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Community Based Survey of Village Development in Kalimpong Area, West Bengal, India

*A report prepared for the Glenn Family Foundation
May 2008*

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Preface

This report was the outcome of a meeting between Owen G. Glenn, two of the authors (Dr Yvonne Underhill-Sem and Dr Ward Friesen), and a liaison person from the School of Business (Geoff Whitcher) in early 2008. On the occasion of the opening of the Owen G. Glenn Building, the new home of the School of Business at The University of Auckland, to which the Glenn Family Foundation (GFF) had made a substantial contribution, Owen G. Glenn requested a meeting with the authors to discuss the possibility of a study of development projects which the GFF was undertaking in India. Following that meeting, a study was commissioned by GFF to be carried out through the Development Studies programme at The University of Auckland to assess the village development work that GFF has been carrying out in the Kalimpong area in the Himalayan foothills in the north of West Bengal. The purpose of this study was to examine the projects in relation to broader development principles and practices.

The project involved a team based in Auckland, New Zealand comprising Dr Underhill-Sem and Dr Friesen who conceptualised the project, two research assistants, Alan Cheung and Jen Margaret, and an editorial assistant, Jessica Peterson. The fieldwork for this report was carried out in the Kalimpong area in March 2008 by Ward Friesen and Jennifer Margaret. They would like to express their warm thanks for their hospitable reception by the people of this area, especially the staff of the GFF and the Sisters of Saint Joseph of Cluny. The fieldwork involved visits to the three villages where the GFF has been working and interviews with participants and key informants in the area. Information collected was then analysed by the whole team in the context of literature on various aspects of village development, from perspectives of both theory and practice, and within the context of development within the broader area around Kalimpong.

This report offers a number of important insights. First, it identifies the valuable and often essential contributions that external resources can make to places that, for various reasons, are not receiving the support needed to enhance their basic needs for education, health, water, sanitation, and livelihoods. Second, it highlights the difficulties of developing sustainable livelihoods in places where physical topography, complex politics of location, and embedded cultural practices are daily challenges. Third, it points to the possibilities of the contribution that philanthropic individuals and trusts can make, a sector of development often overlooked in the academic literature.

Executive Summary

This report analyses community-based village development in Kalimpong, West Bengal, India. The Kalimpong area is characterised by poor economic opportunities, a harsh terrain, political tensions, and entrenched social inequalities. Despite these challenges, local people show determination to improve their quality of life. The development work of the Glenn Family Foundation combined with the commitment of the local people is generating positive change in villages in the area.

The Glenn Family Foundation (GFF) has supported development work in the Kalimpong area for many years. In March 2007, the GFF embarked on a new direction with the development of a Model Village concept in three villages. This report comes at a time when the initial implementation phase has been completed and GFF is expanding its approach into other parts of the villages.

The report provides an early analysis of the value of the work undertaken by GFF within the wider development context of the area. Key strengths of the new GFF approach include;

- The 'model village' approach is appropriate in that it allows external funding to support self-reliance.
- GFF's Model Village approach to community development is based on sound development principles.
- Existing networks and relationships are used and developed
- The provision of sanitation, water, education, and health as the first priority in a village sets a sound base for further income generating initiatives.
- The incorporation and adaptation of development techniques already present in local communities, such as the Self Help Groups, highlight the ability of the Model Village approach to respond to current societal conditions. In addition to this, GFF's strategy of working with people based in the local community context ensure the organisation's efforts are relevant to, and appropriate for, the people they are trying to help.
- GFF has achieved an impressive amount in a short time in the three villages of Pdung, Bong Busty, and Chibo Busty.

In addition to these strengths, the following issues have been identified for GFF to consider as it develops and expands its work in the Kalimpong area.

- Maintaining and supporting this work is a vital component in sustaining the gains that have been made for the people of these villages. The research team feel that particular attention needs to be paid to ensuring that adequate resources are put into supporting GFF staff on the ground and to ensuring the community has capacity to absorb and make the most of the development initiatives provided by GFF.
- Integral to sustaining the achievements in the previous years work is the development of a work plan. This will provide clarity, not only to GFF staff, but to funding recipients who will know what to expect in the future. The research team believes that a time-specific work plan that has clearly spelt out targets and timeframes need not restrict the dynamism clearly evident in GFF's work as it stands.
- Potential economic livelihoods are evident but require careful consideration of especially of market access and physical terrain.
- New projects (into adjacent villages) need to be developed, but at a pace that also allows for deepening support for current initiatives.
- Thus far the approach taken by GFF has been to work with the most accessible households in a village and encourage self sufficiency through the contribution of labour. This approach may make it hard for those who are not able to contribute labour. GFF should develop ways to ensure those most marginalised in the community are included, an objective that fits with the philosophy of the Model Villages concept.
- Child labour and trafficking is a complex issue. The practice that leads to it is embedded in the social structure and therefore does not allow a simple solution. The research team recommends partnering with other organisations whose expertise and contextual understanding will provide invaluable insights into the best methods to address this issue, and build a critical mass for implementation.
- Finding markets for goods is a key livelihoods issue and a vital next step in terms of development work in the area. Challenges in terms of markets relate to physical, economic, and political constraints. In depth research is needed to respond to these challenges and establish where markets will be and the channels of distribution to those markets.

- Continued surveying and research into development opportunities in the area would greatly enhance a sustainable livelihoods approach.

A number of possible future opportunities for GFF and The University of Auckland were identified by this research. Areas where The University of Auckland might contribute skills include: evaluation and monitoring; research on livelihoods and socio-economic issues; mapping; development of a research and resource centre, and tissue culture expertise.

This report is based on the information gathered through the fieldwork undertaken in April 2008 and a range of material collected as background information. This report is set out in three sections:

- Section One provides the context for the study.
- Section Two provides the background on village development looking specifically at environment, economy, people, and services. It puts the Kalimpong area and the work of GFF into the broader development context.
- Section Three provides comment on the development process undertaken by GFF. It outlines issues for consideration and future opportunities.
- Appendices provide additional information including digitised maps created by University of Auckland, which might serve as the basis for further mapping, as well as other resources.

The University of Auckland has welcomed the opportunity to participate in GFF's work in the area through the fieldwork and production of this report. We would be happy to engage in further discussion of the potential for an on-going relationship to support this vital development work.

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Introduction

Informed by new understandings of international community development in remote places, where poverty is endemic, this paper reports on development work underway in Kalimpong, West Bengal. It particularly captures the situation in villages in the Kalimpong area¹ where the Glenn Family Foundation (GFF) is funding education, health and other social development projects. This report provides an analysis of village development in the Kalimpong area that will be useful for understanding and tracking the nature and impact of current and future development interventions. It also provides suggestions for specific support requested by the communities interviewed.

The University of Auckland research team uses an ‘asset mapping’ approach as a framework for representing the socio-economic situation of the area of Kalimpong within the Darjeeling District (see Appendix C Figure C1, page 51). This method built on the researchers own considerable fieldwork experience in gathering community based information in remote parts of the Pacific. Compared to more conventional needs based analysis, asset-based mapping encourages a recognition that places are rarely bereft of any assets, although these may need considerable support to be able to produce long-term change. By paying closer attention to the process of asset strengthening, development interventions have more enduring effects.

This report comments on the considerable assets evident in the study region, beginning with skilled residents committed to sustainable development. A process of surveying the socio-economic situation of its residents has begun and a number of Self-Help Groups and village committees are active. A variety of livelihood options are evident, which points towards the possibility of diverse economies that are more sustainable than single livelihood economies. The community has also positively embraced the recent GFF process of self-help village development. It is clear that these communities are moving in the right direction in terms of taking responsibility for making development in the area appropriate and manageable. The challenge for those located outside the region is to support these initiatives in ways consistent with local inventiveness.

¹ We use the term “Kalimpong area” to refer to the two census districts (CD blocks) which are entitled “Kalimpong” i.e. C.D. Block Kalimpong I and C.D. Block Kalimpong II. This does not include two other CD Blocks (Garubathan and Jaldhaka) which are part of the “Kalimpong sub-district” since they are more distant from the GFF village projects being considered in this report. The urban area will be referred to as “Kalimpong town”. See Appendix C1.

There are however, other considerations to take into account. Rapid socio-economic change is often hard to sustain. This is especially so with the co-existence of enduring practices of social inequality that reflects the gap between the rich and the poor, for instance, bonded child labour. There are also specific challenges within the region. Key issues include a difficult physical terrain and political instability

Section I: Context

1. Origin of report and methodology

In February 2008 Owen G. Glenn visited University of Auckland to open the new Business School to which he had generously contributed. He briefly met Geoff Whitcher, Commercial Director of University of Auckland Developments, Faculty of Business School, Dr Ward Friesen, Senior Lecturer, School of Geography, Geology and Environmental Science, Faculty of Science, and Dr Yvonne Underhill-Sem, Director, Centre for Development Studies, Faculty of Arts. They discussed the possibility of undertaking research relating to the work of the Glenn Family Foundation (GFF) in the Darjeeling District, West Bengal. Following this discussion, the University of Auckland developed a proposal to conduct a survey of village development in the Kalimpong area. The proposal encompassed undertaking background research, fieldwork in the region, and the production of this report.

Prior to the fieldwork, the University of Auckland project team was formed, consisting of Dr Yvonne Underhill-Sem and Dr Ward Friesen (Principal Researchers), Jennifer Margaret, and Alan Cheung (Research Assistants). Editorial assistance was provided by Jessica Petersen (See Appendix A for brief biographies). Background information was gathered from GFF as well as preliminary data from the India census and documents on related development work. These sources helped to give focus to the questions and issues explored in the fieldwork.

In early April 2008, Dr Ward Friesen and Jennifer Margaret spent eight days in Kalimpong undertaking the fieldwork component of the project. They were hosted by the GFF team in Kalimpong. A day was spent in each of the three villages in which GFF is working. During these visits they had the opportunity to talk with other members of the GFF project team, village committee representatives, and villagers. They also visited a number of projects that GFF support and spoke both with those involved in administering the projects and project participants. Many of these were projects run by the Sisters of St Joseph of Cluny (the Cluny Sisters) with whom GFF has a close working relationship. Visits were made to: a Health Camp held at Sweet Angels School in Kurseong; Ashadeep Hostel for children rescued from bonded labour; the Care and Support Centre for people with HIV/AIDS; Cluny Women's College and Community College; and St Philomena's School in Kalimpong. Tours of local cactus, orchid, and paper making operations provided additional opportunities to gather information on local commercial industries.

The fieldwork team were accompanied on these visits by key members of the GFF team: Saom Namchu, GFF India Country Manager, Alana Nichol, GFF Intern, Mala Sherpa, Tony Thocker, and Sister Monica and Sister Clarentia, GFF Village Representatives. They also met with Dr Samuel Rai, an expert in agriculture and development, and Dr Bishwa from Kalimpong Hospital. The visit began and concluded in meetings with the GFF team, and throughout the eight days GFF team members provided University of Auckland staff with a wealth of information on the area and the work of GFF. On return to Auckland, Dr Friesen and Jennifer Margaret worked with other members of the University of Auckland project team to generate maps and analyse and compile the information for this report.

The intention of this report is to consider the work of GFF in the Kalimpong area within the broader context of development interventions. It does not therefore provide a comprehensive description of GFF's work, but aims to consolidate the variety of information gathered during the research process and provide analysis of development trajectories in the project area, and highlight issues for further development.

Glenn Family Foundation involvement in the region

The Glenn Family Foundation (GFF) was established in the early 1980s and has been a vehicle for philanthropic work of Owen G. Glenn and his family since then. GFF supports communities and projects throughout the world. GFF has, over many years, supported projects in Kalimpong and the surrounding areas including, health camps, a care and support centre for people with HIV/AIDS, rebuilding of schools, maintenance of churches, levelling and fencing playing fields, and providing facilities for schools and tertiary colleges.

While continuing to support a variety of initiatives, since March 2007 a key focus for GFF has been the development of a Model Village concept. This work reflects Owen G. Glenn's vision of village self-reliance and long-term sustainability. GFF is focusing initially on ensuring that basic needs are met with regards to sanitation, water, education, and health. Alongside this, work is being undertaken to create opportunities for income generation and develop structures for self-reliance (see Section III for further details). Three villages in close proximity to Kalimpong were chosen as the initial communities in which this work would occur. The villages are Pudung, Bong Busty, and Chibo Busty. The three villages have distinctive characteristics, although collectively they are fairly representative of the broader

Kalimpong area (See Appendix D). The information gathered and experiences gained from these three villages are relevant to future expansion of the Model Village concept to other villages in the Kalimpong area. It is also relevant to other development initiatives within the region.

2. Remote communities and development: Kalimpong, West Bengal

There are still many parts of the world where social inequities inhibit the ability of people to support their own basic human rights to sanitation, water, education, and health. The consequences of this are enduring poverty and a continual struggle to maintain, let alone develop, livelihoods that allow for an adequate standard of living. Although states have responsibilities to deliver to all their citizens, this happens only rarely in low income countries such as India. According to the World Bank, India is making economic progress at a “scale, size and pace that is unprecedented in its own history”² However, despite its vibrant democracy, with over one billion people and enormous regional diversity, the country still falls short of providing for all its citizens. The State of West Bengal is one such place, and within West Bengal, the northern most region where Kalimpong is located, is even further marginalised. Yet its location, sandwiched between the neighbouring countries of Nepal and Bhutan and the state of Sikkim, has proved to be strategically important over the years. Clear evidence of the historical complexity of the region is the diversity of the population of Kalimpong in terms of religion, language, and culture. Political and religious groups, traders, and now philanthropists have variously contributed to the social, cultural, and economic structures of this place.

3. Brief historical context of Kalimpong

Until the mid-19th century, the area around Kalimpong was ruled intermittently by the Sikkimese and Bhutanese kingdoms. The area was populated by the indigenous Lepcha community and migrant Bhutia and Limbu tribes. The British East India Company controlled the Kalimpong area from 1865 following the Anglo-Bhutan War. The temperate climate of Kalimpong town led to the town being developed as a hill station, much like Darjeeling. It was also an important trading outpost between China and India because of its proximity to the Nathula and Jelepale passes into Tibet. From the late 1800's migration from Nepal led to a significant increase in the population of the Kalimpong area.

² World Bank Country Overview 2007 <http://go.worldbank.org/ZUIBUQT360>.

The arrival in the late 1890s of missionaries saw the construction of schools, orphanages, and health centres. Famous amongst these are Dr Graham's Homes, established by the Scottish Reverend J.A. Graham in 1900, and the schools established by Catholic orders including the Sisters of St Joseph of Cluny. These and other schools and colleges in the area continue to draw students from Nepal, Bhutan, China, and other parts of India and give Kalimpong its reputation as an educational hub.

Following independence in 1947, Kalimpong became part of the state of West Bengal. In 1959, as a result of China annexing Tibet, many Buddhist monks migrated to Kalimpong where they established monasteries. In 1962, the closure of the Jelep Pass after the Sino-Indian War had a negative impact on Kalimpong's economy, which relied heavily on trade between Tibet and India. The pass reopened again in 2007.

Issues relating to the status and treatment of the majority ethnic Nepalese population and neglect of the region by the state government gave rise to a movement for a separate state of Gorkhaland. This movement was led by the Gorkha National Liberation Front (GNLF) established in 1980. The militancy of the fight for statehood increased during the 1980s and the conflict was centred in Kalimpong. It peaked in 1987 when a forty day strike occurred. Schools and hospitals were closed, travel was restricted, and houses were burnt and looted. Many people were killed in the fighting between the GNLF and the West Bengal Government, who called in the Indian Army for support. This conflict led to the formation of the Darjeeling Gorkha Hill Council, a body that was given semi-autonomous powers to govern the district.

The struggle for independent statehood is ongoing, and has recently been revitalised. In March 2008, the GNLF was ousted and the Gorkha Janmukti Morcha party took over leadership of the independence struggle. Their stated commitment to non-violence and ensuring that school and health services are not disrupted has been an important factor in their appeal. While aiming not to disrupt what are regarded as essential services, they have recently initiated the closure of government offices.

Despite this turbulence and the complex history of the area village level relations between people in Kalimpong area appear relatively harmonious. There is a notable sense of community spirit and willingness to work across the mix of ethnic and religious boundaries. However the potential impacts of on-going political instability must be considered by those with an interest in development in this area.

