall more than three standard deviations below the reference median are considered severely undernourished.

75. Low birth weights affect 13% of babies and 11% of children are considered to be under-weight. A third of Solomon Islands children are stunted, with 9% being severely stunted. Table 5 shows that using any of the nutritional measures, there are larger proportions of children on Guadalcanal that are undernourished and severely undernourished compared with children from other provinces and children from all rural households.

Table 5- Nutritional Status of Children by Location

Location	Height-for-age		Weight-for-height		Weight-for-age	
	% below 3SD	% below 2SD	% below 3SD	% below 2SD	% below 3SD	% below 2SD
Urban	6.9	23.0	0.5	3.4	0.6	8.2
Rural	8.7	33.9	1.5	4.4	2.6	12.2
Honiara	5.7	24.1	0.3	4.3	0.4	10.0
Guadalcanal	11.7	34.3	1.8	4.9	3.0	14.3
Other provinces	6.4	33.4	0.2	2.9	1.7	10.2

Source: SIG – Demographic and Health Survey (2007).

76. These and other factors give Solomon Islands a Human Development Index score of 0.371 and rank the country 13th out of the 15 Pacific Island countries ranked by UNDP.

77. In Guadalcanal, educational achievement varies according to gender, as shown in Table 1, twice as many females (9%) compared with males (4%) have no education, slightly more males (26%) than females (24%) have a primary education, and twice as many males (4%) as females (2%) have graduated forms 5 through 7.

Table 6 - Education Levels by Gender in Guadalcanal

Gender	Education Level (%)					
	None	Primary	Form 1 - 4	Form 5 - 7	Cert./Diploma or Degree	Not stated
Male	4.3	26.3	13.1	3.6	2.7	2.2
Female	8.7	24.1	10.5	1.6	1.2	1.6

Source: HIES 2005/06 - Provincial Report.

78. In terms of achieving its Millennium Development Goals (MDGs), the most recent report indicates that Solomon Islands is unlikely to meet most of its MDGs by 2015.[31] A number of the MDGs include gender-based parameters, as shown in Table 7.

[30] SIG c; op cit.
[31] ADB b; *Millennium Development Goals in the Pacific: Relevance and Progress*, Manila, 2003.

Table 7 – Gender Related MDGs

MDG	Status
Goal 3 - promote gender equality & empower women	The gender gap remains noticeable in education and literacy rates but has decreased. The gender gap in primary enrolment ratios in 1998 was 3%, in secondary enrolment 12%, and in adult literacy rates 15%; and The share of women in total employment is relatively high with 48%, but women's participation in the work force is limited to menial tasks and few women penetrate the upper ranks of civil service. Women have been particularly hard hit by the rising unemployment due to the ongoing conflict
Goal 5 – improve maternal health	Available data suggests that the maternal mortality rate has doubled between 1995 and 1999, while the proportion of births attended by skilled health personnel had decreased to 85% in 1999; and The government has also been unable to pay doctors and other health workers regularly, causing general de-motivation and even abandonment of posts.

Source: ADB – MDGs Report (2003).

79. There are indications that the poverty situation has been exacerbated by law and order problems, the ongoing financial crisis, the contraction of economic activities and rising unemployment, compounded by high population growth rates. Many people have been displaced by the inter-community conflict that is still simmering. Some disparities between males and females are slowly decreasing, but inequalities in key areas (refer to Section V) remain evident.

80. Funding for essential social services has diminished impacting upon the health and education indicators, particularly in remote areas. Education indicators are very low. Primary enrolment rates are the lowest of all ADB's Pacific member countries. The gender gap has narrowed but remains noticeable in school enrolment and literacy rates. Health indicators are poor. Available data suggest that child mortality rates and malaria prevalence have decreased slightly. Maternal mortality rates are very high. Access to water and sanitation has improved slightly but urban-rural disparities are extremely high. For all indicators there are great variations between the different provinces and islands.

III. PROFILE OF SUBPROJECT IMPACT AREA

81. Based on the methodology already established in SIRIP and DMSP, consultations, rapid rural appraisal (RRA) and survey field teams were deployed in June and July 2010. The purpose of the field visits were to (i) undertake data collection; (ii) establish communications protocols with the beneficiary communities; (iii) consult with relevant stakeholders; and, (iv) undertake preliminary planning for consultation and awareness programs.

82. For the RRA, seven villages were selected within the subproject area. Villages were selected to represent settlements with both small and larger populations as well as different locations within the wider road catchment area i.e. representing villages along the road and those off spur roads and up to a 1.5 hour walk from the St. Martin Road. The field procedures for collection of information are the RRA adopting primarily direct observation, focus group discussions (FGDs), key-informant interviews with chiefs and elders to compile the village data forms, along with the household survey (conducted in nine villages located in the wider catchment of the road and in seven communities along the road). Other data collected during the initial environmental examination (IEE) investigations has been incorporated into this report where relevant.

A. Villages and Population in the Catchment

83. About 1400 people live in the wider catchment area of the subproject road, based on the 1999 Census population and adjusted for growth. The population is not evenly distributed, with the bulk of population and communities located at the end of the road. The subproject road is located in one ward – Malango – and traverses three enumeration areas and partially traverses another four enumeration areas.

84. The population of the villages selected for the rapid rural appraisal (RRA) in the vicinity of the subproject road is provided in Table 8. This information is based on estimates of numbers of households and population provided during the RRA and meetings held during field work for the PSA and IEE.

Table 8 - Population in Selected Villages in Vicinity of the Subproject Road

Village	No. of males	No. of females	Total pop.	No. of H'holds	Av. H'hold size	No. of land owning lines
Tenaru	237	203	440	36	12	
Belaha	10	11	21	6	4	3
Koai	57	59	116	17	7	2
Veraolia	35	35	70	7	10	2
Tita	30	30	60	16	4	3
Babakolova	16	11	27	6	5	2
Verachiria	28	25	53	11	5	1
Hailalua	50	60	110	23	5	4
Total	463	434	897	122	6.3	17

Source: PPTA Village Socio-Economic Data Collection (June/July 2010).

85. Based on the information for the chiefs, average household size is in the order of six people, however this ranges from four people in Belaha to 10 and 12 people per household in the main Tenaru area (at the beginning of the road) and in villages such as Veraloia located away from the road, including living feeder roads.

86. The chiefs in the villages stated there are no land disputes or claims in the road corridor. There are disputes outside of the immediate subproject area associated with the trading of title to parcels of land without consent of the land owning line.

B. Characteristics of Beneficiary Households

1. General Data on Households

87. The survey captured 170 households with a population of 926 (447 females and 479 males). Some 77 households are located on feeder roads and 93 households are located in the immediate vicinity of St. Martin Road (Table 9). The female to male ratio is 93:100, with females accounting for 48% of the population.

Table 9 – Sample Size and Household Size

Location	No. of Households			Household members		
	Female headed	Male headed	Total	No. of females	No. of males	Total
Feeder roads	13	63	77	205	211	416
St. Martin Road	24	69	93	242	268	510
Total	37	132	170	447	479	926

Source: PPTA Household Survey (July 2010).

88. Overall, households headed by females account for 22%. A larger proportion of households along St. Martin Road (26%) compared with the feeder roads (17%) are headed by females.

89. A quarter of household heads are young, being in the 20 to 30 year age group, and nearly three-quarters (73%) are aged between 31 and 60 years old. A very small proportion (2%) is older than 61 years old. Most heads of household (83%) are married, as shown in Table 10. Some 12% overall are not married, with a larger proportion of unmarried head of household along St. Martin Road than in the wider catchment area. Separated or divorced heads of household are located in the feeder roads areas only.

Table 10 – Marital Status of Head of Household

Location	Marital status (%)			
	Not married	Married	Separated or divorced	Widowed
Feeder roads	6.5	85.7	2.6	5.2
St. Martin Road	16.1	80.6	0.0	3.2
Total	11.8	82.9	1.3	4.1

Source: PPTA Household Survey (July 2010).

90. The survey data indicates that adults located on feeder roads are not as well educated as those located along St. Martin Road; 12% (compared with 6%) have no education, and 58% (compared with 35%) have only a primary level education. While a similar proportion have a secondary level education, less than 10% of those in the feeder road catchment compare with a third of those along St. Martin Road have a tertiary (including business and teacher's college) education.

Table 11 – Education Level of Head of Household

Location	Education level (%)			
	None	Primary	Secondary	Tertiary
Feeder roads	11.8	57.9	25.0	5.3
St. Martin Road	5.7	35.2	26.1	32.9
Total	8.5	45.7	25.6	20.1

Source: PPTA Household Survey (July 2010).

91. Single-person households account for less than 5% of households and small households of two or three people account for 19% overall (and a quarter of households along feeder roads). Households are larger along the St. Martin Road with households of between four and

seven people accounting for 61% (compared with 55% of households on feeder roads) and households with eight or more people accounting for 21% (compared with 17% along feeder roads).

Table 12 – Household Size

Location	No. of people per household (%)					
	1	2 to 3	4 to 5	6 to 7	8 to 9	10 or more
Feeder roads	3.9	24.7	15.6	39.0	11.7	5.2
St. Martin Road	3.2	14.0	37.6	23.7	15.1	5.4
Total	3.5	18.8	27.6	30.6	13.5	5.3

Source: PPTA Household Survey (July 2010).

92. Overall, 18% of households (30 in number) are comprised of more than one family, of these households most (24 in number) are two-family households.

93. A larger proportion of households in feeder roads catchment live in houses constructed from palm leaf (walls 29% and roof 58%) compared with households along St. Martin Road (walls 12% and roof 26%). Over two-thirds of households (69%) along St. Martin Road and 42% of households in feeder roads live in a house with a corrugated iron roof. More than half (52%) of households live in a house with walls of milled timber, accounting for a larger proportion of the houses along St. Martin Road.

Table 13 – Main Construction Materials of Houses

House construction	Location	Main construction materials (%)				
		Palm leaf	Corr. Iron	Rough sawn wood	Milled wood	Wood/ brick
Walls	Feeder	28.9	1.3	21.1	48.7	0.0
	St Martin	12.2	1.1	23.3	56.7	6.7
	Total	19.9	1.2	22.3	52.4	4.2
Roof	Feeder	58.4	41.6		0.0	0.0
	St Martin	26.3	69.2		1.1	3.3
	Total	41.1	56.5		0.6	1.8

Source: PPTA Household Survey (July 2010).

94. Most respondents (49%) live in a house with an "open" toilet (i.e., forest or stream) accounting for a larger proportion of respondents in feeder roads catchment (70%) than along St. Martin Road (31%). Approximately a third (34%) of households along St. Martin Road has a pit latrine and nearly another third (31%) has a flush/pour toilet.

2. Livelihood Activities, Income and Poverty

95. Some 31% of males aged 19 years and older and 11% of females aged 19 years and older are in regular paid work, in addition, 73% of households have males engaged in unpaid work and 77% of households have females engaged in unpaid work on a daily basis.

96. Over two-thirds (69%) of households (58% in feeder roads and 79% along St. Martin Road) receive a regular cash income. Table 14 shows that employment in the government/public service (23%) and agriculture (32%) are the two most important income sources in the subproject area. Income from cocoa and copra sales is most important to households in feeder roads, being the main income source for 36% of households.

97. Wages from the private sector is the third main income source; accounting for 21% of households in feeder roads and 13% of households along St Martin Road. While tourism accounts for an important income source for only 4% of households overall, it is identified as the main source of income for 8% of households in feeder roads (and none in St Martin Road). This is associated with the households that are developing the walking tours to and around the Tenaru Waterfall located at the end of the spur road.

Table 14 – Main Source of Household Income

Location	**Source of main income** (%)								
	Government	**Private**	**Trade/sales**	**Tourism**	**Agriculture**	**Construction**	**Daily labor**	**Transport**	**Other** [32]
Feeder roads	2.6	20.5	12.8	7.7	35.9	0.0	12.8	5.1	2.6
St. Martin Road	42.3	13.0	2.6	0.0	27.2	5.2	3.9	3.9	2.6
Total	22.5	16.8	7.7	3.9	31.6	2.6	8.4	4.5	2.6

Source: PPTA Household Survey (July 2010).

98. Household income has been obtained by collecting data about (i) wages/salary earned from different sectors (public/private sector employ, construction, tourism); (ii) sales from agricultural produce and other goods; and (iii) non-wage income such as remittances, pensions, income from rent etc. The total household income has been based on stated sources of income, it does not factor in any imputed values for subsistence production, and therefore, represents cash income only.

99. The total monthly household income from all sources was divided among the number of people in each household to derive per capita income, from which three broad income groups can be established, as shown in Table 15.

Table 15 – Income Groups

Income group	**Monthly per capita income** (SI$)		
	Minimum	**Maximum**	**Average**
1 – Lowest	67	316	181
2 - Middle	319	578	432
3 - Highest	583	5000	1076

Source: PPTA Household Survey (July 2010).

100. The first income group includes households falling below the FPL and BNPL. The poverty lines for provincial urban households were used because the rural poverty lines were

[32] Other income sources identified in the survey included sale of betel nut, timber, flowers, and tobacco.

considered too low and Honiara poverty lines too high; due to its proximity to Honiara, the subproject area was considered to more accurately reflect provincial urban households (therefore the poverty lines used were FPL 169 and BNPL 316).

101. Overall, 43% of households are in the lowest income group which includes households falling below the FPL (22%) and BNPL (19%), a larger proportion of households along St. Martin Road (24%) fall below the FPL and are represented in the lowest income group (44%). This is interesting given that a large proportion of households (79%) along St. Martin Road receives regular income, and could be explained by a comparatively large proportion of households (42%) receiving their main income from the public sector which is not as well paid as the private sector. A quarter of households along St. Martin Road compared with a third of households in the feeder roads are in the highest income group (Table 16).

Table 16 – Households below Poverty Lines and Income Group Distribution

Location	Poverty line (%)		Income group (%)		
	FPL	BNPL	1	2	3
Feeder roads	19.5	22.1	41.6	26.0	32.5
St. Martin Road	23.7	17.2	44.2	30.2	25.6
Total	21.8	19.4	42.9	28.2	28.8

Source: PPTA Household Survey (July 2010).

