APPENDIX 4

BASIC POVERTY PROFILE

Basic Poverty Profile

* Mitta Sub-township belongs to Dawei Township.

Source：JICA Survey Team

Basic Poverty Profile (1/4)

Summary	
Village Name	Rimpi Village Tract (2-Villages)
Township	Hakha
State / Region	Chin

Outline of Village

Rimpi Village Tract is a very remotely located and small populated village in north east of Hakha where very limited agricultural production potential is observed. Currently, village people produce rice and vegetables for self consumption only, and livestock breeding is the major income activities so that villagers to sell meat and animal skin (for a small portion). Since the village access depends on one road network from Hakha although villagers notes that there is a road to Kalaymyo, they face serious difficulty for market access, especially during the rainy season due to number of landslides along the mountain road. Since delivery of products from/to the market and the village takes long time with risk, villagers need to stick with self sustaining living style rather than market based.

Industrial Structure

The Village Tract is located in such remote condition from its market potential city of Hakha, and their basic industry is not sales oriented agro-productions, but for their own consumption. Goods transportation takes a lot of time and risk to the market, they tends to deliver animal meat because unit price is higher than the other agro-products, such as rice and grain. Villagers do not have other industrial activities for major income sources, and currency flow is also very limited. There is very limited demand of transportation, so that such service industry is not in place on common base. Only families with motor vehicles (motorbikes) may transport people or goods to the city area for income generation, but it is also limited.

Economical Condition of Household

As it is understood that most villagers are living on the self sustaining and self consumption basis and production. Only limited income would be made through meat sales and animal skin sales as byproduct. Average or, in fact higher side, income of a household is 10,000 kyat per month, however such income is not generated by common agricultural production. Besides, people and families in the village are supporting each other to live better instead of competing their incomes. Since there is not such strong market based industry and economic structure, people maintain very similar livelihood one to the other.

Living Condition

There is no sufficient public infrastructure provided as major road is still very weak and fragile for rain fall, their living environment is very limited in activities and time for their freedom. Since the community is very small with only 495 population, such low living condition might not be so hindering them. However, improvement of basic social service and infrastructure supply should highly contributes to their living condition improvement. Road network improvement, by the way, necessarily is changing their living status as if they could have better and easy access to larger market for more economic activities.

Overview of Infrastructure

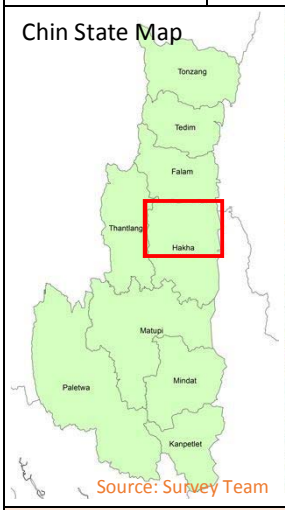
The Village Tract does not have both agricultural production oriented infrastructure and basic social service infrastructure up to date. There is no specific development plans for the infrastructure improvement either with the village. For power supply, there are families own SHS system to generate minimum electricity in which the devices cost 40,000 to 80,000 kyat while their basic income is about 10,000 per month. Therefore, the power supply is at higher demand with low electricity charge. On the other hand, water supply is only provided by the public water tank, but access to the tank is not fairly made for all. Water fetching is still takes lots of time of villagers in every day. There is no primary school existing although there is a secondary school in the village. However, only one teacher provide educational service to the village students, and this is not enough for all. Healthcare service then is not provided now since there is no healthcare worker to the village, although there is a healthcare center constructed. There are number of infrastructure and services to be improved immediately for better livelihood of villagers.

Diagnosis

There is a large demand of infrastructure improvement in all sectors, especially road network improvement, however due to repeatedly occurring landslides, the road improvement is not an easy solution to the Tracts' economic improvement. Their agro-production is also very limited due to their limited potential land for cultivation as well as size of population. Many young people are not expecting working in agricultural industry as they want to move out for better education and jobs.
Instead of giving effort to develop agriculture, there might be a better opportunity for livestock industry and its improvement for more income generation. Water supply and architectural solution to the industry, for instance, may help their better livestock production under more sustainable breeding environment control. AS if the meat production is increased, village based transportation service may also be expanded for better and more periodical transport service for people and goods. Thus, benefits returned from increased production and market sales may help villagers for income generation. Such change might also improve access to not only Hakha but also other cities, such as Kalaymyo.
Road network improvement does not only contribute to their income rise, but its should improve product purchase and delivery to the village which should also help their living condition to improve.

Basic Poverty Profile (2/4)

Village General Data		Development Possibility	
Village Name	Rimpi Village Tract (2-Villages)	Market Based Potential	Weak
Township	Hakha	Production Increase Potential	Weak
State / Region	Chin	Basic Infrastructure Potential	Weak
Population	495 (Male: 257, Female: 238)	Disadvantaged Area	Distance to Market
Major Industry	Agriculture: 39%, Weaving/Textile: 1%, Government Official: 60%	Other Development Potential	
No. of Household	78		
Major Agro-Product(s)	A: Corn (100 acre)	Quantity:	
	B: Rice (60 acre) Shifting Cultivation	Quantity:	
	C: Rice (20 acre) Flat Land	Quantity:	
	D: Foxtail Millet (2 acre)	Quantity:	
There is no sufficient p	Hakha		
Average Household Income	10,000K/month per H.H.		
Climate Info. of Region	Monsoon		
Disaster Info. of Region	Landslides		



Existing Social Services		
School (Primary)	Distance	Size/Scale N/A
	None	
School (Secondary)	Distance	in village tract
	One (1) Secondary school with level teacher stationed	
Healthcare Facility	Distance	Myaung Mya Urban
	One healthcare center is located in 15 minutes walking distance. Currently there is no medical staff.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Securing road rehabilitation works, when slope failure and/or landslide happen, enable local traffic to be opened promptly Note: Although comprehensive countermeasures against road disaster such as a slope failure, landslide, etc. are urgent needs to secure a safe traffic, project costs will be remarkably huge. Thus,rehabilitating damaged roads by maintenance equipment is considered practicable in urgent needs until such a budget to implement the countermeasure will be allocated.	
Effect(s)	1) Securing stable access to a neighboring areas 2) Improvement of BHN	Size/Scale Provision of road maintenance equipment for earthworks and transportation, such as a bulldozer, excavator, wheel loader, dump truck, etc.
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	None	
Effect(s)	-Improvement of household economy -Releasing from hard work of products transportation -Making more efficient and economic transportation mean -Diversification of commercial activities	Size/Scale Target area: 1,893 ha Power tiller (53 units), Reaper (16 units), Thresher (16 units), Excavator (4 units), Dozer (2 units), Tractor (2 units) Equipment of workshop (1 set) Training equipment (1 set)
Water Supply	N/A	
Effect(s)	N/A	Size/Scale N/A

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	Existing roads between the major road (Kalay - Hakha Road) and this village tract goes in a mountainous region. Passing this existing road is extremely dangerous due to narrow road width by slope failure, and partially muddy and slippery conditions caused by spring water even in dry season. When a landslide happens, the road blocks any traffic over weeks or months.	
	Problems Remarkably dangerous road passing a mountainous region	
Water Supply	There is a ADB's plan to assist this village for water supply.	-
	Problems N/A	
Irrigation	1) No irrigation systems to be included in the Project.	-
	Problems 1) Irrigation system is not suitable in this village where hill slopes of farmplots are so steep and water is not available for gravity irrigation.	
Agro-Mechanization	Mechanization has not stated.	
	Problems Provision of support program is difficult because of long and bad access road condition.	

Basic Poverty Profile (1/4)

Summary	
Village Name	Webula Village Tract (6-Villages)
Township	Falam
State / Region	Chin

Outline of Village

This village has been expecting itself to be upgraded to a town from village status in order to obtain more government based benefit including funding to develop social service facilities and government program establishment. The Village Tract besides producing several products including tea, sesame seeds and vegetables in general for both selling and self consumption. Since the village's upgrade to town considered strongly, making the village (future town) to be a center or regional market of the surrounding townships. Thus, the village becomes more for economic activity center of the area instead of agro-production based village. In order to achieve such administrative upgrade, there are several needs of infrastructure upgrade and the village is keen to improve them to meet the requirement.

Industrial Structure

The village depends on sales based production of vegetables (onion, garlic and tomato), and other products are mainly for self consumption, even there are some potential of value added in for instance sesame seeds. There is no other strong and higher income generating industry in the village tract, and it is not easy to establish new with the community. Marketable products should be transported by the village people or merchants form the market, but the transportation cost is still high to afford by the villagers. Reducing transport cost is one key to improve economic condition of the village people.

Economical Condition of Household

Although the villagers only produce marketable products of garlic, onion and tomato, these production is stable based on their effort for improvement and study. The village people lead by the leaders are keen to learn techniques and skills for production improvement, and such effort seems realizing their desire. Besides, the village is in such a location between major cities and markets, such as Hakha and Kalaymyo, and the road condition is relatively better comparing with other parts of the State. This road and access conditions in some way contribute their income and economic condition. There seems more improvement potential because of their effort of town upgrade.

Living Condition

Similar to the other Village Tracts in the area, the village people do not have sufficient power supply, although there is a mini hydro system for electricity. Although the village is among the mountain for water resource access potential, the water supply service could be improved a bit more for better quality and safety of supply. healthcare facility is located in the middle of the village, and common service is provided, but there is no convenient school service to the students. Road access is still have space for improvement to urban areas of Kalaymyo, for instance, to improve market potential. The farm land access is in such distance, so that village farmers need to spend more time to access, and this seems reducing productivity. Thus village internal road network improvement may be also helpful to the overall activity including production.

Overview of Infrastructure

There is a mini hydro power supply system nearby village, and power supply is made to the village. Water supply then is also made through several water tanks located in the village residential areas. Road network to the mark cities and urban areas are better than other mountain area villages as well as internal roads could be connected well with minor improvement of surfaces. Social service facilities may be more improved for their use. As the Village Tract is making effort to upgrade to Town, they need to put more work on general infrastructure, such as road, power and water supply to meet the government set requirement. However, the improvement of such infrastructure could be achieved in a short period of time. Once the village becomes town, it should be a local (regional) market center, so that the village (town) should have more services and facilities to cater increased people and economic activities. Including government service facilities, there are necessary infrastructure should be well planned for development ahead of time.

Diagnosis

It is important to set the village development concept to the Tract for upgrading of administrative status. It is not only because of the village's living and economic improvement, but also such change and improvement should help surrounding villages to engage more locally oriented but enhanced market activities. Making the Tract to the center of the local market is the key for development. The agro-production of the Village Tract then will be assisted with road access improvement with mechanization to the production activities for marketable products. Access improvement between residential zone and farm land zone will also highly helpful to reduce walking time of the farmers.
School facilities as well as other social service functions need to be installed for better living condition for all level of people considering ages as well. Improved education will support better industrial and production environment, and healthier community will change the activities of the village into regional development model to the area. This village should bear not only just self-developing standard but also regional development model for future local market establishment.

Basic Poverty Profile (2/4)

Village General Data		Development Possibility	
Village Name	Webula Village Tract (6-Villages)	Market Based Potential	Fair
Township	Falam	Production Increase Potential	Fair
State / Region	Chin	Basic Infrastructure Potential	Fair
Population	600 (Male: 298, Female: 302) Increasing	Disadvantaged Area	Distance to Market
Major Industry	Agriculture: 90%, Livestock: 5%, Shop Owner: 5%	Other Development Potential	
No. of Household	104		
Major Agro-Product(s)	A: Corn (130 acre)	Quantity: Self-sufficient	
	B: Rapeseed (350 acre)	Quantity: Self-sufficient	
	C: Onion (20 acre), Garlic (20 acre), Tomato (20 acre)	Quantity: to Market	
	D: Rice (20 acre)	Quantity: Self-sufficient	
Target Market	Kalay		
Average Household Income	400,000K/year per H.H.		
Climate Info. of Region	Monsoon		
Disaster Info. of Region	Landslide		

Existing Social Services		
School (Primary)	Distance	in village tract
	-	
School (Secondary)	Distance	in village tract
	One (1) High School in Falam T.S. (need to take exam)	
Healthcare Facility	Distance	Myaung Mya Urban
	One healthcare center is located in 10 minutes walking distance. Currently there is one medical staff.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	Landslide	
Effect(s)	1) Securing stable and shorter access to the nearby market, farm lands, etc. 2) Improvement of BHN	Size/Scale 1) Bituminous surface pavement L= 3km (Webla village) 2) Bituminous surface pavement L=10km (Pa Mum Chaung village) 3) Construction of bridge L=50m×1 bridge
Irrigation	1) Unification of 2 existing wooden weirs at head of 2 irrigation systems. 2) Connection canal between the 2 weirs. 3) Sedimentation removable in canals.	
Effect(s)	1) Stable intaking water 2) Decrease of repairing and maintenance works on the weirs 3) Decrease of sedimentation/ increase of irrigation capacity of the canal	Size/Scale 1) Construction of headworks (W=8m, concrete weir: height=1m) 2) Construction of connection canal (L=1.5km)
Mechanization	-	
Effect(s)	-Improvement of household economy -Releasing from hard work of products transportation -Making more efficient and economic transportation mean -Diversification of commercial activities	Size/Scale Target area: 1,893 ha Power tiller (53 units), Reaper (16 units), Thresher (16 units), Excavator (4 units), Dozer (2 units), Tractor (2 units) Equipment of workshop (1 set) Training equipment (1 set)
Water Supply	Construction of water supply faculties is required using a spring on mountain slope. Facilities consist of water intake, pipe-line, reservoir tank and public taps.	
Effect(s)	Water coverage will be increased using safe water by the construction of water supply facilities with mitigating water shortage on dry season and shortening water fetching time.	Size/Scale Distance between village and water source is 3 to 5 miles.

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) Existing roads connecting between Webula village and others in this village tract are unpaved surface (basically earth). 2) The existing timber suspension bridge over a river near Pa Mum Chaung village collapsed around year 2013. Thus villagers cannot access to their farm land by any vehicle and motor cycle. Problems 1) Muddy and sometimes impassable condition in rainy season 2) The collapsed bridge blocks vehicle and motor cycle to access to farm lands (Pa Mum Chaung village).	
Water Supply	Water sources for water supply are springs on mountain slope. Spring water is conveyed through pipe line to the village. Rainfall is also used in rainy season. Problems -Water shortage happens in dry season due to decrease in water discharge of springs. - Water pipe line is cut down by land slide in rainy season to suspend water supply.	
Irrigation	1) There are 2 wooden fixed weirs. (W=8-10m, weir height=1m). The upstream weir was constructed in 1970 by the Government, and the downstream weir was constructed in 1969 by villagers. 2) Total rrigation area is 138 acres (55.2ha) 3) Main canal has about 8km. Problems 1) The wooden wiers are frequently flushed out by floods, and users have to repair or re-construct	
Agro-Mechanization	Mechanization has not stated. Problems As rotation farming is major, mechanization is difficult.	-

Basic Poverty Profile (1/4)

Summary	
Village Name	Dolluang Village Tract (10-Villages)
Township	Tedim
State / Region	Chin

Outline of Village

Most of villages under this Dolluang Village Tract are very remotely located and small populated in north west of Kalaymyo in which has a big market. Only few villages located at a non-mountainous area, such as Zo Zang village, produce fair agro-products as rice, ground nuts and sun flowers, etc. Currently, mountainous village people produce tea leaf to sell and rice and corn for self consumption only, and livestock breeding is the major income activities so that villagers to sell meat. Since the access to mountainous villages depends on one rural road network between Kalay and a major road forward Tedim, they face serious difficulty for market access, especially during the rainy season due to number of landslides along the mountain road. Since delivery of products from/to the market and the village takes long time with risk in common with other remote villages in Chin State, villagers need to stick with self sustaining living style rather than market based.

Industrial Structure

Mountainous villages are located in such remote condition from its market potential city of Kalaymyo, and their basic industry is not sales oriented agro-productions other than tea leaf, but for their own consumption. Selling tea leaf is very important for villagers at mountain areas for income generation. Villagers do not have other industrial activities for major income sources. Goods transportation mainly for tea leaf takes a lot of time and risk to the market. Only families with motor vehicles (motorbikes) may transport people or goods to the city area for income generation, but it is also limited.

Economical Condition of Household

Only limited income would be made through selling tea leaf and meats. Income of a household is 25,000 to 30,000 kyat per month. Such income is not generated by common agricultural production other than villages located at a non-mountainous area as Zo Zang. Since there is not such strong market based industry and economic structure, people maintain very similar livelihood one to the other.

Living Condition

There is no sufficient public infrastructure provided as major road is still very weak and fragile for rain fall, their living environment is very limited in activities and time for their freedom. The community of mountainous villages is very small. For instance, Dolluang village and Swang Dawh village have a population of only 148 and 174, respectively, so that low living condition might not be so hindering them. However, improvement of basic social service and infrastructure supply should highly contributs to their living condition improvement. Improvement of transportation and water supply in particular will help them to get easier access from/to the village and other areas for more economic activities and water as well.

Overview of Infrastructure

As for power supply, villagers at Zo Zang village mainly generate electricity by their private generator. In case of mountainous areas as Dolluang village and Swang Dawh village, electricity is provided by mini hydro-power. As for water supply, Zo Zang village has a public well but there seems to be a problem with water quality (e.g. coliform) according to a basic site analysis in the survey. Water supply of Dolluang village and Swang Dawh village is only provided by the public water tank. Water fetching still takes lots of time of villagers in every day. There is no secondary school existing in villages. As for healthcare service, Zo Zang village and Dolluang village have healthcare facilities. On the other hand, villagers of Swang Dawh village need to vist Dolluang village or Kalaymyo to get medical services. Therefore, securing stable road conditions between villages is important although mountain roads are frequently blocked by landslides. In addition, as the important basic needs of road infrastructure, developing a bridge or stable structure over the river at the entrance of Zo Zang is essential for this village tract to secure stable access from/to villages and neighboring areas (e.g. Kalaymyo) because the river becomes impassable around 5 month in rainy season and villages are isolated.

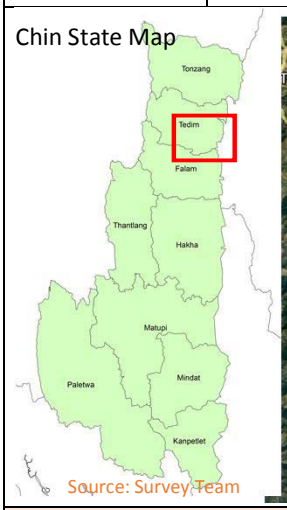
Diagnosis

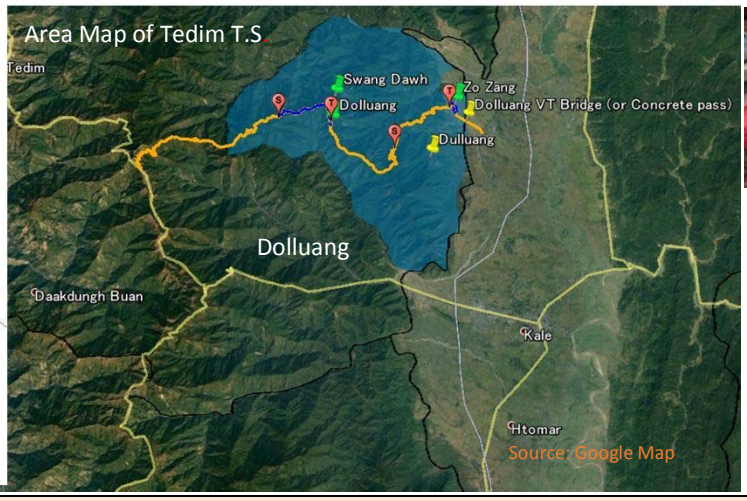
There is a large demand of infrastructure improvement in multi-sectors at this mountainous and remote area, especially road network improvement, however due to repeatedly occurring landslides, the road improvement is not an easy solution to the Tracts' economic improvement. Their agro-production is also very limited other than Zo Zang and only tea leaf produced at Dolluang village and Swang Dawh village due to their limited potential land for cultivation as well as size of population. However, improvemet of access between villages and markets (e.g. Kalaymyo) for agro-products transportation, to social services, and of safe water still essential to contribute to their income generation and to improve their basic living conditions. As an effective assistance, improvements of road and water supply will be the major issues in terms of BHN. Moreover, since selling tea leaf to markets is important for villagers of Dolluang village and Swang Dawh village for income generation, agricultural mechanization which improve transport efficiency of such agro-products is also considered important.

Basic Poverty Profile

(2/4)

Village General Data		Development Possibility	
Village Name	Dolluang Village Tract (10-Villages)	Market Based Potential	Poor
Township	Tedim	Production Increase Potential	Medium
State / Region	Chin	Basic Infrastructure Potential	Poor
Population	Dolluang: 148 (Male; 63. Female :85), Zo Zang: 1,830 (Male; 870, Female; 960), Swang Dawh: 174 (Male; 69, Female; 105)	Disadvantaged Area	Distance to Market
Major Industry	Dolluang: Agri.(50%), Livetock (45%), Zo Zang: Agri. (70%), Livestock (25%), Swang Dawh: Agri. (60%), Livestock (40%)	Other Development Potential	
No. of Household	Dolluang: 22, Zo Zang: 312, Swang Dawh: 36		
Major Agro-Product(s)	A: Tea Leaf (Dolluang: 160 acre, Swang Dawh: 270 acre)	Quantity: to-market	
	B: Rice (Dolluang: 10 acre; Zo Zang: 850 acre: Swang Dawh: 30 acre)	Quantity: Self-sufficient	
	C: Corn (Dolluang: 2 acre, Swang Dawh: 10 acre)	Quantity: self-sufficient	
	D: Ground Nuts (Zo Zang: 100 acre)	Quantity: to-Market	
	E: Sun Flower (Zo Zang: 100 acre)	Quantity: to-Market	
Target Market	Let Pan Vhaung Market in Kalay TS (Dolluang and Zo Zang), Ta Han Market In Kalay TS (Swang Dawh)		
Climate Info. of Region	Monsoon		
Climate Info. of Region	Rainy Season (May to November)		
Disaster Info. of Region	Landslide and wind		





Existing Social Services		
School (Primary)	Distance	in village tract
	Existing (need to upgrade) (Swang Dawh)	
School (Secondary)	Distance	in village tract
	-	
Healthcare Facility	Distance	Myaung Mya Urban
	One healthcare center within village (Dolluang and Zo Zang), No healthcare center in the village (Swang Dawh)	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Securing the road network with the bridge over the river between the village tract and neighboring areas 2) Securing road rehabilitation works, when slope failure and/or landslide happen, enable local traffic to be opened promptly Note: Although comprehensive countermeasures against road disaster such as a slope failure, landslide, etc. are urgent needs to secure a safe traffic, project costs will be remarkably huge. Thus,rehabilitating damaged roads by maintenance equipment is considered practicable in urgent needs until such a budget to implement the countermeasure will be allocated.	
Effect(s)	1) Securing stable access to a neighboring areas 2) Improvement of BHN	Size/Scale 1) Construction of bridge or concrete pass (L=Approx. 180 to 250m) 2) Provision of road maintenance equipment for earthworks and transportation, such as a bulldozer, excavator, wheel loader, dump truck, etc.
Irrigation	N/A	
Effect(s)	N/A	N/A
Mechanization	Improvement of transportation of the product to the market by providing power tillers with a trailer.	
Effect(s)	-Improvement of household economy through reduction of transportation cost -Releasing from hard work for transportation of the products. -Diversification of commercial activities	Size/Scale Two units of power tiller with a trailer for each village. Total four units.
Water Supply	Construction of water supply faculties is required using a spring on mountain slope. Facilities consist of water intake, pipe-line, reservoir tank and public taps.	
Effect(s)	Water coverage will be increased using safe water by the construction of water supply facilities with mitigating water shortage on dry season and shortening water fetching time.	Size/Scale Distance between village and water source is 6.6～9km.

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) At the entrance of Zo Zang village, there is no bridge over a river at present. That river is passable in dry season because the river water is mostly dried up. But the river becomes in impassable condition around 5 month in rainy season, and the said Zo Zang village and others behind Zo Zoang are isolated from neighboring areas. 2) Most of existing roads passing this village tract goes in a mountainous region in common with other areas in Chin State. Passing this existing road is extremely dangerous due to narrow road width by slope failure, and partially muddy and slippery conditions caused by spring water even in dry season. When a landslide happens, the road blocks any traffic over weeks or months.	 Road passes the river (near Zo Zang)  Mountain road
	Problems 1) No access to villages cut off by the river in rainy season 2) Remarkably dangerous road connecting mountainous areas (e.g Dolluang village, Swang Dawh village, etc.) to neighboring areas	
Water Supply	Water sources for water supply is spring on mountain slope. Spring water is conveyed through pipe line to the village. Rainfall is also used in rainy season.	 Water reservoir tank
	Problems -Water shortage happens in dry season due to decrease in water discharge of spring -Water pipe line is cut down by land slide in rainy season to suspend water supply	
Irrigation	1) In Zozng village, there is a irrigation system (1,495 acres) with a intake structure (river width=150m). 2) In Dulluang and Swang Dawh villages, there are no irrigation systems to be included in the Project. 2) Villagers cultivate tea leaves farmland on slope with mist, without irrigation.	 
	Problems 1) River water always meanders and intake water con not be taken stably. However rehabilitation of intake for stabilizing intaking water is not feasible in economically and technically due to this river has largh width. 2) In Dulluang and Swang Dawh villages, Irrigation system is not suitable in villages where hill slopes of farmkands are so steep and water is not available for gravity irrigation.	

Agro-Mechanization	<u>Zo Zang</u> 15 units of power tillers and 2 units of threshers owed by villagers. Their fields are flat adjacent to Sagaing Region suite to mechanization. <u>Dolluang</u> Tea production village. Producers transport their products in bag on foot or by a motorbike in the narrow earth way to a major road junction or the nearest town market. <u>Swang Dawh</u> Tea production village. Producers transport their products in bag on foot or by a motorbike in the narrow earth way to a major road junction or the nearest town market.	 Zo Zang  Dolluang  Swang Dawh
	<u>Problems</u> Private service providers are expected to extend their service in from Kalay area.	

Basic Poverty Profile (1/4)

Summary	
Village Name	Kyauk Ni Village Tract (5-Villages)
Township	Taunggyi
State / Region	Shan

Outline of Village

This is a medium size village tract with a population of 6,594 and the number of households is 1,182. Average farmland per farmers household is 1ha/ HH. Average farmers household income level by village differ considerably varying from 750,000~3,000,000 kyat/HH. The income level of the village on the slope is low.

Industrial Structure

There are several gravel roads and both rivers and rainwater are used for irrigation.
For the power, the area was covered by the power grid in June 2016 and until then, a solar home system was used.
The mobile phone penetration rate is 2 phones per household on average, which corresponds to the informatization of the society.

Economical Condition of Household

The food self-sufficiency rate is low. Cash crops are sold at the market to obtain cash income to purchase food. The average household income is 3,000,000 kyat/household.

Living Condition

There is one Health Care Center and one midwife is stationed there. There is a facility with a doctor in Taunggy at a distance of 4 miles from the village, and there is no problem in the access road.
As for the water supply, although there is one deep well in the village, it is currently in repair. Since water from a shallow well and rainwater stored in a tank are used, the situation is not satisfactory regarding the supply of safe water.

Overview of Infrastructure

Basic Infrastructure:
In the rainy season some road section connecting truck road become impassable causing difficulty in market access and social service access. As for the water supply problem of safe water access is observed.

Diagnosis

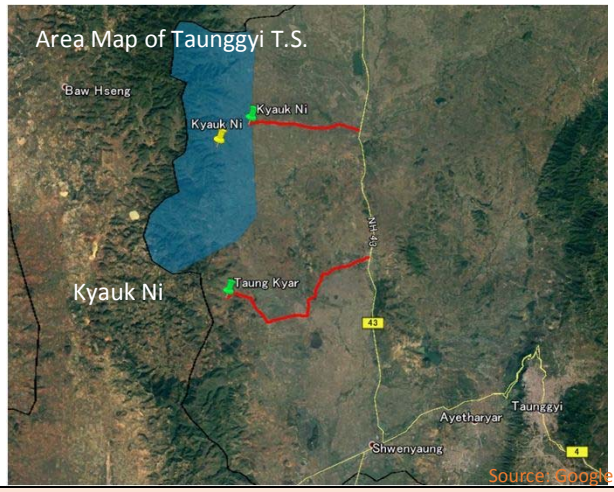
The average household income is 3,000,000 kyat, which represents a comparatively well-off condition. The average farmland size is 2 acres and the continuation of agriculture-based economic activities is assumed and progression to the agricultural product process field is the current issue. However, the future long-term prospect cannot be too optimistic. Securement of non-agricultural income by utilizing the advantages of the proximity to the township can be considered as an option.
Securement of safe water is problematic in terms of BHN and improvement is necessary. However, considering the average household income, securement of a deep well based on the contribution by villagers can also be considered as an option.

Basic Poverty Profile (2/4)

Village General Data		Development Possibility	
Village Name	Kyauk Ni Village Tract (5-Villages)	Market Based Potential	Fair
Township	Taunggyi	Production Increase Potential	Fair
State / Region	Shan	Basic Infrastcture Potential	Good
Population	6,594, Increased	Disadvantaged Area	N/A
Major Industry	Agriculture: 95%, Commercial: 5%	Other Development Potential	
No. of Household	1,182 (almost natural increase)		
Major Agro-Product(s)	A: Corn (360haKyauk Ni village)	Quantity: 5,000viss/acre	
	B: Pigeon Pea (360haKyauk Ni village)	Quantity: 300viss/acre	
	C: Rice (16ha: Kyauk Ni village)	Quantity: 64basket/acre	
	Ground nut (12ha: Kyauk Ni)	Quantity: 30viss/acre	
Target Market	Taung Ni, Shwe Naung, Than Te, Taunggyi urban area		
Averrage Household Income	750,000~3,000,000kyat/HH per year		
Climate Info. of Region	Monsoon(Moderate and Heavy Rain fall Area from May to August)		
Disaster Info. of Region	Flood during rainy season		

Shan State Map

Source: Survey Team



Existing Social Services		
School (Primary)	Distance	in village tract
	Five (5) Primary schools exist in the Tract.	
School (Secondary)	Distance	in village tract
	One (1) Secondary school exists in the Tract. Also one (1) High school exists.	
Healthcare Faculity	Distance	Within the village tract
	There is no clinic in the village tract, but there is a hospital within Taunggyi urban area at the distance of 4 mile.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	Flood during rainy season	
Effect(s)	1) Securing stable and shorter access to the nearby market, well, etc. 2) Improvement of BHN (Taung Kyar village)	Size/Scale 1) Bituminous surface pavement L=8km (Kyauk Ni village) 2) Bituminous surface pavement L=13km (Taung Kyar village) 3) Construction of bridge L=10m×1 bridge
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Construction of water supply facilities is requested using groundwater. Facilities consist of deep well, pump station, reservoir tank, pipe-line and public taps.	
Effect(s)	Water will be supplied stably in terms of water quantity and quality throughout rainy and dry season by construction of water supply facilities	Size/Scale Depth of deep well is planned 100 to 300m.

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) Existing road connecting from Kyauk Ni village to bituminous paved road is approximately 8 km with unpaved surface (basically earth and partially gravel). 2) Existing road connecting from Taung Kyar village to bituminous paved road is approximately 13 km with unpaved surface (basically earth), and a timber bridge is deteriorated and damaged.	
	Problems 1) Muddy and sometimes impassable condition in rainy season 2) Poor access even to the nearby well (Taung Kyar village)	
Water Supply	- Villagers use water of rainfall pond in foot of mountain and shallow hand dug well of neighboring village in Taung Kyar. - Villagers use water of spring pond 3 miles from the village in Kyauk Ni. Their deep well collasped this year and not in use now.	
	Problems - Rainfall in the pond drys up in dry season - Water quality of shallow hand dug well is contaminated by domestic waste water from village - Water in spring pond is contaminated, and its water level declines in dry season.	
Irrigation	1) There is no suitable irrigation system to be included in the project in the villages which the survey team visited. There is a irrigation system adjacent to the village, but this system is own and operated by the army exclusively. 2) There are very small indivisual irrigation systems with diesel pumps. However those irrigation systems do not have significant problems, and those system are not suitable size in a grant aid rehabilitation schceme.	
	Problems N/A	
Agro-Mechanization	Mechanization is developing already. 100 units of power tiller and 6 units of corn sheller are exists.	
	Problems N/A	

Basic Poverty Profile (1/4)

Summary	
Village Name	Myin Ma Hti Village Tract (14-Villages)
Township	Kalaw
State / Region	Shan

Outline of Village

This rural village is dominated by hilly terrains. This small rural village has a population of 4,100 and the number of households is 810. The average farmland size is 2 acres, which is rather small. While potatoes, cabbages, tomatoes, and sesame seeds are delivered to the market, rice and peanuts are allocated for home consumption. Since the village is located at hilly terrains and a mountain region, rice is grown in the upland. farming approach. For farming, recycled fertilizers such as recycled waste from the village are not used and they are purchased from fertilizer companies.

Industrial Structure

All the households are engaged in farming. The average farmland size is 2 acres per household. The farmlands are self-owned and all the farmers own their land. The crops are potatoes, cabbages, tomatoes, rice, peanuts, and sesame seeds. While potatoes, cabbages, tomatoes, and sesame seeds are delivered to the market, rice and peanuts are allocated to home consumption. Sine the village is located at hilly terrains and a mountain region, rice is grown in upland farming approach. For farming, recycled fertilizers such as recycled waste from the village are not used and they are purchased from fertilizer companies. Agricultural products are transported to the market mainly by tractors, motor bikes, and animal-drawn carts. Mechanization is delayed. Since the farmlands are located in hilly terrains and upland farming is practised by using rainwater, the yield is not abundant.

Economical Condition of Household

The food self-sufficiency rate is 90% and cash crops are sold at the market to obtain cash income to purchase food. The average household income is 1,000,000 kyat/household. All the households are engaged in farming. The average farmland size is 2 acres per household. The farmlands are self-owned and all the farmers own their lands.

Living Condition

There is no Health Care Center in the village. The medical facility is located in Aung Pan, at a distance of 9 miles from the village.
Rainwater is used as the water supply in the rainy season. In the dry season, river water is pumped up to the water storage tanks in two locations with the non-motorized pump due to the increased turbidity.

Overview of Infrastructure

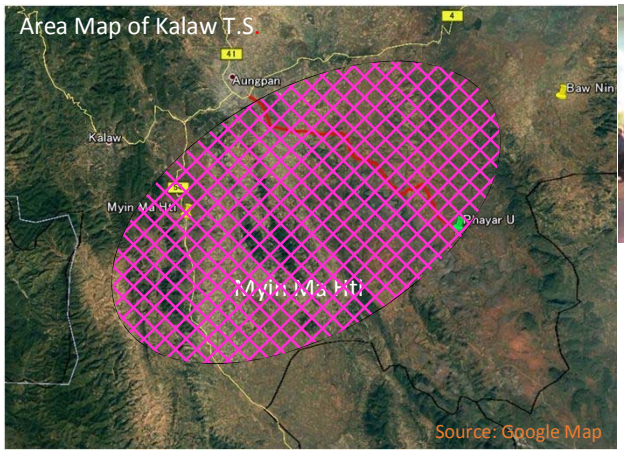
Basic Infrastructure:
Rainwater is used for the irrigation and no problem is traced since the planting season falls into the rainy season. In the dry season, upland farming is not practised. As for the water supply, water is pumped up to the rainwater tanks in two locations from the rivers and is stored.
A solar home system is used for the power and the installation cost is 150,000 kyat/set.
The mobile phone penetration rate is 1 phone per household on average, which corresponds to the informatization of the society.
There is one primary school among four villages and the primary school is located within the walking distance of 15 minutes. Most of villagers are engaged in farming after finishing the primary school and those who receive further education are rare.

Diagnosis

This village is located in the mountain area and the villagers use a different language from those in other areas. Continuation of agriculture-based economic activities is assumed. They do not have strong request for the improvement of infrastructure related to agriculture. As a direction of economic development, an increase of the production capacity by an increase of cultivated land is intended. The result of IHLCA indicates the land ownership per farm household in 2010 is 6.7 acres in Myanmar as the national average and 4.1 acres in Shan Stage. Therefore, the land ownership rate in the village is low. The long term prospect is uncertain.
In terms of BHN, securement of safe water is problematic and its improvement must be promoted.

Basic Poverty Profile (2/4)

Village General Data		Development Possibility	
Village Name	Myin Ma Hti Village Tract (14-Villages)	Market Based Potential	Week
Township	Kalaw	Production Increase Potential	Week
State / Region	Shan	Basic Infrastcture Potential	Fair
Population	4,100, Natural increase	Disadvantaged Area	Distance to market
Major Industry	Agriculture: 100%	Other Development Potential	
No. of Household	810		
Major Agro-Product(s)	A: Potato (Phyar U village)	Quantity: 3,000~4,000viss/acre	
	B: Cabbage (Phyar U village)	Quantity: 3,000viss/acre	
	C: Tamato (Phyar U village)	Quantity: 2,000viss/acre	
	D: Rice (Phyar U village)	Quantity:40basket/acre	
Target Market	Aung Pan, Traditional Post		
Averrage Household Income	1,000,000kyat/HH per year		
Climate Info. of Region	Monsoon(moderate to heavy rainfall from May to September)		
Disaster Info. of Region	No disaster in the area		



Existing Social Services		
School (Primary)	Distance	in village tract
	One (1) Primary schools exist in the Tract.	
School (Secondary)	Distance	in village tract
	Not so many children go to secondary school.	
Healthcare Faculity	Distance 9 miles	Aung Pan
	There is no no health care facility in the vlilage. For major injury or emergency, people should go to Aung Pan.	

Basic Poverty Profile

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of a road network with bituminous surface connecting villages to a major road	
Effect(s)	1) Securing stable and shorter access to a major road 2) Improvement of BHN	Size/Scale 1) Bituminous surface pavement L=16km (Phayar U village, etc.)
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Villager satisfied with current water supply. So there is no plan.	
Effect(s)	N/A	Size/Scale N/A

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	Existing road connecting from villages at a hilly area to bituminous paved road is approximately 16 km with unpaved surface (basically earth and partially gravel). Problems 1) Muddy and sometimes impassable condition in rainy season 2) Poor access to the market due to the remote location	
Water Supply	- Water sources for water supply is stream water located 1.5km from village. - Stream water is pumped up to the village to supply water from public taps. - They also use rainfall on roofs in rainy season. Problems - It is only 3 months in one year that stream water can be pumped up to the village. - Villagers fetch stream water by walking during the other months. Nevertheless, they are satisfied with current water supply.	
Irrigation	1) There is no irrigation system because this village is located on the top of hill. 2) For domestic watar use, there is a pump driven by water flow in order to pump up from lower place to hill top, without using epensive power source, like electricity or diesel power. However this is not utilized for irrigation. Problems N/A	
Agro-Mechanization	There is no machine. They cultivate by cows. Some farmers ask machine service from other villages. Problems Even though a power tiller can be bought by sales price of 2-3 heads of cow, they didn't know the advantage of multipurpose use of a power tiller.	

Summary	
Village Name	Baw Nin Village Tract (20-Villages)
Township	Kalaw
State / Region	Shan

Outline of Village

This is a village tract dominated by hilly areas. Bau Nin is a medium size village tract with a population of 11,351 and the number of households is 2,481. The average cultivated land size is 6 acres. Although shifting cultivation is practised, the farming lands are privately owned. The crops are ginger (150 acres), rice (150 acres). peanuts (150 acres), and rapeseed (150 acres). Three-year crop rotation is exercised.

Industrial Structure

Although this is an agriculture-based village, one household is engaged in general retail business for providing services to the residents. Fifteen farming households do not own land. These farming households without land are not tenant farmers and are engaged in farming for the farmers who have lands by receiving wages. The area has a gentle slope and the average farmland size is 20 acres/household. Although the total farmland size is 1,500 acres, the annual planted area is 450 acres since 5-year cycle shifting cultivation is practised. The average cultivated land size is 6 acres. The farmlands used for shifting cultivation are privately owned. For farming, bio-fertilizers are used for farming and chemical fertilizers are not used. Rainwater is used for irrigation and there is no other facility.

Economical Condition of Household

The food self-sufficiency rate is inadequate. Cash crops are sold at the market to obtain cash income to purchase food. The average farming household income is 2,000,000 to 2,500,000 kyat/household. For the wage-earning farmers without land, the amount of 70,000 kyat is paid monthly and the annual household income is 840,000 kyat.

Living Condition

Spring water is used for the drinking water. Rainwater or well water is not used. In the dry season, as there is a shortage of spring water for some periods, spring water from the neighbouring village is used. Drawing water is the task of females and 30 gallons of water are drawn, making three return trips per day. There is no Health Care Center in the village and a hospital with doctors stationed is located in He Hoe, at a distance of 9 miles from the village. There is one primary school in the village. Although there is no junior high in the village, there is one in the neighbouring village. There is a high school in He Hoe.

Overview of Infrastructure

There is an unpaved section of 2 miles up to the paved road and the section becomes impassable for two months annually. Since the village is outside of the grid coverage, a solar home system is used. The mobile phone penetration rate is one phone per household on average, which corresponds to the informatization of the society.
No sewage or rainwater drainage facility is available.

Diagnosis

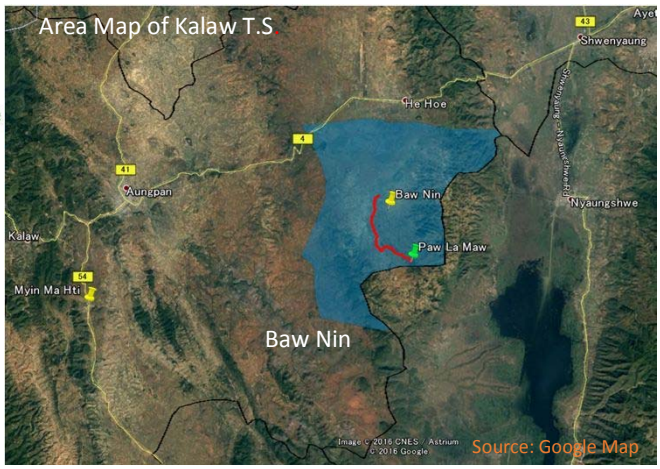
The household income is 2,000,000 kyat/year and the average farming scale is 20 acres. However, the practical farming size is 6 acres. Continuation of agriculture-based economic activities is assumed in the future also. As the issue of agriculture-related infrastructure improvement, construction of an irrigation system is considered. Support for propagation of technological knowledge for farming and rural village financing for agricultural diversity are necessary. Wage-based farm employees without their own land are increasing and hierarchy dissolution of land tenure farmers and creation of employment opportunities for employment securement will be the long-term issue.
In terms of BHN, improvements of road and water supply will be the major issues.

