

CHAPTER 7: EXISTING HUMAN ENVIRONMENT AND LAND USE

7.1 INTRODUCTION

This Chapter provides a description of the current baseline conditions in the project impact zone and area of influence as described in **Chapter 3, Section 3.7**. Baseline environmental status outlines the prevailing environment conditions of the project area. The baseline characteristics of socio-economic conditions are used as the basis of prediction of possible effects and also to monitor changes during construction and operation.

7.2 APPROACH AND METHODOLOGY

7.2.1 Review of Project Information and Data Collection

To plan the fieldwork and survey, maps of the project impact zone were created and the key environmental and social resources were located and analysed. Before fieldwork and survey, literature review was undertaken mostly based on existing secondary information (published reports, maps, topographic sheets, satellite images, etc.). This analysis was used to develop the survey plan and target locations.

Further, secondary data, which are relevant to understand the baseline pertaining to social, health and land use has been collected and reviewed. These include data from NREB, DOE, District Offices (DO), Department of Agriculture (DOA), Forest Department Sarawak (FDS), JBALB, Health Department, Museum Department, etc.

7.2.2 Consultations

Consultations on environmental issues with community members, institutional stakeholders and potentially affected communities in the form of stakeholder meetings, focused group discussions, social and health surveys, public display of TOR (online and physical), etc. were carried out. Consultation process involved both formal and non-formal discussion. The feedback generated through these meetings has been incorporated as far as possible in the design of the project. The consultation process shall continue even during the implementation stage to

gauge the general opinion. The details are elaborated in **Chapter 4: Stakeholder Analysis and Engagement**.

7.2.3 Survey and Fieldwork

Field survey and environmental baseline sampling were conducted over several periods from October 2020 to July 2021. Planned trips were postponed several times due to Covid-19 outbreak and imposition of Conditional Movement Control Order (CMCO) and Movement Control Order (MCO) by the Sarawak State Disaster Management Committee (SDMC). The following summarises the engagement and surveys undertaken:

No.	Date / Period	Engagement Activities
1	08 Oct. 2020	Dialogue Session with Community Leaders and Kapit District Officer
2	14 Oct. 2020	Dialogue Session with Community Leaders and Bukit Mabong District Officer
3	16 Oct. 2020	Dialogue Session with Community Leaders and Song District Officer
4	03 Nov. 2020	Dialogue Session with Community Leaders and Song District Officer
5	01-07 Dec. 2020	Social survey/ Community interviews (focus group discussions) at Kanowit District (Mapai, Kabah, Nanga Tada)
6	02-20 Jan. 2021	Display of ESIA's TOR for public review and comment
8	07-30 May 2021	Phone interviews of some headmen/ members of JKKK of the affected communities in Kanowit, Bukit Mabong, Kapit and Song Districts. Their help was sought to inform the other members of the community to fill-in Google form.
9	14 June – 3 July 2021	Face-to-face community interviews and household surveys at Bukit Mabong, Kapit and Song Districts.

7.2.4 Social Survey Methodology and Coverage

The social survey focused on settlements found between the northern banks of Btg. Rajang and Btg. Baleh where the proposed BMTLP extends from the Baleh HEP to Mapai Substation. This area is determined based on its proximity to the proposed transmission line route, where potential impacts will most likely be felt. Based on data from the Kanowit, Song, Kapit and Bukit Mabong District Offices

(2020), there are about 159 settlements between the Baleh HEP and Mapai Substation (northern bank). The lists of these settlements by district can be found in **Appendix 7.2.1**.

Out of the 159 settlement which consists of 3,413 households, 68 settlements (43%) were selected for the survey. From these settlements, 185 households (5.4%) participated in the household survey.

The location of surveyed settlements by districts are shown in **Table 7.2.1** and **Figure 5.8.2 (a – d)** in **Chapter 5**. Of these 68 settlements, seven (7) are located within the 500 m AOI, 47 within the river corridor south of the transmission line, two (2) within 100 m along an access road and 12 outside the AOI. This number is considered representative of the site condition as most of the longhouses here are located along the main river of Btg. Rajang and Btg. Baleh.

The social survey consists of **community interviews** and **household survey**. They are briefly described as follow:

Community interviews: This interview was carried out first, prior to any household survey. The purpose of this interview is to collect general village/ settlement information; and the exploration of awareness, common perceptions, existence and issues of vulnerable groups, and other potential issues, etc. regarding the proposed project. It helps to provide better overall understanding of socio-economic settings of the settlements and the respondents involved in the household survey.

The interviews were carried out in small groups (rarely more than 10), involving the headmen and members of JKKK (representing various group at the settlements, including women groups). Identification of women issues and vulnerable groups was also carried out in this survey. If any vulnerable group was identified, the group or their representatives will be interviewed subsequently, or at the appointed time after the community interview. A sample of community interview form is appended in **Appendix 7.2.2**.

Household survey: Household survey was carried out after the community interviews. The purpose of this survey is to gather information on general traits of the households within the social survey focal area as well as their responses to the proposed project. A total of 185 respondents were interviewed comprising those involved in community interviews, particularly the households whose lands are potentially affected (i.e., the main issue of interest associated with the project) as identified based on the project site map and preliminary site survey of

transmission line ROW. Some respondents are from other settlements within the social survey focal area (although community interview was not carried out at these settlements) who shows interest and willing to be interviewed. A sample of household survey form is appended in **Appendix 7.2.3**.

Social survey was carried out mostly with the assistance of the local enumerators (i.e., identified by the headmen and/ or members of the JKKK, and trained on the spot by the social survey team); except at some settlements when local enumerator cannot be found and/or the communities insisted to be interviewed by the social survey team instead, or for one-time visits when accessibility was difficult and time-consuming due to shallow water. Where local enumerators were appointed to assist in the social survey, they were given between 5 to 12 days to carry out the survey at their respective communities, and sometimes, at the nearby communities; hence, the enumerators, headmen/ JKKK and other members of the community have time to discuss among themselves about the project and response accordingly in the social survey.

Due to high similarities in ethnicity (Iban) and settlement setting (i.e., all rural and sparsely populated), the communities/ settlements and households involved in the social survey should be able to provide general baseline socio-economic features of the project area of influence, as well as local awareness, acceptance and perceptions of the project. Relevant secondary data from the District Offices and Department of Statistics, Malaysia were also referred to, to have better insights of overall district/ regional socio-economic features.

COVID-19 pandemic restrictions, accessibility challenges and time constraints have resulted in an inability to reach the targeted number of respondents (260) for household survey. Physical contact with local people was minimized during fieldwork because there was a general unease among the communities about receiving visitors to their longhouses. Meetings to inform the communities of the project and the ESIA study, were mostly held in the *ruai* or longhouse common galleries in small groups not more than 15 persons (inclusive of the survey team members), and sometimes, also at open areas outside the longhouse. The meetings were limited to about 1 hour as much as possible. Settlements under quarantine order from the SDMC and DDMC due to COVID-19 were not visited.

Table 7.2.1: Location of Settlements by District and AOI and Numbers Respondent Involved in Community Interview and Household Survey

District	Settlements				Community Interview Total Settlement (%)	Household Survey Respondent (%)
	Within 500 m Area of Influence (AOI)	Within River Corridor south of transmission line	Within 100 m along access roads and jetties	Areas outside the AOI		
Kanowit	0	10	1	9	20 (29)	42 (23)
Song	3	11	1	1	16 (24)	32 (17)
Kapit	3	12	0	1	16 (24)	50 (27)
Bukit Mabong	1	14	0	1	16 (24)	61 (33)
Total Surveyed	7	47	2	12	68 (100)	185 (100)
Total Settlements	16	117	2	24	159	

Source: CKSB Fieldwork (2021)

Note: Percentages may not tally to 100 due to rounding.

7.3 GOVERNANCE AND ADMINISTRATION

Sarawak is divided into administrative divisions, districts and sub-districts. A division is divided into smaller administrative unit called district. Some districts due to its large size, or remoteness of some population centres, are divided further to sub-districts to streamline administrative activities. Currently, there are 12 divisions, 40 districts and 26 sub-districts in Sarawak. The proposed transmission line transverses areas which fall within Kanowit District of Sibul Division; and Song, Kapit and Bukit Mabong Districts of Kapit Division.

Each of the division in Sarawak is headed by a resident. Resident Offices are found at all administrative centres of the divisions, which are Sibul Town and Kapit Town for Sibul and Kapit Divisions, respectively. A Resident Officer holds the authority to be involved in any development projects which is subject to the State Planning Authority (SPA), and has the highest authority in decision making processes involve in development planning and management in the division and assisted by Deputy Resident. Other roles of the Resident Office include monitoring and coordinating development projects and security aspects in the division (Noni Harianti & Dani, 2015).

District Office plays more of supporting roles to the Resident Office in the management of development projects, particularly in the monitoring and coordinating of the projects in the district. Hence, the District Officer (DO) or/and Administrative Officers (also known as Sarawak Administrative Officer (SAO)) are closer to the people on the ground, attending to their problems and welfare. DO sometimes plays the mediator roles in settling disputes among the people. Other roles of the DO include judicial (probate, child adoption, fire arm license), and collection and management of important data like district profiles, village profile, poverty etc.

7.3.1 Community Leadership

Sarawak has a unique community leadership hierarchy system. The system is structured according to the local level administration with the *Temenggong* representing community chiefs at the divisional level, the *Pemanca* representing the district level, the *Penghulu* overseeing the sub-district level and the *Ketua Kaum/Headmen (Tua Kampung/Tuai Rumah)* at the village or longhouse level. The system plays important role in community-building in Sarawak, particularly in facilitating communication between the government and the peoples in the communities. These community leaders are the front-liners for the government in

advising people about the state policies. The roles of these community leaders are briefly described below.

Temenggong: The highest authority within the community leadership hierarchy system. A *Temenggong* is entrusted to represent the major ethnic groups in every division in Sarawak. In a division comprised of several small ethnic groups, a *Temenggong* shall be appointed to represent all of them or they shall come under the jurisdiction of a *Temenggong* who is representing one of the major ethnic groups in the division. The *Temenggong* has a supervisory function over the *Pemancas* and the *Penghulus*.

Pemanca: The second highest authority within the community leadership hierarchy system. The *Pemancas* are responsible for representing their respective ethnic groups at the district level and are also entrusted to administer the administration of justice in the Native Court.

Penghulu: The third highest authority within the community leadership hierarchy system. The *Penghulu* are responsible for the welfare of various ethnic groups at the sub-district level, or zones within a big or populous districts, and are arguably the most powerful leaders at the grassroots level. Their functions and responsibilities include the registration of new marriages, resolution of domestic problems, ensuring the safety and security of the village, assisting probate, assisting in child adoption cases, addressing social problems within his area, attending government functions and planning the development of villages within his jurisdiction. Some *Penghulu* have also been appointed as judges in the Native Chief Court.

Ketua Kaum: The lowest authority within the community leadership hierarchy system. *Ketua Kaum* (Headman) or *Tuai Rumah* (the term used in respect of Iban community) are responsible for daily administration of local affairs in the villages or longhouses. They are also responsible in:

- a. Assisting the *Penghulu* as and when required in the administration of the area.
- b. Encouraging and leading their communities to participate in government activities or projects.
- c. Settling family squabbles or minor disputes based on their community's *adat* (or customary law) and where applicable the Native Courts Ordinance.
- d. Promoting closer links between their communities and the government.

- e. Carrying out government instructions from time to time.

7.3.2 Community Organizations

All longhouses in the study area have their own Village Development and Security Committee (VDSC), or in Malay, commonly referred to as the JKKK (*Jawatankuasa Kemajuan dan Keselamatan Kampung*). The JKKK, which is made up of the elected local leaders and representatives of all organizations of the longhouse, is chaired by the headman. Each JKKK comprises a chairman, a secretary, a treasurer, and about five or more committee members depending on the activities and size of the longhouse. The members are selected from the existing chairmen of various local organizations such as People Volunteer Corps (RELA), Sarawak National Youth Organisation (SABERKAS), Women's Institute (WI), Political Group, Religious Committee, and Farmers Association. The dual positions of JKKK members facilitate communication between the JKKK and the other organisations.

Among the tasks of JKKK are to identify, plan, implement, and to supervise development projects at the longhouse which cover aspects such as socio-economic, education, health, religion and village security. As an extension of the district office administration, the JKKK acts as a liaison group between the longhouse and the government, linking the longhouse with government agencies responsible for development programmes. JKKK is also responsible to lead and coordinate longhouse resources in order to ensure development of the community, and also to sustain a stable and safe environment which is free from social threats such as drug abuse and loafing among youths.

7.4 LAND USE AND SETTLEMENTS IN THE STUDY AREA

The proposed transmission line will affect a total of 159 settlements along the area of influence of 500 m to the north and up to the banks of Btg. Rajang and Btg. Baleh to the south.

7.4.1 Urban Centres

There are no urban centres or town along the northern bank of Btg. Rajang or Btg. Baleh where the transmission line is located. Urban centres are all located on the southern bank. The three main urban centres in the region are Kapit, Song and Kanowit towns. Kapit Town is the administrative capital for Kapit Division, which is also the most important urban centre in the vicinity of the proposed transmission line. It is a vibrant commercial and social centre for the region catering to the

longhouse communities, timber camps and recently the Baleh HEP. Kanowit and Song towns which are smaller than Kapit town, serve as the administrative capitals of Kanowit and Song Districts, respectively.

Up until 2020, Kapit and Song towns can only be reached via river from Sibul and other settlements in the hinterland. With the completion and operation of the new road, Kapit town is now linked to the State's road system. With this new road opened to the public, the town is about 1 and half hour drive from Sibul, and 45 minutes to 1 hour from Song.

Most of the government departments are represented in the town. The government quarters are mostly constructed on hill tops behind the existing town centre, and away from the centre particularly in Jalan Selirik area. Housing developments occur in pockets of flat and gently sloping land along the main roads. Most commercial establishments are located in the town centre as well as housing estates in Jalan Selirik. Commercial activities comprising retailing, catering, offices, hotel, banking and finance are located in conventional two to four storey shophouses.

Kapit town also has extensive range of community facilities including electricity, treated pipe water, telecommunication facilities, schools, hospitals, sport and recreational facilities, religious centres and water transport services. It presently has a hospital (i.e., Hospital Kapit) catering for the whole division. Police and fire stations are located near the town centre. The town, however, has limited sport/recreational facilities and open space. The existing sport/recreational facilities include Gelanggang Kenyalang and Kapit Mini Stadium, while Kapit Town Square is the only public square in town.

The economy of Kapit is still highly dependent on the logging and forest industry although the industry is on a downturn. Many of its population are directly or indirectly involve in this industry. Most of the logs are not process locally but transported by river to Sibul where most of the processing factories are located. Employment is therefore concentrated mostly in the commercial, service and public administrative sectors.



Plate 7.4.1: Kapit Town Square



Plate 7.4.2: Song Bazaar, express boat terminal at the foreground



Plate 7.4.3: Kapit District Office, Song Branch



Plate 7.4.4: Kanowit Town

7.4.2 Longhouses

There are approximately 159 settlements along the northern bank of Btg. Rajang and Btg. Baleh, between Baleh HEP up to Mapai Substation. These longhouses are sparsely scattered along the length of the Btg. Rajang, Btg. Balleh and its tributaries. They are of various sizes, with number of doors or *bilek* ranging from a short seven (7) doors to very long 56 doors longhouse. These settlements as well as those surveyed belongs to the Iban who made up the largest ethnic group in the

study area, except for Kg. Serian. Kg. Serian is inhabited by the Rajang/ Tanjong tribe (a native sub-tribe of Kajang group).

A longhouse consists of a series of individual apartments built adjoining each other in a straight line, from 7 to more than 50 *bileks*; akin to a village under one roof. The building form of each longhouse is mostly similar except for their architectural style, detailing and materials which is influenced by the natural surrounding area, socio-economic conditions as well as accessibility of the settlements.

A typical longhouse comprised of apartment units for every family (*bilek*), a covered common long gallery (*ruai*) and an open veranda (*tanju*, commonly used for drying). Many longhouses have two floors, with the upper floors (known as *sadau*) mainly used as sleeping area. All households involved in the household survey live in longhouses, mostly one-storey (72%) but some are double-storey (28%). About two third (64%) of these longhouses are semi-concrete, while 20% built with a mix of concrete and wood, and the remaining 16% being entirely wooden (see **Table 7.4.1**). Most of the semi-concrete and concrete longhouse apartments have tiled floors, while those few with cement floors are hoping to tile their floors in the future. Most of the newer longhouses are brick constructed with cement plastered walls, metal roofing and tiled floors.



Plate 7.4.5: Rh. John, Krangan Ara, Bukit Mabong District, two storeys



Plate 7.4.6: Rh. Laso, Nanga Entawau, Bukit Mabong District, two storeys

Table 7.4.1: House Building Materials

Building Material	No. of Respondent	Percentage
Wood	30	16
Semi-concrete (mixture of wood and brick/cement)	118	64
Mix concrete (brick and cement)	37	20
Total	185	100

Source: CKSB Fieldwork (2021)

Contemporary longhouses are mostly built on cement slabs/floorings instead of stilts, with multipurpose cemented front areas used for drying purposes, playing court as well as vehicle parking areas (at the longhouses with road access). All the available spaces in the longhouse provide facilities similar to a village. As an example, the *ruai* in the longhouse has the same function as a multi-purpose hall. *Ruai* also function as a meeting place, place to conduct religious activities, wedding reception, and festival celebrations and venue to entertain guests.

Many of the longhouses in the study area are situated on the riverbanks and facing the rivers, as the river is the main mode of transportation. With the availability of road access, newer longhouses are built facing road instead, as observed in Mapai of Kanowit District. However, if suitable sites are lacking (such as sites too far from riverbanks or roads), houses may be built on stilts at low-lying sites that are prone to flooding.

At some settlements when land is no longer enough to accommodate more *bileks* in a straight line, or when some households prefer to have separate dwellings from the main longhouse, few detached houses are also noted built surrounding the main longhouse. These individual households, however, remain under the chieftain of the main longhouse headman.



Plate 7.4.7: Rh. Gerinsa, Nanga Segentu, Sg. Ibau, Kapit District, a wooden longhouse built on stilts



Plate 7.4.8: Rh. Gani (formerly Rh Baja), Sg. Entangai, Kapit District, a single storey concrete longhouse

Kg. Serian, the only non-Iban settlement in the study area, has a slightly different house arrangement. It comprises two separate longhouses and some individual detached houses, perched on a steep northern bank of Btg. Rajang; and hidden by tall riparian vegetation including planted fruit trees. The village is located approximately 4km upstream of Kapit Town.



Plate 7.4.9: Rh. Awın, Mapai, Kanowit District



Plate 7.4.10: Rh. Jacob, Nanga. Leon, Sg. Menuan, Kapit District

7.4.2.1 Housing Condition

Housing conditions and levels of cleanliness of the settlements surveyed are generally good and acceptable. Physically, settlements are clean as most of the longhouses have proper drains that channel wastewater to the nearby rivers or streams while chicken and pigs are usually penned, or kept at the farms. The availability of basic infrastructures particularly treated water supplies and 24-hour electricity has brought great improvement in the quality of life at many settlements (46%). The compounds of some longhouses are also beautified by planting ornamental shrubs, palms and trees; thus, improving general environmental quality and liveability of the longhouses.



Plate 7.4.11: Beautifully landscaped Rh. Lajang, Sg. Belawai, Kapit



Plate 7.4.12: Spacious *ruai* for social activities and relaxing at the longhouse, Rh. John, Baleh.

Community interviews found that the average numbers of persons residing among the known numbers of door is 4.0. From causal observation, it was also noted that none of the longhouses or *bilek* looked crowded while the *bilek* are mostly rated as comfortable by the respondents (95%) (**Table 7.4.2**). A *bilek*, however, can be very uncomfortably warm during the day without proper ventilation especially the *bilek* of single storey longhouses. Fans are commonly used to improve ventilation at the longhouses, especially those with reliable 24-hour electricity supply; however, only 16 (9%) of the *bilek* had air-conditioning units.

Table 7.4.2: Condition of Longhouse Apartment/ Bilek

Condition	No. of Household	Percentage
Comfortable	175	95
Uncomfortable	6	3
Crowded	4	2
Total	185	100

Source: CKSB fieldwork (2021)

7.4.2.2 Common Pest Problem

Commonly encountered pests in the homes of the respondents are listed in **Table 7.4.3**. Most of the respondents reported their home experienced one to three types of these pests, which is deemed as problems. The most frequently mentioned are mosquitoes (65%), flies (57%) and ants (55%). From casual observations, however, these pests are rarely noticed, and no locals expressed their serious concerns over their existence; hence, their numbers could be assumed of a typical home, and not to the amount of creating annoyance or have potential of spreading diseases of epidemic scale.

Table 7.4.3: Pests Reported in Respondent's Home

Type of Pest	No. of Household	Percentage ¹
Mosquitoes	121	65
Flies	106	57
Ants	101	55
Rats	95	51
Cockroaches	88	48

Source: CKSB fieldwork (2021)

Notes:

¹ Multiple responses (i.e., a household may use multiple methods of rubbish disposal)

7.4.3 Social Infrastructure – Utilities, Facilities and Services

7.4.3.1 Water Supply

Most of the sampled households have access to portable water supplies (**Table 7.4.4**). About 68% of these supplies are gravity-fed, sourced nearby suitable hilly areas in the vicinity of the longhouses. Some of these supplies experience shortages during droughts where the villagers have to resort to stored rainwater, or nearby rivers for domestic water needs. About a third (30%) of the sampled

households enjoyed treated water supply from JBALB, mostly those in Mapai, Kabah and Nanga Tada, Kanowit; and Nanga Entawau, Baleh. The others, 3%, used stored rainwater, water fetched or pumped from nearby rivers, or both. It is noted that many households in the rural areas have water tanks, mean to minimize supply interruptions due to pipe burst or intake blockage, low pressure, dried sources, etc.

Table 7.4.4: Types of Water Supply

Types	No. of Household	Percentage
Gravity-fed	125	68
JBALB (treated water)	55	30
Rivers/Rainwater	5	3
Total	185	100

Source: CKSB fieldwork (2021)



Plate 7.4.13: HDPE water tanks for rainwater harvesting

7.4.3.2 Power Supply

24-hour power supply is enjoyed by 46% of the surveyed community. 24-hour power supply coverage is limited to settlements, schools and health clinics in Mapai, Kabah, and Nanga Tada as well as along Btg. Rajang (up to Pulau Pisang Ulu (Rh. Bakar)) and Btg. Baleh (up to Nanga Mujong).

Further inlands/ upstream, most of the longhouses and facilities primarily rely on either private or communal generator set that runs for only a few hours in the evening. Other than that, some of the locals depend on solar panels and micro-hydroelectric systems as source of electricity, as well as portable battery-powered lanterns and kerosene lamps for lighting purpose.

Table 7.4.5: Sources of Power Supply

Electricity Source	No. of Settlement	Percentage
SESCO	31	46
Generator sets	33	49
Solar	4	6
Total	68	100

Source: CKSB fieldwork (2021)

7.4.3.3 Sanitary Facilities

All *bilek* at the surveyed settlements have either pour-flushed or pull-flushed toilets, depending on the reliability of water supplies. Pull-flushed toilets are preferred to other types of toilets where piped water supplies are available such as at Nanga Tada and Nanga Entawau. At settlements relying on gravity-fed waters supply, or rainwater, pour-flushed toilets are more common. The distributions of toilet types used by the sampled households is tabulated in **Table 7.4.6**.

Table 7.4.6: Types of Toilets

Type of Toilet	No. of Household	Percentage
Pull-flushed	91	49
Pour-flushed	94	51
Total	185	100

Source: CKSB fieldwork (2021)

7.4.3.4 Domestic Waste Disposal

Local community resort to multiple methods for rubbish disposal as indicated by the sampled households (**Table 7.4.7**). Rubbish is reported be disposed at designated locations near the settlements (48%), usually close to the riverbanks. Oftentimes observed, rubbish is simply thrown into the rivers as commonly reported by the respondents (40%). Other methods of rubbish disposal include burning (26%) and burying (9%). Municipal rubbish disposal services (23%) are only

available at the settlements located near towns and major population centres as well as those along major roads in Kanowit, Song and Kapit Districts.

Table 7.4.7: Rubbish Disposal

Type of Disposal	No. of Household	Percentage ¹
Designated sites	89	48
Throw in the river	74	40
Burn	49	26
Local authorities	43	23
Bury	17	9

Source: CKSB fieldwork (2021)

Notes:

¹ Multiple responses (i.e., a household may use multiple methods of rubbish disposal)

7.4.3.5 Education Facilities

Mapai Substation Area

Generally, children from the surrounding settlements of Mapai Substation have easy access to education facilities due to the existing road network. The nearest primary school from the Mapai Substation is SK Nanga Balingiau, approximately 1.6 km west of Mapai Substation. Another primary school, namely SK Ng. Tada is located within Nanga Tada at the end of Nibong-Tada Road. For Mapai community who has road access and owns a vehicle, these two primary schools are generally preferred. For settlements along the riverbank, SK Nanga Dap (southern bank of Btg. Rajang) and SK Nanga Ngemah (northern bank of Btg. Rajang) are another two primary schools to attend to, depending on the convenience and distance to travel from the settlements. It is also noted that Nanga Tada and Nanga Kabah have pre-school education facilities (Tabika KEMAS).

As for secondary education, there are SMK Datuk Haji Abdul Rahman Yakub (adjacent to Nibong-Tada Road) and SMK Nanga Dap (southern bank of Btg. Rajang). Alternatively, parents who work in Kanowit Town can send their children to SMK Kanowit.

Song Area

There are several primary schools located along Btg. Rajang at Song area namely SK Nanga Beguang (northern bank), SK Nanga Temalat (southern bank) and SK Nanga Embuau (southern bank). Further to the north (towards the transmission

route), there are SK Nanga Selibut and SK Ulu Melipis located along Sg. Song and Sg. Entangai, respectively. Both rivers are upstream tributaries of Btg. Rajang. The nearest secondary schools for Song communities are SMK Song and SMK Song No.2, both located in the Song Town at the southern bank of Btg. Rajang. Both the secondary schools have boarding facilities for students travel from afar.

Kapit Area

Primary schools found along the Btg. Rajang at Kapit area include SK Nanga Ibau (northern bank) and SK Nanga Yong (southern bank). Along the tributaries located at the north of Btg. Rajang, there are SK Nanga Segenok (along Sg. Ibau), SK Nanga Trusa (along Sg. Belawai), and SK Lepong Menuan (along Sg. Menuan). Generally, parents send their children for secondary education at schools in Song (SMK Song and SMK Song No.2) and Kapit Town (SMK Kapit, SMK Kapit No.2, SMK Selirik), depending on the distance to travel from the settlements. All the secondary schools mentioned have boarding facilities for students who came from settlements located further in the interior of Song and Kapit. In addition, there is Giatmara Vocational Training Centre in Kapit Town which provides technical, skills courses for young school leavers on fields such as welding, brickwork, auto-repair and tailoring.

Along Btg. Baleh

There are several primary schools scattered along Btg. Baleh namely SK Temenggong Koh (northern bank), SK Nanga Sempili (southern bank), SK Lepong Gaat (southern bank), SK Nanga Kain (southern bank), SK Nanga Mujong (northern bank), SK Nanga Bawai (southern bank) and SK Nanga Ibun (southern bank). The only secondary school located along this river is SMK Baleh (southern bank), located near to Kerangan Ara. The schools are all accessible via river transport, except for SK Nanga Mujong.



Plate 7.4.14: SK Nanga Tada, Kanowit



Plate 7.4.15: SK Nanga Balingiau, Kanowit



Plate 7.4.16: SK Ulu Melipis, Song



Plate 7.4.17: SK Lepong Menuan, Kapit

7.4.3.6 *Place of Worship - Churches, Mosques, Temples*

The longhouses populace at the surrounding of the project site are mostly of Iban ethnic group who embrace Christianity. Although majority of the populations are Christian, traditional beliefs still remain important for certain numbers of longhouses (see also **Section 7.5.1.5**).

There are no churches, mosques or temples within the transmission line ROW. Churches are also rarely found at the longhouses, except at larger settlements such as Nanga Tada, Nanga Kabah, Nanga Mujong. Locals usually utilized the longhouse common galleries (*ruai*) as their makeshift places of worship, while some attend religious services at the nearby towns/ service centres, depending on the distance to travel from the longhouses.



Plate 7.4.18: Nanga Kabah Church, Kanowit, within the river corridor

7.4.3.7 Telecommunication

Fixed line phones and mobile phone coverages are good in towns and the nearby areas. Mobile phone coverages are usually available at larger settlements or/at major logging camps. There is no coverage at settlements located in isolated places. Television and radio receptions are also generally poor for settlements located far from towns.

7.4.3.8 Police / Emergency Services

The emergency response services i.e., police, ambulance, fire department are mainly stationed at Song and Kapit Town. Generally, these services are always on standby and provide 24/7 emergency response.

7.4.3.9 Recreational and Sport Facilities

The recreational and sport facilities found in the study area are generally under - developed. These facilities i.e., futsal court, football field and kids' playground, can only be found in some of the resettlement scheme areas (e.g., Nanga Tada, Nanga Mujong, etc.).

7.4.3.10 Tourism and Recreation Areas

As reported in Land and Survey Sarawak's website (2012), the river journey from Sibul to Kapit and onwards, through the rapids of Btg. Rajang, to Belaga is rather popular among tourists especially after the establishment of Bakun Hydroelectric

Dam which makes the river travel more attractive. In addition, other tourist attractions include the many indigenous longhouses, the Gawai Dayak Festival, Fort Sylvia in Kapit Town, and the Baleh-Kapit Raft Safari.



Plate 7.4.19: Fort Sylvia, Kapit

7.4.3.11 Roads, Transportation and Navigation

From Sibu and Kanowit, the Mapai 500 kV Substation area can be easily reached via the existing tar-sealed Nibong-Tada Road. From the main Nibong-Tada Road, most of the surrounding settlements (towards the transmission line ROW and towards the riverbank) are connected by dirt roads belonging to the oil palm or timber plantation companies.

Most of the settlements on the northern bank of Btg. Rajang and Btg. Baleh where the transmission line is located, still lack proper road access. The locals mainly rely on river transportation via express boats and longboats. There are some longhouses which can be reached by logging tracks, but the road condition is highly unreliable especially after rain, when the road turns muddy and slippery.

Nonetheless, the State Government in recent years has been improvising the road network in this region by constructing good tar-sealed roads to connect the settlements on both sides of the riverbanks to the nearest town. Besides the completed Kapit-Song-Kanowit Road and Melekun-Nanga Mujong Road, there are on-going road and bridge construction projects that connect Nanga Mujong to the Baleh Dam (known as RECODA Road), as well as road projects that connect settlements located in the interior to the riverbank, such as the Nanga Ibau Road

Project and Nanga Belawai Road Project. These infrastructure projects are being developed by RECODA, with Public Works Department (JKR) serving as the implementing agency.