102. As discussed in Section II G, in the Solomon Island context, associated with the high levels of subsistence and semi-subsistence, poverty does not only mean insufficient cash income as it includes other forms of hardship as lacking basic food and essential non-food items. Table 17 shows a larger proportion of households in the feeder roads as lacking food and essential non-food items such as fuel, clothes, education or medical expenses in the past year. Of the households suffering hardship, 10% lacked food and 6% of households lacked basics up to eight times in the previous year. Households along St. Martin Road suffer a greater degree of non-food hardship with 5% of households lacking basic essentials nine times or more in the last year, compared with 3% of households in the feeder roads.

Table 17 – Hardship: Lack of Food and Non-food Basics

Location	Lacked items (%)		No. times lacked food (%)			No. times lacked basics (%)		
	Food	Basics	1 to 4	5 to 8	9 to 12	1 to 4	5 to 8	9 to 12
Feeder roads	18.2	16.9	10.4	1.3	2.6	0.0	7.8	2.6
St. Martin Road	12.9	10.8	6.5	3.2	2.2	4.3	1.1	4.7
Total	15.3	13.5	8.2	2.4	2.4	2.4	4.1	3.7

Source: PPTA Household Survey (July 2010).

C. Characteristics of Transport and Travel

103. Vehicle ownership is very low in the subproject area with less than 20 households owning vehicles, car and van ownership (nine households) is higher than truck ownership (four households). For those households captured in the survey, truck ownership is limited to households along St Martin Road, and twice as many households along St. Martin Road (12) as along the feeder roads (6) own vehicles. Some 15 households also own bicycles (Table 18).

Table 18 – Vehicle Ownership

Location	Households owning vehicles (no.)			
	Bike	Car/van	Hilux	Truck
Feeder roads	8	4	2	0
St. Martin Road	7	5	3	4
Total	15	9	5	4

Source: PPTA Household Survey (July 2010).

104. The low level of vehicle ownership increases the importance of passenger transport services along the road. Passenger transport services are provided by truck, mini-van and taxi. However, with the deterioration in road condition mini-vans and taxis find it difficult to travel past St. Martin, especially after heavy rains when areas of the road are flooded and become boggy. Fares are standard for trucks and mini-vans between, operators charge between SI$ 2 and SI$ 5 to travel from the end of St. Martin Road to the junction with the Main Road, and between SI$ 10 and SI$ 15 to travel to Honiara.

105. Tables 19 and 20 show that 81% of people making daily and weekly trips make those trips by truck, and 73% of all weekly trips are made by truck. A quarter of weekly trips and a third of monthly trips are made by mini-van. People making trips by taxi and total taxi trips account for a very small proportion, confirming the information provided on consultations that taxis and cars have difficulty driving along the road due to the condition.

Table 19 – Number of People Making Trips by Mode and Frequency

Gender of trip maker	Number of people making trips by mode and frequency							
	Daily				Weekly			
	Truck	Mini-van	Taxi	Total	Truck	Mini-van	Taxi	Total
Female	35	9		44	89	17		106
Male	63	13	1	77	129	34	1	164
Total	98	22	1	121	218	51	1	270
%	81.0	18.2	0.8		80.7	18.9	0.4	

Source: PPTA Household Survey (July 2010).

Table 20 – Number of Trips by Mode and Frequency

Gender of trip maker	Number and frequency of trips by mode							
	Weekly				Monthly			
	Truck	Mini-van	Taxi	Total	Truck	Mini-van	Taxi	Total
Female	234	74	3	311	75	67	4	146
Male	527	186	14	727	134	69	15	218
Total	761	260	17	1038	209	136	19	364
%	73.3	25.0	1.6		57.4	37.4	5.2	

Source: PPTA Household Survey (July 2010).

106. The focus group discussions with villages in the catchment of the road and the household survey identified that about five years ago the road condition started to deteriorate to the point where Hilux and pick-up trucks have difficulty driving to the end of the road and mini-vans/buses can no longer drive beyond the St. Joseph Secondary School.

107. Respondents were asked if passenger transport services made fewer trips since the road had fallen into poor condition, 58% stated they did. Two-thirds of respondents also stated that there were fewer vehicles operating along the road. Table 21 shows that more than three-quarters of respondents (80%) report that currently there are about ten vehicles making weekly trips along the road.

108. Compared with the 59% of respondents reporting that when the road was in good condition (about five years ago) there were 21 or more vehicles making weekly trips, not one respondent reported that currently there were more than about 20 vehicles per week making trips along the road.

Table 21 – Reporting of Vehicles using St Martin Road

Timeframe	% of respondents reporting no. of vehicles				
	1 to 5 vehicles per week	6 to 10 vehicles per week	11 to 15 vehicles per week	16 to 20 vehicles per week	> 21 vehicles per week
Currently	51.4	28.8	11.2	8.5	0.0
About 5 years ago	15.8	6.1	9.8	9.8	58.5

Source: PPTA Household Survey (July 2010).

109. As well as reducing the number of vehicles making trips along the road, the poor road conditions have resulted in a shift in mode of travel to key facilities. For the main mode used to transport goods to market, Table 22 shows that now 21% of households carry goods on foot compared with only 3% when the road was in good condition, and less than half of the households (21%) that used to transport goods via a Hilux or van do so now (10%). There has also been a reduction in the proportion of households now being able to carry goods by truck (65%) compared with when the road was in good condition (73%). Transport by boat is not undertaken by many households (less than 1%) and this has remained the same as it is unaffected by road condition.

Table 22 - People Transporting Goods to Market

Timeframe	Mode of transport (%)				
	On foot	Hilux/van	Truck	Boat	Other
Currently	21.1	9.9	64.8	0.7	3.5
About 5 years ago	2.8	21.1	73.2	0.7	2.1

Source: PPTA Household Survey (July 2010).

110. For people travelling to Honiara, daily and weekly trips have decreased in response to failing road conditions, while fortnightly and monthly trips have increased compared with the proportion of people making trips when the road was in good condition. As shown in Table 23, the increase in people making fortnightly and monthly trips (10%) between now and about five years ago is less than the overall decrease in people making daily and weekly trips (14%). Currently 5% of respondents do not travel to Honiara regularly or frequently, compared with less than 1% five years ago.

Table 23 – Frequency of Trips to Honiara

Timeframe	Frequency of trips (%)				
	Daily	Weekly	2 weekly	Monthly	Not often
Current	13.4	40.9	32.9	7.9	4.9
About 5 years ago	16.2	52.1	26.9	4.2	0.6

Source: PPTA Household Survey (July 2010).

111. The respondents who travel less to Honiara now were asked why they are making fewer daily and weekly trips; fewer passenger services between the subproject area and Honiara was the reason for 49% of respondents; 51% stated it was because the trips were both longer and less comfortable; while 28% stated the less frequent trips were not related to the road condition.[33]

112. In addition to changes in travel mode, travel time has also been affected by the road falling into disrepair, respondents indicated that trips both by vehicle and on foot take longer now than when the road was in good condition (Table 24). The household survey data indicates that fewer respondents (or people from their household) can make trips by vehicle to key facilities in less than half an hour, with the proportion of respondents decreasing by 10% for trips to the health centre, by 12% for trips to primary school, and by 15% for trips to secondary school. For each of these trips 10% more respondents now, compared with when the road was in good condition, state the trips are as long as an hour.

113. When the road was in good condition more than half of the respondents (55%) could make the trip on foot in less than half an hour, this has decreased to 43%. For twice as many respondents the trip on foot to the health centre now takes between an hour and 1.5 hours.

114. Pedestrian trips to the market are now three hours or more for 20% more respondents compared with when the road was in good condition. Changes in pedestrian travel time in respect of trips to secondary school have also occurred, most significantly with an increase from 9% to 21% of respondents stating it takes students between 1.5 and 2 hours to walk to school. No respondents stated it took three hours or longer to make the trip to secondary when the road was in good condition, whereas now 5% of respondents note it takes three hours or longer.

Table 24 – Travel Time to Key Facilities

Travel mode	Destination	Timeframe	Travel time (%)					
			Less than 0.5 hour	0.5 to 1 hour	1 to 1.5 hours	1.5 to 2 hours	2 to 3 hours	More than 3 hours
By vehicle	Market	Current	6.4	38.3	39.0	16.3		
		About 5 years ago	9.9	45.1	34.4	9.3	1.3	
	Health centre	Current	82.7	15.6	1.6			
		About 5 years ago	93.4	5.7	0.9			
	Primary school	Current	63.7	32.3	1.9	2.0		
		About 5 years ago	75.2	22.8	1.9			
	Secondary school	Current	62.5	29.8	7.7			
		About 5 years ago	77.4	19.6	1.9	0.9		

[33] The percentages discussed total more than 100% as respondents provided multiple reasons.

On foot	Market	Current	4.3	1.1	2.2	3.3	15.2	73.9
		About 5 years ago	8.9	1.1	2.2	4.5	28.9	54.4
	Health centre	Current	43.4	34.7	15.2	2.4	0.6	3.2
		About 5 years ago	55.1	31.4	8.4	1.5	1.3	1.5
	Primary school	Current	26.1	37.6	17.4	5.7	5.8	7.2
		About 5 years ago	38.1	34.7	12.3	4.3	6.5	3.6
	Secondary school	Current	31.1	22.3	19.4	20.7	1.2	5.2
		About 5 years ago	39.4	27.5	22.1	8.7	2.4	

Source: PPTA Household Survey (July 2010).

115. Table 25 shows that the changes in main transport mode to primary and secondary school follow a similar pattern to that for trips to the market (shown previously in Table 22); about half of the children who used to travel by truck (27%) now travel by truck (13%) and a very small proportion now travel by mini-van (1%) compared with when the road was in good condition (12%). A small proportion of secondary students used to be able to travel to school by bicycle, now none can. Most trips to health centre (> 90%) are on foot and this has not been affected by change in road condition. The trips to the health centre that have been affected are those made by truck (a 4% decrease) and by van (a 2% decrease).

Table 25– Transport Mode to Key Facilities

Destination	**Timeframe**	**Transport mode** (%)				
		Walk	**Bicycle**	**Hilux/ van**	**Truck**	**Other**
Primary school	Current	82.3	0.5	4.2	9	4.1
	5 yrs ago	79.3	0	5.4	9.5	5.8
Secondary school	Current	85.6	0	1.2	12.8	0.4
	5 yrs ago	55.8	2.7	2.1	26.9	12.4
Health centre	Current	98.7	0	0.6	0.7	0
	5 yrs ago	92.1	0	2.3	4.3	1.3

Source: PPTA Household Survey (July 2010).

IV. COMMUNITY AND STAKEHOLDER CONSULTATION

A. Methodology

116. Consultation undertaken during the PPTA included structure and semi-structured interviews with stakeholders (village chiefs, truck and mini-van operators and copra and cocoa buyers), FGD meetings in villages in the catchment of the road, and a household survey (170 households) in 16 villages.

117. The FGDs were undertaken with separate groups of men and women, general discussions about problems and issues faced in the villages opened the meetings, followed by more detailed discussion about the proposed subproject with the groups identifying anticipated benefits and impacts associated with the road rehabilitation works. FGDs were conducted in seven locations and included 59 men and 55 women, totaling 114 participants (Table 26).

Table 26 – Location and Participants in Village Meetings

Date	Village	Male	Female	Total
02.07.10	St. Joseph School	12	5	17
14.07.10	Volovua	7	11	18
15.07.10	Pao	8	17	25
17.07.10	Kaimamosa	7	5	12
19.07.10	Niutenakula	7	6	13
20.07.10	Belaha	7	11	18
22.07.10	St. Martin RTC	11		11
Total		59	55	114

Source: Consultations during PPTA (July 2010).

B. Results of Women's FGDs

118. The women's FGDs raised several key general issues and problems being faced by both women and the community. The main points raised included: domestic violence; kwaso making/drinking and alcohol and drug abuse; fear of women and girls being attacked by drunken men; lack of local market and need to frequently travel to the main Honiara market; lack of water supply and sanitation in villages along the spur road (shown previously on Figure 2); and inadequate supply of medicine and vaccinations in health clinic.

119. Specific access issues raised centered on the poor condition of the road and lack of passenger transport along the road. Children have to go the end of St. Martin Road to attend primary school (Gold Ridge Relocation Village), the road is in such bad condition past St. Martin area that only a couple of trucks can pass and they do not travel in the morning or afternoon at a time suitable to take children to school. In some of the villages further away from St. Martin Road the children/students refuse to go to school (primary and secondary) because of the distance and time to walk there, also they are very scared of crossing the river after it has rained.

120. For all members of the communities beyond St. Martin (where the largest proportion of people are located) there are long travel distances (on foot) to basic services and to the market. Lack of transport services has meant that people cannot find employment in town because they cannot be sure of regular and reliable transport to a job, also if a person going to sell goods at market misses the truck they have to wait until the next day.

121. The women located in communities along the spur road and south of St. Martin Road cited severe access constraints associated with lack of access from St. Martin Road to their villages. This was very problematic for emergencies, sick or pregnant women, and women with sick children or elderly in their care needing to travel to the clinic at Gold Ridge Relocation Village, or further to the main hospital in town.

122. Rehabilitating and maintaining the road is anticipated to create a number of benefits. Those most commonly cited in the women's FGDs included: employment opportunities for women as well as men in maintenance activities; income generating opportunities associated with provision of food and drink to workers rehabilitating the road in the first instance; increase in availability of passenger transport services; improved access to school and health facilities; reduced travel time and potentially cheaper travel (reduction in fares through competition); with improved access might be able to get a police post established in the area and a doctor may be

able to make monthly visits to the health center; could develop a market along St. Martin Road would not need to travel to town all the time and can sell/trade products locally; reduced damage during transport of vegetables and fruits produced in the area; and, more buyers would come to the area, if the spur road was also improved buyers would travel to those villages as well.

123. The women noted that as part of the project bus stops/shelters should be constructed at various locations along the road, especially in the vicinity of St. Martin's RTC and St. Joseph's Secondary School.