Section II: Village development: environment, economy, people, services

1. Physical and environmental context

One of the fundamental challenges to development in the Kalimpong area is the physical environment. As part of the Himalayan foothills, the area is dissected by large rivers and smaller streams resulting in a series of ridges and valleys. Thus, many villages are located on relatively steep hillsides, growing crops on a series of terraces. This topography, along with climatic conditions, result in particular challenges within the Kalimpong area.

Terrain, transport and access

Access to the Kalimpong area is difficult as a result of several factors. The steep terrain means that it is not feasible to build an airport in the area and the roads are steep and strongly impacted by weather conditions. The nearest airport is at Bagdogra, near Siliguri, the largest town/city in the area. This airport is 80 kilometres from the town of Kalimpong, but the trip by four-wheel drive takes about three hours. During the monsoon (June to October), it may take longer, or may not be possible at all. During the 2007 monsoon, the road access to Kalimpong town was blocked by landslides several times, with one closure lasting for 26 days. This results in goods from other parts of India being more expensive as well as increasing the cost of produce being exported from the area.

Within the Kalimpong area, access is also an issue. Roads not only traverse steep slopes, but are also often in poor condition as a result of harsh climatic conditions and an inadequate maintenance programme. Where major roads are maintained by the military through the Border Roads Organisation (BRO), they are in relatively good condition, but are still vulnerable to landslides (e.g. the main road from Siliguri to Kalimpong). Local roads are in poor condition. Thus, for example, the distance between one of the study villages, Pudung, and Kalimpong town, is about four kilometres “as the crow flies” and eight kilometres by road, but the trip between these places takes about 30 minutes by four-wheel drive. Villagers in Pudung said that the local roads had not been maintained for the last six years. In some cases local communities have adopted some road maintenance (e.g. Chibo Busty) but normally this is likely to be beyond the means of the communities.

According to the 2001 Census, most villages in the Kalimpong region had “road access”, but besides the poor conditions of these roads, it should be noted that since villages tend to be dispersed, many houses are at a considerable distance from these roads. Paths to reach these houses are often difficult to traverse during the monsoon, although in some cases, durable rock paths and steps have been constructed as part of the state government’s “100 Days” programme ³ in which local labour is hired to construct village infrastructure.

Climate and monsoons

It is said that Kalimpong has five seasons, with the usual four being supplemented by “the monsoons”. The hill areas of Darjeeling District have much higher average annual levels of rainfall than the plains or the other areas of West Bengal. Most areas average above 3000 mm per year, and some areas are above 4000 mm.⁴ As well as this, much of this rainfall (about 80 percent) occurs in the four month period of the monsoon. When combined with the rugged terrain, these monsoon conditions impose considerable limitations on various aspects of life in the Kalimpong area. As well as the impacts on roads and access in general as discussed above, there are impacts on the villages and their agricultural systems. Crops grown in this period must be able to tolerate high levels of water, so paddy rice is one of the main crops during this period, but many other crops are not possible. Landslides pose a risk to productive land and to houses and other structures, and during the fieldwork in the GFF villages a number of examples of landslide events during the 2007 monsoon were identified.

Ironically, in some areas the seasonal nature of rainfall also results in water shortages during the dry season, and in some cases not only is there a shortage of water for agriculture, but even for domestic purposes, such as drinking, cooking, washing etc. This is one of the development issues being addressed by the GFF projects either by piping water in from year round sources or water harvesting to exploit the seasonal imbalance in water supply (see Section 4: Services and amenities below).

³ Under the National Rural Guarantee Scheme one member from each of India’s 60 million rural households is guaranteed 100 days of work each year. They receive a minimum wage of 60 rupees (\$1.35) or an unemployment allowance if there is no work. People employed by the scheme work on projects such as building roads, improving rural infrastructure, constructing canals or working on water conservation schemes. The scheme was launched in 2006 in an effort to address rural poverty.

⁴ Viswavidyalaya, B. C. K. (no date)

Development issues relating to physical environment

- The physical terrain and state of the roads imposes constraints on access to markets and services (e.g. health and schooling).
- Unpredictable access as well as the severity of rainfall during the monsoon impact on the pace at which development projects can be undertaken.
- Water supply is an important issue. Aspects of this issue are the seasonality of rainfall, water storage, and distribution. Building water tanks for rain harvesting and piping water from source are effective approaches that GFF is taking to ensure that the water supply is more accessible, reliable, and clean. However, large storage capacities are required if water supply is to serve for agricultural as well as domestic purposes.

2. Livelihoods: resource base and economic activity

This section does not attempt to be a comprehensive overview of the economy of the Kalimpong area, but rather highlights some of the issues of resources and economic activity, especially agricultural, of relevance to development in the villages in which GFF is working and other surrounding villages. As well as the fundamentals of sanitation, clean water, education, and health, the support and development of livelihood opportunities for villagers is an important component of the GFF Model Village projects.

Agriculture

Although the highest point near Kalimpong town is the Deolo Hill at 1660 metres above sea level, the villages in which GFF is working, and most villages in the area range from about 700 to 1300 metres above sea level. This and the climatic conditions already mentioned, results in three generalised growing seasons:

1. Late winter - spring (January to June): relatively dry, moderate temperatures with typical crops being maize, ginger, cardamom, and a range of vegetables (e.g. ladies finger, cucumbers).
2. Monsoon (June to October): heavy rainfall and warm resulting in sub-tropical agriculture so main crops include paddy rice and paddy vegetables (e.g. gourds).

3. Autumn - early winter (October-December): moderate rainfall and temperatures resulting in temperate climate crops, such as pulses, wheat, and “winter vegetables” (cabbage, cauliflower, winter potato, beans etc).

Tree crops, especially oranges, are also common to the Kalimpong area. Oranges have the advantage that they do not require irrigation during the dry months. Other niche crops, including non-food crops, such as flowers and cacti are discussed in the section “Existing and potential niche products” below.

Soils in the Kalimpong area are considered to be high to moderately fertile, and well-drained (loamy, lithic or typic udorthents), although there is a potential for these to become leached and exhausted in areas with relatively high population densities and steep slopes. Although chemical fertilisers have been adopted in some cases, these are seen by many to be expensive, so fertility is maintained by the use of natural fertilisers, especially cow dung mixed with leaves.

The most common crops produced in the GFF project villages are shown in Table 1, and these appear to be typical of the crops grown in the Kalimpong area. A notable difference between the two villages nearest to Kalimpong town (Bong Busty and Chibo Busty) and the more distant Pudung is that the latter has higher proportions of its households undertaking crop cultivation. This is partly a result of the fact that households in the closer villages rely more on income from employment in town (as discussed below).

Table 1: Percentage of households which grew specified crops

	Bong Busty	Chibo Busty	Pudung
Paddy rice	25	43	78
Millet	13	3	18
Maize	38	43	72
Dal	4	5	47
Vegetables	36	n.s.	27
<i>No. of households surveyed</i>	<i>53</i>	<i>60</i>	<i>60</i>

Source: GFF village surveys

Biodiversity, indigenous crops, and organic farming

One of the positive aspects of agriculture in the Kalimpong area is that the climate and soils allow a range of crops to be grown and there are a wide range of crop

varieties available to the farmers. This biodiversity, though, is under threat here, as it is in many different parts of the world. High yielding varieties (HYV) have been promoted by companies and agricultural extension workers over many years, and this may result in a diverse range of local crops becoming extinct. A survey of the Kalimpong area (two CD blocks) in the early 1990s shows that in terms of area, the area planted in local rice was still predominant, while local maize was predominant, but less so.⁵ More recent data on production was not available, but it was asserted by some in the villages that they would stay with local varieties since the seed stock was cheaper. In the case of rice, the local variety is also considered of higher quality. However, it is not high-yielding and so most people supplement with lower quality cheaper rice grown on the plains. The preference for local varieties is therefore a positive factor in maintaining bio-diversity; however, it has implications in terms of productivity and self-sufficiency, and this tradeoff should be investigated further.

At the Cluny Sisters farm in Pudung is a laboratory and growing room supplied by the Irish government, where a programme to preserve and rejuvenate the use of local varieties of food crops is under way. This involves the propagation of tissue culture of local species and varieties for distribution to village producers, and there is potential for expansion of this work with the provision of expertise and resources.

An impetus towards organic farming appears to have come from at least three sources: 1) awareness raised by training institutions and NGOs of problems using chemical inputs in agriculture and the market potential for organic produce 2) cost of chemical inputs and 3) the perception that “traditional ways” have served many farmers well for generations. Thus in parts of the villages where GFF is working, many producers have not used phosphate fertilisers, herbicides, or pesticides in recent years while in other parts, farmers have abandoned their use because of cost or other considerations. However, products from these fields are not necessarily marketed as organic since organic principles have not been consistently applied or certified.

Worldwide there are many examples of organic farming projects, but the most useful for Kalimpong may be those in nearby Sikkim where there has been a concerted state effort to promote organics for economic and environmental reasons.⁶ However, without significant government support, two key considerations are relevant to the

⁵ Rice in hectares, 4200 local versus 1700 HYV; 71 percent. Maize in hectares, 4200 local versus 2700 HYV; 61 percent (Vishawavidyalaya, n.d., Table 15).

⁶ www.sikkimipr.org/CMO/ACHIEVEMENTS/organic_state.htm

villages in the Kalimpong area: 1) the cost related to achieving certification as organic producers and 2) the availability of a sufficiently large market for organic products locally, especially if a number of villages undertook similar programmes. Consideration should also be given to the fact that World Vision already has some organic projects in the area.

Livestock

An important element of the village economies of the Kalimpong area is the raising of livestock, especially chickens, pigs, goats, and cows, but also including farmed fish and bullocks used for ploughing. In each case, these animals are significant for subsistence (own consumption) as well as cash generation. In the case of cows, it is shown below that their milk (and its products) can be a valuable source of income, while their manure is important in maintaining soil fertility.

The occurrence of livestock within households in the villages in which GFF is working is shown in Table 2. These statistics are based on surveys carried out before the GFF projects started, so do not include the significant number of animals provided by GFF. What is not reflected is the quality of livestock. There are significant differences between low and high yielding cows and the existing livestock in some villages are of poor quality. Sourcing good quality livestock is difficult because it requires travelling to surrounding regions (even as far as Sikkim). Transportation is beyond the means of most villagers who could not do this without support from GFF.

Table 2: Percentage of households which had specified livestock

	Bong Busty	Chibo Busty	Pudung
Cows	53	62	75
Bullocks	4	0	33
Goat	51	47	30
Pigs	11	77	33
Chickens	51	77	58
<i>No. of households Surveyed</i>	<i>53</i>	<i>60</i>	<i>60</i>

Source: GFF village surveys

Economic alternatives: agriculture, piece work, wages

Most households that have access to land produce at least some of their own food. However, there is little information on how important this is and how much variation there is between households. In every case, however, there is some requirement for cash income as well as subsistence food production. As part of their livelihoods strategy, individuals and households in villages generally have alternative sources of cash income, although the degree of choice between different activities may be highly constrained by circumstances. One household may, for example, be able to produce food or other agricultural crops for sale, while another with little or no land is unable to produce some of their own food requirements. In both cases, there is likely to be a desire to have at least one predictable source of cash income within the household, or in some cases from remittances of family members outside of the household. Land ownership varies within and between villages so in subsequent surveys it would be useful to collect more specific data. More specific information could be collected on the nature and level of remittances.

One way of considering the well-being of households within a village is to consider the different possible livelihoods which may be available to them. In Table 3, a preliminary attempt is made to consider the different types of income-generating activities which the households in the Kalimpong villages undertake, and the amount of income they typically generate. It is obvious why government employment is seen as desirable, but it is only available to a relatively small number. Table 4 shows that of the three villages, just over ten percent of households in Bong Busty and Chibo Busty received some income from government employment while only five percent did in Pudung.⁷ However, Table 4 implies that each household has only one source of income, so some activities have 'disappeared' e.g. in Pudung where rock-breaking is significant, it does not appear in the data, and presumably is subsumed under 'agriculture' since many households participate in both.

Existing and potential niche products

Flowers and Succulents

The Kalimpong area is well-known for the appreciation and cultivation of flowers and succulents, and these are exported to many parts of India, and in some cases,

⁷ It is assumed that 'government employment' here includes all kinds of employment, including school teaching.

overseas. Some of this production, such as of orchids and cacti, tends to be reliant on greenhouses, so producers are likely to be medium to large scale operators, with tourist brochures identifying about 20 commercial nurseries which can be visited. There may be further potential for small-scale production as well though since the construction of greenhouses is possible at relatively low cost. A programme of greenhouse construction has been initiated by GFF and while this is initially focussed on producing seedlings for distribution within the villages, these could also serve the purposes of flower and succulent production. Some flowers, such as tulips or gladioli, can be grown in open fields at certain seasons, so may be produced by small-scale growers, although marketing becomes more of an issue at this scale. As well as the risks of weather, floriculture has risks relating to disease and pests, emphasising the importance of a tissue culture facility providing backup for replacement or alternative varieties.

Table 3: Rates of return to different economic/employment activities in Kalimpong

Activity	Rate of return and means of payment	Weekly equivalent (Rupees)	Weekly equivalent (\$US)
Milk production from one cow	5-10 l/day @ 10-15 Rs/l marketed locally; curd 15-20Rs/l	350-1050 (if all milk sold)	\$8-\$25
Flower production (tulips)	5,000-6,000 Rs / season (1 household in Pudung)	If selling season = 1 month, 1250-1500	\$30-\$35 (seasonal)
Stone-breaking -- women (breaking with hammers)	7 Rs/box X 7-8 boxes/day X 6 days	300-400	\$7-\$10
Stone-breaking -- men (loading trucks with shovels)	Amount / truck loaded (size dependent)	800-900	\$19-\$21
Casual labour (construction, carrying...)	Daily rate: 70-80 Rs/ day X 6 days	420-480	\$10-\$11
Government primary teacher	Monthly salary: 5,000 -7,000 Rs	1150-1600	\$27-\$38
Government job (clerical: C division)	Monthly salary: 14,000 -15,000 Rs	3200-3450	\$76-\$82

Source: interviews during fieldwork (data should be treated as estimates) [\$1US=42.9 Rs]

Table 4: Percentage of households according to main employment type

	Bong Busty	Chibo Busty	Pudung
Agriculture	39	53	87
Daily wage	8	12	7
Private company	23	17	2
Government	12	11	5
<i>No. of households surveyed</i>	53	60	60

Source: GFF village surveys

Note: Survey did not differentiate agricultural employment from own production. Also, each household was ascribed only one activity, so for example, rock-breaking as a source of income does not appear at all (see comment in text).

Craft production

With its diverse history, and its location close to Sikkim, Bhutan, Nepal, Bangladesh, and China, Kalimpong town already has a reputation as a trading node in this region, with buyers coming from other parts of India to trade there. With the recent re-opening of the Jelep Pass into Tibet facilitating increased trade with China, this trade is likely to expand. At the same time, while tourism in Kalimpong itself has not expanded very much, it has expanded in nearby Sikkim. Although most of the trade in Kalimpong involves products originating elsewhere, such as Tibet, these two factors may provide an opportunity for the expansion of the production of handicrafts and fabric manufacture sourced from the Kalimpong area itself. Kalimpong was once home to a famous handicraft training centre established in the early 1900's by Katherine Graham, wife of the Church of Scotland Missionary, Rev John Anderson Graham. The Centre declined 30 to 40 years ago due to lack of funding and no longer exists. However, there are people in the Kalimpong area who still have the skills they learnt there. GFF is exploring the potential of revitalising these handicrafts. If products can be created for which there is a secure market, then it would be timely to undertake this before the existing skills are lost.

Kalimpong has two small factories making craft paper using the daphne plant as source material. GFF is also considering the potential for making bamboo furniture in the villages. The key factor for any of this production is ensuring there are markets for the products as discussed below.

Village based tourism

Around the world, “ecotourism” and “cultural tourism” have received a great deal of attention in recent years as possible sources of income for local communities.⁸ The benefits include the fact that tourism is a relatively labour-intensive activity and that these particular types of tourism should attract travellers who are more sensitive to the environment and cultural difference than may be the norm for tourists. Further, these types of tourism are more likely to be locally-owned so that a relatively high proportion of the tourist expenditure remains in the local economy. The disadvantages may include the reality that not all tourists will be sensitive and may have a negative impact on environments and cultures, and that the supply of tourists may not be reliable.