Basic Poverty Profile (4/4) (2/4)

Village General Data		Development Possibility	
Village Name	Baw Nin Village Tract (20-Villages)	Market Based Potential	Fair
Township	Kalaw	Production Increase Potential	Good
State / Region	Shan	Basic Infrastcture Potential	Fair
Population	11,351, slightly increased	Disadvantaged Area	N/A
Major Industry	Agriculture: 90%,, Shop 10%	Other Development Potential	
No. of Household	2,481		
Major Agro-Product(s)	A: Ginger (60ha: Paul La Maw village)	Quantity: 2,300viss/acre	
	B: Rice (60ha: Paul La Maw village)	Quantity: 20basket/acre	
	C: Groundnut (60h: Paul La Maw village) double cropping with rapeseed	Quantity: 15~50basket/acre	
	D: Rapeseed (60ha: Paul La Maw village)	Quantity: 2.5basket/acre	
Target Market	He Hoe		
Averrage Household Income	2,000,000~2,500,000 kyat/HH per year		
Climate Info. of Region	Monsoon(moderate to heavy rainfall from June to October)		
Disaster Info. of Region	No disaster in the area		

Shan State Map

Source: Survey Team



Existing Social Services		
School (Primary)	Distance	in village tract
	One (1) Primary schools exist in the village	
School (Secondary)	Distance	in village tract
	One (1) Secondary school exists in the Tract.	
Healthcare Faculity	Distance 9mile	He Hoe
	There is no clinic in the village tract, but ther is one clinic with doctor in the adjacent village.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of a road with bituminous surface connecting to a major road	
Effect(s)	1) Securing stable and shorter access to a major road 2) Improvement of BHN	Size/Scale 1) Bituminous surface pavement L=8km (Paw La Maw village)
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Construction of water supply facilities is requested using groundwater. Facilities consist of deep well, pump station, reservoir tank, pipe-line and public taps.	
Effect(s)	Water will be supplied stably in terms of water quantity and quality throughout rainy and dry season by construction of water supply facilities .	Size/Scale Depth of deep well is planned 100 to 300m.

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	Existing roads connecting from villages to bituminous paved road is approximately 8 km with unpaved surface (basically earth). Problems 1) Muddy and sometimes impassable condition in rainy season	
Water Supply	- Water source for water supply of the village is spring ponds. - Villagers take water from springs to the village by walking. It takes 15 to 30 minutes. Problems Water table of spring pond declines in dray season to cause water shortage. Villagers have anxiety on water quality in color/turbidity. They are dissatisfied with long water fetching time.	
Irrigation	There is an irrigation system (4,599 acres) with a resourvoir constructed in 1965. Some parts and structures of the system are slightly damaged by long time use. However there is no urgent needs for repairement by grant aid. Problems - There are earth canal where ID wanted to construct concrete lining. - Some division structures needs some minor repairment.	
Agro-Mechanization	20 farmers owe power tillers and provide service to other farmers. Problems N/A	

Basic Poverty Profile (1/4)

Summary	
Village Name	Doke Toe Yae Village Tract (5-Villages)
Township	Ywangan
State / Region	Shan

Outline of Village

Doke Toe Yae Village Tract is dominated slope areas. Doke Toe Yae is a small size village tract with population of 1,546 and number of households of 368. Average farmland per farmers household is small 1ha/HH.

Industrial Structure

Although this is an agriculture-based village, some households are engaged in general retail business or trading to provide services to the residents since the village is sufficiently large. The average farming land size is 2.5 acres/household. The farmlands are self-owned and there are no farmers without land. Fruit growing using the slope is the main industry and tea, lemon, coffee, and avocado trees are planted. Fruit trees are cultivated by using the slope with rainwater as the water supply.

Economical Condition of Household

The food self-sufficiency is low, which is almost 0%. Cash crops are sold at the market to obtain cash income to purchase food. The average household income is 2,160,000 kyat/household.

Living Condition

As for the drinking water, rainwater is stored in tanks. However, as the drinking water becomes insufficient during April to May each year, they purchase water from the neighbouring village at the price of 200kyat/5 gallons. There is no Health Care Center in the village and there is a doctor in Ywar Ngan town, at a distance of 14 miles from the village. A junior high school provides education services for 8 school years, combining a primary school and a junior high school.

Overview of Infrastructure

Basic Infrastructure:
The distance from the earth road of the village to a paved road is 1.5 miles and the road becomes muddy and impassable for tractors and jeeps during the rainy seasons of July and August.
Since the village is not covered by the grid, a solar home system is used for the power.
The mobile phone penetration rate is one phone/household on average, which corresponds to the informatization of the society.
No sewage or rainwater drainage facility is available.

Diagnosis

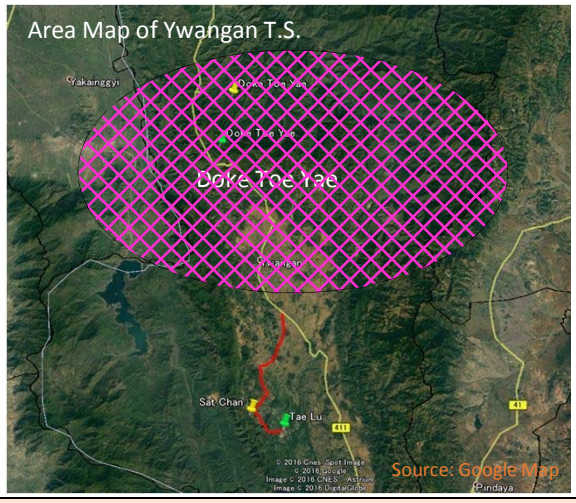
The household income is 2,160,000 kyat/year and the agricultural business scale is 2.5 acres on average and a continuation of agriculture-based economical activities is assumed for the future also. Although there is no strong request for the improvement of agricultural infrastructure, progression to the agricultural product process field is raised as the issue and support for propagation of knowledge of agricultural technology and rural village financing are necessary as the skill-based aspect. Since the scale of the agricultural business is not large, the long-term prospect is uncertain.
In terms of BHN, securement of safe water and improvement of road access, which becomes impassable for some periods, are the issues.

Basic Poverty Profile (2/4)

Village General Data		Development Possibility	
Village Name	Doke Toe Yae Village Tract (5-Villages)	Market Based Potential	Good
Township	Ywangan	Production Increase Potential	Fair
State / Region	Shan	Basic Infrastcture Potential	Fair
Population	1546 (alomost natural increase)	Disadvantaged Area	N/A
Major Industry	Agriculture: 88%, shop and trading 12%	Other Development Potential	
No. of Household	368		
Major Agro-Product(s)	A: Tea (60 ha: Doke Toe Yae village)	Quantity: 60 viss/acre	
	B: Lemon (64 ha: Doke Toe Yae village)	Quantity: 1,800 pcs./acre	
	C: Coffee (6 ha: Doke Toe Yae village)	Quantity: 500 viss/acre	
	D:	Quantity:	
Target Market	Mandalay and within village (broker)		
Averrage Household Income	2,200,000kyat/HH per year		
Climate Info. of Region	Monsoon(moderate to heavy rainfall from June to September)		
Disaster Info. of Region	No disaster in the area		

Shan State

Source: Survey



Existing Social Services		
School (Primary)	Distance	in village tract
	One (1) Primary schools together with secondary class rooms exist in the village	
School (Secondary)	Distance	in village tract
	One (1) Secondary school exists in the village.	
Healthcare Faculity	Distance 14 mile	Ywangan
	There is no clinic in the village tract, but ther is one in Ywangan.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	N/A (Roads around this village tract under control of NATALA)	
Effect(s)	N/A (Roads around this village tract under control of NATALA)	Size/Scale N/A
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	No plan. Villagers are satisfied with current water supply	
Effect(s)	No plan	Size/Scale N/A

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	N/A (Roads around this village tract under control of NATALA)	
	Problems N/A	
Water Supply	- Villagers use rainfall water from roofs to reservoir tank for water supply. - In case of water shortage, they buy water from neighboring villages.	
	Problems Villagers are satisfied with current water sup	
Irrigation	1) No irrigation systems to be included in the Project. 2) Villagers culivate fruits and tea without irrigation.	
	Problems N/A	
Agro-Mechanization	Main products are perennial crops such as tea, lemon, and coffee. Traditional fields on a slope are abandoned.	
	Problems Traditional fields are located on sand gravel layer.	

Basic Poverty Profile (1/4)

Summary	
Village Name	Sat Chan Village Tract (5-Villages)
Township	Ywangan
State / Region	Shan

Outline of Village

Sat Chan Village Tract is dominated by slope areas. Sat Chan is a small size village tract with population of 2,049 and number of households of 470. Average farmland per farmers household is small with 0.8ha/HH. Almost half of the farmland are commonly possessed and not registered. If such non-registered common farmland is deducted, average farm land per farmers household becomes 0.4ha/HH. Farmers household sell the surplus rice and beans for cash income.

Industrial Structure

Although the village is based on farming, there is a fuel distributor for providing a service to the residents. Although the average farmland size is 4 acres/household, the actual cultivated farmland size is 2 acres/household. The farmland sizes comprise about 50% of sloping land and about 50% of flat land. The farmland comprises common farmland and privately-owned farmland, which is owned by the farmers. The common farmland is not registered as farmland and if such non-registered farmland is deducted, the average farmland per household becomes 1 acre/household. All the farmers own their lands. The crops are rice, pigeon pea, and some vegetables. The cash crops are rice and beans. However, farmers sell surplus rice at the market for cash income. Spring water is used for irrigation and farmers built a simple irrigation system on their own. Rice is produced in the paddy fields.
As another industry, females produce carpets and handy crafts utilizing bamboo products.
As for farming, bio fertilizers produced by using waste from livestock in the village are used and no fertilizers are purchased from fertilizer companies.

Economical Condition of Household

Farmers sell the surplus rice and beans for cash income and the average annual household income is 200,000 kyat/household.

Living Condition

There is one Health Care Center in the village and one midwife and one nurse are stationed in the Center. A facility where a doctor is available is located at a distance of 20 miles from the village.
Spring water and rainwater are used. Although spring water that is available at several locations is stored in a tank, the tank is not covered. A concrete tank is installed in each household for rainwater from as the aid from UNDP. In addition, a public rainwater tank is available.
As the education facility, there is one primary school servicing four school years and there is a junior high school at a distance of 17 miles from the village.

Overview of Infrastructure

Basic Infrastructure:
A road covering 12 miles up to the paved road has been improved to a gravel road by NATALA in 2015. In addition, a private road is being constructed by a cement company. In terms of a road network, although there is a plan for a network, the road leads to a dead-end. During the months from June to August, and sometimes to September, the road becomes muddy and impassable.
A solar home system is used for the power.
The mobile phone penetration rate is 30 phones in the village, which is 0.4 phone per household. This rate is low.

Diagnosis

Although food self-sufficiency rate is 100%, this rural village is located in the mountain area at a distance of 12 miles from the paved road. The average household income is 200,000 kyat/household, which is low. Villagers are living under the closed economic environment. Continuation of agricultural-based economical activities is assumed. Although the average farmland size per household is 2 acres, there is abundant spring water, giving a room for the improvement of market access so that there are agricultural potentials. As the direction of economical development, there is the possibility of an increase of production volume for the time being and change of the long-term crop system. There is a legal restriction on the expansion of farmland.
In terms of BHN, there is a problem in the securement of safe water and improvement must be promoted.

Basic Poverty Profile (2/4)

Village General Data		Development Possibility	
Village Name	Sat Chan Village Tract (5-Villages)	Market Based Potential	Good
Township	Ywangan	Production Increase Potential	Good
State / Region	Shan	Basic Infrastcture Potential	Good
Population	2,049, Increased	Disadvantaged Area	Land registration
Major Industry	Agriculture: 30%, Livestock: 30%, Others: 40%	Other Development Potential	
No. of Household	470		
Major Agro-Product(s)	A: Rice (56ha: Tae Lu village)	Quantity: 50 bskt/acre	
	B: Pigeon Pea (12ha: Tae Lu village)	Quantity: 20 bkst/acre	
	C: Vegetable (Tae Lu village)	Quantity:	
	D:	Quantity:	
Target Market	Currently brokers come to village for purchaing agricultural produce.		
Averrage Household Income	200,000kyat/HH per year		
Climate Info. of Region	Monsoon(moderate to heavy rainfall from June to August or September)		
Disaster Info. of Region	No disaster in the area		

Shan State Map

Source: Survey Team

Existing Social Services		
School (Primary)	Distance	in village tract
	One (1) Primary school exists in the Tract.	
School (Secondary)	Distance 17mile	
	Secondary school exists 17miles from the village.	
Healthcare Faculity	Distance	in the village
	There is a health care center in the village with one nurse and midwife. 20 mile distance is existing to see the doctor.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of a road network with bituminous surface connecting villages to a major road	
Effect(s)	1) Securing stable and shorter access to a major road 2) Improvement of BHN	Size/Scale 1) Bituminous surface pavement L=19km (Tae Lu village, etc.)
Irrigation	1) Rehabilitation of structures at water source 2) Installation of canal related structure, such as check and turnout structures with steel gates.	
Effect(s)	1) Proper water distribution is established. 2) Effective water utilization is promoted.	Size/Scale 10-15 canal related sturctures on 2 main canals.
Mechanization	Improvement of their farming and transportation of the products to the market by providing power tillers	
Effect(s)	-Improvement of household economy through increase of productivity and reduction of transportation cost -Releasing from hard work for transportation of the products -Diversification of commercial activities	Size/Scale Target area: 88 ha Two units of power tiller
Water Supply	Construction of water supply facilities is requested using groundwater. Facilities consist of deep well, pump station, reservoir tank, pipe-line and public taps.	
Effect(s)	Water will be supplied stably in terms of water quantity and quality throughout rainy and dry season by construction of water supply facilities	Size/Scale Depth of deep well is planned 100 to 300m.

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	Existing roads connecting from villages at a hilly area to bituminous paved road is approximately 19 km with unpaved surface (basically earth and partially gravel). Problems 1) Muddy and sometimes impassable condition in rainy season 2) Poor access to the market due to the remote location	
Water Supply	- Villagers use 2 spring ponds for water supply. - They fetch water by walking. - They also use rainfall on roofs in rainy season. Problems -Water table of spring ponds declines in dry season causing water shortage. - Water quality of spring has problem due to proximity of ponds to village households discharging domestic waste water.	 Water intake of spring
Irrigation	1) There is an irrigation system (80 acres) with 2 main canals. Water sources are 2 springs which can provide abundant water through a year. 2) Main canals do not have any division structures. Thus presently users make a bund with soil and control water distribution. Problems - Farmers are not using water effectively. Due to lack of division facilities, it is so difficult for user to distribute irrigation water properly on time. They do not cultivate in dry season even they have irrigation water. - Land title of those irrigated farmland is registerd as "forest", thus the change of the land title is required if the grant aid project will be implemented in this village.	
Agro-Mechanization	They started the farming recently and the access road to the main road was constructed in the just last year. Then their farming technology has not been developed well even without machines. Problems Their field are registered as a forest land but agricultural land.	-

Basic Poverty Profile (1/4)

Summary	
Village Name	Paw Yar Village Tract
Township	Pinlaung
State / Region	Shan

Outline of Village

Village tract located on the flat land. This is a small size village tract with population of 3,997 and number of households of 849. Average farmland per farmers' household is 4ha/HH. The village is along the trunk road, tertiary industry is already launched.

Industrial Structure

Although this is an agriculture-based village, some households are engaged in service businesses for the residents. Some farming households do not own their lands. These farming households without land are not tenant farmers and are engaged in farming for the farmers who have lands by receiving wages. The average farmland size is 10 acres/household. The land is flat and the crops are rice, corn, garlic, and potatoes. Double cropping farming approach is practised and garlic and potatoes are grown as secondary crops. Farmers sell surplus rice at the market for cash income. Therefore, the food self-sufficiency rate is 100%. For the farming, bio fertilizers and fertilizers that are purchased from fertilizer companies are used. Although an irrigation facility is available, it is considered to be inadequate. For the irrigation facility, water from five deep wells is used as the source of agricultural water and a cooperation system was constructed in the same way as in surrounding rural communities.

Economical Condition of Household

The food self-sufficiency rate is 100% and cash crops are sold at the market for cash income to purchase food. The average farming household income is 2,000,000 kyat/household. The amount of 3,500 kyat/day is paid to the wage-based farmers without land and the annual household income is 1,000,000 kyat.

Living Condition

Water from the seven deep wells is used for drinking. Drawing water is a task for females. It takes about five minutes by walking to the wells and 20 gallons of water is used per day. Although no Health Care Center is available in the village, a Health Care Center is available in the same tract at a distance of 2 miles from the village. There is a hospital with a doctor stationed in Tkyit township, at a distance of 4 miles from the village. There is a primary school in the village. Although no junior high school is available, there is one at a distance of 1 mile from the village.

Overview of Infrastructure

Basic Infrastructure:
There is a paved road passing through the village and there is no impassable period throughout the year.
The village is covered by the grid so that the grid power is used.
The mobile phone penetration rate is 2 phones/household on average, which corresponds to the informatization in the society.
A sewage facility or a rainwater drainage facility is not available.

Diagnosis

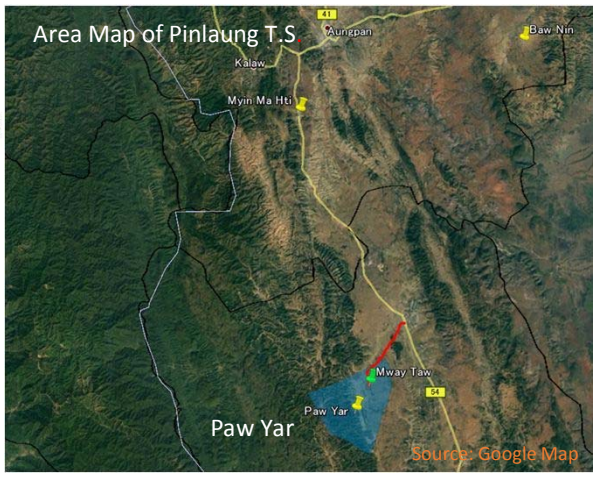
The household income is 2,000,000 kyat/year and the farming scale is 10 acres. Continuation of agriculture-based economical activities is assumed. Although there is no strong request for the improvement of agricultural infrastructure, the productivity enhancement and expansion of sales channels are raised as the issues and support for propagation of knowledge of agricultural technology and rural village financing are necessary as the skill-based aspect. Wage-based farm employees without their own land are increasing and hierarchy dissolution of land tenure farmers and creation of employment opportunities for employment securement will be the long-term issue.
In terms of BHN, there is no major issue.

Basic Poverty Profile (2/4)

Village General Data		Development Possibility	
Village Name	Paw Yar Village Tract	Market Based Potential	Fair
Township	Pinlaung	Production Increase Potential	Fair
State / Region	Shan	Basic Infrastcture Potential	Fair
Population	3,997, slightly increased	Disadvantaged Area	N/A
Major Industry	Agriculture: 98%, shop: 2%	Other Development Potential	
No. of Household	849		
Major Agro-Product(s)	A: Rice (60ha: Mway Taw village)	Quantity: 60 baskt/acre	
	B: Corn (60ha: Mwa Taw village)	Quantity: 800~1,000 viss/acre	
	C: Garlic (60ha: Mway Taw village)	Quantity: 800viss/acre	
	D:Potato (40ha: Mway Tau village)	Quantity: 500viss/acre	
Target Market	Aung Pan		
Averrage Household Income	2,000,000kyat/HH per year		
Climate Info. of Region	Monsoon(moderate to heavy rainfall from May to August)		
Disaster Info. of Region	No disaster in the area		

Shan State Map

Source: Survey Team



Existing Social Services		
School (Primary)	Distance	Size/Scale N/A
	One Primary school exists in the village.	
School (Secondary)	Distance 1mile	in village tract
	Secondary school exists in the nearby village	
Healthcare Faculity	Distance	
	There is a health care center in the village tract. To see the doctor villagers go to Tkyit Township 4 miles away.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of a road network with bituminous surface connecting to the nearby market	
Effect(s)	1) Securing stable and shorter access to the nearby market	Size/Scale 1) Bituminous surface pavement L=11km (Mway Taw village)
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Construction of water supply facilities is requested using groundwater. Facilities consist of deep well, pump station, reservoir tank, pipe-line and public taps.	
Effect(s)	Water will be supplied stably in terms of water quantity and quality throughout rainy and dry season by construction of water supply facilities	Size/Scale Depth of deep well is planned 100 to 300m.

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	Existing roads connecting to bituminous paved road is approximately 11 km with unpaved surface (basically earth and partially gravel). Problems 1) Muddy condition in rainy season	
Water Supply	-Villagers use public shallow hand dug well for water supply fetching water by walking. - They also use rainfall in rainy season - Villagers who have private deep wells do not use public shallow well. Problems Water table of a shallow hand dug well declines in dry season causing water shortage. Groundwater of shallow well is affected by water contamination from domestic waste water, which results in bad water quality. They suffer from long fetching time.	 Public hand dug shallow well
Irrigation	1) There is a good gravity irrigation system with fine facilities. And there are many indivisual pump irrigation for vegetables. 2) Irrigation facilities as well as agriculture practices in the village are quite adequate, which does not need the grant aid project's supports. Problems N/A	
Agro-Mechanization	7 units of power tiller and 3 units of thresher exist. Some farmers ask machine service. About 90% of fields are mechanized already. Problems N/A	-

Basic Poverty Profile (1/4)

Summary	
Village Name	Mat Mon Mun Village Tract (16-Villages)
Township	Nansang
State / Region	Shan

Outline of Village

Ma Mon Mone village tract is located on the flat land near trunk road. This is a small size village tract with population of 4,842 and number of households of 1,134. Average farmland per farmers' household is 4ha/HH.

Industrial Structure

The village entirely relies on farming. Some farming households do not own their lands. The average farmland size is 10 acres/household. This figure is high in comparison to the average land size owned per farming household within Shan State, which is 4.0 acres (IHLCA Survey 2009-2010).
Although the farmland belongs to the tribe, no legal procedures has been taken. However, the customary land ownership of the residents of the village has been determined. The crops are corn, rice, and rapeseed, and sesame seed. Corn and rapeseed or sesame seed are grown in the double cropping approach and shifting cultivation is not practised. As for livestock, two to three pigs are bred per household on average and cows and buffalos are not bred.
Rice is grown in the dry paddy land. The main cash crops are corn, rice, rapeseed, and sesame seeds.
For the farming, chemical fertilizers are used, not bio fertilizers since they do not breed cows. Rainwater is used for the irrigation and no facility is available.
Although buffalos were used as the animal power previously, they are now replaced with the agricultural machines.

Economical Condition of Household

The food self-sufficiency is less than 50%. The cash crops are sold at the market for the cash income to purchase food. The average farming household income is 2,000,000 kyat/household.

Living Condition

As for the drinking water, spring water of the neighbouring rural community is used free of charge. Although there seems to be sufficient water, a shortage seems to occur in the dry season and rainwater seems to be used. Drawing water is the task of males and water is transported by trailer jeeps. A Health Care Center is available in the village tract. There is a hospital with doctors stationed in Nam San town, a distance of 12 miles from the village. There are a primary school and a junior high school within the village tract. There is a high school in Nam San. Villagers use the market in Nam Sam for shopping.

Overview of Infrastructure

Basic Infrastructure:
An unpaved road of 2 miles leads to a paved road. There is no impassable period.
Since the village is not covered by the grid, a solar home system is used. However, only five households have installed the system.
The mobile phone penetration rate is 15 phones among 58 households, which indicates a delay in informatization in the society.
No sewage or rainwater drainage facility is available.

Diagnosis

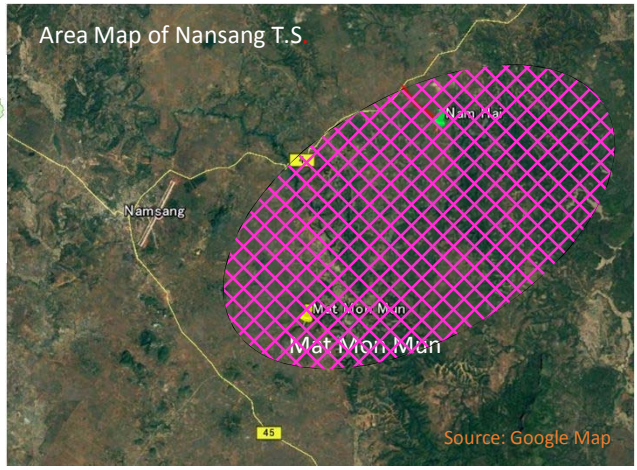
Although the agricultural productivity is not high, mechanization is progressing gradually and the scale of the agricultural business is large, which is 10 acres/household. Continuation of agriculture-based economical activities is assumed. Promotion and support of technical knowledge of agriculture are necessary for the enhancement of the agricultural productivity and diversification.
In terms of BHN, the securement of safe water and power supply from the grid are the major issues.

Basic Poverty Profile (2/4)

Village General Data		Development Possibility	
Village Name	Mat Mon Mun Village Tract (16-Villages)	Market Based Potential	Fair
Township	Nansang	Production Increase Potential	Good
State / Region	Shan	Basic Infrastcture Potential	Good
Population	4,842, Increased	Disadvantaged Area	Water supply
Major Industry	Agriculture: 100%	Other Development Potential	
No. of Household	1,134		
Major Agro-Product(s)	A: Corn (172ha: Nam Hai village)	Quantity: 1,500viss/acre	
	B: Rice (60ha: NamHai village)	Quantity: 25~30basket/acre	
	C: Rapeseed (172ha: Nam Hai village)	Quantity: 50viss/acre	
	D:Sesame (172ha: Nam Hai village)	Quantity: 40viss/acre	
Target Market	Broker (2mile), exported to Thailand		
Averrage Household Income	2,000,000kyat/HH per year		
Climate Info. of Region	Monsoon(moderate to heavy rainfall from June to October)		
Disaster Info. of Region	No disaster in the area		

Shan State Map

Source: Survey Team



Existing Social Services		
School (Primary)	Distance	
	-	
School (Secondary)	Distance in village tract	
	There exists one secondary school in the village tract.	
Healthcare Faculity	Distance in village tract	
	There is no health care center in the village tract. For major injury or emergency, people should go to Namsan Township 6miles away..	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of a road network with bituminous surface connecting to a major road	
Effect(s)	1) Securing stable and shorter access to a major road 2) Improvement of BHN	Size/Scale 1) Bituminous surface pavement L=6km (Nam Hai village, etc.)
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Construction of water supply facilities is requested using groundwater. Facilities consist of deep well, pump station, reservoir tank, pipe-line and public taps.	
Effect(s)	Water will be supplied stably in terms of water quantity and quality throughout rainy and dry season by construction of water supply facilities	Size/Scale Depth of deep well is planned 100 to 300m.

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	Existing roads connecting from villages to bituminous paved road is approximately 6 km in total with unpaved surface (basically earth). Problems 1) Muddy and sometimes impassable condition in rainy season	
Water Supply	- Water sources for water supply is shallow hand dug wells, and villagers fetch water by walking. - They also use rainfall on roofs in rainy season. - Some villagers own private deep wells. Problems - Water table of shallow well declines in dry season causing water shortage. - Water quality of shallow well is deteriorated due to contamination by domestic waste water from village. - Water fetching time is long.	
Irrigation	1) No irrigation systems to be included in the Project. 2) There are micro-size indivisual irrigation plots near spring where irrigation water is served by hands. Problems N/A	
Agro-Mechanization	15 units of power tiller exist and provide service to other farmers. Mechanization is developing well even some farmers use cows. Problems N/A	

Basic Poverty Profile (1/4)

Summary	
Village Name	Hai Nar Gyi Village Tract (10-Villages)
Township	Nansang
State / Region	Shan

Outline of Village

Hai Nar Gy village tract is located on the flat land between the mountains. This is a village tract with population of 7,573 and number of households of 1,702. Average farmland per farmers' household is 1.6ha/HH and paid agricultural farmers to work in Thailand are emerged.

Industrial Structure

This village forms a tract from 10 villages.
All the households are engaged in farming and one household is practising a general retail business and also farming to provide a service to the residents. They breed farm animals for home consumption. Some farmers do not own their lands and are engaged in farming as tenants. The average farmland size is 1.6 hectares/household. The difference between the farmers without land and farmers who own their lands is not substantial. The farmland expands to a flat area and a sloping area. The crops are corn, rice, pigeon pea, and rapeseed. Although double cropping farming is not practised, corn and pigeon pea are grown at the same time.
While farmers with land can yield sufficient rice for their own consumption, farmers without land cannot grow sufficient rice for their own consumption so that the food self-sufficiency is less than 100%.
For the farming, fertilizers are purchased from fertilizer companies and bio fertilizers that are obtained from livestock in the village are extremely low. No irrigation facility is available and rainwater is used. No special facility such as a tank is available.

Economical Condition of Household

The food self-sufficiency rate is less than 100%. Cash crops are sold at the market to obtain cash income to purchase food. The average farming household income is 3,000,000 kyat/household.

Living Condition

For the drinking water, spring water is used. No incidental facility such as a cover is available for the spring water and the observation by the delegate indicates a high possibility of pollution. In the rainy season, rainwater is used as the supplement. Drawing water is the task of females mainly. Twenty gallons are used each day. A Health Care Center with nurses and midwives stationed is available. There is a hospital with doctors stationed in Nam San town, a distance of 10 miles from the village. While there is a primary school within the tract, a junior high school and a high school are located in Nam San, a distance of 10 miles from the village.
Villagers shop at the Nam San market.

Overview of Infrastructure

Basic Infrastructure:
A paved road is available within one mile from the village and the road is passable throughout the year.
The village is outside of the grid and a solar home system is installed in all the households.
The mobile phone penetration rate is 40 phones within the village, which does not reach the rate of one phone per household. Therefore, its informatization is insufficient.
A sewage or rainwater drainage facility is not available.

Diagnosis

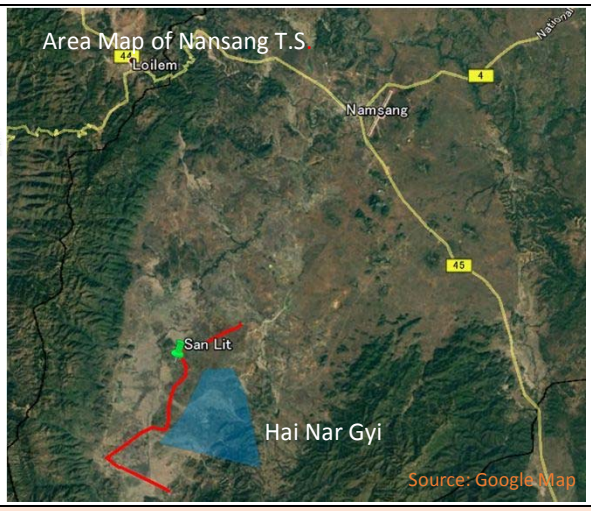
The household income is 3,000,000 kyat/year and the average farming scale is 1.6 hectares. Continuation of agriculture-based economical activities is assumed. The productivity enhancement and expansion of sales channels are raised as the issues and support for propagation of knowledge of agricultural technology and rural village financing are necessary as the skill-based aspect. Farmers without their own land are increasing and hierarchy dissolution of land tenure farmers and creation of employment opportunities for employment securement will be the long-term issues.
In terms of BHN, the securement of safe water is the issue.

Basic Poverty Profile (2/4)

Village General Data		Development Possibility	
Village Name	Hai Nar Gyi Village Tract (10-Villages)	Market Based Potential	Fair
Township	Nansang	Production Increase Potential	Good
State / Region	Shan	Basic Infrastcture Potential	Good
Population	7,573, slightly Increased	Disadvantaged Area	N/A
Major Industry	Agriculture: 100%	Other Development Potential	
No. of Household	1,702		
Major Agro-Product(s)	A: Corn (60ha: Sen Lid village)	Quantity: 500viss/acre	
	B: Rice (48ha: Sen Lid village)	Quantity:40basket/acre	
	C: Pigeon Pea (12ha: Sen Lid village)	Quantity: 5baslet/acre	
	D: Rapeseed (6ha: Sen Lid village)	Quantity: 2basket/acre	
Target Market	Namsan urban		
Averrage Household Income	3,000,000K/HH per year.		
Climate Info. of Region	Monsoon(moderate to heavy rainfall from May to August)		
Disaster Info. of Region	No disaster in the area		

Shan State Map

Source: Survey Team



Existing Social Services		
School (Primary)	Distance	in village tract
	Primary school exists in the Tract.	
School (Secondary)	Distance 10mile	
	No Secondary school exists in the Tract. It exists in Namsan town.	
Healthcare Faculity	Distance	Myaung Mya Urban
	There is a health care center in the village tract, hospita with doctor exists only in Namsan town.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of a road network with bituminous surface connecting villages to the nearby market, farm lands, etc.	
Effect(s)	1) Securing stable and shorter access to the nearby market, farm lands, etc.	Size/Scale 1) Bituminous surface pavement L=19 km (San Lit village, etc.)
Irrigation	1) Newly installation of concrete weir instead of an existing wooden weir at headworks. 2) Sedimentation removable in the canals.	
Effect(s)	1) Stable intaking water 2) Decrease of repairing and maintenance works on the weirs 3) Decrease of sedimentation/ increase of irrigation capacity of the canal	Size/Scale 1) Construction of headworks (W=8m, concrete weir: height=1m) 2) Construction of connection canal (L=1.5km)
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Construction of water supply facilities is requested using groundwater. Facilities consist of deep well, pump station, reservoir tank, pipe-line and public taps.	
Effect(s)	Water will be supplied stably in terms of water quantity and quality throughout rainy and dry season by construction of water supply facilities	Size/Scale Depth of deep well is planned 100 to 300m.

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	Existing roads connecting from villages to bituminous paved road is approximately 19 km with unpaved surface (basically earth). Problems 1) Muddy and sometimes impassable condition in rainy season 2) Poor access to farm lands	
Water Supply	- Villagers use 2 spring ponds for water supply. They fetch water from spring to village by working. - They also use rainfall in rainy season. Problems Discharge from 2 spring ponds is not enough due to small basin area, Water table of the pond declines causing water shortage in dry season. Water quality of pond is deteriorated due to proximity of ponds to the village.	
Irrigation	1) There is a wooden fixed weir. (W=10m, weir height=1m). 2) Irrigation canals have sedimentation due to flood flow through non-gate intake structure at headworks. Problems 1) The wooden wier is frequently flushed out by floods, and users have to repair or re-construct weir every times. Such burden is too heavy for users.	
Agro-Mechanization	50 units of power tiller and 3 units of corn thresher exist. Mechanization is developing well even some farmers use cows. Problems N/A	

Basic Poverty Profile (1/4)

Summary	
Village Name	Nam Hkok Village Tract (5-Villages)
Township	Hopong
State / Region	Shan

Outline of Village

Nam Hkok village tract is located on the flat land between the mountains. This is a small size village tract with population of 4,246 and number of households of 806. Average farmland per farmers' household is 0.8ha/HH and paid agricultural farmers are emerged.

Industrial Structure

Although Nam Hkok is a farming-based village, there are shops to provide services to the residents and wage earners due to its large population. The village is located in the level land and average farmland size of Nam Hkok village is 2 acres/household. The crops are sugarcane, rice, corn, garlic, ginger, tamarind, Tha Net Phat, and pigeon pea. Of these crops, mixed planting of corn and pigeon peas and double-cropping of rice and garlic were witnessed. Planting has been diversified. Rice is grown in the paddy fields by applying the transplanting cultivation method. The food self-sufficiency rate is less than 100% due to the large number of non-farming households. Self-helping improvements of the irrigation facility by the village farmers are progressing. Currently the sediment deposits in the rainy season debris are blocking the flow, disabling the function.
The farmers mainly use chemical fertilizers and only a small amount of bio fertilizers is used by using the waste of livestock. Farm mechanization is progressing. Many villagers migrate seasonally for work to Thailand, Malaysia, Yangon, and Mandalay.

Economical Condition of Household

The food self-sufficiency of the village is not 100% due to the large number of non-farming households. The average household income is 0.9 to 2.8 mi. kyat.

Living Condition

As for the drinking water, there is a company with a water treatment facility having a deep well in Nan Khok as a source of water and residents purchase water from the company at the rate of 500 kyat/5 gallons. There is a water supply system that was developed by the joint investment between NATAL and the village, which conveys water from spring water to the tank through a pipe and distributes water free charge. Currently, the system is managed by four villages. A communal water washing facility is installed per 10 households.

Overview of Infrastructure

Basic Infrastructure:
The distance to a paved road is short in any village and the road is connected to a paved road. Even in the rainy season, which is from June to October, the roads are passable.
The power grid was expanded in January 2016, covering 50% of the Nam Khok village. Other villages did not benefit from the grid cover.
The mobile phone penetration rate is 2 phones per household in the Nam Khok village, which corresponds to informatization in the society.
Sewage or rainwater drainage facility is not available.

Diagnosis

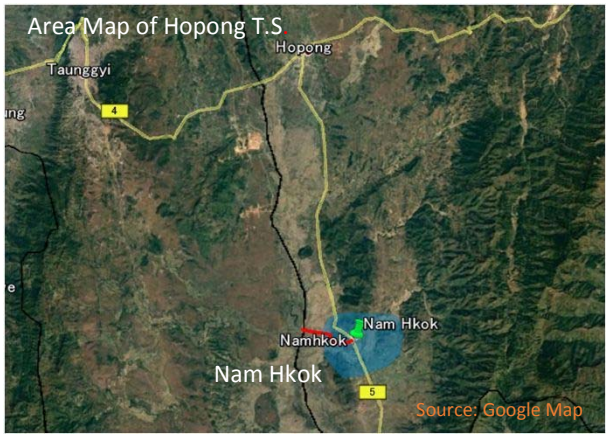
Although agricultural business scale is not large, an increase of the production capacity can be expected for the time being by progressing repair of the irrigation system and mechanization gradually. In the Nam Khok village, continuation of rural industrialization (high-value addition) as well as the agriculture-based economic activities is assumed. Support for propagation of technical knowledge of agriculture is necessary for improvement of the agricultural productivity and diversification.
In terms of BHN, securement of safe water and supply of power by the grid are the issues.

Basic Poverty Profile (2/4)

Village General Data		Development Possibility	
Village Name	Nam Hkok Village Tract (5-Villages)	Market Based Potential	Good
Township	Hopong	Production Increase Potential	Fair
State / Region	Shan	Basic Infrastcture Potential	Good
Population	4,246, Increased	Disadvantaged Area	N/A
Major Industry	Agriculture: 30%, Livestock: 30%, Others: 40%	Other Development Potential	
No. of Household	806		
Major Agro-Product(s)	A: Sugarcane (400ha: Nam Hkok village)	Quantity: 7ton/acre	
	B:Rice (200ha: Nam Hkok village)	Quantity: 40 basket/acre	
	C:Corn (120ha: Nam Hkok village)	Quantity: 1,000viss/acre	
	D: Garlic (32ha: Nam Hkok village)	Quantity: 1,000viss/acre	
Target Market	Nam Khok village		
Averrage Household Income	900,000~2.800,000kyat/HH per year3,000K/day, 4,000kyat/day for paid worker		
Climate Info. of Region	Monsoon(moderate to heavy rainfall from June to October)		
Disaster Info. of Region	No disaster in the area		

Shan State Map

Source: Survey Team



Existing Social Services		
School (Primary)	Distance	in village tract
	Primary school exists in the Tract.	
School (Secondary)	Distance	in village tract
	One (1) Secondary school exists in the Tract. Also one (1) High school exists.	
Healthcare Faculity	Distance	within village tract
	There is a clinic and one (1) health care cente exist in the village tract.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of a road with bituminous surface connecting to the nearby market, farm lands, etc.	
Effect(s)	1) Securing stable and shorter access to the nearby market, farm lands, etc.	Size/Scale 1) Bituminous surface pavement L=5 km
Irrigation	1) Newly installation of canal related structures, such as check and turnout in the main canals. 2) Concrete lining partially 3) Sedimentation removable in the canals.	
Effect(s)	1) Proper water distribution is established. 2) Effective water utilization is promoted.	Size/Scale 10 canal related sturctures on a main canal.
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Villagers are satisfied with current water supply. There is no plan.	
Effect(s)	No plan	Size/Scale N/A

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	Existing roads connecting between farm lands in this village to bituminous paved road is approximately 5 km with unpaved surface (basically earth). There is a RC bridge crossing a river on the border between this village tract and Taunggyi Township.	
	Problems 1) Muddy and sometimes impassable condition in rainy season 2) Poor access cnnecting farm lands to a major road	
Water Supply	-Villagers use spring water from limestone cave using pipe-line to the village. - Water is conveyed to large reservoir tank, which distributes water to each household. - Most of the villagers have their own deep wells/shallow wells.	
	Problems Discharge from spring is enough for water supply necessary for the village with reservoir tank with enough capacity. But there is a problem in operation of water distribution, which results in restricted water supply in every 3 days.	
Irrigation	1) There is a irrigation system (1,850acre) with concrete headworks (Nam Methar weir) with a steel intake gate. 2) Main canal has concrete lining at upstream portion for about 500m, and at the downstream portion all the canal is earth canal. 3) Main canal has good capacity and the headworks can divert enough water to canal.	
	Problems - Farmers are not using water effectively. Due to lack of division facilities, it is so difficult for user to distribute irrigation water properly on time. - Irregal water use from canal is observed friquently. Water users association is not active for adequete water distribution.	
Agro-Mechanization	10 units of tractor, 40 units of power tiller, and a combine harvester exist. Almost all farmers owe small corn threshers. Mechanization has been developed well.	
	Problems Lack of information for use and maintenance technology of machines could be found.	

Basic Poverty Profile (1/4)

Summary	
Village Name	Pawng Lin Village Tract (35-Villages)
Township	Hopong
State / Region	Shan

Outline of Village

Pawn Lin Village Tract is located near trunk road dominated slope areas between mountains. Population is 9,043 and 2,020 households. Average farmland per farmers household is around 1.2ha/HH. Paid agricultural farmers and paid workers away from home to work in Thailand emerged.

Industrial Structure

While some villages fully rely on farming, some households combine a commercial activity to provide a service to residents and farming. Forty households breed livestock together with farming. In this village tract also, some farmers do not own their land and work as day farm workers. The sloping land takes up 65% to 70% of the farmland and the flat land takes an about 30% to 35% of the farmland. The crops are corn, rice, pigeon pea, tamarind, and The Nat Phat. Corn and pigeon pea are planted together. These crops are sold at the market for cash income except rice. Although rice is grown for home consumption, it does not reach the full self-sufficiency level. Rice is grown in dry fields. For the farming, chemical fertilizers are used and only a small volume of bio fertilizers obtained by breeding cows is used. Rainwater is used for irrigation and no facility is available. Mechanization is not progressing due to the size of the cost burden.