124. The meetings in the villages in the area of the spur road discussed the issue of the very poor access to the ten communities living south of St. Martin Road. The bridge (1.3 km from the junction with St. Martin Road) collapsed many years ago and has not been repaired,[34] the road beyond the bridge is little more than an earth track. The people from the villages must walk and cross the river (even in full flows) to St. Martin Road, it is about a 1.5 - 2 hour walk. During cocoa harvest time growers have to pay people (SI$ 10 per person) to carry the bags of cocoa to the St. Martin Road because the buyers will not travel the spur road (not even as far as the first river) due to the poor road condition.

125. Measures to support women identified in the FGDs include: awareness raising (health issues, rights, etc); training – livelihood activities (piggery, chicken raising), literacy/numeracy, home economics and household budgeting, sewing, marketing, calico making (already ongoing), assistance with developing tourism (around the waterfall) in the area; and, development of a market and cooperative run canteen (by the school).

C. Results of Men's FGDs

126. The men's groups raised some similar issues to those raised by the women. The men also noted that young men in the villages did not work together well and there was a need for better cooperation (this could perhaps be marshaled though the church); breakdown between chief and villagers because of corruption and lack of trust; in the area around the spur road, men noted the sale of custom land was resulting in land disputes; lack of a police post and difficulties in managing the people who abuse alcohol[35] and become violent or thieves (property theft was an increasing problem noted during the men's FGDs); safety and security issues for students (especially at night); and, increased difficulties in access for the people in the villages located along feeder roads.

127. Specific access and transportation issues raised in these groups included the constraints imposed by expensive truck fares (SI$ 15 to Honiara), especially for the poor members of communities. For the men that owned vehicles, the reduced cost of maintenance and repair was considered a significant benefit.

128. In addition to the benefits already identified in the women's FGDs, according to the men, life in general would become easier if the road, and therefore access, was improved. This was emphasized by the men in the villages along the spur road who considered access constraints their number one problem. According to the men, improving access will open many opportunities for generating income (such as construction and operation of cocoa dryers, and

[34] In some FGDs it was mentioned the bridge had collapsed about 5 years ago while in other FGDs the bridge was said to have collapsed 11 years ago.

[35] The men's FGDs highlighted the issue of black market liquor in some villages.

operating small truck services), the men's FGDs noted that they would like support in identifying and harnessing additional opportunities. They also discussed that the spur road (as shown previously on Figure 2) is the only access to the Tenaru Waterfall, if the road was improved the villages could develop walking tours and people could visit the area. This could develop into a small, community managed tourism operation.

129. The men (in the Volovua meeting) also raised the issue of extraction of river gravels for the road rehabilitation works. Payment of the gravel to the actual resource owners would be required. If cocoa trees were damaged during the work, the contractor or MID must compensate the tree owners.

130. The men were also keen for community awareness on a range of topics, and a training program. In addition, the men suggested that traffic calming measures such as speed humps (sleeping policemen) be installed in the vicinity of the school, and that the road shoulders be properly formed so they could be used safely by pedestrians.

D. Willingness to Participate in the Project

131. The FGDs and the household survey asked participants about willingness to be involved in rehabilitation of the road and ongoing maintenance activities, which will be organized through group oriented labor intensive/labor-based, equipment-supported (LBES) activities as much as possible.

132. Overall 62% of respondents stated there are people in their household willing to participate in infrastructure maintenance, and maintenance of St. Martin Road in particular. This includes three-quarters of respondents from the feeder roads and 57% from St. Martin Road itself. A gendered breakdown shows that 46% of female, and 71% of male, heads of household stated there are people in their household able to participate in maintenance.

133. In total the survey captured 37% of females and 55% of males (aged 16 years and older) willing to participate in LBES maintenance activities. The breakdown of numbers of potential participants, by location, is given in Table 27.

Table 27 – Number of Participants by Location

Location	Male (no.)	Female (no.)	Total (no.)
Feeder roads	84	57	141
St. Martin Road	74	90	164
Total	158	147	305

Source: PPTA Household Survey (July 2010).

134. Few respondents stated there were not any times when they or members of their household would be unable to participate; the few that did comment included the rainy season, the school term, and December, as the periods they would not be available.

135. As indicated in Table 28, males are most willing to participate in drain excavation (42%) and grass cutting (58%). A small proportion of males (11%) and smaller proportion of females (3%) wish to be involved in clearing or cleaning of drains. Nearly all of the females prefer to participate in grass cutting.

Table 28 – Types of Maintenance Activities by Gender

Activity	Male	Female
Drain excavation	41.7	0
Drain clearing	11.4	3.3
Grass cutting	58.2	97.8

Source: PPTA Household Survey (July 2010).

136. In terms of the basis of involvement, 26% of respondents stated a preference for being involved as an individual (accounting for 27% of male heads of household and 21% of female heads of household), some 73% stated a preference to be involved as part of a community group (accounting for larger proportion of female heads of household – 79% - than male heads of household with 72%). These survey findings reiterate the comments made during the FGDs, in which women's groups clearly stated a preference for community based involvement whereas the men's groups wanted to be involved on an individual basis.[36]

E. Summary Stakeholder Analysis

137. The primary stakeholders are the people living along the subproject road as well as the wider catchment (feeder roads) and passenger and cargo transportation service providers using the road. Secondary beneficiaries are those who are not necessarily from households along the road or users of the road, but who will benefit in other ways; for example health workers and teachers will enjoy greater mobility, and cocoa and copra buyers who travel to the area to buy goods.

Table 29 - Stakeholder Analysis

Stakeholder	Primary	Secondary	Key Interest in the Project
Members of villages and households	**X**		Reinstated access to markets and services, to secondary schools, and health services (especially women's access to obstetrical services at Referral Hospital); Increased incentives to produce cocoa, copra and other crops as transport to large markets (Central Market and Kukum Market) improve; Increased incomes from produce and cash crop marketing will allow families to invest in better housing and rainwater catchments, which will improve public health status; Small household retail businesses will become more profitable as local incomes rise; Increased access to employment opportunities among youth
Transport operators		**X**	Business opportunities to carry passengers and goods on a regular basis on rehabilitated road; Mini-van and taxi operations can resume; School bus services can resume
Key services staff: health and education personnel		**X**	Services in schools and the health centre disrupted during the flood can recommence; With more and better qualified teachers and health workers in subproject areas, the quality of services is likely to improve. There will be easier access to the rural clinic for health mobile teams from Guadalcanal Provincial hospital
Copra and cocoa processors and exporters		**X**	Assuming other constraints to the industry are overcome, production in the area will increase as it becomes easier to take coca and copra to market.

[36] The primary reason cited in the men's groups for individual involvement was that in the past the chief has kept the money and the workers have only been given a small proportion of what they actually would have earned.

V. GENDER ASSESSMENT

A. Gender Issues in Solomon Islands

138. Overall, women represent under half of the population, with a sex ratio of 106 males per 100 females (at 1999 Census). The total fertility rate for women aged between 15 and 49 years is in the order of 5.7, and the maternal mortality rate (per 1000) is 2.1.

139. The study of a Community Sector Program funded by Australian Agency for International Development reported that 91% of rural population depend on selling goods (fresh and prepared fruit and vegetables) at markets and sale of agricultural produce, income from sale of handicrafts and baskets – which are produced disproportionately by women – account for 70% of income ahead of cocoa, oil and timber palm production.[37] Census data indicates that 54% of women aged 15 years and older are "economically active" however 15% of employed women (compared with 31% of employed men) are employed in paid work.[38] Statistics about women's involvement in private sector participation and informal economic activities are not collected and therefore women's contribution to and participation in, the economy is not fully known.

140. Informal activities, primarily domestic food preparation and handicrafts, are an important source of income for women. Based on a survey of women traders reported in UNDP's Common Country Assessment, the characteristics of women engaged in informal economic activity suggest that two-thirds are self employed and that the small business is the sole income for half of the female traders. More than three-quarters spend 16 hours or more per week on income generating activities. The breakdown of activities shows 38% are engaged in gardens; 21% in food preparation, 15% in craft, and 11% in textile production. The women are not well educated with 20% having no formal education and half reaching a primary level education only, while a quarter of the women traders were illiterate.[39]

141. A scoping study on women in business identified a number of barriers to women's ability to undertake informal or formal business in the Solomon Islands:[40]

- Lack of access to finance or credit – Solomon Islands ranks 135th out of 178 countries for access to credit, women lack recognized collateral such as land[41] or income/savings, and will often be asked to identify a male guarantor. There are no banking products designed to cater for women;
- Discrimination in registration and obtaining licenses – women have to wait many months for a license compared with men who wait weeks, women prefer not to pay bribes for faster license approvals (as men will do) and registry staff tend to neglect an application for a woman;
- Lack of regulation allowing middle men to buy women's products at low prices, re-package and then sell them on for much higher prices;
- Lack of formal markets or places for women to sell;
- Vulnerability to fines for operating outside of "formal" market-places if women try to be highly visible as informal operators; and

[37] AusAID (b): op cit.
[38] SIG (a); op cit.
[39] UNDP; op cit.
[40] Hutchens, A; Women in Business in Solomon Islands, Honiara (April 2008).
[41] Even in matrilineal clans, decisions over custom land are most often made by men.

- Lack of training in marketing, networking, and micro-business skills.

142. Gender inequities in education are of concern. As noted in Section II H, more females have no education, and males attain higher levels of education than females, while regular school attendance shows higher rates for boys (56%) than girls (44%). Households will withdraw daughters, ahead of sons, from school if they can not afford school fees.[42]

143. Domestic violence and wider violence against women remains a significant issue for people in Solomon Islands. A health and safety study reported that 18% of females aged older than 15 years had experienced physical violence and 29% had experienced physical or sexual violence, and that in the survey, representing 3.6% of the female population, 37% of women aged between 15 and 49 years old had been sexually abused before they had reached 15 years old.[43] Solomon Islands has one of the highest rates of violence against women in the world.

144. The Government is committed to ending discrimination and violence against women. The Convention on the Elimination of All Forms of Discrimination Against Women was ratified by Solomon Islands in 2002 and the Government has also established a national policy on Eliminating Violence Against Women.

145. The National Policy on Gender Equality and Women's Development 2010 – 2015 (NPGEWD) seeks to advance gender equality and enhance women's development, ensuring the active contribution and participation of Solomon Islands' women and men in all spheres, and at all levels of decision making. The goal of the NPGEWD is in line with the Medium Term Development Strategy 2008-2010 which recognizes that (i) women's development will help address the basic needs of people in rural communities; and, (ii) ensure real improvement in people's standard of living.

B. Gender Characteristics of Subproject Area

1. General Household Characteristics

146. As noted in Section III B, overall households headed by females account for 22%, with a larger proportion of households along St. Martin Road (26%) compared with the feeder roads (17%) being headed by females. There is a larger proportion of young – 20 to 30 years old - female household head (35%) than young male household head (23%). Three-quarters of male heads of household are aged between 31 and 60 years old while 62% of female heads of household fall in this age group. The proportion of heads of household being aged between 61 and 75 years is small, but there is a larger proportion of women (3%) than men (1.5%) in this age group.

147. Disaggregating marital status by sex shows that between 81% (female) and 83% (male) of heads of household are married. A larger proportion of male heads of household are unmarried (14% compared with 5%), while a larger proportion of female heads of household are widowed (14% compared with 2%).

[42] UNDP; op cit.
[43] Ministry of Women, Youth & Children's Affairs; Solomon Island Family Health and Safety Study – A Study on Violence Against Women and Children, Honiara (2008).

Table 30 – Marital Status of Head of Household by Gender

Gender of Household head	Marital status (%)			
	Not married	Married	Separated or divorced	Widowed
Female	5.4	81.1	0.0	13.5
Male	13.6	83.3	1.6	1.5
Total	11.8	82.9	1.3	4.1

Source: PPTA Household Survey (July 2010).

148. None of the widowed heads of household are older than 60 years, and are therefore, not especially vulnerable by virtue of being both widowed and elderly.

149. Despite there being a larger proportion of female headed households comprising more than one family (23% compared with 17%), households headed by women are smaller than those headed by men. As shown in Table 31, there is a larger proportion of single-person households (5%) and households with two or three people (22%) headed by women than headed by men (3% and 18% respectively). Households of between four and seven people account for 43% of female headed and 47% of male headed households. Some 6% of male headed households and 3% of female headed households comprise ten or more people, but only households headed by men have more than ten people.

Table 31 – Household Size by Gender of Household Head

Gender of Household head	No. of people per household (%)					
	1	2 to 3	4 to 5	6 to 7	8 to 9	10 or more
Female	5.4	21.6	21.6	32.4	16.2	2.7
Male	3.0	18.2	28.8	30.3	12.9	6.1
Total	3.5	18.8	27.6	30.6	13.5	5.3

Source: PPTA Household Survey (July 2010).

150. The single-person households are people aged between 20 and 60 years old, two of the six households are widowed women and four are unmarried men.

151. Table 32 shows that 19% of women compared with 6% of men in the subproject area do not have an education, similar proportions of men and women (71%) have a primary or secondary level education, although a larger proportion of women (35%) than men (24%) have a secondary school level education. A significantly larger proportion of males (23%) compared with females (10%) have a tertiary level education.

Table 32 – Education Level by Gender

Gender	Level of education (%)			
	None	Primary	Secondary	Tertiary
Female	19.4	35.5	35.4	9.7
Male	6.1	47.7	23.5	22.7
Total	8.5	45.8	25.6	20.1

Source: PPTA Household Survey (July 2010).

152. In terms of literacy rates, overall literacy in the official language of English is low with 28% of adults aged over 20 years, a larger proportion of women (a third) compared with men

(23%) are able to read or write in English. Men (51%) are more literate than women (47%) in Pidgin and in both Pidgin and English (42% of men compared with 39% of women).

2. Women's Livelihood Activities, Income and Poverty

153. A larger proportion of households headed by men (72%) than by women (59%) receive a regular cash income. There is little to difference in relative importance of the main income source of households based on gender of household head, with three exceptions; 26% of male headed households compared with 18% of female headed households derive main income from employment in public sector; only female headed households derive their main income from "other" sources (as previously described in Section III B); and, trade and sales is the main income source for a significantly larger proportion of female headed households (15%) than male headed households (1%).