The issue of the supply of tourists may be particularly a problem in attracting tourists to villages where they may not be a particular cultural feature, or a particular activity which is well known to the wider world. However, there are travellers or tourists who are interested in “experiencing village life” and there may be potential for organising either village daytrips or longer stay visits with a village-experience itinerary. The issues of access, especially during the monsoon season, may also impose a limitation on village-based tourism, but this is also a constraint experienced by the mainstream tourist industry, which has a strongly seasonal cycle. The impact of political instability on tourist perceptions of safety must also be considered.

Marketing

One of the main issues in ensuring sustainable livelihoods in the villages through cash production of agricultural goods, or of other products such as crafts, is ensuring that producers have access to a market, and that they receive a fair price for their production. There are several geographical ‘layers’ to the potential markets for products from the villages around Kalimpong:

1. Local villages: selling to households in the local or nearby villages is appropriate for items which spoil easily in transit (e.g. milk) is often marketed locally.
2. Kalimpong town market: appropriate for products, such as vegetables and fruits, since there is a market everyday, with larger ones on some days

⁸ See Appendix F Resources for list of resources pertaining to this section

(Wednesdays and Saturdays); however, there is often much competition especially when many sellers follow the same seasonal growing patterns.

3. Siliguri market: suitable for perishable but transportable products such as vegetables and fruits; disadvantage is cost of transport and competition from sellers closer to this market, but might be suitable for niche items, such as flowers and crafts.
4. Markets further away: Kolkata, Delhi, overseas; only suitable for specialised niche items; of the perishable items, flowers from some commercial growers are exported to these markets, but are dependent on marketing networks, and in the case of overseas markets, experience in dealing with customs and agricultural requirements. These markets might also be reached through the internet.

One proposal that has been canvassed by the GFF team in Kalimpong is a retail outlet in Kalimpong town that would be supplied by the GFF villages which might carry a range of products ranging from the perishable products such as milk, vegetables, and flowers to crafts. An alternative, which is currently favoured, is the possibility of developing a wholesaling operation, which might be able to facilitate access to markets at the various levels mentioned above. Models in Sikkim and Darjeeling (e.g. Tibetan craft market) are currently being considered to determine what might be possible in Kalimpong.

Development issues relating to resources and economic activity

- A more intensive survey/study of the return to particular agricultural activities versus alternative economic options and the various options and strategies of different households are critical. The existing data on the multiple sources of household income are not adequate to make many comments on the nature of household strategies needed to inform future development options.
- Alternative marketing mechanisms need to be developed drawing on studies of successful models applied in similar circumstances. A significant issue is to assess the markets at different geographical scales to determine the potential for each.
- The maintenance of a diverse and disease resistant plant stock which includes local varieties is important for the future of sustainable agriculture. In

relation to the latter, further support of a tissue culture specialist may be one option.

- Further analysis of the costs, benefits, and markets for organic farming is necessary.

3. Demographic, socioeconomic and cultural characteristics

The results of the 2001 Census of India should be viewed with caution. However, in general, it is considered to be reliable in relation to most demographic variables, even though some under-enumeration is likely in most areas.⁹ Not all data collected is available because some variables have not been tabulated and released to the public in detail, for example at the sub-district or village level.

The analysis in this report which is based on the 2001 census data uses variables which we have assessed to be of some use to understanding the development context of the region.

Population density

The population density of the villages in the Kalimpong area at the 2001 Census is shown in Figure C2.¹⁰ It shows that at that time, many of the villages had a density of less than 250 persons per square kilometres. However, villages near the urban areas have higher densities, with Kalimpong Kasmahal, in which Chibo Busty is located had about 1050 persons/km², and although some of this is accounted for by some settlement on the edge of the built up area, there are also “small village” areas in which many houses are clustered together, many without access to land for cultivation. The density of Bong Kasmahal in 2001 was approximately 780 persons/km² and Pudung Kasmahal was 550 persons/km².

Age-sex structures

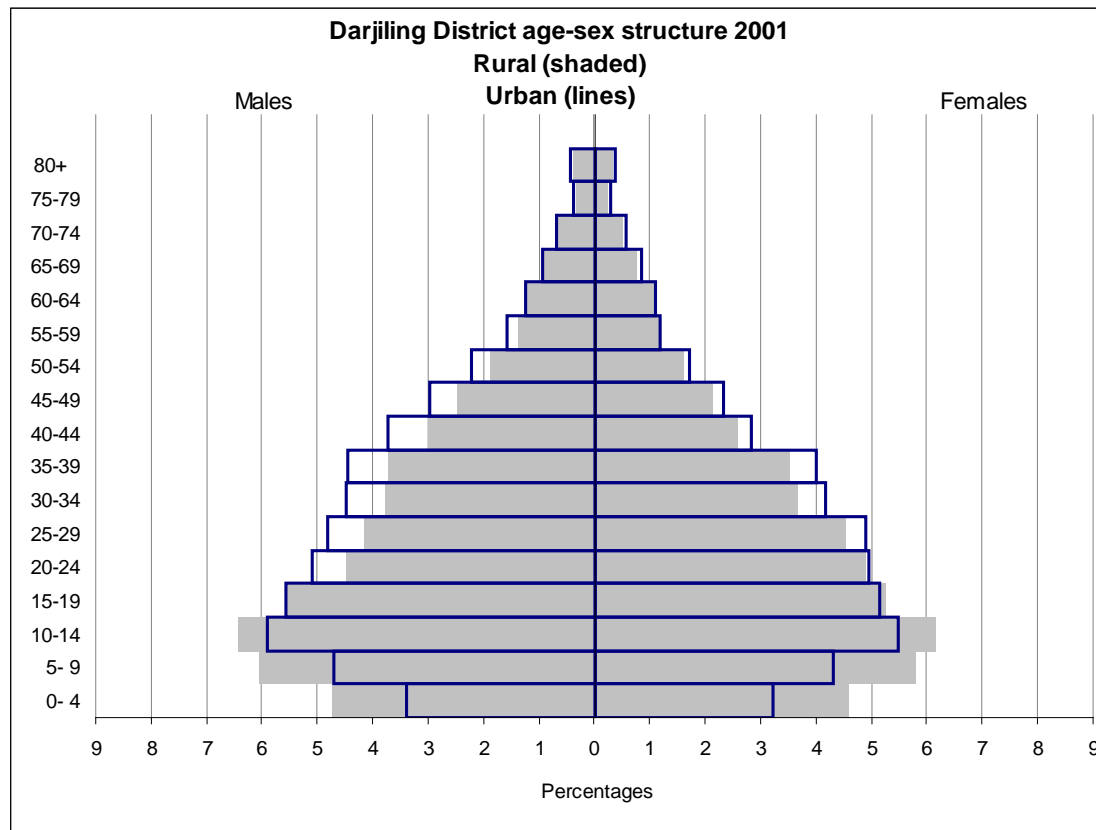
Age structure is one of the variables for which detailed breakdowns are not available at the local level. The urban and rural age-sex structure of the Darjeeling District is shown in Figure 1 (see below). The structure most relevant to the study villages is the rural population since it excludes the large urban areas of Siliguri and Darjeeling. For the rural population, the smaller bars for those age groups under 10 years of age

⁹ Dyson 2001

¹⁰ Figure C2 is in Appendix C, General and location maps

suggests a significant reduction of fertility levels in recent years (and even more so for the urban population). This supports the assertion by some of those in the study villages that family size had declined in recent years, with a “typical” family now having about three children.

Figure 1: Age-sex structure of the Darjeeling District differentiated by urban/rural



One variable available from the 2001 Census is the number of children aged zero to six, which can be used as a measure of the “youthfulness” of the population of an area. If high proportions of a population are in this age category, it is likely that there is a relatively high birth rate, unless there are high levels of in-migration of children. Figure C3 shows that the child ratio in the three study villages is somewhere in the middle range in relation to the broader Kalimpong area. The implications of this for provision of schooling, however, are not always clear. Especially for those villages near Kalimpong, village primary schools may appear less attractive than those in town, especially private ones. The improvement of the conditions of the village schools is critical to maintaining them as an effective means of providing even the poorest of village children with education. Thus, the GFF provision of school maintenance, books, and other support is an important part of the Model Village concept.

Literacy

The 2001 Census shows that the Darjeeling District, at 72 percent had a higher rate of literacy than India as a whole (65 percent) and West Bengal (67 percent). The Kalimpong area had a literacy rate which was higher still, at 76 percent, but paralleling trends in other parts of India there are significant differences between literacy rates between urban and rural areas and by gender. In Kalimpong town, the 2001 Census showed an 86 percent rate in literacy, while in the rural area of Kalimpong, the average rate was 72 percent. It may be that Kalimpong's role as an education centre has had an impact on this relatively high rate of literacy in the urban area, and perhaps also across the wider Kalimpong district. Between men and women there was also a significant gap, averaging 11 percent in urban areas and 15 percent in rural areas. The census data for the larger villages in which the Model Villages are found showed similar patterns. The rates were: Pudung Khasmahal 79 percent, Kalimpong Khasmahal 80 percent, and Bong Khasmahal 83 percent. Figure C4 shows that these are in the middle range of literacy rates for the Kalimpong area. The gender gap was greatest when literacy was lowest, so Pudung had a 18 percent gap, Kalimpong Khasmahal 14 percent and Bong 12 percent. Figure C5 shows that these proportions are typical of the range within the area. The coordinated work of the GFF in supporting village schools and the Cluny Sisters in providing education for females is attempting to address the issues of differential educational outcomes.

Poverty

There is no comprehensive source of information on the socioeconomic status of the people of the Kalimpong area, or of the prevalence of poverty. The government of India allocates people into the status of either "above poverty line" (APL) or "below poverty line" (BPL). Although being BPL allows a person to access cheaper primary health care, it was felt by some of the people we talked to in Kalimpong that the measure was somewhat simplistic and not effectively measured. This was as a result of superficial measurement criteria used in some cases (e.g. presence of an iron roof), and in other cases, favouritism on the part of those with authority to determine APL/BPL status. Another measure of socioeconomic status may be literacy. We have already seen in the section on economic activities that there is a wide range of incomes within the Kalimpong area for those who are economically active (see Table 3), and the situation for those who are landless and unemployed is even more severe

than for those such as the female stone-breakers who are at the lower end of the income continuum.

Child labour

The phenomenon of bonded child labour reveals issues of social inequality, such as patron-client relationships and poverty.¹¹ Poverty is a key driver which forces some families to give up their children to either formal or informal systems of child labour in which children work outside the family in jobs, such as domestic help, shop-keeping, cleaning, and in some cases, the sex trade. Generally these children are not able to go to school, and so even when they do become legitimate adult workers, there is a high likelihood they will remain in unskilled and poorly-paid jobs and repeat the cycle of social inequality.¹²

Despite the relatively high rate of school attendance in West Bengal, there is also a high drop out rate, and the state is also identified as one with a high rate of child labour. One reason for this is its proximity to Nepal, Bhutan, and Northeast India, which are sources of child labour, and the phenomenon of child labour and trafficking are known to be common within the Kalimpong area. The scale of child labouring around Kalimpong is not clear, but at the state level, it is estimated that about three percent of the labour force is made up of children. Even more disturbing is the estimate that about 11 percent of all children aged five to 14 in West Bengal are employed as labourers.

In late 2006, the Cluny Sisters established Bal Suruksha Abhiyan, a pilot project “to work towards a child labour free Kalimpong sub-district and Darjeeling District” and “to promote human rights and dignified life for children”. This initiative has since been supported by GFF and together several actions have been undertaken. With the Child Labour (Prohibition and Regulation) Act 1986 being recently strengthened to include domestic work, and to impose large fees and potentially a prison sentence for offenders, there is greater potential to confront employers of child labourers as the Cluny Sisters have done in recent times. In most cases, these employers have released the children in their employ, although many are reluctant, especially if they have made some sort of payment for the child involved. In these cases, the Sisters

¹¹ As well as information gathered during fieldwork, this section is based on information from a number of sources listed in Appendix E under the section titled Child Labour.

¹² The Child Labour (Prohibition and Regulation) Act 1986 and its recent amendment prohibit the use of children under 15 in employment in these kinds of activities.

may have to reimburse this money to ensure the child is released. Once rescued, the boys are housed in a hostel (e.g. Ashadeep in Kalimpong town), and the girls live in the Cluny convents in the villages, and in each case schooling is resumed. The ultimate objective is to reunite the child with his or her family. Locating the child's family can be difficult and returning to the family may also be difficult if the family remains at a level of poverty which resulted in the child leaving the family as a labourer in the first place. One option is to provide the family with some sort of minimum income support which would allow the child to attend school. In the transition period, however, there is an increasing need for hostel accommodation and GFF has recently approved the construction of a boys and girls hostel in Kalimpong for this purpose.

Longer-term solutions to the problem of child labour are also being addressed. One element is the raising of the standard of living of the poorest families and confronting other aspects of social inequality in the area. These are large challenges. Support for livelihoods projects in the GFF Model Village programme is an initiative in this direction. A second element is the raising of public awareness of bonded child labour. This is one of the activities of Bal Suruksha Abhiyan, which involves confronting child labour where it is discovered, but also raising awareness of the legal and moral issues around child labour with employers and the general population. Working with other NGO's like Bal Suruksha in the South Asia context would provide many synergies.

Cultural diversity

The history of the Kalimpong area, its diverse range of governing powers through history, and its position in proximity to several different countries, have resulted in a diverse population. The earliest inhabitants of the area are said to be Lepchas, who speak a language with the same name, tend to practice Buddhism, and are spread from this area northwards into Sikkim. The predominant Nepalese-speaking Gorkha (Gurkha) population claims descent from the Hindu Rajputs and Brahmins from Northern India, in some cases having arrived in the Kalimpong area via Nepal. This group is divided into a number of subgroups including Thapas, Chettris, Tamangs and Rais, among others, and these groups tend to be associated with particular castes.¹³ There is a significant Tibetan population, many of whom arrived after the

¹³ Information based on fieldwork as well as Sinha & Subba 2003.

Chinese annexation of Tibet. Other ethnic populations include Bengalis, Biharis, Marwaris, and Anglo-Indians.

Development issues relating to demographic and socioeconomic status

- Even though population growth rates in the area are relatively low, there is still a shortage of land for particular groups of people. It is in these groups that poverty is more evident.
- Despite Kalimpong's long history as an education hub, there is still a need to pay attention to education in terms of its quality and its geographic and economic accessibility.
- Child labour, although illegal, is likely to remain a problem while some families remain at very low income levels and while systems of social inequality persist. This is a complex issue to address. Directions to consolidate and expand include the focus on changing attitudes through education, addressing the immediate needs of housing, education and security for the children rescued, and working with specialised NGO's in the wider region.

4. Services and amenities

There are a number of services and amenities whose provision is important to the promotion of well-being in the villages. The problems of roading, transport, and access in general have been mentioned earlier. Fundamental to the GFF approach is the improvement of services and amenities in relation to four aspects of well-being: sanitation, water, education, and health and these are the focus of this section.

Sanitation

Sanitation is an important element of development and one of the most important aspects of this is the use of toilets, which ensure the safe disposal of human waste and especially its separation from drinking water. One approach is Community-led Total Sanitation (CLTS), which encourages public education on issues of sanitation as well as the provision of cheap and effective disposal systems.¹⁴ A similar approach in the provision of sanitation to village households is one of the fundamental elements of the GFF Model Villages programme. The situation before

¹⁴ See IDS 2005.

the initiation of the GFF projects is shown for the three Model Villages in Table 5. In some places toilets were non-existent while in many others they were “kaccha” or temporary structures, sometimes with drainage into a nearby stream. To improve the safety of local water sources, and for general health purposes, a more permanent (“pucca”) toilet is desirable. The GFF has contributed to the construction of permanent toilets with septic tanks in each of the three villages. As with its other projects there is an element of self-help in these constructions. The household, for whom a toilet is provided, must provide some of the labour and dig the septic tank hole. The GFF then provides cement, bricks, and other materials as well as a brick mason, usually a person who comes from the local village. Over about a one year period GFF has contributed to the construction of 133 toilets in the three Model Villages.