Plate 7.4.20: RECODA Road, access road to Baleh HEP still under construction

7.4.4 Industrial Area

The nearest industrial area to the BMTLP site is the Bletih / Kapit Light Industrial Estate located approximately 2 km west of Kapit, on the southern bank of Btg. Rajang. This industrial estate is one of the essential providers of employment for the locals in this region.

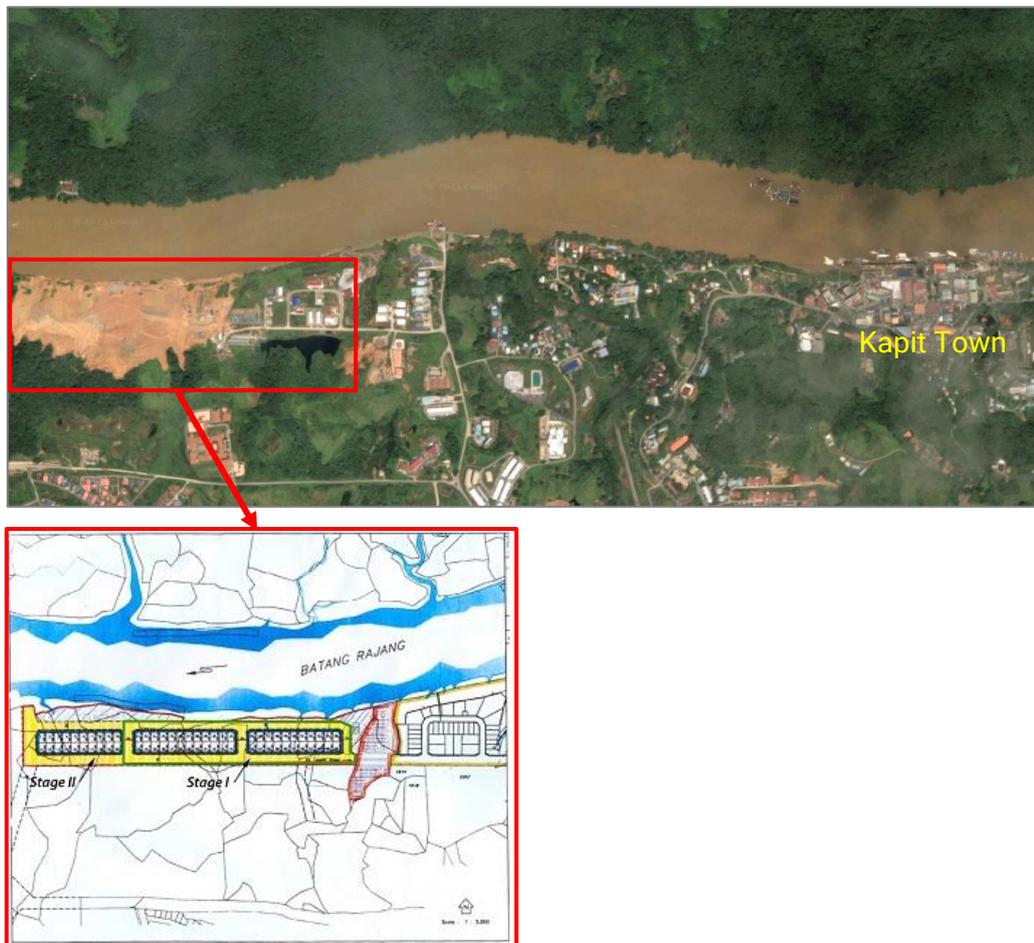


Figure 7.4.1: Bletih / Kapit Light Industrial Estate

Source: Ministry of International Trade & Industry, Industrial Terminal and Entrepreneur Development (MINTRED): <https://mintred.sarawak.gov.my/page-0-0-68-Industrial-Estate-In-Kapit-Division.html>, Google Earth, 2021

7.4.5 Agriculture Lands

Based on the satellite imagery and land use investigation (also refer to **Chapter 6, Section 6.2**), agricultural lands of various crops can be found scattered at the surrounding of the transmission line route. One of the most distinct agricultural lands which can be easily identified from the satellite imagery is the oil palm plantations, due to the tree crown and planting patterns. Oil palm plantations are primarily found near Mapai Substation area and near the Baleh confluence (see **Figure 3.2.2a** and **Figure 3.2.2e** in **Chapter 3**).

It was identified that the transmission line will be traversing across oil palm plantations belonging to Boustead Pelita Kanowit Sdn Bhd (Ladang Mapai) and Victory Pelita Kabah Sdn Bhd at the Mapai area (from AT31 to AT33) as well as oil palm plantation belonging to Ta Ann Pelita Baleh Sdn Bhd at Baleh area (from AT15

to AT17). The estimated oil palm plantation is within the ROW is approximately 46.2 ha. Besides oil palm, scattered within the tree crop areas are tiny, household level areas of perennial crops, such as rubber, cocoa, banana or pepper. Some of these may be within the shifting cultivation area which cover about 94.5 ha (10.9%) of the transmission line ROW (see **Table 7.4.8** below).

Another type of agricultural land distinctly found in the study area is paddy field (hill and wet paddy). The transmission line crosses paddy fields at Mapai area close to NAT31 and AT33. Based on satellite imageries (Google Earth, ALOS and Sentinel 2), the total area of paddy field is about 3.2 ha or 0.37% of the total ROW (see **Table 7.4.8**). Paddy fields are commonly found near the settlement areas and are associated with shifting cultivation (refer to **Section 7.5.2.3.1**). Within the paddy field, scattered fruit trees such as durian, tapang, rambutan are commonly found as they are planted partially as demarcation of user rights.

Table 7.4.8: Agriculture Land within the ROW

Land Cover	Area within ROW, Ha.	Percentage
Forest	657.7	76.22
Shifting Cultivation	94.5	10.95
Grass and Bushes	56.5	6.55
Oil Palm	46.2	5.35
Bare land	4.3	0.50
Paddy	3.2	0.37
Pond	0.4	0.05
Pepper	0.1	0.01
Total	862.90	100

7.4.6 Forested Lands (Natural Forest and Planted Forest, Secondary Forest)

The transmission line generally traverses across forested lands. These forested lands are mostly forestry license areas for the purpose of timber production, either approved for conversion to planted forest (Licensed Planted Forest, LPF) or timber harvesting (natural forest management). The forest management companies have in several cases overlapping timber and plantation concessions in their areas (also refer to **Section 6.3.1**). It is also noted that the LPF's licensees are permitted to develop 20% of their licensed areas as agricultural plantation crops such as oil palm and rubber.

Within the ROW, approximately 654 ha are under timber licence (timber licence, but with overlapping planted forest licence) while about 55.36 ha are pure planted forest licence, giving a total of 708 ha under some form of concession. The forestry concessions area within the ROW is listed in **Table 7.4.9** below and shown in Figure 7.4.2: The Proposed Transmission Route Across Plantation **Cadastral Map**

Table 7.4.9: Forest Concessions within the ROW

Licence No. and Holder*	Area within ROW, Ha.
1. T/0518: Sarawak Timber Industries Development Corporation	84.16
2. T/3243 Skyline Trading Sdn Bhd overlaps with LPF/0030	162.98
3. T/3361: Subur Tiasa Holdings Sdn Bhd	55.10
4. T/3397: Sanjung Etika Sdn Bhd	90.22
5. T/3080: Ninjas Development Sdn Bhd	40.94
6. T/3673: Masja Plantation Services Sdn Bhd	220.17
7. LPF/0026 Part 2: Rajang Heights Sdn Bhd	55.36
Total	708.93

Source: Forest Department Sarawak, 2021

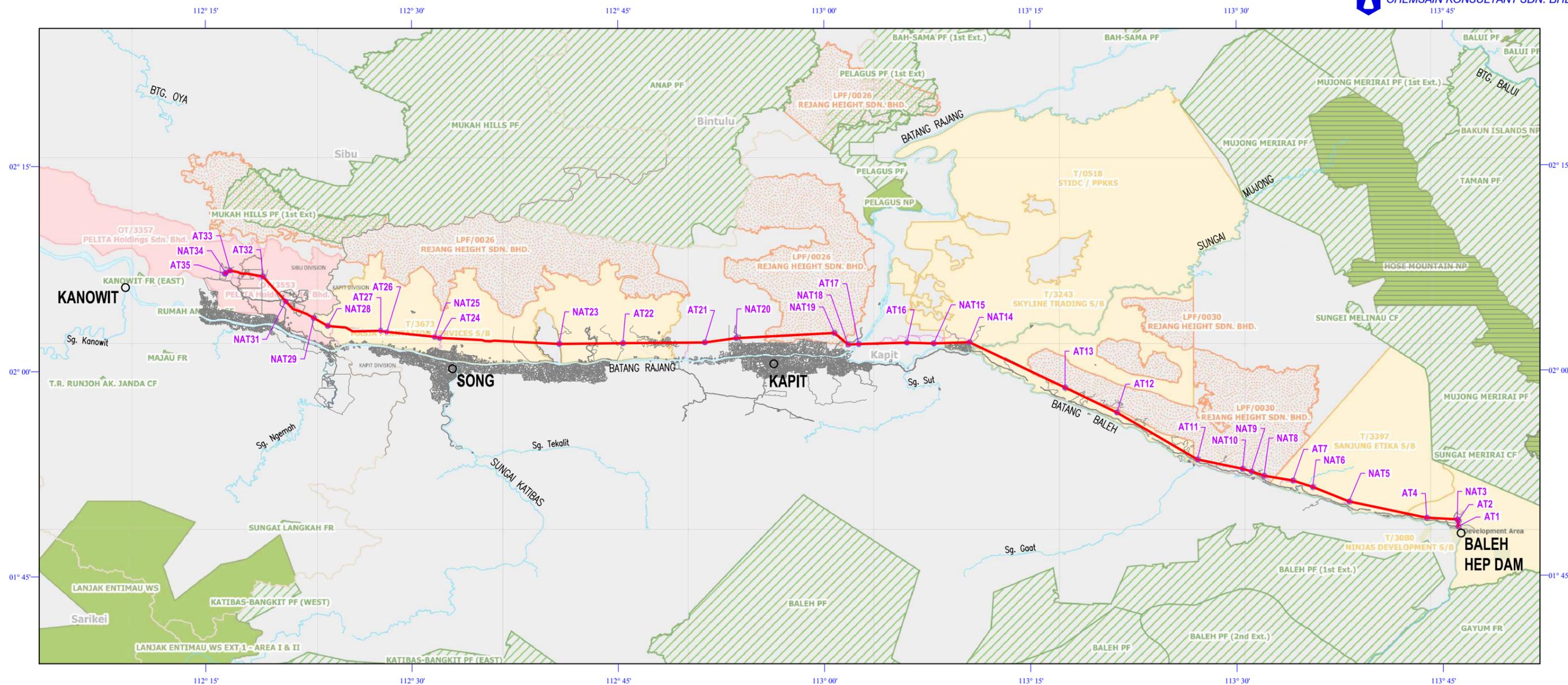
* While listed here as T-licences, some areas are LPF licenced within the T-licence

The transmission ROW along the Btg. Baleh passes through timber license area belonging to Sarawak Timber Industries Development Corporation (STIDC), Skyline Trading Sdn Bhd, Subur Tiasa Holdings Sdn Bhd, Sanjung Etika Sdn Bhd and Ninjas Development Sdn Bhd.

For Kapit and Mapai area, the transmission line ROW traverses across timber license area belonging to Masja Plantation Services Sdn Bhd and LPF belonging to Rajang Height Sdn Bhd.



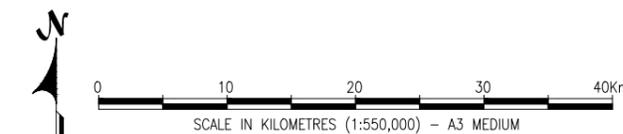
Plate 7.4.21: Stack of logs piled at the bank of Btg. Rajang, ready for transportation



LEGEND:

-  PROPOSED TRANSMISSION LINE ROUTE
-  PROPOSED ANGLE TOWER (AT1 - AT35)
-  OCCUPATIONAL TICKET LICENCE
-  TIMBER LICENCE
-  LICENCE FOR PLANTED FORESTS
-  PLANTED FORESTS
-  FOREST RESERVE
-  LANJAK ENTIMAU WILDLIFE SANCTUARY
-  HOSE MOUNTAIN NATIONAL PARK

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) STUDY FOR THE PROPOSED BALEH-MAPAI 500 KV TRANSMISSION LINE PROJECT



GRID
 -The outer ticks indicate the Latitude and Longitude
 SOURCE: Sarawak Energy Berhad

THE PROPOSED TRANSMISSION ROUTE ACROSS THE PLANTATION CADASTRAL MAP

FIGURE: 7.4.1

7.4.7 Land Tenure

Land tenure can be defined as the way land is held or owned by individuals and groups, or the set of relationships legally or customarily defined amongst people with respect to land (UN-HABITAT 2008). It reflects relationships between people and land directly, and between individuals and groups of people in their dealings in land and natural resources. The basic rules of land tenure define how property rights (use, control, and transfer) are to be allocated within societies, as defined through statutory or customary law.

Land tenure in the social survey focal area is largely govern by native customary laws, by which the natives of Sarawak acquire native customary rights to the land. Laws of Sarawak Chapter 51 (1958 Edition) - Land Code (Incorporating all amendments up to 31st December, 2019), under Section 5 of Sarawak Land Code - Native customary rights, stated the conditions for creating native customary rights (Subsection 1), and the methods by which such rights may be acquired (Subsection 2). Section 5(2) stated the rights may be acquired by:

- a) The felling of virgin jungle and the occupation of the land thereby cleared;
- b) The planting of land with fruit trees;
- c) The occupation or cultivation of land;
- d) The use of land for a burial ground or shrine;
- e) The use of land of any class for rights of way; or
- f) Any other lawful method.

And if a permit is obtained under Section 10, native customary rights could be created upon Interior Area Land.

A plot of land acquired by enforcement of native customary rights is called native customary land, which are commonly referred to as NCR land. **NCR lands are mostly undocumented, and without formal title.** These lands are heritable to the descendants of the first owner who claimed rights over those lands. When the owner has passed away, the siblings and children of the deceased will have the rights to inherit the land. With the consent of the head of the parental household, a sibling may re-clear a part of the secondary forest to establish perennial crops such as rubber, pepper and cocoa, and thereafter, obtain independent rights to that plot with the perennial crops.

7.4.7.1 **Titled Land and Undocumented Land**

The transmission line traverses both areas under titled land (individual lots and provisional leases (PL)) and untitled/ undocumented lands. It passes over some of these titled lands especially in sections C to D (**Table 7.4.10** and **Figure 7.4.3**). Area under titled lands are approximately 225.073 ha (25.7%) of the ROW while the remaining 74.3% are undocumented.

As discussed in **Section 7.4.6** above, large parts (708.9 ha) of the transmission line ROW fall within forestry concessions granted to various timber and plantation companies. However, the map does not show the existence of NCR lands. **NCR lands are mostly undocumented, and without formal title.** Nevertheless, the existence of local communities indicates the presence of native customary rights (see **Section 7.4.7.2**); hence, NCR lands.

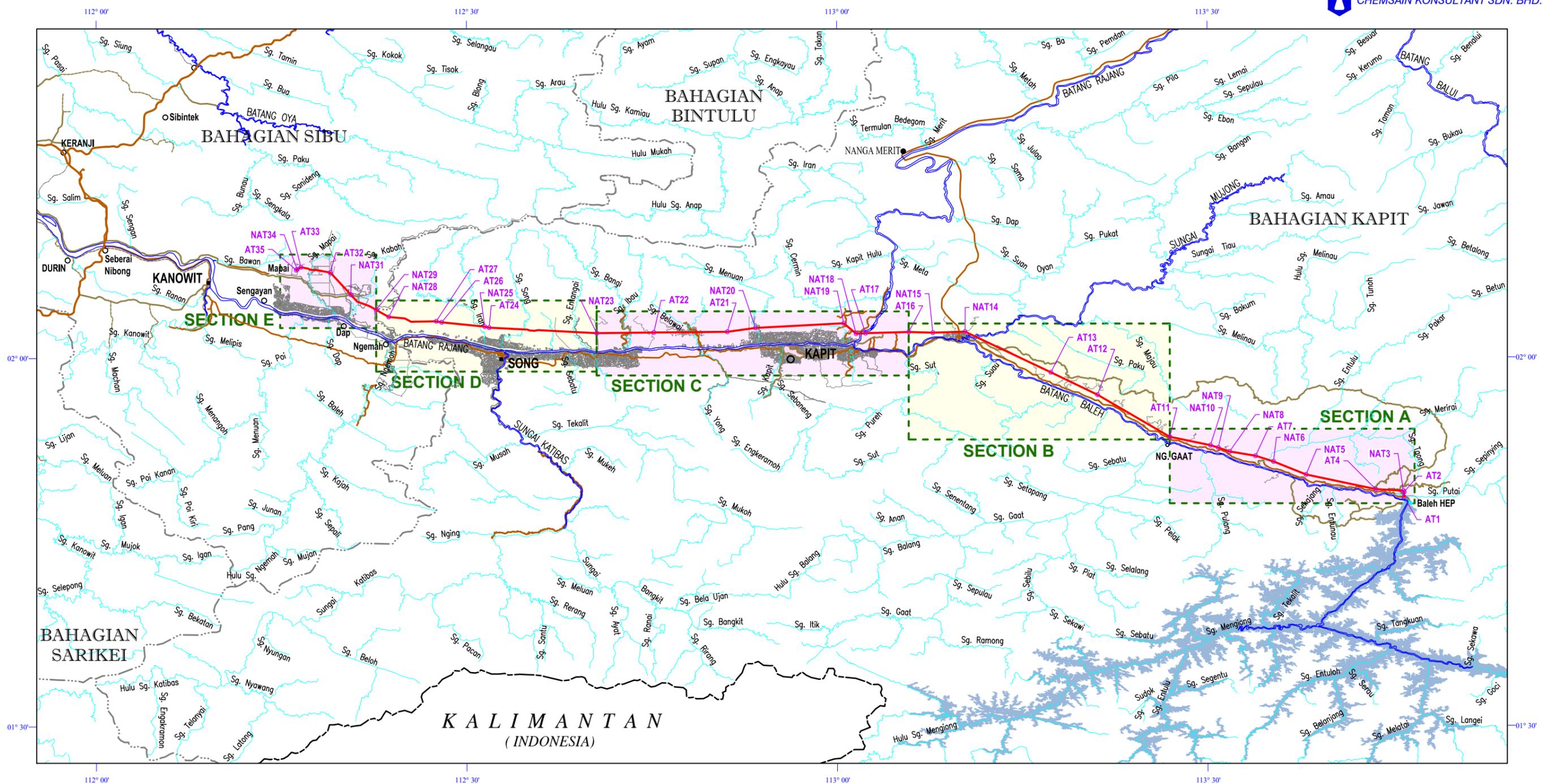
It is important to note that a PL cannot be created where native customary rights exist. Sarawak Land Code, Section 48 – Survey required before alienation – provide conditions for the creation/application for PL. It stated among others (e) – that any land held under native customary rights created under Section 5 or native territorial domain under section 6A shall be excluded from the area covered by the PL. Also, Subsection 3 – stated that PL will not be issued if 1(a) the land is already held under native customary rights created in accordance with section 5 or native territorial domain under section 6A. Therefore, it is safe to conclude most of these undocumented lands especially near settlements are likely NCR lands or land subject to NCR claim.

It is the intention of the Project Proponent to acquire the strip of land (50 m width) for the transmission line ROW. The acquisition process for both titled (both individual and provisional) and NCR lands are described in **Chapter 9, Section 9.6.2: Land Acquisition and Livelihood Restoration Plan**. While the acquisition of titled land is straight forward according to the existing laws, the acquisition of NCR lands is more delicate and lengthier. Hence, NCR land claims are potentially the most important issue to be addressed due to the sensitivity of the matter among the local communities.

Table 7.4.10: Total Area of Titled Land in Each Sections (Inclusive of Provision Lease with Titles)

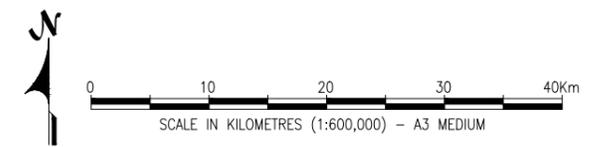
Division	Section	Length (m)	Width (m)	Area (Ha.)	Percentage (%)	Cumulative Percentage (%) by Length	Titled Lands (%) for Each Section	Titled Area in Hectare
Kapit (up to division boundary line)	A	37111.179	50	185.555895	37111.179	21	0.602	1.11705
	B	43034.393	50	215.171965	80145.572	46	14.672	31.57
	C	47485.77	50	237.42885	127631.342	73	38.19	90.6741
	D	33576.62	50	167.8831	161207.962	92	35.881	60.2381
Sibu (up to division boundary line)	E	14202.452	50	71.01226	175410.414	100	58.403	41.4733
Total		175410.414		877.05207				225.073 (25.7%)

Source: SEB, 2021



- LEGEND:**
- PROPOSED TRANSMISSION LINE ROUTE
 - PROPOSED ANGLE TOWER (AT1 - AT35)
 - INTERNATIONAL BOUNDARY
 - DIVISIONAL BOUNDARY
 - BALEH DAM
 - BALEH DAM RESERVOIR
 - RIVERS / STREAMS
 - ROADS / MOTORABLE TRACK

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) STUDY FOR THE PROPOSED BALEH-MAPAI 500 KV TRANSMISSION LINE PROJECT



GRID
 -The outer ticks indicate the Latitude and Longitude
 SOURCE: Adapted from
 SERIES 8
 EDITION 8
 SCALE 1:500,000

THE PROPOSED TRANSMISSION ROUTE ACROSS THE CADASTRAL MAP CATEGORIZED IN DIFFERENT SECTIONS

FIGURE: 7.4.2

7.4.7.2 Land and Land Uses Among Sampled Households

Land and crop are of special importance to the people in the project area, as other rural areas in Sarawak. Acquisition of productive farmlands and loss of crops associated with these lands are delicate matters that need to be handled carefully. The household surveys shows that the majority, 175 or 95% of the respondents informed they or their households own some plots of land (**Table 7.4.11**). The stated types of ownership of lands potentially affected (**Table 7.4.12**) indicates that these are most likely NCR lands.

Table 7.4.11: Land Ownership

Land Ownership	No. of Respondent	Percentage
Yes	175	95
No	10	5
Total	185	100

Source: CKSB fieldwork (2021)

Some of the land owners indicated that their lands will be affected by the transmission line ROW (65 respondents or 37% of 175). The others, however, admitted they are not sure (41%) or their lands are not affected (22%). On the other hand, only 5 (3%) of them indicated their lands will be affected by access roads while the rest are either not sure (65%) or thought their lands are not affected (31%). All affected land owners (65 or 100%) claimed that the affected lands are NCR lands. Only 2 (3%) said the lands are Native Area Land (NAL). One (2%) land owner did not specify the type of affected land (**Table 7.4.12**).

Table 7.4.12: Type of Land Ownership of the Potentially Affected Lands

Land Ownership	No. of Respondent	Percentage
NCR	65	100
NAL	2	3
Others	1	1

Source: CKSB fieldwork (2021)

Note:

¹ Multiple responses (i.e., a household may own plots of different use). n=65 (only the respondents alleged their lands would be affected).

The types of land use at these alleged affected lands are tabulated in **Table 7.4.13**. Major lands use reported include mixed fruit orchards (68%), hill-rice fields (48%), rubber gardens (43%), short-term crops (banana, vegetables, root crops etc.) (42%) and secondary forests (*temuda* i.e., currently fallowed lands for future rice

cultivation, especially hill-rice; 38%). The lands are also used for pepper gardens, wet-rice paddies, farm house or future permanent house site, oil palm smallholding and oil palm plantation (i.e., participants in Boustead Pelita Kanowit Sdn Bhd (Ladang Mapai), Victory Pelita Kabah Sdn Bhd and Ta Ann Pelita Baleh Sdn Bhd), etc.

Table 7.4.13: Land Uses of the Allegedly Affected Lands

Land Ownership	No. of Respondent	Percentage ¹
Fruits orchards (mixed)	44	68
Hill-rice fields	31	48
Rubber gardens	28	43
Short-term crops	27	42
Secondary forests, <i>temuda</i>	25	38
Pepper gardens	18	28
Wet-rice fields	14	22
Farm houses, or future house sites	13	20
Oil palm smallholdings	8	12
Oil palm plantation (part of Boustead-Mapai Plantation and Ta Ann Pelita Baleh Sdn. Bhd.)	7	11
Fish ponds	3	5
Business uses	3	5
Other uses	5	8

Source: CKSB fieldwork (2021)

Note:

¹ Multiple responses (i.e., a household may own plots of different use). n=65 (only the respondents alleged their lands would be affected).

7.4.8 Protected Areas (National Parks, Sanctuaries, Reserves)

As discussed in **Section 6.3.2**, there are no gazetted, legally protected areas, i.e., national parks, wildlife sanctuaries, nature reserves, within 50 km of the project site apart from catchment and water intake protection. The entire area upstream of Kapit is under catchment protection for Kapit Raw Water Intake, while areas 8 km upstream of Nanga Entawau, Nanga Beguang and Nanga Dap are protected under the 8-km buffer zone for the intakes. These protections are entirely for protection of water quality at the intakes and no hindrance for the proposed infrastructure development.

7.4.9 Grassland

From the satellite imagery, grasslands can be found scattered along the transmission ROW. Grass areas cover 56.5 ha. (6.5%) of ROW. These areas are generally associated with shifting cultivation or forest harvesting, although have not regenerated into secondary forest but have developed beyond a grass phase dominated by *lalang* grass (refer **Section 6.2.2.3**). It is noted that these grasslands are unlikely to home any primary plant species with high conservation value due to the land has been repeatedly re-initiated by slash and burn agriculture (see shifting cultivation are in **Table 7.4.8**).

7.5 DEMOGRAPHY AND SOCIO-ECONOMIC CONDITIONS

7.5.1 Population

7.5.1.1 Size

The BMTLP traverses rural districts, which are sparsely populated. The previous census data (2010) and the projected population (2020) of these districts are shown in **Table 7.5.1**. Based on the projected population for Year 2020, the population density of these districts is from 4 to 15 persons per sq. km. The populations are largely concentrated in the administrative capitals of these districts and the surrounding areas.

Table 7.5.1: Population by District

District	2010	2020 ^p	Area (sq.km)	Pop. (Per sq. km)
Kanowit	28,954	34,300	2,254	15
Song	20,595	24,500	3,935	6
Kapit ¹	56,053	65,800	15,949	4

Source: Department of Statistics (DOS) (2010 and 2020)

Note:

¹ Population of Bukit Mabong District is included as the district was only created in 2015; hence, population projection can only be based on the population of Kapit District (Population and Housing Census of Malaysia 2010).

p - projection

The total population of the 159 settlements found near the proposed transmission line is approximately 25,132 (**Table 7.5.2**). The lists of these settlements by district can be found in **Appendix 7.2.1**. The size of the longhouses ranges between 7 to 56 doors, with averages number of doors between 18-23 doors. The officially registered population (with the District Offices) ranges from 44 to 576, with an

average of 125 to 211 persons. However, a large number of the registered members of these settlements are either working or residing outside the longhouse (see migration pattern **Section 7.5.1.6**).

Table 7.5.2: Doors and Population of the Potentially Affected Settlements

District	No of Settlement	No. of Door	Population (est.)	Range of No. of Door	Average No. of Door	Range of No. of Population	Average Pop. of Settlement
Kanowit	32	598	4,027	8-56	18	44-282	125
Song	31	722	5,723	11-50	22	76-576	178
Kapit *	62	1302	8,200	7-40	23	50-450	160
Bukit Mabong	34	791	7,182	7-47	23	78-300	211
Total	159	3413	25,132	-	-	-	-

Source: Kanowit, Song, Kapit and Bukit Mabong District Offices (2020); CKSB Fieldwork (2021)

Note: * Estimated

Household survey indicated that the sizes of the sampled households range from 1 - 39 members with an average of 7.3 persons per household (**Table 7.5.3**). Compared to other districts, Bukit Mabong had a larger average household size. This could be attributed to the absentee families not living at the longhouse but they are counted as members of *bileks* at the longhouses. The majority of the sampled households are single-family households (58%), while the others are multi-family households (42%) (**Figure 7.5.1**).

Table 7.5.3: Sizes of the Sampled Households

District	No. of Sampled Household	No. of Household Members	Average No. of Household Members
Kanowit	42	2-10	5.5
Song	32	1-14	5.1
Kapit	50	2-13	6.3
Bukit Mabong	61	1-39	10.5
Total	185	1-39	7.3

Source: CKSB Fieldworks (2021)

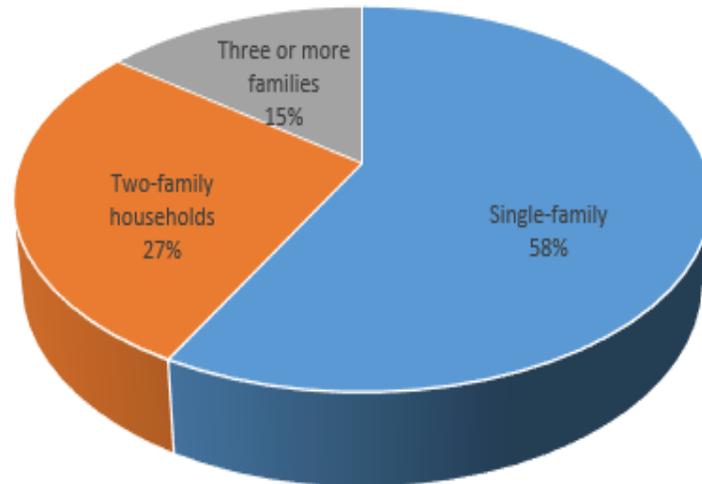


Figure 7.5.1: Types of Households

7.5.1.2 Gender

The gender ratios of the sampled population are more than 1.00, indicating more males than females in the study areas (**Table 7.5.4**). Male to female ratios being higher could be a result of a higher number of females from the community moving to urban areas in search of better employment opportunities, staying with family members/ relatives in towns or getting married outside the community. Due to lack of formal education or low educational attainment, many men tend to remain at the longhouses and engage in numerous activities such as farming, fishing, hunting, collecting jungle produce, and working at nearby logging operations or plantations.