154. In total some 37% of working age women and 55% of working age men are engaged in paid work.

155. The key sectors of work for women and men are shown in Table 33. It is clear that agriculture is an important sector of work accounting for 62% of women who work and 45% of men who work. Employment in the public sector is the second most important sector for women (14%) while it is the private sector for men (19%) followed by the public sector (17%). Trade and sales account for 5% of people who work overall, an account for 7% of women and 4% of men who work. Women are not involved in work in construction and men are not involved in work in tourism.

Table 33 – Sector of Paid Work by Gender

Gender	Sector (%)								
	Government	Private	Trade/sales	Tourism	Agriculture	Construction	Daily labor	Transport	Other
Female	14.4	8.9	6.7	2.2	62.2	0.0	1.1	1.1	3.3
Male	16.8	18.6	4.3	0.0	44.7	4.3	1.9	3.1	6.2
Total	15.9	15.1	5.2	0.8	51.0	2.8	1.6	2.4	5.2

Source: PPTA Household Survey (July 2010).

156. Livelihood activities include a number of unpaid activities that are required to sustain a household. The household survey indicates that 73% of households have males engaged in unpaid work and 77% of households have females engaged in unpaid work on a daily basis.

157. Table 34 shows that only a small proportion of households ask school age children (5 to 18 years) and older people (65 years and older) to undertake unpaid work. Males aged between 19 and 64 years undertake up to six hours per day in unpaid activities in 88% of households and undertake between seven and twelve hours unpaid work per day in 10% of households. Females aged between 19 and 64 years undertake unpaid work for more than seven hours per day in 49% of households.

Table 34 – Involvement in Unpaid Activities by Gender

Gender of Household members	Age group and hours in unpaid work per day (%)						% of total Household
	5 to 18 years		19 to 64 years		65 years or older		
	1 to 6 hr	7 to 12 hr	1 to 6 hr	7 to 12 hr	1 to 6 hr	7 to 12 hr	
Males	4.8	0.0	88.0	9.6	2.4	0.0	73.5
Females	6.2	0.0	49.3	48.5	1.5	0.8	76.7

Source: PPTA Household Survey (July 2010).

158. The above was generally confirmed during the FGDs when women discussed the number of hours per day they were engaged in different activities. In addition to any paid work they might undertake, depending on their location, women are engaged in an average of between 3.4 and 5.8 hours of other household work.

159. By activity, it can be seen that working in the household garden and looking after children or the elderly take on average between five and six hours per day but range between three and eight hours and four and eight hours respectively. It should be noted that some activities are undertaken together and are therefore not necessarily cumulative.

Table 35 – Type of Women's Daily Unpaid Activity

Activities	Hours per day by location and activity						
	St. Joseph	Volovua	Kaimamosa	Belaha	Pao	New Tenakula	Average
Looking after children/elderly	3	5	5	6	4	8	5.2
Working in garden	4	7	5	8	5	8	6.2
Working in the house	3	7	4	5	6	5	5.0
Travelling to/from town or market	3	5	5	3	4	6	4.3
Other activities	4	5	3	3	2	2	3.2
Average	3.4	5.8	4.4	5	4.2	5.8	

Source: PPTA Consultations (June/July 2010).

160. A significantly larger proportion of female headed households (41%), compared with 17% of male headed households, fall below the FPL, and 20% of male headed households and 19% of households headed by women fall below the BNPL. This results in nearly two-thirds of households headed by women (63%) being in the lowest income group, compared with 38% of households headed by men. There is also a smaller proportion of households headed by women (17%) in the highest income group compared with households headed by men (32%).

Table 36 – Poverty and Income by Gender

Gender of H'hold head	Poverty line (%)		Income group (%)		
	FPL	BNPL	1	2	3
Female	40.5	18.9	62.9	20.0	17.1
Male	16.7	19.7	37.8	30.7	31.5
Total	21.8	19.4	42.9	28.2	28.8

Source: PPTA Household Survey (July 2010).

161. Hardship indicators show that there is no difference in households lacking basics on the basis of gender of head of household; however a larger proportion of households headed by men (17%) lacked food in the previous 12 months compared with 8% of households headed by women.

Table 37 – Household Hardship by Gender of Household Head

Gender of Household head	Lacked items (%)		No. times lacked food (%)			No. times lacked basics (%)		
	Food	Basics	1 to 4	5 to 8	9 to 12	1 to 4	5 to 8	9 to 12
Female	8.1	13.5	5.4	2.7	0.0	2.7	8.1	2.7
Male	17.4	13.6	9.1	2.3	3.0	2.3	3.0	3.8
Total	15.3	13.5	8.2	2.4	2.4	2.4	4.1	3.5

Source: PPTA Household Survey (July 2010).

3. Involvement in Community Decision Making & Development

162. The survey asked some questions about women's participation in community development. There is a high level of interest and participation in meetings, with 83% of respondents stating someone from their household attended village meetings and 77% stating someone from their household attended local council (ward) meetings. Between 58% and 61% of respondents stated that both a female and male attended meetings, between 17% and 19% stated that a male went to the meetings alone, and 2% stated that a female attended meetings by herself.

163. Less than a third of respondents (29%) stated there was a female representative on the local ward advisory committee (WAC) of council, 13% said they did not know and 59% stated there was not a female member on the local WAC. In terms of women's membership on the WAC, 53% of respondents said the women were elected, 26% stated they were not sure and 21% stated they thought there was a quota system.

164. Respondents were asked about the participation of women in various activities associated with community development. As shown in Table 38, between 10% and two-thirds of respondents stated that women had involvement, most respondents stated that women's involvement was limited to provision of food and drinks to laborers while a third stated women were actually involved as laborers and another quarter stated they were involved in physical maintenance works. Nearly a third stated that women were involved in the location planning of community facilities (30%) or as part of a management committee or group (28%).

Table 38 – Women's Participation in Community Development

Area of participation	%
Facilities planning (e.g., location of facilities)	29.8
Construction (as laborers)	33.1
Providing food for construction workers	65.7
Collecting and managing community contributions for construction	21.9
Collecting and managing user fees	14.0
Undertaking maintenance works	24.8
Operation and maintenance management (organizing people)	10.1

As part of the management committee or group	27.5

Source: PPTA Household Survey (July 2010).

a. Development Priorities

165. During the FGDs, participants were asked to prioritize works, facilities and services considered necessary for community socio-economic development (Table 39). Improving access to the main road (St. Martin Road) is clearly the highest priority of the people in the areas located off St. Martin Road. The men in five of the six villages, and women in four of the six villages ranked this as their number one priority. This reiterates other discussions during the FGDs, the villages along the spur road (and other feeder roads) considered minimum upgrades were required of those roads otherwise their access to St. Martin Road and Main Road was still impeded. Improving St. Martin Road was ranked as first priority by women in two villages and men in one village.

166. Second development priority identified in the women's groups is construction of a market, being ranked 2nd in three villages and 1st priority in another village. In the men's groups, this was only identified in one village but identified as 3rd development priority. Constructing bus stops/shelters was identified as important in men's groups more than in the women's groups. In the men's groups, it was identified in four villages ranking 1st, 2nd and 4th and 5th in those villages.

167. More frequent transport services was a high priority; ranking 1st in one village, 3rd in another village and 4th in three villages by the men's groups and ranked 5th in three villages and 4th in another village by the women's groups.

168. Improving the health facilities was put forward in three villages by women's groups and in two villages by men's groups. In the women's groups, it was ranked as third highest development priority while in the men's groups, it was ranked 3rd and 5th.

169. Improving tracks in and around the community was put forward in four of the villages in men's groups and in five of the villages in women's groups, ranking 1st, 2nd and 3rd and 5th priority in the women's FGDs and ranking 2nd 3rd and 4th in the men's groups.

170. Constructing footbridges was considered a lower level priority, being identified in three of the villages.

Table 39 – Development Priorities Identified in FGDs

Development priorities		Location					
		St. Joseph	Volovua	Kaimamosa	Belaha	Pao	New Tenakula
WOMEN	Improve tracks in and around the community	5	3	1		2	5
	Improve the road	1	1			5	
	Improve the access to the road	3	4	1	1	1	1
	More frequent transport services		5	5	5	4	
	Construct bus/truck stops or shelters	3	2				
	Construct foot bridges				4		4

	Improve the health facilities			3	3		3
	Construct a market in or near the village	1		2		2	2
	Build/improve drinking water supply				2		
MEN	Improve tracks in and around the community	4	3	2		3	
	Improve the road	1	5	5		5	
	Improve the access to the road	4	1	1	1	1	1
	More frequent transport services		1	3	4	4	4
	Construct bus/truck stops or shelters	1		4	5	2	
	Construct foot bridges		3				5
	Improve the health facilities				2		3
	Construct a market in or near the village	3					
	Build/improve drinking water supply				3		2

Source: PPTA Consultations (June/July 2010).

C. Gender Characteristics of Travel

171. The methods employed during the FGDs ensured that women's views and perspectives were elicited in a sensitive manner, and the household survey results have been disaggregated and analyzed in such a way so as to establish any gender differences in travel patterns as well as transport needs.

172. Some data on trips and transport disaggregated by gender has already been presented in Section III C.

173. As noted in Section III, transport by truck accounts for most of the travel in the subproject area. Table 40 shows that a larger proportion of females (83%) than males (80%) make trips by truck, while more men (20%) than women (17%) make trips by mini-van. Of the people taking regular trips by taxi, the survey captured only men (1%).

Table 40 – Mode of Travel by Gender

Gender of transport users	Transport mode (%)		
	Truck	Mini-van	Taxi
Female	82.7	17.3	0.0
Male	79.7	19.5	0.8

Source: PPTA Household Survey (July 2010).

174. The analysis in Section III shows that since the road has deteriorated, there has been a modal shift, with an increased number of people making trips to all common destinations (market, schools and health clinic) on foot, and fewer mini-van and pick-up/Hilux trips resulting in more trips being made by truck. Trips to the market by truck for both men and women have decreased (by 12% for women and by 8% for men) as have trips by Hilux or van (by 12% for men and by 9% for women). Conversely, trips to the market on foot have increased. When the road was in good condition, no women made trips to the market on foot, now 17% do, while men's trips on foot have increased form 4% to 21%. Boat trips, which are only made by women, have not been affected by changes in road condition and remain at 3% of women's trips. There

has been an increase in men's trips made by "other" form of transport, from 3% to 5%, which according to information provided during the FGDs are trips made on bicycle (Table 41).

Table 41 – Transport Mode to Market

Timeframe	Gender	Mode of transport (%)				
		On foot	Hilux/van	Truck	Boat	Other
Current	Female	17.2	6.9	72.4	3.4	0.0
	Male	21.4	10.7	63.4	0.0	4.5
About 5 years ago	Female	0.0	16.1	80.6	3.2	0.0
	Male	3.6	22.7	70.9	0.0	2.7

Source: PPTA Household Survey (July 2010).

175. The major differences in women and men's travel patterns are grounded in the gender-based division of labor. The focus of women's daily activities and therefore, travel and trips, is typically the homestead. In general, women tend to take shorter, more frequent and more dispersed trips during the day to fetch water, collect firewood, and undertake cocoa/copra production, and these trips are most often undertaken on foot.

176. In Section III, it was noted that the deterioration of road condition has impacted the frequency of trips to Honiara (including to the main market). The survey data for the subproject also indicates that the proportion of women making daily trips has increased (from 6% to 9%), their weekly and monthly trips have remained the same, and women's fortnightly trips have decreased (by 9%). Men's daily trips have decreased from 19% to 15%. Men's daily and weekly trips have decreased by 4% and 14% respectively, and the proportion of men making fortnightly trips has increased (from 24% to 34%), while their monthly trips have increased by 5%. This suggests that there is more flexibility in men's daily and weekly trips than women's daily and weekly trips because despite deteriorating road condition, more women are making a daily trip and the same numbers of women make the weekly trip now as when the road was in good condition.

Table 42 – Frequency of Trips

Timeframe	Gender	Frequency of trips to Honiara (%)				
		Daily	Weekly	Fortnightly	Monthly	Not often
Current	Female	8.8	47.1	26.5	11.8	5.9
	Male	14.7	39.5	34.1	7.0	4.7
About 5 years ago	Female	5.6	47.2	36.1	11.1	0.0
	Male	19.2	53.8	23.8	2.3	0.8

Source: PPTA Household Survey (July 2010).

177. More than half of the male respondents suggested that the changes in trip are due to having fewer transport services available (56%) and bad conditions making trips longer and more uncomfortable (59%), a third of the female respondents cited these reasons, whereas 41% of women, compared with 26% of men, said that their fewer trips had nothing to do with road conditions.

D. Experience of Participation of Women in Maintenance

178. SIRIP includes a number of routine maintenance LBES contracts on Guadalcanal, Malaita, and Temotu. Women are involved in the LBES work program of SIRIP in two ways; (i) operating, or part of the operation of, a small contracting business; and/or (ii) as laborers, either as part of a community group or engaged by a small contractor.

179. Prior to the letting of a contract, awareness consultations were undertaken by MID and SIRIP advising of the nature of the upcoming works, the process of registering as a small contractor or community group, and the training that would be provided to support newly-established contractors, was discussed at those meetings. In each area SIRIP then provided a two-week pre-bid training course for all candidate contractors. The training focused on the requirements of bid documents and what they meant; how to price work and prepare a bill of quantities; how to prepare an expression of interest; and the obligations of a contractor. On completion of the training course, candidate contractors received a certificate. The pre-bid training was followed with on-the-job training courses provided those contractors that had registered with MID, and then a pre-tender meeting held to further discuss bid preparation and answer any questions the candidate contractors might have.

180. For SIRIP's LBES contracts, some 83 awareness consultations were held in the nine provinces and were attended by 247 potential contractors/groups including 1582 men and 691 women. Following the awareness meetings, pre-bid training courses were run at 13 locations and were attended by 117 candidate contractors represented by 235 men and 52 women (including 41 supervisors of whom seven were women). On-the-job training was conducted for contractors in three provinces (43 men and four women, including 12 supervisors of whom one is female). The pre-tender meetings were attended by 99 candidate contractors represented by 120 men and 29 women.[44]

181. As summarized in Table 43, 44% of attendees at the community contractor awareness consultations were women, and participation of women in the contractor training provided ranges from 9% to 24%.