Table 5: Percentage of households with particular amenities

	Bong Busty	Chibo Busty	Pudung
Regular water supply	24	30	5
Irregular water supply	75	70	95
Pucca toilet	74	63	20
Kaccha or no toilet	26	37	80
Electricity	96	81.	72
<i>No. of households surveyed</i>	<i>53</i>	<i>60</i>	<i>60</i>

Source: GFF village surveys

Water supply

Safe drinking water is one of the fundamental development issues related to the provision of water in India, but other issues include availability for other domestic purposes and agricultural uses.¹⁵ The source of water supply was one of the variables collected in the 2001 Census. It showed that for most villages in the Kalimpong area “tap water” was the predominant water supply, in most cases involving piping water from nearby *jhora* (streams). However, this is somewhat misleading since it may indicate as little as a single supply and there is no indication of how many houses have access to that supply. In many cases, villagers have to carry water from distant sources. The GFF survey showed that a regular water

¹⁵ See http://www.wateraid.org/documents/plugin_documents/drinking_water.pdf

supply of drinking quality was available to only a minority of households in the Model Villages, ranging from only five percent in Pudung to 30 percent in Chibo Busty (see Table 5).

The provision of water is a central element of the GFF Model Village approach. Crucial is the supply of clean drinking water, but provision for other domestic tasks is also important. For this purpose, water has been piped from nearby streams, and in some cases, stored in tanks for reliable supply. In other cases, tanks have been provided to enable “water harvesting” from corrugated iron roofs. In the dry season, there is demand for water for agricultural purposes, which was given as a reason for some villages having low agricultural productivity in the first months of the year. In the absence of a reliable source stream, water storage for agriculture requires large storage tanks, or the consideration of other possibilities such as small dams.

Education

State primary schools are widely available in the Kalimpong area, with nearly all larger village areas having at least one school and many having more, as shown in Figure C8. The Model Villages also appear to be well catered in terms of the presence of primary schools. However, the issue of primary schooling appears to be more one of quality than of quantity. Class sizes are relatively small in the village primary schools, with some in the study villages having less than 10 students each. Although this could provide the opportunity for high quality teaching, it may also be indicative of the fact that many students are attending schools further afield, which have better reputations. For poorer villagers, these private schools tended to be those run by missions or churches. It is not possible here to comment on the overall quality and teaching standards of the village schools, but a regular comment was that they generally suffered from lack of resources. In some cases, classrooms were shared between classes, general building maintenance was minimal, and resources such as books and teaching aids were few. Thus, as part of the Model Village programme, GFF has contributed to improvements in these areas.

For secondary schooling, access in relation to distance, road condition and availability of transport is important. For some villages the nearest high school is more than 15 kilometres away, which is generally too far to walk daily, so school attendance is difficult if there is no transport or a family can not afford to pay for it. The distance from Pudung to Kalimpong town is less than this, but is still a challenge for high-school students. Access to state and private schools in Kalimpong town is

better for those in Bong Busty and Chibo Busty, but still involves navigating steep slopes if walking.

Health

A number of health issues are prevalent in the Kalimpong area. The disease most often identified as important was tuberculosis, although viral hepatitis and typhoid are also significant threats at times. More generally, malnutrition was identified as a problem in some areas, an issue which relates both to the presence of poverty and to education on nutrition.

With 31 doctors, the hospital in Kalimpong is capable of treating a wide range of medical conditions, with only the more specialised problems needing to be transferred to Siliguri. Clinics, health centres, and dispensaries are found in many villages, but the service they provide is variable, often lacking adequate supplies.¹⁶

One of the programmes GFF supports is “health camps” in which doctors volunteer their time, as do others who help to organise these events, while GFF and other funders provide funding for drugs and other expenses. These camps are free to attend and are often held in areas which are remote from hospitals and health centres. They serve as a means of both primary and secondary health care for villagers who can not afford to travel into town. A considerable number of people who attend the health camps require follow up treatment; however, currently there is no formal system for this follow up.

Development issues relating to services and amenities

- Effective systems of sanitation have been established for some households, and this programme of public education on sanitation and provision of pucca toilets needs to cover the whole population for it to be effective on a village-wide basis.
- Water supply piped from streams and collected in tanks has been a successful way of providing clean water for domestic purposes, but the challenge to provide water for agricultural purposes in the dry season remains.

¹⁶ See Figure C10.

- The improvement of village schools is important, especially for those from poorer households who may have difficulty in getting to more distant schools which might be considered of higher quality.
- Health care in the Kalimpong area is currently provided for through a system of hospitals, clinics and, in more remote areas, health camps. These constitute an adequate initial response to healthcare; however, issues were identified with the follow up treatment for patients because of constraints on funding and accessibility.

Section III: Development and change processes

1. The role of development interventions

Entrenched social inequalities continue to be a feature of many developing countries despite many decades of international development aid. The reasons for the continued existence of glaring social inequalities between and within countries are complex, however. Without the demonstrated commitment of visionary leaders and the persistent and sometimes strident efforts by those most affected to improve their daily situation, changes to these complex social inequalities are unlikely. For long-lasting solutions, people in local communities must be engaged at the outset and systematically incorporated throughout all development programmes. External assistance may also be important. Increasingly, new kinds of development actors, such as private foundations like the Glenn Family Foundation (GFF), are genuinely trying to translate their 'concern from a distance' into basic social services on the ground in places where, for various reasons, these are too slow to appear.

2. The Glenn Family Foundation approach

The GFF approach to work in the Kalimpong area reflects the Foundation's vision statement 'Give a Man a Fish, Feed Him for a Day. Teach a Man to Fish, Feed Him for a Lifetime' (Lao Tzu). The goal of GFF is to create a Model Village using a basic formula that enables people to become self-sufficient, gainfully employed, and educated. As mentioned previously, this involves providing people with local access to the basic necessities of life – sanitation, clean water, education, and health care. Broader objectives of this work are to encourage ownership, accountability, and community spirit. Although GFF has been working in the villages of Pudung, Bong Busty, and Chibo Busty, the Model Village concept has wider applicability. Since 2007, the GFF team has been reflecting on their work and has refined their approach in preparation for extending into new parts of each village in April 2008. The following are key interrelated aspects of the approach GFF uses to achieve their vision and goal.

Assessing needs and development opportunities

The work of GFF is intended to strengthen whole communities and to address the needs of the most marginalised in those communities. In 2007, prior to work being undertaken in the three villages, students of Cluny Women's College undertook a

survey of households in each of the three villages comprising a total of 173 households surveyed (see Appendix D for further information on these surveys). The data from the surveys was analysed by teachers at the College. GFF staff used the analysis, along with the knowledge of key people in those communities, as a basis for determining household and village needs. The survey process also highlighted which households were most amenable to change, both in terms of their geographic accessibility and in terms of householders' willingness to engage. GFF adopted a pragmatic approach by starting with these households.

The survey form and process has been refined by the GFF team in preparation for extension of the GFF work into new parts of each of the three villages in May 2008. GFF staff are working with people within each village who will on a volunteer basis conduct the survey during April 2008. Having local people undertake the survey is a means of building relationships from the outset with the new people/households being engaged in the process. The surveying process is a useful way of assessing needs and getting to know people in the new areas. However, it is also a time-consuming undertaking because the number of households is much greater than in the first survey and many are in more remote locations.

Meeting basic needs

In the new areas to be worked in from May 2008, the initial focus will be on ensuring that basic needs are met with regards to sanitation, water, education, and health. Alongside this, work will be undertaken to create opportunities for income generation and for developing community/village processes and structures to support self-reliance. It is recognised that it is necessary to prioritise work to address basic needs, because meeting these needs increases the likelihood of people being able to participate more fully in income generating activities. In the areas where these aspects have largely been addressed through the work already undertaken by GFF, the focus will be on creating opportunities for diverse income generation and securing new markets.

Networks and relationships

A key strength of the GFF approach is developing structures and processes, which utilise networks, structures, and relationships that already exist. This relationship based approach is evident at all levels of GFF work. GFF's Founder and Chairman Owen G. Glenn spent his early years in the Kalimpong area as did Jimmy Keir who

works closely with GFF. The connection of both these men to the region is significant. A passion for the place and an emphasis on genuine relationships with people in the area originating from these two men, now characterise the work of GFF. Valuing and working through existing relationships is evident in GFF's connections with other organisations working in the area as well as in the approach taken at village level. This is clear in the role of GFF village representatives, and the relationship between Community Committees, Self-Help Groups, and Panchayat Members.

Relationships with other organisations

As previously mentioned, GFF supports a range of other projects in the Kalimpong area and Darjeeling District, beyond the work it is undertaking in the villages. A number of these projects are ones that are led by the Sisters of St Joseph of Cluny. The Cluny Sisters have been in the region since the 1920's. They have a convent in Kalimpong and 18 convents in the villages within the Kalimpong area, as well as eight health centres or dispensaries. Their work focuses on addressing the needs of the most marginalised people in the area. The Sisters are courageous in addressing issues that other organisations and groups will not. Key examples of this are the Care and Support Centre for people with HIV/AIDS and Bal Suruksha Abihiyan, which is working towards ensuring Kalimpong subdivision and Darjeeling District are free of child labour. The Sisters have a long tradition of providing educational opportunities, particularly for girls and young women, who are living in poverty. The close, mutually-beneficial working relationship between the Cluny Sisters and GFF is evident in that GFF supports many of the Cluny Sisters initiatives and a number of Sisters are GFF team members. The Sisters bring a wealth of local knowledge and networks to the GFF work.

There are other non-governmental organisations working in the region. For instance, World Vision is working in some of the same areas as GFF. When this is the case, both parties have agreed upon boundaries of work and areas of focus for each organisation, to ensure complementarity.

Village Level Structures

The three villages that are the current focus of work were chosen because of the relationships that already existed with people there. GFF had already supported work in Chibo Busty and Bong Busty, and the Cluny Sisters have a farm and convent in Pudung. The structures and processes developed by GFF for working in the

villages provide an effective and efficient way of operating. Central aspects of the structure at the village level are the GFF Village Representatives and Village Committees. GFF also connects with other village structures in particular, Self-Help Groups, and Panchayat members.

GFF Village representatives

GFF Village representatives are members of the core GFF team who lead the work in each village. Where possible the GFF village representative is a local person who brings local knowledge and relationships along with their professional skills. GFF team members attribute much of the success of the work to this process. The existing reputation and trust that the village representative has, allows GFF work to progress rapidly. Although there are obviously huge benefits to GFF and the villages in having local people in these roles, it does however potentially invite some risks. For instance, they may be left in an awkward position if things do not go as well as the local people anticipate. This is a familiar issue in village development projects internationally. Clarity around respective roles and responsibilities can alleviate this especially when negotiating sensitive issues.

Village Committees

Village committees have been established in each of the three villages. The committees with the support of the GFF Village Representative and Project Manager identify needs and prioritise work to be undertaken within the village. They manage the day to day work within the village, including managing funds. Although the committees have been established through the GFF project, they are intentionally referred to as Village Committees, not GFF committees. This is because this better reflects the aim that the committee will engage with a range of organisations to progress community development. The initial establishment of the committees was not easy because many people were cautious and waited to assess how genuine GFF was in its intentions and commitment before they got involved. GFF team members approached people who already held leadership roles at the village level – school principals, Panchayat members, and leaders of Self-Help Groups. Many of these people became members. Although there is variation between the three villages, after a year of work the committees have grown and strengthened and more people are willing to participate. Members see the committee as a vehicle for village development.

Self-Help Groups

In India Self-Help Groups (SHGs) emerged in the 1980s as a means to enable poor, in particular women, to access credit. Members pool their money and then use this to make small interest bearing loans to members with increasing support from central government via the National Bank of Agriculture and Rural Development (NABARD). This basic form of micro credit combines access to low-cost financial services with a process of self management and development for its members. SHGs are locally formed, but are usually supported by NGOs, and increasingly by Government agencies. Linked not only to banks, but also to wider development programmes, SHGs are seen to confer many benefits, both economic and social. SHGs enable members to grow their savings and to access the credit, which banks are increasingly willing to lend. SHGs can also be community platforms from which women become active in village affairs, stand for local election, or take action to address social or community issues. NABARD estimates that by March 2006 over 33 million women have been linked to banks for financial services through 2.2 million SHGs. Growth has been spectacular in the past couple of years: 'over 400 women per hour' according to the NABARD web-site.¹⁷

In a relatively short period of time Sister Monica, a Cluny Sister, has supported the establishment of 21 SHGs with a total of 210 members in Pudung. There are generally ten members in each group and members of the SHG contribute 50Rs (Approx 1.15USD) a month. If contributions and attendance are regular, and the group meets a certain threshold (5000IR), the government will match the amount. The money is used to establish income generating activities such as floriculture, mushroom cultivation, poultry raising, pickle making, vegetable cultivation, and paper bag making. In Pudung, each group decides what activity it will focus on. Sister Monica is most active in the first six months of a group's development and the government provides the training needed for undertaking the chosen activity and doing the required book-keeping.

In addition to the economic benefits, SHGs impact positively on social and community issues. In Pudung, for instance, there was initial resistance from men in regard to women participating in the SHG. This was addressed by opening the groups to men. Not many men have taken this option up; however, they are now more supportive of their wives attending. Although previously they might have spent the time drinking, in some cases the men now care for the children and cook while

¹⁷ <http://www.apmas.org/pdf%5Cm.pdf>

their wives are at SHG meetings. Women gain skills and self-esteem through participation in SHGs, which holds beyond their time within the group. SHG members spoke of their increased confidence to participate in other community activities and become involved in community organising for instance, through joining the Village Committee. Group members are from a range of caste and tribal groups. The SHG focus on working collectively both reflects and helps to foster community spirit.

In Pudung, a SHG has recently been established which comprises women who work as stonebreakers. For this tedious work, women earn 300 – 400Rs a week. Prior to the establishment of the SHG, many of these women were using a high proportion of their income to pay off the debt from alcohol (bought by themselves and their husbands) in the previous week. They began by saving 10Rs a month and over time this has increased to 50Rs. A challenge for this group is finding income generating activities that are not too time-consuming as they already work long hours breaking stones. Paper-bag making is a potential activity for this group. Support is needed to find markets for the bags and GFF intend to provide this assistance.

It has taken time to build up the SHGs and they are flourishing more in Pudung than the other villages. Chibo Busty has some SHGs, but it also has a local village scheme. Villagers who can afford to, contribute a monthly sum (usually 50Rs a month), which is used to buy communal resources, for example cooking pots for large events, and to cover the cost of medical emergencies for those who contribute to the scheme. Both these local village schemes and the SHGs are generating economic and social benefits through developing self-reliance and community spirit so there is a natural alliance between these groups and the GFF work.

Although there are many benefits of the SHGs and the local village schemes, some of the issues mentioned above indicate that the most marginalised people in communities may not be able to participate. For instance, they may not have the income to contribute or women may be prevented by their husbands from participating¹⁸. It is important to ensure that the non-participation in SHGs and local village schemes does not exclude these people from the benefits of other projects.

¹⁸ For further information go to <http://www.ids.ac.uk/ids/bookshop/wp/wp303.pdf>

Panchayat

The term panchayat literally means assembly of five elders. Panchayats have been the institution of grassroots village governance in India for centuries. Traditionally panchayats were village councils with executive and judicial powers. Post independence the panchayati raj was formalised in the Indian Constitution as the system for self-governance at the local level. Under this system the panchayat is the village council which is constituted of between seven and 17 elected members. Members are elected by adult voters every five years. A third of members must be women and a proportion must be members of scheduled castes and scheduled tribes.

In the late 1970s, the West Bengal government handed over responsibility for the provision and maintenance of all local public goods, and implementation of most local public projects to the panchayats. The Panchayats and Rural Development Department of the West Bengal Government is responsible for supporting the work of the panchayats. The state government support to panchayat appeared to us to be unreliable and inconsistent.

With regard to GFF's work at village level, involvement of panchayat members is important as they are key players at the village level. As elected representatives they have recognition and support at the local level and a good knowledge of village issues. They are also an important source of information on, and link to, state government initiatives. It is therefore a mutually beneficial relationship for panchayat members and GFF members to work together to progress village development.

Self reliance and participation.

The use of existing networks and relationships is a process by which GFF aims to build self-reliance and participation. Another key way in which this is fostered is through requiring people to contribute labour to the project. For example, in Chibo Busty, the masons who build the toilets are from the local village. They work for six days and are paid for five as they contribute one days labour voluntarily to the project. People who have contributed to, and benefited from, the project are provided with green paint for their roofs, a visible symbol of their belonging to the GFF family. There has been a positive local response to GFF's 'hand-up' rather than 'hand-out' approach. People have benefited greatly from amenities, such as safe and accessible water and new toilets, and community pride has been built through involvement in the work (see Section B and Appendix C for further details of work

undertaken). Obviously inherent in this approach is the risk that those who are most in need may not be able to participate as they cannot contribute labour, especially if they already work seven days a week or are in poor health. In Chibo Busty, the villagers address this by working together and providing labour for people in this situation. Many people commented that there is a unique positive community spirit in Kalimpong villages that would not be found elsewhere. The implications of this would need to be considered if the GFF work is extended to other parts of the Darjeeling District

Sustainability

GFF wants to ensure the work it is undertaking in the villages is sustained. One way in which it intends to achieve this is through division of money from the income generating activities GFF supports. It is anticipated that 70 percent will go to those who have generated the income, 20 percent will go to GFF to fund similar work in other villages and 10 percent will go to the village committees to fund village projects.