Economical Condition of Household

The food self-sufficiency does not reach 100%. Cash crops are sold at the market for cash income to purchase food. The average farming household income is 1,500,000 to 2,000,000 kyat/household. Farmers without land work as day farm workers and earn a wages of 3,000 kyat/day. Since the irrigation facility is not available, the productivity is low. The many graded sections also attribute to the low productivity. Shortages of high-grade seeds, fertilizers, and agricultural machines are recognized. There seems to be no room for farmland expansion. There was a strong request for small loans for the road improvements and the purchase of seeds, fertilizers, and machines.

Living Condition

Inadequate safe water and electricity for conducting daily living are raised as the issues. In addition, the residents requested a village hall and a pre-school. Spring water is the important source of the drinking water and some river water is also used. Spring water is drawn into the communal water tap and is managed by the community. Although none of the villages has a Health Care Center, there is one within the tract and is mutually used. A hospital with doctors stationed is located at Hon Pong town, which is at a distance of 6 miles from the villages. The facility development conditions of a primary school and a junior high school are the same. Although they are not available in all the villages, they are available within the village tract and are mutually used. There is a high school in the town of Hon Pong. Villagers use the market of Hon Pong for daily shopping.

Overview of Infrastructure

Basic Infrastructure:
Although the villages that were researched are located at the sections with unpaved roads of 3.5 to 8 miles connecting to paved roads, there is no impassable period. The rainy season covers from June to October. In August, which is a high-rainfall month, the roads are passible, but difficult. Since the villages are not covered by the grid, a private solar home system is used.
The mobile phone propagation rate is one phone/household, which corresponds to the informatization in the society.
A sewage or rainwater drainage facility is not available.

Diagnosis

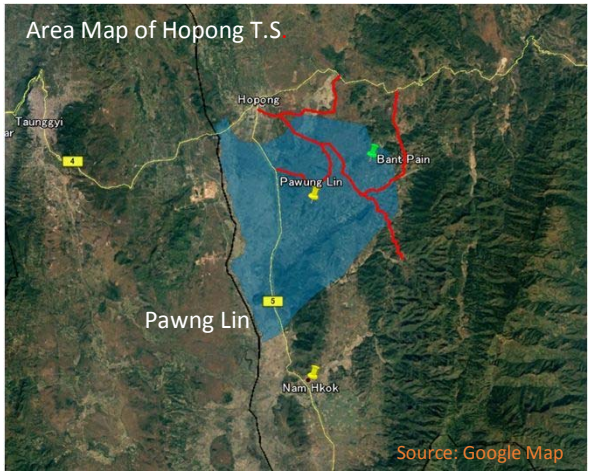
Since the agricultural productivity is not high, the average farmland size is lower than that of Shan State, and many villagers migrate seasonally for work, a long-term structural transformation must be considered although expansion of agricultural production is aimed at for the time being. Support for propagation of technical knowledge of agriculture is necessary for improvement of the agricultural productivity and diversification.
In terms of BHN, securement of safe water and supply of power by the grid are the issues.

Basic Poverty Profile (2/4)

Village General Data		Development Possibility	
Village Name	Pawng Lin Village Tract (35-Villages)	Market Based Potential	Fair
Township	Hopong	Production Increase Potential	Fair
State / Region	Shan	Basic Infrastcture Potential	Good
Population	9,043, Increased	Disadvantaged Area	Distance to market
Major Industry	Agriculture: 90%i以上,shopss:	Other Development Potential	
No. of Household	2,020		
Major Agro-Product(s)	A: Corn (52ha: Nam Pa Che village)	Quantity: 1,000viss/acre	
	B: Rice (40ha: Nam Pa Che village)	Quantity: 40basket/acre	
	C: Pigeon Pea (12ha: Nam Pa Che village)	Quantity: 5basket/acre	
	D: Tamarind (8ha: Nam Pa Che village)	Quantity: 500~600viss/acre	
Target Market	Ho Pong		
Averrage Household Income	1,500,000~2,000,000Kyat/HH per year		
Climate Info. of Region	Monsoon(moderate to heavy rainfall from June to October)		
Disaster Info. of Region	No disaster in the area		

Shan State Map

Source: Survey



Existing Social Services		
School (Primary)	Distance	Size/Scale N/A
	Primary schools exist in the Tract.	
School (Secondary)	Distance	in village tract
	Secondary school exists in the Tract. However highschool is only available in Hopong town.	
Healthcare Faculity	Distance	in the village tract
	There is health care center in the vilage tract and villagers are using the faiclity. However, hospital with doctoris only available at Hopong town.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of a road network with bituminous surface connecting to a major road	
Effect(s)	1) Securing stable and shorter access to a major road 2) Improvement of BHN	Size/Scale 1) Bituminous surface pavement L=40 km (Bant Pain village, etc.)
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Construction of water supply facilities is requested using groundwater. Facilities consist of deep well, pump station, reservoir tank, pipe-line and public taps.	
Effect(s)	Water will be supplied stably in terms of water quantity and quality throughout rainy and dry season by construction of water supply facilities	Size/Scale Depth of deep well is planned 100 to 300m.

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	Existing roads connecting from villages at a hilly area to bituminous paved road is approximately 40 km in total with unpaved surface (basically earth and partially gravel). Problems 1) Muddy and sometimes impassable condition in rainy season 2) Poor access to the market due to the remote location (Bant Pain village)	
Water Supply	- Villagers use water of a spring in foot of mountain and stream water. - They convey spring water through pipe line to village to supply water from public taps for drinking. -They use stream water at intake point for bathing and washing. Problems - Water table of spring pond declines in dry season causing water shortage. - Turbidity of stream water becomes higher in rainy season to suspend its usage.	
Irrigation	1) There is no irrigation system because this village is located on the top of hill. Problems N/A	-
Agro-Mechanization	Farmers have 4 units of power tiller and provide service to others. Problems If proper loan program could be provided, mechanization would progress rapidly.	-

Basic Poverty Profile (1/4)

Summary	
Village Name	Moke Soe Kwin Village Tract (5-Villages)
Township	Myaung Mya
State / Region	Ayeyarwady

Outline of Village

Mote Soe Kwin Village Tract is a tract with 7,312 population and 1,834 households in 2016, mainly producing rice under double harvesting cycle where there is no major flood disaster occurrence. There are both farm land owner and paid workers for agro-production. Because of its proximity to Myaung Mya urban market, the products are delivered right away. Livestock and vegetables are produced for their own consumption. There is no stable public power supply to the village tract and people are depending on the water supply from dug well or pond. Social services for education is provided from primary level to high school level, but there is no clinic in the village and people should seek treatment in Myaung Mya Urban.

Industrial Structure

The main income source industry is in the primary sector led by agricultural production followed by livestock breeding. Main product is rice by monsoon paddy and summer paddy production in the Tract. There are other products such as vegetables, and these are mainly self-consumption base. Double harvesting for rice paddy is common, however the farm area is not large for major production improvement. Agro-production is either made by the farm land owner farmers or daily based paid workers in the area. Besides, traditional leaf made mat making is common in the Tract, but the income is not large as only small number of women can produce the mat.

Economical Condition of Household

Large number of village families and people are working as paid worker in the Tract agro-production. They are daily based paid workers for average 4,000K for men and 2,500K for women. Families (house head) who own farm land earn about 150,000K per month. This is typical income level of the rural agro-villages in the region.
Transporting good to the market by tractor costs about 10,000K per delivery, and it should be quite large load for a family.
60% of the village households own motorbikes, and there are 40 tractors owned by the village people for goods/person transportation.
Mobile phones are used and some families spend about 5,000K per month for phone calls mainly.

Living Condition

There are primary schools, a secondary school and a high school in the Tract, and large number of school aged children attend classes, while there is no healthcare facility and services in the village and people should go to the neighboring village for treatment or to Myaung Mya urban for better treatment.
There are only limited families with SHS solar system or generators for electricity supply, and most families fetch water from reservoir ponds or wells. Major transportation means in the village are motorbikes and tractors for both good and people. Village farmers only sell their products (mainly rice) to mill factory for their set price but they feel fine with the price, since their products are not at the level of quality. Women today work for agro-production since the factory shut down in the region. Women want to work for textile and garment industry for different income other than agriculture.

Overview of Infrastructure

Basic Infrastructure:
There is no public power supply and water supply, and village people privately own small SHS and generator for electricity (limited families), and reservior and well for water fetching. Village access road and bridges are in need of rehabilitation or upgrade for better transportation and market access. Social service sector in healthcare is needed for general access by the village people.
Agricultural Infrastructure:
There is no major irrigation system or facilities in the area except small channels to distribute river water for agro-production. The channels should be dredged for better function. AMS has equipment but rental service to the Tract needs to have better operation. Equipment stationed in the region is not sufficient to effectively manage production.

Diagnosis

This village tract is close to the market of Myaung Mya and there is no major disaster damage taking place, therefore agricultural production can be focused on for the development and further income generation. There is no specific market based demand of products, however the improvement of market access could be effective to the village income growth.
Farm land area is not large so that maximizing production is not easy task, however there seems spaces fo task improvement to effectively reduce work time and load or improve quality and management by introducing mechanization to the production. These existing channels can also be rehabilitated for better irrigation function.
There may be another chance to introduce soft component to assist villagers with other variety of rice to make better production, so that working with agricultural department can be effective to technically training village farmers.
While considering mechanization, road and bridge rehabilitation in the village and access to the market is necessary for integrated effects while access to some social services can be improved. Water supply in general should be provided by developing well and tank system for more stable supply to the villages.
It could be small impact, however certain improvement in agro-production, market access as well as BHN and livelihood improvement.

Basic Poverty Profile

(2/4)

Village General Data		Development Possibility	
Village Name	Moke Soe Kwin Village Tract (5-Villages)	Market Based Potential	Fair
Township	Myaung Mya	Production Increase Potential	Fair
State / Region	Ayeyarwady	Basic Infrastructure Potential	Good
Population	7,312 (Male: 3,432, Female: 3,880), Increased	Disadvantaged Area	N/A
Major Industry	Agriculture: 30%, Livestock: 30%, Others: 40%	Other Development Potential	
No. of Household	1,834		
Major Agro-Product(s)	A: Monsoon Paddy (972 acre)	Quantity: 60 bskt/acre (4,000~6,000K/bskt)	
	B: Summer Paddy (890 acre)	Quantity: 80~90 bkst/acre	
	C: Rubber	Quantity: Very small	
	D:	Quantity:	
Target Market	Myaung Mya Urban		
Average Household Income	150,000K/month per H.H., Male paid worker: 3,000~5,000K/day, Female paid worker: 2,000~3,000K/day		
Climate Info. of Region	Monsoon		
Disaster Info. of Region	No disaster in the area		

Villages in the Tract:
Moke Soe Kwin
Nyaung Lay Pin
Ma Yan Chaung
Ka Thin Kone

Existing Social Services		
School (Primary)	Distance	in village tract
	Five (5) Primary schools exist in the Tract.	
School (Secondary)	Distance	in village tract
	One (1) Secondary school exists in the Tract. Also one (1) High school exists.	
Healthcare Facility	Distance	Myaung Mya Urban
	There is no clinic in the village tract, but there is one private clinic in the nearby village (15 min. drive). For major injury or emergency, people should go to Myaung Mya hospital.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Road improvement 2) Reconstruction of Bridge	
Effect(s)	1) Securing the year-round access to the 2 villages 2) Improvement of productivity by using agricultural machinery	Size/Scale 1) Concrete pavement: L=2km 2) Reconstruction of bridge: L=15m
Irrigation	Excavation of 2 irrigation channels (each 460m length) and Construction of 6 channel crossing structures (concrete panel bridge)	
Effect(s)	Additional 264 acre will be irrigated during summer season. Accessibility from farm road to farm land will be improved.	Size/Scale Channel section (Base width = 6m, Hight = 1.5m) Excavation volume = 8,000 cum
Mechanization	Strengthening service capacity of AMS in Myaungmya and provision of agricultural mechanization service due to needs of farmers in the village where private service system does not exist	
Effect(s)	- Improvement of household economy through reduction of losses and cost of harvesting by mechanization - Diversification of commercial activities	Size/Scale Target area: 90 ha Combine harvester (1 units)
Water Supply	(1) Underground water development to Pha Ya Kone and Moke Soe Kwin village facing water shortage in dry season (2) Underground water development to Ma Yan Chaung and Pat Ta Gone village utilizing river water as water source	
Effect(s)	Water supply ratio in dry season will be improved. In addition, reduction of the burden of water fetching from the river that 10% of residents is forced can be expected.	Size/Scale - Well excavation by following equipment; Well excavator (300m class), excavating tools, air compressor, hauling truck, screen and casing (10,000m), well logging equipment

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1)Satisfactory acccess due to nearby market (Myaungmya). It takes 2 or 3 minutes by motorbike 2)Many Village roads have paved, and have fair road	
	Problems 1)Poor access to village road connecting 2 villages -There are agricultural lands along the route, but it becomes difficult to pass in the rainy season because of unpaved road. -The timber bridge on the road is fragile with narrow width (2 m) and becomes unable to pass frequently.	
Water Supply	- Principal water source is rainwater, underground water and river water. - Village tract committee manages only 15 public wells since most of household have their own private wells.	 Tube Well System
	Problems In villages using underground water as water source suffers water shortage due to drought in summer season.	
Irrigation	There are several irrigation channels to intake the river surface water for the irrigation of paddy fields. The channels are constructed by farmers themselves. The present rrigation areas are 972 acre during monsoon season and 708 acre during	 Proposed Irrigation Channel Site
	Problems The balanced area (264 acre) between summer and monsoon seasons is not irrigated without irrigation channel.	
Agro-Mechanization	Delay of harvesting occurs due to luck of labor, and generate losses of the product. Mechanization is the efficient counter measure but cannot fulfill the demand yet even though private service providers started to come in.	
	Problems Luck of labor and harvesting machines.	

Basic Poverty Profile (1/4)

Summary	
Village Name	Shan Yae Kyaw Village Tract (1-Village)
Township	Myaung Mya
State / Region	Ayeyarwady

Outline of Village

This village tract is situated in the isolated land where over 300m bridge is necessary for basic access to market and other services. There is no major disaster with the village tract, however salt content from the dry season river water makes their agro-production very difficult for double crop agriculture. The neighboring village tracts are also in the same needs of bridge access, and these village tracts could be considered as an combination of assistance target because of large population over 6,000 for benefit. Monsoon rice production is general income source for the village and people do not have much other options except minor mat making. There will be a chance to improve rice production with mechanization, however the bridge access improvement is the first for the production improvement. Market access improvement also requires bridge development first.

Industrial Structure

Major income source of the village tract is monsoon paddy which shares over 80%. Livestock breeding and production follows the rice production in 15%. Others including mat making (with nipa palm leaf) is very minor for income generation. Rice production is controlled by the farm land owners of the village and paid workers are working for the land owners with much less daily wages. Rice is produced in over 1,200 acre of paddy land, however productivity is not at the higher level and there should be more space for production improvement. Change of rice variety may improve production but there is a need of technical and knowledge input for the village farmers. Other than primary industry, there is very limited options today.

Economical Condition of Household

Per-month H.H. income is at good level however there is only periodical income generating months during harvesting of monsoon paddy in each year. Thus, overall income of the village people is not high enough. On the other hand, daily based paid workers who do not own land should face more difficulty to maintain stable income and some need to work around villages to keep income. Women produce mat for additional income, but such income cannot stabilize their family living. The village people need more stable income generating system as well as market access for better product sales environment.

Living Condition

Living condition of the village tract is not highly stabilized since there is no stable public power and water supplies provided. There is a high school in the tract but the distance to students are not even since their distances differ. There is a clinic in the tract but the accessibility considers some long distance to some people. There is no major disaster disturb people for daily living, however there should be some improvement in water supply and road/bridge access to make these easier.

Overview of Infrastructure

Due to its necessary bridge development to connect the tract to main land and market, agro-production based infrastructure development may come to the second priority, and rather basic human needs with water supply and road/bridge improvement should come first for livelihood improvement. There is not enough drinking water during dry season, and water supply targeting this problem should change people's living condition. Since the tract and neighboring tracts have a large internal economic potential, village networking road system in the tracts should be established first. 300m long bridge should change village people's lives drastically, but there might be other solutions for market and other region access and accessibility improvement, such as upgrade of boat transportation, etc.
When the 300m bridge is constructed, agricultural mechanization shall be highly effective with large production area, however the village farmers may need to establish double crop or double harvesting strategies instead of monsoon paddy only production pattern.

Diagnosis

There is a certain agro-production improvement potential since there is a large enough monsoon paddy field without major flood type disaster. However, the village tract is so isolated from other township area because of rivers and the physical connection of the village through long bridge is necessary to have better market environment. The Village Tract's disintegrated market network is a major weakness to the community, and access development should improve farmers' market development and sales of products. It is however very high investment necessary for the long bridge construction, and the village tract should be treated with water supply and basic road networking within the tracts in same island to meet basic human needs.
Once immediate BHN development is completed in the future, the long bridge could be the priority for development in the future stage to improve agro-production and market accessibility.

Basic Poverty Profile

(2/4)

Village General Data		Development Possibility	
Village Name	Shan Yae Kyaw Village Tract (1-Village)	Market Based Potential	Difficult due to no access
Township	Myaung Mya	Production Increase Potential	Fair
State / Region	Ayeyarwady	Basic Infrastructure Potential	Good
Population	1,991 (Male: 975, Female: 1,016), Increasing	Disadvantaged Area	No access bridge
Major Industry	Agriculture: 80% (15% farm land owner), Livestock: 15%, Others: Mat making	Other Development Potential	
No. of Household	532	Development with other village tracts	
Major Agro-Product(s)	A: Monsoon Paddy (1,212 acre)	Quantity: 45 bskt/acre (4,800~5,000K/bskt)	
	B:	Quantity:	
	C:	Quantity:	
	One farm land owner owns approx. 10 acre of land.		
Target Market	Myaung Mya Urban		
Average Household Income	100,000~120,000K/month per H.H., Paid worker: average 4,000K/day		
Climate Info. of Region	Monsoon		
Disaster Info. of Region	No disaster in the area		

Existing Social Services		
School (Primary)	Distance	in village tract (in High School)
	None	
School (Secondary)	Distance	in village tract
	Only one (1) High school exists and this consists of all grades for local students.	
Healthcare Facility	Distance	in village tract
	One (1) Community Clinic exists.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Securing the road network among the other village tract 2) Improvement of road condition for village roads	
Effect(s)	1) Shorter access time to the market 2) Improvement of the driveability of village roads 3) Improvement of productivity by using agricultural machinery	Size/Scale 1) Construction of bridge (L=300m) 2) Concrete pavement of road (L=5km)
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Underground water development to Shan Yae Kyaw village facing water shortage in dry season	
Effect(s)	Water supply ratio in dry season will be improved.	Size/Scale - Well excavation by following equipment; Well excavator (300m class), excavating tools, air compressor, hauling truck, screen and casing (10,000m), well logging equipment

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1)The village is isolated from road network by river (width=150m) 2)The Present access to the market (Myaungmya) -motorbike: 1 hour (include going across the river by boat) -only boat : 3 hours 3)Unpaved village road makes passages difficult in the rainy season	
	Problems 1) Interrupted road network to the market by 150m width river. 2) Fragile village road surface in rainy	
Water Supply	- Principal water source is underground water. Rainwater is used limited in rainy season. - Village tract committee manages three dug wells for drinking use and six dug wells for general purpose use.	 Dug Well
	Problems There are three dug wells for drinking use in this village tract. However two wells out of three are not applicable for drinking use in dry season due to the increase of saline concentration.	
Irrigation	There is no irrigation facility in this village tarct. The monsoon paddy of 1,212 acre are cultivated under rainfed condition.	 Present Post-harvest (Dryer) Site
	Problems Farmers cannot cultivated summer season paddy without irrigation water due to salt (sea) water intrusion in the adjacent river.	
Agro-Mechanization	Mechanization has not started.	
	Problems Access of machines to the village is difficult for flooding road.	

Basic Poverty Profile

Summary	
Village Name	Thin Gan Gyi Village Tract (8-Villages)
Township	Labutta
State / Region	Ayeyarwady

Outline of Village

This village tract experiences major flood disaster and seawater inlet from the river, so that monsoon paddy is the only income base because double harvesting is not an option with this village tract today. From agro-production assistance point of view, there are several private equipment rental companies already running their businesses and new mechanization program should be very carefully studied for peaceful implementation. Water supply to improve livelihood is important, however tide break bank/embankment development may still need to be completed for stable pure water supply in the tract. The tidal embankment is 17 mile long and the cost of development is considerable.
Coordination with DRD and MoC for road/bridge construction shall be made for effective access/network improvement for the villages in the tract.

Industrial Structure

The village tract has agriculture and fishery income mainly, and the share is about 50%/50%. Fishery is fish farm including crab farm. Agriculture depends on monsoon paddy mainly as there is over 5,000 acre paddy field to produce 40 baskets per acre. Because of such a large production farm area, the village income is assumed quite large from monsoon paddy, however there should be more income generating space if the village can manage double crop or double harvesting pattern. Fish farms also generate income but the amount is not so high since the system is not at sophisticated level.

Economical Condition of Household

Village farmers have approximately 200,000 kyat/month during the monsoon paddy harvesting season, however it is only a few month period and the total income is not considered high enough to support family members well. Paid workers' income information is not clear, but the average of monthly income should be lower based on the overall hearings from the villages as these paid workers move around wherever harvesting man power is demanded. Fishery based income is also not high as their farming system is not at highly stable level.

Living Condition

Due to flooding and salt contents in the ground water, village people face water shortage during dry season without high rain fall amount, and there is a major need of water supply to improve their living condition. Access roads and bridges should improve some living environment, however this might not be the first priority. Embankment for flood protection and tidal breaking is more important to develop or to improve their agro-production for more income.

Overview of Infrastructure

Embankment for flood protection and block seawater entry to the village farm lands are considered priority.
Basic infrastructure improvement including water supply and road/bridge upgrade are necessary, however these will contribute less to villagers' income generation or marketing strategy.
Water supply and road access improvement should contribute village people to improve their living condition from BHN point of view.
Embankment should be made before irrigation development or improvement is considered. Agro-mechanization may have some positive impact because of large paddy field area as equipment should reduce farmers work tasks and time more effectively.

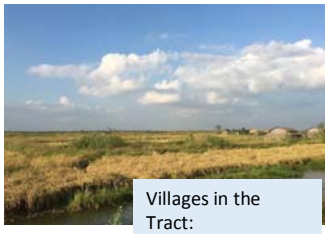
Diagnosis

This village tract should have potential for agro-production improvement and income increase because of large farm land area, however it is very important to establish more flood protected dike which also functions as tidal breaking not allowing seawater coming into the village land.
Since flood damage and salt water damage to the farm land are considered serious, these problems should be sorted out before setting any agricultural infrastructure improvement. Therefore, the village tract may be considered for BHN development target for the first stage.
Once the protection is well established against flooding and seawater damages, irrigation system, mechanization and water supply should help more on agro-production for higher income together with double crop and/or double harvesting production pattern. Thus, road/bridge development to strengthen market access should also highly contribute to village income generation.

Basic Poverty Profile

(2/4)

Village General Data		Development Possibility	
Village Name	Thin Gan Gyi Village Tract (8-Villages)	Market Based Potential	Fair
Township	Labutta	Production Increase Potential	Fair
State / Region	Ayeyarwady	Basic Infrastructure Potential	Good
Population	3,120 (Male: 1,672, Female: 1,428), Increased	Disadvantaged Area	Major Flooding
Major Industry	Agriculture: 50%, Fishery: 50% (sea fish farm: crab, etc.)	Other Development Potential	
No. of Household	928	With 17 mile Tide Break Bank embankment	
Major Agro-Product(s)	A: Monsoon Paddy (5,531acre)	Quantity: 40 bskt/acre (8,000K/bskt)	
	B:	Quantity:	
	C:	Quantity:	
	D:	Quantity:	
Target Market	Labutta Urban Market		
Average Household Income	200,000K/month per H.H., Paid worker: 2,000~5,000K/day		
Climate Info. of Region	Monsoon		
Disaster Info. of Region	Major Flood occurs, especially cyclone Nargis affected large area in 2008.		



Villages in the Tract:
Thin Gan Gyi
Kone Gyi
Gon Nyin Dan
War Kone
Na Lin Kyaw
Zin Ywe Lay

Existing Social Services		
School (Primary)	Distance	in village tract
	Five (5) Primary schools exist in the Tract. Students of a few Tract Villages should attend in other village schools.	
School (Secondary)	Distance	in village tract
	One (1) Secondary school exists in the Tract.	
Healthcare Facility	Distance	in village tract
	One (1) Community Clinic exists in Thin Gan Gyi village. For emergency or major injury, people needs to go Labutta. General healthcare is free of charge.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement the road access among the 3 villages	
Effect(s)	1) Shorter access time to the market 2) Improvement the driveability of village roads	Size/Scale Concrete pavement of road (L=13km)
Irrigation	Embankment of dike (total length = 17miles	
Effect(s)	Paddy area of 2,000 acre will be completely protected from salt water intrusion	Size/Scale Dike section (Top width = 5m, Hight = 2m) Embankment volume = 432,000 cum
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Securement of water resources in dry season by the construction of additional rainwater ponds, along with the population growth	
Effect(s)	Acquisition amount of water to be taken from rainwater ponds is limited to three gallon per one person due to drought in dry season. From such circumstances, the construction of additional rainwater ponds contribute to the increase of water service ratio.	Size/Scale - Construction of five (5) rainwater ponds

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) 28km from the market (Labutta, it takes 90 minutes by car). Road from Labutta to VT is managed by MOC. Unsatisfactory road condition due to unpaved surface. 2) Although there are roads to each village, access to the three villages during the rainy season is difficult. Must use a boat.	
	Problems 1)Difficulty of road access among the 3 villages in the rainy season	
Water Supply	Principal water source is rainwater. Rainwater is stored in earth pond or RC (Reinforced Concrete) tank.	 Rainwater Pond
	Problems Thin Gan Gyi village tract is surrounded by a river with brackish water, and underground water has high saline concentration. From such circumstances, drinking water depends on rainwater.	
Irrigation	There is no irrigation facility in this village tarct. The monsoon paddy of 5,534 acre are cultivated under rainfed condition. The most of the farm lands surrounded by the rivers are protected by dikes in order to prevent salt water intrusion.	 Road cum Dike
	Problems Farmers cannot cultivated summer season paddy without irrigation water due to salt (sea) water intrusion in the adjacent river. According to the farmers, some farm lands are not yet completely protected by dikes, and about 17 miles length additional dikes are required.	
Agro-Mechanization	The area is damaged by saline. Private mechanization service providers come from Labutta already.	-
	Problems N/A	

Basic Poverty Profile

Summary	
Village Name	Labutpyay Lal Pyout Village Tract (4-Villages)
Township	Labutta
State / Region	Ayeyarwady

Outline of Village

This village tract does not have major flood disaster, and there is a potential to increase production since there is a paddy field usage difference between monsoon and summer rice productions. It is because dry season water supply is limited that farmers cannot implement dry season rice production. Thus, irrigation for dry season water supply and mechanization will contribute in paddy field increase and production expansion. Drinking water supply then also improve general living condition of the village tract. When the rice production expands, road/bridge development should also contribute better market accessibility to transport larger amount of products.
There are people working for fishery and other manufacturing industry in small amount, however these are not the major income sources of the village.

Industrial Structure

Industrial structure of the village tract is with 50% agriculture, 10% of fishery, 5% nipa palm production (leaf roof sheeting) and 35% others. However, 35% includes large amount of paid agricultural workers, and the agro-production is the major industry of the village. Because of less water supply to the paddy field during dry season, the production rate is lower with less field area compared to the monsoon paddy production. Average H.H. income is not so high based on monsoon paddy production, and summer paddy production needs to be highly considered to start for higher income generation. Fishery and other industry are at minor income sources for the village tract. People also manage livestock breeding, however this share is smaller considering income.

Economical Condition of Household

Land owners in the village should be able to earn about 90,000 kyat per month, and this is not very high income. Others are paid worker and they earn much lower daily wage, and they are not sustainable due to production condition. There is a major rice production improvement necessary to increase income of household in both land owners and paid workers. When village people need to go other township or village, they need to use motorbike or boat rides which also cost high for a ride, thus they are not often go out of village except trading purposes by farmers.

Living Condition

There are many paid workers as well as women to work as paid workers, and their income level is still at minimum. Motorbike an boat owners are limited, and most of villagers are based on the village domestic market activities. Since there is not interesting and effective jobs for stable income, many young people move out to other areas including Yangon for better income, although their education is limited. Electricity and water supply are very limited, and water is sold by self-employed person who carries water from rainwater pond. Selling price is 500 Kyat per 24 gallon. Only 10% of H.H. owns SHS for small power supply. Schools and a clinic are located in the tract, but these are not located at the convenient location for all and need improvement. BHN is also important target to improve in the village tract.

Overview of Infrastructure

There is no sustainable water and power supplies in the village. Mobile network is checked fair, but people only use mobile phone for minimum occasion. There is a major need of dredging of existing channels in the tract to improve irrigation, and agro-mechanization is also in need to improve productivity. Cultivation and harvesting are done by hands, and there should be space for improvement especially for harvesting. However, there is an issue with the mechanization, since there are local private equipment rental companies in the region, and additional equipment delivery by the government may initiate conflict. Road and bridge development is also necessary to improve village domestic transport as well as market access for more product transport.

Diagnosis

This village tract has higher potential for agro-production improvement and market development, since there is no major disaster to hold development. Applying channel dredging and mechanization to improve paddy production in area expansion should be possible. Since expanding production is expected, road/bridge development to enhance market access can also contribute to the poverty reduction, since villagers' income are not considerably higher to sustain the living condition. Market demand to the village is not particularly high, however access improvement could strengthen stable product delivery from the vilalge and this could improve villave economy with income increase.

Basic Poverty Profile

Village General Data		Development Possibility	
Village Name	Labutpyay Lal Pyout Village Tract (4-Villages)	Market Based Potential	Good
Township	Labutta	Production Increase Potential	Good
State / Region	Ayeyarwady	Basic Infrastructure Potential	Good
Population	2,237 (Male: 1,107, Female: 1,120), Increased	Disadvantaged Area	
Major Industry	Agriculture: 50%, Fishery: 10%, Nipa Palm (roof sheeting) 5%, others:	Other Development Potential	
No. of Household	500		
Major Agro-Product(s)	A: Monsoon Paddy (2,515 acre)	Quantity: 60 bskt/acre (5,000K/bskt)	
	B: Summer Paddy (1,700 acre)	Quantity: 95 bskt/acre (bit higher than monsoon)	
	C:	Quantity:	
	There are 210 land owner farmer with approx. 12 acre each.		
Target Market	Labutta Urban Market		
Average Household Income	90,000K/month per H.H.		
Climate Info. of Region	Monsoon		
Disaster Info. of Region	Major Flood occurs, especially cyclone Nargis affected large area in 2008.		

Villages in the Tract:
Lae Pyauk
Kwin Hla
La Put Pyay

Existing Social Services		
School (Primary)	Distance	in village tract
	One (1) Primary school exists in the Tract. Students of Tract Village without primary school should go long distance.	
School (Secondary)	Distance	in village tract
	Two (2) Secondary schools exist in the Tract.	
Healthcare Facility	Distance	in village tract
	One (1) Community Clinic exists. Good quality health center is in Kyar Kan Village.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of access to the market 2) Improvement of driverbility in the village tract. 3) Improvement of access to the farmlands.	
Effect(s)	1) Shorter access time to the market 2) Improvement of the driveability of village roads 3) Improvement of productivity by using agricultural machinery	Size/Scale 1) Concrete pavement L=5km 2) Reconstruction of Bridge L=20m. 3) Construction of bridges L=10m×7 bridges
Irrigation	Re-excavation of irrigation channel (Length = 2,200m), Rehabilitation of farm road along the channel and Construction of 10 channel crossing structures (concrete panel bridge)	
Effect(s)	Summer paddy of 150 acre will be additionally irrigated. Farmers and families living in the paddy area will easily come to the village center during monsoon season by road improvement.	Size/Scale Channel section (Base width = 6m, Hight = 1.5m) Excavation volume = 14,000 cum Road section (Width = 5m, Hight = 0.5m)
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Securement of water resources in dry season by the construction of additional rainwater ponds, along with the population growth	
Effect(s)	Due to the drying-up of pond water in the year 2014, residents received relief of bottled water from Myaungmya Township. The construction of additional rainwater pond will improve such circumstances, and water service ratio especially for dry season.	Size/Scale - Construction of two (2) rainwater ponds

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) This VT is 25 km northeast of Labutta. 2) The market (Kyar Kan) is close (about 2.2 km), but the road is unpaved and the condition is bad. 3)The road along the agricultural canal in the village is broken. Problems 1) Fragile access to the market 2) Insufficient driverbility in the village tract. 3) Difficulty of access to the farmlands.	
Water Supply	Principal water source is rainwater for drinking purpose. The other hand, river water is used for general purpose use. Problems Laput Pyay Lae Pyauk village tract is surrounded by a river, and underground water has high saline concentration. Accordingly, drinking water depends on rainwater.	 Rainwater Pond
Irrigation	There are 4 irrigation channels to irrigate about 1,700 acre. Each length of channels is 6,900-7,000 feet with the width of more than 20 feet.The irrigation channels intake the river surface water to farm lands withour any permanent intake structures. Problems One of 4 channels is required some rehabilitation works. That channel is not well functioned due to bank deterioration, sediment and so on.	 Irrigation Channel required Improvement
Agro-Mechanization	Rice cultivation area. Private mechanization providers from Yangon are providing services already. Problems N/A	-

Basic Poverty Profile

Summary	
Village Name	Thar Si Village Tract (5-Villages)
Township	Hinthada
State / Region	Ayeyarwady

Outline of Village

This village tract is located at very close proximity to Hinthada urban center with minor improvement of access road/bridge development, so that market potential is at high level. There are 25% of village land faces flood during rainy season, however there is no salt content soil damage identified. Thus, agro-production improvement is highly possible where flood problem is rare. Though, their production is already at higher level compared with the other villages in the Region, and the improvement or enhancement of production might be less by irrigation rehabilitation and/or mechanization upgrade. Over 75% of households already have hand pump well for drinking water, and there is not a large improvement expected in BHN point.

Industrial Structure

Package of monsoon paddy and bean production is the basic agro-production pattern in this village tract, and it is stabilized except some areas with flood problems. Agro-production is managed by land owners, but there are large population working as paid worker, and their living base is unstable. Many young people are moving out to seek better business and job opportunities as they are not in favor of agricultural labor. There are only a few other manufacturing including mat making, but these are not major village income sources.

Economical Condition of Household

H.H. income according to the hearing can be considered fair but it is not high enough to stabilize living condition. Paid workers are at lower daily wage. Transporting products to Hinthada costs higher, so that 2/3 of H.H. owns motorbikes, but fuel costs are also high. Especially paid workers' economic status should be considered for improvement.

Living Condition

Since it is close to Hinthada Urban center, people are well aware of trend of market. Based on their income level, general living condition can be managed at comfortable level (not luxury). Where flood occurs, people has difficulties for living, however village people have more access to goods and information, so that it is not desperately low living condition as most H.H. are accessible to drinking water through wells and transportation to urban areas.

Overview of Infrastructure

The village tract does not have power supply and water supply by public sector. 10% of H.H. own SHS and there 10 privately owned generators. 75% of H.H. have water well, and they share well water with others who do not have well. Road/bridge to village access from main road to Hinthada urban requires some rehabilitation, but it is not serious matter. Existing channels needs dredging to make water flow more efficient for production. There may be more need of combined harvesters to improve production for both rice and bean since they are doing double crop system. Arsenic is detected from underground water in whole Hinthada TS, and its concentration exceeds WHO drinking water standard which is 0.01mg/l. Arsenic is generally detected at comparatively shallow aquifer of less than 200 feet. Accordingly, Safe water supply can be expected by the extraction of underground water from the depth of 300 to 400 feet.

Diagnosis

Since the need of infrastructure is simple to improve agro-production in this village tract, it is achievable to implement of all infrastructure assistance. Channel dredging to improve irrigation efficiency is one solution for the existing channel system. Mechanization and supplying harvesters should improve double crop production more effectively. Road/bridge rehabilitation should easily improve market access and transportation problems in the village. Deep well development should easily help people to access better drinking water. So all sector infrastructure can be considered for both agro-production and BHN improvement. The Hinthada market is growing further and it is a potntial with the village agro-production. Strengthening market access could draw income increase.
However, this village seems not at an urgent stage of infrastructure rehabilitation compared with other villages, and impact of the assistance may not be so large since their production is already at good level and BHN are at more than average level including social services since the village is very close to the Township urban center.

Basic Poverty Profile

(2/4)

Village General Data		Development Possibility	
Village Name	Thar Si Village Tract (5-Villages)	Market Based Potential	Fair
Township	Hinthada	Production Increase Potential	Good
State / Region	Ayeyarwady	Basic Infrastructure Potential	Good
Population	1,495 (Male: 700, Female: 795), Increasing	Disadvantaged Area	25% for flood
Major Industry	Agriculture: 30%,Paid Worker 60% (farming main), Others (Mat making): 40%	Other Development Potential	
No. of Household	396		
Major Agro-Product(s)	A: Monsoon Paddy (1,535 acre)	Quantity: 70 bskt/acre (4,000K/bskt)	
	B: Bean (1,535 acre)	Quantity: 10 bskt/acre (45,000K/bskt)	
	C:	Quantity:	
	D:	Quantity:	
Target Market	Hinthada Urban (Rice product is delivered to the rice mill factory in Nat Maw village for processing, and kind of broker will deliver to the market.		
Average Household Income	150,000K/month for men and 60,000K/month for women		
Climate Info. of Region	Monsoon		
Disaster Info. of Region	Seasonal flood in July and August and lasts 15 plus days. About 25% (114 acre) farm land get flooded due to low elevation.		

Villages in the Tract:
Thar Si Thu Gyi Su
Moe Gyote
Ta Pa War

Existing Social Services		
School (Primary)	Distance	in village tract
	Two (2) Primary schools exist in the Tract.	
School (Secondary)	Distance	go to Hinthada
Healthcare Facility	Distance	in village tract
	One (1) Community Clinic in Thar Si village.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of access to the market 2) Improvement of driverbility in the village tract.	
Effect(s)	1) Shorter access time to the market 2) Securing year-round access among the villages	Size/Scale 1) Concrete pavement L=6km 2) Reconstruction of bridges (L=15m X 2 bridges)
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	Strengthening service capacity of AMS in HInthada and provision of agricultural mechanization service due to needs of farmers in the village where private service system does not exist	
Effect(s)	- Improvement of household economy through reduction of losses and cost of harvesting by mechanization - Diversification of commercial activities	Size/Scale Target area: 90 ha Combine harvester (1 units)
Water Supply	Securement of water service ratio by underground development toward the population increase	
Effect(s)	Safe water supply will be ensured by the extraction of underground water from depth of 170 to 200 feet. In addition, water service ratio in the village tract will be improved by underground development toward the population growth.	Size/Scale - Well excavation by following equipment; Well excavator (300m class), excavating tools, air compressor, hauling truck, screen and casing (10,000m), well logging equipment

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) This VT is 15 km southwest of Hinthada. The road from main road to VT is not good due to unpaved road and bridge that needs repair. 2) The roads (among rice paddies) in the village is not accessable in the rainy season.	
	Problems 1) Fragile access to the market 2) Insufficient driverbility in the village tract.	
Water Supply	About 75% of households own private well with hand pump, whose depth is 170 to 200 feet.	 Dug Well
	Problems Arsenic is detected from underground water in Hinthada TS, and concentration exceeds WHO standard. Arsenic is generally detected at shallow ground layer of less than 200 feet.	
Irrigation	There is no irrigation facility in this area. Paddy is cultivated under rainfed condition during monsoon season and bean is cultivated by utilization of soil moisture contents remaind from the monsoon season.	 After Paddy Harvested
	Problems Some paddy areas are suffered from inundation caused by the heavey rainfall in the monsoon season. Farmers propose the construction of drainage canals to improve inundation. However, further study on soil moisture mechanism shall be required for the drainage development plan, bacause the present cultivation method of bean is depended on the soil moisture bred by inundation.	
Agro-Mechanization	As delay of harvesting paddy makes reduction of beans production in dry season, farmers need to mechanization of harvesting is very high.	
	Problems For machines access to the village, the road shall be renovated.	

Basic Poverty Profile

Summary	
Village Name	Sit Sa Li Hton Village Tract (4-Villages)
Township	Mawlamyaing Gyun
State / Region	Ayeyarwady

Outline of Village

This village tract is located along a rural access road from trunk road between townships and village people considered two markets for their product sales. Agro-production is based on the double crop with of rice and bean in approximately 2,500 acre of farm land. There is no major flood or disaster occurring in the village except minor water covering during rainy season, and there is a high potential of production improvement and increase with irrigation and mechanization upgrades. Some road/bridge rehabilitation and upgrade work should connect village tract with those concerned markets and neighboring villages for better economic activities. There are six rainwater tanks whose capacity is around 5,000 gallon. However, 73,000 gallon of water for living is insufficient in each village. from such situation, installation of additional rainwater tanks is desirable, and it will improve their living condition as well.

Industrial Structure

Most village farmers are producing rice and bean, and 90% of village industry depends on agriculture. Minor villagers work for government or schools as teachers. Current H.H. income level is not high, however it could be increased by improvement of agro-production. Two markets are considered for product sales, and farmers are aware of better quality products should bring higher income by market demands.

Economical Condition of Household

Although there is a production improvement potential with the village agriculture, current income level is not at stable level. Due to road quality, farmers sell products to brokers although price is lower than the market since they believe that the transporting products by themselves further make loss so that it is reasonable to sell to broker. Therefore, road improvement may help village farmers to increase income when they can sell products directly to the markets.

Living Condition

Christian based community is somewhat supportive each other to manage daily living condition together. 70% of village people still use battery and candles without power supply environment, and they depend on shared water tank supply. Income level is not high, however it seems peaceful in the village. There are much potential to improve BHN in the village, though.

Overview of Infrastructure

Channels in the village tract need dredging and improvement of water flow for more effective irrigation. Mechanization should also improve their double cropping system with rice and bean. Both electricity and water supplies are not sufficient in the village, and there are potential for improvement in living condition. Road and bridge development is at minimum level in the tract, but small improvement could change a lot for market access and village internal economic activities. Mobile signals are identified although it is weak, so that villagers have information access for marketing improvement.