Table 43 – Participation in LBES Contractor Training

Training provided	Groups (no.)	Male (no.)	Female (no.)	Female (%)
Awareness consultations	247	1582	691	43.7
Pre-bid training	125	270	55	20.4
On-the-job training	30	43	4	9.3
Pre-tender meetings	99	120	29	24.2

Source: SIRIP (August 2010).

182. Candidate contractors that wish to pursue a contract with MID may register their business with MID. Community groups may register but similar to a business, must identify three people as co-signatories (director, financial, technical) in order to be considered as a legal entity for the purposes of an MID contract.

[44] Cardno Acil; SIRIP – Monitoring and Evaluation Report: Annual Report of Indicators. Honiara (2010).

183. In order to encourage women to participate in, and take advantage of, opportunities being provided through the LBES works program, SIRIP gave a higher weighting to contractors that (i) included a woman as one of the three co-signatories in the contractor register; (ii) included a woman in the pre-bid training and demonstration of the same through the woman being identified on the completion certificate; and (iii) included a woman as co-signatory on the business bank account.

184. These latter two requirements were to ensure that women would be actively involved in the management and financial aspects of the business rather than being a co-signatory in namesake for registration purposes only. To date, 31 contracts have been let, and eight of the 25 contractors include women.

185. Small and medium contractors operate in one of two ways: (i) employ a few persons directly e.g. supervisors and skilled workers and some permanent labor and engage community members for labor-intensive work; or (ii) directly engage, or sub-contract work to, community groups. The small and medium contractors use labor from adjacent villages for most of the works. Labor is provided by women and men, but as indicated in Section IV, there is a division of labor in terms of the types of activities men and women prefer to be employed for. Women prefer to be employed for grass cutting and vegetation clearing while men prefer to be employed for drain excavation and pothole filling.

186. Data from SIRIP progress reports has been obtained to summarize the work days and wages generated under LBES contracts let since 2009 (Table 44). It can be seen that over the 31 contracts and a total of 24,999 person days of work, 10,519 days of work have been provided by women, an overall female participation rate of 42%. The female participation rate for second quarter of 2010 is 39% and is lower than for first quarter (53%), this is primarily due to inclusion of an additional five contracts awarded in Temotu which have poorer performance in terms of female participation (with rates ranging from 12% to 19%). By excluding those poorly performing contracts, the overall female participation rate is 44%, and by individual contracts ranges from 26% to 79%.

187. To date, the LBES contracts have generated a total of SI$ 1.1 million in income for rural communities with SI$ 448,472 being earned by women.

Table 44 – Summary of LBES Participation and Wages

Period	No. of contracts	Total person days	Female work days	Total wages (SI$)	Female wages (SI$)	Female work days (%)
Q2 2010	12	7,510	2,962	266,547	102,922	39.4
Q1 2010	7	4,621	2,438	174,367	89,198	52.8
Q1 – Q4 2009	12	12,868	5119	662,368	256,352	39.8
Total	31	24,999	10,519	1,103,282	448,472	42.1

Source: SIRIP Progress Report (June 2010).

188. The experience provided by SIRIP shows that women do avail of the opportunities to participate in an LBES work program both as laborers and as small contractors. The project will build on this foundation by providing support to women who would like to establish “women’s road groups” in their village, as well as including additional life-skill and micro-business training modules available for women that wish to operate businesses in their right or in partnership with men, in the LBES training program, these are identified in the GAP.

E. Project Gender Impacts

189. The main gender impacts of the project include:

- The gendered nature of transport and the differential impacts of failing infrastructure between the genders (discussed in Sections III C and V C);
- Risk of spread of HIV and STIs and its impact on women and men;
- Women's participation in LBES construction and maintenance;
- Gender impact of LBES road construction methods and maintenance; and
- Role of women contractors and barriers they face in responding to the implementation of a gender-equitable LBES road maintenance program.

1. Risk of Spread of HIV and STIs

a. Current Status and Awareness

190. The first case of Human Immune-deficiency Virus (HIV) in Solomon Islands was detected in 1994. Data shows, as at December 2007, ten cases of HIV (two being reported during 2007), including two cases of Acquired Immuno-deficiency Syndrome (AIDS), and four deaths associated with AIDS.[45]

191. The prevalence of sexually-transmitted infections (STIs) in Solomon Islands is very high and is an indicator of those at risk of contracting the HIV. The incidence of STIs is a sensitive marker for behaviors that put people at increased risk of HIV infection, and genital ulcer disease has long been implicated as a co-factor in the transmission of HIV. In respect of data, there is no systematic reporting of suspected STIs and health posts are unable to undertake testing the actual number of cases is difficult to confirm. Positive cases are considered to be an under-estimation of the actual number of cases. Data for 2006 and 2007 provided by Guadalcanal Provincial Hospital are presented in Table 45.[46]

Table 45 - STI Data for Guadalcanal

STI	Number of cases	
	2006	2007
Gonorrhoea	10	40
Syphilis	26	60
Chlamydia	57	74
Herpes	20	15
Total	93	189

Source: SIRIP Main Road Guadalcanal PSA (August 2008).

192. HIV infection is concentrated in subpopulations with risk-taking behaviors that make them more susceptible to infection. Subpopulations identified as engaging in risky behaviors: (i) sex workers and their clients; (ii) mobile populations, such as loggers and seafarers; and (iii) men who have sex with men. Estimating the prevalence within these subpopulations is difficult, as people in these groups typically do not attend clinics where HIV testing is undertaken.

[45] Data made available from National Referral Hospital.
[46] Data for 2008 and 2009 was not available.

193. There are a range of significant risk factors for HIV, including the high prevalence of STIs; the low level of condom use; the high levels of inter-regional and intra-regional mobility; cultural practices such as taboos on frank discussion of sexual issues; the practices of tattooing, polygamy, and multiple sex partners; and the high rates of transactional sex. Pacific cultures are typically conservative, and intolerance and misunderstanding may marginalize affected or vulnerable individuals and isolate them from information and services that reduce risk and vulnerability.[47]

194. In general, in Solomon Islands, the knowledge of sexual and reproductive health within the community is poor. Discussions about reproductive and sexual health with young people in the family, educational, and health systems are limited due to cultural and religious barriers. Primary and high schools do not have a formal curriculum for sex education, and continuing training for health workers in the areas of STI, HIV infection, and AIDS has been lacking. Most notable is the absence of access to free or affordable condoms and 'youth-friendly' sexual health advice services, particularly in remote areas.[48]

195. The *Demographic and Health Survey* shows that nine in ten have heard of HIV/ AIDS and that knowledge is slightly lower among urban women who are divorced, separated or widowed and rural women. Knowledge about HIV/AIDS and its transmission is lower among women and men who have never had sex, rural women, and women with lower levels of education. Some 61% of women and 65% of men know that consistent use of condoms is a means of preventing the spread of HIV, and about 80% of women and 92% of men know that limiting the number of sexual partners can reduce the chances of contracting HIV.[49]

196. During the FGDs, in each group the concern was expressed about a low general knowledge about STIs and HIV, particularly methods of transmission and increasing safety from exposure, even though there had been visits by Ministry of Health (MOH) for STIs and HIV awareness-raising. On this issue, people stated clearly that more awareness is needed and a campaign that targets sub-groups within the community need to be held separately, i.e. separate sessions and discussions for boys and girls, youth and elders, women and men.

197. As noted in Section IV, in the discussion about the possible benefits and impacts of the road improvement, "bad influences" associated with the construction workers was cited as an adverse social impact, in particular increased alcohol consumption and risk of exposure to STIs and HIV were mentioned.

198. The household survey data indicates (Section V B) that women have lower levels of education than men and a higher number of women are widowed. According to the causal links about education and marital status and awareness of HIV and STIs found in the health survey, this puts the women in the subproject area at greater risk.

b. Mitigating the Risk

199. It is clear from the foregoing that there is limited knowledge of risk, and protection from, STIs and HIV in the villages along the subproject road, and therefore there needs to be a systematic approach to awareness raising and prevention adopted by the project.

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[47] SPC & Burnett Clinic; Pacific Regional HIV/AIDS Project Monitoring and Evaluation Report, June 2005.
[48] Ibid.
[49] SIG c; op cit.

200. Mitigating the risk of spread of STIs and HIV/AIDS during the construction phase of the project will include implementation of the STIs and HIV/AIDS awareness and prevention program. Using the model developed and currently being implemented in SIRIP, the risk will be mitigated by: (i) inclusion of a clause in the bidding and contract documents requiring the contractor to engage an approved service provider to deliver HIV and STIs awareness and prevention workshops/training sessions for all workers engaged by the contractor; (ii) the contractor providing adequate health care facilities including an HIV/STIs/AIDS education post and first aid facilities in any camp or office established for the purposes of the project; (iii) a community-based HIV and STIs awareness and prevention program, the community program is to be implemented prior to contract mobilization to the area; (iv) inclusion of a line item in the bill of quantities in the subproject contract to ensure that (i), (ii) and (ii) are implemented; and (iv) monitoring indicators covering the foregoing.

201. The estimated (and rounded) cost of the program as shown in Table 46 is in the order of SI$50,600 ($6,400). This assumes that all of the information, educational, and communication (IEC) materials required will be provided by Oxfam under the provisions of the Pacific Regional HIV/AIDS Progamme.[50]

Table 46 - Estimated Cost of STIs/HIV Awareness & Prevention

No.	Item	**Total** (SI$)	**Total** ($)
A.	Contractor Awareness Training (approved service provider)	6,000	757
B.	Community awareness raising & prevention	40,000	5,048
C.	Subtotal	46,000	5,805
D.	Contingency (10%)	4,600	581
E.	TOTAL	50,600	6,386

Source: Consultant estimate based on current costs provided by SIRIP.

2. Labor-Based Maintenance Approach

202. Following rehabilitation of the road, St. Martin Road will be maintained by implementation of an LBES program to ensure the sustainability of the investment and improvements to access. The main components of the LBES approach include (i) introducing LBES methods of road construction and maintenance whenever cost effective; (ii) training, counseling and employing local small-medium sized contractors, and (iii) supporting access to equipment through leasing, hire purchase and/or other methods.

203. Participation in any LBES program provides opportunities for women and men to acquire skills in construction techniques and maintenance works, which they could then apply to community-level infrastructure. The benefits that accrue to women include:

- Regular involvement in economic activities and engaging with others on a daily basis will expose more women to public life, and as a result, their confidence will hopefully increase encouraging them to seek other opportunities for involvement in livelihood and community development;

[50] Oxfam is an approved service provider in Solomon Islands. The approach adopted for SIRIP was that project awareness and prevention measures should link in with existing initiatives wherever possible. Oxfam is the local coordinating office for the Pacific HIV/AIDS Regional Program and in this capacity provides information and builds links with other organizations in the delivery of awareness and prevention, they have developed a number of materials that are suitable for contractor and community awareness type training.

- Opportunities to participate in training programs afforded through the LBES maintenance approach;
- Access to an income-generating opportunity, as laborers or as small contractors, access to cash provides women the opportunity to acquire productive assets and contribute to their economic empowerment. With improved household income there is likely to be improved household welfare, and the possibility that poor households may move above the poverty line;
- The attitude of men toward women and their capabilities could modify over time to better reflect what women can achieve with support;
- Overall, the community will benefit from the increased purchasing power of the workers. With better access as a result of improved infrastructure, farm-gate prices may improve and commodity prices reduce.

204. Any participation will need to be balanced with the usual (paid and non-paid) workload of women and men. Women are more likely to be disproportionately affected since in addition to providing LBES, they will continue doing household chores and other unpaid work. This means that they will experience even more fragmented use of their time and have less time for leisure and rest.

205. In addition to the participation in the training and actual construction and maintenance activities, women can benefit through the sale of food to the other workers on the road, from which income can be used for improving their welfare or investment in micro-enterprises. However, such activities will tend to reinforce the prevailing division of labor in villages. As women can often typically be assigned the task of food preparation and provision of water, as far as possible, in implementing LBES works, allocation of tasks should not be along gender lines (i.e., based on the belief that women are more suitable for, and naturally more efficient at, some tasks than men).

206. Promoting women's participation under any type of contracting may be difficult given the fact that already established contractors are primarily interested in profit maximization rather than equity. This can be addressed by including measures to motivate existing contractors, and encourage newly establishing contractors, to employ women as laborers through incentives. Without affirmative action for women, it could be difficult for them to mobilize as small business operators or partner in a contracting business and get work as laborers because contractors tend to believe that implementing quotas cuts into profits (largely because "female workers come late due to their domestic responsibilities").

207. Based on the model being implemented in SIRIP, measures (affirmative actions) that can be included in the project to maximize benefits for women, and to remove any constraints on the participation of women, can include:

- Overcome gender constraints on local procurement processes by including non-price attributes as well as price.[51] This can then include provision of weighting for businesses with female partners or all-female businesses, in the LBES contract procurement/tendering mechanism;
- Pre-qualifying contractors that include women;

[51] A current revision of MID's procurement manual is recommending that bid evaluation be changed to include up to 30% for non-price attributes and 70% on price, rather than 100% on price and contract being award to the lowest bidder.

- In the provision of training and information given on LBES contract procedures, training address gender issues including greater focus on gender-balanced community participation, and enabling an understanding of the gender impact of failing infrastructure;
- Identify means (such as micro-finance or revolving credit schemes) to overcome other possible barriers such as difficulty in securing the start-up capital that a small-scale contractor requires to purchase tools and to provide flexibility with cash flow (especially prior to first invoice being paid);
- Requirement for contractors to ensure that at least a third of the labor force are women, or alternatively a third of the work (or tasks) is given to women workers, depending on how contractors engage with community groups;
- Selecting and training women to be work-gang leaders, leading hands and/or supervisors;
- Requirement for contractors to use task, instead of daily, rates and adopt flexible working times;
- Requirement for contractors to recruit a new community-based workforce at regular intervals (such as every 2 km) to spread work opportunities and ensure that women are not discouraged by excessive distances to the workplace;[52]
- Requirement for equal pay for equal work for both men and women; and
- Requirement for contractors to submit weekly records of daily or task labor and wages paid by male and female (which can be used for disaggregated monitoring).