Table 7.5.4: Gender Ratios of the Sampled Population

District	Male	Female	Male/Female Ratio
Kanowit	140	125	1.12
Song	85	80	1.06
Kapit	169	155	1.09
Bukit Mabong	345	284	1.20
Total	739	644	1.15

Source: CKSB Fieldwork (2021)

7.5.1.3 Age Distribution

The population distribution by age group for the sampled households is tabulated in **Table 7.5.5**. The active working age group (defined as those aged 15 to 64 years old) represents approximately 69% of the population, which is comparable to the national percentage of 69.7%. The remaining are mostly schooling age and toddlers, aged 1 to 14 years old (25%); and the elderly, 65 years old and above (6%). The youth and elderly dependency ratios are approximately 37% and 9%, respectively, indicating high percentages of vulnerable members of the sampled population.

Table 7.5.5: Age Groups of the Sampled Households

Age Groups	No. of Male	%	No. of Female	%	Total (Male and Female)	%	Malaysia (2018) ¹
1 -14	189	26	162	25	351	25	69.7
15 - 24	114	15	108	17	222	16	
25 - 34	157	21	113	18	270	20	
35 - 64	232	31	219	34	451	33	
65 +	47	6	42	7	89	6	6.5
Total	739	100	644	100	1383	100	

Sources: CKSB fieldwork (2021), ¹ Malaysia health facts 2019

Note: Percentages may not tally to 100 due to rounding.

7.5.1.4 Ethnic Composition

Iban is the predominant ethnic group in all districts in the study area, comprises more than 80% of the total population of these districts (**Table 7.5.6**). Others include the Chinese, Malay, Melanau, other natives as well as the non-Malaysians.

Table 7.5.6: Ethnic Composition by District

District	2020p	Iban (%)	Chinese (%)	Others ² (%)
Kanowit	34,300	28,100 (82%)	3200 (9%)	3000 (9%)
Song	24,500	21,400 (87%)	1000(4%)	2100 (9%)
Kapit ¹	65,800	53,800 (82%)	4300 (7%)	7700 (12%)

Source: District Offices of Kanowit, Song and Kapit (2020)

Note:

¹ Population of Bukit Mabong is District included as the district was only created in 2015; hence, population projection can only be based on the population of Kapit District (Population and Housing Census of Malaysia 2010).

² Other including Malay, Melanau, Orang Ulu, Bidayuh, Indian and non-Malaysians.

p - projection

Among the surveyed community, all are Iban except for Kg. Serian (Rajang/Tanjong ethnic). However, household survey was not carried out for Kg. Serian as there were Covid-19 cases at the village at the time of survey. This was only made known to the study team during the community interview. Most of these communities have some members from other ethnic groups usually as results of mixed marriages. Most members from other ethnic groups integrate well with the host communities, adopting their culture and traditions.

Among the surveyed households, all are of Iban except for 3 respondents who are of Bidayuh, Kenyah and Kadazan ethnic background. They are part of the community through inter-marriage.

7.5.1.5 Religion

Religious affiliation in the community is closely linked to ethnic group. Christianity is the main religion (82%) in the study area as indicated by the respondents of the household survey (**Table 7.5.7**). Iban and persons from other ethnic groups married to the members of the studied household are mostly Christians. Roman Catholic and Methodist are the two major Christian denominations noted.

A small number of Iban are still adhering to the traditional Iban religion which is a diffuse collection of beliefs and rituals. Among the surveyed respondents, it was noted that 34 (18%) adhere to the Iban traditional belief systems.

There are also Malays, Melanau, Kedayan and Iban who are Muslims in the social survey focal area. However, most reside in urban areas; hence, no *surau*/mosques were noted at the settlements studied.

Table 7.5.7: Religions of the Respondents

Types of Religion	No. of Respondent	Percentage
Christianity	151	82
Iban traditional belief	34	18
Total	185	100

Source: CKSB Fieldworks (2021)

7.5.1.6 Migration and Population Change

In this study, migration refers to a prolong absence from the longhouses/studied settlements, and not a permanent leaving/abandonment of one’s longhouse or settlement. Most of the respondents (64%) informed they have been staying in their present longhouses between 11 to 40 years, while the others (23%) more than 40 years (**Table 7.5.8**). Only 14% of the respondents have lived in their present *bilek* for less than 11 years.

Table 7.5.8: Length at the Present Longhouse Apartment/ *Bilek*

Length of Stay (Years)	No. of Respondent	Percentage
0 - 10	25	14
11 - 20	43	23
21 - 30	50	27
31 - 40	25	14
> 40	42	23
Total	185	100

Source: CKSB fieldwork (2021).

Community interviews indicated roughly 963 (71%) of the known doors¹ (1350) in the settlements are occupied, while the others 387 (29%) are empty most of the time (**Table 7.5.9**). The interviews also indicated only 3293 (39%) of the known registered population² (8397) are residing at the longhouse while the majority of them, 5104 (61%) are absentees (**Table 7.5.10**).

Table 7.5.9: Longhouse Apartment (Doors/*Bilek*) Occupation Status

<i>Bilek</i> Occupation Status	No. of Door	Percentage
Occupied	963	71
Empty	387	29
Total	1350	100

Source: CKSB fieldwork (2021)

¹ Known doors are total numbers of doors from all settlements where the numbers of total number of registered, occupied and empty doors are known (excluding the settlements with incomplete information).

² Known population are total numbers of population from all settlements where the number of registered, residing and absent residents are known/estimated (excluding the settlements with incomplete information).

Table 7.5.10: Longhouse Population Residential Status

Residential Status	No. of Population	Percentage
Residents/Residing	3293	39
Absentees/Absent	5104	61
Total	8397	100

Source: CKSB fieldwork (2021)

Household survey which specifically targeted largely the potentially affected households, also indicated that approximately 7% of the members of these households are away from the village/longhouse (**Table 7.5.11**).

Table 7.5.11: Migration Trend among the Sampled Population

Age Group	Total No. of Population	No. of Migrating Population	Percentage
1 to 14	351	17	5
15 to 24	222	19	9
25 to 34	270	32	12
35 to 64	451	31	7
65, above	89	3	3
Total	1383	102	7

Source: CKSB fieldwork (2021).

Note: Total percentage may not add up to 100 due to rounding up

Leaving the longhouse for prolong period of time is common especially at settlements located far from towns, and/ or with difficult access (i.e., those without good access road, and depend solely on river transport). Most of the people who reside outside the longhouse/ village are either working/ studying, or old folks following their children working and living in various towns throughout Sarawak, particularly Kapit, Song, Sibul and Kanowit. Some households also chose to reside in urban and suburban areas due to better access to infrastructure/ amenities, particularly schools/ internet for children education, and medical care for the old/ sick persons.

As a result of local migration among young working members of the communities who preferred less laborious, more conducive working conditions, regular income as well as more comfortable urban life, the remaining population at the longhouses are either very young (non-schooling) or older people. At few longhouses that were visited, the occupants were all adults.

Many households who reside outside the longhouse, have members who return to longhouses monthly/ bimonthly to clean their individual *bilek* (which is necessary accordingly to local custom); although some have delegated such duty to their relatives residing at the longhouse. Members of communities and households residing outside the community usually return to their respective longhouses during major festivals such as Gawai Dayak and Christmas/ New Year, and events such as communal meetings for important communal decisions and death of longhouse members.

7.5.2 Economic Activities

7.5.2.1 *Employment and Incomes*

Socio-economic status or roles of the members of sampled households are shown in **Table 7.5.12**. Roughly one third (33%) of the members of the household are in actively working groups. Farmers made up the bulk of them (i.e., 60% of the total working members), indicating farming as the most common type of occupation in the study area. Other important types of employment include working in civil service, operating small businesses (mostly village shops/ canteens, vegetable sellers; and a few small general contractors), and working in logging/ forest plantation associated works. Other working members of the community work as assistants at shops/ supermarket, and café/ restaurants; various jobs in private sector, as well as general labourers in construction works or oil plantations.

The majority of the sampled population (63%) fall within non-working group. Many of these members of the communities are schooling children, dependent housewives and toddlers, which together constituted approximately 56% of the sampled population. The rest are old/sick/disabled persons (7%) and pensioners (2%).

The unemployed and those looking for job comprise roughly 4% of the sampled population. Some of them are recent school leavers (many with SPM qualifications), and also those who lost their job due to the closing of logging operations in Bukit Mabong and Belaga District and Covid-19 pandemic.

Table 7.5.12: Socio-economic Status and Roles among the Sampled Population

Socio-economic Status/Roles	No. of Individual	Percentage
Farmers	266	19
Labourers (general construction, oil plantation etc.)	24	2
Business persons (village shop, small general contractors)	41	3
House, boat builders	10	1
Factory/ Manufacturing sectors	10	1
Shop/ Supermarket, Assistant, Café/ Restaurant Workers	12	1
Private sectors	14	1
Logging/ Forest plantation	31	2
Civil service	39	3
Unemployed, looking for job	60	4
Pensioners, no longer working	26	2
Housewives	225	16
Old, sick/disabled persons	93	7
Schooling children	430	31
Small children, toddlers	102	7
Total	1383	100

Source: CKSB fieldwork (2021)

Note: Total percentage may not add up to 100 due to rounding up.

At communal level, involvement of the 1350 known households in various economic sectors are in shown in **Table 7.5.13**. About 45%, 29% and 25% of these households have members working in agricultural, fishing and livestock activities, typical of rural areas. Oftentimes, fishing and hunting/ collecting jungle produces are carried out concurrently. There are also some households with members working in public service, private sector, construction, logging/ timber industries (including forest plantation), retails, self-employed (small general contractors, canteen/ village shop operators and vegetable sellers), manufacturing and tourism.

Table 7.5.13: Involvement in Economic Sector

Economic sectors	No. of Households (N=1350)	Percentage
Agricultural	612	45
Fishing (riverine)	385	29
Livestock	344	25
Public service	276	20
Private sector	266	20
Construction (Labourers)	205	15
Logging industries	109	8
Retails	68	5
Self-employed	62	5
Manufacturing	31	2
Tourism	11	1
Others	54	4

Source: CKSB fieldwork (2021)

Note: Multiple responses (i.e., a household may involve in a few economic activities)

7.5.2.2 Household Income

The distribution of household income groups is shown in **Table 7.5.14**. Reported monthly household cash incomes (i.e., valid responses only) range from RM300 to RM10400, with an average of RM 1290. More than 80% of these households reported to earn monthly cash incomes below RM2131 (i.e., Poverty Line Income (PLI) of Sarawak in 2019³, for an average household size of 4.0 persons); and approximately, half (58%) of these households could be categorized as hard-core poor i.e., those earning RM1000 and below (cash incomes which are less to half of the PLI). Low cash incomes indicate a largely subsistence nature of these households, which is common in many rural households in Sarawak where cash incomes are generated from mostly agricultural activities; and also, to some extent, wages, remittances and sales of forest and river products. This could also indicate a high level of dependency of these households on non-cash incomes

³ Source: Household Income and Basic Amenities Survey Report by State and Administrative District, Sarawak 2019 (Department of Statistics Malaysia, 2020)

from agricultural/ farming activities, utilization of natural resources from nearby forests and rivers.

Table 7.5.14: Household Cash Income

Income Groups (RM)	No. of Household	Percentage
<1000	102	58
1000-1500	36	20
1501-2000	14	8
2001 - 2500	8	5
2501 >	17	10
Total	177	100

Source: CKSB fieldwork (2021).

Notes:

Total percentage may not add up to 100 due to rounding up

The majority of the households/ respondents (60%) reported having cash incomes from agricultural/ farming activities, which are mostly between RM100-RM500 per month. Agricultural cash incomes usually generated from the sales of short-term crops such as vegetables and fruits (banana); and cash crops especially oil palm and black pepper. Wages/ salaries are important sources of income to the households (40%) living closer to towns where employed family members are earning regular wages/ salaries. Other sources of income are remittances, self-employed, and sales of forest and river products as reported by 30%, 10% and 10% of the respondents, respectively. These are important particularly to those living at the longhouses located far from towns and service centres.

7.5.2.3 Livelihood

Livelihood generally referred to means including capabilities, assets (stores, resources, claims and access) and activities of making a living, particularly in securing necessities of life such as foods, water, shelter medicine and clothing. Local households in the study areas involved in diversified livelihood strategies which include agricultural activities/ farming, waged/ salaried employments, remittances as well as forest and river resources-based activities such as hunting and fishing. Besides, living in close-knitted communities such as longhouse provides very much needed social and manpower supports among the members.

7.5.2.3.1 Agricultural and Farming Activities

Agricultural and farming activities are the pillars of local livelihood strategies in the study area. These activities are usually diversified into growing cash and subsistence crops, and keeping livestock. Rubber, oil palm and black pepper are important cash crops. Rubber is the most important cash crop, and covers large portion of cultivated areas as most of the households' own rubber gardens. At times of good rubber price, it is the most important source of cash income; however, due to the current low rubber price, many rubber gardens are no longer tapped. Oil palm is currently the preferred cash crop, especially in areas with good road accessibility such as in Mapai-Nanga Tada in Kanowit. Government supports, relatively stable price and yields are among major factors that attract locals to involve in oil palm cultivation. Pepper cultivation is a minor activity associated with small numbers of households due to high labour requirement and expensive input for the crop as well as unstable pepper price. Observed pepper gardens are usually less than 500 vines.

Seasonal fruit trees such as *dabai*, durian, and *isau* are important crops in the upriver areas in Song, Kapit and Bukit Mabong Districts. Although seasonally available, these highly valued fruits provide lucrative cash income to farmers beside their importance for home consumption; hence, widely cultivated by the local population. Other important fruit trees are banana, rambutan, *mak*, *terap*, *langsai*, mangoes, *petai*, *kasai* and jackfruits.

In areas located closer to urban and service centres where agriculture inputs and technical advice are easily accessible, and there is easy access to markets, many households devote more efforts and resources in small-scale market gardening which is proven to provide fast and stable cash income. Noted vegetables farmed include *cangkok manis*, brassicas, brinjal, chillies, okra, baby corn, taro, bunched onion, *ensabi*, etc. In isolated settlements in Kapit and Bukit Mabong Districts, these vegetables are also grown mainly for own consumption, although extra produce are usually sold to fellow members of the communities. Vegetable farms are usually located close to the longhouses.

Rice cultivation is the most important subsistence crop among locals. Wet-rice cultivation is mostly noted in Kanowit District, where some naturally flat and swampy areas can be found in Mapai and smaller pockets in Song and Kapit. Where terrains are steep and hilly such as in Bukit Mabong District, only hill-rice is cultivated. Rice acts as subsistence buffer during times when market prices for cash crops are low, or household cash reserve is low. Rice fields are usually

located close to longhouses, riverbanks or roadsides; hence, can be monitored against destructive pests, particularly macaques and pig-tailed monkeys. The numbers of households growing rice are showing declining trends as the numbers of the existing manpower continues to dwindle due to old age, while the younger generation prefer working in non-agricultural sector away from their longhouses.

Important livestock are chicken, duck and pigs. These livestock are kept largely for own consumption, and for the households who still adhere to Iban traditional belief, for ceremonial purposes (esp. chicken and pigs). Extra numbers of livestock oftentimes sold to fellow community members for cash, to augment household cash income or to meet emergency cash needs.

7.5.2.3.2 Waged / Salaried Employments, Remittances

Waged/ salaried employments are limited particularly in settlements located in isolated areas far from towns. Only few members of community are noted to be working at nearby logging operations, oil palm or forest plantations, as well as in civil service in the study area (as teachers, nurses, medical assistants, librarians etc.). Working in logging operations or forest plantation used to be the main type of employment in these areas. However, the decline in forest-related activities has resulted in many local males being unemployed as logging camps and timber processing plants were closed.

Some of the retrenched workforces resorted to look for jobs in Kapit, Sibul, Bintulu and other major towns in Sarawak, and as far as Labuan, Peninsular Malaysia and Singapore. Younger workforces usually preferred working in towns where working conditions are much more conducive than hard physical labour of agricultural activities in the longhouse. These waged/ salaried working members of the households contribute much for the household cash needs in the forms of wages/ salaries, or remittance to household members living at the longhouses.

7.5.2.3.3 Natural Resource-Based Activities

Natural resource-based activities are important activities contributing to higher resilience of many rural households to the vagaries of market force, by reducing their dependency on cash incomes. Collection of forest products such as wild vegetables (bamboo shoots, palm cabbages, *daun sabung*, fern shoots etc.), weaving materials (rattans, *bemban*, screw pine, bamboo, *senggang*) and construction materials (timber, poles, bamboo) are often for own needs.

Hunting and fishing are popular activities among the male members of the communities, especially at the settlements located in Kapit and Bukit Mabong Districts. These activities are largely an integral part of many rural households, whose male members carried out the activities as often as time permits mainly for home consumption. As there are often limited sources of cash income in rural areas, fishing and hunting activities also contribute a significant amount of cash to the household through the sales of much sought after game meats (wild pigs, deer) and high value fishes (*empurau*, *semah*, *tengadak*, and *labang*).



Plate 7.5.1: Oil palm smallholding, Mapai, Kanowit



Plate 7.5.2: Mixed fruit orchard (durian, mangoes, *cempedak*, *dabai*)

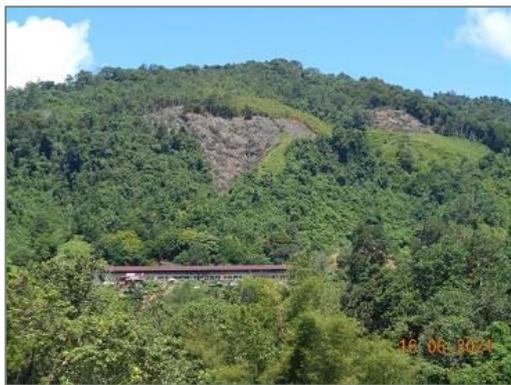


Plate 7.5.3: New clearing for hill paddy planting, Baleh



Plate 7.5.4: Small-scale market garden, Nanga Beguang, Song



Plate 7.5.5: Black pepper drying, Nanga Beguang, Song



Plate 7.5.6: Small-scale backyard poultry keeping, Sg. Entangai, Kapit



Plate 7.5.7: Fishing using cast-net, Sg. Belawai, Kapit



Plate 7.5.8: Local hunters on their way for hunting trip, Sg. Iran, Song

7.5.2.4 Human Resource and Labour Availability

General characteristics of potential workforce of the sampled settlements by gender and age-groups are shown in **Table 7.5.5**, while their potential availability can be estimated by analysing **Table 7.5.11** (migration trend), and **Table 7.5.12** (socio-economic status/ roles). The potential working age groups (15 - 64-year-old) made up roughly 69%. However, the available workforce percentage may be less than 50% if dependent housewives, schooling children, disabled/sick and migrants are excluded.

The distribution of the education attainment of the potential workforce are tabulated in **Table 7.5.15** below. Among the potential workforce, most have formal education, ranging from primary school to college, with only 16% reporting no formal education. Most potential workforces have secondary (47%) and primary (24%) levels of education, and only 12% have tertiary education. Among the respondents, most of them have secondary (35%) and primary (30%) levels of

education, and only 3% have tertiary education; while the other one third (32%) informed they have no formal education.

Table 7.5.15: Formal Education Attainment of the Working and Unemployed

Education Attainment	No. of Individual	Percentage
No formal education	117	16
Primary school	183	24
Lower secondary school (LCE/SRP/PMR)	195	26
High school (SPM/STPM)	160	21
Certificates (technical, vocational etc.)	22	3
Diploma	56	7
Degree	14	2
Others	2	0
Total	749	100

Source: CKSB fieldwork (2021)

Note: Percentages may not tally to 100 due to rounding.

7.5.2.5 Access and Use of Natural Resources

Forests and rivers can be accessed by all households for the purposes of harvesting/ collecting, or utilizing natural resources, so long as the households possess the necessary means (manpower, tools, or transportation) to acquire/ utilize those resources. More than 90% of respondents indicated that forests and rivers are important to their households.

Rural households are dependent on forest products for both non-cash incomes (like wood products and other forest products for use at home and as food) and cash incomes. Collection of easily available natural resources in the form of vegetable, bamboo, firewood, weaving materials (rattans, *bemban*, bamboo, screw pine, *senggang*) are largely from individual rubber agroforests and/ or fallow lands, and/ or communal reserve areas. The distribution of households by their utilization of forest resources are shown in **Table 7.5.16** below.

The availability of construction materials (for house and longboat) is declining in recent years as logging operations continues to deplete good timber from nearby interior area lands⁴. At the same time, some communities also allowed their

⁴ Law of Sarawak allows native communities to harvest timbers from these areas for own uses, but not for commercial purposes.

communal forest reserves (*pulau galau*) be commercially harvested, leaving less for local uses. As a result, many locals resort to utilize the available timber trees from individual rubber agroforests (particularly, *engkabang* trees (*Shorea spp.*) and reserved patches of forest (*pulau, pala umai*), and sometimes, the riparian forests.

Hunting is an important activity among the rural populace, not only for own consumption but also due to lucrative return from sale of game meat (esp. wild pig, deer). However, major disturbances to natural environment particularly logging, forest plantations and oil plantations as well as uncontrolled hunting activities, have caused the decline in numbers of game animals; hence, more difficult to find nowadays.

Table 7.5.16: Utilization of Forest Resources

Forest Resources	No. of Household	Percentage ¹
Hunting	144	78
Construction materials	115	62
Poles	79	43
Bamboo	125	68
Rattan	105	57
Vegetables	164	89

Source: CKSB fieldwork (2021).

Notes:

¹ Multiple responses (i.e., a household utilizes multiple types of forest resources)

Local rivers and streams also play very important roles in life of rural communities in the social survey focal area. These rivers and streams are the sources of gravity-fed water supplies to most of the settlements in this area, as treated water supplies are limited to towns and its surrounding areas. Oftentimes, rivers are the sole mean of access to the longhouses in the upriver areas. Locals also used rivers and streams for washing and bathing especially during droughts as well as for recreational purposes.

Rivers are also important sources of cash income from sales of high values fishes, and protein to rural communities. A variety of fishing methods are used, depending on water conditions and targeted fishes. Cast-nets and gill-nets are the most common fishing methods, although hooks and lines, traps and spear-guns are also used. The distribution of river and river resources utilization among the sampled households are shown in **Table 7.5.17**.

Table 7.5.17: Utilization of River and River Resources

River Utilization	No. of Household	Percentage ¹
Gravity-fed water supplies	152	82
Transportation	152	82
Fishing	176	95
Washing	139	75
Bathing	168	91
Recreation	104	56

Source: CKSB fieldwork (2021).

Notes:

¹ Multiple responses (i.e., a household involves in multiple forms of river/stream and river resources utilization)

Timber logging, oil palm and forest plantations, dam operation, construction activities of hydroelectric dam and roads, and uncontrolled / overfishing are some challenging issues of river resources in the area. Locals observed fish catches are generally declining which they attributed to the operation of Bakun Dam, and water pollution due to logging, plantation and road construction activities in the water catchments beside uncontrolled fishing activities among the locals. Logging, plantation and constructions activities in the study areas have also thought to cause navigational difficulties of small rivers (Sg. Belawai, Ibau, Song, Iran, etc.) which are experiencing high sedimentation rate, and become too shallow for navigation even after short dry spells.



Plate 7.5.9: Valuable fishes on sale at Market Teresang, Kapit



Plate 7.5.10: Pile of driftwood collected as firewood, Baleh



Plate 7.5.11: Washing in the river, Sg. Seranau, Kapit



Plate 7.5.12: River transport - pulling longboat at a shallow stretch of Sg. Belawai, Kapit

7.5.3 Social Capital

Social capital generally refers to the norms and networks that facilitate collective action. It can also be thought as links, shared values and understandings in society that enable individuals and groups to trust each other, to work together for common purpose. Social capital strongly interlinked with social resilience of a community. It is 'the glue that holds society together', in the form of trust, reciprocity and exchanges, social networks and groups. In communities that are tightly knit communities, transaction costs are lower, as costs of enforcing contracts and monitoring are smaller. Knowledge and expertise can be exchanged more easily than in low trust communities, and people might become less risk-averse because of the informal social safety net, created by social capital in the community. Besides, social capital is also an important catalyst to accelerate the development process in the society.

At the longhouse/village, social norms are form and regulated by local customary laws (*adat*). A strong adherent to *adat* among local communities is noted among the potentially affected communities. Breaches of the *adat* and disturbances of the ritual order are believed to render a longhouse 'hot' (*angat*), leaving its inhabitants open to infertility, sickness, death and other calamities; hence, could threaten the harmonious and cohesive community life of the people (also see **Sections 7.8.4 and 7.8.5**).

The headmen, elders and/or JKKK members play important role as guardians, ensuring adherent to *adat* and cooperation among longhouse members. The headmen/JKKK also play important role as contacts between longhouse

communities and outsiders including the State (through its agencies) as noted in the community interviews as they are said to have ‘authority’ over or ‘to speak’ for other longhouse residents. Good links between the headmen/JKKK with people in the position of authority usually equate more development at or assistance to, the longhouse communities.

Mutual assistance or work party (locally known as *gotong-royong*) is still widely practiced at the longhouses. It helps to make communal affairs success as well as promotes and maintain networks/touch among longhouse dwellers, as every household will assign a member to participate. Occasions such as death of longhouse members, weddings, receptions of dignitaries and some traditional rites and rituals (*miring/gawai*) are always treated as communal affairs and carried out in *gotong-royong* spirit. In such occasions, residents of the longhouse will help each other, and those stay away will return to the longhouse to help/ participate. Oftentimes, members of the neighbouring longhouse would be invited, and come to help. Other communal affairs such as maintenance of longhouse general cleanliness and gravity-fed water supplies are all carried out in the spirit of *gotong-royong*.

Sharing of resources are common practices at the longhouse. Reciprocal works are still very much parts of hill rice farming activities which involve laborious tasks such as land clearing, planting and harvesting, and also in other works such as longhouse apartment */bilek* construction or repairs. Fishing and hunting activities are often carried out as team works, while resources obtained are often share among neighbours and close kin.

There are also strong relationships/ networks between the households residing in the longhouse with members or relatives living or working away from the longhouse. The residing households often asked to look after the empty *bilek* of the absentees, thus ensure the safety and upkeep of those *bilek*. In return, working members of the households living and/or working outside oftentimes provide support both in cash (remittances) and in-kinds to those living at the longhouses in times of need. They also provide accommodations to the visiting members of household/ longhouse seeking medical treatment in towns, and sometimes, play roles as guardians (i.e., household heads) to children from longhouse attending secondary schools or working in towns. Members of the longhouse working or living outside the longhouse often provide connections to the prospect employers or industry for family members or relatives living at the longhouse who are looking for job.

It can be concluded that the potentially project-affected communities depend on social capital in many aspects of daily life at the longhouse. It promotes community cohesion, and increases resiliency of the community against shocks (e.g., the potential adverse impacts of the project). Local leadership play important roles in the continuity and enhancement of social capital; hence, should enhanced/empowered to be more effective.

7.6 VULNERABLE GROUPS

Vulnerable groups are distinct groups of people who might suffer disproportionately or face the risk of being marginalized due to impacts of the project development. Although the project does not involve physical resettlement of any community or individual, it will involve acquisitions of farmland, and incur adverse impacts to forest and river resources which are important to people who use or depend on these assets to sustain their livelihoods.

Based on the project activities and potential adverse impacts, among the potentially affected vulnerable groups in the study area include:

1. Elderly, sick or disable persons.
2. Single-headed households.
3. Dependent children.
4. Low-income households.

7.6.1 Elderly, Sick and Disable Person

About 7% of the sampled population are either considered elderly (65 years and above), or sick and disable persons (see **Table 7.5.12**). Elderly folks are those who are at the retirement ages, and are considered too old to carry out full-time employment; some are living with their children in the longhouses. Many elderly members of the communities are engaged in part-time economic activities, especially in farming, gathering timber and non-timber forest products, hunting and fishing. The contributions of their part-time economic activities are nonetheless significant, especially among the poor households. The socio-economic wellbeing of the elderly is vulnerable if the natural resources are affected by the proposed project.

For the families having sick and/or disabled members, a part of the family labour and income will have to be devoted to palliative care of these members thereby reducing their labour productivity and net household income. Poor families having sick, and/ or disabled members and relying on productive resources of farmlands, forests, and rivers are more vulnerable to the loss, degradation or destruction of these resources as a result of the proposed project.

7.6.2 Single-Headed Households

Both community and household-levels social surveys indicate the existence of single-headed households in the sampled communities. About 5% (165 individuals) of the known residing population (3293) at the settlement involved in community interviews are identified as widowed or single-parents by the headmen and/or members of JKKK (see **Table 7.5.10**). Approximately 6% of the households sampled are also single-headed households (i.e., those headed by the respondents of 64 years old and below), and about 3% of them are women-headed households. Many of these household heads do not engage in full-time employment but may be engaged in economic activities on a part-time basis as they have to look after the family. Some of them try to supplement their household income by engaging in part-time economic activities such as farming, fishing and collection of jungle products; hence, are potentially vulnerable to the loss or degradation of farmlands, forest and river resources cause by the project activities.

7.6.3 Dependent Children

Dependent children are the schooling children and toddlers, mostly of the age groups of 14-year-old and below (see **Table 7.5.12**). They comprise a total of 38% of the sampled population. These children depend almost entirely on the adults and working members of the households for physical and emotional care, and economic well-being. As such they are potentially vulnerable, especially those from low-income and/ or single-headed households who depend on subsistence farming, gathering of forest products, fishing and hunting.

7.6.4 Low-Income Households

The social survey found more than 80% of the sampled households reported earning monthly cash incomes below RM2131.00 per month (see **Section 0**). This could indicate high number of poor households in the study area. About half (58%) of these households can be categorized as hard-core poor i.e., those earning RM1000 and below (less to half of the PLI).

In view of the low cash income, many low-income households are depending on subsistence activities for their livelihoods, including planting of wet and hill paddy, fruit trees, vegetables and other food crops; gathering of forest products; fishing and hunting. In their present position, they are vulnerable to the risks of loss of their farmlands and access to forest and fisheries resources caused by the proposed project, thereby leading to undesirable welfare outcomes.

7.7 INDIGENOUS PEOPLE (IP)

7.7.1 Definition

The Bumiputera term when applied to East Malaysia states of Sarawak and Sabah imply a more heterogenous connotations. The populations of Sarawak and Sabah are made up of no fewer than 70 ethnic groups of which at least 50 are considered indigenous (Harun, 2006). In Sarawak, its 2.7 million population comprises of six main ethnic groups and 25 sub-ethnic groups. The six main ethnic groups are Iban, Malay, Chinese, Bidayuh, Orang Ulu and Melanau. Besides the Chinese, there are very small number of Indian and both ethnic groups are not considered as indigenous people or bumiputera. The rest of the ethnic groups are bumiputera. The 25 sub-ethnic groups, as listed in the Population Census Report 2010 are Sarawak Bisayah, Bukitan, Sarawak Kadayan, Kajang, Kanowit, Kayan, Kejaman, Kelabit, Kenyah, Lahanan, Lisum, Lugat, Lun Bawang/Sarawak Murut, Penan, Punan, Sabup, Sekapan, Sian, Sipeng, Tabun, Tagal, Tanjong, Ukit and other Bumiputera. The total Bumiputera population in Sarawak is 74.7% and the two ethnic groups not considered as indigenous to the state are the Chinese (24.5%) and Indians (0.31%).