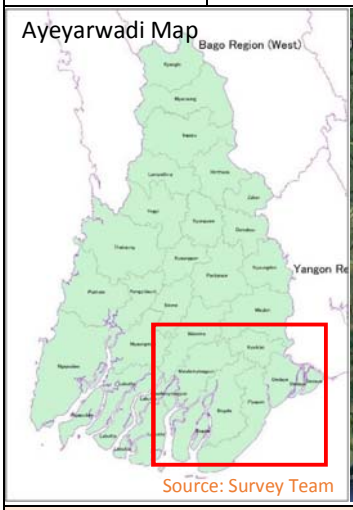
Diagnosis

this village tract has very high potential in agro-production improvement as well as BHN improvement utilizing all sectors, as there is no major flood or disaster, or salt content soil problems to expand production in rice and bean. There is no major hindrance with mechanization such as private sector business conflicts. Road and bridge improvement should support both market access and living condition enhancement with better access to other villages. Summer paddy production is smaller due to less water supply in dry season, so that water supply improvement through irrigation should expand summer paddy production up to monsoon paddy production area. Mechanization then should support farmers to reduce heavy tasks and time to working in farm land. Women as well as young people may have more opportunities to seek different income options through generated spare time. Having two markets aroudn the village is a strong key to improve community's living condition with higher income, and such advantage should be hgihly maintiained with better access with road netowrk.

Basic Poverty Profile

(2/4)

Village General Data		Development Possibility	
Village Name	Sit Sa Li Hton Village Tract (4-Villages)	Market Based Potential	Good
Township	Mawlamyaing Gyun	Production Increase Potential	Good
State / Region	Ayeyarwady	Basic Infrastructure Potential	Good
Population	3,205 (Male: 1,632, Female: 1,618), Increasing	Disadvantaged Area	
Major Industry	Agriculture: 90%,Others: 10%	Other Development Potential	
No. of Household	590		
Major Agro-Product(s)	A: Monsoon Paddy (2,461 acre) R1-90bskt, R2-60bskt, R3-40bskt	Quantity: R1-R3 noted in left (4,200K/bskt)	
	B: Summer Paddy (894 acre) only at R3-100bskt	Quantity: R#: 100 bskt/acre (4,500K/bskt)	
	C: Bean (1,567 acre) R1-15bskt, R2-10bskt	Quantity: R1-R2 noted in left (50,000K/bskt)	
	432 farmers, each owns 5 to 6 acre of farm land.		
Target Market	Yone Dount Village (1.5 mile) Kyaik Lat and Kyaik Pyae Village (7 mile)		
Average Household Income	100,000K/month per worker		
Climate Info. of Region	Monsoon		
Disaster Info. of Region	Suffering from water shortage in dry season		



Villages in the Tract:
Sit Sa Li Htone
Pattaw

Existing Social Services		
School (Primary)	Distance	in village tract
	One (1) Primary school exists in the Tract.	
School (Secondary)	Distance	in village tract
	Two (2) Secondary schools exist in the Tract.	
Healthcare Facility	Distance	in village tract
	Two (2) Community Clinics exist in the Tract.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of driverbility to the market 2) Improvement of accessability to the south village	
Effect(s)	1) Shorter access time to the market 2) Securing year-round access to the southern village	Size/Scale Consrete pavement L=12km Reconstruction of bridges (L=15m X 2 bridges)
Irrigation	Re-excavation of irrigation channel (Length = 3,200m) and Excavation of river (Length = 5,000m)	
Effect(s)	At present, farmers have to use pump to get water from the channel and river whose flow capacities are small due to sedimentation. Pump operation cost will be decreased by this development.	Size/Scale Channel excavation volume = 9,000 cum River excavation volume = 100,000 cum
Mechanization	Strengthening service capacity of AMS in Mawlamyengyun and provision of agricultural mechanization service due to needs of farmers in the village where private service system does not exist	
Effect(s)	Improvement of household economy through increase of productivity and reduction of transportation cost -Releasing from hard work for transportation of the products -Diversification of commercial activities	Size/Scale Target area: Tractor (156 ha), C. harvester (90 ha) Tractor (1 unit) Combine harvester (1 unit)
Water Supply	Construction of rainwater tanks for eliminating serious water shortage in dry season	
Effect(s)	Water service ratio of drinking water decreases to 20% during dry season, although it is almost 100% in rainy season. Increase of water service ratio and reduction of a burden of water fetching can be expected by the construction of additional rainwater tanks,.	Size/Scale - Construction of 12 rainwater tanks * Sit Sali Htone village tract consists of 4 villages. * Required capacity is reported as 73,000 gallon per village.

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) Access to the market is as follows - Yone Dauk: 2.5 km east of the village tract - Kyaik Pyae: 11 km west of the village tract 2) The road condition to the village tract is not good due to unpaved surface. 3) Not accessable to the southern village in the rany season. <u>Problems</u> 1) Insufficient driverbility to the market 2) Fragile access to the southern village	
Water Supply	- Principal water source is rainwater for drinking purpose. - Underground water is not applicable for drinking due to high iron concentration. <u>Problems</u> Residents have to get water from Yar Zu Dai river 7miles away from the village tract in dry season due to drought of rainwater.	 Rainwater Tank
Irrigation	Four natural streams and one irrigation channel are utilized for the irrigation farming. The irrigation channel,whose service area is about 150 acre, was constructed in 1990 by the Department of Irrigation. The channel length is about 2 miles and the width is about 12 feet. <u>Problems</u> The present flow capacity of the channel is not enough to irrigate 150 acre due to heavy sedimentation. Therefore, farmers pump up the river water for the supplemental irrigation water. Farmers ask to excavate the channel to recover the	 Natural River for Excavation
Agro-Mechanization	Needs of harvesting machine is high as they produce beans just after harvesting paddy. Tractor is also requested as they start paddy cultivation just after harvesting bean. <u>Problems</u> N/A	 

Basic Poverty Profile

Summary	
Village Name	Sa Bai Kone Village Tract (8-Villages)
Township	Bogale
State / Region	Ayeyarwady

Outline of Village

This village tract is in the irregular river and channel system in the south east of Bogale. There is no major flood or disaster occurrence except this year, and farmers are able to manage monsoon and summer paddy productions. Since the village has channel network within the tract already, there is not much need of irrigation improvement, however additional mechanization should improve production of rice. Channels are connected with major rivers and to the ocean so that low tide affects water level, and villagers cannot use channels for transporting people or good during low tide. Therefore, there is a need of road and bridge upgrade and rehabilitation for better vehicle access between Bogale market and the village. Currently farmers are mainly using boat transport for products.

Industrial Structure

Major industry for village income is agriculture of rice, coconut, betel nut and vegetables, and the largest share is with rice by monsoon and summer paddy production. Others are not in large share for income. There are 40% of village people either working in fishery industry or paid workers. Most paid workers are working for agricultural production under the land owner farmers to support their cultivation. Production amount from fishery is not large since it is not structured fish farm industry in the tract.

Economical Condition of Household

Majority of village farmers own their farm land or borrowing the land from the government for their cultivation, and many paid workers are working for those land owners for both monsoon an summer paddy productions. Including fishery industry, average daily wage is not so high for individuals so that maintain living is not easy in this village. Therefore, there are many young people move out of the village for better or stable income and job opportunities. Agriculture and its production tasks are not in favor of those young people today. Summer paddy by the way produces larger amount, however the market price is not as good as monsoon season rice. Transportation of good also costs and not efficiently managed due to river/channel based transport, so that there is a chance to also improve income by changing good transporting method or system.

Living Condition

The village people depend on river and channel system since road network is weak. There have not been much of flood or disaster in the tract, however water shortage occurs during dry season. Because of its remote situation there is no public water and power supplies in the village tract. 80% of village people still use candles and rechargeable batteries. Drinking water depends on rain water by making pond, however some ponds do not have good reservoir function. Houses are spread in tropical woods and access among each others is even not easy at some areas due to channel layout. Since basic income level is very low, their living condition is at minimum level, and living quality improvement is necessary.

Overview of Infrastructure

There is a very limited infrastructure services in the village tract, and these are community based services such as water supply ponds. Privately owned SHS or generators exist but these are not utilized for all. Road network is very weak as only motorbikes can run through, thus most villagers are depending on river and channel system for transport. Since large area of the tract is among river system, there is a good channel system already established by village people. Agricultural production in both monsoon and summer season is still mainly done manually because it is not easy to deliver equipment to the arm land through the river an channels. There is a major need of road/bridge upgrade and rehabilitation.

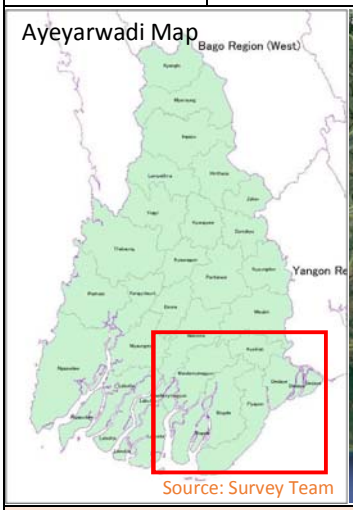
Diagnosis

Since there is no major disaster record including flood with the village, there should be a good chance to improve agro-production utilizing existing channel system as an irrigation network and employing new equipment for more effective cultivation and harvesting. Improvement of paddy production will bring better income. Meanwhile access roads and bridges among villages in the tract as well as to connect the tract to the market and main road should be rehabilitated and upgraded for better function. rivers and channels lose water level for transportation during low tide, so that road access is important to secure 24/7 access among villages and market for better trading.
Water supply is depending on rainfall and villagers face difficulty in dry season for water access. Therefore there should be better and reliable reservoir tanks to be developed for drinking water security in BHN point of view. This village tract has both BHN and agriculture production improvement potential. SInce the Village Tract is close enough to Bogale market, and access improvement simply ease villager's product transportation to the market and that will help possible income increase. Location based potential between the village and the market cannot be missed for development.

Basic Poverty Profile

(2/4)

Village General Data		Development Possibility	
Village Name	Sa Bai Kone Village Tract (8-Villages)	Market Based Potential	Good
Township	Bogale	Production Increase Potential	Good
State / Region	Ayeyarwady	Basic Infrastructure Potential	Good
Population	3,572 (Male: 1,767, Female: 1,805), Increasing (though, some gone out of village)	Disadvantaged Area	
Major Industry	Agriculture: 60%,Others (Fishery and Paid Worker): 40%	Other Development Potential	
No. of Household	716		
Major Agro-Product(s)	A: Monsoon Paddy (3,445.28 acre)	Quantity: 40 bskt/acre (8,000K/bskt)	
	B: Summer Paddy (3,445.28 acre)	Quantity: 70~75 bskt/acre (6,000K/bskt)	
	C: Vegetables, Coconut and Betel Nut	Quantity: small	
	324 farmers		
Target Market	Bogale Urban		
Average Household Income	2,000K/day for paid workers		
Climate Info. of Region	Monsoon		
Disaster Info. of Region	Flood: Large flood damage occurred this year.		



Villages in the Tract:
Sa Bai Kone
Dar Chaung
Nga Pi Tone Hlae
Oo Do Can Su
Sa Kar Lone Kone
Ba Wa Thit

Existing Social Services		
School (Primary)	Distance	in village tract
	Six (6) Primary schools exist in the Tract.	
School (Secondary)	Distance	in village tract
	One (1) Secondary school exists in the Tract.	
Healthcare Facility	Distance	in village tract
	One (1) Community Clinic exists in the Tract.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Securing the road network among the other village tract 2) Improvement of the accessability among the villages	
Effect(s)	1) Shorter access time to the market 2) Securing year-round access among the villages 3) Improvement of productivity by using agricultural machinery	Size/Scale Concrete pavement L=6 km Reconstruction of bridges (L=15m X 2 bridges) Reconstruction of bridge (L=50m) Construction of bridges (L=10m X 14 bridges)
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	Strengthening service capacity of AMS in Mawlamyengyun since there is no AMS in Bogale and provision of agricultural mechanization service due to needs of farmers in the village where private service system does not exist	
Effect(s)	Improvement of household economy through increase of productivity and reduction of transportation cost -Releasing from hard work for transportation of the products -Diversification of commercial activities	Size/Scale Target area: Tractor (312 ha), C. harvester (180 ha) Tractor (2 unit) Combine harvester (2 unit)
Water Supply	There are 16 rainwater ponds in this village tract. However, some of ponds don't function properly due to structural matter. Project object is to improve the structure from earth embankment to reinforced concrete, for recovering the function.	
Effect(s)	Degradation of water quality / quantity in dry season and a burden of water fetching can be improved by the exchange of the structure.	Size/Scale - Structural exchange of existing 16 rainwater tanks from earth pond to RC tank.

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) 17km from the market (Bogale). The road from main road to VT is not accessable by car due to disaster in 2008. Main transportation of people and goods depends on boats, but can not be used at low tide. 2) Unpaved village road makes passages difficult in the rainy season	
	Problems 1) Unrestration road network among the other village tract 2) Insufficient road condition for village roads	
Water Supply	- Principal water source is rainwater. - Underground water is not able to use due to high iron concentration.	 Rainwater Pond
	Problems There are 16 rainwater ponds. However, some of ponds don't function properly due to structural matter, and water quality degrades by the pollution from the soil level during March to April	
Irrigation	There are so many irrigation channels constructed in this village tract, five by Irrigation Department in 1990-1991, others by farmers themselves. In a general way, the channel width is 3 feet and the length is 100-500 feet. One channel covers about 14 acre on the average.	
	Problems The unit yields of paddy are 2.1 ton/ha in monsoon season and 3.6-3.8 ton/ha in summer season. These low unit yields are caused by the present poor farming practices. For example, farm inputs (fertilizers, agro-chemicals, etc.) may be insufficient under the difficult access conditions.	
Agro-Mechanization	Double cropping area of paddy. As farmers cultivate average 8.5 ha / a family they face hard work and expect mechanization for reduction of hard work and time for farming.	
	Problems The village locates out of service area of the nearest AMS in Mawlamyinegyun.	

Basic Poverty Profile

Summary	
Village Name	Auk Yae Hpyu Village Tract (6-Villages)
Township	Launglon
State / Region	Tanintharyi

Outline of Village

The village tract is located in the area where major flood takes place during rainy season, and the tract is also close to the river which becomes seawater entry during the dry season so that the farm land becomes more salt contained soil not suitable for agriculture. Therefore, it is difficult to improve agro-production in this village before the protection measures and salt water resource treatment could be implemented. However, mechanization may have positive impact for production efficiency and quality improvement. Tract villages through internal access road improvement may improve internal network activities. Groundwater also contains salt during the dry season, and well water development may not function well, and mountain water resource should be further studied for capacity and quality. BHN based development assistance may come first for the village tract to support village people.

Industrial Structure

The village tract depends on monsoon paddy production minor rubber production which is not fully producing. Size of the paddy field is not large enough considering the village population, and the average income of household is considered low even for the farm land owners. Since its soil condition with salt content during the dry season and groundwater capacity, it is very difficult to increase production of rice. Other than the paddy production, there is very minor nipa palm based leaf roof manual manufacturing is operated by the village people, however this industry is only earning small profit. Young people are going out of village because of better job opportunities in other cities or countries.

Economical Condition of Household

Average household income of farm land owners is about 1 million kyat and the daily paid workers earn only 5,000 kyat per day, and this figure is not high enough to support family member at good living status. Village farmers use mill factory brokers to sell rice to the market, and the prices that the brokers set are slightly lower than that of direct sales. However, the farmers consider transportation cost basically make comfortable balance of price, and people are feeling fair about the brokers' price setting. Since the markets of Dawei and Launglon is easily accessible, access issue s not the major problem for improvement.

Living Condition

Villages are actually located nearby the trunk road to Dawei, and these are provided with the privately supplied power although charge applied. Mobile connectivity is also good enough for wider information access, although village people are not capable to utilize internet type information system. Other than the flood problems, there is not much difficult condition observed in the village. Since industry other than agriculture is very weak in the area, it is difficult to keep young people to stay in the villages. It is important to make easier and comfortable agriculture working environment which attract young people better.

Overview of Infrastructure

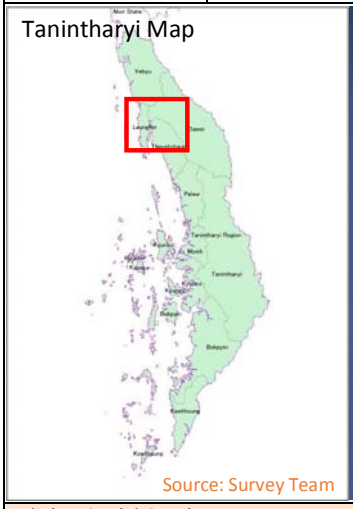
electricity is provided to the village area along the trunk road by the private company, but other tract villages are not provided, and there is a infrastructure service gap within the village tract. Water supply in general is weak through out the village as groundwater resources are limited and water shortage in the dry season is the issue for the major improvement. Irrigation channels are developed by the government, but it does not cover all farm area, and there is a potential for improvement if flood protection is made. Agricultural mechanization with more effective AMS services may improve productivity in the area, however it may not directly impact to the income increase. Internal road and bridge rehabilitation and improvement should help villagers to make more active intra-village market activities.

Diagnosis

There is a good potential for both agricultural production improvement with market access enhancement and BHN based livelihood improvement for this village tract, when flood protection is effectively made. Water supply is another issue to identify good water source since the area experiences higher salt content during the dry season. Therefore, this village tract may be treated with BHN based development assistance, especially road and bridge rehabilitation and/or improvement. In order to increase income by agriculture, water quality and irrigation are also needed for improvement. Because of salt content in groundwater during the dry season, double crop or double harvesting method might be difficult, so that production expansion and efficiency improvement should be made with mechanization assistance.

Basic Poverty Profile

Village General Data		Development Possibility	
Village Name	Auk Yae Hpyu Village Tract (6-Villages)	Market Based Potential	Fair
Township	Launglon	Production Increase Potential	Fair
State / Region	Tanintharyi	Basic Infrastructure Potential	Good
Population	5,963 (Male: 2,927, Female: 3,063), Increasing	Disadvantaged Area	Major Flood
Major Industry	Agriculture: 70%, Others: 30%	Other Development Potential	
No. of Household	1,690	Dike Development	
Major Agro-Product(s)	A: Monsoon Paddy (2,407 acre)	Quantity: 60 bskt/acre (3,000K/bskt) (1bskt=50lb)	
	B: Rubber and others (2,939 acre)	Quantity: unknown	
	C: Nipa Palm (50 acre)	Quantity: Very small	
	Total farm land: 5,396 acre, 557 farmers	total village area: 10,656 acre	
Target Market	Dawei Urban at 18 miles (not Launglon) Rice mill factory is located in Auk Yae Hpyu village.		
Average Household Income	1,000,000K/year per H.H., Paid worker: 5,000K/day		
Climate Info. of Region	Monsoon with heavy rain in rainy season		
Disaster Info. of Region	Flood covers paddy land causing damages.		



Villages in the Tract:
Auk Yae Hpyu
Got Inn
Ka Dat Ngal Htein
Kyauk Phyu

Existing Social Services		
School (Primary)	Distance	in village tract
	Four (4) Primary schools exist in the Tract.	
School (Secondary)	Distance	in village tract
	One (1) Secondary school exists in the Tract. Also one (1) High school exists.	
Healthcare Facility	Distance	Myaung Mya Urban
	One (1) Community Clinic exists.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of accessability of the east-west road	
Effect(s)	1) Securing year-round access of the east-west road	Size/Scale Macadam pavement: L=3km
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	Strengthening service capacity of AMD in Dawei and provision of agricultural mechanization service due to needs of farmers in the village where private service system does not exist	
Effect(s)	Improvement of household economy through increase of productivity and reduction of transportation cost -Releasing from hard work for transportation of the products -Diversification of commercial activities	Size/Scale Target area: [Auk Yae Hpyu] Tractor (156 ha), C. harvester (540 ha) [Pyin Htein] C. harvester (270 ha) [Auk Yae Hpyu] Tractor (1 unit) Combine harvester (6 units) [Pyin Htein] Combine harvester (3 units)
Water Supply	Development of water supply system by gravity flow from the spring near mountain area for eliminating water shortage due to drought of dug wells located at highland area	
Effect(s)	Water service ratio in whole village tract will improve in dry season because of the introduction of water supply system by gravity flow instead of dug wells located in highland area.	Size/Scale - Construction of one (1) gravity water supply system from the spring water source

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) 30 km from the market (Dawei). It takes 1 hour by car. 2) High traffic volume on main road (managed by MOC) goes through from north to south of this village tract. 3) The unpaved east-west road (about 3 km to the VT in the east side) is difficult to pass through in the rainy season due to flood. Problems 1) Insufficient access of the east-west road	
Water Supply	There are 973 wells and underground water covers 90% of the village tract as principal water source. Remaining water source depends on a water springing from mountain area. Problems Around 35% of dug wells located at highland suffers drought during dry season.	 Dug Well
Irrigation	There are two main drainage rivers with many tributary drainage streams in the agricultural area. One is Htwar River running along the north boundary of this village. The other is Chan Twin River running in the middle of the village. Both river have abundant water in the monsoon season, but are dried up in the summer season. The Department of Agriculture (DOA) together with the Department of Irrigation have implemented drainage improvement program of the Chan Twin River. They excavated the river to increase the drainage flow capacity. They also have a plan to construct sluice gate structure at the mouth of the river. Problems Major constraint in this village tract is inundation during monsoon season. As for the Htwar River, the same improvement plan as the Chan Twin River can be proposed, but DOA dose not have any such program.	
Agro-Mechanization	Major product is rice together with rubber. Need for timely harvesting to avoid losses by a harvester is very high among farmers. Private service delay usually on proper time because they process their own field firstly. Problems N/A	

Basic Poverty Profile

Summary	
Village Name	Pyin Htein Village Tract (only 1-Village)
Township	Launglon
State / Region	Tanintharyi

Outline of Village

This village tract faces small flood problems in a area along small stream through the village, and this part of the stream should be treated with protective structure. Such protection may be developed together with irrigation facility for integrated effect. Drinking water is obtained from water wells in the village, however the amount of water becomes less at highland area during dry season. The village farmers has started new production of watermelon experimentally and it is working well, therefore there should be a potential to start double crop production in the area with particular varieties which do not require much water to grow during the dry season. The village tract is located comfortably close distance from the trunk road for Dawei and Launglon markets, and the road and bridge accessibility should be improved well for better market connection.

Industrial Structure

There are about 70 farmer households that own paddy land of 1,010 acre to manage monsoon paddy, and rice production is the main income source while there are minor production of rubber and other products, such as watermelon. People do not own land are basically working for daily based payment. Since industry including rice production is not strong and expanding as young people see there is not much other job opportunity, about 20% of young aged villagers are moving out of village for better job opportunity. Agricultural industry should seek improvement and strengthen strategies.

Economical Condition of Household

Considering over half of the population in the village is living on the daily payment basis with around 5,000 kyat per day, the villagers are not at economically healthy state as the village depends on monsoon paddy production only. There is still a need of increase income of the villagers by establishing stronger production system for multi-crop agriculture. Since village farmers sell products to brokers and no direct sales is made to the markets, villagers earn less profit compared to the direct marketing method.

Living Condition

Although average income of village people are not high enough, the village tract is closer to larger markets of Launglon and Dawei and it is easily accessed to the markets to fulfill their daily needs. People face difficulty to obtain drinking water during the dry season, but the condition is not so critical as the ground water does not completely dry out as the area is close to the nearby small mountain. Many households, by the way, own motorbikes for transportation, so that the expanding the production may not seriously screw up their goods transportation.

Overview of Infrastructure

There is no publicly installed power supply system, but private generators supply electricity to over 90% of households in the village. Most houses use water wells for drinking water. There is no well organized irrigation in the village tract although irrigation channels exist. There is one site of AMD's experimental paddy field readjustment with mechanization at the border of the village, and equipment from this development might be one option to utilize. Access roads and bridges within the village and to the markets are not very good in condition, and these should be treated for improvement. There is not enough school facilities and no clinic within the village tract since it is closer to Launglon urban area, so that the people should commute to Launglon to take health services as well as continuous education.

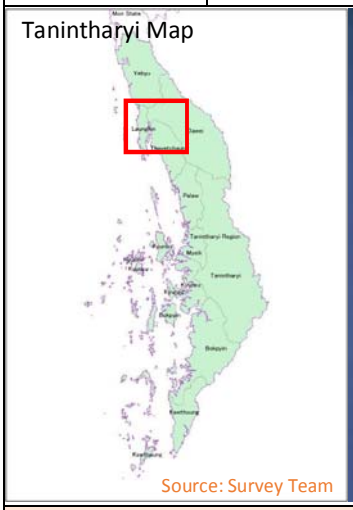
Diagnosis

This village has a potential for market connectivity and production improvement by applying road/bridge rehabilitation and improvement together with mechanization for additional multi-crop production with rice. It is rather flat land and closely located geographical advantage to the market making its development easier, if the flood protection is well made in the village tract. Because of close proximity to the mountain, ground water capacity may be higher for drinking water supply, so that the water supply facility improvement may help villagers' living condition to improve. As farmers have already started the experimental watermelon production during the dry season, there is a higher potential of double crop agriculture with some varieties which do not require higher water amount to grow. With irrigation and mechanization improvement, soft component of new technology or alternative technology transfer or training program to the farmers may be effective to improve production. Firstly road/bridge and water supply development in BHN basis should be considered for the village tract.

Basic Poverty Profile

(2/4)

Village General Data		Development Possibility	
Village Name	Pyin Htein Village Tract (only 1-Village)	Market Based Potential	Fair
Township	Launglon	Production Increase Potential	Good
State / Region	Tanintharyi	Basic Infrastructure Potential	Good
Population	825 (Male: 394, Female: 431), Stable	Disadvantaged Area	Major Flood
Major Industry	Agriculture: 60%, Others: 20% (20% moved out for remittance)	Other Development Potential	
No. of Household	190	Flood Treatment at small stream	
Major Agro-Product(s)	A: Monsoon Paddy (1,010 acre)	Quantity: 60 bskt/acre (3,200K/bskt) (1bskt=50lb)	
	B: Rubber and others (50 acre)	Quantity: 15 lb/day acre (920~960K/lb)	
	C: Watermelon (10 acre)	Quantity: Very small	
	Total farm land: 1,449 acre, 70 farmer H.H.		
Target Market	Only sell products to brokers and unknown about the market.		
Average Household Income	Paid worker: 6,000K/day for men, 5,000K/day for women		
Climate Info. of Region	Monsoon with heavy rain in rainy season		
Disaster Info. of Region	Part of the village gets flooded during rainy season.		



Existing Social Services		
School (Primary)	Distance	in village tract (in the secondary school)
	-	
School (Secondary)	Distance	in village tract
	One (1) Secondary school exists in the Tract.	
Healthcare Facility	Distance	Launglon
	There is no healthcare facility. People need to go one in Launglon (about 1.4km)	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of accessability of the east-west road	
Effect(s)	1) Securing year-round access of the east-west road	Size/Scale Macadam pavement: L=3km
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	The Project aims at ensuring safe and stable water supply by the centralized control of water resources.	
Effect(s)	DRD desires a centralized control of water resources for stable and safe water supply from the dug well located in lowland area and having enough yield capacity despite seasonal change.	Size/Scale - Construction of one (1) gravity water supply facility by the centralized control of water resource

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) This village tract is located east side of the center of township 2) The east-west road is partially paved with macadam but mostly unpaved. There is a flood in June - August every year, and the period becomes unaccessible. 3) In the flooded area, the depth of flooding reaches a maximum of 40 - 50 cm from the road surface and 90 cm from the arable land. Problems 1) Insufficient access of the east-west road	
Water Supply	50% of households in the village tract owns private dug well, and underground water is used for both drinking and general purpose use. Problems Dug well located at highland area suffered water shortage from January to February in 2014. In addition, neighboring village tracts suffer water shortage in dry season due to the increase of saline concentration.	 Dug Well
Irrigation	The monsoon paddy is cultivated under rainfed condition. There are threee small rivers in the paddy fields. These river have abundant water in the monsoon season but are dried up in the summer season. Problems The paddy fields of about 500 acre are attacked by the flash floods with inundation depth of about 5-6 feet. In order to improve this problem, the river flood control plan shall be studied. However, it is difficult to formulate the optimum improvement paln for these rivers without any meteorological and hydrological data.	
Agro-Mechanization	Rice is the major product and they produce water melon after rice cultivation. Farmers request mechanization service for shortening work time and proper management on time of cultivation. They can use machine by borrowing from other villages but it cannot fulfill the demand yet. Problems	

Basic Poverty Profile

Summary	
Village Name	Wa Kone Village Tract (4-Villages)
Township	Dawei
State / Region	Tanintharyi

Outline of Village

The village tract is located in the mountains where a major private mining company is excavating lead. The mountain range is rather rock instead of soil form as well as steep areas are spread, so that common agriculture production is not easy to expand. In such condition, the village tract depends on betel nut and rubber production for main income although rubber production is not fully operational today. Although villagers produce rice and others for their own consumption, community is depending on brokers to deliver their food from Dawei market, and expense to the purchase is still high. Assistance target should be mainly BHN base with water supply and road access improvement, because improvement for betel nut production is not very easy.

Industrial Structure

The village tract focuses on betel nut based agriculture over 70% in industry, and minor population is earning small income out from lead mining site as they search rare lead from waste dump soil and rocks to sell to the brokers. The industrial structure is very simple, so that the village needs to have alternate risk hedging production, and rice or other vegetable could be considered for additional production improvement. However, technical advice type approach may be more effective instead of providing irrigation and/or equipment for production improvement for new kinds.

Economical Condition of Household

Income of the village tract and people are not very high comparing with other villages. As betel nut production is the only industry for income generation, the village community should investigate alternative income source(s) for economic risk hedge. the mining industry is rather owned by a private company, and there is not any promise to the community for good job opportunity or livelihood support.

Living Condition

Since the mining industry and its activities are in some way affecting to the villagers' livelihood, some tract villages are facing water contamination by the mining discharged materials and other reasons. There seems living condition gap considered as disparity in the same tract, and this should be improved for balanced condition as much as possible. The village tract is closer to the secondary trunk road to the market of Dawei, so that the villagers' living condition could be further improved easily with road access improvement. As there is not a strong inter-economic activities among the tract villages, internal road improvement should also be effective for livelihood improvement.

Overview of Infrastructure

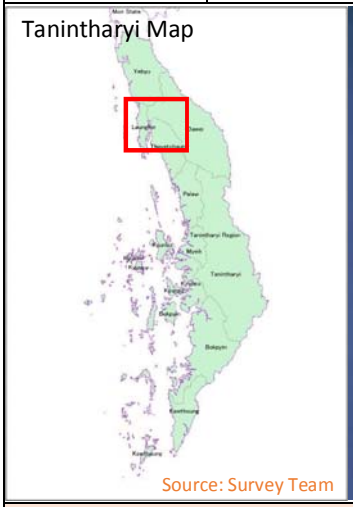
Water supply is a large problem with some area due to the mining pollution, and this issues should be attended in order to provide safe water and healthcare environment through the safe water supply. Access roads among tract villages are at low quality of surface that needs improvement for better internal market activities. As it is in the mountains, the village tract are not easy for irrigation and mechanization, and farm field access might be the possible improvement target. In general power supply is not provided except Hein Da village so that improvement is needed. Telecommunication in the area is only possible with CDMA network which is very limited communication signal system, and the village people has very low communication access level for market information input, for instance.

Diagnosis

The village tract should be targeted for BHN based living condition and service improvement support, since the village tract is producing only betel nuts for income generation and there is very limited potential for agriculture development. There is no serious disaster issue exists, so that the road/bridge access improvement and water quality control and supply can be considered for development for BHN approach. Road/bridge development or improvement are at the high potential, the section where private mining company gains the project development benefit should be excluded from the consideration in order to maintain ODA policy. Common market to the village tract is Dawei and it is in a long distance. There should be a access improvement potentail, however marketing software system, such as sales network, needs to be established among other village tracts producting the same products.

Basic Poverty Profile

Village General Data		Development Possibility	
Village Name	Wa Kone Village Tract (4-Villages)	Market Based Potential	Difficult
Township	Dawei	Production Increase Potential	Difficult
State / Region	Tanintharyi	Basic Infrastructure Potential	Good
Population	1,652 (Male: 856, Female: 796), Increasing	Disadvantaged Area	Water Pollution
Major Industry	Agriculture: 70%, Others: 30% (Mining black marketing: lead)	Other Development Potential	
No. of Household	254		
Major Agro-Product(s)	A: Betel Nut (2,000 acre)	Quantity: 500 viss/acre (3,000~5,000K/bskt)	
	B: Rubber (50 acre)	Quantity: 15 lb/day acre (650~700K/lb)	
	C:	Quantity:	
	Private company runs lead mining in the village tract area.		
Target Market	Dawei (21 miles): collection center is the point to sell betel nuts and the center (broker type) sets the market price.		
Average Household Income	5,000,000~6,000,000K/acre of betel nut farm H.H. per year. Paid worker: 3,000K/day		
Climate Info. of Region	Heavy rain fall during rainy season		
Disaster Info. of Region	Village people has faced less water (rain) in the last two years.		



Villages in the Tract:
Wa Kone
23 Mile
W Kone Chaung

Existing Social Services	
School (Primary)	Distance in village tract (in the secondary school)
	There (3) Primary Schools exist in the Tract.
School (Secondary)	Distance in village tract
	One (1) Secondary school exists in the Tract.
Healthcare Facility	Distance in village tract
	One (1) Clinic exists in the Tract.

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Securing the accessibility to the southern village.	
Effect(s)	1) Improvement of BHN 2) Shorter access time to the center of VT	Size/Scale Construction of bridges: L=15m X 2 bridges Macadam pavement: L=3km
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	The village tract is located at mining area, and many kinds of mineral is contained in underground water. Exchange of water source is expected from the underground water to the spring water, from safety aspect.	
Effect(s)	Water shortage in dry season will eliminate by the development of spring water resource. In addition, the fear associated with water borne diseases will be removed.	Size/Scale - Construction of one (1) gravity water supply system from the spring water source

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) 30 km from the market (Dawei). It takes 1 hour by car. 2) High traffic volume on main road (managed by MOC) goes through from west to east of this village tract. 3) The villagers by themselves manage construction of the gravel village road around the residential area. 4) The southern village beyond the mine is unpaved and difficult to access during the rainy season. Problems 1) Insufficient access to the southern village.	
Water Supply	Principal water source depends on a water springing from mountain area, and water is supplied to whole households by pipeline. The other hand, underground water is used during March to April due to the decrease of spring water capacity. Problems (1) Spring water capacity decrease from March to April. (2) Skin trouble is reported. However, a causal relation to water quality is not clarified because of no diagnosis result.	 Water Reservoir (From the Spring)
Irrigation	This village tract is the mountainous area, and there is no irrigation facility. The main productions are betel nut and rubber. Problems The farmers do not know the farming practices of paddy and other common agricultural crops.	 Betel Nut Tree
Agro-Mechanization	Rubber production area. Problems As rubber trees grow on a slope, mechanization cannot be applied.	

Basic Poverty Profile

Summary	
Village Name	Hein Dar (Mine) Village Tract (8-Villages)
Township	Myitta Sub-Township, Dawei TS
State / Region	Tanintharyi

Outline of Village

The village tract is located among mountains in eastern Dawei where a major private mining company is excavating lead. The mountain range is rather rock instead of soil form as well as steep areas are spread, so that common agriculture production is not easy to expand. In such condition, the village tract depends on betel nut and rubber production for main income although rubber production is not fully operational today. Community is depending on brokers to deliver their food from Dawei market and they hardly produce their own food products, and expense to the purchase is still high. As development for betel nut industry in the village is not easy to achieve, assistance target should be mainly BHN base with water supply and road access improvement.

Industrial Structure

The village tract focuses on betel nut based agriculture over 80% in industry, and minor population is earning small income out from lead mining site as they search rare lead from waste dump soil and rocks to sell to the brokers. Very small amount of other products are made but these are for self consumption. The industrial structure is very simple, so that the village needs to have alternate risk hedging production.

Economical Condition of Household

Income of the village tract and people are not very high comparing with other villages. However, because of the private mining industry, the village is provided with water and power supply in Hein Da village. Others are not provided so that they are depending on self servicing of water and power such as SHS. The village people are supported by the mining company in minimum level, so that the economic condition is not the lowest with current income level.

Living Condition

Since the mining industry and its activities are in some way affecting to the villagers' livelihood, some tract villages are facing water contamination by the mining discharged materials and other reasons. Where power and water supplies are provided by the mining company, people's living condition is better, while other are facing very minimum livelihood to maintain. There seems living condition gap considered as disparity in the same tract, and this should be improved for balanced condition as much as possible.

Overview of Infrastructure

Access roads among tract villages are at low quality of surface that needs improvement for better internal market activities. Water supply is a large problem with some area due to the mining pollution, and this issues should be attended in order to provide safe water and healthcare environment through the safe water supply. As it is in the mountains, the village tract are not easy for irrigation and mechanization, and farm field access might be the possible improvement target. In general power supply is not provided except Hein Da village so that improvement is needed. Telecommunication in the area is only possible with CDMA network which is very limited communication signal system, and the village people has very low communication access level for market information input, for instance. Common market to the village tract is Dawei and it is in a long distance. There should be a access improvement potentail, however marketing software system, such as sales network, needs to be established among other village tracts producting the same products.

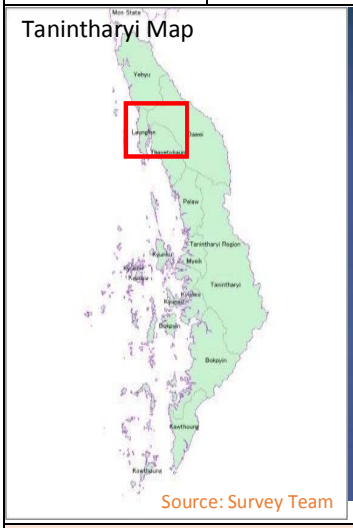
Diagnosis

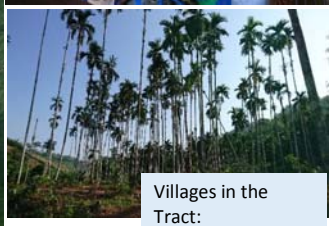
Since the village tract is producing only betel nuts for income generation, there is very limited potential for agriculture development, so that the village tract should be targeted for BHN based living condition and service improvement support. There is no serious disaster issue exists, so that the road/bridge access improvement and water quality control and supply can be considered for development.
Road/bridge development or improvement are at the high potential, the section where private mining company gains the project development benefit should be excluded from the consideration in order to maintain ODA policy.

Basic Poverty Profile

(2/4)

Village General Data		Development Possibility	
Village Name	Hein Dar (Mine) Village Tract (8-Villages)	Market Based Potential	Difficult
Township	Myitta Sub-Township, Dawei TS	Production Increase Potential	Difficult
State / Region	Tanintharyi	Basic Infrastructure Potential	Good
Population	4,973 (Male: 2,414, Female: 2,559), Increasing 30~50 H.H. per year	Disadvantaged Area	
Major Industry	Agriculture: 80%, Others: 20% (Lead Mining Black marketing work)	Other Development Potential	
No. of Household	1,915	Water Quality Control (Pollution)	
Major Agro-Product(s)	A: Betel Nut (10,000 acre)	Quantity: 300,000 viss/acre (4,000K/viss)	
	B: Rubber (560 plants)	Quantity: 10lb/day-acre	
	C: Paddy (30 acre)	Quantity: 40 bskt/acre	
Target Market	Dawei Urban at 35 miles		
Average Household Income	5,000,000~6,000,000K/year H.H., Paid worker: 3,600~5,000K/day		
Climate Info. of Region	Heavy rain during rainy season		
Disaster Info. of Region	N/A		





Villages in the Tract:
Hein Dar
Myaung Pyo
Yay Pu Wa
Phut Lat To
Kyat Paung Chaung
Wa Zwan Chaung
Hein Dar Pyin

Existing Social Services		
School (Primary)	Distance	in village tract
	Eight (8) Primary schools exist.	
School (Secondary)	Distance	Size/Scale N/A
	One (1) High school exists.	
Healthcare Facility	Distance	in village tract (and Dawei)
	There is no healthcare facility, but there is a community health worker stationed. For emergency and major injury, people should go to Dawei (35 miles) for treatment.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Securing the accessibility to the southern village. 2) Improvement of driverbility to the village road.	
Effect(s)	1) Improvement of BHN 2) Improvement of the driveability of village roads 3) Shorter access time to the center of VT	Size/Scale Construction of bridges: L=10m X 2 bridges Construction of bridge: L=50m Macadam pavement: L=12.8km
Irrigation	N/A	
Effect(s)	N/A	
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Improvement of safe and bountiful water supply in Myaung Pyo village suffering water borne diseases near the minig area	
Effect(s)	Water shortage in dry season will eliminate by the development of deep underground water development. In addition, the fear associated with water borne diseases will be removed because minerals contain in comparatively shallow aquifer.	Size/Scale - Well excavation by following equipment; Well excavator (300m class), excavating tools, air compressor, hauling truck, screen and casing (10,000m), well logging equipment

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) 45 km from the market (Dawei). It takes 1.5 hour by car. 2) Due to mining development, village population growth rate is high, some shops. It is rare for many villagers to go to Dawei. 3) The southern village is unpaved and difficult to access during the rainy season. 4) Most of the village roads are unpaved and the villagers want to be paved.	
	Problems 1) Fragile access to the southern village. 2) Insufficient driverbility of the village road.	
Water Supply	- Hein Dar village: Principal water source is spring water and underground water. Utilization ratio is 80 % of spring water and 20% of underground water. - Other five villages: Principal water source is underground water and river water.	
	Problems Dug wells located at highland area in Hein Dar and Myaung Pyo village are easy to suffer water shortage during dry season. Furthermore, water borne diseases are reported from Myaung Pyo village.	
Irrigation	This village tract is the mountainous area, and there is no irrigation facility. The main productions are betel nut and rubber.	
	Problems Farmers want to expand the paddy area to 100 acre, but it is hard for them to conduct land reclamation without farm machines. The potential areas of paddy cultivation are also scattered in the village, and irrigation development is difficult in consideration of topographical conditions and limited water resources.	
Agro-Mechanization	Rubber and betel nuts production area.	-
	Problems N/A	

Basic Poverty Profile

Summary	
Village Name	Nan Daw Yar Village Tract (6-Villages)
Township	Myeik
State / Region	Tanintharyi

Outline of Village

This village tract depends on betel nut production for their main income source, other products such as rice are produced mainly for their self consumption. Expansion of their agricultural production is rather difficult. Besides, the village tract faces major flood problem in a large area, therefore there is an important development for flood protection.
On the other hand, there are two other village tracts namely Ta Nyit VT and Taung Shae VT next to this village, and these are connected by a road and major bridge to connect them to trunk road leading to Myeik urban area. Once the road and the bridge improvement is made, market accessibility for those three villages should be improved. Therefore, the development assistance should not only focus on Nan Daw Yar VT but other two VTs for combined development.