208. There are significant benefits to be gained from gender equitable involvement in LBES approaches to road construction and maintenance. In addition to improving access, which will have much longer-term gender benefits in project of improving education and health status of women (in addition all community members will also be better able to access health care services especially during emergencies).

F. Gender Action Plan

209. The gender action plan (GAP) has been prepared to ensure that women have opportunities to fully participate in the project, are not prevented from accessing project benefits by constraints, and to mitigate any potentially adverse impacts on women. The GAP comprises a number of elements addressing different aspects of disadvantage experienced by women as identified in the FGDS, household survey, and consultations with stakeholders. The GAP will include:

(i) HIV and STIs awareness and prevention program (as described in Section V E 1);
(ii) A one-week life-skills and micro-business training course including numeracy, literacy, basic household and small-business budgeting and management and savings made available to women in subproject area (women who do not participate in LBES maintenance works will still be eligible for the training);

[52] This requirement will also ensure equity between communities in terms of access to employment opportunities provided under a LBES maintenance program. It is also known form experience on other project being implemented that communities are reluctant to allow people from a neighbouring community to work on “their” section of road.

(iii) Community-based (women's trading group) savings scheme - helping women to open bank accounts and operate a small group micro-credit facility which can be used to provide small loans to other women to set up small-enterprises;
(iv) A gender module in the overall LBES training program, to be detailed following further consultations, integrated into three iterations; (i) pre-bid (technical aspects and role of small contractors); (ii) work organization and small business development training (organization, what is a small business, setting up wage ledgers, cash-flow, small scale risk management, money management (business versus wantok); and (iii) evaluation at about 3-6 months into contract (looking at where improvements can be made, do costs match bid price etc);
(v) Construction of a small market and bus-shelter (in a location to be determined) through consultations. A women's trading group will be established through women who participate in the life-skills and micro-business – these women will be given priority in operating stalls at the market.

Table 47 - Cost Estimate of GAP

Item	Cost ($)
HIV/AIDS/STIs awareness & prevention	6,400
Life skills training and development (HH budgeting, literacy, numeracy)	4,000
Women's trading group and saving scheme	-
Module in LBES training (contract requirements, technical aspects etc)	3,500
Market development	7,000
Bus stop and/or small shelters	2,000
Changes to local procurement processes (affirmative action)	-
Gender targets and disaggregation of baseline and benefit monitoring data	-
Subtotal	22,900
10% contingency	2,290
GAP TOTAL	25,190

G. Summary and Conclusions

210. The project overall, and St. Martin Road subproject, will help support the Government in attaining several of priority outcomes identified in the NPGEWD including:

- Improved and equitable health and education for women, men, girls and boys;
- Improved economic status of women;
- Equal participation of women and men in decision making and leadership; and
- Increased capacity for gender mainstreaming.

211. In order to ensure that women can enjoy project benefits by participation in opportunities provided by the project, and that potentially negative impacts upon women are mitigated, a range of measures have been proposed in the GAP.

Table 48- Summary of Subproject Gender Impact

Level	Issues and Impacts	Benefits
Women	Hours spent on road activities can lead to more fragmented use of time and less time for rest and leisure;	Access to cash; Increased control over, and access to, productive assets;

	Risk of exposure to STIs and HIV; Low levels of education and literacy affecting ability to participate; Low levels of involvement in community decision making	Access to life-skills and other training through GAP and LBES program Acquire skills in road maintenance works; Empowerment; Increased exposure to public life; Increased confidence
Men	Hours spent on road activities can lead to more fragmented use of time and less time for rest and leisure; May wish to control income of wife/daughter; Can be uneasy about women working on the road or taking greater role in household income generation	Access to cash; Access to training through LBES program; Acquire skills in road maintenance works; Increased awareness about women's role in community, and wider, development;
Household	Women have less time for household chores and unpaid work;	Increased household food security; Improved household income; Improved nutrition; Spare cash for school fees and other; Ability to improve houses i.e. tin roof/water tank
Community	Less time for community work, meetings, group leisure; Possibility of conflict if involvement in LBES not deemed equitable	Community trained in maintenance with skills transferred to other community infrastructure; Formation of new networks; Improved farm gate prices and reduced commodity prices; Better access to markets and social services

212. The GAP implementation and outcomes will be monitored along with gender specific targets included in the project's design and monitoring framework.

VI. POVERTY AND SOCIAL ASSESSMENT

A. Poverty Assessment

213. In Section II G, conclusions as to poverty in Solomon Islands have been provided based on the analysis carried out by UNDP. Poverty in the Solomon Island context has been defined as not meaning hunger or destitution, but rather described households struggling to meet daily or weekly living expenses, particularly those that require cash payments, and constantly having to make choices between the competing demands for household expenditure.

214. There are correlations between deteriorating road conditions, inhibited market access and poverty. During consultations, community members indicated that improving accessibility through road rehabilitation was essential for facilitating their access to markets and hence increasing household income and reducing hardship (manifested by households occasionally lacking food or other basic essentials). The survey validates this, showing that deteriorating road conditions have a considerable impact on income generating capacity; nearly three-quarters of respondents reported that deteriorating road conditions made it difficult to get their crops to markets (and therefore households produced less now than when the road was in good condition), increased their transport costs, and reduced the number of buyers to the area, each factor exacerbating ability to earn income.

215. The survey analysis in Section III showed that 21% of households carry goods on foot compared with only 3% when the road was in better condition, and that less than half of the households that used to transport goods via a hilux or van can do so now. The deterioration in road condition affects both the amount of crops sold and the types of crops produced. Households produced either the same or less than they did before the road condition

deteriorated, no households produced more now than they did when the road was in good condition. Some 74% of households (86% of households along feeder roads and 48% of households along St. Martin Road) stated they sold less produce since the road has fallen into bad condition, while 56% stated they now sold a different type of crop. The main reasons given for the decrease in produce sales are given in Table 49, in all cases the proportion of households is greater for feeder road areas.

Table 49 – Reasons for Decrease in Crop Production

Main reason for selling reduced amount of produce	HH location (%)		Total (%)
	St. Martin	Feeder	
Crops/produce is damaged by bad road conditions	42	61	52
Fewer buyers come to the area	37	69	53
It is more difficult to get crops/produce out	40	79	60
Truck drivers charge more to carry crops/produce	43	68	56

Source: PPTA Household Survey (July 2010).

216. As an impetus for wider socio-economic development, the *Smallholder Agricultural Study* notes that there are many opportunities for agricultural development in North Guadalcanal. The constraints that apply throughout Solomon Islands also operate here; in particular, the poor state of road maintenance, the lack of relevant information for agricultural producers, and a lack of other support. Nevertheless, the proximity of Honiara means that these constraints can be overcome more readily than for many other locations in Solomon Islands. Rehabilitating and maintaining the road will encourage people to produce more crops because the existing constraints and impediments (cited above) will be removed.

217. The household survey undertaken for the subproject indicates that 22% of households fall below the FPL and 19% of households fall below the BNPL. The gender assessment (Section V) shows that a significantly larger proportion of female headed households (63%) than male headed households (38%) fall below the poverty lines and are represented in the lowest income group. Households living in poverty cannot afford to (i) consume “luxuries” (mainly imported processed foods consumed by choice) such as tinned fish, tinned meat, cabin biscuits, tinned or powdered milk, and noodles; (ii) contribute to school fees, or cash donations to church and ceremonial activities; (iii) improve the quality of their houses (with a corrugated iron roof doubling as a rainwater catchment for example); and (iv) pay fares for transport to key facilities and to Honiara.

218. Improved houses are widely aspired throughout Solomon Islands. Traditional palm leaf houses, although cool, harbor mosquitoes and other insects, and must be constantly repaired or they leak when it rains. A house with a corrugated iron roof can be used as a rainwater catchment. A house constructed of more durable material such as wood or brick, can be built with doors and windows and can be mosquito-proofed, reducing risk of mosquito-borne diseases. Therefore, standard of housing can also be used as relative poverty indicator, as those who are economically advantaged are able to afford to improve their standard of housing.

219. According to HIES, on Guadalcanal, some 57% of households live in thatched or traditional “leaf” houses, 29% of households live in houses constructed of timber or concrete/timber, while the remaining 14% live in houses constructed from other materials (masonite, fiber-glass sheet). As discussed in Section III B, households in the subproject area generally subscribe to this pattern, with 41% living in houses with a palm leaf roof and 57%

living in houses with a corrugated iron roof. A larger proportion of households in the feeder roads (58%) than along St. Martin Road (26%) live in a house with leaf roof, which means that more than half of households in the feeder roads area cannot take advantage of this opportunity to use their roof as a rainwater catchment.

220. As noted during the FGDs, improving access as a means to increasing household incomes was a direct correlation made by villagers. Rehabilitating and maintaining St. Martin Road will contribute to poverty reduction through (i) improving access to key markets by re-introducing regular and reliable passenger transport services along the road; (ii) encouraging visits by buyers of cocoa, copra and other local produce; (iii) increasing the ease with which producers can take their goods to the market; and (iv) contribute to a slowly developing small-scale tourism sector associate with Tenaru Waterfall. The foregoing will improve household well-being and potentially increase household income.

B. Improving Access to Key Facilities and Services

221. Access to social services and key community facilities will be improved as a result of the rehabilitation of St. Martin Road, and the implementation of a maintenance program will ensure the sustainability of the investment in road rehabilitation. It is anticipated that the subproject, by improving the road, will encourage the re-introduction of vehicles and passenger transport services into the subproject area, reduce travel times for both vehicles and pedestrians, as well as reducing costs associated with vehicle travel along the road (vehicle operating cost savings), with the potential for some savings being passed on to passengers.

222. In terms of education services in the subproject area, there is a primary school in Gold Ridge Relocation Village (relocated from Belaha) and a national secondary school – St. Joseph's – at St. Martin located along the subproject road. The secondary school provides boarding facilities and is attended by about 400 students from around the country. In the vicinity of St. Martin, there are also two RTCs.

223. In respect of health services, there is a health centre/nurse aid post at the Gold Ridge Relocation Village (relocated from Kanga) located along the subproject road. In the vicinity of Honiara, there are a number of clinics, nurse aid posts, an area health clinic, as well as the national referral hospital.

1. Improving Access to School

224. The deterioration in the condition of St Martin Road has created a modal shift in transport to primary and secondary school in a similar pattern to trips being made to the market and to Honiara; about half of the children who used to travel by truck (27%) now travel by truck (13%) and a very small proportion now travel by mini-van (1%) compared with when the road was in good condition (12%).

225. There has been an increase in students walking to secondary school from when the road was in good condition (56%) to now (86%). A small proportion of secondary students used to be able to travel to school by bicycle, now none can.

Table 50 – Mode of Transport to School

Destination	Timeframe	Transport mode (%)				
		Walk	Bicycle	Hilux/ van	Truck	Other
Primary school	Current	82.2	0.5	4.2	9.0	4.1
	5 yrs ago	79.3	0	5.4	9.5	5.8
Secondary school	Current	85.6	0	1.2	12.8	0.4
	5 yrs ago	55.8	2.7	2.1	26.9	12.4

Source: PPTA Household Survey (July 2010).

226. During the consultations, people frequently commented that children were reluctant to go to school because of increased travel time and increased number of students who must now walk, for children in villages along the spur road (as shown on Figure 2) access difficulties were exacerbated as a result of the bridge being washed out about three or so years ago. Children must cross the river, which is very fast flowing and deep after a heavy rain. Some people mentioned in the FGDs that children from villages along the spur road would simply not go to school after it had rained for fear of being hurt by being carried downstream, or even drowned, while crossing the river.

227. The foregoing has two effects: (i) in the short-term, school attendance rates are decreased; and (ii) in the longer-term education levels are lower than they should be. This conclusion is validated by both previous Census data and household survey data.

228. Census data shows that school attendance in the subproject area was low, with between a half and three-quarters of school age children actually attending school. No boys and 7% of girls in the four to five year age group attended school, and 61% of girls, compared with 78% of boys, aged between six and twelve years attended school. Less than a quarter of students in the 17 – 19 year age group - girls (21%) and boys (24%) - attended school. With the exception of the 13 – 16 year age group in which a larger proportion of girls (67%) compared with boys (51%) attended school, the school attendance rate for boys is higher than for girls (Table 51).

Table 51 - School Attendance by Age Group and Gender

Gender of students	Attendance rate as % of total of age group			
	4 to 5 years	6 to 12 years	13 to 16 years	17 to 19 years
Female	6.6	61.4	66.7	20.9
Male	0.0	79.5	51.4	23.9

Source: 1999 Census GIS Database.

229. The data from the household survey (discussed in Section V) showed that 19% of women compared with 6% of men in the subproject area did not have an education, similar proportions of men and women (71%) have a primary or secondary level education, but that a significantly larger proportion of males (23%) compared with females (10%) have a tertiary level education.

230. Provided that socio-cultural factors that give rise to inequitable education outcomes between the genders can be addressed, improving access to school will have a positive effect on both attendance rates and in the longer-term, educational achievements.

2. Improving Access to Health Facilities

231. During the FGDs, both women and men noted difficulties in access to health facilities due to increased pedestrian travel time and decreased transport services as a result of poor road condition, these difficulties were more pronounced for pregnant women who struggled to the clinic or further to the Referral Hospital. The point was raised during the women's FGDs that with improved access, a doctor would be able to make monthly visits to the health clinic at Gold Ridge Relocation Village.[53]

232. Most trips to health centre (> 90%) are on foot and this has not been affected by change in road condition, although a larger proportion of people now make the trip on foot (a 6% increase). The health trips that have been affected are those made by truck (a 4% decrease) and by van (a 2% decrease).

Table 52 – Transport Mode to Health Facility

Destination	Timeframe	Transport mode (%)				
		Walk	Bicycle	Hilux/ van	Truck	Other
Health centre	Current	98.7	0	0.7	0.7	0
	5 yrs ago	92.1	0	2.3	4.3	1.3

Source: PPTA Household Survey (July 2010).

233. Improving access to health facilities will encourage people to seek treatment for illness and injury, rather than not seeking treatment and allowing an illness to worsen. The survey indicated that 13% of households contain adults, and 18% of households contain children, who did not seek treatment for an illness in the past year (Table 53).