“Natives” is the term generally used to imply the indigenous people in Sarawak. A ‘native’ under the Interpretation Ordinance Laws of Sarawak 1958 is defined as any person who is a citizen of Malaysia and who belongs to one of the races which is considered to be indigenous to Sarawak. Under Article 161A(6) and (7) of the Federal Constitution, the definition of ‘native’ in Sarawak denote a person who is a citizen and either belongs to one of the races recognised as indigenous to the State or is of mixed blood deriving exclusively from those races. The races that fall under the definition of ‘native’ as indigenous to Sarawak are the Bukitans, Bisayahs, Dusuns, Sea Dayaks (Iban), Land Dayaks (Bidayuh), Kadayans, Kalabit, Kayans, Kenyahs (Including Sabups and Sipengs), Kajangs (including Sekapans, Kejamans, Lahanans, Punans, Tanjongs dan Kanowits), Lugats, Lisums, Malays, Melanos, Muruts, Penans, Sians, Tagals, Tabuns and Ukits.

In the area of the proposed BMTLP, the IP are mainly the Iban. Under the HSAP guidelines (pg. 102) for “Indigenous peoples”, the Iban qualifies as a distinct social cultural group possessing the characteristics of:

1. Ethnic self-identification as members of a distinct indigenous social cultural group which is also recognized by other ethnic groups.
2. Collective attachment to geographically distinct area divided by riverine network in the project area and to the natural resources in these riverine territories.
3. Customary cultural, economic, social or political institutions that are different from the other Bumiputera groups such as the Malay, Melanau, Bidayuh, Kayan, Kenyah, etc.
4. Speak a language considered as lingua franca to the population of Sarawak but different from the official language of the country Indigenous peoples refers to a distinct social.

Other smaller indigenous groups such as the Kanowit, Tanjong and Melanau Rajang also reside along the stretch of Btg. Rajang where the transmission line is proposed. The Kanowit and Tanjong are believed to be the early inhabitants of lower Rajang stretch and have migrated sparsely to upper Rajang area. According to the observation made by Edwards and Stevens in 1971, the two minority groups are largely absorbed by the more numerous Iban and some live in small numbers on the banks of Rajang between Kapit and Nanga Baleh (1971:91). From the 185 respondents, all are of Iban ethnicity except for 3 respondents who are of Bidayuh, Kenyah and Kadazan ethnic background. These are people married to local Iban, and live at the longhouses.

7.7.2 Native Customary Laws

The indigenous people or natives of Sarawak are protected by the *Adat* or customary law. The customary law has existed predates the Brooke colonial and it was upheld throughout the colonial era until now. Several ordinances are enacted by the state government to legally protect the rights of the natives through the *adat* or native customs.

Under the Native Customs (Declaration) Ordinance, 1996 (Cap.22), *Adat* means native custom or body of customs to which lawful effect has not been given

thereto under any other written law and shall be deemed to include the tradition and culture of the natives.

The Council for Native Customs and Traditions under the Native Custom Council Ordinance 1977 statutory functions as the official advisor for all matters related to *adat* of the native groups in the State. The customary laws are reviewed from time to time and recommendations are made to the state executive council for review, codification etc. The Ordinance also serve to promote better understanding and appreciation of the *adat*, cultures, traditions and history of the various native communities in Sarawak. The Council is also responsible to approve and authorize studies or research related to the customary laws of the IP or natives in Sarawak.

The various native groups of Sarawak are governed by their own customary practices and the practices have been codified to legally protect the rights of the people, such as the *Adat Iban*, *Adat Bidayuh*, *Adet Kayan-Kenyah*, *Adat Lun Bawang*, *Adat Bisaya*, *Adet Kelabit* dan *Adet Penan*.

Malaysia has adopted the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and endorsed the Outcome Document of the World Conference on Indigenous Peoples, but has not ratified ILO Convention 169. Laws recognising customary land rights and customary law of the Indigenous Peoples are in place, but, according to the International Working Group on Indigenous Affairs, they are not properly implemented or are ignored. The Federal Court in 2016 ruled that the written laws of Sarawak do not accord the force of law to IP traditional territory (*pemakai menoa*) and communal forest (*pulau galau*), so IP cannot stake a customary claim to them: only settled, cleared and cultivated lands can be recognised as Native Customary Rights (NCR) and not the forest at large. This is being legally challenged by some village headmen, and the Chief Judge of Sabah and Sarawak ruled that an April 2018 amendment to the Sarawak Land Code, legally recognises *pemakai menoa* and *pulau galau*.

Adat refers to the common body of rules, and *penti-pemali* to the rituals, observed by longhouse residents. *Menoa rumah* refers to the territorial domain around each longhouse where individual *bilek* families clear their annual farms and grow rice and other food crops. Longhouse or village headmen (*tuai rumah*) and other community elders including family heads (*tuai bilek*) have authority in enforcing *adat*. The headman is a government-appointed position, and the Iban headmen are expected to deal with their communities in a manner similar to all other communities in Sarawak. Headmen are appointed by District Officers, and their position is established in law, in a government circular dated 2 October 1980

entitled "Terms and Conditions of Service of [village headmen]", Article 140 of the Local Authorities Ordinance 1996, and Terms and Conditions of the Headmen Service dated 24 March 1973. While recognised as headmen of a community, Iban leaders do not in fact have authority to command other members of the community, and their leadership position is dependent on the continual goodwill and approval of the other members of the longhouse. Other positions of authority are the *Penghulu* (appointed by District Officer and responsible over a sub-district level) and *Temenggong* (a higher traditional authority, above the headmen).

7.8 CULTURAL HERITAGE

Culture encompasses all aspect of life of a community or a group of people. Culture denotes the behaviour, beliefs, values, customs, symbols, arts, music, etc of a group of people. It is learned through the association with other members in the community and passed down from generation to next generation. Culture is dynamic and adaptive to the changing environment. Heritage refers to the aspects of culture inherited to the present and which will be preserved for the future. It is more stable as compared to culture.

Cultural heritage of a community is produced or expressed in tangible and intangible forms. Materials or items that are touchable and available in physical forms such as buildings, monuments, crafts, pottery, weaving, musical instruments are known as tangible heritage. Whereas oral stories, collective memories, dreams or beliefs that governed the way the design of a carving or weaving, rituals for propitiations etc., are intangible heritage. Both tangible and intangible heritage form a fundamental connection to the cultural background of people.

Cultural heritage as described by United Nations Educational, Scientific and Cultural Organization (2002) "allows the identification of one another by distinctive spiritual, material, intellectual and emotional features of society or a social group, and that it encompasses, in addition to art and literature, lifestyles, ways of living together, value systems, traditions and beliefs". Cultural heritage allows members of a community to identify with each other and creates a sense of unity and belonging within the group. It also instils a sense of pride and esteem for the people and nation.

7.8.1 Social History

The Iban are considered the IP of Sarawak who have travelled from the headwaters of Kapuas River in Kalimantan to Sarawak in several waves approximately 400 years ago. It is believed that since their first migration, sixteen (16) generations of Iban have been living in Sarawak.

The history of the Iban in Sarawak can be traced through two (2) types of sources. The first is the *tusu'* or genealogies that traced back as far as twenty-five generations or more from present day. The second source is the *pengap* or oral tradition that is sung by a *lemambang*. The *pengap* usually tells of ancient Iban hero or heroine tales. It is usually sung during special *gawai*⁵ or festivities.

According to oral history, the first Iban migration from Kapuas River to Sarawak settled in Undup River and Kumpang River of Batang Ai. The migration then moves on to Balau Hill of Simanggang, then to Sebuyau of Batang Lupar. Iban community expanded and continued their migration into Skrang River and Saribas River. When James Brooke annex Rajang watershed in 1861, there were no Iban communities upriver of the Katibas River. In 1863 due to the Kayan's raids on other communities in Btg. Rajang, James Brooke enlisted Iban from Skrang, Saribas and Krian for the famous 'Kayan Expedition'. The expedition successfully forced the Kayan to relocate to beyond Pelagus Rapids. By 1874, the migration of Iban into Rajang continued to be extended further into Btg. Baleh. There were about 290 doors of Iban at Nanga Sut of Btg. Baleh in 1899.

The movement of Iban into upper Rajang continued into the 20th century. By 1905, it was reported under the leadership of Penghulu Meram, 14 longhouses with a total population of 700 people were already living at the river mouth of Sg. Mujong. By 1910 it was reported that the Iban community has moved further to Sg. Gaat and Sg. Merirai. A famous Iban leader, Koh was asked by the Rajah to settle down at the Sg. Dia of Kapit. Koh then moved to Nanga Entawau while his son moved to Sg. Mujong. His son in law settled at Sg. Gaat.

From the history of migration and village settlement in upper Rajang, there is a possibility of old burial sites and *tembawai* at Sg. Mujong, Sg. Entawau and Sg. Gaat. *Tembawai* is a term used by Iban for old longhouse sites which have been abandoned. This site is located within the *pemakai menua* (territorial domain). Fruit

⁵ 'Gawai' Dayak is an annual festival celebrated by the Dayak people in Sarawak, Malaysia and West Kalimantan, Indonesia on 1 and 2 June. It is a public holiday in Sarawak and is both a religious and a social occasion recognized since 1957.

trees and vegetables can usually be found at *tembawai*. The right to the fruit tree on the *bilik's⁶ tapak* (lot) belongs to respective *bilik*, but the rights to the *tembawai* are held by the longhouse community.

7.8.2 Historical and Archaeological Site

Sarawak Museum Department was consulted on registered and potential cultural heritage assets at the BMTLP area. There are no registered cultural heritage assets to their knowledge along the proposed 177 km transmission line. In the list of heritage monuments gazetted under the Antiquities Ordinance 1958, Fort Sylvia of Kapit and Fort Emma of Kanowit are the only two tangible monuments in Btg. Rajang listed. There are no other historical or cultural sites in Rajang basin that is in the proposed list under the Sarawak Cultural Heritage Ordinance 1993.

At the time of writing (June 2021), the newly proposed Sarawak Heritage Ordinance 2019 which was gazetted on 13 Dec, 2019 is not officially enacted yet due to the postponement of Sarawak State Legislature Assembly. The new ordinance will replace the Sarawak Cultural Heritage Ordinance 1993 to include underwater heritage and intangible cultural heritage that encompasses cultural expressions such as songs, dances, oral traditions and skills.

With the new ordinance too, a heritage council will be established to advise the State Government on heritage related policies. Action plans for the administration and management of heritage will be under the charge of the council. Sarawak Heritage Ordinance 2019 will also enable the government to set up a trust fund and register for Sarawak's cultural heritage preservation and protection work. The new ordinance seeks to address a broader scope of heritage for the protection, preservation and conservation of Sarawak cultural heritage.

7.8.3 Heritage Site and Gravesites

It is reported in the EIA for the Proposed Jalan Nanga Ibau/Ulu Sg. Ibau, Kapit Division, Sarawak (by CKSB, 2020), that there is a sacred site named *Batu Katak⁷* found at the riverbank of Sg. Ibau (**Plate 7.8.1**). It is a small rock outcrop jutting out of Sg. Ibau riverbank which the locals revered and believed that had once cured someone of his ailment after he slept under the rock. The said sacred site is

⁶ Refers to family apartment within a longhouse. Normally one family occupies a *bilik* / apartment.

⁷ *Lit. Frog Stone*

situated approximately 300 m north of the project ROW, hence will not be affected by the project implementation.



Plate 7.8.1: *Batu Katak, Sg. Ibau*

Source: *Chemsain Konsultant Sdn Bhd, 2020*

It is also reported in the SEIA for the Proposed Baleh Hydroelectric Project, Kapit Division, Sarawak (by CKSB, 2013), that there are both grave and cultural sites on a small hill at the confluence of the Btg. Baleh and Sg. Putai (approximately 650 m south of the transmission line ROW). According to the local Iban informants, the graves at Sg. Putai belong to their relatives from Nanga Entawau. The cultural site, on the other hand, consists of a pair of earthen crocodile effigies, locally known by the Iban community as *Buaya Tanah*⁸. It is described that the crocodile effigies were made back in 1954 by the Iban longhouse folks from Nanga Entawau, as part of the old hill paddy planting ritual to get rid of paddy pests before the paddy began to flower and bear grains.

⁸ *Lit. Earth Crocodile*

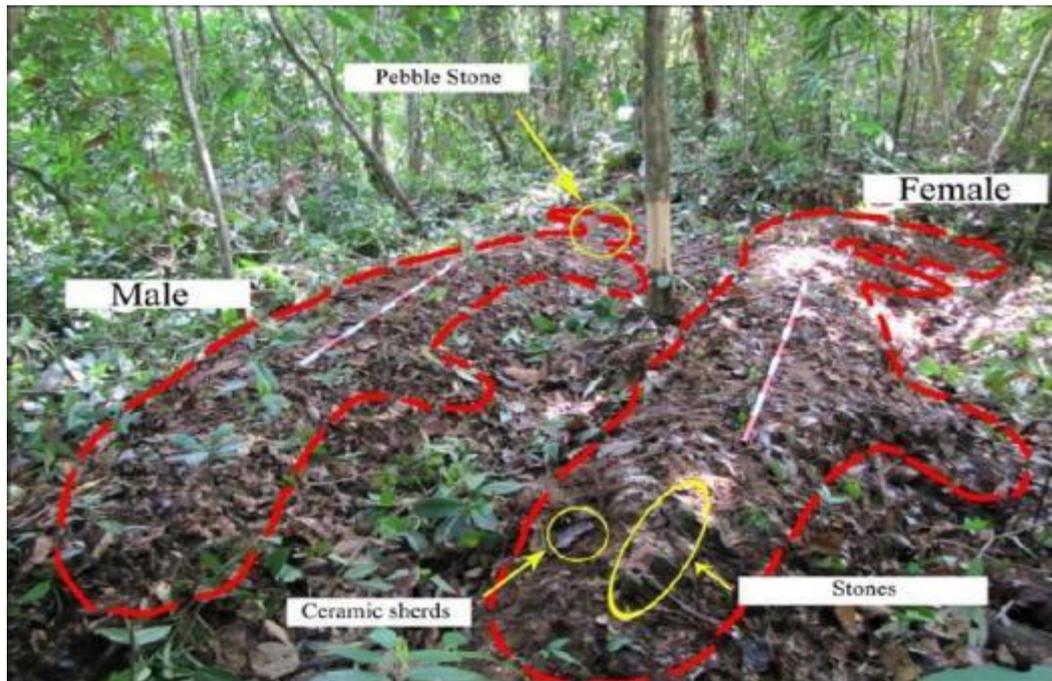


Plate 7.8.2: Crocodile effigies known as *Buaya Tanah*

Source: Chemsain Konsultant Sdn Bhd, 2013

The sacred *Batu Katak* site and the *Buaya Tanah* cultural historical site is not affected by the proposed transmission line.

Other possible heritage assets at the proposed site would be graves of nearby longhouse communities. The only way to verify if there are graves or old forsaken graves that would be affected is to have direct engagement with the communities. Through ground survey and interviews with the local communities living near the vicinity of the transmission line, it was found that majority of the graves (*pendam*) are found situated away from the longhouses and located near the riverbanks. According to the locals, the gravesites are commonly located near the riverbanks due to limited accessibility to their communal land back in the old days. Some of the resettled communities in Mapai area have their communal gravesites at the southern bank of Btg. Rajang as their settlements were originally located across the river.

The Iban old customs do not encourage the living including the deceased's close kins to visit the graves (*pendam*) after the burial. The only occasion is that of *Gawai Antu*, at which miniature houses (*Sungkup*) with a number of miniature tools for livelihood in the Afterlife are put in the *Sungkup* erected on the graves. Some daring and ambitious persons may visit a *pendam* to sleep a night or two in order to obtain inspirations or charms through dreams.

For Iban communities, relocation of old graves or reburial is not a common practice. However, if due to dreams or mysterious happenings experienced by the next of kins or the longhouse community, exhumation is carried out. It is always discussed in details with the consensus of the next of kins and community members.

Several burial grounds were found during the land survey conducted by appointed land surveyors. The input from three (3) surveying consultants were obtained for the land area surveyed.

1. JP Consortium discovered the burial grounds at Sg. Manap which belong to Rumah James Baling and Rumah Muni at the location of T23/21 and T23/22. (**Figure 7.8.1** and **Figure 7.8.2**).
2. Jurukon Malaysia reported a burial ground at AT27A/1 near Sungai Beguang. The burial ground belongs to Rumah Richard. (**Figure 7.8.3** and **Figure 7.8.4**).
3. Ukurancang Perunding Sdn Bhd reported the sighting of graves at survey point AT 29-7 and AT32-7. The burial ground located near Nanga Tada at AT29-7 belongs to Rumah Billy (**Figure 7.8.5** and **Figure 7.8.6**), while the one at AT32-7 belongs to Rumah Awin. (**Figure 7.8.7** and **Figure 7.8.8**).

The surveyors have proposed realignment of the three sections of the proposed transmission line to avoid trespassing the burial area.

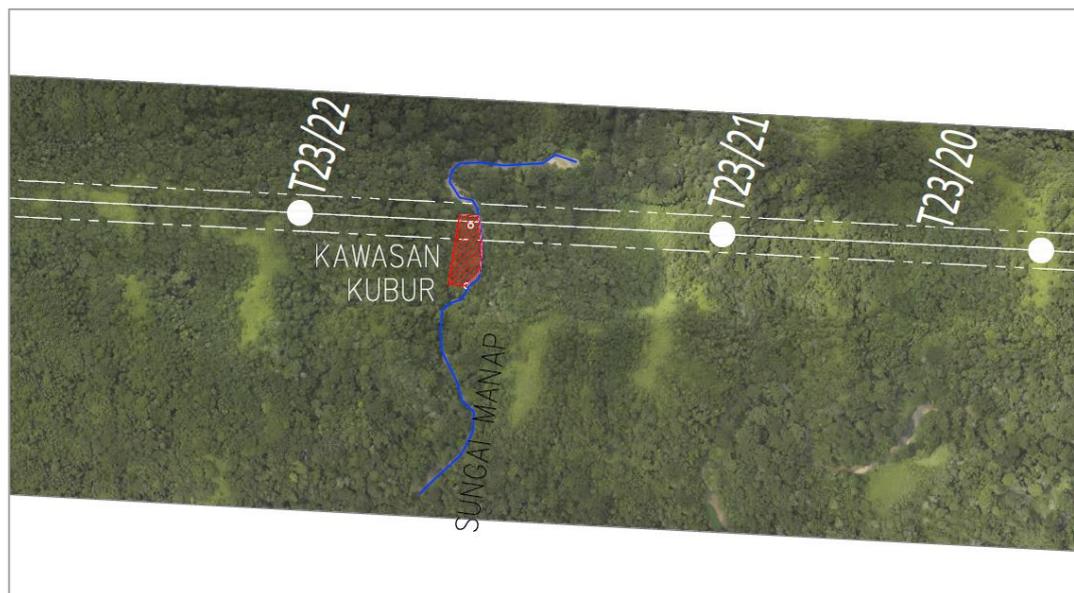


Figure 7.8.1: Grave at T23/21 and T23/22 of Rumah James Baling and Rumah Muni as Reported by JP Consortium

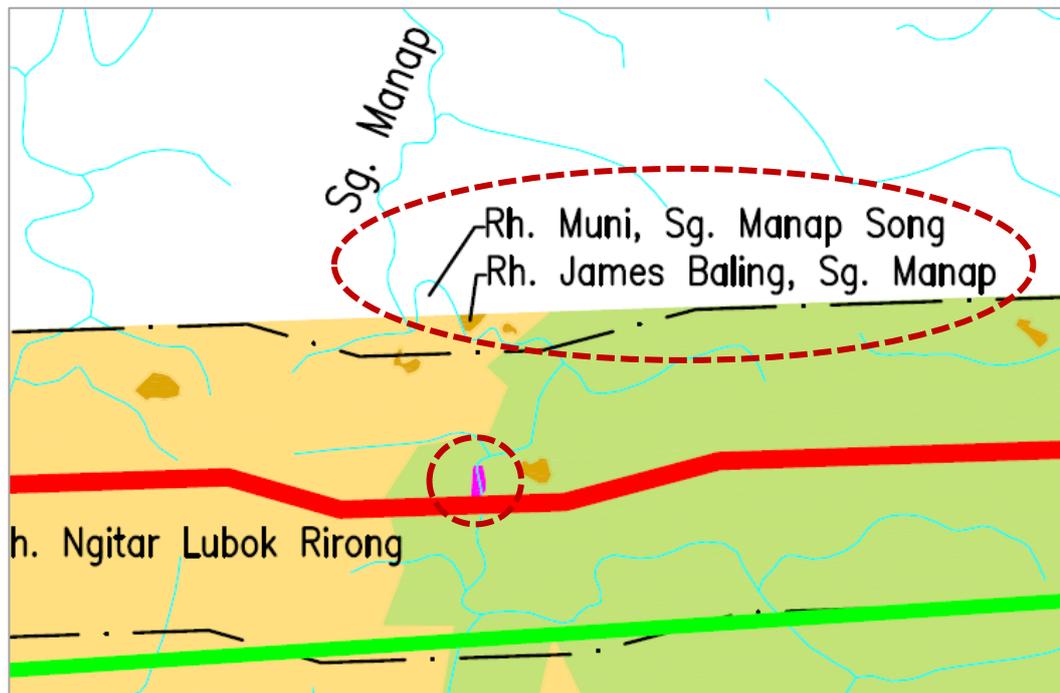


Figure 7.8.2: Location of Rumah Muni and Rumah James Baling, Ng Manap. The Owner of Graves Found at T23/21 and T23/22

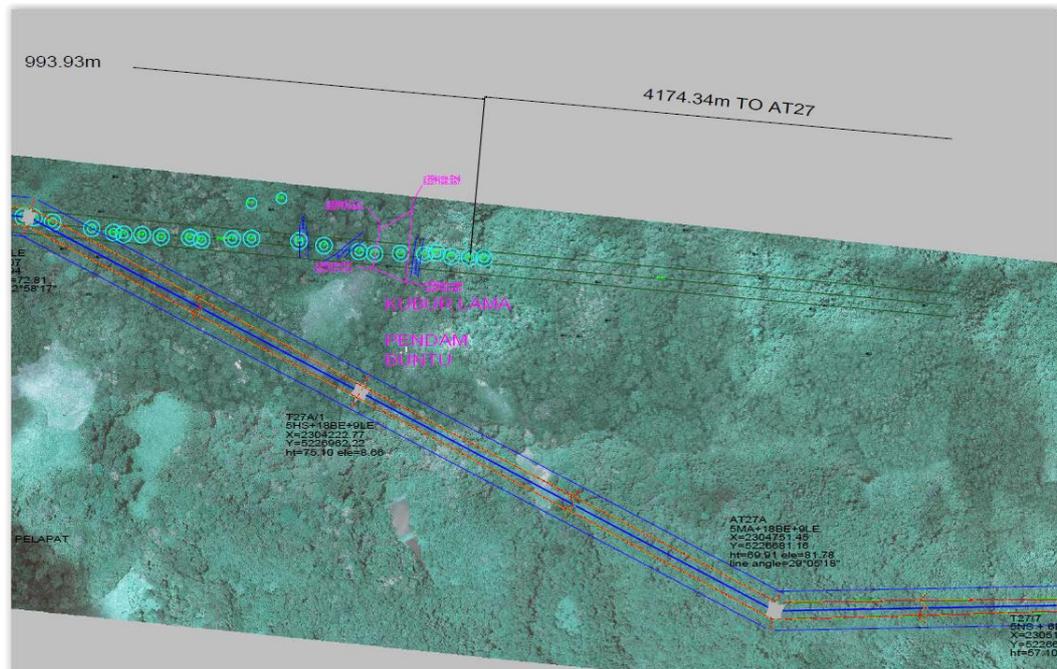


Figure 7.8.3: Grave at AT27A/1 of Rumah Richard (Reported by Jurukon Malaysia) with Proposed Realigned Section

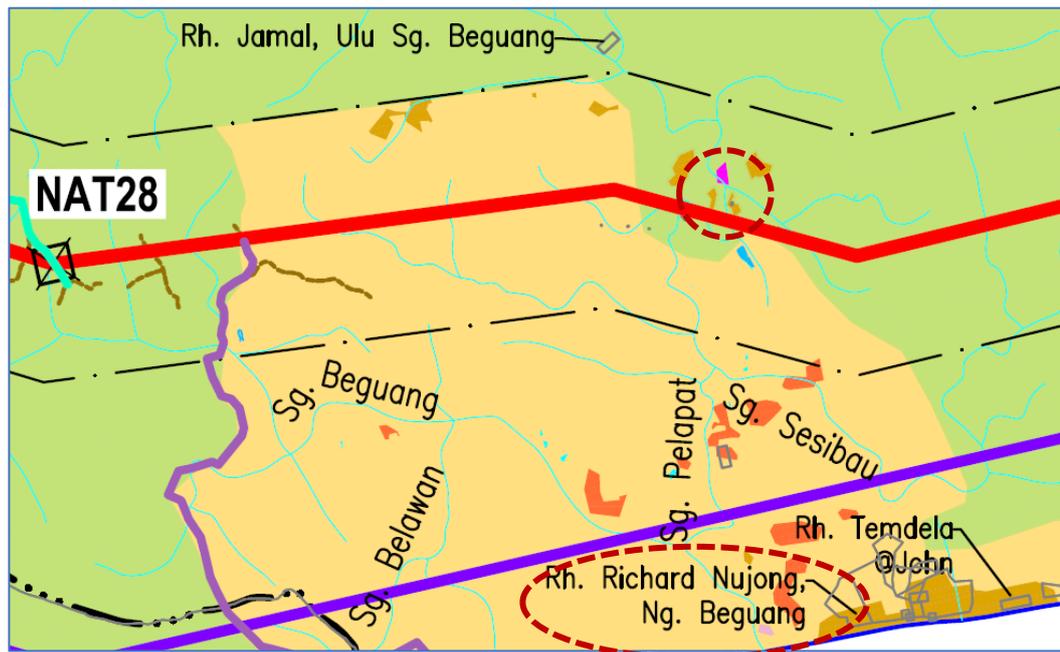


Figure 7.8.4: Location of Rumah Richard Nujong, Nanga Beguang. The owner of Grave Found at AT27A/1

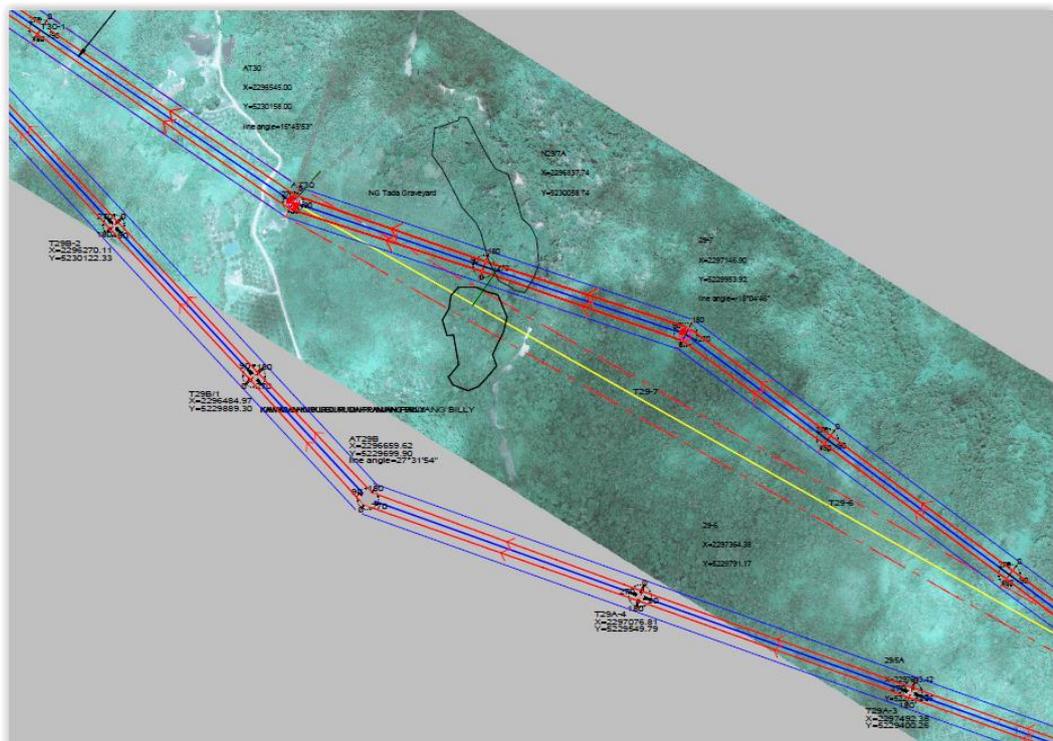


Figure 7.8.5: Grave at AT29-7 of Rumah Billy (Reported by Ukurancang Perunding Sdn Bhd) with Proposed Realigned Section

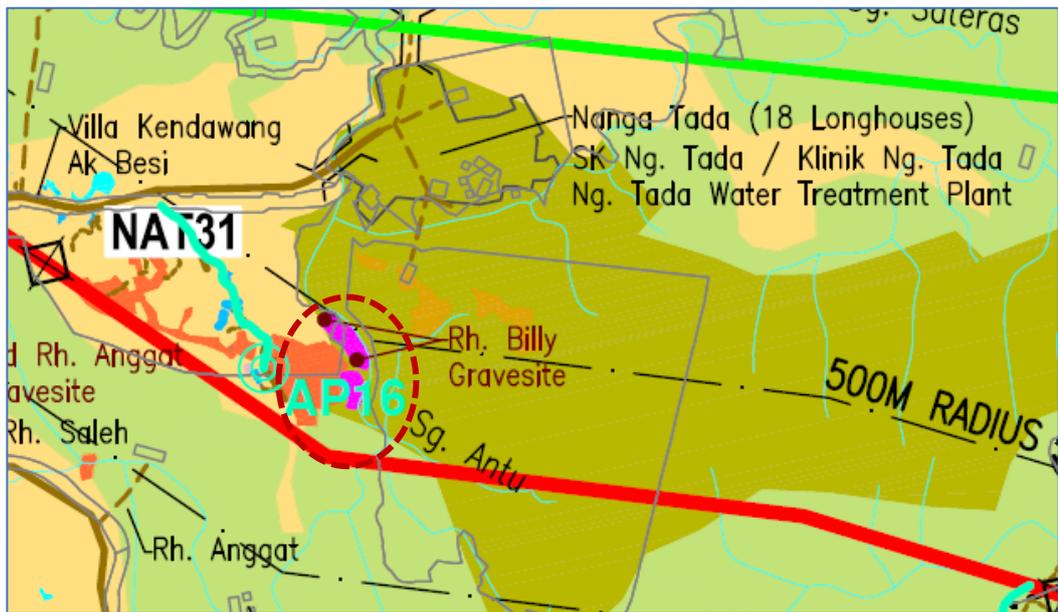


Figure 7.8.6: Location of Rumah Billy grave site at Nanga Tada. Grave Found at AT29-7