Industrial Structure

The village tract is agriculture production based community with betel nut and rubber, but rubber plants are not grown enough for actual production. Therefore, the income generating product is only betel nut in the village tract. Due to single income source risk is very high under the high flood damage rate, it is important to expand other production in this village, such as rice and other vegetables or grain if possible. Other than betel nut, products such as rice are produced for self consumption and generating no income. Although villagers produce rice, they still purchase from broker because of their debt based obligation to brokers.

Economical Condition of Household

Farm land owners doing betel nut production normally earn approximately 200,000 kyat per acre and many own a few acres, thus they are not making good income to support family members. Besides, paid workers earn 4,000 to 5,000 kyats per day and this income is not very stable to depend on. Overall village income is assumed still low. Due to the market access bridge does not allow to drive cars (only motorbikes), there is a difficulty to transport larger amount of products to Myeik market, and this costs high as well. Therefore, secondary income source production should be needed to increase village tract's income.

Living Condition

Other than the flood damage, the village tract does not have much trouble. However since their income level is still low, their living condition could be improved by basic infrastructure and social service improvement. Since there is only community health worker available for treatment without clinic or health service facility, it is important to have the service facility developed, while there are schools in the village to provide basic education till high school level. Though, the capacity of the school facilities is not enough to meet all demand. Water supply is minimum but stable, however village people face difficulty during dry season for drinking water access.

Overview of Infrastructure

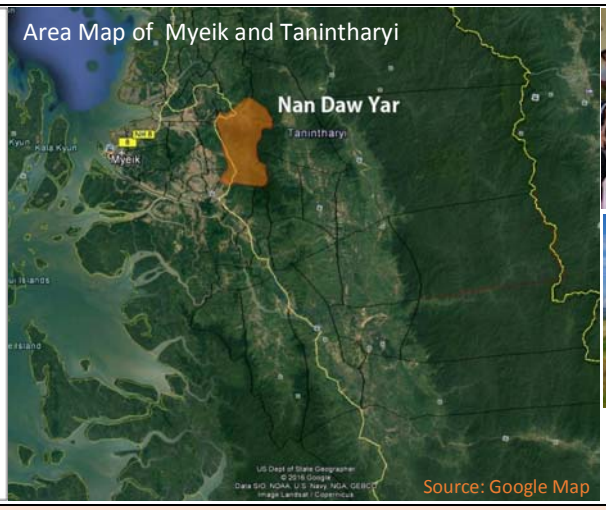
The village tract should have improved road and bridge access through the neighboring tracts to make direct access to the main road to Myeik. The village does not have irrigation system due to small amount of rice production in monsoon season. Though flood protection development should be considered prior to the irrigation installation in the village because of the magnitude of flood damage. There are a few water sources around the village tracts so that the pipe connection should be improved for better drinking water access as well as fetching time reduction of villagers. Healthcare facility is not ready in the village so that social service level is low besides, basic level education being provided. Since the rice production is mainly for self consumption, there is no high requirement of mechanization to the village, however considering to secure income variation, there might be potential for mechanization. Meyeik market is large for sales of products, and access improvement should bring a large potentail to the group of Vilalge Tracts, therefore road network development shoudl tie with the economic activity.

Diagnosis

As this village tract is considered as the single development target, the village tract should be improved with BHN based development with road/bridge and water supply. However, this village tract is situate with other two village tracts(Ta Nyit and Taung Shae), and these tracts have large paddy field for production improvement and expansion, and combined development for both agriculture and BHN improvement should be highly considered for the packaged village tract for better effect and benefit.
Although those neighboring tracts are also in flood damage area and there should be a need of protection measure, overall development potential is much higher because of paddy field area in total. While betel nut production is not a major target for irrigation and mechanization, the neighbor inclusive development should increase benefit on rice production, and regional income level could be higher.

Basic Poverty Profile

Village General Data		Development Possibility	
Village Name	Nan Daw Yar Village Tract (6-Villages)	Market Based Potential	Fair
Township	Myeik	Production Increase Potential	Fair
State / Region	Tanintharyi	Basic Infrastructure Potential	Good
Population	1,528 (Male: 748, Female: 780), Increasing at 2.98%	Disadvantaged Area	Major flood
Major Industry	Agriculture: 90%, Others: 10% (Roof material production)	Other Development Potential	
No. of Household	307	Flood Control	
Major Agro-Product(s)	A: Betel Nut (5,888 acre)	Quantity: 150viss/acre (3,000~5,000K/viss)	
	B: Rice (655 acre)	Quantity: 30-35bskt/acre (3,500~4,000K/bskt)	
	C: Nipa Palm	Quantity: Small	
Target Market	Myeik This village tract should be treated with other two village tracts nearby to maximize development effect.		
Average Household Income	200,000K/year H.H. (land owner) Paid worker: 5,000K/day for men and 4,000K/day for women		
Climate Info. of Region	Heavy rain during rainy season		
Disaster Info. of Region	Major flood occurs during rainy season, and lasts over two weeks.		



Villages in the Tract:
Nan Daw Yar
Thar Ya Phyat
Kaung Mhu
Pyin Chaung

Existing Social Services		
School (Primary)	Distance	in village tract
	Four (4) Primary Schools exist.	
School (Secondary)	Distance	in village tract
	One (1) Secondary school exists.	
Healthcare Facility	Distance	in village tract
	No Healthcare facility, but there is a community health worker stationed in the village for 24/7.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of accessibility of the 80m bridge 2) Improvement of accessibility of the road between the village tracts 3) Securing the accessibility to the southern village	
Effect(s)	1) Shorter access time to the market 2) Improvement of the driveability of village roads 3) Improvement of productivity by using agricultural machinery	Size/Scale Reconstruction of bridge: L=100m Macadam pavement: L=22km
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	Strengthening service capacity of AMD in Myeik and provision of agricultural mechanization service due to needs of farmers in the village where private service system does not exist	
Effect(s)	- Improvement of household economy through reduction of losses and cost of harvesting by mechanization - Diversification of commercial activities	Size/Scale Target area: 180 ha Combine harvester (2 units)
Water Supply	(1) Installation of the gravity water supply system from the spring water source in Nn Daw Yar village tract (2) Underground water development in neighboring areas of Nan Daw Yar village tract	
Effect(s)	Improvement of water service ratio in dry season can expected in Nan Daw Yar and neighboring village tract.	Size/Scale - Construction of six (6) gravity water supply systems from the spring water source - Procurement of well excavator

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) 50 km from the market (Myeik). It takes 1.5 hour by car. 2) The bridge crossing the tribute of Tanintharyi River (L=80m) is dedicated to pedestrians and motorcycles. 3) The road among the village tracts is unpaved, and it is difficult to pass through the rainy season. 4) The village road to the southern village is also unpaved, and it is difficult to pass through the rainy season.	
	Problems 1) Restricted access of the 80m bridge 2) Fragile access of the road between the village tracts 3) Fragile access to the southern village	
Water Supply	Water supply circumstances differs depending on villages. Principal water source in Nan Daw Yar village is spring water and underground. Remaining five villages use underground water from dug wells.	 Water Supply Pipeline (From the Spring)
	Problems Nan Daw Yar V.T: Water service population decreases in dry season due to the decrease of spring water capacity by drought. Neighboring V.T: Water shortage in dry season due to the less numbers of wells.	
Irrigation	Monsoon paddy of 655 acre is cultivated under rainfed condition. There is no irrigation facility.	 Nan Daw Yar River near Village
	Problems The major issue of this village tract is annual flooding caused by the Nan Daw Yar River not only in paddy fields but also in residential areas.	
Agro-Mechanization	Farmers in Nan Taw Yar Village Tract produce betel nuts mainly together with little rubber. But in neighboring Tanyin Village Tract, they produce rice in 1,300 ha. There is no harvester in the village and the request to service by a combine harvester is very high among farmers.	
	Problems N/A	

Basic Poverty Profile

Summary	
Village Name	Maw Tone West Village Tract (5-Villages) (80% Muslim)
Township	Tanintharyi
State / Region	Tanintharyi

Outline of Village

This village tract depends on betel nut production for major income, although rubber, cashew, rice and seasonal vegetables are produced as well. Most products are mainly for village self-consumption and not generating cash flow. Income level of the village is rather quite low, however villagers seem managing their living fair enough. The village, by the way, experiences major flood often and this should be treated somehow before any development. Betel nut is not the product for easy expansion or improvement in production. Although rice and other vegetables are produced, these are not fully consumed by the villagers and they purchase from brokers delivering food from market as they have debt to the brokers. Such financial structure makes the village difficult to be more independent from brokers. Road/bridge and water supply may be the first ones for BHN improvement.

Industrial Structure

Main industry of the village tract is agriculture with betel nut, rubber, cashew, rice and vegetables lead by betel nut production followed by rubber. There is no other major income sources in the village except small shop running. Since betel nut and rubber production are not easily expandable, there might be very limited potential for agro-production improvement, unless otherwise rice production increase for marketable level. Other than rubber and betel nut, most products are for self-consumption, and the concept of agriculture production needs to be reconsidered for better agro-promotion for the village tract.

Economical Condition of Household

Average income of paid workers in the village is about 120,000 Kyat per month and this could be fair income compared with other village tracts according to the hearing information. However, harvesting of betel nut and other products are limited in certain period of a year, so that the year based income may not be enough to support families. Meanwhile, villagers need to use boat and vehicle transport for goods and people to Myeik and other locations and the transportation cost is still high. People also spend for others, such as mobile charges, of over 5,000 Kyat per month. Therefore, their annual income could be still minimum to support daily living.

Living Condition

Most village people belongs to Muslim sect, and their daily living style is somewhat strongly influenced by the belief. Although their income is not sufficient enough to maintain higher living condition, villagers are supporting each other in many ways. Some part of the village tract has paved roads for ease of bike ride, but it is not fully developed throughout the village area. When major flood hits the village, the water stays over two week period, and villagers should evacuate from the area until water level drops, and this makes people with difficulty with agricultural works and most others stalled. Besides, the village tract is at remote area isolated by river system so that the villagers boat ride to go other areas, such as Myeik. This boat ride hinders their transportation activities for product sales as well as other living matters including accessing healthcare services.

Overview of Infrastructure

First of all, the village tract is only connected by the small boat access, and all villagers need to use the boat ride as they should go to schools, clinic, Myeik market and other necessary places. Therefore, this is the major hindrance to expand village tract's activities. As the village tract experiences flood problems often, there is no organized irrigation system, and village farmers are not utilizing AMS equipment due to their economic condition as well as river access issue. Most villagers are depending on spring water or dug well, and pipe supply lines from the spring near mountain area are small in diameter so that the supply is not efficient. Pipe water supply network should be improved for better water distribution. Mobile signal is available although it is not strong. Villages within the tract need to improve road network for better access even for internal market activities.

Diagnosis

Although the village tract produce mainly betel nut for income, there is a large farm land area around for production expansion with different products. However, flood protection should be make prior to the agro-production improvement with this village tract. Village people consider the education is very important as there re many university/college students (distance learning students), though they are not fully accessible for the latest information in the world market considering, for instance job opportunities. Women are keen to know new things, but the daily living matters disturb them a lot, so that effective mechanization, for example, is important to reduce time consumption by women for agricultural works. The village area is quite large but the road and bridge network to connect villages are not strong enough to encourage villagers to have more internal market activities. Therefore, road and bridge development within the village tract is important to improve their living condition together with water supply improvement as for BHN treatment. The village tract may need to consider intra-market within the tract before considering larger market competition due to their less production.

Basic Poverty Profile

Village General Data		Development Possibility	
Village Name	Maw Tone West Village Tract (5-Villages) (80% Muslim)	Market Based Potential	Fair
Township	Tanintharyi	Production Increase Potential	Fair
State / Region	Tanintharyi	Basic Infrastructure Potential	Good
Population	2,209 (Male: 1,105, Female: 1,104), Increasing	Disadvantaged Area	Major flood
Major Industry	Agriculture: 90%, Others: 10% (Roof material production)	Other Development Potential	
No. of Household	453	Flood Control	
Major Agro-Product(s)	A: Betel Nut (1,050 acre)	Quantity: 2,000 viss/acre (2,500~4,500K/viss)	
	B: Rice - monsoon paddy (492 acre)	Quantity: 40 bskt/acre (3,500=5,500K/viss if sold)	
	C: Cashew (589 acre)	Quantity: 1,000-10,000 viss/acre (1,300~1,500K/viss)	
	D: Rubber (same with betel nut)	Quantity: 1,000 viss/year (2,500~3,000K/viss)	
Target Market	Myeik (by boat)		
Average Household Income	800,000K/year H.H. Paid worker: 120,000K/month for limited periods		
Climate Info. of Region	Heavy rain during rainy season		
Disaster Info. of Region	Major flood occurs during rainy season, and lasts over two weeks.		

Villages in the Tract:
Nan Seint Pyin
Nyaung Zin Dount
Ka Dot Kan

Existing Social Services		
School (Primary)	Distance	in village tract
	Two (2) Primary Schools exist. 100% attend.	
School (Secondary)	Distance	in village tract
	One (1) Secondary school exists. 70% attend.	
Healthcare Facility	Distance	Maw Tone East
	No Healthcare facility, no community health worker.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Construction of bridge across the river 2) Reconstruction of damaged bridge 3) Improvement the accessibility of the road	
Effect(s)	1) Improvement of BHN 2) Shorter access time to the market	Size/Scale Construction of bridge: L=150 Reconstruction of bridge: L=15m Macadam pavement: L=14km
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	(1) Expansion of the facility to four villages utilizing the gravity water supply system (2) Installation of gravity water supply system to Ka Daut Kan village having no water supply system	
Effect(s)	Improvement of water service ratio can be expected by the installation of gravity water supply systems from the spring near mountain area.	Size/Scale - Construction of five (5) gravity water supply systems from the spring water source

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) The village is isolated from road network by river (width=100m) 2) 70 km from the market (Myeik). It takes 2 hours by car 3) Part of the village road is concrete paved, but unpaved sections are difficult to pass during the rainy season. 4) There is a bridge that is heavily damaged, only passable by pedestrians, and obstructing children attending school. 5) The road from main road to VT is not accessable in the rainy season due to unpaved surface. 6) Flood damage frequently occurs.	
	Problems 1) Interrupted road network to the market by 100m width river. 2) Fragile road condition for village roads	
Water Supply	Four villages (Nan Say Pyin, Nyaung Sin Dount, Than Phat and Htein Htae village): Principal water source is spring water Ka daut Kan vllage: Principal water source is underground water	 Water Supply Pipeline
	Problems Enough water is not able to be supplied from the water source by friction loss due to small pipe diameter and no installation of air release valves.	
Irrigation	Monsoon paddy of 492 acre is cultivated under rainfed condition. There is no irrigation facility.	 Maw Tone River
	Problems The Maw Tone River flowing in the village causes flooding to the agricultural lands as well as the residential areas with the interval of one in two to three years. In order to mitigate the flooding, the flood control plan for the Tanintharyi River basin shall be studied, not only the plan for the Maw Tone River which is the tributary of the Tanintharyi River.	
Agro-Mechanization	As the area is affected by saline they produce rice for self-consumption only and betel nuts for cash income.	-
	Problems N/A	

Basic Poverty Profile

Summary	
Village Name	Tha Kyet (Chout (6) Mile) Village Tract (8-Villages)
Township	Tanintharyi
State / Region	Tanintharyi

Outline of Village

This village tract experienced flood in every three to four years, and it could not be serious disturbing their agricultural production. Though the serious disaster has occurred in 1994, but others are not so large flood. Underground water does not contain salt so that agro-production is suitable and good for improvement for the village. It is necessary to use boat or ferry to go across the river in order to access the village from Tanintharyi Township Urban. BHN level improvement is necessary with water supply to reduce water fetching time as well as improve road/bridge network among tract villages and neighboring village tracts for local level economic activities. Flood or disaster potential should be further evaluated, and agro-production improvement could be made if major disaster risk is not identified in the village.

Industrial Structure

Agriculture with rice, betel nut and rubber productions is the main industry in the village tract. There are a few other products, but rice is the largest income source of the village. There are land owner farmers and paid farmers in the village for agro-industry. Betel nut and rubber productions share about 20%, however these are minor in income generation.

Economical Condition of Household

Average H.H. income per year is not so large to maintain good living condition. Paid workers are paid at about 5,000 kyat per day, and these paid worker should have bit more difficult living condition due to unstable income. Since there is no other ways other than crossing the river for market trading, village people need to spend transportation cost at higher price, which could be hindering their living condition improvement.

Living Condition

Most village H.H. uses candles and kerosene lamps except 10% using DRD provided SHS. 50% of H.H. have dug well for drinking water, however the quality of ground water is not good due to iron contamination. Access between villages also have difficulties due to low road surface and bridge conditions. Village internal trading an economic activities should also be promoted for living condition improvement. Basic social services for education and healthcare are ready but these are not evenly distributed and some villagers have difficulties for access.

Overview of Infrastructure

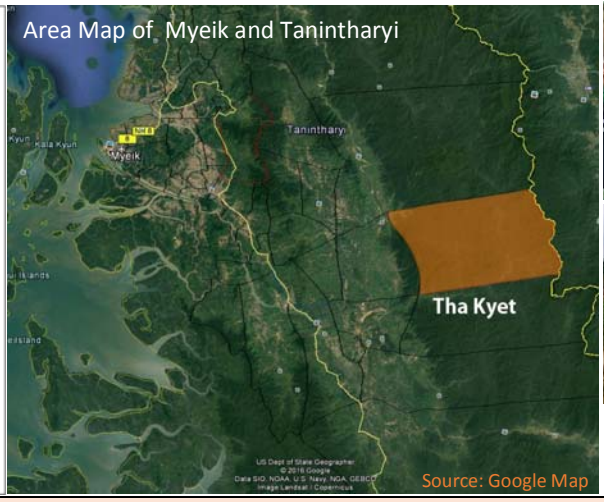
There is no publicly installed power supply and water supply in the village tract. Only 10% H.H. are provided with SHS by DRD. 50% H.H. has well, however others do not have and these should fetch water from nearby stream, for example. Currently boat and ferry crossing river point has been studied for bridge development by MoC, however the plan is not fixed yet that the development schedule is yet unknown. There are several points of the Tanintharyi river possibly causing flood, however this should be further studied for the magnitude of disaster and damage, before considering irrigation upgrade or mechanization plan for production improvement.

Diagnosis

It is considered that the village tract has less risk of flood and disaster, however more detailed disaster and flood risk evaluation shall be made prior to agro-infrastructure improvement implemented for irrigation and mechanization. There should be a potential to improve production in rice an other products in the village tract. Though, step-by-step development shall be considered. Besides, road and bridge development as well as water supply infrastructure should be made for BHN level improvement among tract villages. Major target for agro-production improvement is rice, and other products may not be highly effective for irrigation and mechanization. Although MoC is under planning or studying of the bridge development, the schedule is not fixed yet, and the development of access bridge should be priority for not only the tract access but also other tract connections. Market in Tanintharyi is not so large, and trading and marketing should be considering at wider area including internal village trading. The village tract may need to consider intra-market within the tract before considering larger market competition due to their less production.

Basic Poverty Profile

Village General Data		Development Possibility	
Village Name	Tha Kyet (Chout (6) Mile) Village Tract (8-Villages)	Market Based Potential	Fair
Township	Tanintharyi	Production Increase Potential	Fair
State / Region	Tanintharyi	Basic Infrastructure Potential	Good
Population	5,989 (Male: 2,954, Female: 3,055), Increasing	Disadvantaged Area	Flood
Major Industry	Agriculture: 60%, Others: 40%	Other Development Potential	
No. of Household	1,216		
Major Agro-Product(s)	A: Betel Nut (5,011 acre)	Quantity: 20,000pcs/acre (4,000K/viss)	
	B: Monsoon Paddy (2,495 acre)	Quantity: 25bskt/acre (3,500~4,000K/bskt)	
	C: Rubber	Quantity: Very small	
Target Market	Dawei Urban at 18 miles (not Launglon) Rice mill factory is located in Auk Yae Hpyu village.		
Average Household Income	6,000,000K/year H.H. +/- Paid worker: 5,000K/day for men and 4,000K/day for women		
Climate Info. of Region	Monsoon with heavy rain in rainy season		
Disaster Info. of Region	Flood sometimes		



Villages in the Tract:
Chout Mile
Tha Byu Pin
Sin Goung
Kyal Htein Gone
Taung Bain (1)
Taung Bain (2)

Existing Social Services		
School (Primary)	Distance	Size/Scale N/A
	Four (4) Primary schools exist in the Tract.	
School (Secondary)	Distance	Size/Scale N/A
	Four (4) Secondary schools exist.	
Healthcare Facility	Distance	in village tract (in Taung Bain (2))
	One (1) Community Clinic exists. Each Tract village has a community health worker for treatment 24/7.	

Basic Poverty Profile (3/4)

Required Infrastructure Improvement		
Roads /Bridges	1) Improvement of road condition in the village tract. 2) Securing the accessibility to the village opposite the river	
Effect(s)	1) Shorter access time to the market 2) Securing year-round access to in the villages	Size/Scale Reconstruction of bridge: L=80m Macadam pavement: L=16km
Irrigation	N/A	
Effect(s)	N/A	Size/Scale N/A
Mechanization	N/A	
Effect(s)	N/A	Size/Scale N/A
Water Supply	Underground water development for ensuring safe and bountiful water supply through whole year	
Effect(s)	Tube well, whose depth is 120', in Chout Mile village provides enough amount of water despite a seasonal change. Accordingly, if water quality and yield capacity satisfy water supply condition in the village tract, safe and bountiful water supply can be expected.	Size/Scale - Well excavation by following equipment; Well excavator (300m Class), excavating tools, air compressor, hauling truck, screen and casing (10,000m), well logging equipment

Basic Poverty Profile (4/4)

Existing Basc Infrastructure		Photos
Roads / Bridges	1) The present access to the market (Tanintharyi Urban) -0.5 hour (including crossing the river by boat) -not use boat : 2.5 hours 2) This village tract is along the semi-main road managed by MOC. 3) Flooding occurs frequently, although not every year. In 2014, all residents along the river were affected by flood, the others were 50% flooded, and it got into the water at the height of about 3 m at the maximum. 4) The village road is unpaved and becomes difficult to pass in the rainy season. 5) Access to the village opposite the river is limited to people and motorbikes only with timber bridge requiring restoration likely every year.	
	Problems 1) Fragile road condition in the village tract. 2) Insufficient access to the village	
Water Supply	Tha Kyet village tract depends on underground water as water resource. There are 550 dug wells whose depth is around 30' and three tube wells whose depth is around 120'.	 Tube Well
	Problems 450 out of 550 dug wells don't supply enough water during dry season due to drought. In addition, some dug wells have a problem about color of underground water attributed by soluble iron.	
Irrigation	The monsoon paddy is cultivated for house consumption under reainfed condition, therefore the unit yield is low as 1.4 ton/ha.	 River Flooding in Monsoon
	Problems According to the farmers, major issues for the paddy cultivation are 1) flood damages and draught even in the monsoon season, 2) a little knowledge of paddy farming practices, and 3) uncomplete land preparation for lack of farm machineries.	
Agro-Mechanization	They produce rice for self-consumption only and betel nuts for cash income.	-
	Problems There is the farming potential in dry season as the saline damage does not exist but it is difficult by draught and flooding due to recent irregular climate.	

APPENDIX 5

PROJECT SUMMARY SHEET

5-1. RURAL ROAD/BRIDGE SECTOR

Road/Bridge Sector

State/Region: Chin	Township: Hakha	Village Tract:Rim Pi

Current Conditions:

Existing roads between the major road (Kalay - Hakha Road) and this village tract goes in a mountainous region. Passing this existing road is extremely dangerous due to narrow road width by slope failure, and partially muddy and slippery conditions caused by spring water even in dry season. When a landslide happens, the road blocks any traffic over weeks or months.

Improvement Effects:

1) Securing stable access to a neighboring areas
2) Improvement of BHN

Project Objectives:

1) Securing road rehabilitation works, when slope failure and/or landslide happen, enable local traffic to be opened promptly

Note:

Although comprehensive countermeasures against road disaster such as a slope failure, landslide, etc. are urgent needs to secure a safe traffic, project costs will be remarkably huge. Thus,rehabilitating damaged roads by maintenance equipment is considered practicable in urgent needs until such a budget to implement the countermeasure will be allocated.

Project Scope:

Provision of road maintenance equipment for earthworks and transportation, such as a bulldozer, excavator, wheel loader, dump truck, etc.

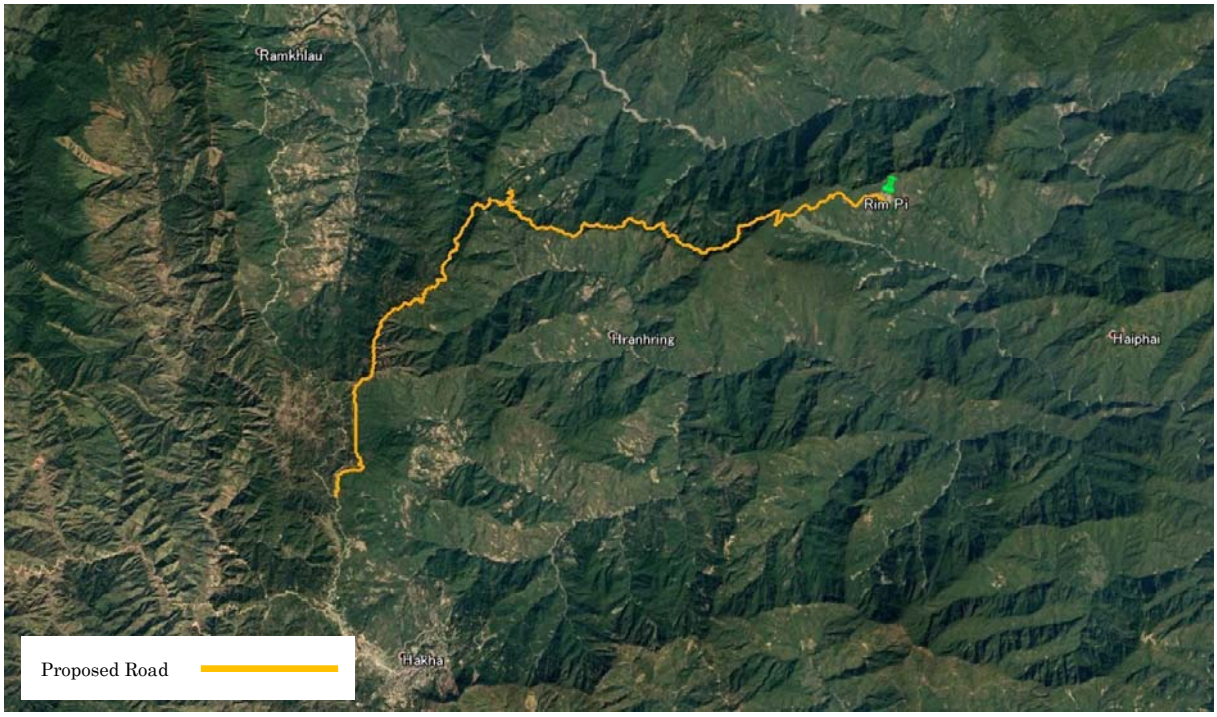
Related Projects:

Road rehabilitation program by ADB.

Estimated Cost:

Construction cost	:	234	Mil. JPY
Consultant fee	:	47	Mil. JPY
Total		281	Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Chin	Township: Falam	Village Tract:Webula

Current Conditions:

1) Existing roads connecting between Webula village and others in this village tract are unpaved surface (basically earth).
2) The existing timber suspension bridge over a river near Pa Mum Chaung village collapsed around year 2013. Thus villagers cannot access to their farm land by any vehicle and motor cycle.

Improvement Effects:

1) Securing stable and shorter access to the nearby market, farm lands, etc.
2) Improvement of BHN

Project Objectives:

1) Improvement of a road with bituminous surface connecting to the nearby market, farm lands, etc.
2) Upgrading the existing collapsed timber bridge near Pa Mum Chaung village to RC bridge

Project Scope:

1) Bituminous surface pavement L= 3km (Webla village)
1) Bituminous surface pavement L=10km (Pa Mum Chaung village)
3) Construction of bridge L=50m×1 bridge

Related Projects:

N/A

Estimated Cost:

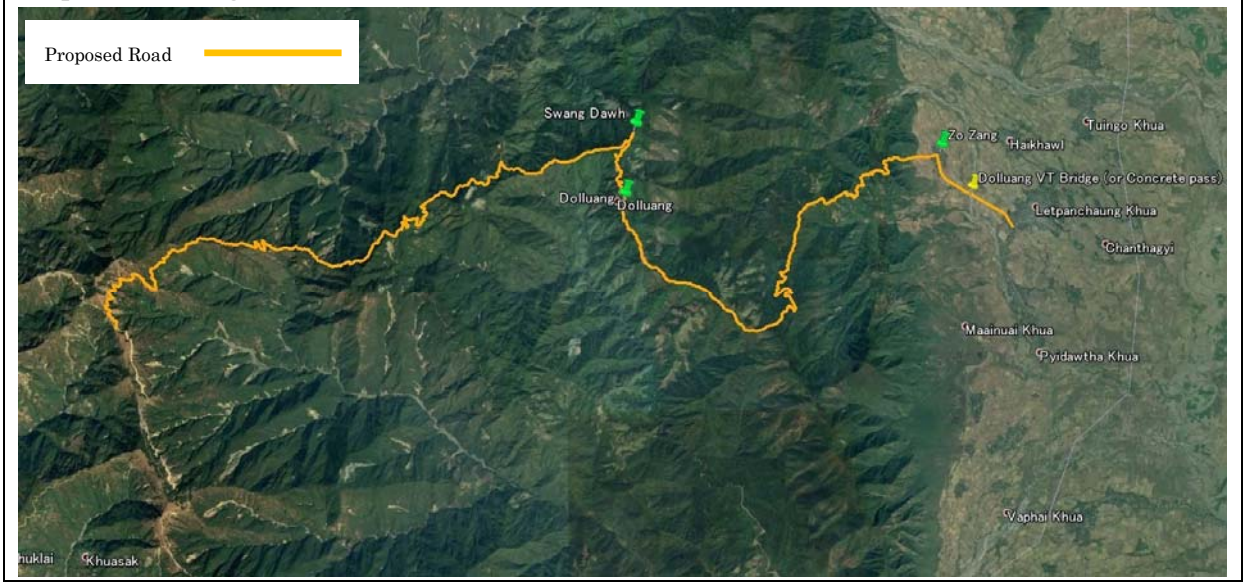
Construction cost	:	371	Mil. JPY
Consultant fee	:	74	Mil. JPY
Total		445	Mil. JPY

Proposed Drawing:

Road/Bridge Sector

State/Region: Chin	Township: Tedim	Village Tract: Dolluang
Current Conditions: 1) At the entrance of Zo Zang village, there is no bridge over a river at present. That river is passable in dry season because the river water is mostly dried up. But the river becomes in impassable condition around 5 month in rainy season, and the said Zo Zang village and others behind Zo Zoang are isolated from neighboring areas. 2) Most of existing roads passing this village tract goes in a mountainous region in common with other areas in Chin State. Passing this existing road is extremely dangerous due to narrow road width by slope failure, and partially muddy and slippery conditions caused by spring water even in dry season. When a landslide happens, the road blocks any traffic over weeks or months.		**Improvement Effects:** 1) Securing stable access to a neighboring areas 2) Improvement of BHN
Project Objectives: 1) Securing the road network with the bridge over the river between the village tract and neighboring areas 2) Securing road rehabilitation works, when slope failure and/or landslide happen, enable local traffic to be opened promptly Note: Although comprehensive countermeasures against road disaster such as a slope failure, landslide, etc. are urgent needs to secure a safe traffic, project costs will be remarkably huge. Thus,rehabilitating damaged roads by maintenance equipment is considered practicable in urgent needs until such a budget to implement the countermeasure will be allocated.		**Project Scope:** 1) Construction of bridge or concrete pass (L=Approx. 180 to 250m) 2) Provision of road maintenance equipment for earthworks and transportation, such as a bulldozer, excavator, wheel loader, dump truck, etc.
Related Projects: N/A		**Estimated Cost:** Included in the Estimated Cost in Rim Pi village tract, Hakha township, Chin State.

Proposed Drawing:



Road/Bridge Sector

State/Region: Shan	Township: Taunggyi	Village Tract: Kyauk Ni

Current Conditions:

1) Existing road connecting from Kyauk Ni village to bituminous paved road is approximately 8 km with unpaved surface (basically earth and partially gravel).
2) Existing road connecting from Taung Kyar village to bituminous paved road is approximately 13 km with unpaved surface (basically earth), and a timber bridge is deteriorated and damaged.

Improvement Effects:

1) Securing stable and shorter access to the nearby market, well, etc.
2) Improvement of BHN (Taung Kyar village)

Project Objectives:

1) Improvement of a road with bituminous surface connecting to the nearby market, well, etc.
2) Upgrading the existing timber bridge to RC bridge

Project Scope:

1) Bituminous surface pavement L=8km (Kyauk Ni village)
2) Bituminous surface pavement L=13km (Taung Kyar village)
3) Construction of bridge L=10m×1 bridge

Related Projects:

Road improvement in Rural Development Programme (Phase-I) by KfW.

Particularly, construction of bituminous road at Taung Ni – Taung Lay Lone section (Total length: 8.34 km)

Estimated Cost:

Procurement cost	:	234	Mil. JPY
Consultant fee	:	47	Mil. JPY
Total		281	Mil. JPY

Proposed Drawing:

Road/Bridge Sector

State/Region: Shan	Township: Kalaw	Village Tract: Myin Ma Hti

Current Conditions:

Existing road connecting from villages at a hilly area to bituminous paved road is approximately 16 km with unpaved surface (basically earth and partially gravel).

Improvement Effects:

1) Securing stable and shorter access to a major road
2) Improvement of BHN

Project Objectives:

1) Improvement of a road network with bituminous surface connecting villages to a major road

Project Scope:

1) Bituminous surface pavement L=16km (Phayar U village, etc.)

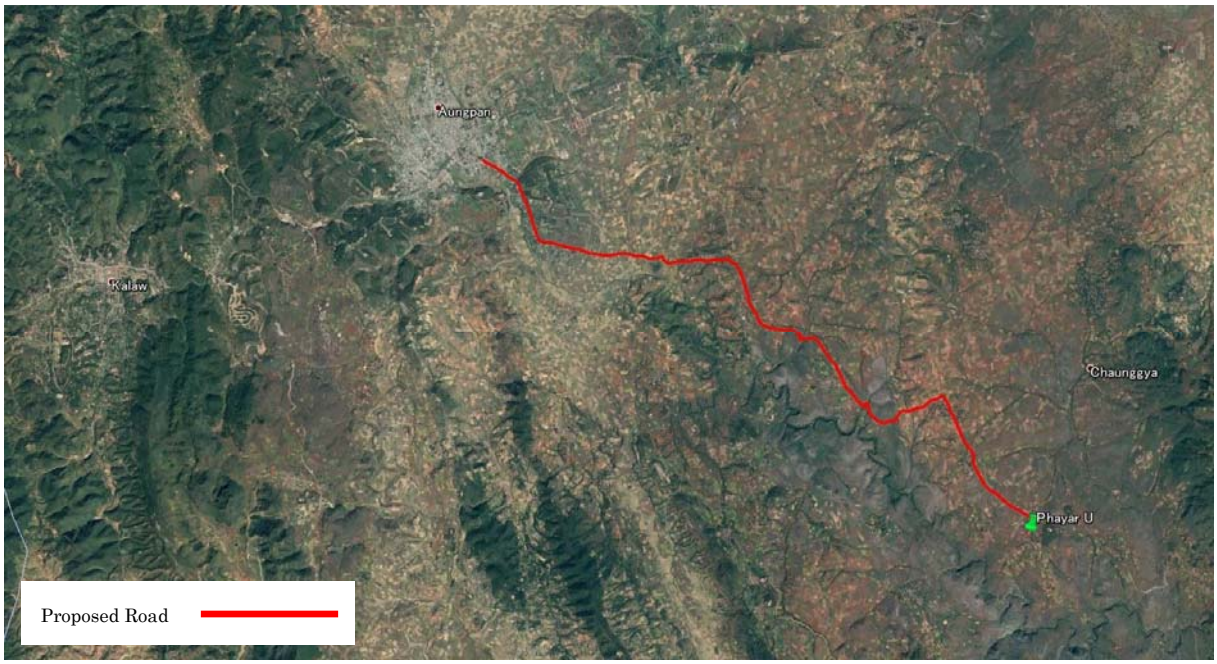
Related Projects:

Road improvement in Rural Development Programme (Phase-I) by KfW.

Estimated Cost:

Construction cost	:	180	Mil. JPY
Consultant fee	:	36	Mil. JPY
Total		216	Mil. JPY

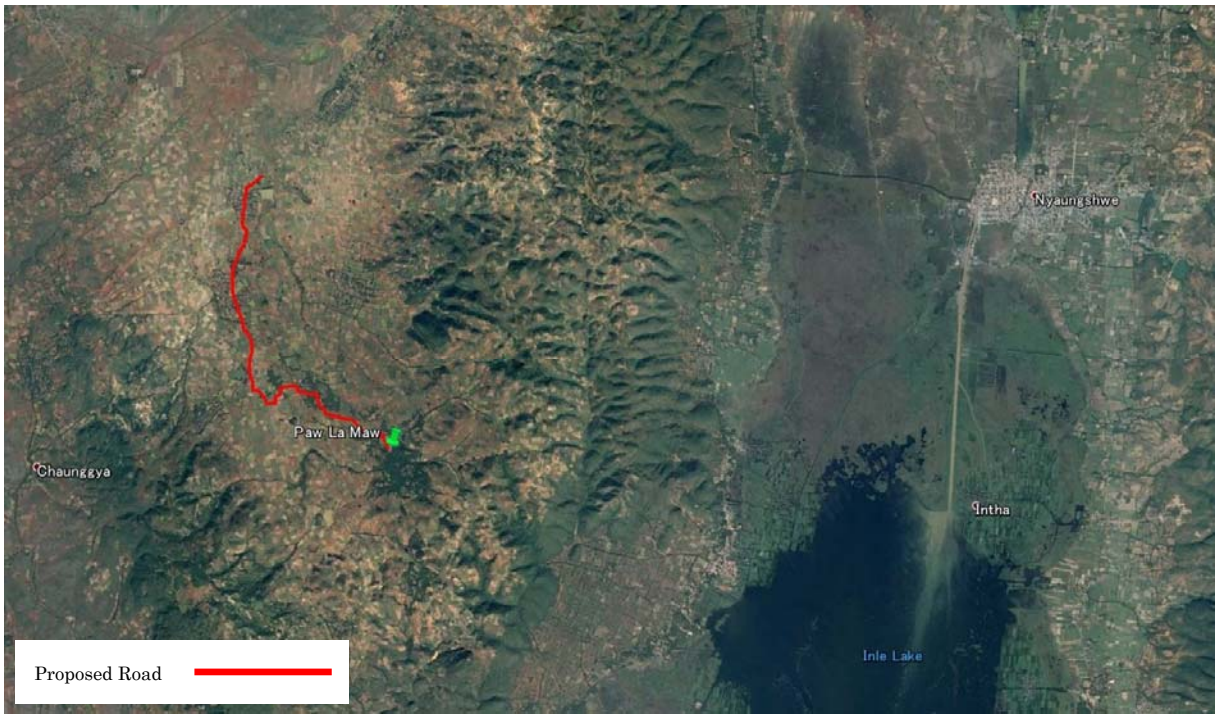
Proposed Drawing:



Road/Bridge Sector

State/Region: Shan	**Township: Kalaw**	**Village Tract: Baw Nin**
Current Conditions: Existing roads connecting from villages to bituminous paved road is approximately 8 km with unpaved surface (basically earth).		**Improvement Effects:** 1) Securing stable and shorter access to a major road 2) Improvement of BHN
Project Objectives: 1) Improvement of a road with bituminous surface connecting to a major road		**Project Scope:** 1) Bituminous surface pavement L=8km (Paw La Maw village)
Related Projects: Road improvement in Rural Development Programme (Phase-I) by KfW.		**Estimated Cost:** Construction cost : 90 Mil. JPY Consultant fee : 18 Mil. JPY Total 108 Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Shan	**Township: Ywangan**	**Village Tract: Sat Chan**

Current Conditions:

Existing roads connecting from villages at a hilly area to bituminous paved road is approximately 19 km with unpaved surface (basically earth and partially gravel).

Improvement Effects:

1) Securing stable and shorter access to a major road
2) Improvement of BHN

Project Objectives:

1) Improvement of a road network with bituminous surface connecting villages to a major road

Project Scope:

1) Bituminous surface pavement L=19km (Tae Lu village, etc.)

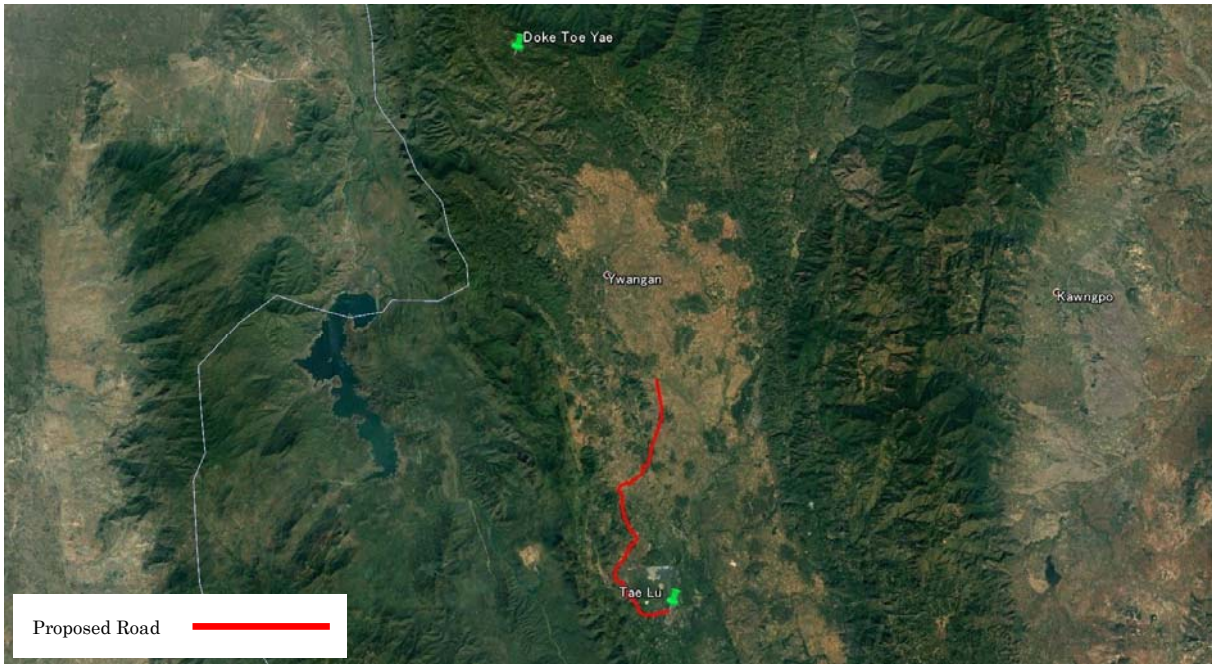
Related Projects:

Road improvement in Rural Development Programme (Phase-I) by KfW.