GFF also works to develop the capability of local people to manage the work and has established the village committees to facilitate this. The intention is to transfer responsibility to local people so that they can have ownership of the on-going development work. This will also allow GFF staff to focus on work within new communities. Lessons from other development projects show that it is important to maintain an appropriate level of support while encouraging increasing independence. The timing and process for 'handing-over' can have a critical impact on the sustainability of projects.

At another level, GFF has introduced other philanthropists to projects that GFF is involved in, such as supporting schools and funding health clinics run by Darjeeling District Rotary Club. Bringing others on board to support projects has increased the capacity for sustaining such initiatives.

3. Issues for Consideration

This section highlights some issues raised throughout this report for consideration by GFF and other parties with an interest in development work in the Kalimpong area.

Development approach

The process of development undertaken by GFF is that of setting up ‘Model Villages’ to promote basic health, sanitation, and general living conditions. This contributes to overall community development and strengthens the possibilities for successful income-earning projects at the village level. This development approach is prevalent globally and throughout India. In many other instances in South Asia, it is also combined with the formation of SHG, as it has been in some instances in the Kalimpong area. This is helpful because it means that much can be learnt from the successes and failures of this type of approach in other places in South Asia. This approach admirably seeks to find a balance between material inputs, community good-will, transparency, and flexibility. Yet, the slightly different historical, geographic, and cultural features of different places means that inevitably there will be different responses to the Model Village approach.

Pace of change and expansion.

The work that GFF is instigating and supporting in the Kalimpong area is developing rapidly. Obviously there are positive aspects to working quickly; however, this needs to be balanced with flexibility to ensure that tight timeframes do not have a detrimental impact on those responsible for carrying the work out and on local people involved. The issue of the pace of work is related to the expansion of the project into new areas. Expansion is important to meet the needs of the people in the new areas. However, geographically many of the new areas are more remote; therefore, more time is needed to reach them. Target communities are also much larger than the existing ones. Providing materials for building work in these areas are likely to be more costly and time-consuming. Although the existing areas now have village committee structures to support their work, these committees are still relatively new and will require on-going support from GFF staff. Maintaining the work that has already begun and initiating new work will require careful management to ensure GFF staff and other key people involved are not over-stretched. Overall, it seems important to the long-term sustainability of the work, that GFF goals are balanced with community capacity to absorb and implement new ideas.

Planning proactively

The Model Village approach reflects a proactive and planned response to development needs. Using this approach, over time, one would expect that the frequency and number, but not necessarily level, of requests for funding is likely to lessen. Without losing the dynamism of the current approach and consistent with the principle of encouraging self-reliance, we suggest that a clear work plan is developed. This plan would include funding priorities and details of the particular geographic areas and sectors to be targeted and the timeframes that GFF is expecting to work within. This would allow both GFF staff and local people to have a clearer understanding of the priorities, direction and timing of GFF work. This is important to ensure the sustainability of GFF's work.

Inclusion of most marginalised people

It is important to ensure that the principle of encouraging self-reliance by requiring villagers to contribute labour is applied with flexibility rather than as a formula. This is necessary to ensure the inclusion of the most marginalised people who are less likely to be able to contribute labour. The pragmatic approach of working with most accessible households initially meant that it was not always those with the greatest need who were the first to receive GFF support. As the project expands into other communities, it will be necessary to work with more marginalised and/or poorer people both in areas where GFF began as well as in new areas.

Child labour and trafficking

This is an endemic issue and thus finding solutions is complex. It will take a significant amount of time to change the social structures and attitudes that lead to child labour. This is not a localised issue; therefore, the approach to addressing child labour would be strengthened by learning from and working with other NGOs with expertise in this area.

Markets

From the fieldwork, it was evident that finding markets for goods is a key livelihoods issue and a vital next step in terms of development work in the area. The GFF team are well aware of this and are putting some effort into researching markets. The challenges in terms of markets are physical (having all-weather roads) and

economic/commercial (establishing the market networks and negotiating contracts). In depth research is needed to respond to these challenges and establish where markets will be and the channels of distribution to those markets. Because of the importance of this work being thorough and robust we recommend that adequate time and resourcing (e.g. a designated staff member) is given to this work.

Summary and Broader Challenges

In summary, we are impressed with the sound development approach adopted by GFF, however we suggest cautions. We suggest GFF be particularly cautious of too rapid a pace of change, that it continues to ensure projects are inclusive of marginalised groups, and that it embarks on proactive planning. These issues are all characteristic of the post-establishment phase of village development projects elsewhere.

Attending to these cautions involves GFF in further developing and refining its practice in the field. There are, however, other difficult challenges that impact on development work in the area, which are largely outside the control of GFF. Broader challenges include:

- The impact of political instability in the Kalimpong area as well as in the surrounding region, specifically in relation to the movement for independence.
- The management of natural hazards such as landslides, so they do not become disasters. A risk assessment of the potential dangers is recommended as part of all development work.
- The possible flow on effects of large scale population displacement as a result of natural hazards or political instability in the larger geopolitical area that include Bhutan, Nepal, and China.

It is important that the impacts of these issues (e.g. on marketing, tourism, safety etc) are considered in planning and continue to be monitored as a routine part of GFF's work.

4. Phase Two: Future Opportunities

The original University of Auckland proposal outlined a two phase research process. Phase One was to provide a profile of the area and to scope the potential for undertaking a systematic socio-economic survey in the area using an Asset-based

Mapping method. It was proposed that Phase Two would involve carrying out this survey.

The fieldwork undertaken as part of Phase One allowed University of Auckland staff to see the work being undertaken in the area by GFF and gain a sound understanding of some of the needs and future opportunities. Following the fieldwork, it was felt that in Phase Two it would be more appropriate to consider how University of Auckland might work with GFF to offer a range of specific contributions to support development work in the Kalimpong area.

During the fieldwork, some discussion took place with the GFF team about how the skills of University of Auckland staff and students could complement and strengthen the work of the on-the-ground experts. University of Auckland has large graduate student population in a number of faculties including arts, science, and engineering. Many of these students (and staff) have an interest in development and could bring useful skills to projects in the Kalimpong area.

While in the Kalimpong area, the following areas were identified where staff and students from The University of Auckland might contribute needed skills:

- Evaluation / monitoring. As mentioned previously the work of GFF in the area could be strengthened through evaluation and monitoring. Information gathered would help determine whether initiatives are having the intended impact and might assist in leveraging more support for the work. Students and staff with expertise in this area could contribute to overall project evaluation as well as providing training to local workers in specific areas such as survey design and analysis.
- Research on livelihoods and socioeconomic issues. It has been noted in this report that for expansion of the GFF Model Village and other projects, it would be useful to gain some in-depth understanding of the complexity of village livelihoods and household strategies in relation to the mix of activities in which they participate. There are also complex issues related to social inequality and the assessment of poverty and well-being that specific in-depth research projects might address.
- Mapping. It is evident that better quality maps would be valuable to those working in the area. Digitised maps of two of the Model Villages have been produced for this report (see Appendix D). There is potential for further more

detailed maps to be produced and also for local people to be trained in using GIS systems so they can produce their own maps.

- Research and education. There is a proposal for a tertiary research and resource centre to be established at Cluny Women's College. Areas of focus for the Centre may include environmental issues, business skills, information technology, and English and Chinese languages. If this proposal is progressed a relationship with a university would be beneficial
- Tissue culture expertise. Tissue culture is an important issue for livelihoods in the Kalimpong area. There is already a well resourced laboratory for this at the Cluny Sisters' farm in Pudung. Mala Sherpa, the GFF representative, in Pudung, is an expert in this area. However, with extension of the GFF work in the village, there is an initial need for another person with this expertise to support and extend the current work. Consideration should also be given to on-going support for tissue culture work.

Although these are some of the specific areas mentioned during the fieldwork, if GFF wishes to work with University of Auckland to progress this involvement, it is likely that there are other areas in which useful contributions could be made (e.g. medical interns, engineering students, marketing, and information technology students).

The University of Auckland has welcomed the opportunity to participate in GFF's work in the area through the fieldwork and production of this report. We would be happy to engage in further discussion of the potential for an on-going relationship to support this vital development work.

Appendix A: University of Auckland Research Team

Dr Yvonne Underhill-Sem

Director, Centre for Development Studies, Faculty of Arts, University of Auckland.

Yvonne has a PhD in Human Geography from the University of Waikato and has work experience as a university lecturer in New Zealand, Papua New Guinea, and Australia. She has also worked for the ACP (Africa, Caribbean Pacific) Secretariat in Brussels as a development Expert in rural development, food security, and the environment. Yvonne has considerable fieldwork experience in remote parts of PNG as well as the Northern Cook Islands. She has travelled extensively and works closely with colleagues in India, the Philippines, Sri Lanka, Uruguay, Brazil, Jamaica, Ghana, Nigeria, South Africa, Fiji, the Cook Islands, and Papua New Guinea.

Dr. Ward Friesen

Senior Lecturer, School of Geography, Geology and Environmental Science, Faculty of Science, University of Auckland

Ward has a PhD in Geography from The University of Auckland, and his thesis research was based on extensive work in the villages and towns of the Solomon Islands. Since then he has undertaken a diverse range of research, consultancy, and teaching on issues of population, migration, development, and tourism. His expertise spans quantitative and qualitative research methods and he has worked with a diverse range of ethnic groups from Asia, the Pacific, and other regions. Over the last 15 years he has supervised 40 graduate theses, including 7 PhDs, in Geography, Development Studies, Asian Studies, Pacific Studies, and Environmental Science.

Jennifer Margaret

Research Assistant, Centre for Development Studies, Faculty of Arts, University of Auckland

Jennifer has a background in community development, sustainable development, adult and community education, indigenous peoples' rights, and social justice work. She has worked for non-governmental organisations (NGOs) and local government in New Zealand as well as NGOs in South Africa and Britain. Jennifer is a core group member for Facilitating Learning and Action for Social Change, a project of the

Institute of Development Studies, University of Sussex. She has travelled extensively in India and other parts of the world and has experience in working cross-culturally both in New Zealand communities and internationally. Jennifer has previously undertaken research on Indian religions and politics.

Alan Cheung

GIS Specialist, School of Geography, Geology and Environmental Science,
University of Auckland

Alan is experienced in Geographical Information System (GIS), spatial analytical methods, and cartographic designs. He has worked for different international research organizations in different projects, including disasters modelling, seafloor analyzing and mapping, and vineyard planning.

Jessica Petersen

Editorial Assistant, Centre for Development Studies, Faculty of Arts, University of Auckland

Jessica has recently completed her MA thesis in Development Studies examining the role of ethnicity in creating vulnerability to disasters. Previously she has worked for local and international NGOs working with communities on issues of social justice. Jessica has also undertaken research for local government examining migrant issues. She is currently involved in Interfaith and Ecumenical dialogue in the Auckland area.

***Appendix B: Glenn Family Foundation Kalimpong Core Team
Members April 2008***

Saom Namchu	GFF India Country Manager
Mala Sherpa	Pudung Representative
Tony Thocker	Chibo Busty Representative
Sister Clarentia	Bong Busty Representative
Alana Nichol	GFF Intern
Sister Declan	Sisters of St Joseph of Cluny
Sister Teresa	Sisters of St Joseph of Cluny

Appendix C: General location and thematic maps

INTRODUCTION:

Some of the maps in this appendix have been referred to in the text of this report, but a number of others have been included here to provide some general background of relevance to development in the Kalimpong Area.

Table of Contents and Map purpose for Figures in Appendix C

Figure C1: Location of Kalimpong Area and Model Villages, Darjeeling District, India

Figure C2: Population density in the Kalimpong Area from 2001 census.

Shows number of people per square kilometre, and may suggest greater pressure on land resources in some areas than others.

Figure C3: Percentage of Children Ages 0-6 in the Kalimpong Area from 2001 Census. Lacking detailed fertility data, the proportion of younger children in the population (aged 0-6) is an indicator of birth rates in different areas.

Figure C4: Percentages of Literates in the Kalimpong Area from 2001 Census.

Shows the level of literacy, which may be an indicator of educational level, but also of other factors such as social inequality.

Figure C5: Gender Gap in Literacy in the Kalimpong Area from 2001 Census.

An indicator of the gap between the literacy levels of males and females.

Figure C6: Sex Ratio in the Kalimpong Area from 2001 Census.

Differences between the number of males and females may be an indicator of sex-specific migration, or potentially other factors.

Figure C7: Percentage of Scheduled Tribes in the Kalimpong Area from 2001 Census. Shows the proportion of the population in scheduled tribes.

Figure C8: Number of Primary Schools in the Kalimpong Area from 2001 Census.

Figure C9: Paved Road Approach to Villages in the Kalimpong Area from 2001 Census

Figure C10: Distance to Nearest Hospital in the Kalimpong Area from 2001 Census

Figure C11: Availability of Electricity in the Kalimpong Area from 2001 Census

The last four maps show the level of access to different services and amenities in the Kalimpong area.

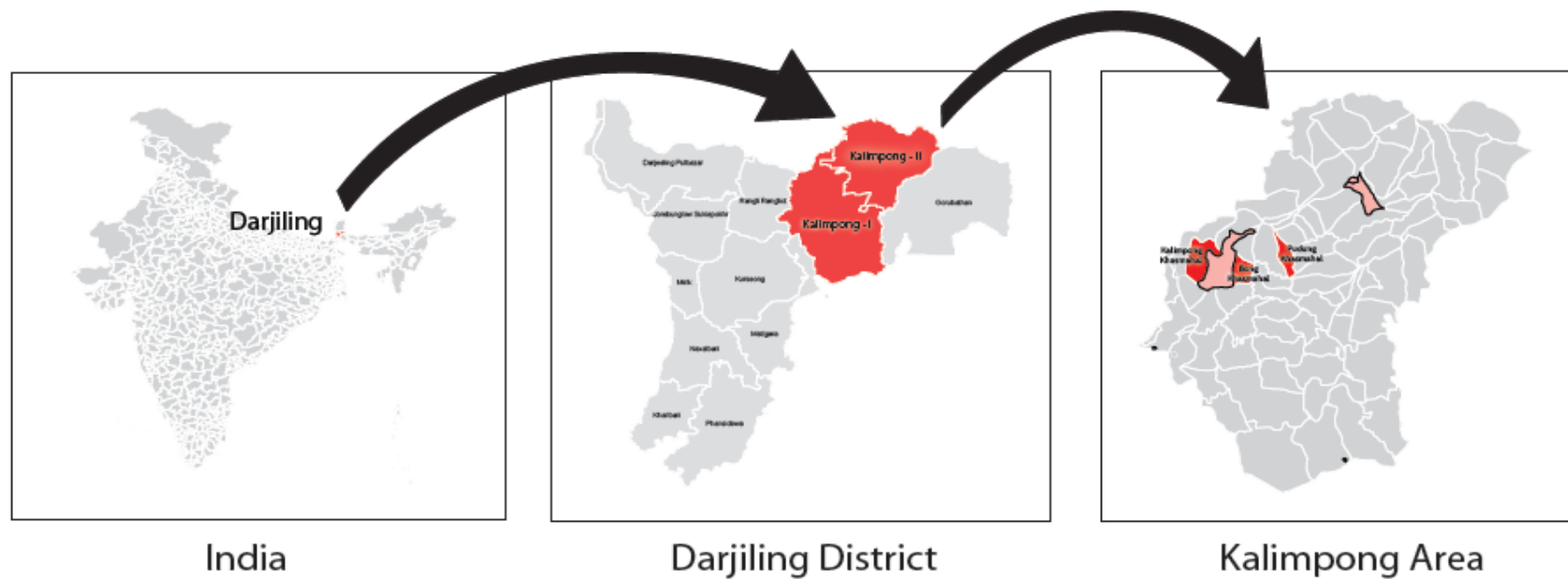


Figure C1 Location of Kalimpong Area and Model Villages, Darjeeling District, India