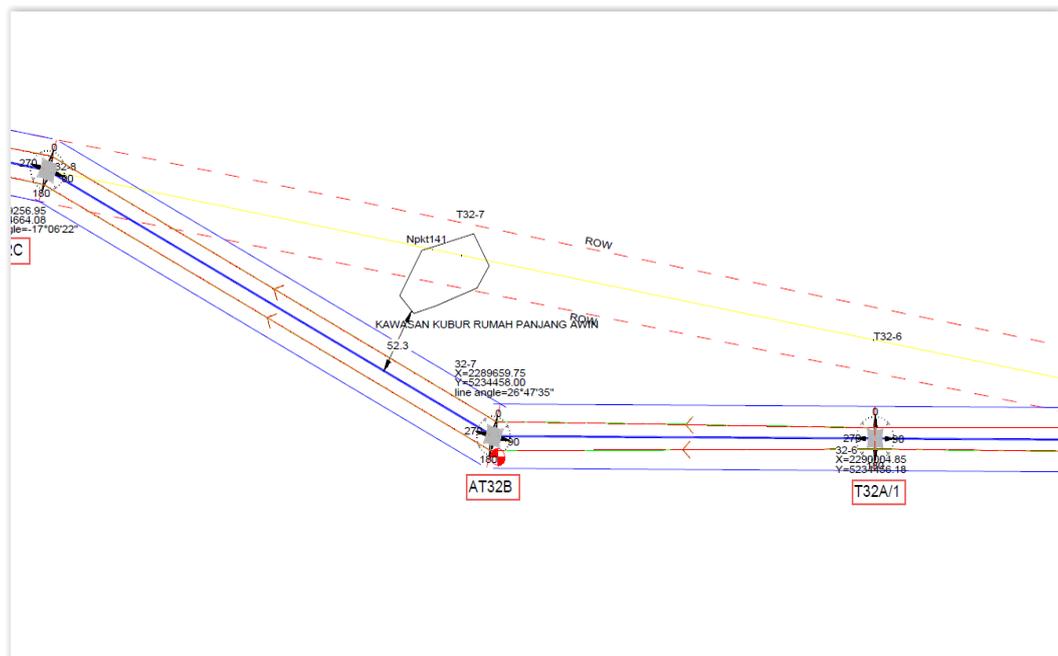


Figure 7.8.7: Grave at AT32-7 of Rumah Awin (Reported by Ukurancang Perunding Sdn Bhd) with Proposed Realigned Section

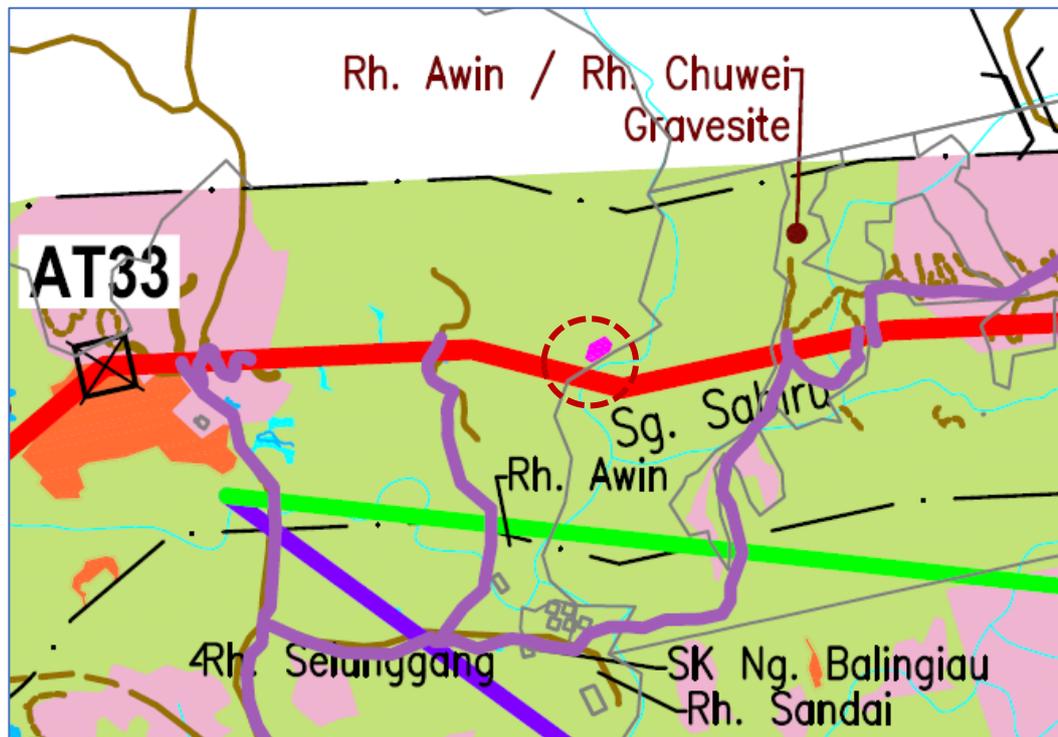


Figure 7.8.8: Location of Rumah Awin grave site Found at AT32-7.

7.8.4 Rites and Rituals for Heritage Site

In dealing with exhumation or grave relocation, Council for Native Customs and Traditions strongly advised to follow the Adat Iban Order 1993, under the Native Courts Ordinance 1992, (No. 9/92) and also the Native Customary Laws Ordinance 1955 (Chapter 51). *Adat* is the custom that governs the state of balance of the Iban community with the physical and spiritual environments. A breach of the *adat* threatens the harmonious and cohesive community life of the people. Therefore, according to Majlis Adat Istiadat Sarawak (MAIS), the *adat* must be strictly adhered to.

A person or any party found to have disrupted the state of balance of the community will be subject to either secular fines (*ukum*) or ritual fines (*tunggu*). *Tunggu* means a form of restoration or restitution. It covers two important concepts of the *Adat* in providing a settlement between individuals of the community and to restore the physical and spiritual wellbeing of the community.

Tunggu is paid in the form of *mungkul*. One (1) *mungkul* is equivalent to RM1 and for more serious fine, it is in the form of *pikul*. One (1) *pikul* is equivalent to RM100. For ritual appeasement, *tunggu* is paid in the form of *genselan*, *pelasi menua*, etc.

If the breach involves penal code, but requires ritual propitiation, the offender shall conduct the ritual requirement as soon as possible in order to avoid untoward happenings to the community such as sickness, accident or death. It is not an admission of guilt for the person or party to perform the propitiation ritual (*Pelasi Menua* or *Genselan*), but to maintain the harmonious relationship among members of the community, the spiritual wellbeing such as the health of the people, and the material prosperity of the whole community.

Under Adat Iban Order 1993 Chapter 6 no 191, whoever excavates or exhumes a human remains from a graveyard is liable to:

- a. For the excavation or exhumation, the offender shall be fined three (3) *pikul*. In addition, the offender shall provide a *tunggu* of 250 *mungkul*, per human remains and shall pay for the costs of making good the graveyard or any damage done and also *Pelasi Menua* consisting of a pig, *kering semengat* and *kurung semengat*.
- b. If the exhumation is ordered by the Court for any reason, the relevant Department shall provide *Pelasi Menua* consisting of a pig, *kering semengat* and *kurung semengat* and shall pay for the costs of making good the graveyard and also compensate for any damage done.
- c. If the excavation or exhumation is done in order to take the deceased's belonging, the offender shall be dealt with as under section 191(a) thereof.

In the case personal belonging or items of the deceased (known as *baiya*) is damaged or taken away, under Adat Iban Order 1993 Chapter 6 no 192, whoever breaks or takes away any *baiya* from a person's graveyard shall be fined two (2) *pikul* and shall provide a *tunggu* of 200 *Mungkul* and shall return or replace the *baiya* as well as provide *genselan* consisting of a pig, *kering semengat* and *kurung semengat*.

Kering semenga' is a ritual compensation comprising of iron items such as nail, sickle, machete, adze and axe. The person involved in the ritual bite the iron items in order for his soul (*semangat*) to stay intact and strong. His soul is not weakened by the event or be frightened by supernatural forces. By biting the iron items, it signifies the soul of the person is strong and can continue to perform his daily lives like normal.

Kurung semengat is paid in the form of jar or pot to signify the person's soul is kept in place and not be separated from his body by supernatural forces. A soul loss would make the person fall sick and succumb to death eventually.

Under Adat Iban Order 1993 Chapter 6 no 188, whoever fells any tree which falls within the area designated as a cemetery or damages a graveyard shall be fined one and a half *pikul*. The offender shall provide a *tunggu* of 150 *Mungkul* to every graveyard damaged and shall replace or pay for the costs of damage done. In addition, the offender shall provide *Pelasi Menua* consisting of a pig, *kering semengat* and *kurung semengat*.

Although Iban communities in Rajang or Baleh are similar in custom and practices, the consensus and agreement of each affected community should be obtained through in-depth discussion. The relationship of the community members and their preference of settlements in the form of customary ways should always be respected to main the harmonious condition between the community and its members, and also with the supernatural world of deities and spirits.

7.8.5 Indigenous Knowledge

One of the important social cultural practices distinctive to the Iban community at the proposed transmission line is their indigenous knowledge on their surrounding environments and agricultural practices. Primary and secondary forests are not only utilized for farming but also for producing timber and non-timber forest products, such as bamboo, rattans, palms, medicinal plants, etc. The Iban community in upper Btg. Rajang especially those living at the upper reaches still practice swidden cultivation, or the 'slash and burn' cultivation. This method of cultivation is a form of shifting agriculture whereby vegetation such as plants, trees are cut down and burned as a method of clearing the land for agricultural purpose. When the plot of land becomes infertile, the farmers move to a new plot of land and repeat the same cutting and burning method.

In choosing the land for cultivation, Iban farmers possess the knowledge of predicting the suitability and fertility of the land through a few methods. One of the methods is by investigating the vegetation conditions of the area. Farmers estimate soil fertility levels by the presence of specific plants and the health condition of trees by the leaf colour and trunk straightness. Other criteria of choosing the site for cultivation includes land accessibility, land tenure, labour availability, rituals, and taboo.

The knowledge of hill paddy cultivation is passed from generations to generations. The stages of cultivation are governed by certain taboos and rituals, such as after the side selection and before the slashing starts, a ritual will be conducted to seek for blessing from the rice spirit, and followed by felling, burning, sowing, weeding and harvesting. Each stage is governed by certain ritual and taboos. Older Iban elders possess the knowledge of choosing auspicious date by observing the stars. For rice cultivation, three main constellations of stars are referred to. The Pleiades or known as *Bintang Banyak* is chosen as ideal timing for *manggul* or land clearing purpose. The Orion or *Bintang Tiga* is chosen for *nuga'* or sowing purpose, while the Sirius or *Bintang Tangkong Peredah* usually marks the end of the rice cultivation season. It is a common belief among older generation of Iban farmers that rice plants sown after Sirius will not mature properly.

At the community level, decisions are made through consensus. Disputes are settled via the participatory mode of consultation, negotiation and mediation. This method helps to keep the community in a cohesive manner where every issue be it communal or household, can be brought for discussion and resolved amicably. The respect and compliance of *adat* helps to consolidate the indigenous community's cohesiveness. Elders and leaders hold very high status among the community. Their opinions and advice are sought for matters pertaining to family, land, labour, employment etc. The respect for leaders and elders is deeply ingrained among the indigenous people at the proposed transmission line project.

Adat is a way of life, for the IP of upper Btg. Rajang. It provides the underlying principle and values in life. It is the accepted code of conducts, manners and conventions uphold by the community. Every Iban longhouse community are bind by the *adat*. Any person found guilty of violating the code of conducts of the community will be fined or punished in accordance with the *adat*. *Adat* also guides the territorial domain between longhouse communities. The territory belonging to a longhouse community including the farms, gardens, burial grounds, old longhouse sites, river, forest is known as *pemakai menua* (territorial domain).

The social survey also indicated that most of the households sampled, still involved in many activities that require the utilization of indigenous knowledges (**Table 7.8.1**).

Table 7.8.1: Activities at the Longhouse

Household Activities	No. of Household	Percentage
Fishing	176	95
Hunting	144	78
Practicing/ Overserving Iban traditional spiritual rituals (<i>miring</i>)	134	72
Weaving/Basketry	120	65
Weaving Iban traditional blanket (<i>pua kumbu</i>)	59	32

Source: CKSB fieldwork (2021)

7.9 ENVIRONMENTAL HEALTH

7.9.1 Health Facilities

The Kanowit Hospital and Kapit Hospital are among the nearest well equipped medical facility available. These hospitals provide both outpatient and inpatient services. For patients who required specialists' attention will be referred to the Sibuh Hospital. Nonetheless, there are several rural health clinics (*Klinik Kesihatan*) available along the Btg. Rajang and Btg. Baleh riverbank, as well as at the resettlement scheme area. These more prominent rural health clinics are located at Song, Nanga Mujong, Nanga Merirai, Nanga Entawau, Nanga Gaat, Nanga lbau and Nanga Tada. They are well placed for the convenience of the villagers who seek simple treatment for mild conditions.

7.9.2 Community Health Status

Table 7.9.1 gives the prevalence rates of selected diseases that have been diagnosed by doctors within the last 1 year, among the 1383 household members from the 185 households surveyed. The highest prevalence rates were for hypertension (11.28%), followed by diabetes mellitus (2.10 %) and COVID-19 (1.88%). The prevalence rates of asthma, hypertension and diabetes mellitus are well below the national rates. However, the prevalence rate for tuberculosis (0.22%) was very much higher than the national rate of 0.08%.

Table 7.9.1: Household Members Diagnosed with Selected Diseases by Doctors Within the Last Year (N=1383)

Disease	Number	Prevalence (%)	National Prevalence (%)
Hypertension	156	11.28	30.0 ^c
Diabetes mellitus	29	2.10	18.3 ^c
COVID-19	26	1.88	
Asthma	11	0.80	4.5 (adults) ^a 7.1 (children) ^a
Heart problem	10	0.78	
Kidney disease	5	0.36	
Tuberculosis	3	0.22	0.08 ^b
Stroke	3	0.22	
Upper respiratory tract infection	2	0.14	
Other cancers	2	0.14	
Chronic bronchitis	1	0.07	
Rhinitis	1	0.07	
Nasopharyngeal cancer	1	0.07	
Malaria	1	0.07	
Stillbirth	1	0.07	

Sources : ^a Ministry of Health Malaysia, 2008

^b Ministry of Health Malaysia, 2019

^c Ministry of Health Malaysia, 2020

The main reason of the sampled household members sought medical treatments at hospitals or clinics within the last 3 months was for periodical monitoring of hypertension and collecting hypertension control drugs (8.82%) (see **Table 7.9.2**). This trend is correlated with the reported hypertension cases (**Table 7.9.1** above). Other reasons include fever, breathlessness, chest pain, and heart attacks.

Table 7.9.2: Reasons for Seeking Medical Treatments by Household Members Within the Last 3 Months (N=1383)

Disease/health problem	Number	Prevalence (%)
Periodical visits (monitoring and collecting medication for hypertension)	122	8.82
Fever	2	0.14
Breathlessness	2	0.14
Chest pain	2	0.14
Heart attack	2	0.14
Asthmatic attack	1	0.07
Vomiting	1	0.13
Eyes disease	1	0.13

Smoking is common among community members as indicated by most of the respondents (58%), who reported having one or more smokers in their households. Thus, indoor air quality can be an issue in some of the homes.

7.9.3 Morbidity Statistics

Morbidity statistics on diseases related to the environment were obtained from Klinik Kesihatan Song, Hospital Kanowit and Hospital Kapit for a period of 1 year from January to December 2020. The full statistics is provided in **Appendix 7.9.1**.

7.9.3.1 Air Pollution Related Cases

Table 7.9.3 shows the disease cases related to air pollution seen at Klinik Kesihatan Song, Hospital Kanowit and Hospital Kapit in 2020.

At Klinik Kesihatan Song, Eye and respiratory diseases as represented by conjunctivitis, upper respiratory tract infections, influenza, tuberculosis and pneumonia made up 13.9% and 23.3% of all adult and children cases, respectively. Cardiovascular diseases as represented by hypertension made up 0.7% of all adult cases. The significant prevalence of eye and respiratory diseases is quite common among most communities in Malaysia.

At Hospital Kanowit, eye and respiratory diseases made up 17.9% and 49.8% of all adults and children cases, respectively. Cardiovascular diseases as represented by hypertension, ischaemic heart disease and cerebrovascular diseases made up of 4.5% of all adult cases. Thus, just like for Klinik Kesihatan Song, disease cases

related to air pollution also made a significant percentage among adult and children cases in Hospital Kanowit.

At Hospital Kapit, eye and respiratory diseases as represented by conjunctivitis, upper respiratory tract infections, asthma, tuberculosis, pneumonia, bronchitis, emphysema and lung cancer made up 41.8% and 65.4% of all adult and children cases, respectively. Cardiovascular diseases as represented by hypertension, heart failure, ischaemic heart disease and cerebrovascular diseases made up 4.3% of all adult cases. Therefore, just as what were seen at Klinik Kesihatan Song and Hospital Kanowit, disease cases related to air pollution also made up significant percentages of all adult and children cases at Hospital Kapit.

7.9.3.2 Water Pollution Related Cases

Table 7.9.4 gives the disease cases related to water pollution seen at Klinik Kesihatan Song, Hospital Kanowit and Hospital Kapit in 2020.

At Klinik Kesihatan Song, only intestinal infectious diseases were reported, and they made up 0.4% and 0.1% of all adult and children cases, respectively. Thus, disease cases related to water pollution do not seem to be a serious health issue in the surrounding communities.

At Hospital Kanowit, water pollution related diseases as represented by viral hepatitis made up of 1.3% and 5.1% of all adult and children cases, respectively. Hence, similar to Klinik Kesihatan Song, diseases related to water pollution do not seem to be a major health problem among the hospital patients.

At Hospital Kapit, water pollution related diseases as represented by dysenteries, viral hepatitis and food poisoning made up of 5.6% and 6.4% of all adult and children cases, respectively. Unlike Klinik Kesihatan Song and Hospital Kanowit, disease cases related to water pollution seem to be more prominent at Hospital Kapit, dominated mainly by viral hepatitis.

7.9.3.3 Animal Vectors and Reservoirs Related Cases

Animal vectors and reservoirs may be associated with a poorly managed environment. Often, discarded containers that are improperly disposed or the presence of water within homes and surroundings may become excellent breeding sites for mosquitoes which transmit diseases. **Table 7.9.5** gives the disease cases related to animal vectors and reservoirs seen at Klinik Kesihatan Song, Hospital Kanowit and Hospital Kapit in 2020.

At Klinik Kesihatan Song, only dengue fever and malaria cases were reported, and they made up only 0.01% and 0.5% of all adult and children cases, respectively. Hence, disease cases related to animal vectors and reservoirs do not seem to be a major health issue.

At Hospital Kanowit, dengue fever and malaria were reported, whereby they both made up of 0.4% of all adult cases. Therefore, diseases related to animal vectors and reservoirs do not seem to be a major concern at Hospital Kanowit, just as for Klinik Kesihatan Song.

At Hospital Kapit, animal vectors and reservoirs related diseases as represented by dengue fever, malaria and typhus which made up of 0.7% and 0.02% of all adult and children cases, respectively. Therefore, similar to what was seen at Klinik Kesihatan Song and Hospital Kanowit, diseases related to animal vectors and reservoirs do not seem to be a major concern at Hospital Kapit either.

7.9.3.4 Skin Diseases Cases

Table 7.9.6 gives the skin disease cases seen at Klinik Kesihatan Song, Hospital Kanowit and Hospital Kapit in 2020.

Of all these skin diseases, dermatitis, eczema, and urticaria are allergic forms of skin reactions that may be exacerbated by allergens and irritants that may be present in air pollution or dust, which were the most common skin disease seen at Klinik Kesihatan Song. The skin disease cases made up 5.3% and 4.8% of all adult and children cases, respectively. Therefore, there are moderate existence of skin diseases among the surrounding populations.

At Hospital Kanowit, skin diseases made up 5.3% and 6.4% of all adults and children cases, respectively. Urticaria and erythemas were the most common skin diseases reported among both adults and children. Similar to Klinik Kesihatan Song, there seem to be moderate existence of skin diseases among the hospital patients.

At Hospital Kapit, urticaria and erythemas; cutaneous abscess/ furuncle and carbuncle; cellulitis and dermatitis and eczema were the commonly reported skin diseases among the local community. The skin diseases made up of 2.2% and 9.8% of all adults and children cases, respectively. Similar to what were seen at Klinik Kesihatan Song and Hospital Kanowit, there also seem to be moderate existence of skin diseases among patients at Hospital Kapit.

7.9.4 Communicable Diseases

Table 7.9.7 show the prevalence rates of selected communicable diseases in the Districts of Song, Kanowit and Kapit in 2020, in comparison with the prevalence of these diseases in Malaysia in 2018.

The prevalence rates for malaria were very much higher than the nation's rate (14.09 per 100,000) in all of the 3 districts, the highest being in the District of Kapit (252.28 per 100,000). Therefore, malaria is a serious health problem in all the 3 districts.

Leptospirosis is also a communicable disease problem in the District Kanowit with a prevalence rate 40.82 per 100,000, compared the nation's rate of 15.39 per 100,000. Hence, malaria and leptospirosis can be a serious health threats to workers working on the transmission line project. It is thus advisable that they take malaria prophylaxis before commencing work on the project.

In summary, we can deduce that the pattern of diseases that are of greatest concern in the affected areas are respiratory and cardiovascular diseases that may be affected by air pollution. However, this transmission line project is not expected to contribute to air pollution problem except for some generation of dust and air pollutants from vehicles during the construction phase. However, this is expected to be minimal and temporary in nature.

Disease cases related to water pollution seem to be more prominent at Hospital Kapit, dominated mainly by viral hepatitis, than the other 2 health facilities. There also seems to be moderate existence of skin diseases and insignificant occurrences of diseases cases related to animal vectors and reservoirs at all 3 health facilities.

However, surveillance of selected notifiable communicable diseases in the Districts of Song, Kanowit and Kapit in 2020 revealed that prevalence of malaria in all 3 districts exceeded the national prevalence rates, while the prevalence of leptospirosis exceeded the national prevalence rate in the District of Kanowit.

Table 7.9.3: Disease Cases Related to Air Pollution Seen at Klinik Kesihatan Song in 2020

District	Conj.		URTI		Inf.		Asth.		TB		Pneu.		Bron.		Emphy		Lung Ca		HPT		HF		IHD		CVA		*Total (All patients)		
	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	
Song	33	22	856	180	27	2	0	0	5	1	19	15	0	0	0	0	0	0	44	0	0	0	0	0	0	0	0	6,753	943
Kanowit	147	55	1572	683	13	29	55	66	52	0	19	60	30	55	0	0	0	0	316	0	0	0	42	0	112	0	10,537	1,905	
Kapit	37	5	8034	3226	0	0	154	60	64	0	85	120	82	0	1	0	1	0	241	0	58	0	412	0	168	3	20,217	5,214	

Conj. : Conjunctivitis
URTI : Upper respiratory tract infections
Inf. : Influenza
Asth. : Asthma
TB : Tuberculosis

Pneu. : Pneumonia
Bron. : Chronic bronchitis
Emphy. : Emphysema
Lung Ca : Lung cancer

HPT : Hypertension
HF : Heart failure
IHD : Ischaemic heart disease
CVA : Cerebrovascular accident/stroke

Table 7.9.4: Disease Cases Related to Water Pollution Seen at Klinik Kesihatan Song, Hospital Kanowit and Hospital Kapit in 2020

Distric	Dys.		Chol.		Typ.		Viral Hep.		Polio.		Food / Int. Infec.		*Total (All patients)	
	A	C	A	C	A	C	A	C	A	C	A	C	A	C
Song	0	0	0	0	0	0	0	0	0	0	27	1	6,753	943
Kanowit	0	0	0	0	0	0	135	97	0	0	0	0	10,537	1,905
Kapit	0	1	0	0	0	0	1,129	332	0	0	7	2	20,217	5,214

Dys. : Dysenteries
Chol. : Cholera
Typ. : Typhoid and paratyphoid
Viral Hep. : Viral hepatitis

Polio. : Acute poliomyelitis
Food. : Food poisoning
Int. Infec. : Intestinal infectious diseases

*Total (All patients): Total attendance of all patients at the clinic during that month.

A: Adult
C: Children

Table 7.9.5: Disease Cases Related to Animal Vectors and Reservoirs Seen at Klinik Kesihatan Song, Hospital Kanowit and Hospital Kapit in 2020

District	YF		DF		DHF		Mal.		Typ.		Plag.		Rab.		*Total (All patients)	
	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C
Song	0	0	1	0	0	0	35	0	0	0	0	0	0	0	6,753	943
Kanowit	0	0	14	0	0	0	32	0	0	0	0	0	0	0	10,537	1,905
Kapit	0	0	28	1	0	0	112	0	5	0	0	0	0	0	20,217	5,214

YF : Yellow fever
 DF : Dengue fever
 DHF : Dengue haemorrhagic fever

Mal. : Malaria
 Typ. : Typhus

Plag. : Plague
 Rab. : Rabies

Table 7.9.6: Skin Disease Cases Seen at Klinik Kesihatan Song, Hospital Kanowit and Hospital Kapit in 2020

District	Cutan.		Cell.		Derm.		Psor.		Urti. & Eryth		Dis.		Rad.		*Total (All patients)	
	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C
Song	5	0	3	1	22	22	0	0	326	22	0	0	0	0	6,753	943
Kanowit	139	21	86	13	73	27	0	0	256	60	1	0	5	0	10,537	1,905
Kapit	75	52	38	69	6	27	2	0	326	354	4	7	0	0	20,217	5,214

Cutan. : Cutaneous abscess/furuncle and carbuncle
 Cell. : Cellulitis
 Derm. : Dermatitis and eczema
 Psor. : Psoriasis

Urti. : Urticaria
 Dis. : Disorders of skin appendages
 Eryth. : Erythemas
 Rad. : Radiodermatitis and other radiation-related disorders of the skin and subcutaneous tissue

*Total (All Patients): Total attendance of all patients at the clinic during that month.

A: Adult
 C: Children

Table 7.9.7: Prevalence Rates of Selected Communicable Diseases in District of Song, Kanowit and Kapit in 2020

Disease	Song (Population 24,500) *		Kanowit (Population 34,300) *		Kapit (Population 65,000) *		Malaysia (2018) ^a
	Number of Cases	Prevalence rates in 2020 (Per 100,000 population)	Number of Cases	Prevalence rates in 2020 (Per 100,000 population)	Number of Cases	Prevalence rates in 2020 (Per 100,000 population)	
Waterborne and Foodborne Diseases							
Cholera	0	0	0	0	0	0	0.50
Typhoid	0	0	0	0	0	0	0.53
Hepatitis A	0	0	0	0	0	0	0.30
Dysentery	0	0	0	0	0	0	0.50
Poliomyelitis	0	0	0	0	0	0	
Food poisoning	0	0	0	0	0	0	45.71
Vector borne and Zoonotic Diseases							
Dengue fever	4	16.33	34	99.13	51	77.51	244.07
Dengue haemorrhagic fever	0	0	0	0	0	0	1.23
Chikungunya	0	0	0	0	0	0	NA
Malaria	51	208.16	59	172.01	166	252.28	14.09
Filariasis	0	0	0	0	1	1.52	NA
Typhus	0	0	0	0	0	0	0
Rabies	0	0	0	0	0	0	0.03
Leptospirosis	1	4.08	14	40.82	7	10.64	15.39

Note: * Population of Song District, Kanowit District and Kapit District in 2020

Source: a Ministry of Health Malaysia (2019)

7.10 PERCEPTIONS OF THE PROPOSED PROJECT

7.10.1 Awareness and Support of the Proposed Project

Less than half (43%) of the respondents are aware of the project (**Table 7.10.1**). The main source of information regarding the project are the headmen; others are friends and relatives. The majority of the respondents were either not aware (28%) or not sure (30%) of the project prior to the survey.

Table 7.10.1: Awareness of the Proposed Project

Awareness	No. of Respondent	Percentage
Aware	79	43
Not aware	51	28
Not sure	55	30
Total	185	100

Source: CKSB fieldwork (2021)

Note: Percentages may not tally to 100 due to rounding.

Despite low awareness of the project, about two third (66%) indicated they supported the project (**Table 7.10.2**). Their support is based on perceived importance of the project to the overall economic development of Sarawak and the potential to create new jobs and business opportunities for the local communities. Others indicated that the project implementation would open roads that will provide access to their isolated lands, so they can be developed.

Nearly a quarter (24%) were unsure whether to support the project, probably due to lack of understanding of the project, or having feeling the project is unstoppable. The other 10% do not support the project.

Table 7.10.2: Respondents' Support for the Proposed Project

Support for the Project	No. of Respondent	Percentage
Supporting	122	66
Not support	18	10
Not sure	45	24
Total	185	100

Source: CKSB fieldwork (2021)

Community general supports of the proposed project was also gauged during community interviews. Given only two options i.e., to support or to oppose the proposed project, most of the communities indicated their supports (82%) while the others opposed (4%). A few communities, however, did not respond (13%) (**Table 7.10.3**). Supports of the community mostly came with conditions. The most important conditions are the land acquisition procedure shall be carried out properly, and the affected persons/ households are fairly compensated for lands and crops lost. Failure to meet these conditions, could result in people opposing the project.

The three communities (4%) that indicated their opposition are Nanga Sepanggih, Nanga Entelangau and Nanga Beguang (Rh. Rawing (Rh. John)). Based on community meetings during the fieldwork, Nanga Sepanggih and Nanga Entelangau claimed their opposition is mainly due to the unsettled alleged land claims within Baleh HEP water catchment. These communities who also claimed to represent the other three communities (i.e., Nanga Entelawan A (Rh. Jake), Nanga Entelawan B (Rh. Samon) and Nanga Serenggat (Rh. Sintau)), stated they will support the proposed project if their land claims within Baleh HEP catchment are investigated, explained and rightful claimants compensated; or they are paid (i.e., every household in these communities) for loss of livelihood equivalent to those of the Entawau group.