Estimated Cost:

Construction cost	:	216	Mil. JPY
Consultant fee	:	44	Mil. JPY
Total		260	Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Shan	**Township: Pinlaung**	**Village Tract: Paw Yar**

Current Conditions:

Existing roads connecting to bituminous paved road is approximately 11 km with unpaved surface (basically earth and partially gravel).

Improvement Effects:

1) Securing stable and shorter access to the nearby market

Project Objectives:

1) Improvement of a road network with bituminous surface connecting to the nearby market.

Project Scope:

1) Bituminous surface pavement L=11km (Mway Taw village)

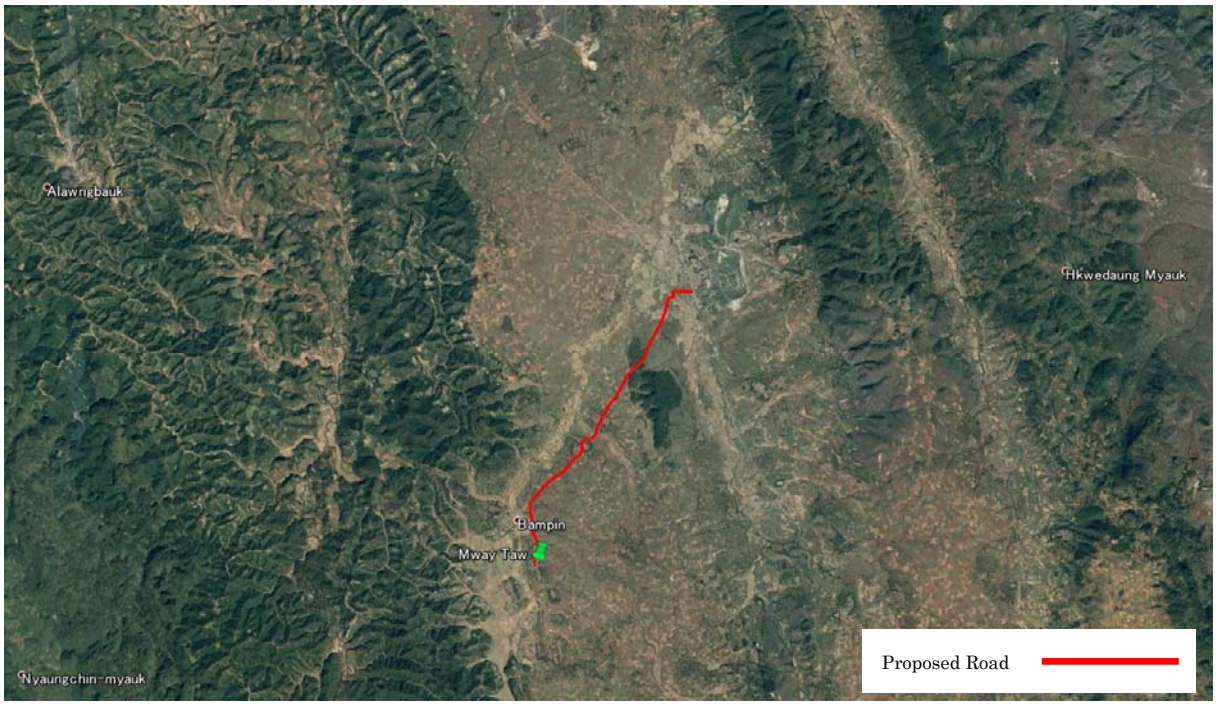
Related Projects:

Road improvement in Rural Development Programme (Phase-I) by KfW.

Estimated Cost:

Construction cost	:	126	Mil. JPY
Consultant fee	:	26	Mil. JPY
Total		152	Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Shan	Township: Nansang	Village Tract: Mat Mon Mun

Current Conditions:

Existing roads connecting from villages to bituminous paved road is approximately 6 km in total with unpaved surface (basically earth).

Improvement Effects:

1) Securing stable and shorter access to a major road
2) Improvement of BHN

Project Objectives:

1) Improvement of a road network with bituminous surface connecting to a major road.

Project Scope:

1) Bituminous surface pavement L=6km
   (Nam Hai village, etc.)

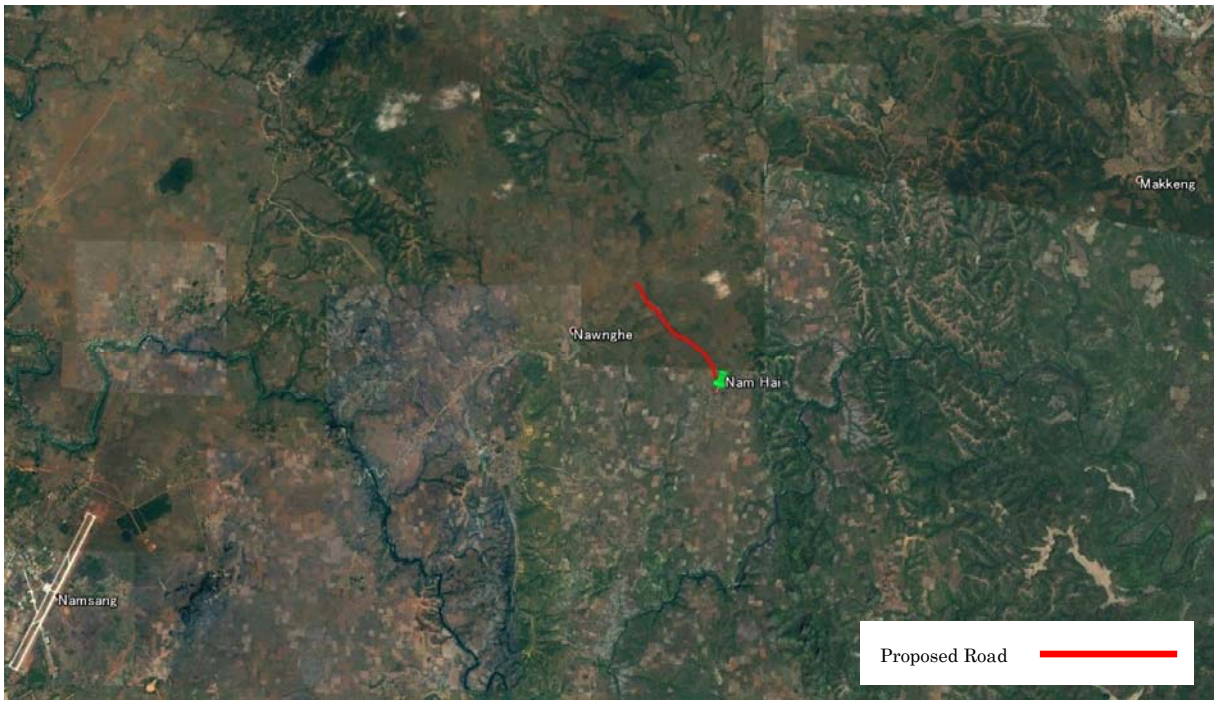
Related Projects:

Road improvement in Rural Development Programme (Phase-I) by KfW.

Estimated Cost:

Construction cost	:	72	Mil. JPY
Consultant fee	:	15	Mil. JPY
Total		87	Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Shan	Township: Nansang	Village Tract: Hai Nar Gyi

Current Conditions:

Existing roads connecting from villages to bituminous paved road is approximately 19 km with unpaved surface (basically earth).

Improvement Effects:

1) Securing stable and shorter access to the nearby market, farm lands, etc.

Project Objectives:

1) Improvement of a road network with bituminous surface connecting villages to the nearby market, farm lands, etc.

Project Scope:

1) Bituminous surface pavement L=19 km (San Lit village, etc.)

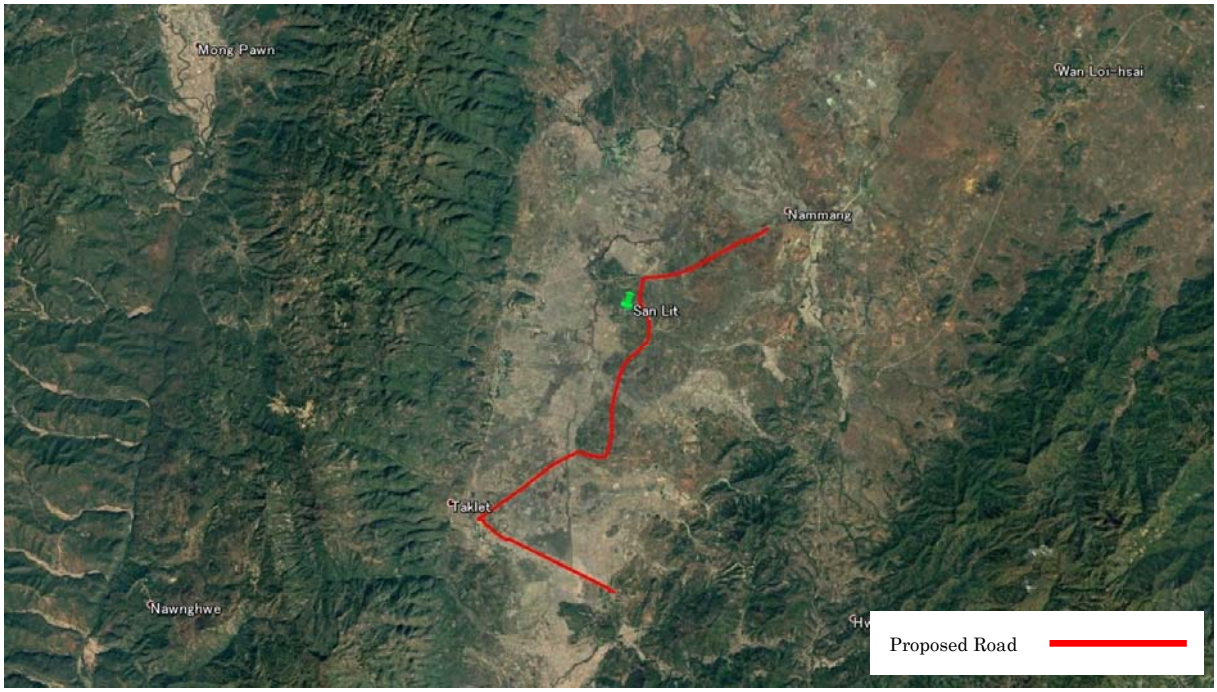
Related Projects:

Road improvement in Rural Development Programme (Phase-I) by KfW.

Estimated Cost:

Construction cost	:	216	Mil. JPY
Consultant fee	:	44	Mil. JPY
Total		260	Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Shan	**Township: Hopong**	**Village Tract: Nam Hkok**

Current Conditions:

Existing roads connecting between farm lands in this village to bituminous paved road is approximately 5 km with unpaved surface (basically earth). There is a RC bridge crossing a river on the border between this village tract and Taunggyi Township.

Improvement Effects:

1) Securing stable and shorter access to the nearby market, farm lands, etc.

Project Objectives:

1) Improvement of a road with bituminous surface connecting to the nearby market, farm lands, etc.

Project Scope:

1) Bituminous surface pavement L=5 km

Related Projects:

Road improvement in Rural Development Programme (Phase-I) by KfW.

Estimated Cost:

Construction cost	:	54	Mil. JPY
Consultant fee	:	11	Mil. JPY
Total		65	Mil. JPY

Proposed Drawing:

Road/Bridge Sector

State/Region: Shan	**Township: Hopong**	**Village Tract: Pawng Lin**

Current Conditions:

Existing roads connecting from villages at a hilly area to bituminous paved road is approximately 40 km in total with unpaved surface (basically earth and partially gravel).

Improvement Effects:

1) Securing stable and shorter access to a major road
2) Improvement of BHN

Project Objectives:

1) Improvement of a road network with bituminous surface connecting to a major road

Project Scope:

1) Bituminous surface pavement L=40 km (Bant Pain village, etc.)

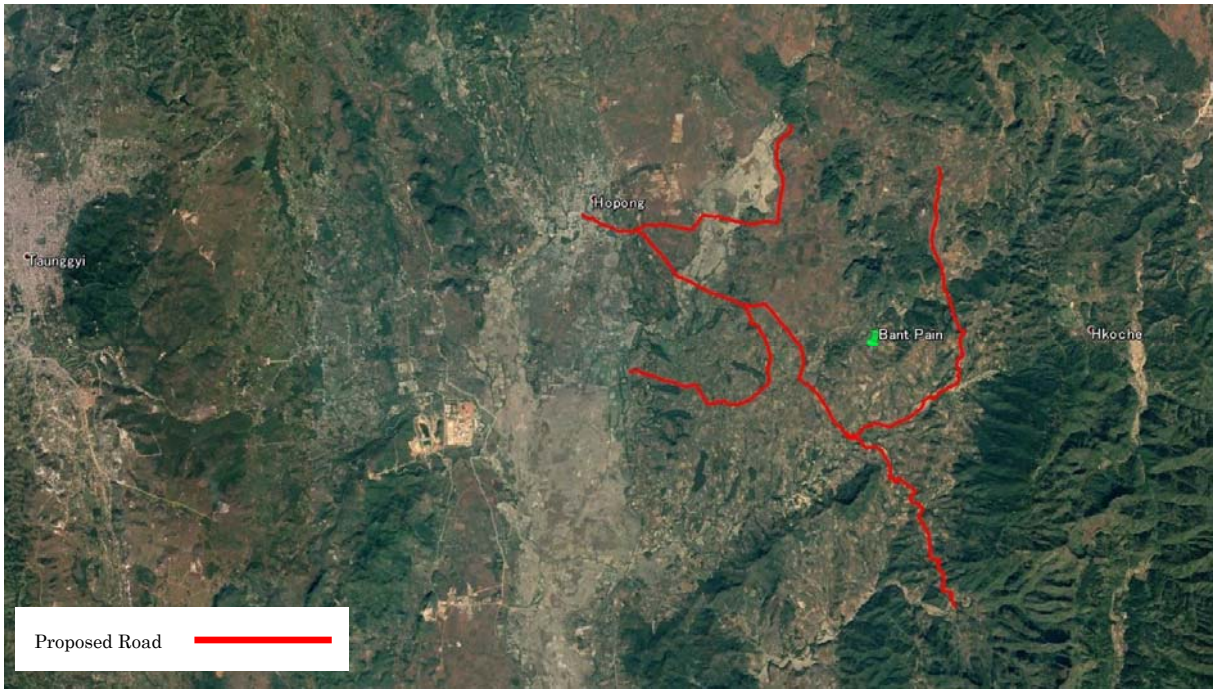
Related Projects:

Road improvement in Rural Development Programme (Phase-I) by KfW.

Estimated Cost:

Construction cost	:	450	Mil. JPY
Consultant fee	:	90	Mil. JPY
Total		540	Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Ayeyarwady	**Township: Myaung Mya**	**Village Tract: Moke Soe Kwin**

Current Conditions:

- Satisfactory access due to nearby market (Myaungmya). It takes 2 or 3 minutes by motorbike
- Many Village roads have paved, and have fair road condition.

Improvement Effects:

- Securing the year-round access to the 2 villages
- Improvement of productivity by using agricultural machinery

Project Objectives:

- Road improvement
- Reconstruction of Bridge

Project Scope:

- Concrete pavement: L=2km
- Reconstruction of bridge: L=15m

Related Projects:

N/A

Estimated Cost:

Construction cost	:	1240	Mil. JPY
Consultant fee	:	248	Mil. JPY
Total		1488	Mil. JPY

Proposed Drawing:

Road/Bridge Sector

State/Region: Ayeyarwady **Township: Myaung Mya** **Village Tract: Shan Yae Kyaw**

Current Conditions:

- The village is isolated from road network by river (width=150m)
- The Present access to the market (Myaungmya)
  -motorbike: 1 hour (include going across the river by boat)
  -only boat : 3 hours
- Unpaved village road makes passages difficult in the rainy season

Improvement Effects:

- Shorter access time to the market
- Improvement of the drivability of village roads
- Improvement of productivity by using agricultural machinery

Project Objectives:

- Securing the road network among the other village tract
- Improvement of road condition for village roads

Project Scope:

- Construction of bridge (L=300m)
- Concrete pavement of road (L=5km)

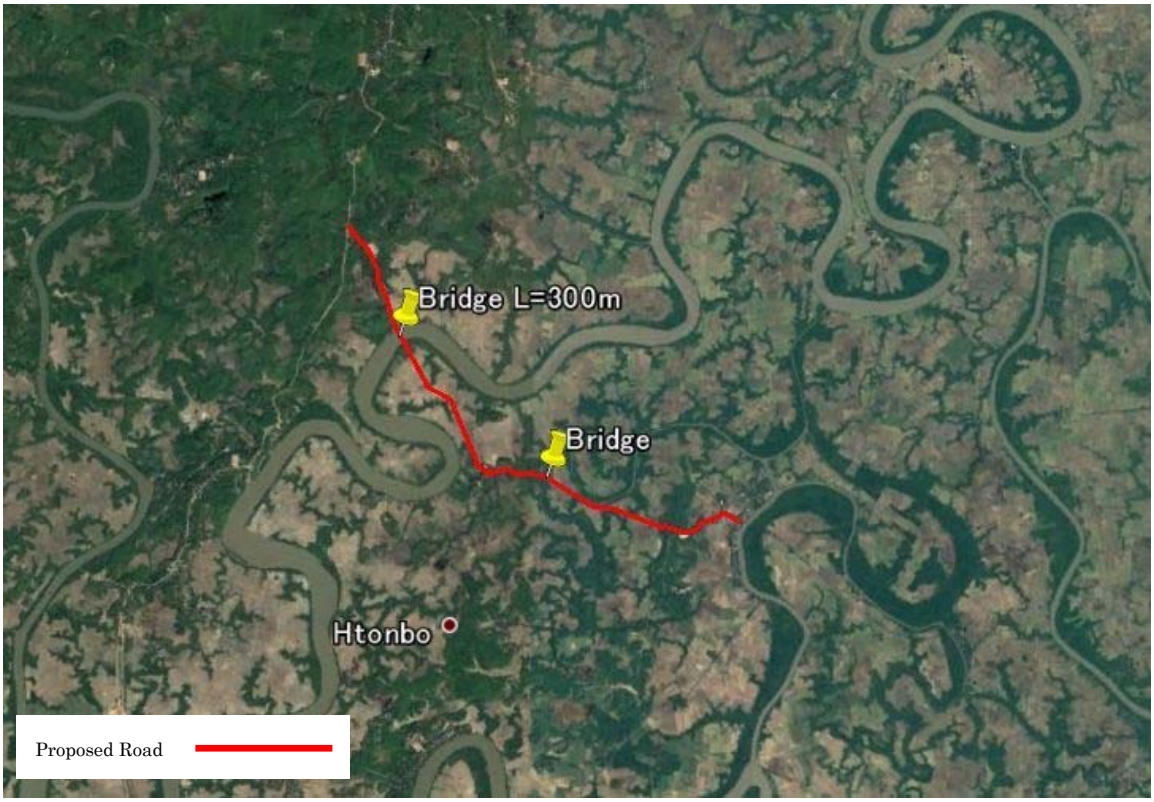
Related Projects:

N/A

Estimated Cost:

Construction cost	:	129120	Mil. JPY
Consultant fee	:	25824	Mil. JPY
Total		154944	Mil. JPY

Proposed Drawing:



State/Region: Ayeyarwady **Township: Labutta** **Village Tract: Thin Gan Gyi**

Current Conditions:

- 28km from the market (Labutta, it takes 90 minutes by car). Road from Labutta to VT is managed by MOC. Unsatisfactory road condition due to unpaved surface.
- Although there are roads to each village, access to the three villages during the rainy season is difficult. Must use a boat.

Improvement Effects:

- Shorter access time to the market
- Improvement the drive ability of village roads

Project Objectives:

- Improvement the road access among the 3 villages

Project Scope:

- Concrete pavement of road (L=13km)

Related Projects:

N/A

Estimated Cost:

Construction cost	:	4680	Mil. JPY
Consultant fee	:	936	Mil. JPY
Total		5616	Mil. JPY

Proposed Drawing:

State/Region: Ayeyarwady **Township: Labutta** **Village Tract: Laput Pyay Lae Pyauk**

Current Conditions:

- This VT is 25 km northeast of Labutta.
- The market (Kyar Kan) is close (about 2.2 km), but the road is unpaved and the condition is bad.
- The road along the agricultural canal in the village is broken.

Improvement Effects:

- Shorter access time to the market
- Improvement of the drivability of village roads
- Improvement of productivity by using agricultural machinery

Project Objectives:

- Improvement of access to the market
- Improvement of driverbility in the village tract.
- Improvement of access to the farmlands.

Project Scope:

- Concrete pavement L=5km
- Reconstruction of Bridge L=20m.
- Construction of bridges L=10m×7 bridges

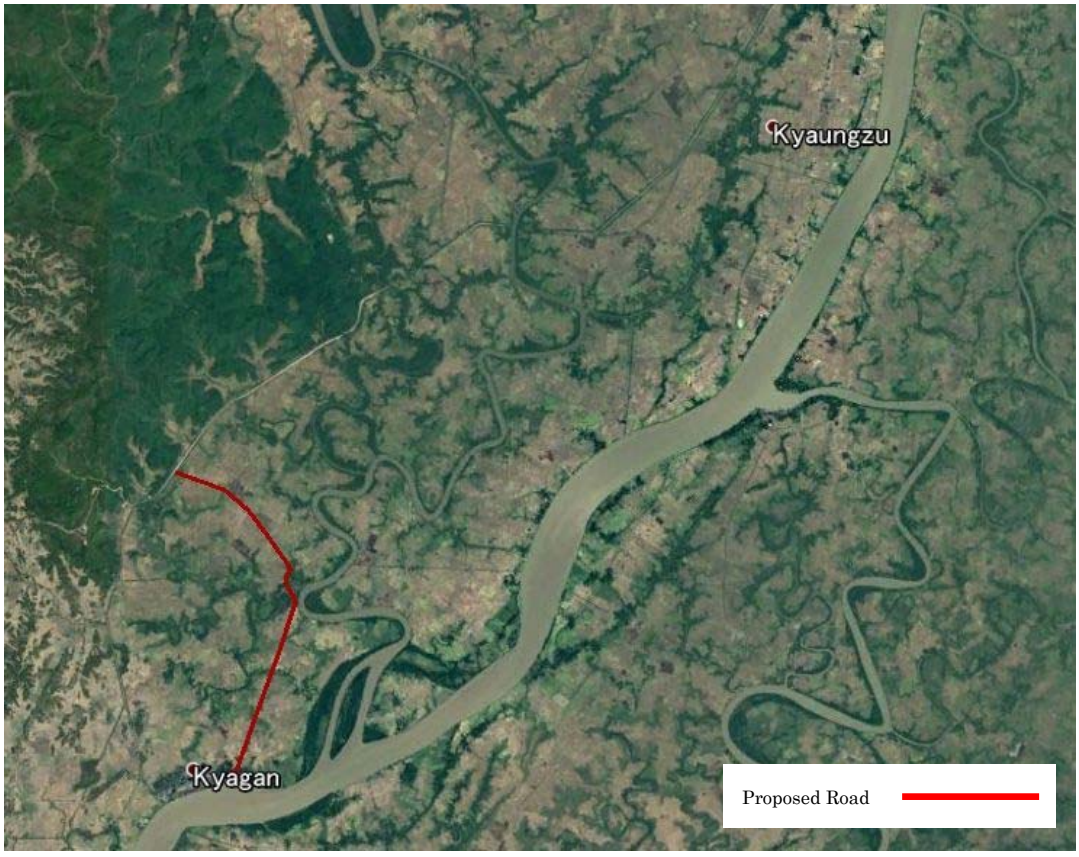
Related Projects:

N/A

Estimated Cost:

Construction cost	:	7092	Mil. JPY
Consultant fee	:	1418	Mil. JPY
Total		8510	Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Ayeyarwady	Township: Hinthada	Village Tract: Thar Si

Current Conditions:

- This VT is 15 km southwest of Hinthada. The road from main road to VT is not good due to unpaved road and bridge that needs repair.
- The roads (among rice paddies) in the village is not accessible in the rainy season.

Improvement Effects:

- Shorter access time to the market
- Securing year-round access among the villages

Project Objectives:

- Improvement of access to the market
- Improvement of drivability in the village tract.

Project Scope:

- Concrete pavement L=6km
- Reconstruction of bridges (L=15m X 2 bridges)

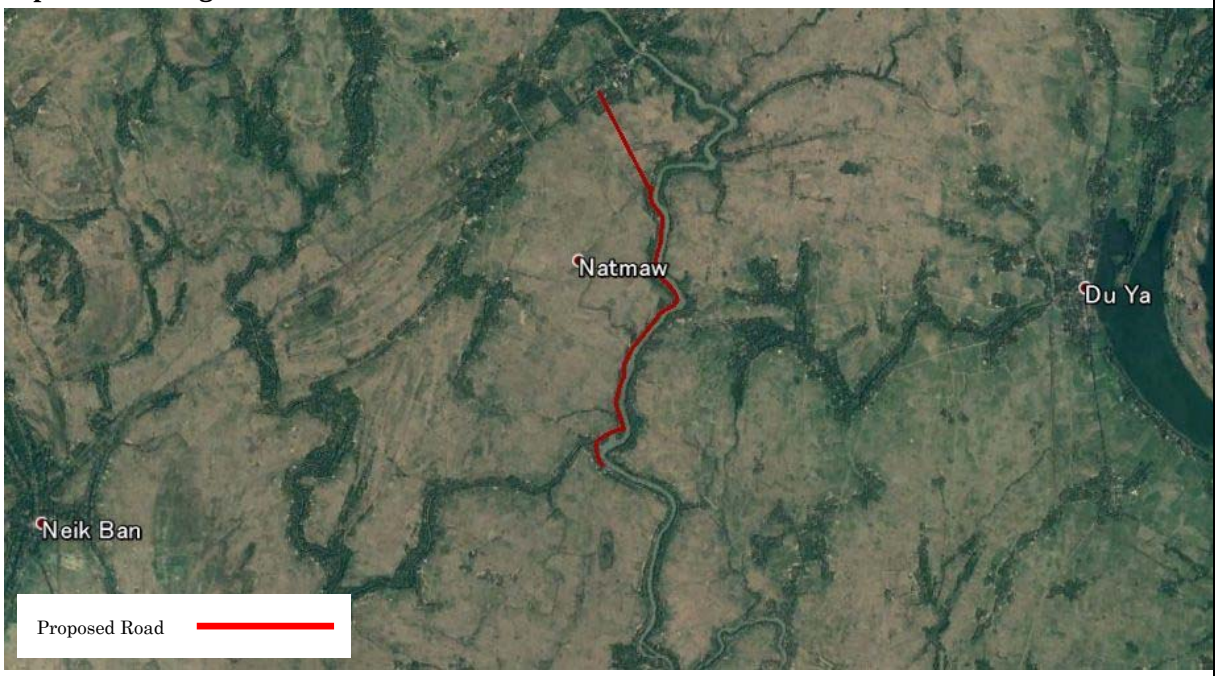
Related Projects:

N/A

Estimated Cost:

Construction cost	:	3888	Mil. JPY
Consultant fee	:	778	Mil. JPY
Total		4666	Mil. JPY

Proposed Drawing:



State/Region: Ayeyarwady **Township: Mawlamyaingyun** **Village Tract: Sit Sa Li Htone**

Current Conditions:

- Access to the market is as follows
  - Yone Dauk: 2.5 km east of the village tract
  - Kyaik Pyae: 11 km west of the village tract
- The road condition to the village tract is not good due to unpaved surface.
- Not accessible to the southern village in the rainy season.

Improvement Effects:

- Shorter access time to the market
- Securing year-round access to the southern village

Project Objectives:

- Improvement of drivability to the market
- Improvement of accessibility to the south village

Project Scope:

- Concrete pavement L=12km
- Reconstruction of bridges (L=15m X 2 bridges)

Related Projects:

N/A

Estimated Cost:

Construction cost	:	5484	Mil. JPY
Consultant fee	:	1097	Mil. JPY
Total		6518	Mil. JPY

Proposed Drawing:

Road/Bridge Sector

State/Region: Ayeyarwady	**Township: Bogale**	**Village Tract: Sa Bai Kone**

Current Conditions:

- 17km from the market (Bogale). The road from main road to VT is not accessible by car due to disaster in 2008. Main transportation of people and goods depends on boats, but can not be used at low tide.
- Unpaved village road makes passages difficult in the rainy season

Improvement Effects:

- Shorter access time to the market
- Securing year-round access among the villages
- Improvement of productivity by using agricultural machinery

Project Objectives:

- Securing the road network among the other village tract
- Improvement of the accessibility among the villages

Project Scope:

- Concrete pavement L=6 km
- Reconstruction of bridges (L=15m X 2 bridges)
- Reconstruction of bridge (L=50m)
- Construction of bridges (L=10m X 14 bridges)

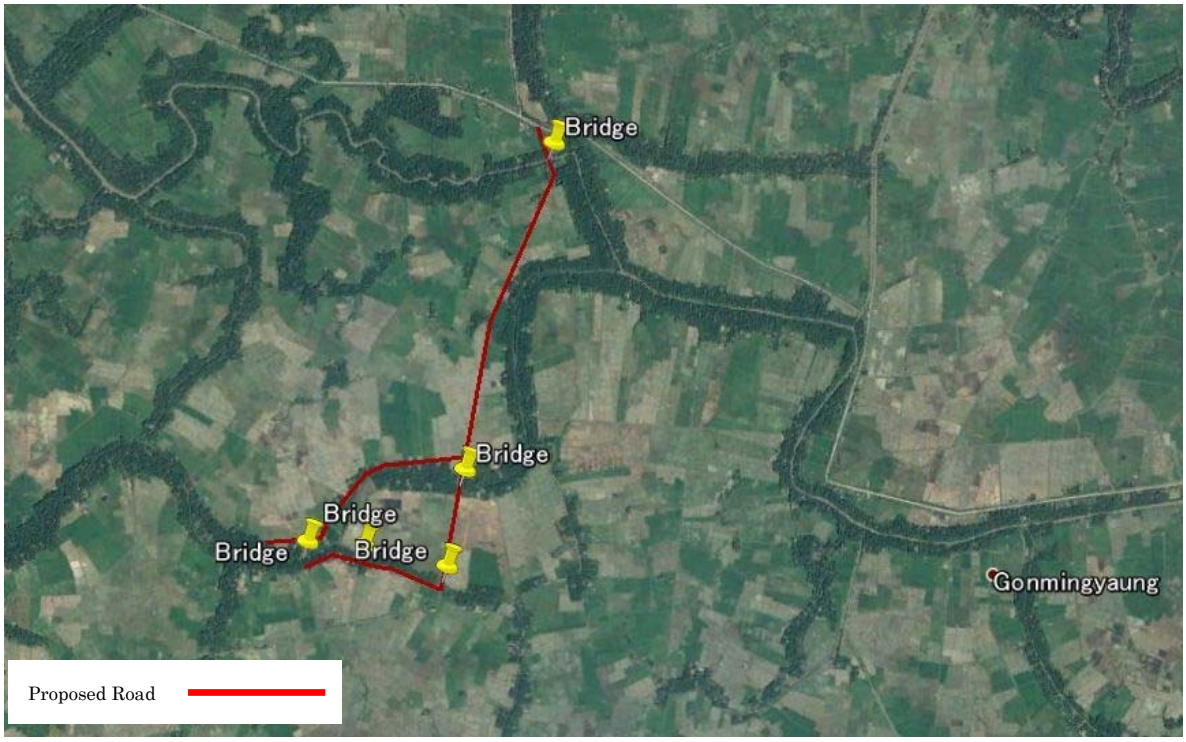
Related Projects:

N/A

Estimated Cost:

Construction cost	:	15096	Mil. JPY
Consultant fee	:	3019	Mil. JPY
Total		18115	Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Tanintharyi	**Township: Lounglon**	**Village Tract: Auk Yae Hoyu**

Current Conditions:

- 30 km from the market (Dawei). It takes 1 hour by car.
- High traffic volume on main road (managed by MOC) goes through from north to south of this village tract.
- The unpaved east-west road (about 3 km to the VT in the east side) is difficult to pass through in the rainy season due to flood.

Improvement Effects:

- Securing year-round access of the east-west road

Project Objectives:

- Improvement of accessibility of the east-west road

Project Scope:

- Macadam pavement: L=3km

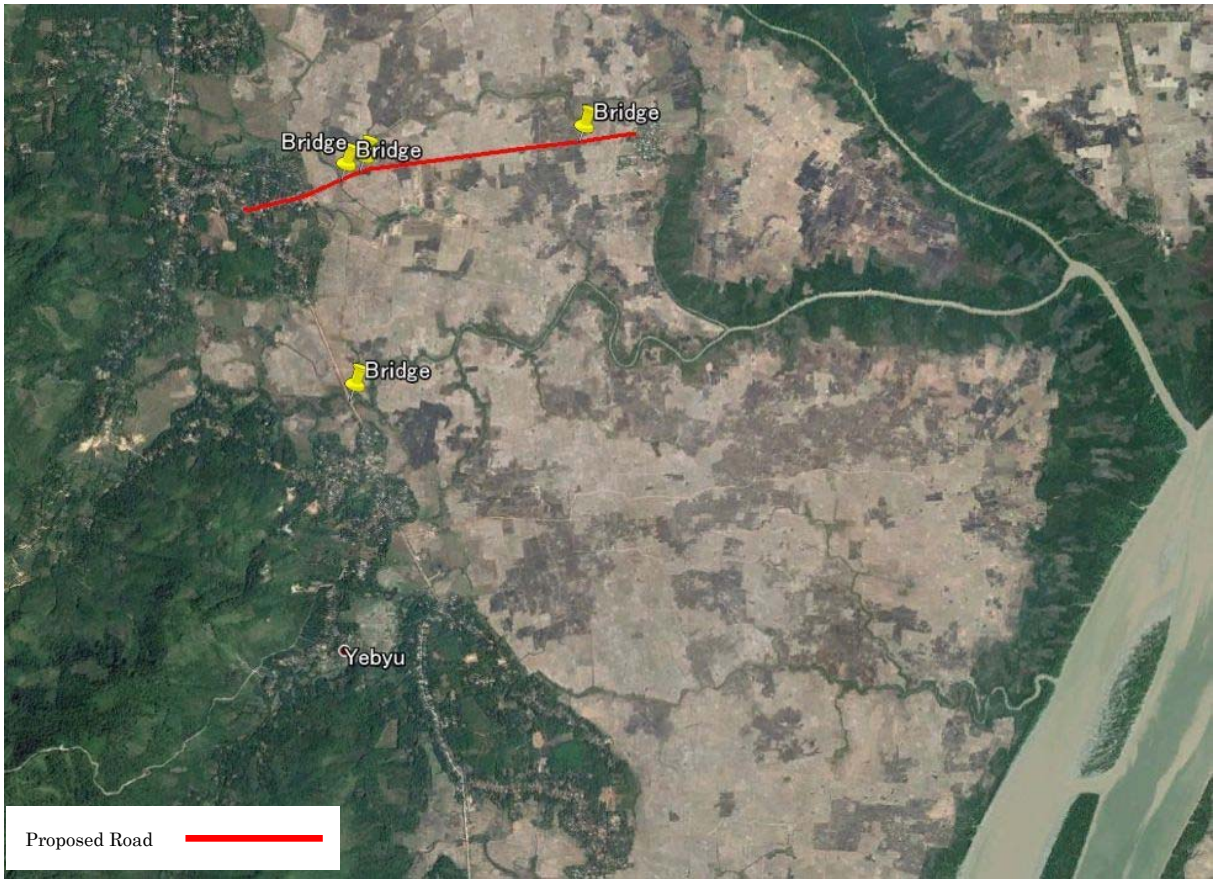
Related Projects:

N/A

Estimated Cost:

Construction cost	:	1728	Mil. JPY
Consultant fee	:	346	Mil. JPY
Total		2074	Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Tanintharyi	Township: Lounglon	Village Tract: Pyin Htein

Current Conditions:

- This village tract is located east side of the center of township
- The east-west road is partially paved with macadam but mostly unpaved. There is a flood in June - August every year, and the period becomes inaccessible.
- In the flooded area, the depth of flooding reaches a maximum of 40 - 50 cm from the road surface and 90 cm from the arable land.

Improvement Effects:

- Securing year-round access of the east-west road

Project Objectives:

- Improvement of accessibility of the east-west road

Project Scope:

- Macadam pavement: L=3km

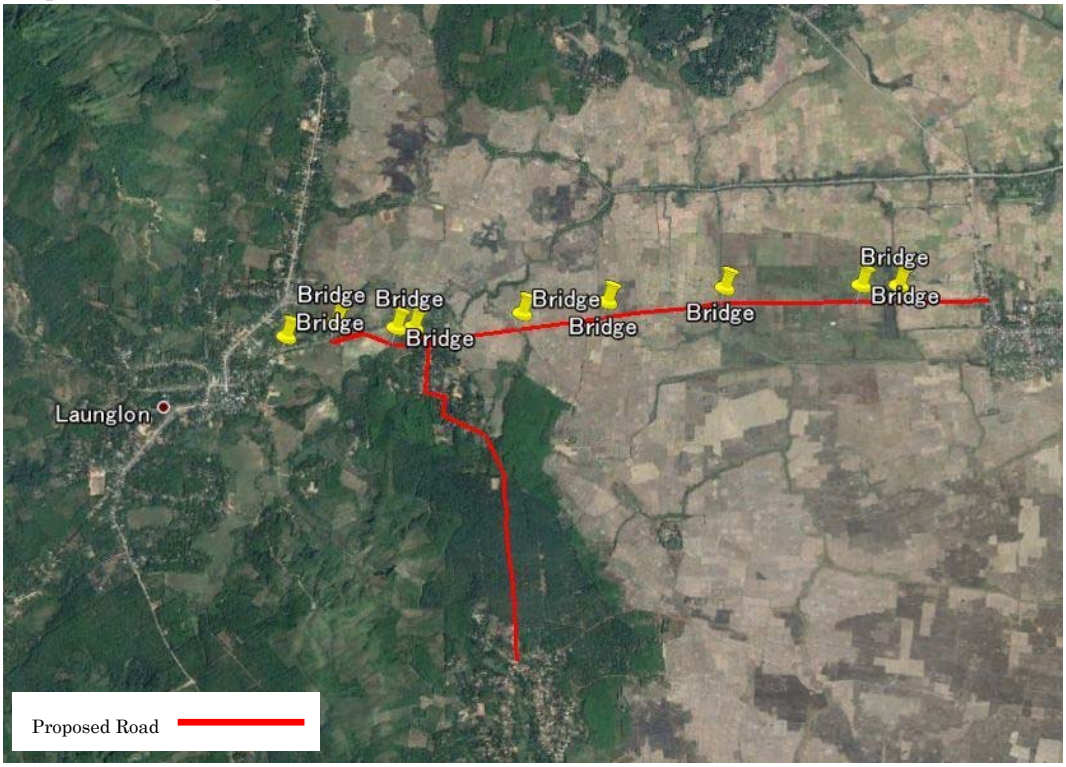
Related Projects:

N/A

Estimated Cost:

Construction cost	:	4493	Mil. JPY
Consultant fee	:	899	Mil. JPY
Total		5392	Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Tanintharyi **Township: Dawei** **Village Tract: Wa Kone**

Current Conditions:

- 30 km from the market (Dawei). It takes 1 hour by car.
- High traffic volume on main road (managed by MOC) goes through from west to east of this village tract.
- The villagers by themselves manage construction of the gravel village road around the residential area.
- The southern village beyond the mine is unpaved and difficult to access during the rainy season.

Improvement Effects:

- Improvement of BHN
- Shorter access time to the center of VT

Project Objectives:

- Securing the accessibility to the southern village.

Project Scope:

- Construction of bridges: L=15m X 2 bridges
- Macadam pavement: L=3km

Related Projects:

N/A

Estimated Cost:

Construction cost	:	4118	Mil. JPY
Consultant fee	:	824	Mil. JPY
Total		4942	Mil. JPY

Proposed Drawing:

Road/Bridge Sector

State/Region: Tanintharyi	Township: Mitta	Village Hein Dan

Current Conditions:

- 45 km from the market (Dawei). It takes 1.5 hour by car.
- Due to mining development, village population growth rate is high, some shops. It is rare for many villagers to go to Dawei.
- The southern village is unpaved and difficult to access during the rainy season.
- Most of the village roads are unpaved and the villagers want to be paved.

Improvement Effects:

- Improvement of BHN
- Improvement of the drivability of village roads
- Shorter access time to the center of VT

Project Objectives:

- Securing the accessibility to the southern village.
- Improvement of drivability to the village road.