Population density in the Kalimpong Area from 2001 Census

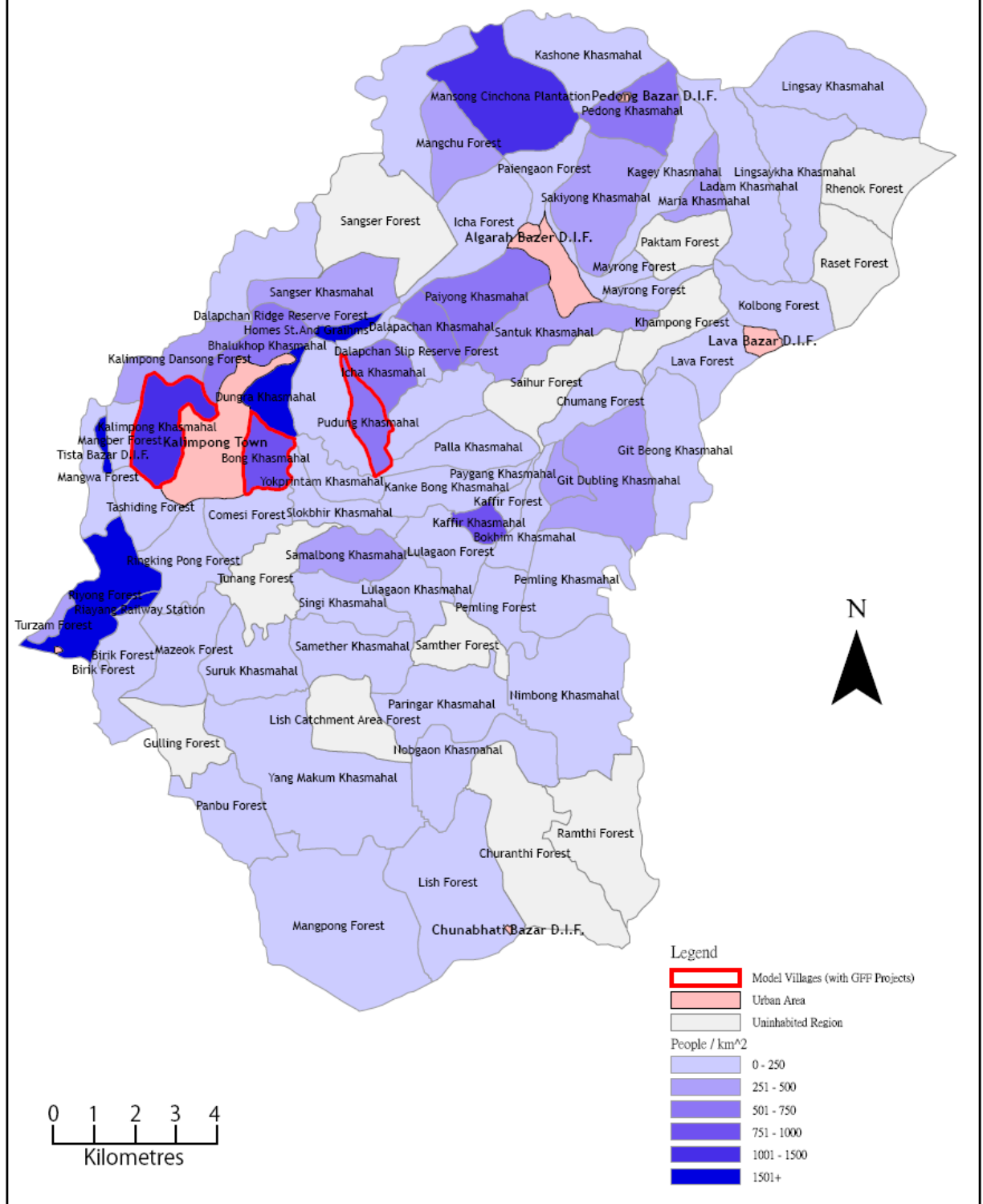


Figure C2

Percentage of Children Ages 0 - 6 in the Kalimpong Area from 2001 Census

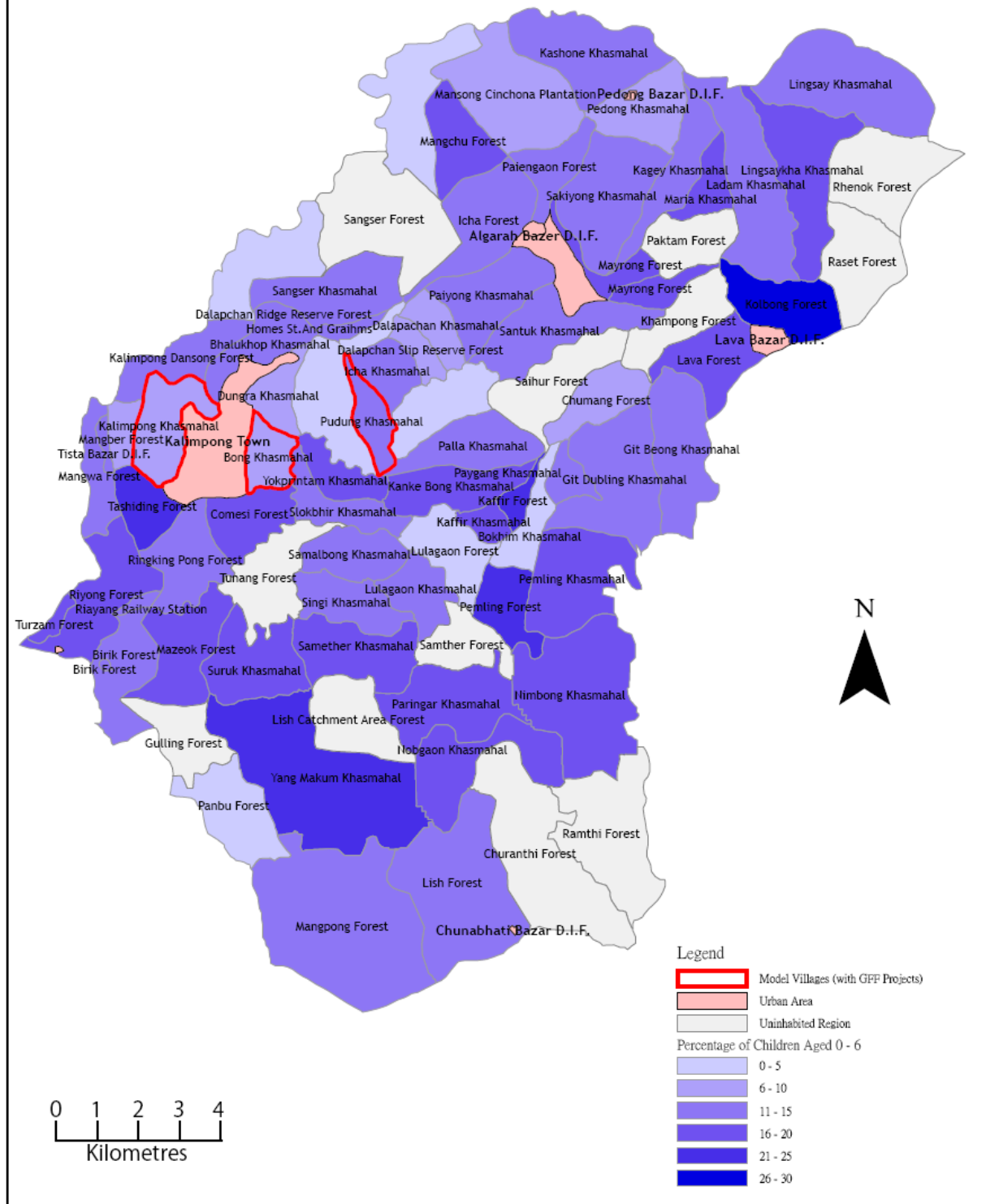


Figure C3

Percentage of Literates in the Kalimpong Area from 2001 Census

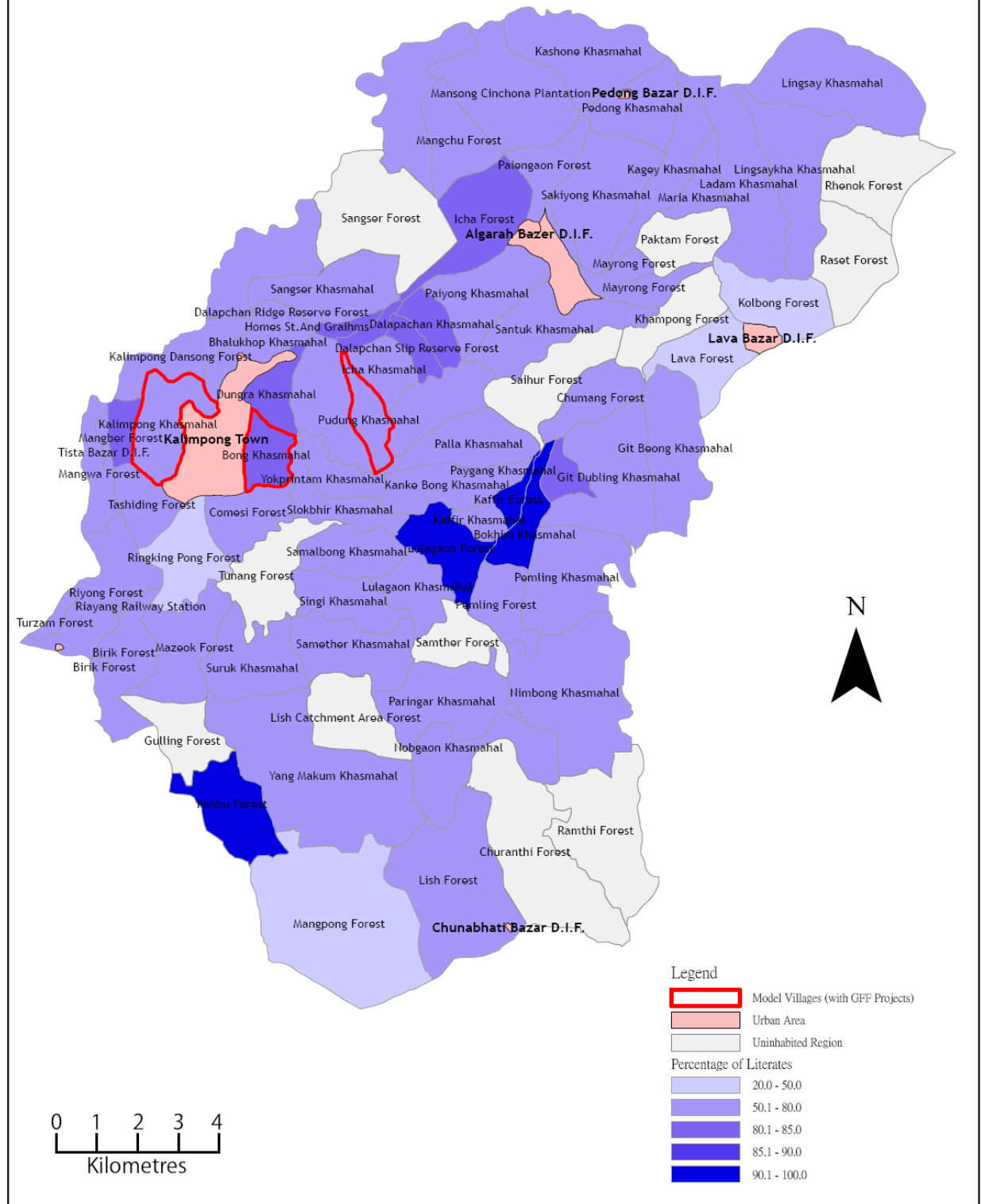


Figure C4

Gender Gap in Literacy in the Kalimpong Area from 2001 Census

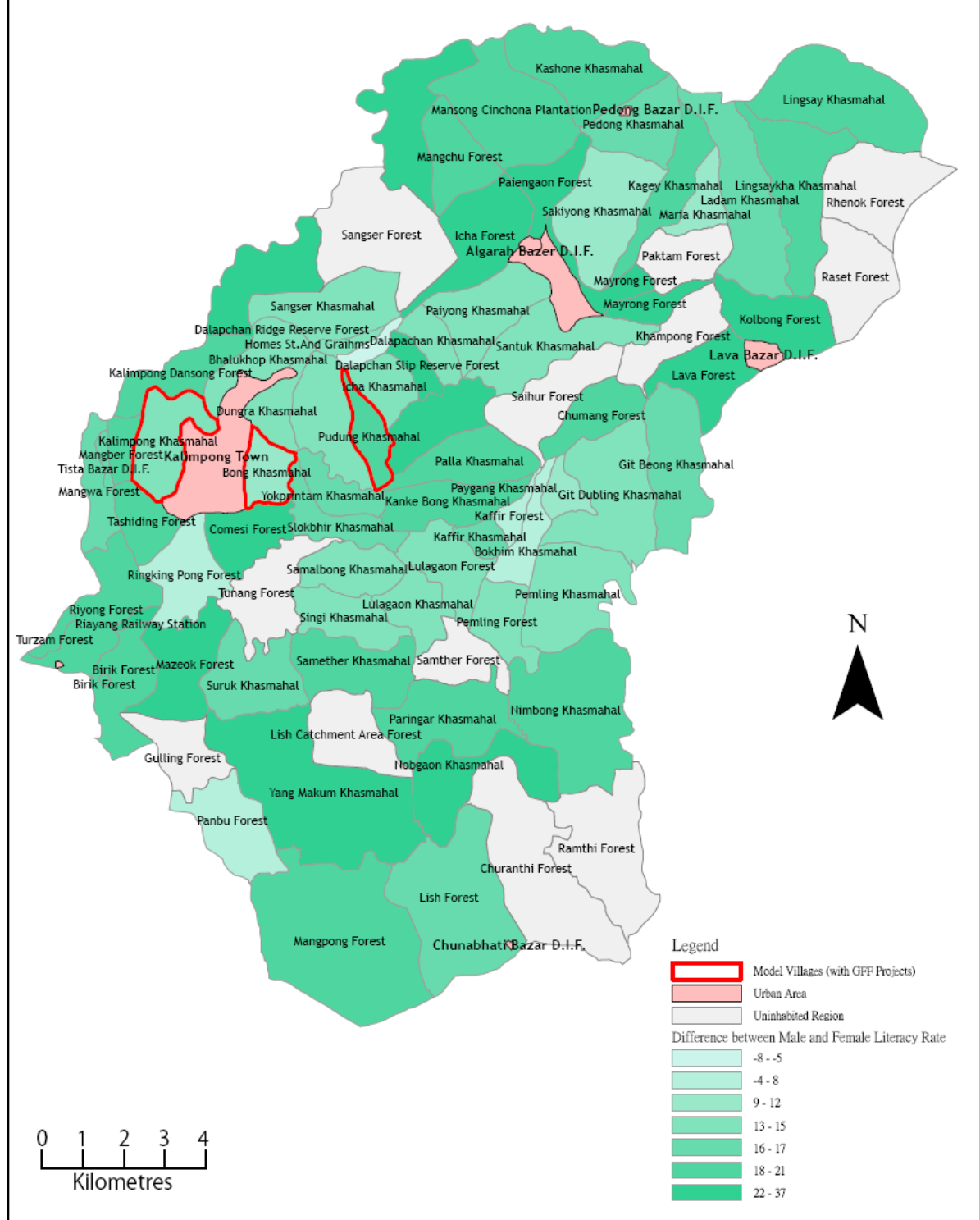


Figure C5

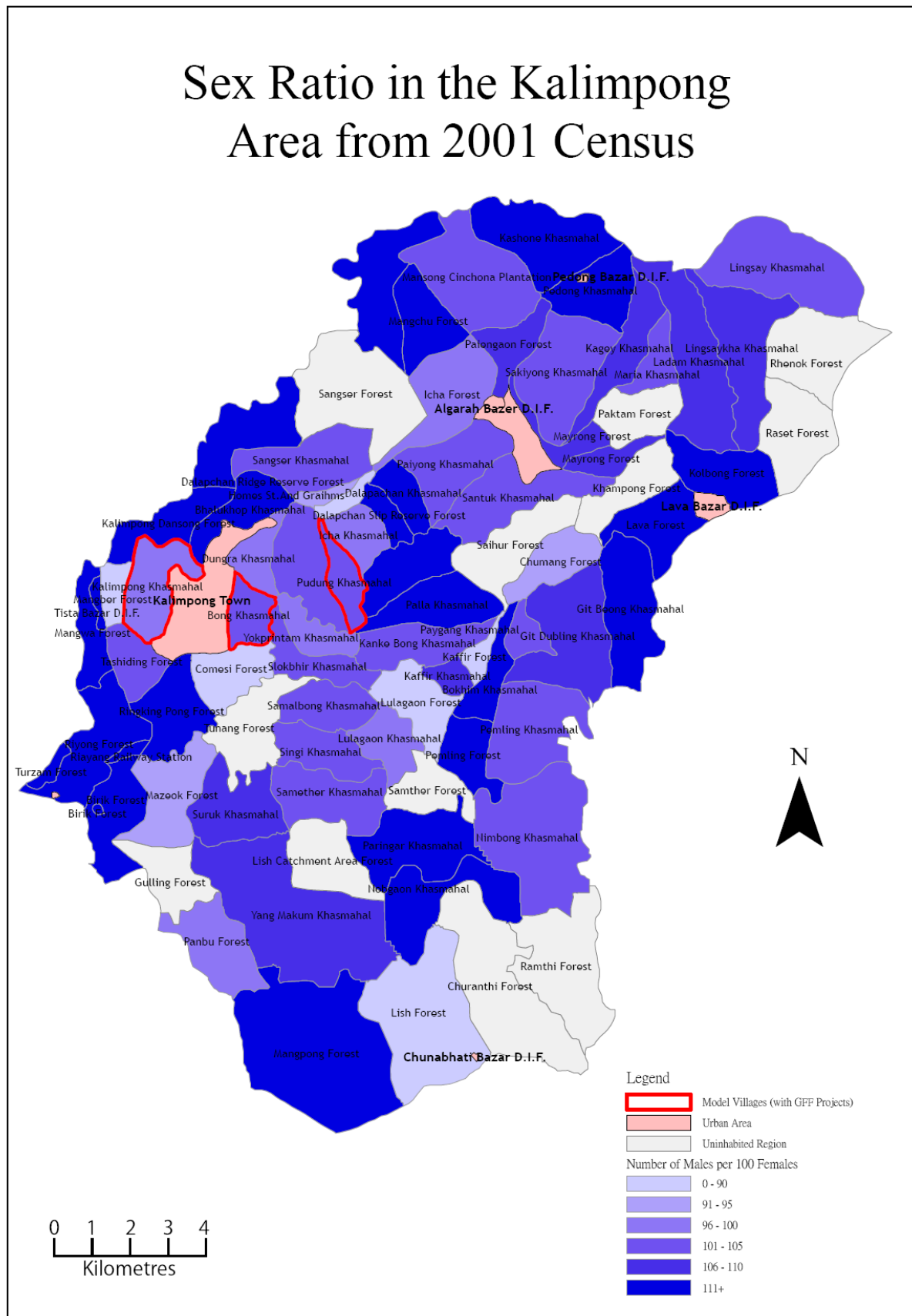


Figure C6

Percentage of Scheduled Tribes in the Kalimpong Area from 2001 Census

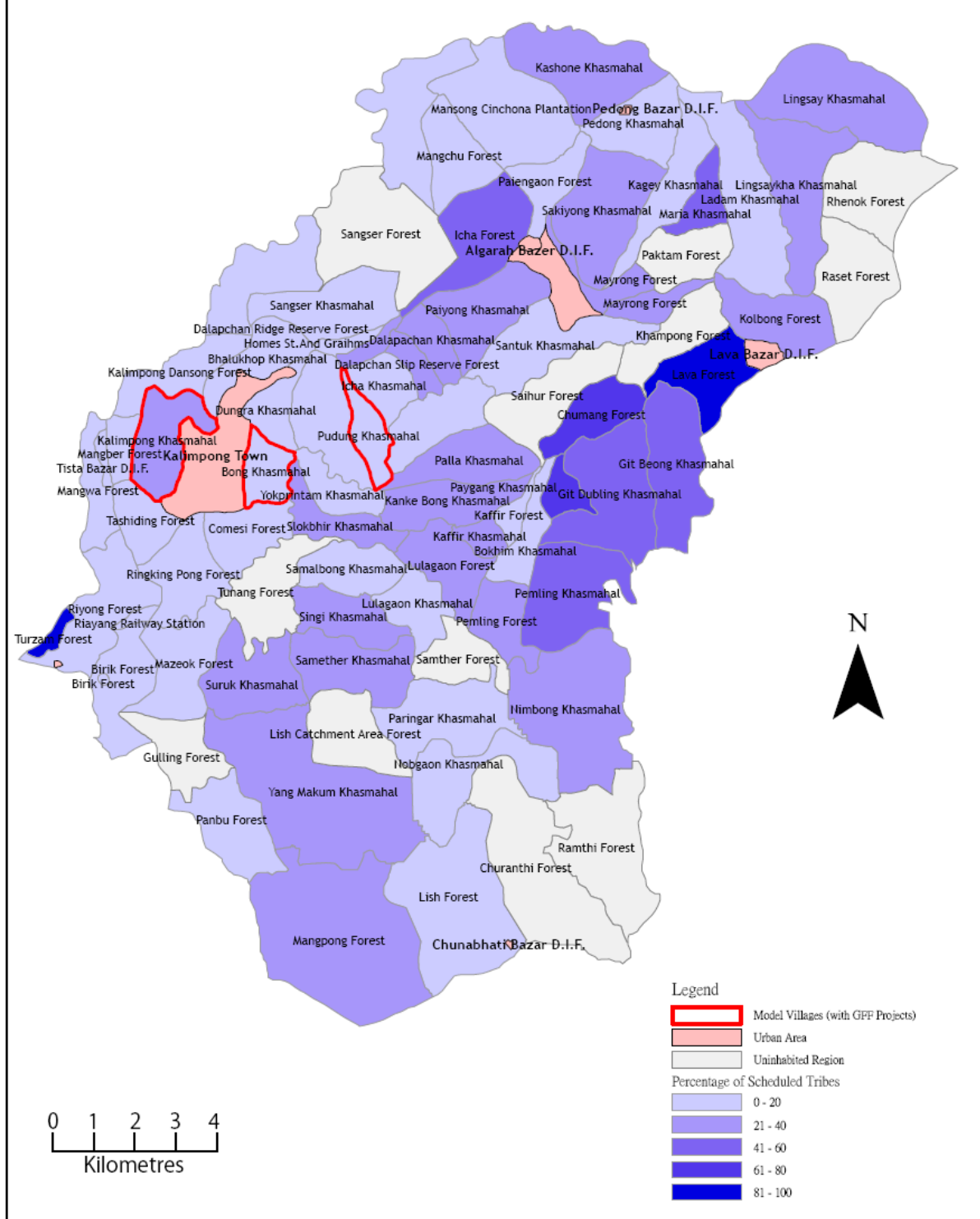


Figure C7



Distance to Nearest Hospital in the Kalimpong Area from 2001 Census

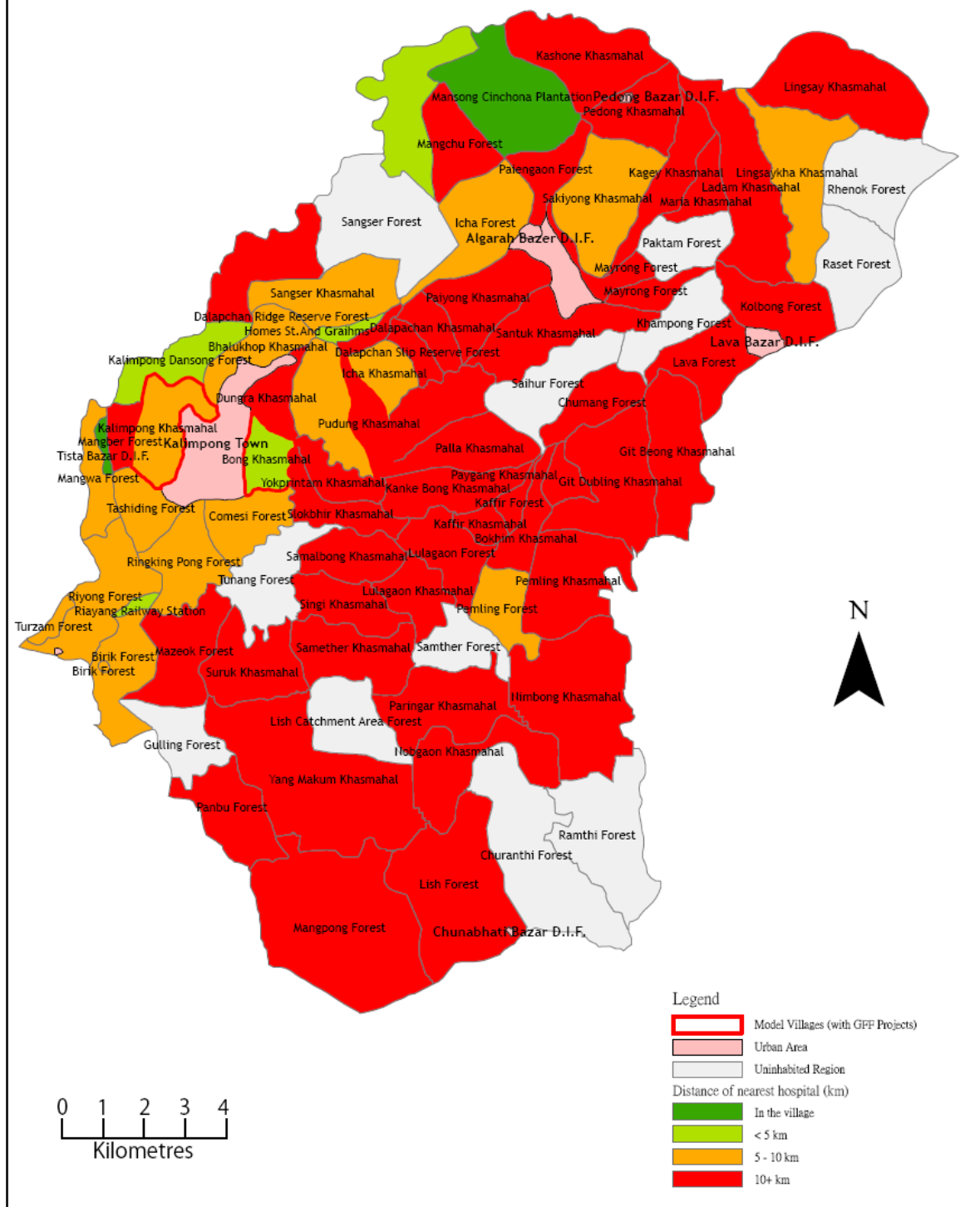


Figure C10

Availability of Electricity in the Kalimpong Area from 2001 Census

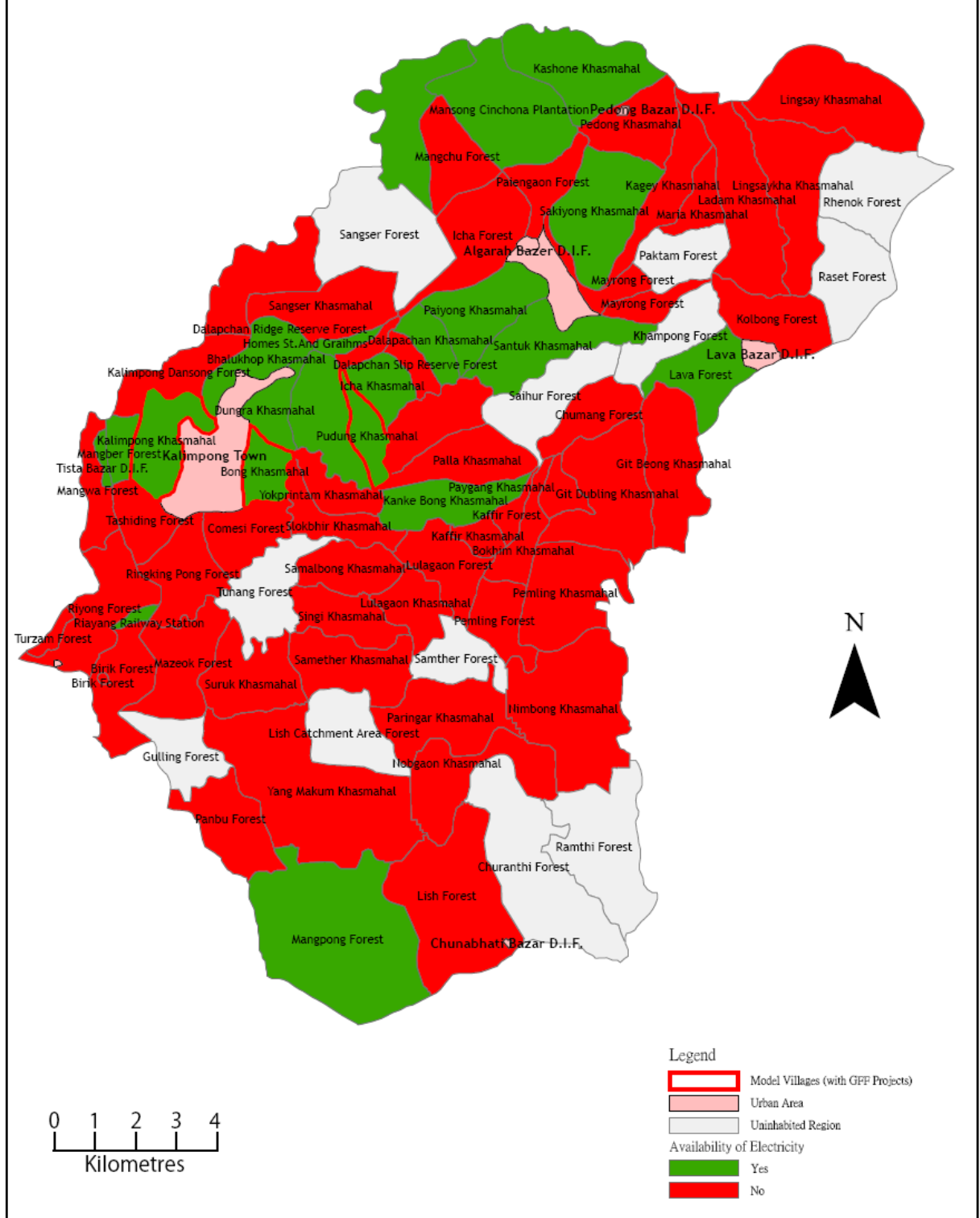


Figure C11

Appendix D: The Model Villages – background and maps

1. List of Tables

Table D1: Population and households of villages surveyed by GFF

Table D2: Landholdings of surveyed households; percentage of households according to size of landholding

Table D3: Modern amenities of surveyed households; percentage of households owning particular item

2. List of Figures

Figure D1: Chibo Busty (within Kalimpong Khasmahal)

Figure D2: Bong Busty (within Bong Khasmahal)

Figure D3 Pudung (within Pudung Khasmahal)

3. Introduction

The purpose of this appendix is to provide some basic information on the villages where Glenn Family Foundation (GFF) Model Village work has been underway. The three village areas, Chibo Busty, Bong Busty and Pudung are part of larger legal entities called “khasmahals” which are used to define the political boundaries of the Gram Panchayat (the basic electoral units in the villages) as well as the named village areas used in the Indian Census. Data for