Table 7.10.3: Community Support/ Opposition of the Project

Worry about the Project	No. of Respondent	Percentage
Support	56	82
Oppose	3	4
No response	9	13
Total	68	100

Source: CKSB fieldwork (2021)

Note: Percentages may not tally to 100 due to rounding.

With regards to BMTLP associated Baleh HEP, the settlements involved in community interviews have split responses on whether the dam project impacts the communities. Based on rough geographical location / classification, the majority (75%) of settlements along Btg. Baleh indicate that the project impact them, compared with those of Btg. Rajang (27%), and Kanowit (5%) (see **Table 7.10.4**).

Table 7.10.4: Perception on the Impact of Baleh HEP

Geographical locations	No. of settlement	Percentage
1. Kanowit District (Mapai, Kabah, Ng Tada)		
Yes	1	5
No	10	53
Uncertain	8	42
Subtotal	19	100
2. Along Btg. Rajang and its tributaries		
Yes	7	24
No	11	38
Uncertain	11	38
Subtotal	29	100
3. Btg. Baleh (from Ng. Baleh to Ng Entawau)		
Yes	15	75
No	2	10
Uncertain	3	15
Subtotal	20	100
4. All responses		
Yes	23	34
No	23	34
Uncertain	22	32
Grand total	68	100

Source: CKSB fieldwork (2021)

Note: Percentages may not tally to 100 due to rounding.

Among current impacts mentioned are the deterioration of water quality and difficult access to upstream of the dam work - both affect fish catches which result in loss of livelihood; presence of foreign workers; and allegations on unsettled land claims and not given opportunities to work in the project. Few communities also fear future safety due to the possibilities of dam breach, and unpredicted/ variable water levels could affect river navigation and fishing activities (**Table 7.10.5**).

Some suggestions to mitigate the impacts include implementing the existing laws/ regulations associated with the development such as those on the protection of water qualities, foreign worker, etc. A few also suggested that the local communities should be supplied with clean water/possibly, treated water supplies.

Table 7.10.5: Impacts of Baleh HEP

Impacts	No. of Response
Deteriorating/ poor water quality (foul smell, yellowish)	10
Variable water levels/ depths	8
Safety (dam breach, floods)	5
Loss of livelihood	5
Unsettled claims (of affected lands)	3
Accessibility problems to upstream	2
Locals are not prioritized to job recruitment	1
Foreign workers	1

Source: CKSB fieldwork (2021)

7.10.2 Worries / Concerns Associated with the Project

Despite of encouraging supports, some the respondents (41%) are worried about the project. The others are either not worried (18%) or uncertain (41%) (**Table 7.10.6**). The summaries of their worries/ concerns associated with the project are tabulated in **Table 7.10.7** (Construction Phase) and **Table 7.10.8** (after Construction Phase).

Table 7.10.6: Worried/Concerned about the Project

Worry about the Project	No. of Respondent	Percentage
Worried	75	41
Not worried	34	18
Uncertain	76	41
Total	185	100

Source: CKSB fieldwork (2021)

7.10.2.1 Worries/Concerns during Construction Phase

During construction phase, potential water pollution; land acquisition and crop loss; loss of forest/river resources; hampered access to orchard/garden forest and rivers; and disruption of fishing activities are among major worries indicated by the respondents (**Table 7.10.7**). Among these, water pollution was the most frequently mentioned due to its impacts on river resources and fishing activities which are important to their livelihood. Land acquisition and crop loss were the other frequently mentioned issues by the respondents, raised both in community interviews and social dialogues; hence, to be addressed with great care and

sensitivity. The project activities, particularly the construction of access roads and river crossings could also affect local access to their farms/ gardens as well as hunting and fishing grounds.

The respondents also worried of the potential adverse impacts of the construction works on health of the people; increasing air pollution (emissions, dust), harassment by foreign workers; changes in landscape and general environment; and increase in river traffic / transportation activities.

Table 7.10.7: Worries Associated with the Project (Construction Phase)

Worries/Concerns	Percentage					Worry Responses
	NW	ALW	W	VW	UC	Counts
Water Pollution	0	24	48	28	0	75
Land acquisition and crop loss	3	15	48	32	1	68
Loss of forest/river resources	4	32	43	21	0	65
Prevent access to orchard/ garden, forests, rivers	12	27	42	19	0	59
Disruption to fishing activities	8	29	45	15	3	59
Impact on health of local people	2	28	43	20	8	59
Air Pollution	2	27	42	18	11	58
Harassment by foreign workers	9	31	25	31	3	56
Landscape or environmental changes	6	24	40	24	6	55
Increase on river traffic/transportation	11	38	28	15	8	53
Noise Pollution	6	30	31	22	11	53
Impact on local environmental tranquillity	10	25	34	26	5	52
Electromagnetic fields	5	24	39	21	11	52
Competition for a job	14	25	30	25	5	51
Harassment by workers	14	14	30	37	5	35
Increase in road traffic	18	18	38	13	13	31

Source: CKSB fieldwork (2021)

Notes:

Percentages may not tally to 100 due to rounding.

NW - Not Worried; ALW - A Little Worried; W - Worried; VW - Very Worried; UC - Uncertain

7.10.2.2 Worries/Concerns after Construction Phase

At the post construction phase, the potential adverse impacts particularly those related to electromagnetic fields and general health are of the most worrisome to the respondents (**Table 7.10.8**). Soil disturbances associated with the clearing of

ROW and construction of access roads during the construction stage, could result in prolong water pollution, years after the construction; hence, it is worrying as this could affect river resources and people who depend on them for their livelihood.

The project itself or its associated activities are also feared to cause access difficulties to farms/ gardens, forest and/ or rivers; adverse changes to the aesthetic value of landscape and/ or general environment; and unsettled issues related to land acquisition and crop loss.

None response to the questions on harassment by workers and increase in road traffic are probably due to the respondents did not anticipate any adverse issue associated with these two aspects after the construction phase.

Table 7.10.8: Worries Associated with the Project (after Construction Phase)

Worries/Concerns	Percentage					Worry Responses
	NW	ALW	W	VW	UC	Count
Electromagnetic fields	3	4	14	21	27	61
Impact on health of local people	4	6	13	20	32	57
Water Pollution	3	5	12	20	25	55
Loss of forest/river resources	3	5	16	27	24	54
Prevent access to orchard/garden, forests, rivers	4	7	18	30	26	53
Landscape or environmental changes	5	8	12	20	27	51
Land acquisition and crop loss	6	10	9	15	24	50
Competition for a job	7	12	14	23	18	50
Noise Pollution	9	15	11	18	22	46
Harassment by foreign workers	9	16	16	28	19	46
Air Pollution	8	14	10	17	23	45
Impact on local environmental tranquillity	13	22	11	18	19	44
Disruption to fishing activities	12	21	8	14	21	43
Increase on river traffic/transportation	13	23	9	16	19	40
Harassment by workers	-	-	-	-	-	-
Increase on road traffic	-	-	-	-	-	-

Source: CKSB fieldwork (2021)

Notes:

Percentages may not tally to 100 due to rounding.

NW - Not Worried; ALW - A Little Worried; W - Worried; VW - Very Worried; UC - Uncertain

At community level, some anticipated impacts of the project are listed in **Table 7.10.9**. The most frequently mentioned impacts are river pollution (82%) which the locals associated with project activities such as site clearing and earthworks, and loss of lands (66%), particularly productive farmlands. They also anticipated impacts on fisheries (impacts on water and aquatic environment), forest resources (loss of plants and wildlife), safety (due to presence of foreign workers), public health, etc.

Table 7.10.9: Anticipated Impacts of the Project

Anticipated impacts	No. of responses	Percentage
River (water pollution)	56	82
Lands (loss of land)/ agricultural	45	66
Fisheries (impact on water quality/ environment)	27	40
Forest (loss of forest resources)	25	37
Forest (loss of wildlife)	18	26
Safety (presence of foreign workers)	17	25
Public health and safety	14	21
Safety (road, river)	11	16
Migration (in/out)	8	12
Safety (health and infectious diseases)	6	9
Tourism (positive impact)	4	6
Electromagnetic fields	3	4

Source: CKSB fieldwork (2021)

Note: Multiple responses (i.e., a community may mention a few anticipated impacts)

7.10.3 Perceptions on Potential Job Opportunities

The majority (70%) of respondents (household survey) is of the opinion that the local people would be interested in potential jobs associated with the proposed project. Only a few (3%) thought that local people are not interested or uncertain (27%) (**Table 7.10.10**). The list of potential transmission line associated works and their preferences among local people are shown in **Table 7.10.11**. Based on local socio-economic backgrounds (i.e., working as rural farmers (**Table 7.5.12**), current/previous working experiences in logging and construction sectors as drivers (general drivers, heavy machinery drivers) (**Table 7.5.13**), most with primary to secondary levels of education (see **Table 7.5.15**), jobs associated with

earthworks, site clearing, general construction and carpentry are thought to be highly preferred the locals.

Table 7.10.10: Interest in Potential Transmission Line Associated Works

Interest in Project Associated Work	No. of Respondent	Percentage
Yes, interested	130	70
No, not interest	5	3
Uncertain	50	27
Total	185	100

Source: CKSB fieldwork (2021)

Table 7.10.11: Preference of Potential Transmission Line Associated Works

Type of Work	No. of Respondent	Percentage
Drivers (general)	97	52
Earthworks	87	47
Site clearing	84	45
Drivers (heavy machineries)	81	44
General construction workers	67	36
Carpentry	66	36
Security	53	29
Cleaner	20	11
Electrician	16	9
Welding/Steelwork	14	8
Cook	13	7
Food suppliers	12	6
Canteen operators	9	5
Stringing of lines	7	4
Working at height	0	0

Source: CKSB fieldwork (2021)

Note: Multiple responses (i.e., a respondent may mention a few job types)

Most locals have no experience with either transmission line projects, or Baleh HEP associated work as indicated by the few responds received during the community interview (**Table 7.10.12**). Therefore, acquiring local workers for the project will likely require short-term training or on-the-job training.

Table 7.10.12: Working Experiences in Power Transmission Line and Baleh HEP

Type of Work	Number (N=8397)	Percentage
Power transmission line	20	0.23
Baleh HEP	3	0.00

Source: CKSB fieldwork (2021)

7.10.4 Women Views of the Proposed BMTLP

Separate sessions were held with women in community interviews to provide them with the opportunity to express their views and to raise women-specific concerns related to the project. In a total of 68 interviews, only 10 (15%) settlements' women thought the proposed project would significantly affect them (**Table 7.10.13**). Women from nearly a third (32%) of the surveyed settlements said they were not concerned about the project. Most women are uncertain whether they will be affected, as indicated by women groups from 36 (53%) of the settlements.

Table 7.10.13: Project Impact on Women

Project Impact	No. of Respondent	Percentage
Yes	10	15
No	22	32
Uncertain	36	53
Total	68	100

Source: CKSB fieldwork (2021)

From the 10 women groups who thought the project would affect them, general safety is the most frequently mentioned concern (**Table 7.10.14**). Additionally, they are concerned about the presence of foreign workers (especially males) who they believe pose physical threats; loss of cultivated lands also means loss of income and electromagnetic fields that could pose harm to pregnant women.

Table 7.10.14: Concerns of Women

Concerns	No. of Response
Safety	6
Foreign workers	4
Loss of land /crop	2
EMF	1

Source: CKSB fieldwork (2021)

Appendix 7.2.1

Lists of Potentially Affected Communities

Kanowit Affected longhouses Baleh Mapai 500kV Transmission Line Project

No	Longhouses	Area	Population	Ethnics	Main Economic	Doors	Contact Number
1	Rh Geoffery Badi	Resettlement Nanga Tada	219	Iban	* Pertanian, Penanaman Kelapa Sawit, Kakitangan Kerajaan, Kakitangan Swasta & bekerja sendiri.	35	012-8912756
2	Rh Kubu		282			36	012-8921347
3	Rh Manggie		166			21	013-8452919
4	Rh Seredin Ak Nanggai		113			13	019-7555744
5	Rh Mani Labong		115			16	019-8480396
6	Rh Awin Bajeng		120			25	013-5787284
7	Rh Sembilan		94			15	014-5779256
8	Rh Salleh Himo	Simpang Semaram	119			17	019-9351895
9	Rh Anggat Nabau		160			21	017-9337823
10	Rh Sauh ak Lebak		144			23	013-2549221
11	Rh Peranti Bukit		115			10	-
12	Rh Asay		180			23	011-12488026
13	Rh Juin		85			20	
14	Rh German @ Ujang		95			28	019-5306587
15							-
16	Rh Aging		98			10	-
17	Rh Bajut		91			16	013-8297883
18	Rh Sidi Alap	60	13				
19	Rh Aji Dingai		185			20	019-8379089
20	Rh Sirai Unchat		121			18	014-5899495
21	Rh Nuing	Main road	112			15	013-6254753
22	Rh Janting		95			16	-
23	Rh Mawing		114			11	-
24	Rh Unting		66			10	013-8092597
25	Rh Berena		55			10	013-8989679
26	Rh Lika		45			12	017-7579660
27	Rh Selunggang		65			15	013-8268058
28	Rh Chuwie Nyerapong		228			32	013-8315247
29	Rh Philip Umpum		58			8	-
30	Rh Mathews Chuat		120			15	011-29987149
31	Rh Andin		287			56	
32	Rh Billy		220			18	

MAKLUMAT RUMAH PANJANG DI DAERAH SONG,

BIL	NAMA KAMPUNG/RH PANJANG	NAMA KETUA KAUM/TUAI RUMAH	NO TELEFON	BIL PINTU	PENDUDUK		KEGIATAN EKONOMI	KOORDINAT GPS	
					L	P		N	E
1	Rh Bantin , Emperan Tembawai, Sg Iran Song	Bantin Anak Masam	0135702889	29	96	78	Pertanian	2° 01'29.47"N	112°31'39.21"E
2	Rh Bukit, Nanga Serau, Batang Rajang Song	Bukit Anak Simpai	0138432694	25	72	62	Pertanian	2° 01'44.68"N	112°28'46.26"E
3	Rh Chang, Nanga Temiang	Chang Anak Jenang	0115887861	15	33	43	Pertanian	2° 01'56.01"N	112°27'53.13"E
4	Rh Chiry, Emperan Muntie, Sg Iran Song	Chiry Anak Jamal	0198537236	16	63	59	Pertanian	2° 02'49.01"N	112°31'05.41"E
5	Rh Darlin, Sg Lijau, Song	Darlin Anak Manja	0137840488	16	49	39	Pertanian	2°01'41.89"N	112°37'12.60"E
6	Rh Enturan, Ng Ngelai Song	Enturan Anak Timbang	01126959875	18	108	99	Pertanian	2° 02'00.83"N	112°32'47.46"E
7	Rh Gawan, Nanga Sebirah, Sg Iran Song	Gawan Anak Pang	0148842902	39	181	159	Pertanian	2° 03'35.62"N	112°30'43.16"E
8	Rh Jamal, Ulu Beguang, Song	Jamal Anak Sawang	0195208269	13	73	69	Pertanian	2°03'33.84"N	112°25'15.46"E
9	Rh Jamba, Nanga Santu, Sungai Iran, Song	Jamba Anak Nyantaw		28	88	82	Pertanian	2° 01'46.91"N	112°31'35.04"E
10	Rh James, Sg Manap, Song	James Anak Baling	0197827633	10	65	58	Pertanian	2°02'31.18"N	112°35'34.82"E
11	Rh Jipon, Nanga Gerenjang, Sg Lijau Song	Jipon Anak Limbi		25	111	110	Pertanian	2°02'32.08"N	112°37'03.79"E
12	Rh John, Nanga Ngelai Sg Song	John Anak Limbang	0138252533	20	85	70	Pertanian	2° 01'57.56"N	112°33'11.28"E
13	Rh Kelau, Nanga Lijau, Btg Rejang Song	Kelau ak Matong	0145937456	30	114	95	Pertanian	2° 00'40.65"N	112°37'16.59"E
14	Rh Manila, Nanga Selibut, Sg Song	Manila Anak Sibaf	01153527077	15	76	77	Pertanian	2° 01'45.04"N	112°33'44.17"E
15	Rh Muni @ Rua, Ulu Manap, Song	Muni @Rua Anak Belalang	0138246531	20	60	66	Pertanian	2°02'35.17"N	112°35'30.55"E
16	Rh Musin, Ng Nansang Iran Song	Musin Anak Anyok	0138198645	50	208	177	Pertanian	2° 04'05.95"N	112°30'28.50"E
17	Rh Ngitar, Lubok Rirong Ulu Song	Ngitar Anak Ali	0148911369	27	71	96	Pertanian	2° 02'06.79"N	112°34'38.89"E
18	Rh Nyala, Ng Manap Song	Nyala Anak Pang	0138226069	29	134	152	Pertanian	2°00'38.48"N	112°35'38.54"E
19	Rh Richard Nujong, Nanga Beguang, Batang Rejang, Song	Richard Nujong Anak Abit	01119194579	49	336	240	Pertanian	2° 02'07.65"N	112°25'31.05"E
20	Rh Sering, Ng Temiang Btg Rajang Song	Sering Anak Salang	0199498232	29	85	93	Pertanian	2° 01'59.18"N	112°27'51.26"E
21	Rh Stephen Ng. Selibut Sg. Song.	Stephen Ak Ajot	0105903222	22	100	98	Pertanian	2° 01'42.58"N	112°33'43.12"E
22	Rh Sugai, Ng Sebetong Sg Song	Sugai Anak Sekau	01125180568	13	62	54	Pertanian	2° 01'59.59"N	112°33'15.14"E
23	Rh Sylvester Panau, Nanga Selibut, Sg Song, Song	Sylvester Panau Anak Ragai	0198594068	32	118	117	Pertanian	2° 01'14.00"N	112°32'59.59"E
24	Rh Temdela @ John, Nanga Beguang, Batang Rejang, Song	Temdela @ John Anak Dinggai	01946775088	36	200	196	Pertanian	2° 02'05.15"N	112°25'52.83"E
25	Rh Timothy Asson Ak Medan Ng Manap, Batang Rejang Song	Timothy Asson Anak Medan	0133893038	30	104	101	Pertanian	2° 00'39.12"N	112°36'01.30"E
26	Rh Wan, Nanga Manap, Batang Rejang, Song	Wan Anak Ngj	0148844130	14	45	37	Pertanian	2°00'42.10"N	112°35'33.70"E
27	Rh Timban Emperan Munti, Sg Iran Song	Timban Anak Siba		15			Pertanian	2° 02'49.00"N	112°31'06.32"E
28	Rh Lebak Ng.Santu Sg.Iran Song	Lebak Ak Lidam	01115804427	11	54	61	Pertanian	2° 01'45.75"N	112°31'35.37"E
29	Rh Jimbon, Ng Temiang, Batang Rejang, Song	Jimbon Anak Lapek	0198766526	11	55	41	Pertanian	2° 01'57.90"N	112°27'47.28"E
30	Rh Sanabong Nanga Wai, Iran Song	Sanabong Anak Nyipa		16	42	38	Pertanian	2° 04'04.88"N	112°30'22.55"E
31	Rh Samad Rantau Panjai Song	Samad Anak Sait	0195542415	19	38	46	Pertanian	2° 01'23.62"N	112°32'59.64"E
JUMLAH KESELURUHAN				722	2,926	2,713			

Division: KAPIT
District: DAERAH KAPIT
Parliament: P.215 KAPIT
DUN: N.63 BUKIT GORAM

No.	Longhouses	Coordinate	
1	Rh Mingat Ng Bawai	2° 0'39.68"N	113° 5'7.06"E
2	Rh Ukau Ng Bawai Ili	2° 0'39.98"N	113° 4'57.17"E
3	Rh Umping Lepong Baleh Kiba	2° 0'44.10"N	113° 2'14.65"E
4	Rh Theophilus Unan Ng Baleh	2° 1'15.57"N	113° 1'43.89"E
5	Rh Jarop Pulau Pisang Ili	2° 2'13.13"N	113° 2'23.36"E
6	Rh Mengga Ng Senuang Ili	2° 3'6.23"N	113° 3'34.72"E
7	Rh Tungan Senuang Ulu	2° 3'20.29"N	113° 3'44.94"E
8	Rh Ajan Sg Aya	2° 3'16.51"N	113° 3'26.33"E
9	Rh Bakar Pulau Pisang Ulu	2° 2'16.09"N	113° 2'29.33"E
10	Rh Ayu Ng Tulie Baroh	2° 1'10.19"N	113° 1'3.82"E
11	Rh Moses Ng Tulie Tengah	2° 1'8.99"N	113° 0'59.50"E
12	Rh Riti Ng Tulie Atas	2° 1'7.74"N	113° 0'54.65"E
13	Rh Puso	2° 3'52.20"N	113° 0'57.90"E
14	Rh Barnabas Bin Adi Kpg Serian	2° 1'15.97"N	112°58'20.65"E
15	Rh Uset Lubok Engkabang	2° 1'57.67"N	112°56'53.09"E
16	Rh Janin Lubok Baya Seranau	2° 1'46.30"N	112°56'48.35"E
17	Rh Juin Rantau Tapang Seranau	2° 1'32.02"N	112°56'50.12"E
18	Rh Dick Ng Lan	2° 1'11.69"N	112°54'53.27"E
19	Rh Melebar Sg Goh Ulu	2° 1'42.24"N	112°54'35.15"E
20	Rh Jeluing Munggo Sabun	2° 1'39.59"N	112°54'31.10"E
21	Rh Tinggi Sg Goh Tengah	2° 1'23.85"N	112°54'26.87"E
22	Rh Dinggai Sg Goh Ili	2° 1'14.53"N	112°54'25.69"E
23	Rh Jacob Ng Leon	2° 2'15.40"N	112°53'45.12"E
24	Rh Latit Ng Semulong	2° 2'28.76"N	112°53'47.39"E
25	Rh Igau Bukong Baroh	2° 2'31.66"N	112°53'40.69"E
26	Rh Liang Bukong Atas	2° 2'33.50"N	112°53'41.19"E
27	Rh Kenyalang Ng Sekerangi	2° 1'49.91"N	112°54'2.94"E
28	Rh Richard Ungat Setapang Ili	2° 1'3.52"N	112°52'45.79"E
29	Rh Jambon Ng Ensilai	2° 0'54.63"N	112°51'58.73"E
30	Rh Kayan Ng Dia	2° 0'49.48"N	112°50'27.23"E
31	Rh Lugan Ng Selangkie	2° 0'55.93"N	112°49'28.04"E
32	Rh Lugom Ng Belawai	2° 1'5.00"N	112°49'0.15"E
33	Rh Lajang Ng Senyaro	2° 1'9.32"N	112°48'59.10"E
34	Rh Pioh Ng Paku	2° 2'13.11"N	112°48'15.82"E
35	Rh Kayan Ng Semujan	2° 2'27.58"N	112°48'21.50"E
36	Rh Marung Ng Terusa	2° 2'27.55"N	112°48'11.26"E
37	Rh Seliong Sekerangan Atas	2° 2'43.33"N	112°47'58.31"E
38	Rh Madau Sekerangan Tengah	2° 2'44.90"N	112°47'58.98"E

39	Rh Gelu Sekerangan Baroh	2° 2'46.10"N	112°47'59.20"E
40	Rh Mamat Ng Sepudun	2° 2'44.58"N	112°47'54.07"E
41	Rh Jabang Ng Sepayang	2° 2'47.80"N	112°47'46.12"E
42	Rh Mamat Ng Buan	2° 0'49.59"N	112°44'35.63"E
43	Rh Sana Ng Pepedi	2° 0'56.19"N	112°43'54.42"E
44	Rh Jampong Ng Ibau Ili	2° 0'40.77"N	112°42'59.71"E
45	Rh Lorrie Ng Ibau	2° 0'45.03"N	112°43'2.19"E
46	Rh Leo Ng Ibau Ulu	2° 0'47.80"N	112°43'0.24"E
47	Rh Ungka Ng Ibau Kanan	2° 0'49.44"N	112°43'3.69"E
48	Rh Bubut Benang Sg Ibau	2° 1'3.22"N	112°42'58.28"E
49	Rh Gerinsa Ng Sepayang Ibau	2° 1'47.75"N	112°43'10.63"E
50	Rh Uho Ng Segetu	2° 2'28.24"N	112°43'28.16"E
51	Rh Beli Ng Ensurai	2° 2'43.46"N	112°42'58.27"E
52	Rh Ambin Ng Segenok	2° 2'58.45"N	112°42'50.53"E
53	Rh Jandah Ng Nansang	2° 3'15.58"N	112°43'8.62"E
54	Rh Baja Ng Entangai	2° 0'46.23"N	112°41'59.78"E
55	Rh Messop Ulu Entangai	2° 3'14.35"N	112°41'13.16"E
56	Rh Rambor Ng Melipis	2° 0'50.32"N	112°40'14.25"E
57	Rh Untat Sg Melipis	2° 0'57.97"N	112°40'5.00"E
58	Rh Keling Lepong Melaban	2° 1'40.11"N	112°39'15.00"E
59	Rh Achai Ng Selubok	2° 1'51.32"N	112°38'59.87"E
60	Rh Segih Emperan Menuang	2° 2'46.32"N	112°39'1.35"E
61	Rh Mulai Batu Ninding	2° 3'12.67"N	112°39'10.81"E
62	Rumah Tat Ulu Entangai	2° 1'13.84"N	112°41'53.68"E

Appendix 7.2.2

Community Information Form

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

VILLAGE INFORMATION FORM

Form Ref: CK/EV103-792/20/BMK_____

For video/telephone interview, or when using Google Form. Are you agree to be interviewed suing telephone call or video call? Yes _____ No _____; Google Form? Yes _____ No _____

This section aims to obtain information about the village

Village Name: _____

Population: _____ (in the village _____; outside _____)

Total house/door: _____ (Occupied _____; Vacant _____) No. of family: _____

At the village: No. of male: _____ No. of female: _____ No. of children: _____

Main ethnic: _____; Other ethnics: _____

Main religion: _____; Other religion: _____

Headman: _____ No. tel.: _____

1. Does the village has/enjoy the following facilities? (the box)

Electricity a. SESCO b. Generator c. Oil Lamp d. Solar
 e. None

Water a. treated water (JBALB/Air Sibu) b. River Sg. _____ c. Gravity-fed Sg. _____ d. Rainwater

Telephone a. Fixed/landline b. Cellphone Coverage: good__ poor__; none__ c. Public d. None

Toilet a. Pull-flush b. Pour-flush c. Pit Latrine d. River
 e. Others

Waste Disposal a. Municipal b. Burn c. Bury d. Compost
 e. River/drain f. Dispose in forest g. Others:
GPS coordinates of waste dumping site (if any):

Transportation

a. Private cars b. boat c. bus/van d. Motorcycle
 e. Others: _____

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

Education and Health facilities

(Tick the box and name, distance from village)

- | | | |
|--------|--|------------------------|
| School | <input type="checkbox"/> a. Kindergarten | Name: _____ (_____ km) |
| | <input type="checkbox"/> b. Primary School | Name: _____ (_____ km) |
| | <input type="checkbox"/> c. Secondary School | Name: _____ (_____ km) |
| Health | <input type="checkbox"/> a. Clinic | Name: _____ (_____ km) |
| | <input type="checkbox"/> b. Hospital | Name: _____ (_____ km) |

2. Public/community facilities in your village (tick the box)

- | | | |
|--|---|---|
| <input type="checkbox"/> a. Cemetery | <input type="checkbox"/> f. Playing fields | <input type="checkbox"/> k. Others: _____ |
| <input type="checkbox"/> b. Community Hall | <input type="checkbox"/> g. Badminton Court | _____ |
| <input type="checkbox"/> c. Library | <input type="checkbox"/> h. Grocery Store | _____ |
| <input type="checkbox"/> d. Mosque | <input type="checkbox"/> i. Marketplace | _____ |
| <input type="checkbox"/> e. Church | <input type="checkbox"/> j. Post Office | |

3. Is there any security and development committee in the village (JKKK)? a. Yes _____; b. No

4. Economic activities of the village population

Economic Activities	No. of Household	Note
<input type="checkbox"/> a. Fishing/fisherman		
<input type="checkbox"/> b. Agriculture		
<input type="checkbox"/> c. Animal husbandry		
<input type="checkbox"/> d. Tourism		
<input type="checkbox"/> e. Civil service		
<input type="checkbox"/> f. Private firms - supporting e.g. clerical, gen. workers		
<input type="checkbox"/> g. Shop/supermarket, restaurant etc.		
<input type="checkbox"/> h. Manufacturing		
<input type="checkbox"/> i. Self-employed/business owner		
<input type="checkbox"/> j. Construction labourer		
<input type="checkbox"/> k. Logging/timber industry		
<input type="checkbox"/> l. Others		

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

5. Types of land use in village and nearby areas

6. Local uses of rivers

Utilizations	Trends			Remarks/ Why?
	Frequent	Rarely	Never	
<input type="checkbox"/> a. Water supply	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> b. Transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> c. Fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> d. Washing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> e. Bathing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> f. Recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> g. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7. Local uses of forests/bushes

Utilizations	Trends			Remarks/ Why?
	Same	Easy	Harder to obtain	
<input type="checkbox"/> a. Hunting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> b. Timber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> c. Poles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> d. Bamboo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> e. Rattan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> f. Vegetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> g. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8. What are the environmental problems/issues in your village area / longhouse?

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

9. What are the health problems / issues in your village / longhouse? Are they getting better or worse? Why?

Issue/health Problems	Trends			Remarks/ Why?
	Better	Same	Worst	
<input type="checkbox"/> a. Cleanliness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> b. Mosquitoes (dengue, malaria)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> c. Infectious diseases (TB, Covid-19, hepatitis)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> d. Heart, BP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> e. Pest issue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> f. Health service accessibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> g. Asma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> h. Cancer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> i. Diabetes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> j. Skin disease	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> k. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

10. Is there any problem / issue involving single parents, abuse of woman, elderly people, disabled etc. in your village / longhouse?

Issues	Note/remarks
<input type="checkbox"/> a. Single parent	
<input type="checkbox"/> b. Abuse of women	
<input type="checkbox"/> c. Elderly people	
<input type="checkbox"/> d. Disabled person	
<input type="checkbox"/> e. Drug abuse	
<input type="checkbox"/> f. Alcohol abuse	
<input type="checkbox"/> g. Drug abuse	
<input type="checkbox"/> h. Others	

11. Historical Place/Archaeological Site/Sacred/Cemetery (locally/nearby). All different types of sites: grave locations and cemeteries; sites with sacred or traditional meanings (sacred rocks, and groves); sites of historical importance; sites associated with local stories or legends, etc.

Site name	GPS Coordinates
1.	
2.	
3.	
4.	