Table 53 – Health Seeking Behavior in Subproject Area

Location	% of households not seeking treatment for illness			
	Adult		Child	
	Female	Male	Female	Male
Feeder roads	13.1	11.7	19.2	21.8
St. Martin Road	15.1	12.9	14.1	17.4
Total	14.1	12.3	16.7	19.6

Source: PPTA Household Survey (July 2010).

234. Respondents were asked to state the most important, and second most important reason, why treatment was not sought for an ill household member in the past year. A number of reasons were given for not seeking treatment including (i) the nature of the illness (either being not serious enough, or being incurable) and (ii) the expense of a consultation and/or treatment. Another two reasons were related to the condition of the road (Table 54).

235. Lack of transport to the health facility was the most important reason for not seeking treatment for 57% of females and 30% of males, and the condition of the road resulting in long

[53] The clinic is currently staffed by one nurse, and with limited equipment, only basic diagnostics are possible. For other than rudimentary health care, patients must travel to the Referral Hospital in Honiara.

travel time and discomfort was the most important reason for not seeking treatment for 29% of females and 40% of males.

236. Lack of transport to the health facility was the second most important reason for not seeking treatment for 29% of females and 30% of males, and the condition of the poor road resulting in long travel time and discomfort was the second most important reason for not seeking treatment for 71% of females and 10% of males.

Table 54 – Road Condition Related Reasons for Not Seeking Treatment

Reason	Most important (%)		Second most importnt (%)	
	Female	Male	Female	Male
Lack of transport to health facility	57	30	29	30
Road is bad condition, trip takes too long	29	40	71	10

Source: PPTA Household Survey (July 2010).

237. The survey asked the number of days adults could not work and children could not attend school as a result of being ill and not seeking treatment. The figures given above were used to determine the number of days not worked or school was not attended as a direct consequence of road condition. In the past year, 20 days of work were missed, and between seven and eight of these are attributed to road conditions resulting in treatment not being sought, extrapolating this to the subproject area population, results in the order of between 645 and 702 days of work being missed in a year due to road condition discouraging the ill from seeking treatment.

Table 55 – Days of Work and School Missed

Reason for not seeking treatment	Adults - days (no.)				Children - days (no.)			
	Male	Fem.	Total	Total pop.	Male	Fem.	Total	Total pop.
Lack of transport to health facility	5.3	2.3	7.6	702	0.9	6.1	7.0	444
Roads are bad/trip takes too long	4.4	2.6	7.0	645	1.1	5.3	6.4	518

Source: Survey data and consultant estimate.

238. Using the minimum wage rate of SI$ 32/day, this results in a total of between SI$ 20,653 and SI$ 22,472 in lost wages in a year, and at household level a loss of between SI$ 2,582 and SI$ 2,809 in wages which account for between 8.5% and 9.2% of average household income. Such losses will be more significant to households falling below the poverty line and those households that do not receive a regular income.

239. In respect of the total number of days children could not attend school (17) and allocating these by the road condition related reasons treatment was not sought as given above (between six and seven days) and extrapolated to the school-age population in the subproject area (a total of 568 children), this results in the order of between 444 and 518 school days being missed in a year.

240. Rehabilitating the road and providing improved access to health care will have a two-fold benefit of saving households potentially lost wages, and reducing the adverse impacts on children's education by potentially decreasing the number of school days missed.

C. Social Safeguards

241. As described in ADB's Safeguard Policy Statement, ADB has one environmental safeguards (safeguard 1) and two social safeguards; safeguard 2: involuntary resettlement and safeguard 3: indigenous people.[54]

1. Involuntary Resettlement

242. For the two sample subprojects, the works envisaged include: (i) road rehabilitation using LBES/labor intensive methods wherever possible, these works will include the clearing of drains and installation of drains and outlets where required, digging out and replacement of sections of pavement, and re-gravelling the pavement surface (as described in Section I).

243. The right-of-way of St. Martin Road is managed by MID on behalf of Commissioner of Lands (COL), the agency responsible for government lands held in perpetual estate.

244. Land immediately adjacent to the road is held in perpetual estate by COL for the state and is under various lease arrangements including to St. Joseph's Secondary School, the two RTCs (St. Martin's Training School and rice cultivation demonstration projects), and the Gold Ride Relocation Village located at the end of the subproject road. The feeder roads that lead off St. Martin Road traverse an area that remains in custom ownership.

245. The foregoing ownership arrangements have been confirmed by the COL. Consultation with village chiefs owning the custom land along the spur road and also with the COL reveal there are no claims or disputes over the land affected by the subproject.

246. For road rehabilitation activities, with the exception of some temporary works (on areas of land to be identified during detailed design), land outside of the existing road alignment will not be affected or required. Any land required for temporary works will be used only if consent of the owner/user is obtained and suitable arrangements for its project use and re-instatement are made as per the provisions of the project's resettlement framework (RF). The IEE prepared for the subproject includes an environmental management plan (EMP) which covers the management and mitigation of construction stage impacts.

247. MID will ensure that (i) further consultation is undertaken ahead of time (i.e. consultations with adjacent land owners and users with advance notice of works commencing, type of works; (ii) for the road subproject, river gravel is obtained through existing extraction arrangements between resources owners of the Lungga River and MID; (iii) for the road subproject, that the location of cross-drains (and discharge of run-off) are discussed and agreed with adjacent land owners and users; (iv) the contractors adopt an "all care" approach in critical areas (which can easily be identified); (v) access is reinstated; and, (vi) the contractors compensate for any damage incurred during works activities (as per the provisions of the RF), there will be no resettlement impacts.

248. Further, incidental or unforeseen impacts will be managed through items in the Project's RF, the environmental management plans included in the IEE. The conclusion is that the St. Martin Road subprojects will not cause resettlement impacts, and therefore, a resettlement plan

[54] ADB. 2009. *Safeguard Policy Statement*, Manila.

is not required. A due diligence report has been prepared to document the rationale for this conclusion and includes the land acquisition and resettlement screening form as an attachment.

2. Indigenous People

a. Indigenous People in Context of Solomon Islands

249. Melanesians and Polynesians[55] make up the largest proportion (98%) of the Solomon Island population, and are considered the indigenous people (IP) of Solomon Islands. In the western islands of the country (Shortland Islands, Choiseul, and Isabel) ethnically and culturally, the people are closely related to the people of Bouganville in Papua New Guinea.

250. Prior to independence, the British brought Chinese and Micronesians (Gilbertese) to the Solomon Islands. Since that time, these people have become "naturalized" Solomon Islanders, along with some remaining British. Recent waves of immigration have brought Chinese (predominantly settled in urban areas) and Gilbertese (predominantly settled in Makira and Western provinces).

251. The Constitution of Solomon Islands (1978) establishes the governing, legal and judicial system, national legislature, and public services of Solomon Islands as an independent nation.

252. The preamble to the Constitution states that the people of Solomon Islands are "…proud of the wisdom and the worthy customs of our ancestors, mindful of our common and diverse heritage and conscious of our common destiny…" and as such agree and pledge to, amongst other things; (i) respect and enhance human dignity and strengthen and build on our communal solidarity; and, (ii) cherish and promote the different cultural traditions within Solomon Islands.

253. The Constitution grants citizenship of Solomon Islands to those, who prior to Independence Day, are an indigenous Solomon Islander, or born in Solomon Islands and who has, or had, two grandparents who are or were members of a group, tribe or line indigenous to Papua New Guinea or the New Hebrides. Other laws make reference to notion of "indigenous" Solomon Islanders. For example, the Land and Titles Act defines a Solomon Islander as a "…person born in Solomon Islands who has two grand-parents who were members of a group, tribe or line indigenous to Solomon Islands".

254. Chapter 11 of the Constitution sets out the rights and protections of Solomon Islanders, among which is the protection from discrimination on grounds of race, place or origin or color, and makes it unlawful; for any act to make an provision "that is discriminatory either of itself or in its effect." The chapter states that no person shall be treated in a discriminatory manner by people in public office or public authority, and no person shall be treated in a discriminatory manner in respect of access to shops, hotels, lodging-houses, public restaurants, eating-houses or places of public entertainment etc.[56]

255. Solomon Islanders claim ancestry through clan/land owning lines which is associated with islands and provinces. Approximately 87% of land in Solomon Islands is retained under

[55] Polynesians are mostly settled in Temotu, Outer Islands of Malaita, and Rennell-Bellona islands.

[56] Within the Constitution "discriminatory" is defined as affording different treatment to different persons attributable wholly or mainly to their respective descriptions by race, place of origin, political opinions, color, creed or sex whereby persons of one such description are subjected to disabilities or restrictions to which persons of another such description are not made subject or are accorded privileges or advantages which are not accorded to persons of another such description.

customary ownership, the remaining 13% is alienated land held in perpetual estate for the State (and for which varying leases are granted), or freehold land.

256. English is the "official" language, however, Pidgin is the lingua franca and people outside of the main urban areas are more likely to be literate in Pidgin than they are in English.[57] There are numerous dialects of Pidgin, differing slightly between islands. Many British, Chinese and Gilbertese speak Pidgin but also speak their own languages.

257. In Solomon Islands' context, while the customs and traditions of different clans or lines, islands or provinces are respected, and differences in cultural practices may differ, Solomon Islanders are seen as one people, there are no ethnic or cultural minorities that are indigenous to Solomon Islands.

b. Applicability of the Policy

258. The objective of the ADB's IP safeguard is "…to design and implement projects in a way that fosters full respect for IPs' identity, dignity, human rights, livelihood systems, and cultural uniqueness as defined by IPs themselves so that they (i) receive culturally appropriate social and economic benefits, (ii) do not suffer adverse effects as a result of projects, and (iii) can participate actively in projects that affect them."

259. The policy is triggered if a project directly or indirectly affects the dignity, human rights, livelihood systems, or culture of IPs.

260. Meaningful consultation has been undertaken for the subproject, any investments developed during project implementation will undertake consultation with all affected and beneficiary groups and people. As presented in Section IV, consultations indicate (i) a high level of homogeneity in communities in the subproject area; (ii) support for the subproject in order to improve and upgrade the road and access to important facilities, services and employment opportunities; and (iii) both the willingness and capacity to participate in design, implementation, and monitoring of the subproject. In general, people commented on the benefits and positive impacts anticipated to result from transport infrastructure improvements, and have stated there are no constraints on the ability of people to participate in project benefits as a result of culture or custom.

261. The IP safeguard also seeks to protect people who might be "economically marginalized". These people include the landless and economic migrants, usually located in urban areas such as Honiara, Auki or Gizo.[58] They have left the place in which they have land or use of land, and often end up living in informal settlements. These settlements are not homogenous as they include people from many islands and provinces and are made up of indigenous and non-indigenous Solomon Islanders. No such settlements or people are within the subproject area.

262. In addition, the subproject will not involve any activities that will:

- Provide for or allow commercial development of cultural resources or indigenous knowledge under the project;

[57] Household surveys undertaken for the Poverty and Social Assessment indicate higher literacy in Pidgin, or a combination of Pidgin and English, than in English.

[58] Land is available for all members of a clan to use, if people move to other areas, they are not entitled to land in those places and in effect become "landless" in the place they have chosen to live.

- Provide for or allow commercial development of natural resources that would impact the livelihoods or cultural, ceremonial or spiritual use of land that would impact the identity or community;
- Provide for or allow restrictions in use of, or access to, protected areas and natural resources;
- Require displacement from traditional or customary lands;
- Create direct or indirect adverse effects on the dignity, human rights, livelihoods systems, or culture of IPs.

263. Therefore, it can be concluded that the St. Martin Road subproject does not trigger the IP safeguard.

D. Risk of Spread of Communicable Disease and Child Exploitation

264. The transmission of communicable diseases such as STIs and HIV can be a potential impact of the construction phase of road rehabilitation projects, usually posed by construction workers engaging in either commercial sex or sexual relationships with local people.

265. The risk of spread of STIs and HIV associated with the project is a function of a number of factors including (i) existing knowledge about the risk; (ii) the length of time that large and relatively mobile populations could be located in the subproject area; and (iii) engagement in high-risk behaviors (such as increased alcohol consumption and multiple partners etc). As noted in the gender assessment (Section V E), the knowledge surrounding routes of transmission and methods of prevention of STIs and HIV in the villages in the St. Martin Road subproject area is low.

266. The works undertaken for the initial rehabilitation of St. Martin Road will be undertaken by a medium sized contractor, and more than likely a local contractor due to the relative small-scale of the works. The rehabilitation works will be undertaken over a period of about ten months; a medium-size contractor will have a small permanent crew and will use community labor for more basic activities (drain clearing, vegetation cutting etc). As a result of close proximity to Honiara it is highly unlikely an accommodation camp for contractor staff will be required. Even in the event the contract is won by an international company, staff would most likely stay in Honiara rather than in St. Martin area. Following the rehabilitation, the road will be maintained through LBES methods utilizing people from the adjacent communities. For these reasons the risk associated with construction is substantially reduced.

267. During operation, the road is considered a no more than minor risk largely because it is a dead-end road and services local traffic only rather than being a thorough-fare.

268. Nonetheless, a risk remains, and needs to be mitigated. The GAP includes an HIV and STIs awareness and prevention component (refer to Section V E 1). The program will be aimed at any construction workers that are brought in from outside the subproject area, as well as increasing awareness for the communities in the subproject area.

269. In respect of the subproject posing a risk of child exploitation, this risk mostly associated with camps and large numbers of outsiders. There are reports recording child exploitation associated with logging camps in parts of the country, and it is clear from a case study that the

presence of camps can be associated with a high risk of child abuse or exploitation.[59] The subproject will not require the establishment of an accommodation camp or site for workers, even in the event that outside workers are required for more specialized activities that can not be undertaken by the community, the numbers will be minimal and it is unlikely that these people will not need to sleep in the subproject area. Therefore, the risk of child exploitation as a result of the subproject is considered negligible.

E. Impacts on Health and Safety

270. Air pollution and noise, which also have a health and safety aspect, are dealt with in the subproject's IEE and mitigation measures are included in the EMP. The risk of spread of communicable disease has already been discussed in Sections V E and above. The subproject can cause a range of health and safety impacts associated with (i) contamination of local water supplies; (ii) risk of accidents at work sites, and (iii) traffic safety issues.