aspects of village life such as economic activity, and access to sanitation and water for the Model Villages are contained within the main body of this report, and additional information is shown in this appendix to provide general background. Also summarised here are, specific issues raised during the surveys of these villages, some of which are referred to in the report.

The maps presented here are based on originals provided by the village representatives. Unfortunately, the map provided for Bong Busty was not geo-referenced so has not been digitised (thus the original version is shown here). The other maps are held on a GIS database which lends itself to elaboration e.g. modification or the incorporation of new information when available.

Chibo Busty

Chibo Busty is considered to be the first Model Village since this was the first village where GFF undertook this type of work, and where the village committee structures are the most robust. Located on the western boundary of Kalimpong town, It is part of Kalimpong Khasmahal (see Figure D1), and the areas for future GFF projects are also part of this khasmahal.

The people of Chibo Busty are mostly Lepchas, Thapas, Chettris, Tamangs and Rais, with the main religions being Hinduism and Christianity, with a few Buddhists. Average household size was six persons. In other parts of this report it has been shown that agriculture is the most important economic activity, but that waged employment is more important here than in some villages further from Kalimpong town. At the same time nearly a quarter of all households have no land, while another quarter have less than a third of an acre (Table D2). The village has a recently renovated government school (and three other government schools) and a private English school, although many also go into Kalimpong town for schooling. There is also a health sub-centre.