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

Locations historical Place/Archaeological Site/Sacred/Cemetery (locally/nearby). Skatch

12. Is the Project will affect / cause disturbance to:

Village burial grounds? a. Yes b. No

Heritage, or historical site? a. Yes b. No

If **Yes**, please tell about it in brief

a. Name of burial ground (name): _____

Can be accessed by foot? Or have to use boat? _____

If can be accessed by foot or boat, how long it takes to reach the site? _____

Are longhouse people frequently _____ or rarely ____ visit the site?

Any belief / legend / stories about the site? _____

If the site is disturbed, what are things locals believe going to happen? _____

b. Heritage / Historical Site (name): _____

Can be accessed by foot? Or have to use boat? _____

If can be accessed by foot or boat, how long it takes to reach the site? _____

Are longhouse people frequently _____ or rarely ____ visit the site?

Any belief / legend / stories about the site? _____

If the site is disturbed, what are things locals believe going to happen? _____

13. Project impacts (expected to be associated with Project implementation)

<input type="checkbox"/> a. River (water pollution)	<input type="checkbox"/> g. Safety (road, river)
<input type="checkbox"/> b. Forest (loss of forest resources)	<input type="checkbox"/> h. Safety (health, infectious diseases)
<input type="checkbox"/> c. Forest (loss of wildlife)	<input type="checkbox"/> i. Safety (presence of foreign workers)
<input type="checkbox"/> d. Land (loss of land)/ agricultural	<input type="checkbox"/> j. Migration (in / out)
<input type="checkbox"/> e. Public safety and health	<input type="checkbox"/> k. Tourism (positive impact)
<input type="checkbox"/> f. Fishing (impacts on water/ aquatic environment)	<input type="checkbox"/> l. Others

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

14. Referring to Baleh Dam Project located in upper reach of Sg. Baleh, is your village or longhouse experience the impact of the Project?

- a. Yes b. No c. Not sure

15. If **Yes**, what are those impacts and how those impacts (due to Project implementation) can be avoided or prevented.

Type of Impact	Mitigation measures

16. What fields, works or activities associated with the Project that the villagers or longhouse people can be involved?

<input type="checkbox"/> a. Site clearing	<input type="checkbox"/> i. Working at height
<input type="checkbox"/> b. Earthworks	<input type="checkbox"/> j. Steelwork
<input type="checkbox"/> c. Drivers	<input type="checkbox"/> k. Carpentry
<input type="checkbox"/> d. Heavy machinery drivers (excavator etc.)	<input type="checkbox"/> l. Security
<input type="checkbox"/> e. Stringing of line	<input type="checkbox"/> m. Food supply
<input type="checkbox"/> f. Electrician	<input type="checkbox"/> n. Canteen operator
<input type="checkbox"/> g. General workers	<input type="checkbox"/> o. Cleaner
<input type="checkbox"/> h. Cook	

17. Working experience

Field

Number of people in village with this experience

a. Transmission line project

b. Baleh HEP

c. Other

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

18. How would you like SEB/ project developer to communicate with longhouse people?

Channels	Frequency (monthly, quarterly etc.)	Remarks/What info
----------	-------------------------------------	-------------------

- a. District Office
- b. Village headman
- c. Meetings
- d. Notice
- e. Others
- f.

19. Do the people in your community in general:

<input type="checkbox"/> a. Support or	<input type="checkbox"/> k. oppose Baleh HEP
<input type="checkbox"/> b. Support or	<input type="checkbox"/> l. Baleh-Mapai Transmission Line Project

20. Who in the community would be considered vulnerable, and why? How many households (elderly, disabled, single-headed households etc.).

Cat. of vulnerable	No. of households	Remarks
--------------------	-------------------	---------

- a. Elderly
- b. Single-headed households
- c. Disabled
- d. Others
- e.

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

Women’s Views on the Project

21. How do women may be differently affected by the Project?
a. Yes b. No c. Not sure

How the Project may affect woman group differently?

22. Do the women present have any different views or opinions they would like to raise

Other Issues/Comments/Suggestions

Interviewees

No. Names

Roles in the communities

Interviewees: _____ **Masa:** _____

Interviewer: _____

**Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh
– Mapai 500 kV Transmission Line Project**

BORANG MAKLUMAT KAMPUNG

Form Ref: CK/EV103-792/20/BMK_____

Untuk temu-bual video/telefon. Adakah anda/AJKKK bersetuju untuk ditemu-bual melalui panggilan telefon/video? Ya ___ Tidak ___.

Adakah anda/tuan/puan membenarkan perbualan ini dirakam? Ya ___ Tidak ___

Bahagian ini bertujuan untuk mendapatkan maklumat kampung ini

Nama & alamat rumah panjang: _____

Jumlah Penduduk: _____ (Menetap _____; Di luar _____)

Jumlah rumah/pintu: _____ (Dihuni _____; Kosong _____) Jumlah Keluarga: _____

Di Kampung: Bil. lelaki _____ Bil. perempuan _____; Bil. kanak-kanak: _____

Bangsa utama: _____; Bangsa lain: _____

Agama utama: _____; Agama lain: _____

Ketua Kaum/TR: _____ No. tel.: _____

1. Adakah kampung ini menikmati kemudahan berikut? (☑ tandakan kotak berkenaan)

Elektrik a. SESCO b. Generator c. Lampu minyak d. Solar
 d. Tiada

Air a. Paip JKR/
LAKU b. Air sungai c. Air paip graviti d. Air hujan
Sg. _____ Sg. _____

Telefon a. Talian tetap b. Bimbit c. Awam d. Tiada
Liputan: Baik ___
Buruk ___ Tiada ___

Tandas a. Pam b. Curah c. Lubang d. Sungai
 e. Lain-lain

Sampah a. Majlis
Perbandaran b. Bakar c. Tanam d. Kompos
 e. Sungai/parit f. Buang dlm hutan g. Lain-lain:

*Koordinat GPS tapak pembuangan sampah
(jika ada):*

Pengangkutan awam

a. kereta persendirian b. perahu/bot c. bas/van d. motosikal
 e. lain-lain: _____

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

Kemudahan pendidikan dan kesihatan

(tandakan kotak berkenaan dan namakan, jarak dari kpg)

Sekolah	<input type="checkbox"/> a. Tadika	Nama: _____	_____ km
	<input type="checkbox"/> b. Sekolah rendah	Nama: _____	_____ km
	<input type="checkbox"/> c. Sekolah menengah	Nama: _____	_____ km
Health	<input type="checkbox"/> a. Klinik	Nama: _____	_____ km
	<input type="checkbox"/> b. Hospital	Nama: _____	_____ km

2. Kemudahan awam/komuniti di kampung anda (tandakan kotak berkenaan)

<input type="checkbox"/> a. Tanah perkuburan	<input type="checkbox"/> f. Padang permainan	<input type="checkbox"/> Lain-lain: _____
<input type="checkbox"/> b. Dewan/Balai raya	<input type="checkbox"/> g. Gelanggang badminton	_____
<input type="checkbox"/> c. Perpustakaan	<input type="checkbox"/> h. Kedai runcit	_____
<input type="checkbox"/> d. Masjid	<input type="checkbox"/> i. Pasar	_____
<input type="checkbox"/> e. Gereja	<input type="checkbox"/> j. Pejabat Pos	

3. Ada Jawatan Kuasa Keselamatan dan Kemajuan Kampung (JKKK)? a. Ya b. Tidak

4. Kegiatan-kegiatan ekonomi penduduk tempatan

Kegiatan ekonomi	Bil. isirumah	Catatan
Menangkap ikan/nelayan		
Pertanian		
Penternakan		
Pelancongan		
Perkhidmatan awam		
Sektor swasta - kerani, pekerja am		
Kedai/supermarket, restoran		
Perkilangan		
Bekerja sendiri		
Buruh pembinaan		
Kerja balak/pembalakan		
Lain-lain pekerjaan		

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

5. Jenis guna-tanah/kegunaan tanah di kampung dan kawasan berhampiran.

6. Kegunaan sungai tempatan

Kegunaan	Trend (frequent, rarely, never)			Catatan/ Mengapa?
	Selalu	Jarang	Tak pernah	
<input type="checkbox"/> a. Sumber air paip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> b. Pengangkutan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> c. Menangkap ikan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> d. Membasuh	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> e. Mandi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> f. Rekreasi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> g. Lain lain (<i>tagang</i> etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7. Kegunaan kawasan hutan atau belukar tempatan:

Kegunaan	Trend			Catatan/ Mengapa?
	Sama	Senang	Susah	
<input type="checkbox"/> a. Berburu	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> b. Kayu pembinaan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> c. Pancang/kayu bulat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> d. Buluh	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> e. Rotan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> f. Sayuran hutan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> g. Lain-lain (Nyatakan)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8. Apakah isu /masalah alam sekitar di kawasan kampung / rumah panjang anda?

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

9. Apakah masalah / isu kesihatan di kampung / rumah panjang anda? Keadaan bertambah baik, atau bertambah teruk? Mengapa?

Issue /Masalah Kesihatan	Trends			Remarks/ Why?
	Better	Same	Worst	
<input type="checkbox"/> a. Isi kebersihan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> b. Nyamuk (denggi, malaria)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> c. Penyakit berjangkit (TB, Covid-19, hepatitis)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> d. Heart, BP,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> e. Pest issue				_____
<input type="checkbox"/> f. Kemudahan kesihatan (capaian)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> g. Asma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> h. Barah	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> i. Diabetes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> j. Penyakit kulit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> k. Lain lain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

10. Adakah masalah / isu yang melibatkan ibu bapa tunggal, kekasaran/penderaan wanita, orang tua, orang cacat dll. di kampung / rumah panjang anda?

Issues	Note/remarks
<input type="checkbox"/> a. Ibu bapa tunggal	_____
<input type="checkbox"/> b. Penderaan/ kekasaran terhadap wanita	_____
<input type="checkbox"/> c. Orang tua	_____
<input type="checkbox"/> d. Orang cacat	_____
<input type="checkbox"/> e. Salah guna dadah	_____
<input type="checkbox"/> f. Salah guna alkohol	_____
<input type="checkbox"/> g. Others	_____

11. Tempat Bersejarah/Tapak Arkeologi/Kawasan Keramat/Perkuburan (setempat/berdekatan). All different types of sites: grave locations and cemeteries; sites with sacred or traditional meanings (sacred rocks, and groves); sites of historical importance; sites associated with local stories or legends, etc.

Nama tapak	GPS Coordinates
1.	
2.	
3.	
4.	

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

Lakaran Tempat Bersejarah/Tapak Arkeologi/Kawasan Keramat/Perkuburan (setempat/berdekatan).

12. Soalan daripada Dr. Elena (Cultural Heritage component).

Adakah Projek ini akan mengganggu:

tanah perkuburan kampung? Ya ___ Tidak ___;

tapak warisan atau tempat bersejarah kampung? Ya___ Tidak ___

Kalau **Ya**, huraikan sedikit sebanyak tentang tapak/tempat tersebut:

a. Tanah perkuburan (nama) _____

Boleh jalan kaki ke tapak tersebut? Atau harus guna bot? _____

Kalau boleh jalan kaki atau guna bot, berapa lama untuk sampai _____

Adakah orang rumah panjang sering () / jarang () lawati tapak ini?

Adakah kepercayaan / lagenda / cerita tentang tapak ini? _____

Kalau tapak ini diganggu, apakah yang dipercayai akan berlaku? _____

b. Tapak warisan/bersejarah (nama) _____

Boleh jalan kaki ke tapak tersebut? Atau harus guna bot? _____

Kalau boleh jalan kaki atau guna bot, berapa lama untuk sampai _____

Adakah orang rumah panjang sering () / jarang () lawati tapak ini?

Adakah kepercayaan / lagenda / cerita tentang tapak ini? _____

Kalau tapak ini diganggu, apakah yang dipercayai akan berlaku? _____

13. Kesan-Kesan Projek (yang dijangka berkaitan dengan pelaksanaan Projek)

<input type="checkbox"/> a. Sungai (mencemarkan air)	<input type="checkbox"/> g. Keselamatan (jalan raya, sungai)
<input type="checkbox"/> b. Hutan (kehilangan sumber2 hutan)	<input type="checkbox"/> h. Keselamatan (kesihatan dan penyakit berjangkit)
<input type="checkbox"/> c. Hutan (kehilangan hidupan liar)	<input type="checkbox"/> i. Keselamatan (kehadiran pekerja asing)
<input type="checkbox"/> d. Tanah (kehilangan tanah)/ pertanian	<input type="checkbox"/> j. Migrasi (masuk/keluar)
<input type="checkbox"/> e. Keselamatan dan kesihatan awam	<input type="checkbox"/> k. Pelancongan (positive impact)
<input type="checkbox"/> f. Perikanan (kesan kepada air/ persekitaran akuatik)	<input type="checkbox"/> l. Lain-lain

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

14. Merujuk kepada Projek Empangan Baleh yang terletak di hulu Sg. Baleh, adakah kampung/rumah panjang panjang anda mengalami kesan Projek ini?

- a. Ya b. Tidak c. Tak pasti

15. Jika Ya, apakah kesan-kesan tersebut dan bagaimana kesan-kesan yang sama (kalau yang disebabkan oleh pelaksanaan Projek ini) boleh dielakkan / diatasi?

Jenis kesan/impak/isu	Bagaimana mengelak, mengatasi

16. Apakah bidang, pekerjaan atau aktiviti berkaitan Projek, yang mana penduduk kampung / rumah panjang boleh melibatkan diri?

<input type="checkbox"/> a. Membersihkan tapak/ Site clearing	<input type="checkbox"/> h. Kerja di tempat tinggi / Working at height
<input type="checkbox"/> b. Kerja tanah/ Earthworks	<input type="checkbox"/> i. Kerja besi/welding / Steelwork
<input type="checkbox"/> c. Pemandu/ Drivers	<input type="checkbox"/> j. Tukang kayu/ Carpentry
<input type="checkbox"/> d. Pemandu jentera berat (excavator etc.)	<input type="checkbox"/> k. Jaga/ Security
<input type="checkbox"/> e. Memasang tali/ Stringing of lines	<input type="checkbox"/> l. Pembekal makanan
<input type="checkbox"/> f. Juru elektrik / Electrician	<input type="checkbox"/> m. Operator kantin
<input type="checkbox"/> g. Pekerja am pembinaan	<input type="checkbox"/> n. Tukang cuci/ Cleaner
<input type="checkbox"/> h. Tukang masak	<input type="checkbox"/> o.

17. Pengalaman bekerja yang berikut:

Bidang	Number of people in village with this experience
<input type="checkbox"/> a. Projek tali api/ tali karan	
<input type="checkbox"/> b. Baleh HEP	
<input type="checkbox"/> c. Lain lain	

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

18. Bagaimana orang rumah panjang mahu SEB/ pemaju Projek berhubung dengan orang kampung atau rumah panjang?

Saluran/ Cara	Frequency (monthly, quarterly etc.	Remarks/What info
<input type="checkbox"/> a. Pejabat daerah		
<input type="checkbox"/> b. Ketua kaum/ Tuai rumah		
<input type="checkbox"/> c. Mesyuarat		
<input type="checkbox"/> d. Notis		
<input type="checkbox"/> e. Lain lain		
<input type="checkbox"/> f.		

19. Adakah orang-orang di kampung atau rumah panjang ini secara am:

<input type="checkbox"/> a. Menyokong atau	<input type="checkbox"/> membantah Projek Empangan Baleh (Baleh HEP)?
<input type="checkbox"/> b. Menyokong atau	<input type="checkbox"/> membantah Projek tali api Baleh-Mapai TLP?

20. Siapa di kampung atau rumah panjang yang dianggap sebagai golongan yang mudah terjejas (vulnerable), mengapa? Berapa keluarga (orang tua, ibu/bapa tunggal, orang cacat, dll.)

Cat. of vulnerable	No. of Household	Remarks
<input type="checkbox"/> a. Orang tua		
<input type="checkbox"/> b. Ibu/bapa tunggal		
<input type="checkbox"/> c. Orang cacat		
<input type="checkbox"/> d. Lain lain		

Environmental and Social Impact Assessment (ESIA) Study for the Proposed Baleh – Mapai 500 kV Transmission Line Project

Pandangan Wanita Wanita terhadap Projek

21. Adakah Projek ini dapat menjejaskan golongan wanita secara khusus / berbeza?

- a. Ya b. Tidak c. Tak pasti

Bagaimana Projek ini boleh menjejaskan golongan wanita secara khusus/ berbeza?

22. Adakah wanita yang hadir dalam interview mengutarakan pandangan atau pendapat berbeza tentang Projek?

Isu-Isu Lain/Komen/Cadangan

Nama orang yang ditemu-bual (interviewees)

Bil.	Nama	Jawatan dalam komuniti
1		
2		
3		
4		
5		
6		

Tarikh: _____ Masa: _____

Penemubual (interviewer): _____

Appendix 7.2.3

Household Survey Form

Social Survey Form

Environmental and Social Impact Assessment (ESIA) Study for The Proposed Baleh - Mapai 500 kV Transmission Line Project

Project Background

Sarawak Energy Berhad (SEB) proposed to construct a transmission line from Baleh to Mapai, Kanowit. The 177-km of transmission line will be located along the northern banks of Btg. Baleh and Btg. Rajang which source from Baleh HEP, traversing mostly hilly to mountainous terrains. This transmission line serves to evacuate the power generated from Baleh HEP to the Sarawak main grid system to meet the growing energy demand from Sarawak Corridor of Renewable Energy (SCORE) development on timely basis.

Chemsain Konsultant Sdn Bhd (environmental consultant) has been appointed to evaluate the environmental and social impact of this Project. Due to the fact that your house, village or longhouse is located in an area that has the potential to receive environmental and social impact (settlements along Btg. Baleh and Btg. Rajang up to 500m north of the transmission line as well as the access road to the transmission line), Chemsain would like to collect socio-economic information as well as the opinions / views of residents on this Project.

This study is necessary and important to assess the environmental and social impacts that may arise in the implementation of this Project, especially the adverse effects, so that mitigation measures to prevent or overcome these effects can be determined. In this regard, Chemsain greatly appreciates your cooperation in filling out this form. Please return the completed form to the Chemsain representative, namely: Mr. Jannatul Firdaus (0128707254), or Mr. Benji (016 8934527).



THE INFORMATION PROVIDED IS CONFIDENTIAL

For video/telephone interview, or when using Google Form. Are you agree to be interviewed suing telephone call or video call? Yes _____ No _____; Google Form? Yes _____ No _____

Village/Longhouse: _____

Enumerator: _____, Date: _____

A. Respondent: _____ (name, optional)

1. Are you? Household head: Yes _____ (Single father/mother? _____), No: _____ (who? _____)

2. Age: _____; 3. Gender _____; 4. Race: _____; 5. Religion: _____

6. Occupation: _____; 7. Education Level (highest achieved): _____

B. Household Profile

1. Number of household members* (including yourself/respondent): _____ .

2. Profile of age and gender of household members. Please write/specify a number.

Age	Total	Male	Female	Not staying at home
1 – 14				
15 – 24				
25 – 34				
35 – 64				
65+				
Total				

* Including those who live outside but not permanently, and also those who attend school outside. They will return home if they do not have a job or no longer schooling.

3. How many families live together in this house? _____

4. Occupation/Activity/Role **of every family members of this household**. Please write/specify the number.

Occupation/ Activity/Role	Total	Male	Female	Workplace/school/stay & number (If not located within this village)
Farmer				
Construction Labourer				
Business operator/owners				
Carpenter				
Factory work				
Sale Assistant/supermarket; restaurant etc..				
Private firm - clerical, gen. worker				
Logging/timber industry				
Civil service				
Unemployed/looking for job				
Pension/retirement				
Housewives				
Old/disabled/sick				
Student/schooling				
Infant/toddler/child				
Total				

5. Accommodation. Tick (✓)

Home Ownership	Type of house	Building materials	Condition
Own house ____	Longhouse ___ / ___	Wood ____	Comfortable ____
Other's ____	Village ___ / ___	Wood-Brick ____	Not comfortable ____
Renting ____	Terrace ___ / ___	Brick ____	Crowded ____
Employer's ____	Twin house ___ / ___	Cement-board ____	
	Bungalow ___ / ___	Others: _____	

6. Mobile property owns by family?

Mobile Property	Tick (✓)	Mobile Property	Tick (✓)
Car / motorbike		Chainsaw	
Boat/ outboard engine		Fridge	
Settee /cushion		Computer	
Television / TV		Washing Machine	
Radio		Gas Stove	
Generator set		Electric Oven	

7. Type of toilet? Tick (✓)

Pour-flushed toilet		Pit toilet	
Pump/pull-flushed toilet		No toilet	

8. How does your family dispose of trash?

Waste Disposal Method	Tick (✓)
Collected by the District Council	
Bury/Plant	
Burning	
Dispose of in a designated area near longhouse	
Throw in the forest/bush	
Throw into the river	

9. The highest level of educational attainment of all household members who are working or seeking for work (excluding retired ones). Please write / specify the number.

Education level	Total	Male	Female
Never been to school			
Primary School			
Lower Secondary			
Upper Secondary			
Skill certificate/ vocational/ technical certificate			
Diploma			
Degree			
Others:			
Total			

10. Are you / your family still involved in the following activities? Tick (✓)

Give spiritual offerings (<i>miring</i>)		Making Iban traditional blankets (<i>pua kumbu</i>)	
Weaving (utilizing locally sourced rattan, palms, screwpine etc.)		Hunting / <i>ngasu</i>	
		Fishing/ <i>berikan</i>	

11. Household Monthly Income (i.e. the income of everyone in your family):

Occupational sector	Total (RM)
Agricultural/farm	
Salary/Wages/Commissions/Bonuses	
Fishing	
Business/Self-employed	
Sales of forest/river products	
Remittances	
Rental/ Dividend	
Others:	
Total	

C. Ownership and Use of Land, Forest Resources and Rivers

1. Does your family own land (other than house site)? Yes _____ (acre: _____) No _____

2. Does your family have lands that:

(a). located in the ROW of the transmission line? Yes _____; No _____; Not sure _____

(b). affected by the access roads to the transmission line? Yes _____; No _____; Not Sure _____

3. If Yes, what is the status of these land (affected by the transmission line / affected by the access road / substation)?

NCR _____; Native area land (NAL): _____; Mixed zone: _____ others: _____

4. What is the use of these lands (i.e. affected lands)?

Crops	Tick (✓)	Crops	Tick (✓)
Wet-paddy		Fish pond	
Hill-paddy		Fruit trees (bananas, durians, etc.)	
Short-term crops (vegetables, corn, beans etc.)		Rented out	
Rubber		Part of Boustead Pelita Kanowit oil palm plantation (as participants)	
Pepper		idle/under-utilized / <i>temuda</i>	
Oil Palm		Business	
House lot/farm hut/ building		Others:	

5. Does your family rearing animals? Yes No

- a. Chicken d. Fish
 b. Duck e. Other
 c. Pig h.

6. Are forest resources around the longhouse / village important to your family?

- Yes, important (go to question No. 7)
 Not important
 Not sure

7. Is your family involved in the collection and / or utilize/use of forest/bushes? Yes No

Utilizations	Trends			Remarks/ Why?
	Same	Easy	Harder to obtain	
<input type="checkbox"/> a. Hunting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> b. Timber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> c. Poles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> d. Bamboo	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> e. Rattan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> f. Vegetables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> g. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

8. Are river resources around the longhouse / village important to your family?

- Yes, important (go to question No. 9)
 Not important
 Not sure

9. Is your family involved in the collection utilize/use of rivers? Yes No

Utilizations	Trends			Remarks/ Why?
	Frequent	Rarely	Never	
<input type="checkbox"/> a. Water supply	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> b. Transport	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> c. Fishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> d. Washing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> e. Bathing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> f. Recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> g. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

D. Opinion Survey on the ‘Proposed Transmission Line’ Project

1. Have you heard of this Project proposal? Yes No Not sure

If **Yes**, from where / who? _____

Do you have any knowledge on what a Transmission Line is? Yes No

2. Do you support / agree with this Project? Yes No Not Sure

3. Are there any benefits of this project? Yes No Not Sure

4. What are there expected benefits of the Project?

5. Do you have any concerns/worries about this Project? Yes No Uncertain

6. What are your worries, and level of concern related to the implementation of this Project (Construction Stage)?

	Not Worried	A little worried	Worry	Very Worried	Uncertain
a. Water Pollution					
b. Air Pollution					
c. Noise Pollution					
d. Impact on health of local people					
e. Land acquisition and crop loss					
f. Loss of forest/river resources					
g. Prevent access to orchard/garden, forests, rivers					
h. Disruption to fishing activities					
i. Competition for a job					
j. Harassment by foreign workers					
k. Harassment by workers					
l. Increase on road traffic					
m. Increased on river traffic/transportation					
n. Impact on local environmental tranquillity					
o. Landscape or environmental changes					
p. Electromagnetic fields					
q. Other concerns (specify):					

7. What are your worries, and level of concern related to the implementation of this Project (after Construction Stage)?

	Not Worried	A little worried	Worry	Very Worried	Uncertain
a. Water Pollution					
b. Air Pollution					
c. Noise Pollution					
d. Impact on health of local people					
e. Land acquisition and crop loss					
f. Loss of forest/river resources					
g. Prevent access to orchard/garden, forests, rivers					
h. Disruption to fishing activities					
i. Competition for a job					
j. Harassment by foreign workers					
k. Harassment by workers					
l. Increase on road traffic					
m. Increase on river traffic/transportation					
n. Impact on local environmental tranquillity					
o. Landscape or environmental changes					
p. Electromagnetic fields					
q. Other concerns (specify):					

8. Will people in your community be interested in employment related to this Project?

Yes No Uncertain

If Yes, in which areas?

Comments / Issues / Suggestions / Additional Views

- END -

Borang Soalselidik

Kajian Penilaian Impak Alam Skitar dan Sosial (ESIA) untuk Cadangan Projek 'Baleh- Mapai 500 kV Transmission Line Project' atau Projek tali api/karan Baleh-Mapai 500 kV, Sarawak

Latar belakang Projek

Sarawak Energy Berhad (SEB) bercadang untuk membina tali karan/api dari Baleh ke Mapai, Kanowit. Tali karan sepanjang 177 km ini bermula dari Empangan Hidroelektrik Baleh (Baleh HEP), akan melalui kawasan di sebelah utara tebing Btg. Baleh dan Btg. Rajang (sila rujuk peta di bawah). Tujuan projek ini adalah untuk menyalurkan tenaga elektrik/api karan yang dijana di Baleh HEP, ke Sistem Grid Sarawak. Tenaga elektrik yang dihasilkan oleh Baleh HEP diperlukan untuk menyokong pembangunan industry di kawasan Sarawak Corridor of Renewable Energy (SCORE), dan Sarawak secara umumnya.

Chemsain Konsultant Sdn Bhd (syarikat perunding alam sekitar) telah dilantik untuk membuat penilaian kesan alam sekitar dan social Projek ini. Oleh sebab rumah, kampung atau rumah panjang anda terletak dalam kawasan yang berpotensi menerima kesan alam sekitar dan social Projek ini (iaitu kawasan-kawasan di sepanjang Btg. Baleh dan Btg. Rajang sehingga 500m ke utara laluan tali karan, dan juga kawasan yang mungkin menjadi laluan jalan masuk ke kawasan tali api), pihak Chemsain ingin mendapatkan maklumat sosio-ekonomi serta pendapat/pandangan penduduk tentang Projek ini.

Kajian ini perlu dan penting untuk menilai kesan alam sekitar dan sosial yang mungkin timbul dalam pelaksanaan Projek, khasnya kesan-kesan buruk, supaya langkah-langkah pencegahan untuk mengelakkan atau mengatasi kesan-kesan ini dapat ditentukan. Sehubungan itu, pihak Chemsain amat menghargai kerjasama anda untuk mengisi borang ini. Sila kembalikan borang yang siap diisi kepada wakil Chemsain iaitu: En. Jannatul Firdaus (0128707254), atau Encik Benji (016 8934527).



MAKLUMAT YANG DIBERIKAN ADALAH SULIT

Untuk temu-bual video/telefon, atau menggunakan Google Form. Adakah anda bersetuju untuk ditemu-bual melalui panggilan telefon/video? Ya ___ Tidak ___; Google Form? Ya ___ Tidak ___

Kampung/Rumah Panjang: _____

Pembanci: _____, *Tarikh:* _____

A. Responden: _____ (nama, optional)

1. Adakah anda? Ketua isirumah: Ya ___ (Ibu/Bapa tunggal? ___), Tidak: ___ (siapa? _____)

2. Umur: _____; 3. Jantina _____; 4. Bangsa: _____; 5. Agama: _____

6. Pekerjaan: _____; 7. Pendidikan (tertinggi dicapai): _____

B. Profile Isirumah

1. Bilangan anggota isirumah * (termasuk diri anda/responden): _____ orang.

2. Profile umur dan jantina anggota isirumah. Sila tuliskan/nyatakan bilangan.

Umur	Jumlah	Lelaki	Perempuan	Tidak tinggal di rumah
1 – 14				
15 – 24				
25 – 34				
35 – 64				
65+				
Jumlah besar				

*Termasuk mereka yang tinggal di luar tetapi bukan secara tetap dan juga mereka yang bersekolah di luar. Mereka ini akan balik ke rumah kalau tidak mempunyai perkerjaan atau tidak bersekolah lagi.

3. Berapa buah keluarga yang tinggal bersama dalam rumah ini? _____

4. Pekerjaan/Kegiatan/Peranan **semua** anggota isirumah tersebut. Sila tuliskan/nyatakan bilangan.

Sektor pekerjaan/ Kegiatan/Peranan	Jum.	Lelaki	P'puan	Tempat kerja/sekolah/tinggal & Bilangan (Jika bukan di kampung/rumah panjang)
Petani				
Buruh pembinaan				
Berniaga/business				
Tukang rumah/ perahu				
Kerja kilang				
Pembantu jualan/ supermarket; restoran dll.				
Sektor swasta_ kerani, pekerja am				
Kerja balak/ pembalakan				
Sektor awam				
Menganggur/sedang mencari kerja				
Pencen/bersara				
Suri rumah				
Tua/cacat/sakit				
Bersekolah				
Anak kecil				
Jumlah besar				

5. Rumah/Tempat tinggal. Tik (✓) ruang yang berkenaan.

Pemilikan rumah	Jenis rumah / Tingkat	Bahan binaan	Keadaan
Rumah sendiri ____	Panjang ___ / ___	Kayu ____	Selesa ____
Menumpang ____	Kampung ___ / ___	Kayu-bata ____	Tidak selesa ____
Menyewa ____	Teres ___ / ___	Batu/bata ____	Sesak ____
Majikan ____	Kembar ___ / ___	Cement-board ____	
	Bungalow ___ / ___	Lain: _____	

6. Harta-harta mudahalih milih keluarga?

Harta mudah-alih	Tik (✓)	Harta mudah-alih	Tik (✓)
Kereta / motorsikal		Chainsaw	
Perahu/ enjin sangkut		Peti sejuk	
Settee /kusyen		Komputer	
Television / TV		Mesin basuh	
Radio		Dapur gas	
Gen-set / enjin api		Oven elektrik	

7. Apakah jenis tandas yang keluarga anda gunakan di rumah? Tik (✓)

Tandas curah		Tandas lubang	
Tandas pump/tarik		Tiada tandas	

8. Bagaimana keluarga anda melupuskan / membuang sampah?

Cara pelupusan sampah	Tik (✓)
Dipunggut oleh majlis daerah	
Tanam	
Bakar	
Buang di tempat dikhaskan dekat rumah panjang	
Buang dalam hutan / belukar	
Buang dalam sungai	

9. Tahap pencapaian tertinggi pendidikan semua anggota isirumah yang **bekerja atau sedang mencari kerja** (tidak termasuk yang sudah bersara). Sila tuliskan/nyatakan bilangan.