Project Scope:

- Construction of bridges: L=10m X 2 bridges
- Construction of bridge: L=50m
- Macadam pavement: L=12.8km

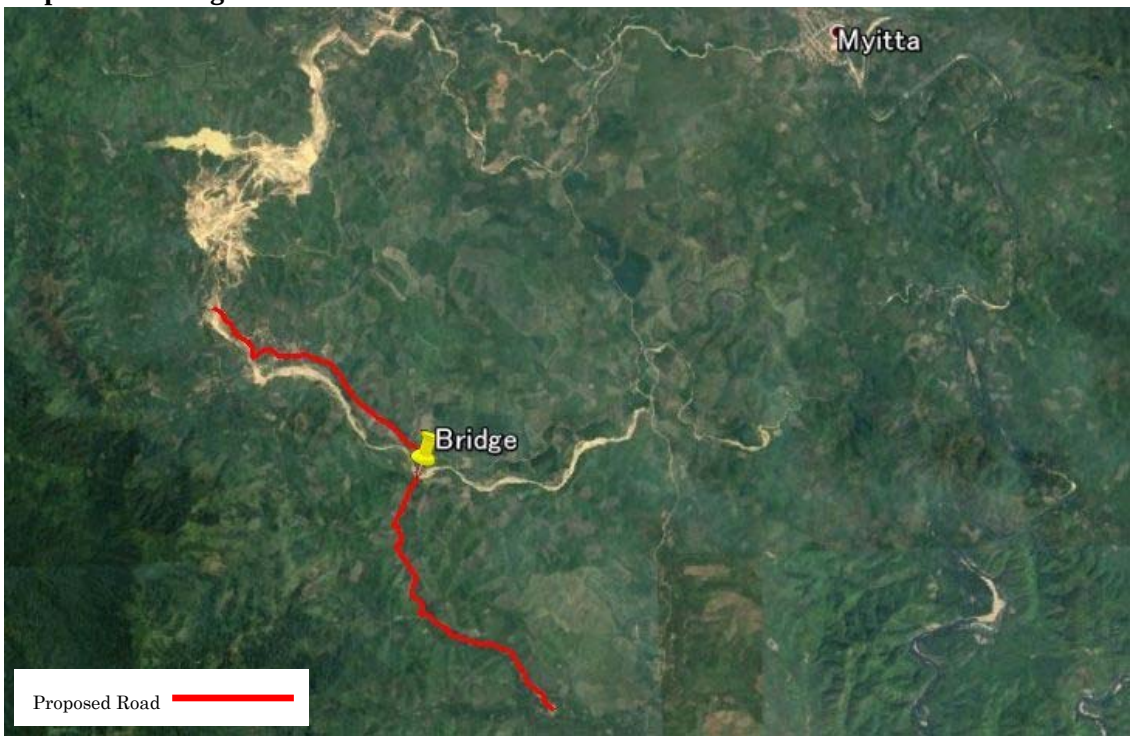
Related Projects:

N/A

Estimated Cost:

Construction cost	:	11153	Mil. JPY
Consultant fee	:	2231	Mil. JPY
Total		13384	Mil. JPY

Proposed Drawing:



State/Region: Tanintharyi **Township: Myeik** **Village Tract: Nan Daw Yar**

Current Conditions:

- 50 km from the market (Myeik). It takes 1.5 hour by car.
- The bridge crossing the tribute of Tanintharyi River (L=80m) is dedicated to pedestrians and motorcycles.
- The road among the village tracts is unpaved, and it is difficult to pass through the rainy season.
- The village road to the southern village is also unpaved, and it is difficult to pass through the rainy season.

Improvement Effects:

- Shorter access time to the market
- Improvement of the drive ability of village roads
- Improvement of productivity by using agricultural machinery

Project Objectives:

- Improvement of accessibility of the 80m bridge
- Improvement of accessibility of the road between the village tracts
- Securing the accessibility to the southern village

Project Scope:

- Reconstruction of bridge: L=100m
- Macadam pavement: L=22km

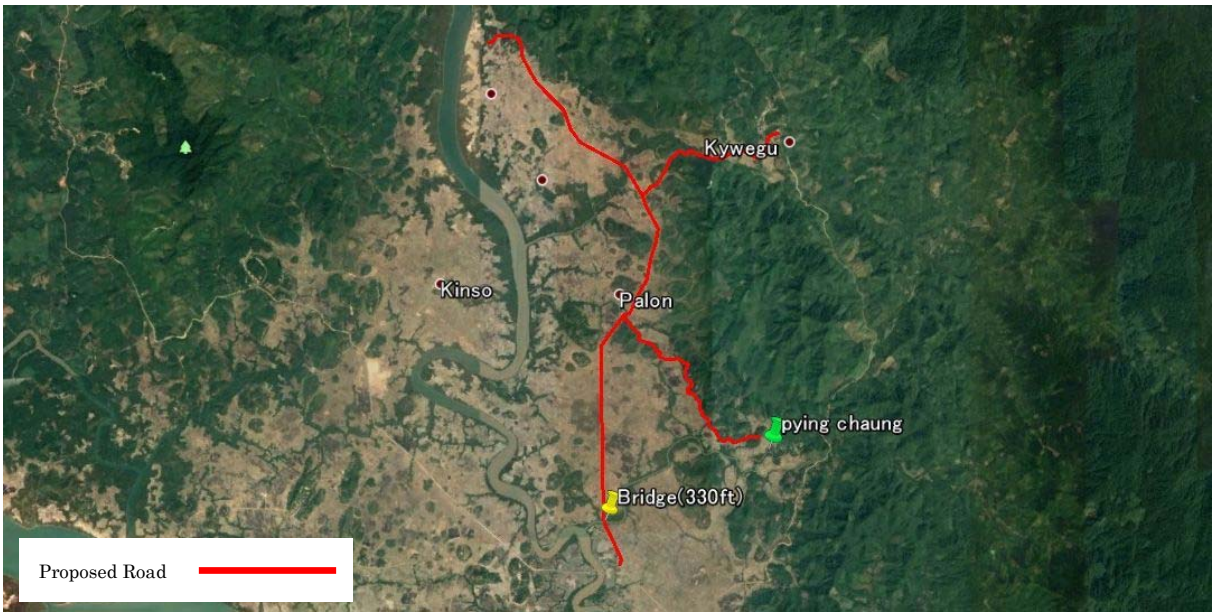
Related Projects:

N/A

Estimated Cost:

Construction cost	:	21557	Mil. JPY
Consultant fee	:	4311	Mil. JPY
Total		25868	Mil. JPY

Proposed Drawing:



Road/Bridge Sector

State/Region: Tanintharyi **Township: Tanintharyi** **Village Tract: Mawtone(West)**

Current Conditions:

- The village is isolated from road network by river (width=100m)
- 70 km from the market (Myeik). It takes 2 hours by car
- Part of the village road is concrete paved, but unpaved sections are difficult to pass during the rainy season.
- There is a bridge that is heavily damaged, only passable by pedestrians, and obstructing children attending school.
- The road from main road to VT is not accessible in the rainy season due to unpaved surface.
- Flood damage frequently occurs.

Improvement Effects:

- Improvement of BHN
- Shorter access time to the market

Project Objectives:

- Construction of bridge across the river
- Reconstruction of damaged bridge
- Improvement the accessibility of the road

Project Scope:

- Construction of bridge: L=150
- Reconstruction of bridge: L=15m
- Macadam pavement: L=14km

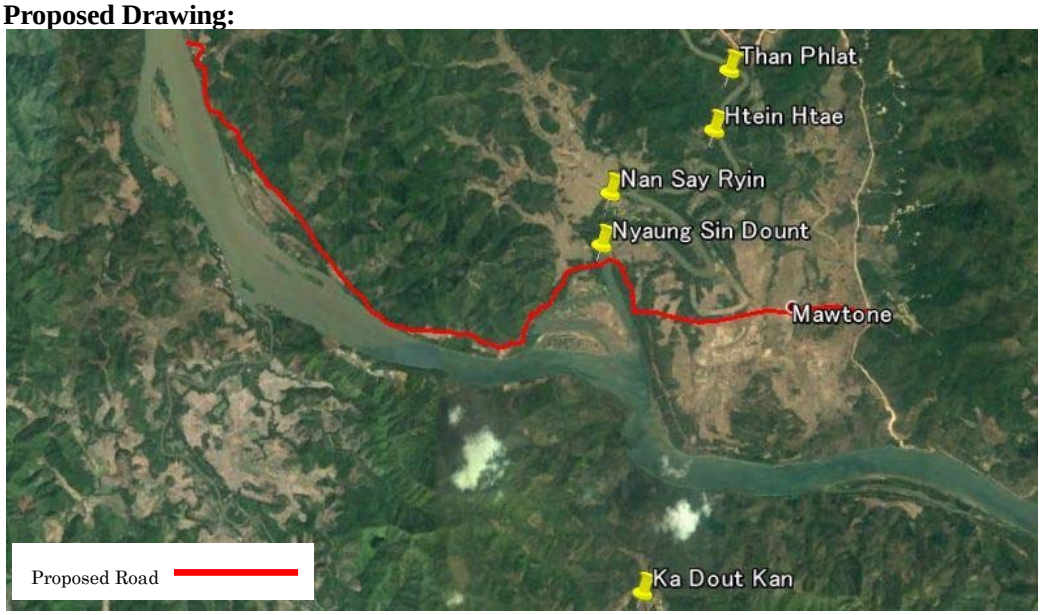
Related Projects:

N/A

Estimated Cost:

Construction cost	:	22374	Mil. JPY
Consultant fee	:	4475	Mil. JPY
Total		26849	Mil. JPY

Proposed Drawing:



State/Region: Tanintharyi **Township: Tanintharyi** **Village Tract: Tha Kyet**

Current Conditions:

- The present access to the market (Tanintharyi Urban)
  -0.5 hour (including crossing the river by boat)
  -not use boat : 2.5 hours
- This village tract is along the semi-main road managed by MOC.
- Flooding occurs frequently, although not every year. In 2014, all residents along the river were affected by flood, the others were 50% flooded, and it got into the water at the height of about 3 m at the maximum.
- The village road is unpaved and becomes difficult to pass in the rainy season.
- Access to the village opposite the river is limited to people and motorbikes only with timber bridge requiring restoration likely every year.

Improvement Effects:

- Shorter access time to the market
- Securing year-round access to in the villages

Project Objectives:

- Improvement of road condition in the village tract.
- Securing the accessibility to the village opposite the river

Project Scope:

- Reconstruction of bridge: L=80m
- Macadam pavement: L=16km

Related Projects:

N/A

Estimated Cost:

Construction cost	:	16416	Mil. JPY
Consultant fee	:	3283	Mil. JPY
Total		19699	Mil. JPY

Proposed Drawing:

Proposed Road

5-2. SMALL SCALE IRRIGATION SECTOR

State/Region: Chin State Township: Falam Village Tract: Webula

Current Conditions:

There are 2 existing wooden fixed weirs to diver irrigation water to paddy field (138acre/55ha for 55HH). The downstream weir was constructed in 1969 by hands of villagers, and upstream one was constructed in 1970 by the central government. The both rustic weirs have chronically been damaged by floods in rainy season. Consequently, villagers obliged to repair them in every year by themselves.

Improvement Effects:

(a) Damages of weirs will be drastically reduced, which provides:

- assurance of delivery of irrigation water, on time and proper amount,
- reduction of farmers' burden for repairing the weir in prior to every cultivation season.

(b) Sedimentation in canal will be decreased by installation of a steel intake gate and a sand flushing gate.

(c) Operation will be improved due to unification.

Project Objectives :

・To upgrade and unify the 2 weirs into a concrete weir in order to ensure delivery of irrigation water through the weir to paddy fields.

Project Scope :

- Upgrading of wooden weirs to a concrete weir
- Installation of intake structure with a steel gate and sand flushing structure with a steel gate.
- Upgrading of irrigation canal in a portion between 2 weirs. The existing wooden weirs should be demolished and fixed concrete weir should be newly installed at the same location.

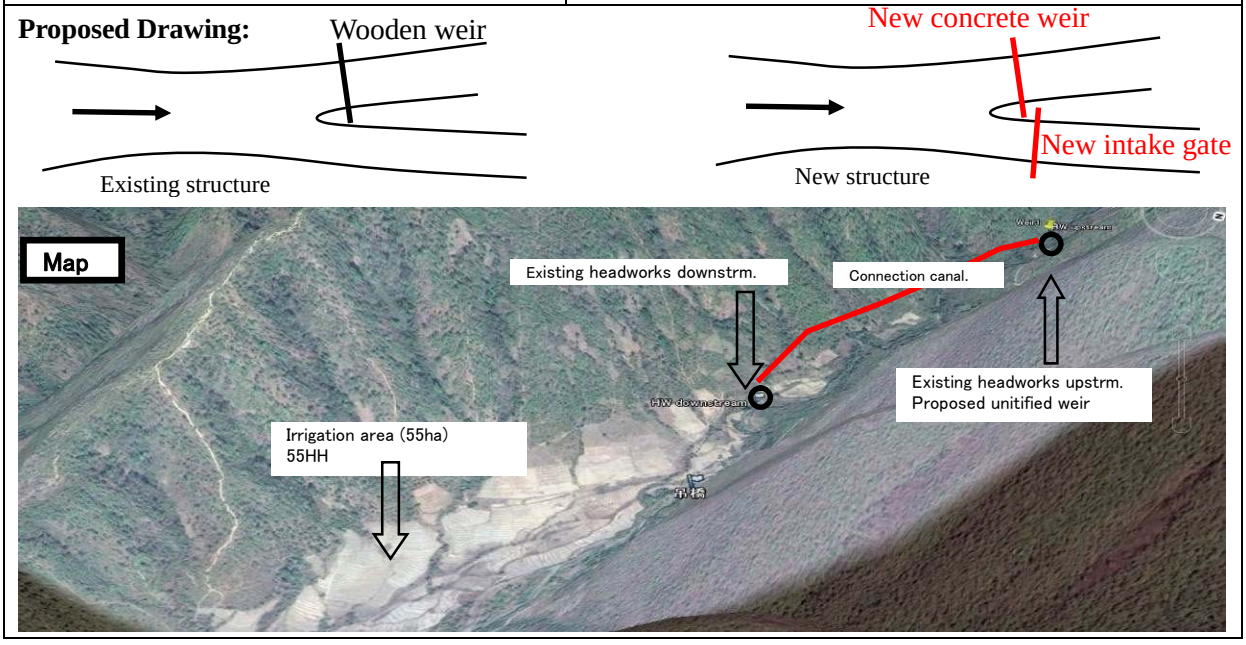
Related Projects:

N/A

Estimated Cost :

Concrete works	:	25	Mil. JPY
Earth works	:	4	Mil. JPY
Others	:	2	Mil. JPY
Construction Cost	:	31	Mil. JPY
Design&Supervision Cost	:	10	Mil. JPY
Total Cost	:	41	Mil. JPY

Proposed Drawing:



State/Region: Shan State　Township: Nansang　Village Tract: Hai Nar Gyi

Current Conditions:

There are an existing wooden fixed weirs to divert irrigation water to paddy fields (4,000acre/1,600ha for 1,000HH). The weir was constructed by hands of villagers and there is no gate on the intake structure. Thus sedimentation has been occurred when flood water enters into the canal and wooden weir is destroyed. The farmers have to rehabilitate every year.

Improvement Effects:

(a) Damages of weirs will be drastically reduced, which provides:

- assurance of delivery of irrigation water, on time and proper amount,
- reduction of farmers' burden for repairing the weir in prior to every cultivation season.

(b) Sedimentation in canal will be decreased by installation of a steel intake gate and a sand flushing gate.

Project Objectives：

・To upgrade the weirs into a concrete weir in order to ensure delivery of irrigation water through the weir to paddy fields and to mitigate annual repairing works.

Project Scope：

- Upgrading of wooden weirs to a concrete weir
- Installation of intake structure with a steel gate and sand flushing structure with a steel gate.
- Upgrading of irrigation canal with concrete.

The existing wooden weirs should be demolished and fixed concrete weir should be newly installed at the same location.

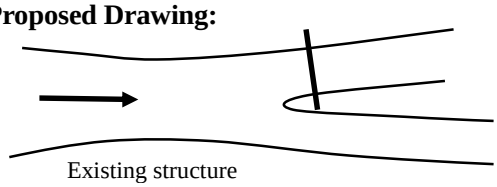
Related Projects:

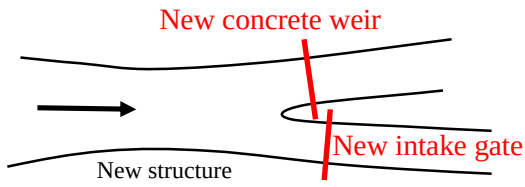
N/A

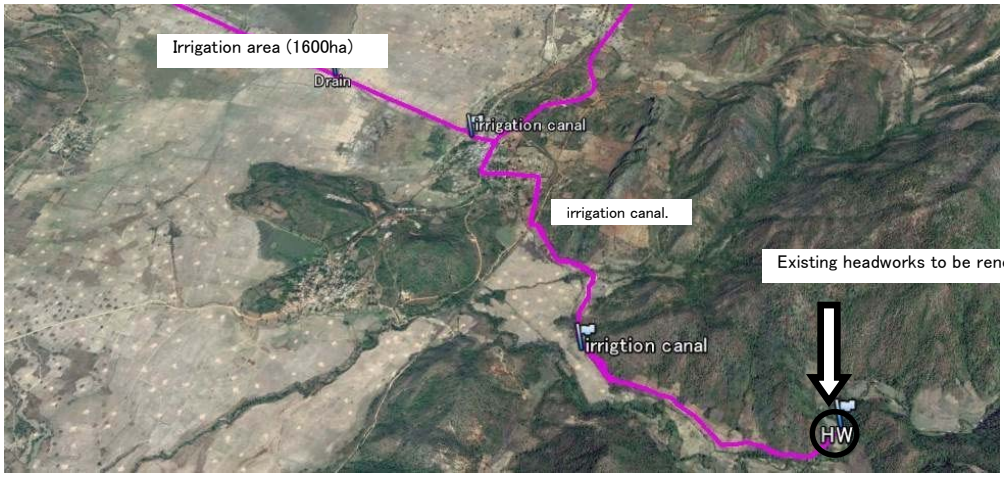
Estimated Cost：

Concrete works	:	39	Mil. JPY
Earth works	:	4	Mil. JPY
Others	:	9	Mil. JPY
Construction Cost	:	52	Mil. JPY
Design&Supervision Cost	:	10	Mil. JPY
Total Cost	:	62	Mil. JPY

Proposed Drawing:







Map

State/Region: Shan State　Township: Hopong　Village Tract: Nam Hkok

Current Conditions:

There are an existing irrigation area of 4,500acre (1,800ha) with Nam Methar Weir. Since the headworks diverts irrigation water to canal as designed, at downstream half of the irrigation area farmers cannot receive sufficient irrigation water due to:

- upstream farmers take water more than planned amount, and
- there are a lot of sedimentation in the downstream portion of the canal.

Improvement Effects:

(a) Assurance of delivery of irrigation water, on time and proper amount, for upstream farmers with adequate distribution manners,

(b) Farmers at downstream area can receive irrigation water.

Project Objectives：

・To rehabilitate and upgrade canal surface with concrete lining in order to ensure delivery of adequate amount of irrigation water to each farmlands.

・To establish efficient utilization system, or proper distribution practice, of irrigation water among farmers.

Project Scope：

- Upgrading of earth canal with concrete lining (2,000m in total) to prevent illegal direct water intaking from main canal.
- Sedimentation removal for downstream portion (4,000m in total).
- Adaption of proper water distribution practices to farmers.

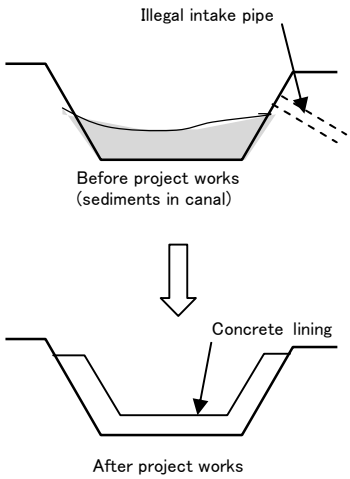
Related Projects:

N/A

Estimated Cost：

Concrete works	:	51	Mil. JPY
Earth works	:	6	Mil. JPY
Others	:	3	Mil. JPY
Construction Cost	:	60	Mil. JPY
Design&Supervision Cost	:	12	Mil. JPY
Total Cost	:	72	Mil. JPY

Proposed Drawing/Map:



State/Region: Shan State Township: Ywangan Village Tract: Sat Chan Tea Lu

Current Conditions:

There are two existing irrigation areas of 80acre (32ha) in total with irrigation water from 2 springs. Since amount of irrigation water is sufficient and stable even in dry season, farmers do not cultivate in dry season. The following 2 reasons are considered:

- irrigation water cannot control properly due to lack of division structures and check structures
- mindset of farmers for dry season cultivation

Improvement Effects:

(a) Assurance of delivery of irrigation water, on time and proper amount, to farmlands with adequate distribution manners,

(b) Farmers income is increase by additional cultivation in dry season.

Project Objectives：

・To rehabilitate and upgrade canal system including canal lining, sedimentation removal, installation of division structure and check structures.

・To advocate farmers to start cultivation in dry season.

Project Scope：

- Upgrading of earth canal with concrete lining (1,000m in total).
- Sedimentation removal for downstream portion (1,000m in total).
- Installation of canal related structures (10 nos.)
- Adaption of proper agricultural practices to farmers.

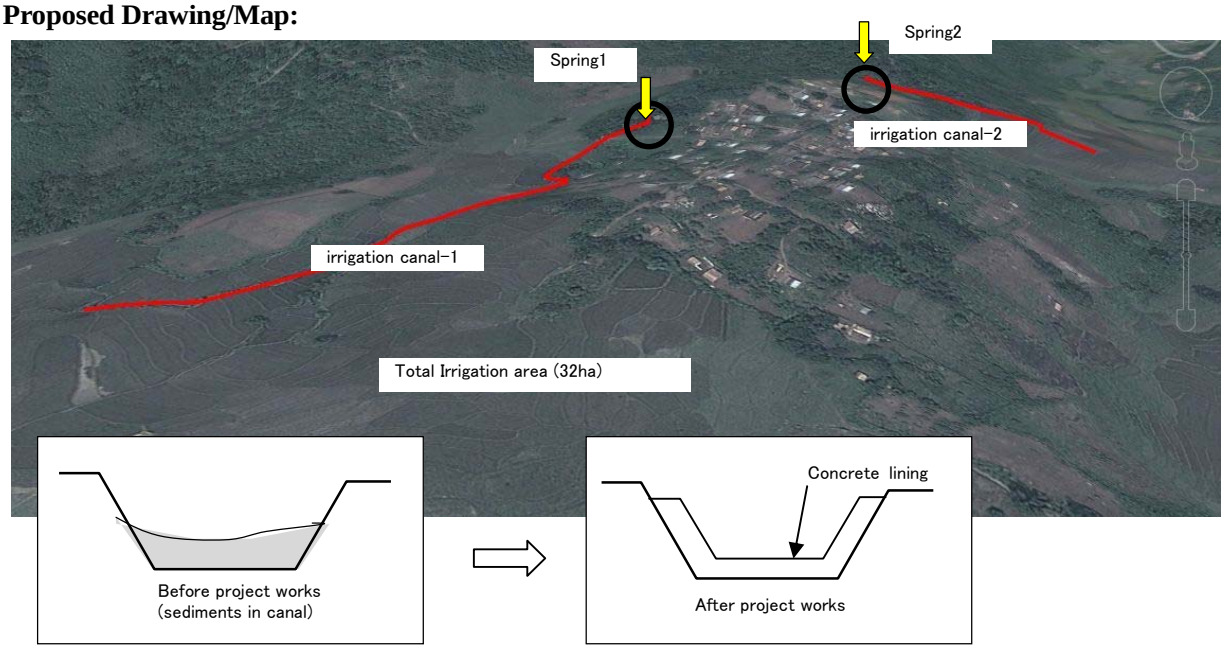
Related Projects:

N/A

Estimated Cost：

Concrete works	:	16	Mil. JPY
Earth works	:	3	Mil. JPY
Others	:	2	Mil. JPY
Construction Cost	:	21	Mil. JPY
Design&Supervision Cost	:	4	Mil. JPY
Total Cost	:	25	Mil. JPY

Proposed Drawing/Map:



State/Region: Ayeyarwady Region Township: Myaungmya Village Tract: Moke Soe Kwin

Current Conditions:

The main crop in this village tract is paddy. The paddy production area is 972 acre (393 ha), in where monsoon paddy of 972 acre and summer paddy of 708 acre are cultivated. The balanced area between monsoon and summer cannot be irrigated without irrigation channel in such area, even the adjacent river has abundant water sources for the irrigation in the summer season.

Improvement Effects:

Balanced area between monsoon and summer paddy, 264 acre (107 ha) will be irrigated during summer season. Based on the average farm size of 5 acre, about 40 farmers will be benefitted by the new irrigation channels.

Project Objectives：

- To irrigate the full paddy area (972 acre) in the summer season
- To improve the accessibility to the farm lands

Project Scope：

- Excavation of about 1,500 feet (460m) channels along both sides of existing village road
- Construction of about 6 concrete panel bridges as the channel crossing structure

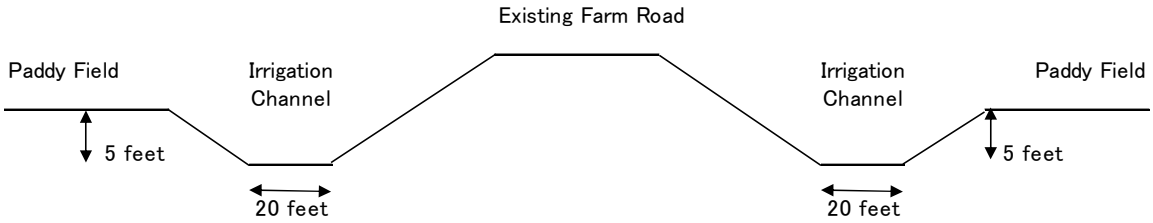
Related Projects:

There are three existing irrigation channels constructed by framer themselves. The channels were excavated by rental backhoe.

Estimated Cost：

Excavation works	:	1.8	Mil. JPY
Concrete panel bridges	:	2.1	Mil. JPY
	:		Mil. JPY
Construction Cost	:	3.9	Mil. JPY
Design & Supervision Cost	:	0.8	Mil. JPY
Total Cost	:	4.7	Mil. JPY

Proposed Drawing:



State/Region: Ayeyarwady Region Township: Labutta Village Tract: Thin Gan Gyi

Current Conditions:

The main crop of this village tract is monsoon paddy, and 5,534 acre (2,240 ha) areas are cultivated by 334 farmers. Farmers cannot cultivate summer season paddy without irrigation water due to salt (sea) water intrusion in the adjacent river. The most of the farm lands surrounded by the rivers are protected by dikes in order to prevent salt water intrusion. The main dike, along the major river, is constructed as the road by MOC. The farmers explained that some farm lands are not yet completely protected by dikes. They require additional dikes of 17 miles (about 27 km) length to protect 2,000 acre (about 800 ha) farm lands.

Improvement Effects:

Paddy area of about 2,000 acre will be completely protected from salt water intrusion even at the high tide of the adjacent rivers. Furthermore, the protection dike can be utilized as the access road to the farm lands, and the farming practices will be improved. Through these effects, the productivity of paddy is also improved.

Project Objectives：

- Improvement of paddy productivity and accessibility to the farm lands through the construction of sea water protection dikes

Project Scope：

- Construction of sea water protection dikes of about 17 miles

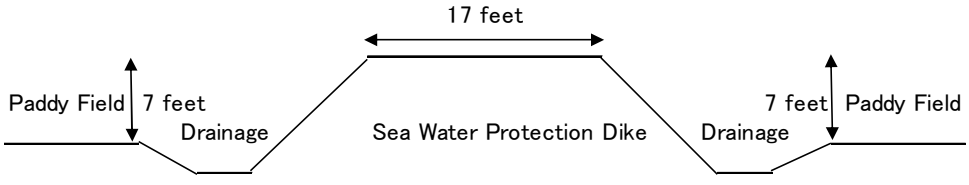
Related Projects:

N/A

Estimated Cost：

Dike embankment works	:	234	Mil. JPY
	:		Mil. JPY
	:		Mil. JPY
Construction Cost	:	234	Mil. JPY
Design & Supervision Cost	:	47	Mil. JPY
Total Cost	:	281	Mil. JPY

Proposed Drawing:



State/Region: Ayeyarwady Region Township: Labutta Village Tract: Laput Pyay Lae Pyauk

Current Conditions:

The main crop in this village tract is paddy. The paddy production area is 2,515 acre (1,018 ha), in where monsoon paddy of 2,515 acre and summer paddy of 1,700 acre are cultivated. There are four (4) channels constructed by farmer themselves and each length is 6,900 to 7,000 feet (about 2,100 to 2,130 m) with their width of more than 20 feet (about 6 m). One irrigation channel is not well functioned due to bank deterioration, sediment and so on. Therefore, some areas cannot be irrigated during summer season. The other balanced area between monsoon and summer cannot be irrigated due to far distance from irrigation channels.

Improvement Effects:

Among the balanced area between monsoon and summer paddy, about 150 acre will be irrigated during summer season. Furthermore, farmers and their families living in the paddy area will also easily come to the village center during monsoon season by the road improvement.

Project Objectives :

- To recover the irrigation area of summer paddy
- To improve the accessibility from the scattered farm houses to village center

Project Scope :

- Re-excavation of about 7,000 feet length irrigation channel
- Rehabilitation of road along the irrigation channel
- Provision of concrete panel bridges as the channel crossing structure

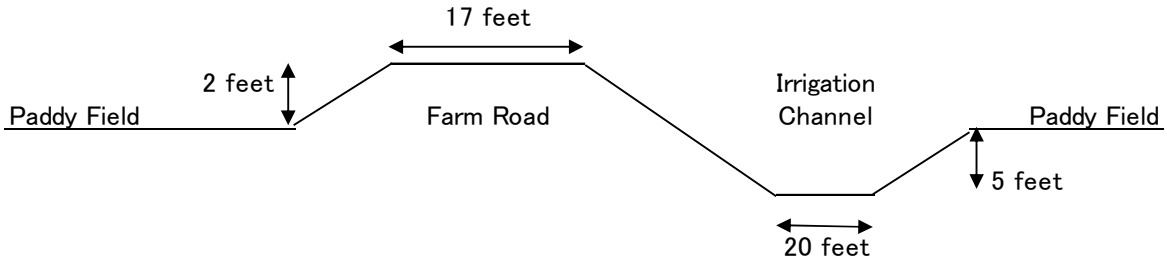
Related Projects:

N/A

Estimated Cost :

Excavation works	:	3.2	Mil. JPY
Road embankment works	:	4.1	Mil. JPY
Concrete panel bridge	:	3.7	Mil. JPY
Construction Cost	:	11.0	Mil. JPY
Design & Supervision Cost	:	2.2	Mil. JPY
Total Cost	:	13.2	Mil. JPY

Proposed Drawing:



State/Region: Ayeyarwady Region Township: Mawlamyinegyun Village Tract: Sit Sali Htone

Current Conditions:

The main crops in this village tract are paddy and bean. The farm area is 2,461 acre (996 ha), in where monsoon paddy of 2,461 acre, summer paddy of 894 acre and summer bean of 1,567 acre are cultivated. Four natural streams and one irrigation channel in the farm lands are utilized for the irrigation farming. The natural creek in the north boundary of the village is also utilized for irrigation farming. However, the irrigation channel and creek has the problem of sedimentation. The river flow cannot enter to these channel and creek, thus the farmers directly pump up the river flow for the irrigation.

Improvement Effects:

The physical increase of irrigable area is not so much expected, but farmers can minimize the operation costs of pump through the excavation works of both water sources, irrigation channel and creek.

Project Objectives :

- To minimize operation cost of pump

Project Scope :

- Re-excavation of about 2 miles length irrigation channel
- Excavation of about 3 miles length creek (Way Ya Khine creek)

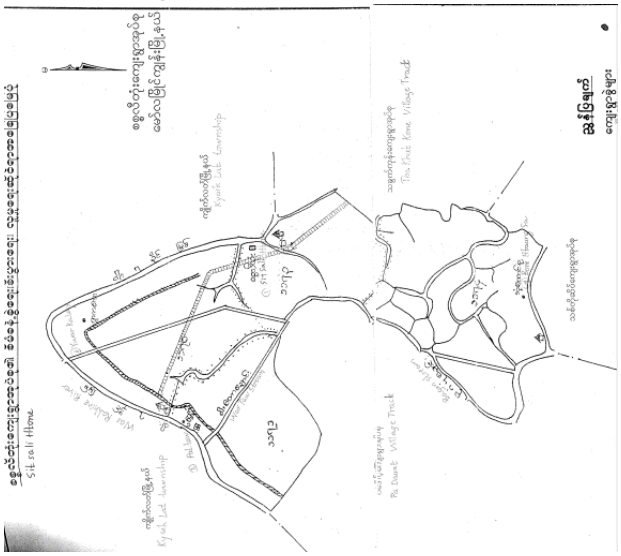
Related Projects:

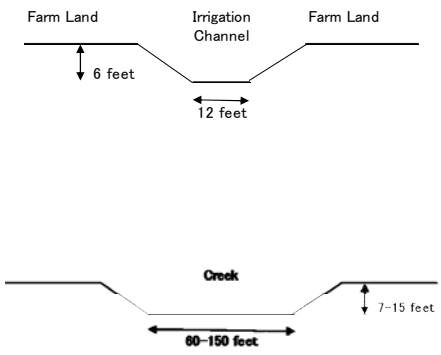
N/A

Estimated Cost :

Re-excavation works	:	2.0	Mil. JPY
Excavation works	:	22.5	Mil. JPY
	:		Mil. JPY
Construction Cost	:	24.5	Mil. JPY
Design & Supervision Cost	:	4.9	Mil. JPY
Total Cost	:	29.4	Mil. JPY

Proposed Drawing:





State/Region: Tanintharyi Region Township: Launglon Village Tract: Auk Yae Hpyu

Current Conditions:

The major crops in this village are paddy, rubber and watermelon. The monsoon paddy of 1,048 acre and summer watermelon of 10 acre are cultivated in the farm lands. There are two main drainage rivers with many tributary drainage streams in the farm area. One is Htwar River running along the north boundary of this village. The other is Chan Twin River running in the middle of the village. Both rivers have abundant water in the monsoon season, but are dried up in the summer season. Main constraint is inundation during monsoon season.

Improvement Effects:

About 800 acres of paddy area will be cultivated without inundation. Therefore, the unit yield of monsoon paddy will be improved. Furthermore, watermelon cultivation area during summer season will be increased by the utilization of ponded water in the river.

Project Objectives：

- To improve the inundation during monsoon season
- To increase the watermelon cultivation area during summer season

Project Scope：

- Excavation of about 12,000 feet length river (Htwar River) for the improvement of drainage conditions
- Construction of sluice gate structure in the Htwar River to pond the water during summer season

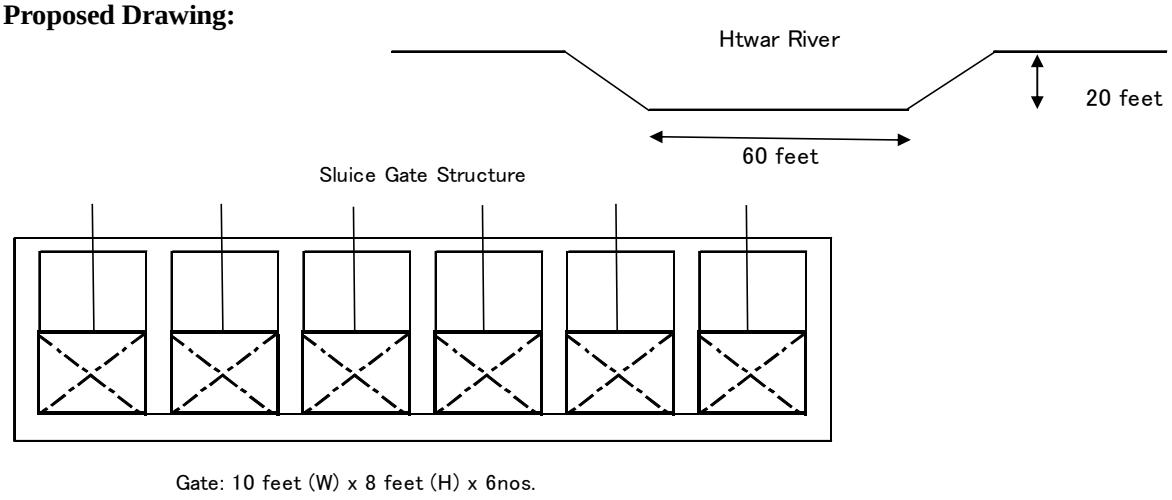
Related Projects:

The Department of Agriculture together with the Department of Irrigation have implemented drainage improvement program of the Chan Twin River. They excavated the river to increase the drainage flow capacity. They also have a plan to construct sluice gate structure at the mouth of the river.

Estimated Cost：

Excavation works	:	8.1	Mil. JPY
Sluice gate structure	:	55.3	Mil. JPY
	:		Mil. JPY
Construction Cost	:	63.4	Mil. JPY
Design & Supervision Cost	:	12.6	Mil. JPY
Total Cost	:	76.0	Mil. JPY

Proposed Drawing:



5-3. AGRICULTURE MECHANIZATION SECTOR

Model Project for Agricultural Mechanization in Mountainous Area (Shan State)

Current Conditions:

Total farmland in Hakha, Falam and Tadin Townships is 3,509 ha (8,773 acres), excepting traditional rotation farm area, where is located on slope of maintains. Mechanization has not started yet and 4 tractors and 19 power tillers are only existing. Main roads and villages are located along mountain ridge and farmland extends below it. And the common farming practice are hard on a slope and for walking between a village and a farmland.

Improvement Effects:

- Improvement of household economy through increase of self-sufficiency and production of cash crops by expansion of farm area.
- Releasing from hard work of farming and transportation by more efficient and economic means for production and transportation on goods and villagers to other villages and markets.
- Diversification of commercial activities by reduction of work time for farming.

Project Objectives：

- To promote agricultural mechanization in the three townships.

Project Scope：

Target area: 1,893 ha (4,733 acre)

- To establish AMS in Hakha and sub-Stations in Tedin and Falam which will provide lending service of power tillers.
- To train and foster persons who can operate and maintain a power tiller in each target village and provide mechanization services in each target villages by trained persons.
- Strengthening land reclamation capacity of LRC to expand farmland where power tiller can be used.

Of Related Projects:

N/ A

Reference Photo:

Estimated Cost：

Agricultural machines*	:	69	Mil. JPY
Equipment of workshop	:	3	Mil. JPY
Machines for land reclamation**	:	87	Mil. JPY
Equipment for training		3	Mil. JPY
Construction Cost	:	163	Mil. JPY
Design & Supervision Cost	:	16	Mil. JPY
Total Cost	:	179	Mil. JPY

* Power tiller: 53 units (with rotary plow, cage wheels and trailer), Reaper: 16 units, Thresher: 16 units

** Excavator: 4 units, Dozer:2 units, Tractor with a blade: 2 units

Model Project for Agricultural Mechanization in Hilly Area (South Shan State)

Current Conditions:

The area centering Taunggyi and along the road for Yangon and Mandaley is one of the advanced commercial production area in Myanmar. However, in the area extended out from such advanced area, agricultural mechanization has still stagnant by low level of owing machines among farmers, limited mechanization service provided by private sector. And the most area locates out of the service area by AMS even though farmers' need for service exists.

Improvement Effects:

- Improvement of household economy through increase of self-sufficiency and production of cash crops by expansion of farm area.
- Releasing from hard work of farming and products transportation by efficient and economic mean for production and transportation of products to market.
- Diversification of commercial activities by reduction of work time for farming.

Project Objectives：

- To promote agricultural mechanization in five villages in Nansang Township of South Shan State.

Project Scope：

Target villages: Noung Pho Mi, Ho Oo, Malam Kham, Lowe Kyant, and Nant Kyok

Target area: 1,453 ha for tractor, 368 ha for power tiller

- Strengthening mechanization service provided by Sub-AMS in Nansang.
- Provision of mechanization service to the target villages by attaching the new leasing service system of power tillers for a small plot of farm and a farm on slope of hill to the ordinary service by tractors.
- Fostering persons who can operate and maintain a power tiller in each target village, and provision of mechanization services by a trained person above.

Related Projects:

N/ A

Reference Photo:

Estimated Cost：

Agricultural machines*	:	109	Mil. JPY
Equipment of workshop	:	3	Mil. JPY
Equipment for training		3	Mil. JPY
Construction Cost	:	115	Mil. JPY
Design & Supervision Cost	:	11	Mil. JPY
Total Cost	:	126	Mil. JPY

* Power tiller: 11 units (with rotary plow, cage wheels and trailer), Reaper: 5 units, Thresher: 5 units, Tractor: 14 units, and Combine harvester: 2 units

Project for Strengthening Mechanization Service by AMD (Ayeyarwady Region and Tanintharyi Region)

Current Conditions:

In the survey area, the mechanization service activities by private sector has been extending along the main roads. However, such service does not extend yet to the area far from the main roads where there are many areas out of the AMS's mechanization service area.

Improvement Effects:

- Improvement of household economy through increase of agricultural productivity, and reduction of losses and cost of harvesting by mechanization.
- Diversification of commercial activities by reduction of work time of farming.

Project Objectives：

- To provide agricultural mechanization service due to needs of farmers in seven villages where private service system does not exist or limited.

Project Scope：

- Target seven villages and five locations of AMS to be strengthened (See Attachment-1)
- Target area by each village (See Attachment -2)
- Increase capacity of mechanization service of AMSs by provision of tractor(s) and/or combine harvester(s)
- Each AMS provides mechanization service to the target village
- Since Sa Bai Kone Village in Bogale Township locates out of the service area of the nearest AMS in Mawlamyiengyun, AMS will lease the machines to the Village in the season after fostering persons in the Village who can operate and maintenance of the machines in advance.

Related Projects:

N/ A

Reference Photo:

Estimated Cost：

Cost for procurement of the machines by each AMS is estimated as follows:

AMS	Budget (000Yen)
[35]Myaungmya	5,200
[15]Hinthada	5,100
[53]Mawlamyienegyun-1	8,500
[53]Mawlamyienegyun-2	16,900
Total	35,700
[91]Dawei	49,800
[95]Myeik	10,300
Total	60,100

* Allocation plan of machines to each AMS is attached in Attachment-3.

Attachment-1

・Target villages and AMS to be strengthened

Region	Township	Target Village	AMS
Ayeyawady	(1) Myaungmya (2) Hinthada (3) Mawlamyinegyun (4) Bogale	(1) Moke Soe Kwin (2) Tha Si (3) Sit Sali Htone (4) Sa Bai Kone	[35] Myaungmya [15] Hinthada [53] Mawlamyienegyun-1 [53] Mawlamyienegyun-2
Tanintharyi	(1) Launglon (2) Myeik	(1) Auk Yae Hpyu, Pyin Htein (2) Nan Daw Yar	[91] Dawei [95] Myeik

Attachment-2

・Target area

Target area where AMS's mechanization service will cover after purchasing machines is planned below.