271. Potential impacts to local water supplies include water supply and wastewater disposal are mostly associated with construction camps. As there will not be an accommodation camp required for rehabilitation works, this impact will not occur. Any works near the river will be managed and controlled through provisions in the EMP, therefore localized impacts on the river as water source are minimized.

272. Observing general health and safety requirements, including provision of safety and protective gear and equipment to workers, will reduce the risk of accidents at the work sites. The contractor's office will be equipped with first-aid and basic medical supplies. The contractor will be required to submit a health and safety plan, along with the EMP, outlining the measures to be taken to protect health and safety, reduce accidents, and the measures to be taken in the event of an accident or emergency, for approval by the project manager.

273. Any site for storage of equipment (identified through consultation with adjacent land users) will be properly signed and fenced and managed according to the provisions set out in the EMP. Only authorized personnel may enter the site area.

274. Following rehabilitation, road projects can also inadvertently cause adverse impacts on road and traffic safety as a result of higher vehicle speeds due to improved road conditions. The proposed rehabilitation works will include bitumen sealing of the first 2 km of the road, and improving the gravel surface for the remaining 6.5 km. As noted earlier, the road is not a connecting or through route, and traffic is associated with local access and buyers coming in to the area for cocoa and copra. The running surface of the road will be improved, and repair works will enable all-weather passage by vehicles, the speed environment will not be changed significantly. However, there is, and will likely continue to be, a large number of pedestrians using St. Martin Road, and therefore road safety should be addressed at the community level. Increased awareness through village meetings and through implementation of road safety programs included in schools will help mitigate this.

275. The Principal of St. Joseph School noted a concern with traffic noise, and speed, and requested consideration of a bypass around the school. Any such realignment would need to cross on either side of the RTC land, cutting through the demonstration rice projects. The land severance and acquisition issues and cost of such realignment would be high, and the relatively

[59] Herbert, T/Christian Care Center; Commercial Sexual Exploitation of Children in Solomon Islands; a Report Focusing on the Presence of the Logging Industry in a Remote Region (Honiara, July 2007).

small benefit to the school does not warrant detailed consideration. Sign-posts and traffic calming measures, along with the implementation of a road safety awareness program in the schools, will address the concerns of the principal.

276. During the FGDs, the ten communities in the catchment of the spur road (to Tenaru Waterfall and as shown on Figure 2) noted that their access problems were more severe than for the communities along St. Martin Road, being exacerbated by (i) the decline in condition of the road leading to St. Martin Road; and (ii) the destruction of the bridge at 1.3 km along the spur road. People in these communities stated that they had to walk across the Tenaru River, which after heavy rains is a deep and fast flowing river. Concerns for children, the elderly, and pregnant women who had to make their way across the river were raised many times in the consultations. In one meeting at Pao, attended by 17 women from the villages along the spur road, most of the discussion was about the access difficulties posed by the missing bridge and poor road condition and the effect this has on their daily lives. About two-thirds of the subproject area population live in this catchment, and an assessment of replacing the bridge and rehabilitating the road is warranted.

277. Measures for reducing and avoiding impacts on health and safety include:

- Appropriate signage and traffic calming measures in the location of St. Joseph Secondary School;
- MID to undertake a feasibility study (technical, economic, and safeguards) of the works required to improve access along the spur road including replacement of the bridge/crossing and rehabilitation of the road to an appropriate level of access;
- Prior to completion of the works, implementation of a road and traffic safety awareness campaign, through the schools and RTCs;
- Signs and other appropriate safety features will used to indicate rehabilitation works are being undertaken;
- Sites for storage of equipment and plant will be securely fenced and “keep out” signs clearly visible;
- The contractor will prepare and submit to the project manager a health and safety plan specifying health and safety matters, and specific hazards and how to avoid them;
- The contractor will provide workers with personal protection equipment, such as safety boots, reflector vests, helmets, and protective clothing and goggles if required;
- Contracts will include a clause specifying that care must be taken during the construction period to ensure that disruptions to access and traffic are minimized and that access to villages along the subproject road is maintained at all times;
- Villages will be consulted in the event that access to a village has to be disrupted for any time;
- Provision of adequate protection to the general public in the vicinity of the work site, including advance notice of commencement of works, installing safety barriers if required by villagers, and signage or marking of the work areas; and
- Provision of safe access across the works site to people whose villages and access are temporarily affected during road rehabilitation activities.

F. Other Social Impacts

278. The rehabilitation is relatively small-scale and is anticipated to be undertaken by a contractor utilizing local labor (as much as possible). Therefore there will not be the need for a camp per se to accommodate construction workers, people working on the road will be expected to travel to and from the site each day. There will be the need to identify an area where the contractors can place equipment and material during the works, the most suitable site for this should be identified in consultation with the community, contractor, and representative of MID, and a lease for temporary use of the site negotiated with the leaseholder or land owner(s) as the case may be. The contractor will be responsible for removing all temporary structures and re-instating the land to its pre-project condition at the completion of the works.

279. To avoid, or reduce the risk of, other social impacts, workers should be limited to subproject sites (immediate site of works on the road and plant/equipment site), and at all times workers should respect village and land owner's boundaries and be cognizant of village rules and terms of conduct (especially addressing women and elders), and avoiding damage to productive trees and gardens. Prior to mobilization of the contractor to the site, the Social Development Officer (SDO), the person assigned to the management and implementation of safeguards and the GAP in the Central Project Implementation Unit (CPIU), in coordination with MID's Community Development Officer (CDO), will inform the contractor of the need to establish the communications protocol between the project and community. The contractor will identify one member of their staff to be the liaison between the village chief and elders and contractor, as well as between the contractor and CPIU. The contractor will be required to submit a code of conduct of staff and workers, along with their mobilization strategy, to the CDO and SDO.

G. Risk Management and Social Development Plan

280. The social impact assessment concluded that there are risks associated with (i) ongoing health and safety issues related to people walking across the Tenaru River, especially at time of high flow; (ii) the spread of STIs and HIV/AIDS during construction phase; (iii) potential conflict between contractor staff and workers and local people; (iii) potential for accidents and traffic and road safety issues.

281. The following measures for the management of these social risks will be implemented:

Table 56 - Measures for Management of Social Risks

Risk	Risk management activity	Expected outcome
Pedestrian crossing of Tenaru River (spur road)	Feasibility study (technical, economic, safeguards) of river crossing and road rehabilitation	Potential for spur road to be developed as a "subproject" and access improvements funded
Spread of STIs/HIV	Contract clause and line item in bill of quantities requiring contractor to implement HIV/AIDS education and awareness training sessions; Approved service provider to implement contractor and community awareness and prevention campaign; IEC materials in contractor site office; Reinforcement of HIV/AIDS message during LBES and other maintenance work, including HIV/AIDS education to maintenance contractors; Monitoring by SDO/CDO and others	Contractor staff and households in the subproject area will be fully informed about the risks of STIs and HIV/AIDs; HIV/AIDS awareness and prevention program implemented;

Conflict between contractor staff and villages	Contract clause requiring contractor to set a code of behavior towards chiefs, girls and women, and requiring workers to treat landowners/villages with respect; Contractor visits all villages to explain rehabilitation activities and timeframe, and undertake any negotiations for land or resource use as required (accompanied by CDO or SDO); Agreements reached for extraction and use of materials (such as gravel etc) and temporary use of land; Monitoring by SDO/CDO	Contractor staff will maintain acceptable codes of conduct (or dismissal); Households in subproject area will be fully informed about road works (and opportunities for work); Negotiations will be conflict-free; No conflict during construction
Traffic and road safety/accidents	Implementation of school traffic awareness and accident prevention program	Increased awareness about traffic and road safety

282. In addition to mitigating social impacts (or managing the social risks), there are measures that will be included in the project design to maximize benefits. These are set out in Table 57.

Table 57 - Measures for Maximizing Subproject Benefits

Subproject Activity	Activity	Expected outcome
Community awareness and contractor mobilization	Households in subproject area fully informed about road works and will benefit from them to the maximum extent possible; Representatives of provincial NGOs health, education, planning, police and agriculture will participate in awareness raising activities organized by the CDO and SDO; Contractors are required to rehabilitate and maintain the road with the maximum local labor inputs, commensurate with good quality work paid at least the minimum rural wage;	All households in the subproject area will cooperate with the project; High levels of community involvement in LBES activities; Establishment of community groups and small businesses
Subproject Activity	**Activity**	**Expected outcome**
Gender awareness and equity measures	Implementation of the GAP (incl. module in LBES training program); LBES and rehabilitation activities planned in manner that accommodates women's existing work/time burden; i) adopting task rates rather than daily rates; ii) flexibility in starting time; iii) undertake most works during the off-peak agricultural seasons; Awareness creation about the significance of women controlling cash; Support for women to establish "road work groups" or small businesses; Awareness creation, targeting women, about the benefits and risks associated with exposure to public life; Training for CPIU and MID staff in safeguards ad gender development issues; Monitoring of GAP implementation	Women from within subproject area have opportunity to participate in project; High female participation rates in LBES and other activities; Livelihood and socio-economic status of women improves; Increased number of small businesses operated by women; Increased awareness of gender issues in government and private sector people working in transport sector; Targets specified in GAP and DMF met
LBES maintenance and training program	LBES specialists, CDO/SDO, and NGO or other for gender module, implement LBES training program; Monitoring of local labor inputs to contracts;	Road is rehabilitated and maintained with maximum local labor inputs

283. The costs of social development plan include the cost of the GAP (detailed in Section V F) and the costs of the traffic safety program. The costs associated with a feasibility study of a crossing of Tenaru River and rehabilitation of the spur road are not known at this time. Training and capacity building for CPIU and MID in safeguards and gender issues has been included in the overall institutional strengthening plan developed for the project, and is detailed in a separate report.

Table 58 – Cost of Social Development Plan

Item	Cost ($)
GAP	22,900
School traffic safety program	5,500
Feasibility study of crossing/spur road rehabilitation	TBA
Contingency (10%)	2,840
Total	31,240

VII. CONCLUSIONS AND MONITORING

A. Conclusions

284. The subproject is welcomed by the people in villages along, and in the wider catchment of, St. Martin Road. People participating in the FGDs and household survey indicated a high level of support for the project. In the survey, 94% of households stated they anticipated their household would directly benefit from the project (100% of female respondents and 98% of male respondents).

285. Rehabilitating the road is anticipated to (i) facilitate re-introduction of passenger transport services to the area; (ii) reduce travel time and discomfort associated with poor road condition; (iii) improve access to markets, school and health facilities; (iv) generally improve access and connectivity; (v) potentially reduce travel costs; (vi) contribute to localized poverty reduction; and (vii) improve livelihoods and socio-economic conditions in the subproject area.

286. The overall level of negative social impacts will be minor. The majority of impacts will occur during the rehabilitation works, and will be temporary, localized, and readily controlled.

B. Monitoring of Social Impacts and Safeguards

287. The project will ensure that baseline data, performance indicators and a monitoring plan are developed to measure and monitor anticipated risks and impacts from the subproject. The household survey undertaken during the PPTA can be used to establish a number of baseline measures.

288. A design and monitoring framework has been established for the overall project. In order to undertake this work CPIU will establish and implement a performance management system that will provide feedback on a number of indicators to show that the social risks associated with the project are being avoided or adequately mitigated and the anticipated benefits are being received.

289. The proposed framework for monitoring the safeguards and social impacts/benefits are set out in Table 59.

Table 59 - Social Impacts and Safeguards Monitoring Framework

Direct Social Benefits	Indicator	Measurement Means[60]
Poverty reduction	Increase in people engaged in paid work; No. of houses below FPL and BNPL; Livelihood improvement and increased food security; No. of improved houses (tin roof/water tanks)	Household survey data; Project reports and secondary information sources
Employment during rehabilitation and maintenance	Implementation of LBES training and maintenance program; Legal wages paid to workers; No use of trafficked or child labor for construction and maintenance activities; Employment targets set for women and ethnic minority people; No differential wages paid between men and women for work of equal value; A specific clause placed in bidding documents that compliance will be strictly monitored during project implementation	No. of contractors registered with MID; No. of LBES contracts let; Construction contract wage bills Project reports esp. to identify if targets being met
Increased transport services	Increases in local vehicle fleet; At least one passenger/transport vehicles will call at xx villages on the stretch daily; Further investment in provision transport services in the subproject area	No. of vehicles (private and passenger transport) using the road per day and per week; No. of passenger and cargo trips per day; Pedestrian and vehicle travel time along road:
Increased volume of production for cash sale	Increase in overall cocoa (and other) production; Improved access to local markets and Honiara	Records of production in area; No. of buyers to area
Increased role of women in village decision making; empowerment of women	No. of women on village authorities/committees; No. of women participating in LBES training and support activities; Increased no. of literate and numerate women; No. of women engaged in construction and maintenance activities; No. of women participating in savings scheme; No. of women involved in savings scheme outreach, accessing existing credit schemes and successfully paying back loans	No. of women participating in LBES works; No. of women participating in GAP activities; No. of women to be specified in terms of % of village population and vis-à-vis men; No. of contractors with female partners registered with MID; RRA & project reports
Indirect Social Benefits	**Indicator**	**Measurement Means**
Promotion of socio-economic development in the area	Increased literacy and education Increased employment in paid work Increased incomes	Survey data Household census data in longer term
Risks	**Indicator**	**Measurement Means**
Increase in HIV/AIDS & sexually transmitted diseases resulting from construction phase activities	Increase in STD and HIV/AIDS rates	Health data and statistics Survey data

[60] Survey data will be disaggregated by income group [specifically poor and non-poor], gender, and age.

Traffic and road safety	Implementation of traffic safety awareness program; No increase in accidents	No. of participants in awareness program; Accident records and data
Other Interventions	**Indicator**	**Measurement Means**
Enhanced social awareness for prevention of HIV/AIDS and trafficking	HIV/AIDS awareness & prevention program implemented prior to construction Inclusion of trafficking awareness and prevention component	Project reports Independent monitoring report
Exclusion of poor and marginalized groups	Poor and marginalized households affected by project (compared with proportion of non-poor)	RRA + baseline data
Public participation	Public awareness programs to beneficiaries and communities living in subproject areas	Project reports Independent monitoring report