- Development issues that were identified during the survey were the need for:
- Better road maintenance, and more footpaths
- Provision of water tanks and facilities for water filtration and purification
- Access to communications such as daily newspapers and telephones
- Electrification
- Diversification of the economic base with alternatives such as quality seeds for agriculture, seedlings of local chilli, poultry, organic pesticides and fertilisers, and irrigation

Bong Busty

Bong Busty is to the immediate east of Kalimpong town, and is part of the Bong Khasmahal. Figure D2 shows the area of Middle Bong Busty (Salimbong) where the GFF Model Village project is currently underway, as well as the area of Lower Bong Busty where the a new part of the project is planned.

The ethnic groupings of Bong Busty are mostly Lepchas, Rais and Chettries. Because of Bong Busty's proximity to Kalimpong town, agriculture is less important here than in many other villages in the Kalimpong area. It is also notable that 30 percent of all households in the GFF survey had no land, so waged employment is an important component of village income. Bong Busty Primary School is in the centre of the village and ongoing efforts are underway to improve the quality of the school. There is also a health sub centre.

Issues of development that were identified during the survey include:

- Need for safe drinking water (including at the school) and need for common water source as well as water tanks
- Improvement of the main road
- Low voltage electricity
- Desire to build unity among villagers and to raise awareness of the people about the importance of the development work

Pudung

Pudung is further from Kalimpong town than the other two Model Village projects. Even though it is only about eight kilometres by road, it still takes at least half an hour to drive there by jeep. Figure D3 shows that the current GFF projects are in Sundung and Khindung and that the planned projects are in adjacent areas of the Pudung Khasmahal.

The main ethnic groupings are Lepchas, Rais and Tamangs. Agriculture is the most important economic activity, with some wage labour, notably stone breaking on the banks of the Relli River. With a lower population density, Pudung has relatively few landless households compared to the other two project villages (Table D2). There is one small primary school but its condition is not seen to be satisfactory. There is also a health sub-centre which caters mostly for pregnant women and small children. For most other health needs, people travel into Kalimpong town.

The development issues identified for Pudung include most of those noted for the other villages, but especially significant are:

- A high incidence of tuberculosis and the difficulty of accessing medical treatment because of distance and cost. Another health issue identified was the prevalence of scabies, often resulting from cramped living conditions.
- Poor sanitation; much lower levels of “pucca” toilets than in the other project villages
- Not far from the Model Village project is some very basic housing for stone-breakers who do not have access to land.

Table D1: Population and households of villages surveyed by GFF

<i>Demographics</i>	Bong Busty	Chibo Busty	Pudung
No. of females	154	189	169
No. of males	147	175	167
People surveyed	301	364	336
Average household size	5.7	6.0	5.6
<i>No. of households surveyed</i>	53	60	60

Source: GFF village surveys

Table D2: Landholdings of surveyed households; percentage of households according to size of landholding

<i>Area of landholding</i>	Bong Busty	Chibo Busty	Pudung
<i>nil</i>	30	23	5
<i>1-10 decimals</i>	13	5	12
<i>11-30 decimals</i>	6	18	18
<i>30-99 decimals</i>	13	17	53
<i>1 acre or more</i>	38	37	8
<i>No. of households surveyed</i>	53	60	60

Source: GFF village surveys; note percentages for Bong and Pudung have been corrected from those calculated in survey reports.

Table D3: Modern amenities of surveyed households; percentage of households owning particular item

<i>Amenities</i>	Bong Busty	Chibo Busty	Pudung
vehicle	8	7	5
telephone	17	13	5
mobile	53	27	20
television	66	48	20
refrigerator	15	10	3
<i>No. of households surveyed</i>	53	60	60

Source: GFF village surveys

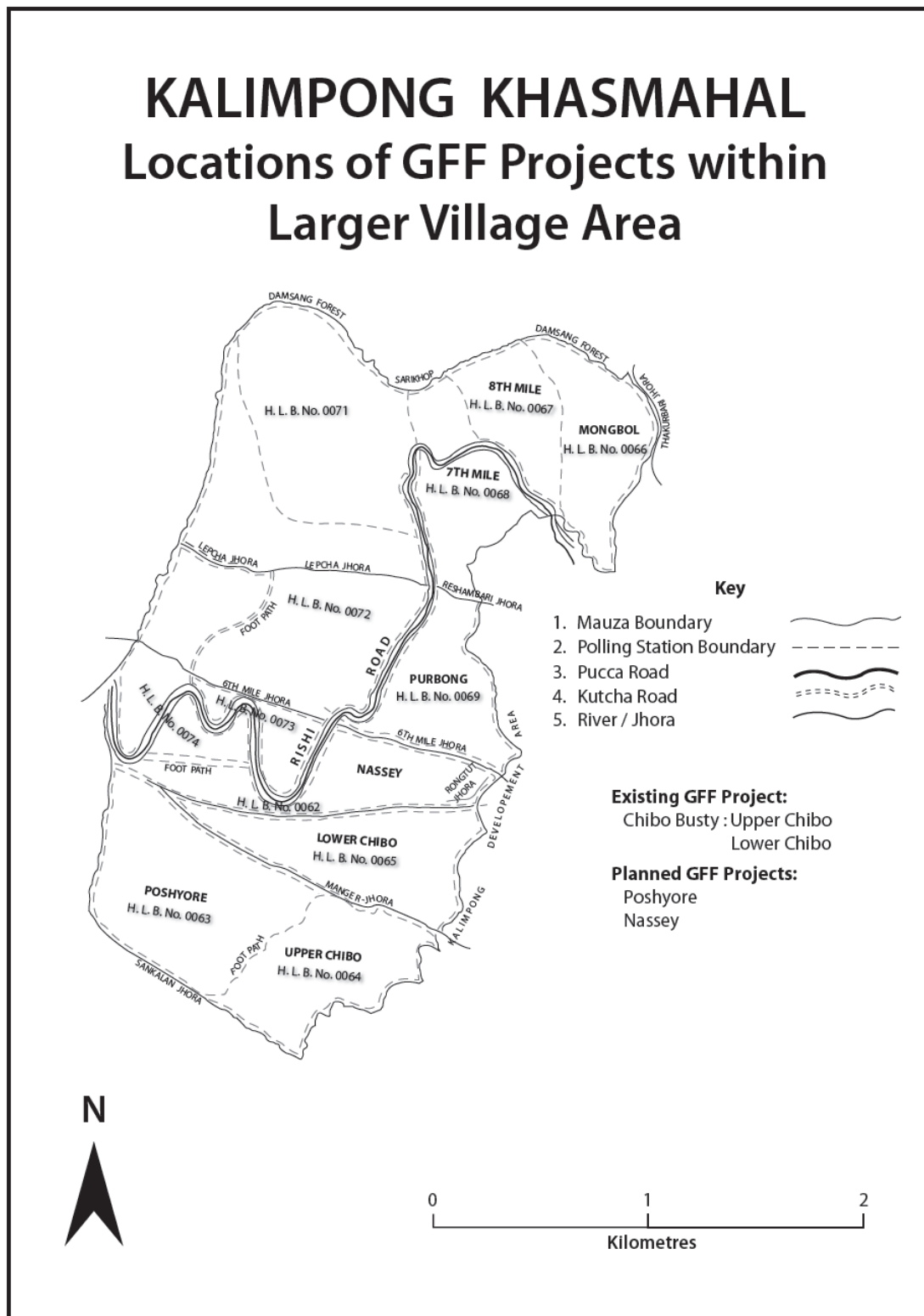
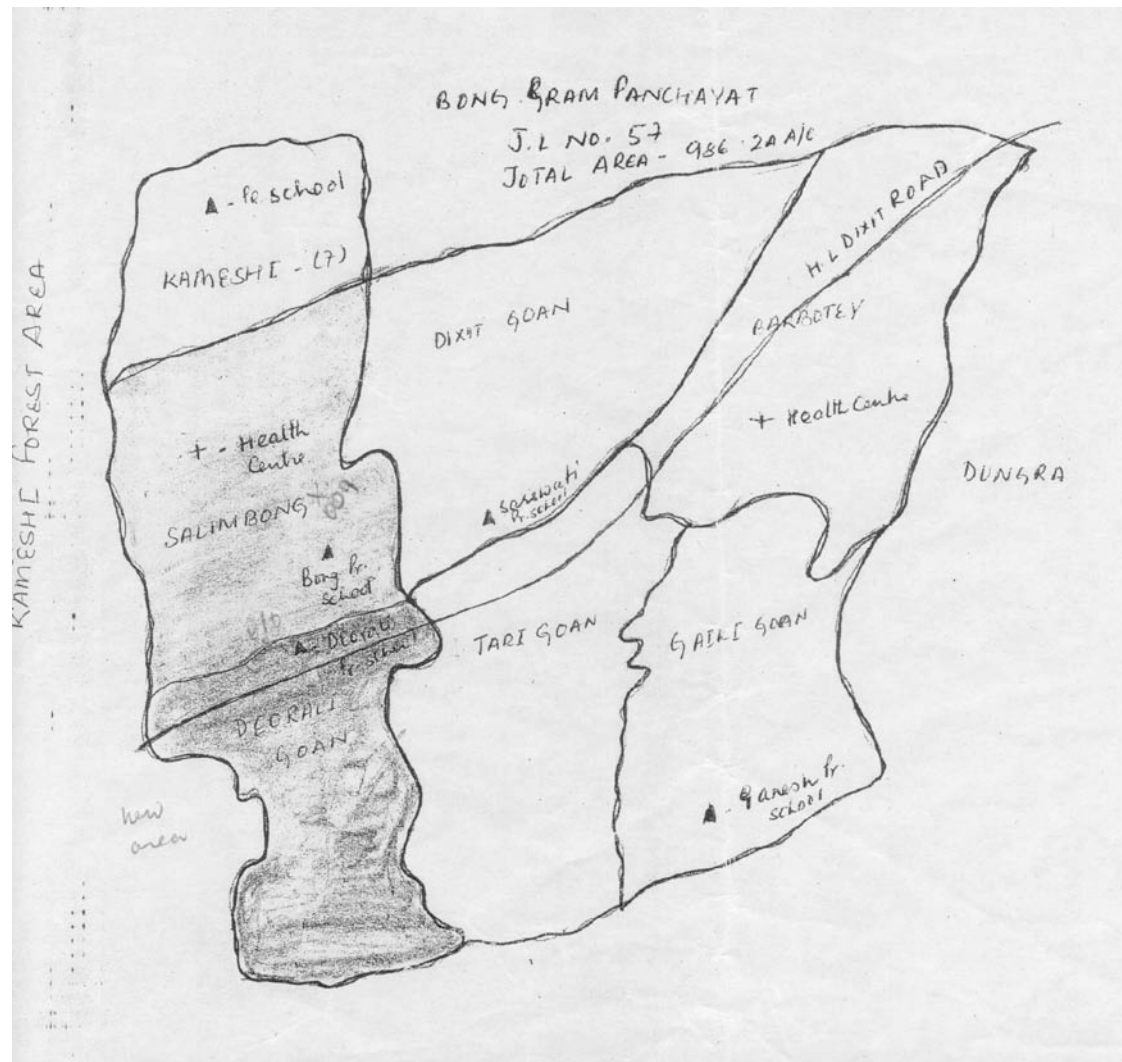


Figure D1 Chibo Busty (within Kalimpong Khasmahal)

BONG KHASMAHAL: Location of GFF Projects within Larger Village Area



KEY:

Existing GFF Project

Salimbong (Middle Bong Busty): light grey colouring

Planned GFF Project

Deorali Goan (Lower Bong Busty): dark grey colouring

Figure D2 Bong Busty (within Bong Khasmahal)

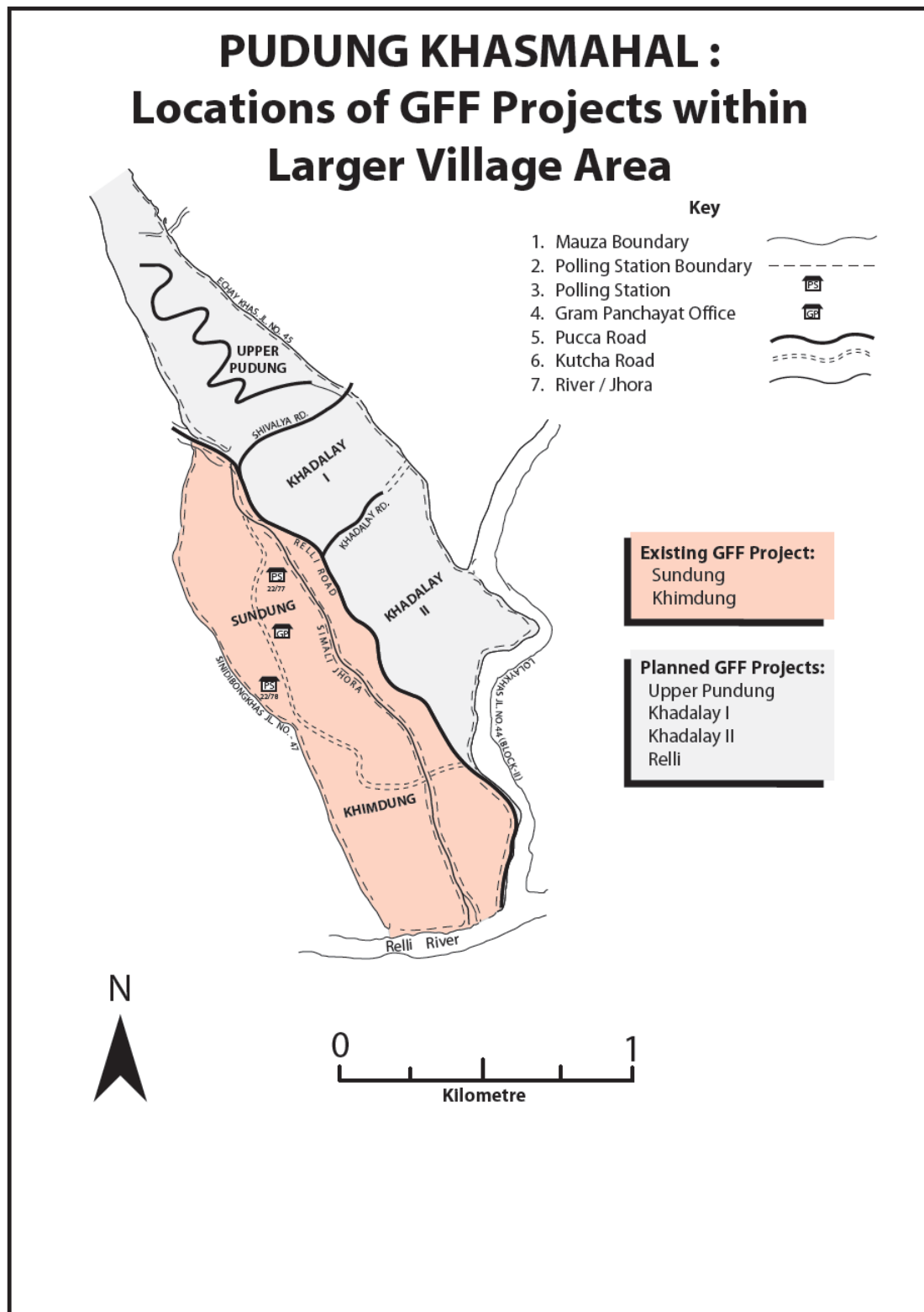


Figure D3 Pudung (within Pudung Khasmahal)

Appendix E: Photos



Figure E1 GFF team in Kalimpong and University of Auckland researchers



Figure E2 Kalimpong market



Figure E3 Terracing for agriculture



Figure E4 The dangers of landslides



Figure E5 Flower cultivation



Figure E6 Ploughing with bullocks



Figure E7 GFF funded greenhouse



Figure E8 Tissue culture lab at Pudung



Figure E9 Stone-breaking



Figure E10 Model cow shed funded by GFF



Figure E11 Old-style “kaacha” toilet



Figure E12 GFF toilet with septic tank behind



Figure E13 Bong Busty Primary School



Figure E14 GFF funded water supply tank and piping



Figure E15 Paper making factory Kalimpong



Figure E16 Cactus nursery Chibo

Appendix F: Resources

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