Tahap sekolah	Jumlah	Lelaki	Perempuan
Tidak pernah bersekolah			
Sekolah rendah			
Menengah rendah			
Menengah atas			
Sjil kemahiran/ vokasional/teknikal			
Diploma			
Ijazah			
Lain:			
Jumlah			

10. Apakah anda/keluarga anda masih terlibat dalam kegiatan berikut? Tik (✓)

<i>Miring</i>		Membuat <i>pua kumbu</i>	
Membuat anyaman rotan, <i>biru</i> , pandan/ <i>krupok</i> , bemban dll		Berburu / <i>ngasu</i>	
		Menangkap ikan/ <i>berikan</i>	

11. Pendapatan bulanan isirumah (iaitu **pendapatan semua orang** dalam keluarga anda):

Sektor pekerjaan	Jumlah (RM)
Pertanian/Kebun	
Gaji/Upah/Komisen/Bonus	
Nelayan/tangkap ikan	
Perniagaan/Kerja sendiri	
Hasil hutan/sungai	
Pemberian anak/anggota keluarga	
Sewaan/Dividen	
Lain-lain:	
Jumlah besar	

C. Pemilikan dan Kegunaan Tanah, Sumber Hutan and Sungai

1. Adakah keluarga anda memiliki tanah (**selain tapak rumah**)? Ya _____ (ekar: _____) Tidak _____

2. Adakah keluarga anda mempunyai tanah yang:

(a). terletak di dalam laluan tali api? Ya _____; Tidak _____; Tidak pasti _____

(b). kena jalan masuk ke laluan tali api atau substation? Ya _____; Tidak _____; Tidak pasti _____

3. Jika **Ya**, apakah status tanah (yang kena laluan tali api/kena jalan masuk/substation) ini?

NCR _____; Native area land (NAL): _____; Mixed zone: _____ Lain: _____

4. Apakah kegunaan tanah/tanah-tanah tersebut (yang kena ini)?

Tanaman	Tik (✓)	Tanaman	Tik (✓)
Padi paya/sawah		Kolam ikan	
Padi bukit		Pokok buah (pisang, durian, dll.)	
Tanaman jangka pendek (sayur, jagung, kacang dll.)		Sewa / disewakan	
Getah		Termasuk dalam Boustead Pelita Kanowit	
Lada		Terbiar/Tidak diusahakan / <i>temuda</i>	
Kelapa sawit		Perniagaan	
Tapak rumah/rumah kebun/ bangunan		Lain-lain:	

5. Adakah keluarga anda memelihara binatang? Ya Tidak

- a. Ayam d. Ikan
 b. Itik e. Lain lain
 c. Babi h.

6. Adakah sumber hutan di sekitar rumah panjang/kampung penting kepada keluarga

- Ya, penting (terus ke soalan No. 7)
 Tidak penting
 Tidak pasti

7. Apakah kegunaan/kepentingan hutan penting kepada keluarga anda? Ya Tidak

Kegunaan	Trend			Catatan/ Mengapa?
	Sama	Senang	Susah	
<input type="checkbox"/> a. Berburu	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> b. Kayu pembinaan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> c. Pancang/kayu bulat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> d. Buluh	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> e. Rotan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> f. Sayuran hutan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> g. Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

8. Adakah sungai di sekitar rumah panjang / kampung penting bagi keluarga anda?

- Ya, terus ke soalan No. 9:
 Tidak penting
 Tidak pasti

9. Adakah keluarga anda terlibat dalam mengumpul/menggunakan sumber sungai? Ya Tidak

Kegunaan	Trend (frequent, rarely, never)			Catatan/ Mengapa?
	Selalu	Jarang	Tak pernah	
<input type="checkbox"/> a. Sumber air paip	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> b. Pengangkutan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> c. Menangkap ikan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> d. Membasuh	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> e. Mandi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> f. Rekreasi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/> g. Lain lain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

D. Survei Pendapat tentang Projek “Proposed Transmission Line” (Projek)

1. Pernahkah anda mendengar tentang cadangan Projek ini? Ya Tidak Tak pasti

Kalau Ya, dari mana/siapa? _____

Adakah anda tahu/ punya pemahaman tentang tali karan? Ya Tidak

2. Adakah anda menyokong/setuju dengan Projek ini? Ya Tidak Tak pasti

3. Adakah Projek ini akan membawa manfaat? Ya Tidak Tak pasti

4. Apakah manfaat/kebaikan Projek ini yang anda jangkakan? _____

5. Adakah anda mempunyai kebimbangan tentang Projek ini? Ya Tidak Tak pasti

6. Apakah kebimbangan, dan tahap kebimbangan anda berkaitan dengan pelaksanaan Projek ini (Peringkat Pembinaan)?

	Tidak Bimbang	Sedikit Bimbang	Bimbang	Sangat Bimbang	Tidak Pasti
a. Pencemaran air					
b. Pencemaran udara					
c. Pencemaran bunyi bising					
d. Kesan terhadap kesihatan penduduk					
e. Pengambilan tanah dan kehilangan tanaman					
f. Kehilangan sumber hutan, sungai					
g. Halang laluan ke kebun, hutan, sungai					
h. Gangguan kepada aktiviti menangkap ikan					
i. Persaingan untuk mendapatkan pekerjaan					
j. Gangguan pekerja asing					
k. Gangguan pekerja					
l. Meningkatkan kesesakan di jalan raya					
m. Meningkatkan kesibukan laluan /pengangkutan sungai					
n. Perubahan pada ketenteraman					
o. Perubahan landskap atau persekitaran					
p. Gelombang elektro-magnetik					
q. Lain-lain kebimbangan (nyatakan):					

7. Apakah kebimbangan, dan tahap kebimbangan anda berkaitan dengan pelaksanaan Projek ini (Peringkat Operasi)?

	Tidak Bimbang	Sedikit Bimbang	Bimbang	Sangat Bimbang	Tidak Pasti
a. Pencemaran air					
b. Pencemaran udara					
c. Pencemaran bunyi bising					
d. Kesan terhadap kesihatan penduduk					
e. Pengambilan tanah dan kehilangan tanaman					
f. Kehilangan sumber hutan, sungai					
g. Halang laluan ke kebun, hutan, sungai					
h. Gangguan kepada aktiviti menangkap ikan					
i. Persaingan untuk mendapatkan pekerjaan					
j. Gangguan pekerja asing					
k. Gangguan pekerja					
l. Meningkatkan kesesakan di jalan raya					
m. Meningkatkan kesibukan laluan /pengangkutan sungai					
n. Perubahan pada ketenteraman					
o. Perubahan landskap atau persekitaran					
p. Gelombang elektro-magnetik					
q. Lain-lain kebimbangan (nyatakan):					

8. Adakah orang tempatan/ di rumah panjang berminat dengan pekerjaan berkaitan dengan Projek ini?

Ya Tidak Tak pasti

Jika Ya, apakah bidang atau bentuk pekerjaan, atau kegiatan yang berkaitan?

Komen/Isu/Cadangan/Pandangan Tambahan

- TAMAT -

Appendix 7.9.1

Morbidity Statistics

Morbidity Statistics

Table 1: Disease Cases Related to Air Pollution Seen at Klinik Kesihatan Song in 2020

Year	Month	Conj.		URTI		Inf.		Asth.		TB		Pneu.		Bron.		Emphy		Lung Ca		HPT		HF		IHD		CVA		*Total (All patients)		
		A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	
2020	J	5	7	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	709	123
	F	1	5	184	72	0	0	0	0	1	0	1	3	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	896	197
	M	2	3	153	29	0	0	0	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0	0	0	0	0	923	158	
	A	2	0	69	12	11	0	0	0	0	0	0	2	0	0	0	0	0	0	8	0	0	0	0	0	0	0	422	61	
	M	2	1	56	9	9	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	379	47	
	J	1	3	62	11	7	1	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	428	59	
	J	3	3	55	12	0	0	0	0	0	0	1	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	562	75	
	A	3	0	41	8	0	0	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	458	49	
	S	4	0	33	3	0	0	0	0	1	0	2	1	0	0	0	0	0	0	17	0	0	0	0	0	0	0	441	42	
	O	1	0	24	5	0	0	0	0	0	1	3	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	396	39	
	N	4	0	71	5	0	0	0	0	1	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	573	43	
	D	5	0	108	14	0	0	0	0	1	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	566	50	
Total		33	22	856	180	27	2	0	0	5	1	19	15	0	0	0	0	0	0	44	0	6,753	943							

Conj. : Conjunctivitis

URTI : Upper respiratory tract infections

Inf. : Influenza

Asth. : Asthma

TB : Tuberculosis

Pneu. : Pneumonia

Bron. : Chronic bronchitis

Emphy. : Emphysema

Lung Ca : Lung cancer

HPT : Hypertension

HF : Heart failure

IHD : Ischaemic heart disease

CVA : Cerebrovascular accident/stroke

*Total (All patients): Total attendance of all patients at the clinic during that month.

A: Adult

C: Children

Table 2: Disease Cases Related to Water Pollution Seen at Klinik Kesehatan Song in 2020

Year	Month	Dys.		Chol.		Typ.		Viral Hep.		Polio.		Int. Infec.		*Total (All patients)	
		A	C	A	C	A	C	A	C	A	C	A	C	A	C
2020	Jan	0	0	0	0	0	0	0	0	0	0	3	0	709	123
	Feb	0	0	0	0	0	0	0	0	0	0	2	0	896	197
	Mar	0	0	0	0	0	0	0	0	0	0	2	0	923	158
	Apr	0	0	0	0	0	0	0	0	0	0	2	1	422	61
	May	0	0	0	0	0	0	0	0	0	0	2	0	379	47
	June	0	0	0	0	0	0	0	0	0	0	3	0	428	59
	July	0	0	0	0	0	0	0	0	0	0	2	0	562	75
	Aug	0	0	0	0	0	0	0	0	0	0	2	0	458	49
	Sep	0	0	0	0	0	0	0	0	0	0	2	0	441	42
	Oct	0	0	0	0	0	0	0	0	0	0	2	0	396	39
	Nov	0	0	0	0	0	0	0	0	0	0	2	0	573	43
	Dec	0	0	0	0	0	0	0	0	0	0	3	0	566	50
Total		0	0	0	0	27	1	6,753	943						

Dys. : Dysenteries

Chol. : Cholera

Typ. : Typhoid and paratyphoid

Viral Hep. : Viral Hepatitis

Polio. : Acute poliomyelitis

Int. Inf. : Intestinal infectious diseases

*Total (All patients): Total attendance of all patients at the clinic during that month.

A: Adult

C: Children

Table 3: Disease Cases Related to Animal Vectors and Reservoirs Seen at Klinik Kesehatan Song in 2020

Year	Month	YF		DF		DHF		Mal.		Typ.		Plag.		Rab.		*Total (All patients)	
		A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C
2020	Jan	0	0	0	0	0	0	3	0	0	0	0	0	0	0	709	123
	Feb	0	0	1	0	0	0	3	0	0	0	0	0	0	0	896	197
	Mar	0	0	0	0	0	0	3	0	0	0	0	0	0	0	923	158
	Apr	0	0	0	0	0	0	5	0	0	0	0	0	0	0	422	61
	May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	379	47
	June	0	0	0	0	0	0	5	0	0	0	0	0	0	0	428	59
	July	0	0	0	0	0	0	3	0	0	0	0	0	0	0	562	75
	Aug	0	0	0	0	0	0	1	0	0	0	0	0	0	0	458	49
	Sep	0	0	0	0	0	0	4	0	0	0	0	0	0	0	441	42
	Oct	0	0	0	0	0	0	3	0	0	0	0	0	0	0	396	39
	Nov	0	0	0	0	0	0	2	0	0	0	0	0	0	0	573	43
	Dec	0	0	0	0	0	0	3	0	0	0	0	0	0	0	566	50
Total		0	0	1	0	0	0	35	0	6,753	943						

YF : Yellow fever
 DF : Dengue fever
 DHF : Dengue haemorrhagic fever
 Mal. : Malaria
 Typ. : Typhus
 Plag. : Plague
 Rab. : Rabies

*Total (All patients): Total attendance of all patients at the clinic during that month.

A: Adult
 C: Children

Table 4: Skin Disease Cases Seen at Klinik Kesehatan Song in 2020

Year	Month	Cutan.		Cell.		Derm.		Psor.		Urti. & Eryth		Dis.		Rad.		*Total (All patients)	
		A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C
2020	Jan	2	0	0	0	0	0	0	0	49	6	0	0	0	0	709	123
	Feb	3	0	1	1	4	0	0	0	57	8	0	0	0	0	896	197
	Mar	0	0	0	0	1	1	0	0	41	8	0	0	0	0	923	158
	Apr	0	0	1	0	1	2	0	0	18	0	0	0	0	0	422	61
	May	0	0	1	0	2	2	0	0	22	0	0	0	0	0	379	47
	June	0	0	0	0	0	3	0	0	27	0	0	0	0	0	428	59
	July	0	0	0	0	1	4	0	0	34	0	0	0	0	0	562	75
	Aug	0	0	0	0	2	2	0	0	28	0	0	0	0	0	458	49
	Sep	0	0	0	0	2	2	0	0	16	0	0	0	0	0	441	42
	Oct	0	0	0	0	3	2	0	0	11	0	0	0	0	0	396	39
	Nov	0	0	0	0	4	2	0	0	16	0	0	0	0	0	573	43
	Dec	0	0	0	0	2	2	0	0	7	0	0	0	0	0	566	50
Total		5	0	3	1	22	22	0	0	326	22	0	0	0	0	6,753	943

Cutan. : Cutaneous abscess/furuncle and carbuncle
 Cell. : Cellulitis
 Derm. : Dermatitis and eczema
 Psor. : Psoriasis

Urti. : Urticaria
 Dis. : Disorders of skin appendages
 Eryth. : Erythemas
 Rad. : Radiodermatitis and other radiation-related disorders of the skin and subcutaneous tissue

*Total (All Patients): Total attendance of all patients at the clinic during that month.

A: Adult
 C: Children

Table 5: Disease Cases Related to Air Pollution Seen at Hospital Kanowit in 2020

Year	Month	Conj.		URTI		Inf.		Asth.		TB		Pneu.		Bron.		Emphy		Lung Ca		HPT		HF		IHD		CVA		*Total (all patients)	
		A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C
2020	J	18	8	263	159	1	2	11	11	3	0	2	10	7	7	0	0	0	0	31	0	0	0	4	0	11	0	1,477	314
	F	26	12	275	160	0	2	8	5	7	0	0	4	1	7	0	0	0	0	31	0	0	0	3	0	8	0	1,154	336
	M	25	13	291	137	0	4	3	4	3	0	0	8	0	8	0	0	0	0	27	0	0	0	10	0	17	0	1,155	280
	A	12	3	91	27	0	2	1	6	5	0	2	5	5	4	0	0	0	0	19	0	0	0	5	0	7	0	707	110
	M	10	2	92	29	0	5	6	6	5	0	0	4	0	6	0	0	0	0	22	0	0	0	4	0	10	0	663	107
	J	10	4	92	23	2	3	5	4	5	0	0	4	3	4	0	0	0	0	28	0	0	0	3	0	8	0	733	108
	J	8	0	72	27	3	2	3	5	3	0	3	4	3	4	0	0	0	0	39	0	0	0	0	0	11	0	818	116
	A	10	1	99	29	0	2	3	5	3	0	2	6	3	2	0	0	0	0	24	0	0	0	1	0	13	0	779	127
	S	4	2	79	20	4	2	3	4	1	0	4	3	3	4	0	0	0	0	17	0	0	0	3	0	6	0	696	104
	O	10	3	69	23	0	0	5	6	6	0	6	4	3	3	0	0	0	0	25	0	0	0	2	0	7	0	789	98
	N	10	4	73	24	0	2	3	6	4	0	0	3	2	2	0	0	0	0	18	0	0	0	3	0	8	0	685	97
	D	4	3	76	25	3	3	4	4	7	0	0	5	0	4	0	0	0	0	35	0	0	0	4	0	6	0	881	108
Total		147	55	1572	683	13	29	55	66	52	0	19	60	30	55	0	0	0	0	316	0	0	0	42	0	112	0	10,537	1,905

Conj. : Conjunctivitis
 URTI : Upper respiratory tract infections
 Inf. : Influenza
 Asth. : Asthma
 TB : Tuberculosis
 Pneu. : Pneumonia
 Bron. : Chronic bronchitis
 Emphy. : Emphysema
 Lung Ca : Lung cancer
 HPT : Hypertension
 HF : Heart failure
 IHD : Ischaemic heart disease
 CVA : Cerebrovascular accident/stroke

*Total (All patients): Total attendance of all patients at the clinic during that month.

A: Adult

C: Children

Table 6: Disease Cases Related to Water Pollution Seen at Hospital Kanowit in 2020

Year	Month	Dys.		Chol.		Typ.		Viral Hep.		Polio.		Int. Infec.		*Total (All patients)	
		A	C	A	C	A	C	A	C	A	C	A	C		
2020	Jan	0	0	0	0	0	0	19	13	0	0	0	0	1,477	314
	Feb	0	0	0	0	0	0	23	23	0	0	0	0	1,154	336
	Mar	0	0	0	0	0	0	8	12	0	0	0	0	1,155	280
	Apr	0	0	0	0	0	0	6	9	0	0	0	0	707	110
	May	0	0	0	0	0	0	8	4	0	0	0	0	663	107
	June	0	0	0	0	0	0	15	5	0	0	0	0	733	108
	July	0	0	0	0	0	0	10	6	0	0	0	0	818	116
	Aug	0	0	0	0	0	0	12	7	0	0	0	0	779	127
	Sep	0	0	0	0	0	0	10	5	0	0	0	0	696	104
	Oct	0	0	0	0	0	0	12	3	0	0	0	0	789	98
	Nov	0	0	0	0	0	0	8	4	0	0	0	0	685	97
	Dec	0	0	0	0	0	0	4	6	0	0	0	0	881	108
Total		0	0	0	0	0	0	135	97	0	0	0	0	10,537	1,905

Dys. : Dysenteries

Chol. : Cholera

Typ. : Typhoid and paratyphoid

Viral Hep. : Viral hepatitis

Polio. : Acute poliomyelitis

Food. : Food poisoning

*Total (All patients): Total attendance of all patients at the hospital during that month.

A: Adult

C: Children

Table 7: Disease Cases Related to Animal Vectors and Reservoirs Seen at Hospital Kanowit in 2020

Year	Month	YF		DF		DHF		Mal.		Typ.		Plag.		Rab.		*Total (All patients)	
		A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C
2020	Jan	0	0	0	0	0	0	4	0	0	0	0	0	0	0	1,477	314
	Feb	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1,154	336
	Mar	0	0	2	0	0	0	1	0	0	0	0	0	0	0	1,155	280
	Apr	0	0	1	0	0	0	0	0	0	0	0	0	0	0	707	110
	May	0	0	0	0	0	0	5	0	0	0	0	0	0	0	663	107
	June	0	0	3	0	0	0	2	0	0	0	0	0	0	0	733	108
	July	0	0	1	0	0	0	1	0	0	0	0	0	0	0	818	116
	Aug	0	0	3	0	0	0	0	0	0	0	0	0	0	0	779	127
	Sep	0	0	0	0	0	0	2	0	0	0	0	0	0	0	696	104
	Oct	0	0	2	0	0	0	2	0	0	0	0	0	0	0	789	98
	Nov	0	0	0	0	0	0	11	0	0	0	0	0	0	0	685	97
Dec	0	0	2	0	0	0	1	0	0	0	0	0	0	0	881	108	
Total		0	0	14	0	0	0	32	0	10,537	1,905						

YF : Yellow fever
 DF : Dengue fever
 DHF : Dengue haemorrhagic fever
 Mal. : Malaria
 Typ. : Typhus
 Plag. : Plague
 Rab. : Rabies

*Total (All patients): Total attendance of all patients at the hospital during that month.

A: Adult
 C: Children

Table 8: Skin Disease Cases Seen at Hospital Kanowit in 2020

Year	Month	Cutan.		Cell.		Derm.		Psor.		Urti. & Eryth		Dis.		Rad.		*Total (All patients)	
		A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C
2020	Jan	3	1	4	0	0	1	0	0	34	6	0	0	0	0	1,477	314
	Feb	13	3	4	1	0	0	0	0	23	7	0	0	0	0	1,154	336
	Mar	20	3	10	1	2	1	0	0	18	4	0	0	3	0	1,155	280
	Apr	15	2	7	3	6	2	0	0	28	5	0	0	0	0	707	110
	May	14	3	4	0	11	4	0	0	17	6	1	0	0	0	663	107
	June	12	2	7	2	10	3	0	0	22	5	0	0	0	0	733	108
	July	13	2	11	1	4	5	0	0	16	3	0	0	0	0	818	116
	Aug	8	3	8	0	9	1	0	0	18	2	0	0	1	0	779	127
	Sep	3	0	8	2	5	3	0	0	20	6	0	0	0	0	696	104
	Oct	10	0	8	1	10	3	0	0	17	6	0	0	1	0	789	98
	Nov	14	0	7	1	10	0	0	0	21	6	0	0	0	0	685	97
Dec	14	2	8	1	6	4	0	0	22	4	0	0	0	0	881	108	
Total		139	21	86	13	73	27	0	0	256	60	1	0	5	0	10,537	1,905

Cutan. : Cutaneous abscess/furuncle and carbuncle

Cell. : Cellulitis

Derm. : Dermatitis and eczema

Psor. : Psoriasis

Urti. : Urticaria

Dis. : Disorders of skin appendages

Eryth. : Erythemas

Rad. : Radiodermatitis and other radiation-related disorders of the skin and subcutaneous tissue

*Total (All Patients): Total attendance of all patients at the clinic during that month.

A: Adult

C: Children

Table 9: Disease Cases Related to Air Pollution Seen at Hospital Kapit in 2020

Year	Month	Conj.		URTI		Inf.		Asth.		TB		Pneu.		Bron.		Emphy		Lung Ca		HPT		HF		IHD		CVA		*Total (all patients)		
		A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C	
2020	J	10	1	1047	430	0	0	36	14	6	0	36	22	14	0	0	0	0	0	0	35	0	9	0	13	0	33	0	2,944	734
	F	10	1	694	218	0	0	24	12	11	0	21	36	14	0	0	0	0	0	0	43	0	2	0	38	0	19	0	2,479	585
	M	10	1	365	96	0	0	30	8	5	0	24	25	14	0	0	0	0	0	0	24	0	6	0	28	0	20	2	1,929	447
	A	0	0	532	268	0	0	7	3	2	0	0	6	0	0	0	0	0	0	0	5	0	3	0	26	0	2	0	1,136	357
	M	0	1	651	262	0	0	4	0	2	0	0	1	0	0	0	0	0	0	0	16	0	3	0	20	0	2	0	1,417	378
	J	3	1	669	282	0	0	5	1	4	0	0	0	0	0	0	0	0	1	0	5	0	4	0	12	0	46	0	1,446	394
	J	0	0	665	283	0	0	5	1	8	0	1	1	0	0	0	0	0	0	0	10	0	7	0	12	0	34	1	1,476	393
	A	4	0	730	290	0	0	3	4	4	0	1	8	0	0	0	0	0	0	0	21	0	6	0	56	0	0	0	1,552	422
	S	0	0	707	277	0	0	14	3	5	0	0	5	0	0	0	0	0	0	0	14	0	5	0	70	0	1	0	1,511	415
	O	0	0	726	280	0	0	5	5	5	0	0	5	0	0	1	0	0	0	0	19	0	5	0	69	0	0	0	1,529	393
	N	0	0	639	275	0	0	11	5	3	0	1	3	20	0	0	0	0	0	0	27	0	2	0	24	0	8	0	1,411	359
	D	0	0	609	265	0	0	10	4	9	0	1	8	20	0	0	0	0	0	0	22	0	6	0	44	0	3	0	1,387	337
Total		37	5	8034	3226	0	0	154	60	64	0	85	120	82	0	1	0	1	0	241	0	58	0	412	0	168	3	20,217	5,214	

Conj. : Conjunctivitis
 URTI : Upper respiratory tract infections
 Inf. : Influenza
 Asth. : Asthma
 TB : Tuberculosis
 Pneu. : Pneumonia
 Bron. : Chronic bronchitis
 Emphy. : Emphysema
 Lung Ca : Lung cancer
 HPT : Hypertension
 HF : Heart failure
 IHD : Ischaemic heart disease
 CVA : Cerebrovascular accident/stroke

*Total (All patients): Total attendance of all patients at the clinic during that month.

A: Adult

C: Children

Table 10: Disease Cases Related to Water Pollution Seen at Hospital Kapit in 2020

Year	Month	Dys.		Chol.		Typ.		Viral Hep.		Polio.		Food/ Int. Infec.		*Total (All patients)	
		A	C	A	C	A	C	A	C	A	C	A	C	A	C
2020	Jan	0	0	0	0	0	0	82	42	0	0	0	0	2,944	734
	Feb	0	0	0	0	0	0	84	59	0	0	1	0	2,479	585
	Mar	0	0	0	0	0	0	63	68	0	0	1	0	1,929	447
	Apr	0	1	0	0	0	0	49	6	0	0	0	0	1,136	357
	May	0	0	0	0	0	0	87	18	0	0	0	0	1,417	378
	June	0	0	0	0	0	0	113	17	0	0	0	0	1,446	394
	July	0	0	0	0	0	0	113	17	0	0	2	0	1,476	393
	Aug	0	0	0	0	0	0	113	27	0	0	0	0	1,552	422
	Sep	0	0	0	0	0	0	113	27	0	0	2	0	1,511	415
	Oct	0	0	0	0	0	0	86	17	0	0	0	0	1,529	393
	Nov	0	0	0	0	0	0	113	17	0	0	1	1	1,411	359
	Dec	0	0	0	0	0	0	113	17	0	0	0	1	1,387	337
Total		0	1	0	0	0	0	1,129	332	0	0	7	2	20,217	5,214

Dys. : Dysenteries

Chol. : Cholera

Typ. : Typhoid and paratyphoid

Viral Hep. : Viral hepatitis

Polio. : Acute poliomyelitis

Food. : Food poisoning

Int. Infec. : Intestinal infectious diseases

*Total (All patients): Total attendance of all patients at the hospital during that month.

A: Adult

C: Children

Table 11: Disease Cases Related to Animal Vectors and Reservoirs Seen at Hospital Kapit in 2020

Year	Month	YF		DF		DHF		Mal.		Typ.		Plag.		Rab.		*Total (All patients)	
		A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C
2020	Jan	0	0	5	1	0	0	14	0	1	0	0	0	0	0	2,944	734
	Feb	0	0	11	0	0	0	20	0	1	0	0	0	0	0	2,479	585
	Mar	0	0	2	0	0	0	27	0	0	0	0	0	0	0	1,929	447
	Apr	0	0	1	0	0	0	6	0	0	0	0	0	0	0	1,136	357
	May	0	0	2	0	0	0	5	0	1	0	0	0	0	0	1,417	378
	June	0	0	2	0	0	0	6	0	0	0	0	0	0	0	1,446	394
	July	0	0	1	0	0	0	6	0	0	0	0	0	0	0	1,476	393
	Aug	0	0	2	0	0	0	5	0	0	0	0	0	0	0	1,552	422
	Sep	0	0	0	0	0	0	6	0	1	0	0	0	0	0	1,511	415
	Oct	0	0	1	0	0	0	6	0	0	0	0	0	0	0	1,529	393
	Nov	0	0	0	0	0	0	5	0	1	0	0	0	0	0	1,411	359
Dec	0	0	1	0	0	0	6	0	0	0	0	0	0	0	1,387	337	
Total		0	0	28	1	0	0	112	0	5	0	0	0	0	0	20,217	5,214

YF : Yellow fever

DF : Dengue fever

DHF : Dengue haemorrhagic fever

Mal. : Malaria

Typ. : Typhus

Plag. : Plague

Rab. : Rabies

*Total (All patients): Total attendance of all patients at the hospital during that month.

A: Adult

C: Children

Table 12: Skin Disease Cases Seen at Hospital Kapit in 2020

Year	Month	Cutan.		Cell.		Derm.		Psor.		Urti. & Eryth		Dis.		Rad.		*Total (All patients)	
		A	C	A	C	A	C	A	C	A	C	A	C	A	C	A	C
2020	Jan	9	6	5	16	0	7	0	0	41	56	0	2	0	0	2,944	734
	Feb	9	8	4	14	0	8	0	0	41	48	0	2	0	0	2,479	585
	Mar	8	6	8	17	1	8	1	0	40	57	0	2	0	0	1,929	447
	Apr	4	3	4	1	0	0	0	0	23	24	0	0	0	0	1,136	357
	May	7	3	1	1	0	0	0	0	23	24	0	0	0	0	1,417	378
	June	6	4	0	3	0	0	0	0	25	25	0	0	0	0	1,446	394
	July	7	4	2	5	0	1	0	0	37	29	1	0	0	0	1,476	393
	Aug	7	3	1	2	2	0	0	0	24	24	1	1	0	0	1,552	422
	Sep	4	3	3	3	1	0	0	0	23	24	1	0	0	0	1,511	415
	Oct	6	6	1	1	1	2	1	0	23	25	1	0	0	0	1,529	393
	Nov	3	3	6	3	1	1	0	0	13	9	0	0	0	0	1,411	359
	Dec	5	3	3	3	0	0	0	0	13	9	0	0	0	0	1,387	337
Total		75	52	38	69	6	27	2	0	326	354	4	7	0	0	20,217	5,214

Cutan. : Cutaneous abscess/furuncle and carbuncle
 Cell. : Cellulitis
 Derm. : Dermatitis and eczema
 Psor. : Psoriasis

Urti. : Urticaria
 Dis. : Disorders of skin appendages
 Eryth. : Erythemas
 Rad. : Radiodermatitis and other radiation-related disorders of the skin and subcutaneous tissue

*Total (All Patients): Total attendance of all patients at the hospital during that month.

A: Adult
 C: Children