Region	AMS	Target Village	Target Area（ha） Tracter / C. Harvester
Ayeyawady	[35] Myaungmya [15] Hinthada [53] Mawlamyienegyun-1 [53] Mawlamyienegyun-2	(1) Moke Soe Kwin (2) Tha Si (3) Sit Sali Htone (4) Sa Bai Kone	(1) - / 90 (2) - / 90 (3) 156 / 90 (4) 624 / 360
Tanintharyi	[91] Dawei [95] Myeik	(1) Auk Yae Hpyu, Pyin Htein (2) Nan Daw Yar	(1) 156 / 540, - / 270 (2) - / 180

Attachment-3

Component (Machines Procurement)

Allocation plan of machines to each AMS is as follows:

Region	AMS	Tractor (No.)	Combine harvester (No.)
Ayeyawady	[35] Myaungmya	-	1
	[15] Hinthada	-	1
	[53] Mawlamyienegyun-1	1	1
	[53] Mawlamyienegyun-2	2	2
Tanintharyi	[91] Dawei	1	9
	[95] Myeik	-	2

Project for Improvement of Transportation by Power tillers with a Trailer (Chin State)

Current Conditions:

Major cash product in Dolluang and Swang Dawh villages in Tedin Township is tea leaf. Producers transport their products in bag on foot or by a motorbike in the narrow earth way to a major road junction or the nearest town market.

Improvement Effects:

- Improvement of household economy by reduction of transportation cost.
- Releasing from hard work for transportation of the products.
- Diversification of commercial activities by reduction of work time of transportation.
-

Project Objectives：

- To improve transportation condition of the product to the market by provision of power tillers with a trailer.

Project Scope：

- The nearest AMS (Tadin sub-AMS if "Model Project of Agricultural Mechanization in Mountainous Area" will be implemented otherwise AMS [2] in Kalay) will provide two power tillers with a trailer to each village after fostering necessary number of villagers for operation and maintenance of machines by training.
- Trained villagers will operate power tillers as transport means for villagers.

Related Projects:

N/ A

Reference Photo:

Estimated Cost：

Power tiller*	:	2.88	Mil. JPY
Construction Cost	:	2.88	Mil. JPY
Design & Supervision Cost	:	0.29	Mil. JPY
Total Cost	:	3.17	Mil. JPY

* Power tiller with a trailer: 4 units (2 units for each village)

Project for Improvement of Agricultural Production and Transportation by Power tiller (South Shan State)

Current Conditions:

Tae Lu Village in Ywangon Township started cultivation farming recently and the access road to the main road was constructed in the just last year. Then their farming technology has not been developed well.

Improvement Effects:

- Improvement of household economy through increase of productivity and reduction of transportation cost.
- Diversification of commercial activities by reduction of work time of farming and transportation.

Project Objectives：

- To improve their farming and transportation of the products to the market by provision of power tillers.

Project Scope：

Target area: 88 ha (220 acre)

- AMS of Aungban [65] will provide two sets of power tiller with attachments after fostering necessary number of villagers for operation and maintenance of machines by training.
- Trained villagers will operate power tillers for farming and transportation for villagers' requests.

Related Projects:

N/ A

Reference Photo:

Estimated Cost：

Power tiller*	:	1.44	Mil. JPY
Construction Cost	:	1.44	Mil. JPY
Design & Supervision Cost	:	0.14	Mil. JPY
Total Cost	:	1.58	Mil. JPY

* Power tiller: 2 units (with a rotary plow, a cage wheels and a trailer)

5-4. VILLAGE WATER SUPPLY SECTOR

State/Region:Chin State Township:Falam Village Tract:Webula

Current Conditions:

- Villagers use water from a distant spring of mountain slope. They also use rainfall in rainy season.
- Spring water is usually not enough in dry season, and water shortage is serious because they cannot use rainfall in dry season.
- Water conveyance pipe-line is sometimes destroyed by land slide, which causes water shortage more serious.
- Villagers have anxiety about water safety due to no information on water quality.

Improvement Effects:

- Water supply coverage rate will be increased throughout rainy and dry season by construction of water supply system using a spring of mountain slope.
- Water fetching work will be made lightened, which will increase opportunity for women to participate into social activity.

Project Objectives:

By construction of water supply facilities;

(1) Water supply coverage with safe water will be increased

(2) Water fetching time will be shortened.

Project Scope:

Construction of:

-water intake of spring point

- pipe line between spring point and village

- reservoir tank and public taps

Distance between spring points and village is 5 miles in case of Webula village and 3 miles in case of Pa Mon Chung village.

Related Projects:

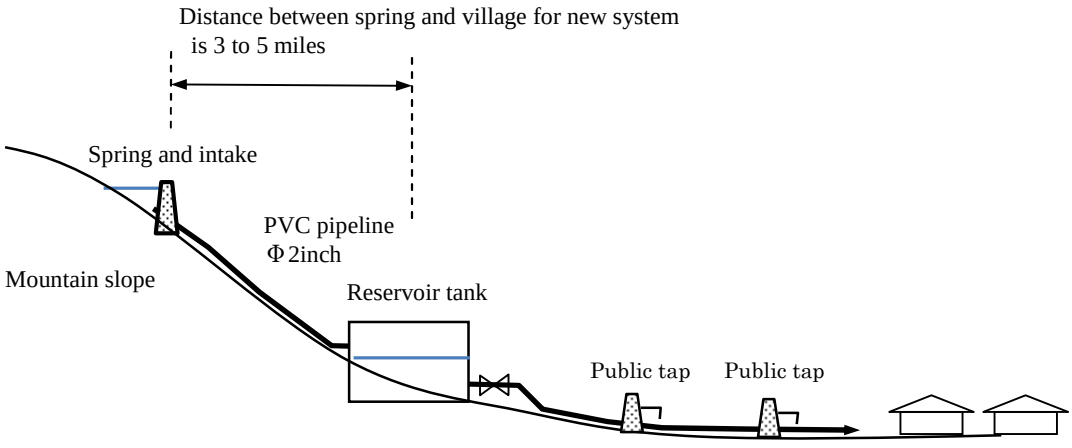
Additional pipes for water conveyance and tools for repair will be procured preparing for occurrence of land slide with technical transfer to village people.

Estimated Cost:

Construction cost (water intake/reservoir/ pipe line /public tap)	: 8.3 Mil. JPY
Design and management	: 1.7 Mil. JPY
Total	: 10.0 Mil. JPY

Proposed Drawing:

Existing and newly proposed water supply system consists of facilities as shown below, namely water intake, pipe-line, reservoir tank and public taps.



State/Region:Chin State Township:Tedim Village Tract:Dollung

Current Conditions:

- Villagers use water from a distant spring of mountain slope. They also use rainfall in rainy season.
- Spring water is usually not enough in dry season, and water shortage is serious because they cannot use rainfall in dry season.
- Water conveyance pipe-line is sometimes destroyed by land slide, which causes water shortage more serious.
- Villagers have anxiety about water safety due to no information on water quality.

Improvement Effects:

- Water supply coverage rate will be increased throughout rainy and dry season by construction of water supply system using a spring of mountain slope.
- Water fetching work will be made lightened, which will increase opportunity for women to participate into social activity.

Project Objectives:

By construction of water supply facilities;

(1) Water supply coverage with safe water will be increased

(2) Water fetching time will be shortened.

Project Scope:

Construction of:

-water intake of spring point

- pipe-line between spring point and village
- reservoir tank and public taps

Distance between spring points and village is 7 to 9 km in case of Zozan village and 6.6 km in case of Dollung village.

Related Projects:

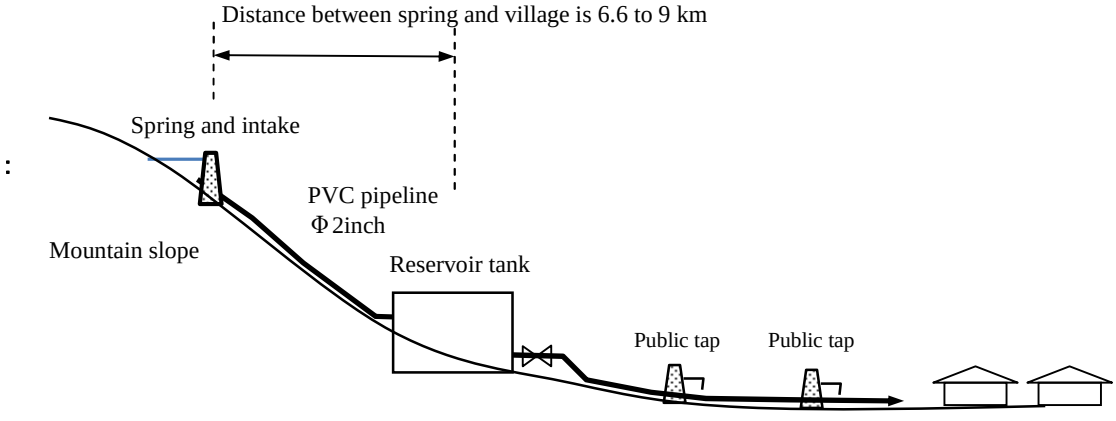
Additional pipes for water conveyance and tools for repair will be procured preparing for occurrence of land slide with technical transfer to village people.

Estimated Cost :

Construction cost (water intake/reservoir/ pipe- line /public tap)	:	9.2	Mil. JPY
Design and management	:	1.8	Mil. JPY
Total	:	11.0	Mil. JPY

Proposed Drawing:

Existing and newly proposed water supply system consists of facilities as shown below, namely water intake, pipe-line, reservoir tank and public taps.



State/Region:Shan State　　Township:Taunggyi　　Village Tract:Kyauk Ni

Current Conditions:

- Kyank Ni village used water of a deep well before. However, the well wall collapsed and now impossible to use. They currently use water of spring 4.8 km from village.
- Taung Kyar village use water of a spring in mountain foot and shallow wells 1 km and 2 km from the village respectively.
- Both water sources have problems in quantity, quality and distance of water fetching.

Improvement Effects:

- Water will be supplied stably in terms of water quantity and quality throughout rainy and dry seasons by construction of water supply system with drilling deep well in the center of village.
- Water fetching work will be made lightened, which will increase opportunity for women to participate into social activity.

Project Objectives:

By construction of water supply facilities;

(1) Water supply coverage with safe water will be increased

(2) Time for water fetching will be shortened.

Project Scope:

- New well (depth of 90m) will be constructed near the existing well that collapsed in Kyank Ni village
- Deep well will be constructed (depth of 100 to 200m) at the center of village with water tank, pipe-line and common taps in Taung Kyar village.

Related Projects:

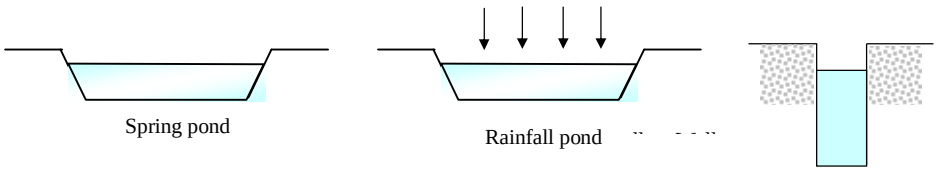
DRD will drill wells using procured rig and materials. They construct water supply facilities including pump station, water reservoir tank and the other related facilities.

Estimated Cost:

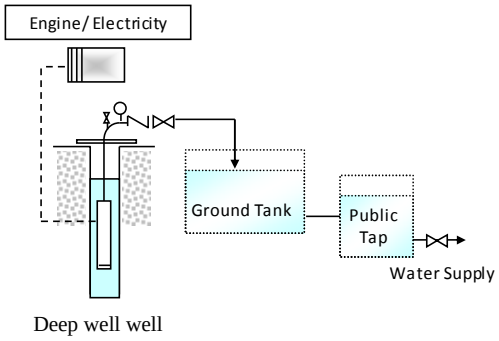
Equipment and materials with transportation for entire Shan state	:	241	Mil. JPY
Consultant fee	:	24	Mil. JPY
Total	:	265	Mil. JPY

Proposed Drawing:

(1) Current Water Supply System at Kyank Ni village (spring pond) and Taung Kyar village (rainfall pond and shallow hand dug well)



Outline of Project :



State/Region:Shan State　　Township:Kalaw　　Village Tract:Baw Nin

Current Conditions:

- Paw La Maw Village uses water from 4 spring ponds, which is located 15 to 30 minutes' walk from village.
- Water table of pond declines in dry season causing water shortage.
- They use rainwater on roofs in rainy season.
- Water quality of ponds have problem.

Improvement Effects:

- Water will be supplied stably in terms of water quantity and quality throughout rainy and dry seasons by construction of water supply system with drilling deep well in the center of village.
- Water fetching work will be made lightened, which will increase opportunity for women to participate into social activity.

Project Objectives:

By construction of water supply facilities;

- Water supply coverage with safe water will be increased
- Time for water fetching will be shortened.

Project Scope:

Well for water supply will be drilled with depth of 100 to 300m in the center of village, and reservoir tank and public taps will be constructed

Related Projects:

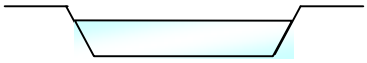
DRD will drill wells using procured rig and materials. They construct water supply facilities including pump station, water reservoir tank and the other related facilities.

Estimated Cost:

Equipment and materials with transportation cost for entire Shan state	:	241	Mil. JPY
Consultant fee	:	24	Mil. JPY
Total		265	Mil. JPY

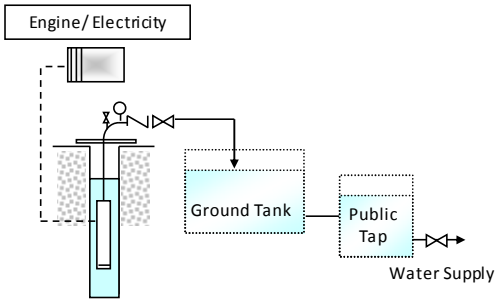
Proposed Drawing:

(1) Current Water Supply System at Paw La Maw Village (spring pond)



Spring pond

(2) Proposed component (Deep Well)



State/Region:Shan State　　Township:Ywangan　　Village Tract:Sat Chan

Current Conditions:

- Tau Lu village uses water of 2 springs; a spring from limestone cave and another spring from alluvial sediment.
- Spring point is located within 500m from the village center. They fetch water by walking.
- Water discharge from spring is enough though turbidity of spring water becomes high in rainy season. Water quality of springs has problem due to their proximity with the village.

Improvement Effects:

- Water will be supplied stably in terms of water quantity and quality throughout rainy and dry seasons by construction of water supply system with drilling deep well in the center of village.
- Water fetching work will be made lightened, which will increase opportunity for women to participate into social activity.

Project Objectives:

By construction of water supply facilities;

- Water supply coverage with safe water will be increased
- Time for water fetching will be shortened.

Project Scope:

Construction of :

- Deep well with depth of 100m～300m
- Reservoir tank
- Pipe line and common taps

Related Projects:

DRD will drill wells using procured rig and materials. They construct water supply facilities including pump station, water reservoir tank and the other related facilities.

Estimated Cost:

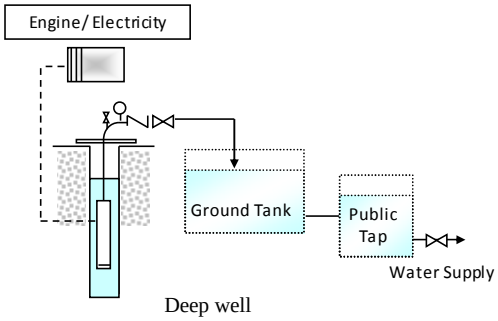
Equipment and materials with transportation cost for entire Shan state	:	241	Mil. JPY
Consultant fee	:	24	Mil. JPY
Total	:	265	Mil. JPY

Proposed Drawing:

(1) Current Water Supply System at Tau Lu village (spring pond)

Spring pond

(2) Proposed component (Deep Well)



Deep well

State/Region:Shan State　　Township:Pinlaung　　Village Tract:Paw Yar

Current Conditions:

- Mway Taw village uses water of a public shallow well.
- Water table of the shallow well declines in dry season. Water quality of the well is bad due to its proximity to the village.
- There are 13 private deep wells, whose owners do not use water of the shallow well.

Improvement Effects:

- Water will be supplied stably in terms of water quantity and quality throughout rainy and dry seasons by construction of water supply system with drilling deep well in the center of village.
- Water fetching work will be made lightened, which will increase opportunity for women to participate into social activity.

Project Objectives:

By construction of water supply facilities;

(1) Water supply coverage with safe water will be increased

(2) Time for water fetching will be shortened.

Project Scope:

Construction of :

- Deep well with depth of 100m～300m
- Reservoir tank
- Pipe line and common taps

Related Projects:

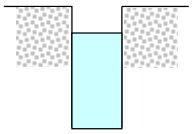
DRD will drill wells using procured rig and materials. They construct water supply facilities including pump station, water reservoir tank and the other related facilities.

Estimated Cost:

Equipment and materials with transportation for entire Shan state	:	241	Mil. JPY
Consultant fee	:	24	Mil. JPY
Total	:	265	Mil. JPY

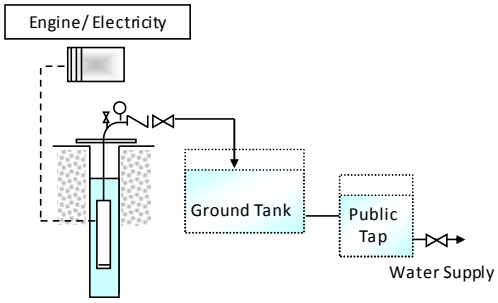
Proposed Drawing:

(1) Current Water Supply System at Mway Taw village (Shallow hand dug well)



Public shallow hand dug well

(2) Proposed component (Deep Well)



Deep well

State/Region:Shan State　　Township:Nansang　　Village Tract:Mat Mon Mun

Current Conditions:

- Mam Hai village uses water from a spring and deep well 0.6 km and 2 km from village respectively. The deep well belongs to private owner, and its usage is limited.
- They use rainwater on the roofs in rainy season.
- Current 2 water sources above have problems in quantity, quality and distance for fetching.

Improvement Effects:

- Water will be supplied stably in terms of water quantity and quality throughout rainy and dry seasons by construction of water supply system with drilling deep well in the center of village.
- Water fetching work will be made lightened, which will increase opportunity for women to participate into social activity.

Project Objectives:

By construction of water supply facilities;

(1) Water supply coverage with safe water will be increased

(2) Time for water fetching will be shortened.

Project Scope:

Construction of :

- Deep well with depth of 100m～300m
- Reservoir tank
- Pipe line and common taps

Related Projects:

DRD will drill wells using procured rig and materials. They construct water supply facilities including pump station, water reservoir tank and the other related facilities.

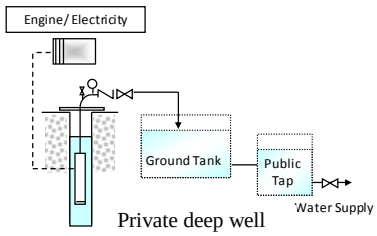
Estimated Cost:

Equipment and materials with transportation for entire Shan state	:	241	Mil. JPY
Consultant fee	:	24	Mil. JPY
Total	:	265	Mil. JPY

Proposed Drawing:

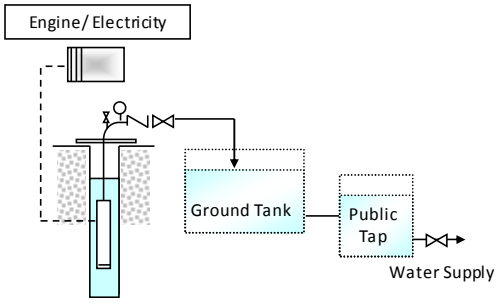
(1) Current Water Supply System at Mam Hai village (spring pond and private deep well)

Spring pond



Private deep well

(2) Proposed component (Deep well)



Deep well

State/Region:Shan State　　Township:Nansang　　Village Tract:Hai Nar Gyi

Current Conditions:

- San Lit village uses water of 2 spring ponds by fetching water by walking.
- Water discharge from springs is not enough due to small water basin. Water table declines in dry season, and water shortage becomes serious.
- Water quality of spring deteriorated because the spring is located near the village.

Improvement Effects:

- Water will be supplied stably in terms of water quantity and quality throughout rainy and dry seasons by construction of water supply system with drilling deep well in the center of village.
- Water fetching work will be made lightened, which will increase opportunity for women to participate into social activity.

Project Objectives:

By construction of water supply facilities;

(1) Water supply coverage with safe water will be increased

(2) Time for water fetching will be shortened.

Project Scope:

Construction of

- Deep well with depth of 100m～300m
- Reservoir tank
- Pipe line and public taps

Related Projects:

DRD will drill wells using procured rig and materials. They construct water supply facilities including pump station, water reservoir tank and the other related facilities.

Estimated Cost:

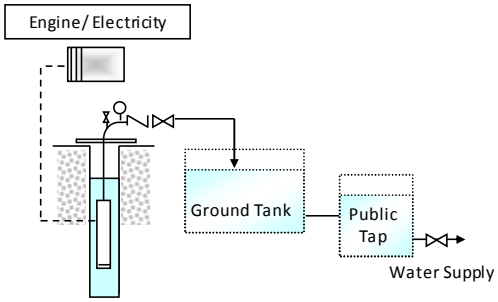
Equipment and materials with transportation cost for entire Shan state	:	241	Mil. JPY
Consultant fee	:	24	Mil. JPY
Total	:	265	Mil. JPY

Proposed Drawing:

(1) Current water supply system at San Lit village (spring pond)

Spring pond

(2) Proposed component (deep well)



State/Region:Shan State　　Township:Hopong　　Village Tract:Pawng Lin

Current Conditions:

- Bant Pain village uses i) water of spring on the foot of mountain and ii) stream water.
- Spring water is conveyed through pipe-line to the village.
- Stream water is used at intake point for bathing and washing.
- Problem in water supply is i) water shortage of spring in dry season and ii) high turbidity of stream water.

Improvement Effects:

- Water will be supplied stably in terms of water quantity and quality throughout rainy and dry seasons by construction of water supply system with drilling deep well in the center of village.
- Water fetching work will be made lightened, which will increase opportunity for women to participate into social activity.

Project Objectives:

By construction of water supply facilities;

- Water supply coverage with safe water will be increased
- Time for water fetching will be shortened.

Project Scope:

Construction of :

- Deep well with depth of 100m～300m
- Reservoir tank
- Pipe line and common taps

Related Projects:

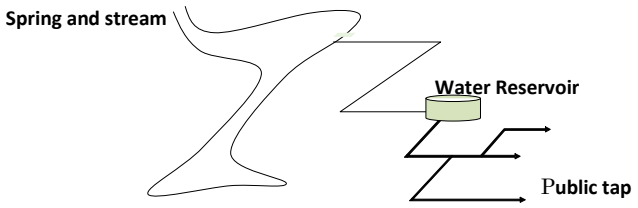
DRD will drill wells using procured rig and materials. They construct water supply facilities including pump station, water reservoir tank and the other related facilities.

Estimated Cost:

Equipment and materials with transportation cost for entire Shan state	:	241	Mil. JPY
Consultant fee	:	24	Mil. JPY
Total	:	265	Mil. JPY

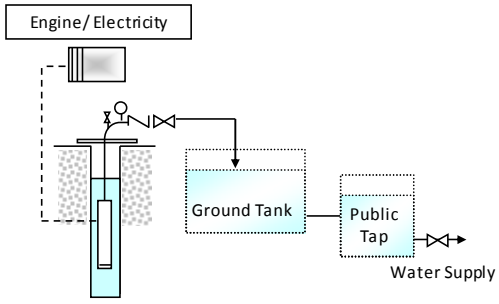
Proposed Drawing:

(1) Current Water Supply System at Bant Pain village (spring water and stream water)



Spring piped water and stream intake

(2) Proposed component (Deep Well)



Deep well

State/Region:Ayeyarwady Region Township:Myaungmya Village Tract: Moke Soe Kwin

Current Conditions:

Most of households in the village tract has private well. However, the yield capacity decreases due to drought in dry season. Pha Ya Kone and Moke Soe Kwin village face serious water shortage due to less numbers of the well. On the other hand, it takes about 10 minutes to reach the water at 2 villages of Ma Yan Chaung and Pat Ta Gone utilizing river water as principal water source, and the percentage of residents who bear a burden of water fetching is 10% of the total population.

Improvement Effects:

Water supply ration in dry season can be improved. In addition, reduction of the burden of water fetching from the river that 10% of residents is forced can be expected.

Project Objectives:

(1) Underground water development to Pha Ya Kone and Moke Soe Kwin village facing water shortage in dry season

(2) Underground water development to Ma Yan Chaung and Pat Ta Gone village utilizing river water as water source

Project Scope:

(1) Procurement of following well excavating machinery and auxiliaries to DRD, and engineering guidance with two months

- Well Excavator (300m Class), Excavating Tools, Air Compressor, Hauling Truck, Screen and Casing (10,000m), Well Logging Equipment

(2) Procurement of water quality meter and engineering guidance with 0.5 months

- TDS Meter, pH meter, Turbidity Meter, Spectrophotometer and Arsenic Concentration Meter

Related Projects:

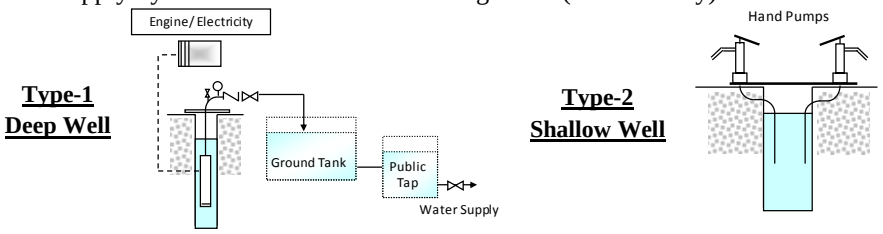
N/A

Estimated Cost:

Well Excavator	:	275.0	Mil. JPY
Water Quality Analyzer	:	3.0	Mil. JPY
Design & Supervision Cost	:	55.6	Mil. JPY
Total Cost	:	333.6	Mil. JPY

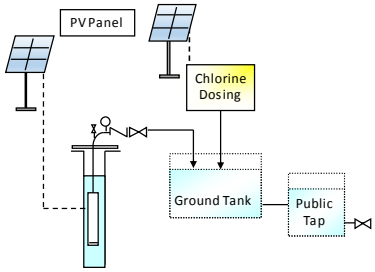
Proposed Drawing:

(1) Current Water Supply System at Moke Soe Kwin village tract (Well Facility)



(2) Proposed component (Deep Well)

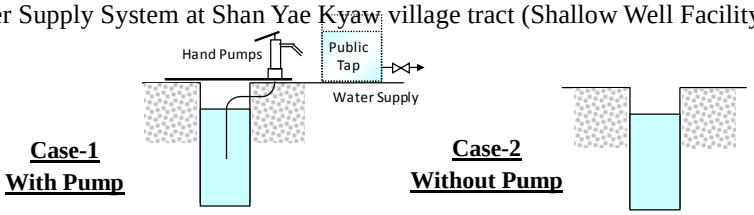
Renewable energy such as photovoltaic generation system is applicable for the operation of pump although water extraction is basically done by a pump with engine.



State/Region: Ayeyarwady Region Township: Myaungmya Village Tract: Shan Yae Kyaw	
Current Conditions: There are three dug wells for drinking use in this village tract. However, because two wells out of three are not applicable for drinking use in dry season due to the increase of saline concentration, residents have to get water from only one well. It takes more than 30 minutes to reach the water as maximum, and approximately 5 gallons of drinking water is necessary for a day per one household.	**Improvement Effects:** Water supply ration in dry season can be improved.
Project Objectives: Underground water development to Shan Yae Kyaw village facing water shortage in dry season	**Project Scope:** (1) Procurement of following well excavating machinery and auxiliaries to DRD, and engineering guidance with two months - Well Excavator (300m Class), Excavating Tools, Air Compressor, Hauling Truck, Screen and Casing (10,000m), Well Logging Equipment (2) Procurement of water quality meter and engineering guidance with 0.5 months - TDS Meter, pH meter, Turbidity Meter, Spectrophotometer and Arsenic Concentration Meter
Related Projects: N/A	**Estimated Cost:** Estimated cost is allocated to the Moke Soe Kwin village water supply scheme.

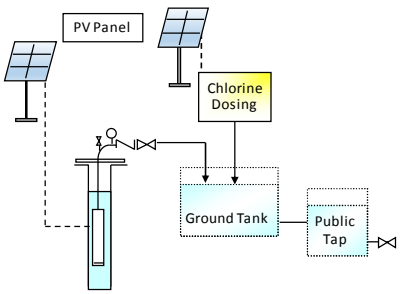
Proposed Drawing:

(1) Current Water Supply System at Shan Yae Kyaw village tract (Shallow Well Facility)



(2) Proposed component (Deep Well)

Renewable energy such as photovoltaic generation system is applicable for the operation of pump although water extraction is basically done by a pump with engine.



State/Region:Ayeyarwady Region Township:Labutta Village Tract:Thin Gan Gyi

Current Conditions:

This village tract is surrounded by a river with brackish water, and underground water has high saline concentration. From such circumstances, drinking water depends on rainwater. It takes more than 20 minutes to reach the water. Approximately five gallons of drinking water is necessary for a day per one household, and water is carried by male due to undeveloped access road to ponds.

Underground and river water are not applicable without desalination treatment for drinking use due to saline concentration. However, it is not reality from the view point of electrical circumstances and operation and maintenance structure.

Improvement Effects:

Acquisition amount of water to be taken from rainwater ponds is limited to three gallon per one person due to drought in dry season. (River water is used for general purpose-use as an alternative to rainwater.)

From such circumstances, the construction of additional rainwater ponds contribute to the increase of water service ratio during dry season.

Project Objectives:

Securement of water resources during dry season by the construction of additional rainwater ponds along with the population growth.

Project Scope:

Construction of the following facilities is estimated as the Project Component;

(1) Rainwater Pond : 5 ponds

Related Projects:

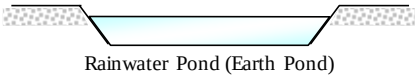
N/A

Estimated Cost:

Construction Cost	:	6.8	Mil. JPY
Design & Supervision Cost	:	1.4	Mil. JPY
Total Cost	:	8.2	Mil. JPY

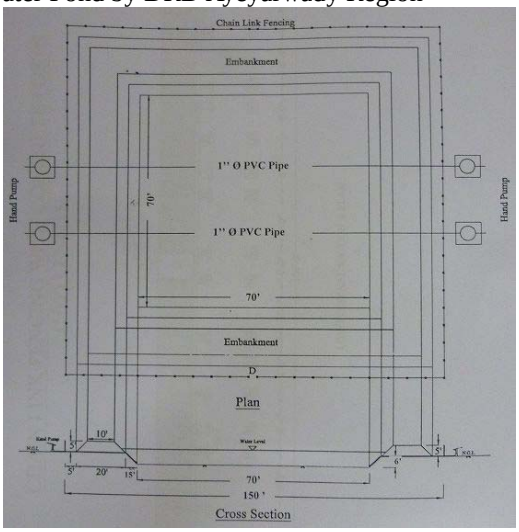
Proposed Drawing:

(1) Current Water Supply System (Rainwater Pond)



Rainwater Pond (Earth Pond)

(2) Standard Drawing of Rainwater Pond by DRD Ayeyarwady Region



State/Region:Ayeyarwady Region Township:Labutta Village Tract:Laput Pyay Lae Pyauk

Current Conditions:

Underground water has high saline concentration. Drinking water, therefore, depends on rainwater in this village tract. Rainwater pond is a little away from residential area. However, Since water is sold for 500 kyat per 24 gallon by self-employed person who carries water from rainwater pond, residents have no burden of water fetching.

On the other hand, river water is taken by submersible pump with battery for general purpose use. Since the turbidity of river water shows high value, which is around 150 NTU, it is not applicable for drinking use without rapid filtration. However, introduction of rapid filtration is not reality from the view point of electrical circumstances and O&M structure.

Improvement Effects:

Due to the drying-up of pond water last year, residents received relief of bottled water from Myaungmya Township. The construction of additional rainwater pond will improve such circumstances, and water service ratio especially for dry season.

Project Objectives:

Securement of water resources in dry season by the construction of additional rainwater ponds along with the population growth.

Project Scope:

Construction of the following facilities is estimated as the Project Component;

Rainwater Pond : 2 ponds

Related Projects:

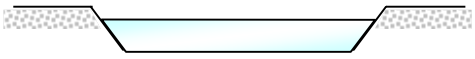
Two small water tanks for securing general purpose water have been granted by UNICEF in the year 2009

Estimated Cost:

Construction Cost	:	2.7	Mil. JPY
Design & Supervision Cost	:	0.5	Mil. JPY
Total Cost	:	3.2	Mil. JPY

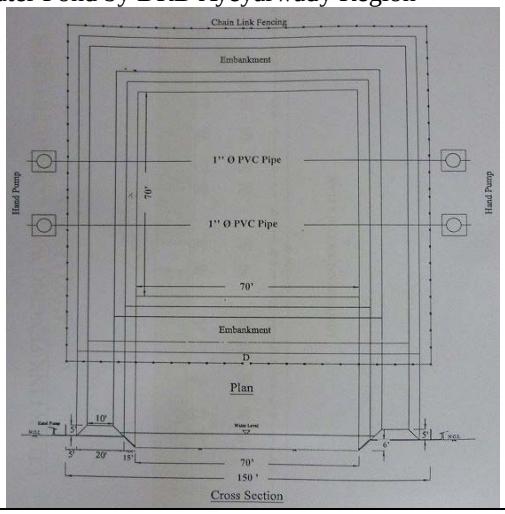
Proposed Drawing:

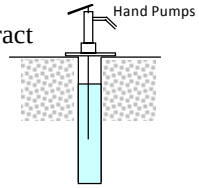
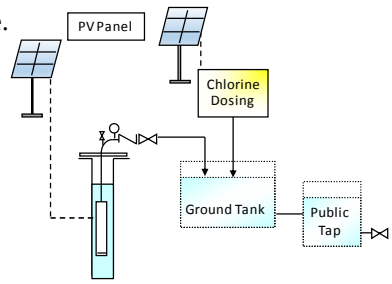
(1) Current Water Supply System (Rainwater Pond)



Rainwater Pond (Earth Pond)

(2) Standard Drawing of Rainwater Pond by DRD Ayeyarwady Region



State/Region:Ayeyarwady Region Township:Hinthada Village Tract: Tha Si	
Current Conditions: In this village tract, about 75% of households owns private dug well with hand pump, and shares with neighboring houses. From such situation, residents don't suffer inconvenience to reach the water. Arsenic is generally detected at comparatively shallow aquifer of less than 200 feet in whole Hinthada area. Although residents living in this village tract uses underground water extracted from 170 to 200 feet, water borne diseases haven't been reported till now. In addition, periodical water quality analysis is never carried out by both DRD and village committee.	**Improvement Effects:** Safe water supply can be expected by the extraction of underground water from the depth of 300 to 400 feet because arsenic and other minerals are detected from comparatively shallow aquifer. In addition, water service ratio in the village tract will be improved by underground development toward the population growth.
Project Objectives: Securement of water service ratio by underground development toward the population increasing year by year	**Project Scope:** (1) Procurement of following well excavating machinery and auxiliaries to DRD, and engineering guidance with two months - Well Excavator (300m Class), Excavating Tools, Air Compressor, Hauling Truck, Screen and Casing (10,000m), Well Logging Equipment (2) Procurement of water quality meter and engineering guidance with 0.5 months - TDS Meter, pH meter, Turbidity Meter, Spectrophotometer and Arsenic Concentration Meter
Related Projects: N/A	**Estimated Cost:** Estimated cost is allocated to the Moke Soe Kwin village water supply scheme.
Proposed Drawing: (1) Current Water Supply System at Tha Si village tract (Dug Well)  (2) Proposed component (Deep Well) Renewable energy such as photovoltaic generation system is applicable for the operation of pump although water extraction is basically done by a pump with engine.  	

State/Region:Ayeyarwady Region Township:Mawlyamyinegyun Village Tract: Sit Sali Htone

Current Conditions:

Water source of the village tract depends on rainwater as drinking use and underground water as general purpose use. Underground water is not applicable for drinking due to iron concentration. Residents are therefore suffering serious water shortage in dry season due to drought of rainwater. Although there are six rainwater tanks having capacity of 5,000 gallon, residents have to get drinking water from Yar Zu Dai river 7 miles away from the village tract because of insufficient capacity. In order get water from the above river, vehicle is required for mounting water bottles or basket, and car rental fee takes 10,000 kyat per one time. It is borne by village peoples, and it increases economic loss.

Improvement Effects:

Water service ratio of drinking water decreases to 20% in dry season, although it is almost 100% in rainy season. In addition, DRD Mawlyamyainegyun assists providing water from Kyaik Pi village tract during March to April due to the lack of drinking water. By the construction of additional rainwater tanks, increase of water service ratio in dry season and reduction of a burden of water fetching can be expected.

Project Objectives:

Construction of rainwater tanks for eliminating serious water shortage in dry season

Project Scope:

Construction of the following facilities is estimated as the Project Component;

(1) Rainwater Tank : 12 tanks (3 tanks per village)

* Sit Sali Htone village tract consists of 4 villages.
* Required capacity is reported as 73,000 gallon per village.

Related Projects:

(1) Two rainwater tanks were donated by UNDP in the year of 2007 for drinking use.

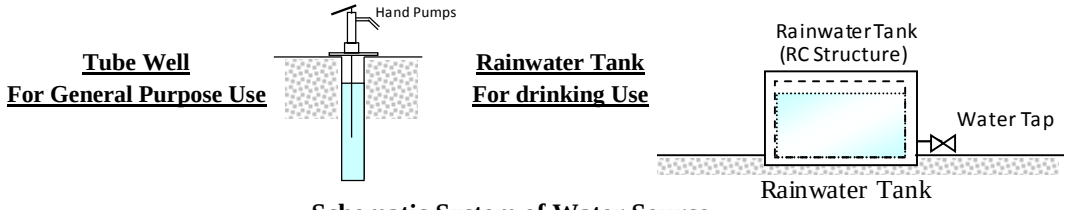
(2) One tube well for general purpose use was donated by UNICEF in the year 2008.

Estimated Cost:

Construction Cost	:	17.8	Mil. JPY
Design & Supervision Cost	:	3.6	Mil. JPY
Total Cost	:	21.4	Mil. JPY

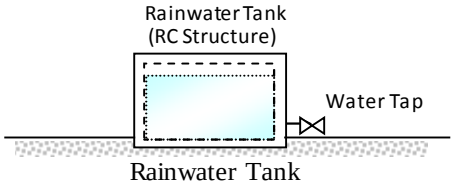
Proposed Drawing:

(1) Current Water Supply System at Sit Sali Htone village tract



Schematic System of Water Source

(2) Proposed Rainwater Tanks



Schematic System of Rainwater Tank (Approx. 140m^3 x Total 12 tanks)

State/Region:Ayeyarwady Region Township:Bogale Village Tract: Sa Bai Kone

Current Conditions:

This village tract is located two miles away from trunk road and bridge necessary for the village access has been significantly damaged.

Water source of this village tract depends on rainwater as drinking use and river water as general purpose use. However, some of ponds don't function properly due to structural matter, and water quality degrades due to pollution from the soil during March to April. Therefore, people have to get drinking water from rainwater pond functioning correctly, which is 4,000 to 5,000 feet away from households and takes 1.5 hours by the boat at high tide time. (High tide and low tide is repeated twice a day.) Furthermore, water fetching is children's burden. Therefore, there is concern about the loss of education opportunity.

Improvement Effects:

DRD has strategy to install rainwater ponds to whole village area in Bogale Township. However, this village tract is not put on high priority area.

(1) Degradation of water quality in dry season and a burden of water fetching can be improved by the function recovery because of exchanging the structure of rainwater ponds.

(2) Water acquisition amount from the rainwater pond is limited in five gallon per household during dry season. Accordingly, renovation of the structure will improve water service ratio.

Project Objectives:

There are 16 rainwater ponds. However, some of ponds don't function properly due to structural matter. Project object is to improve the structure from earth pond to reinforced concrete, because it is not reality to construct additional rainwater ponds due to land acquisition.

Project Scope:

Structural exchange of existing 16 rainwater tanks from earth pond to RC (Reinforced Concrete) pond.

Related Projects:

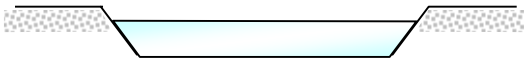
One small rainwater tank has been installed in Nga Pi Tone Hlel village by NGO project in the year 2012.

Estimated Cost:

Construction Cost	:	125.6	Mil. JPY
Design & Supervision Cost	:	25.1	Mil. JPY
Total Cost	:	150.7	Mil. JPY

Proposed Drawing:

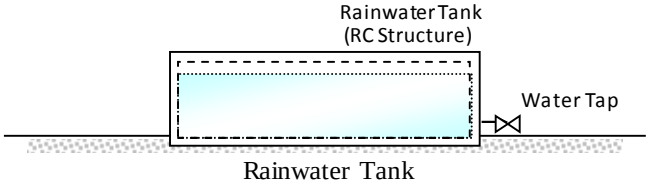
(1) Current Water Supply System (Rainwater Pond)



Rainwater Pond (Earth Pond)

Schematic System of Rainwater Pond

(2) Proposed Rainwater Tanks



Rainwater Tank

Schematic System of Rainwater Tank (16 tanks)

State/Region:Tanintharyi Region Township:Launglon Village Tract:Auk Yae Hpyu

Current Conditions:

Water source depends on underground water covering 90% of the village tract. There are approximately 968 dug wells whose depth is 20-50' and five tube wells whose depth is around 100'. Remaining water source depends on a water springing from mountain area, and water is supplied to households by pipeline. These water source are used for both drinking and general purpose use and produce sufficient water during rainy season. Accordingly, people living in this village tract can get water without any burden due to comparatively high enough water resources. On the other hand, since around 35% of dug wells located at highland suffers drought in dry season, especially for March to April, people living in highland area have to buy water from households in lowland area owning dug wells.

Improvement Effects:

(1) Development of the water supply system by gravity flow from the spring near mountains as an alternative to dug wells located in highland area improve water service ratio in whole village tract in dry season.

(2) However, following points shall be clarified toward the Project implementation;

- Potential of spring capacity
- Distance and elevation difference between water source and highland area
- Water right of spring and land ownership for installing pipeline
- In addition, because deep well is minor system in this village tract, no one grasp the yield capacity. It is therefore recommended to identify the potential of deep underground water.

Project Objectives:

Development of water supply system by gravity flow from the spring near mountains shall be examined well, in order to eliminate water shortage due to drought of dug wells located at highland area

Project Scope:

Construction of the gravity water supply system from the spring water source is estimated as the Project Component;

(1) Catchment Basin : 1 tank
(2) Water Transmission/ Supply Pipeline : 1 lot
(3) Water Reservoir : 1 tank
(4) Chlorination Facility : 1 unit

Related Projects:

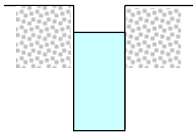
N/A

Estimated Cost:

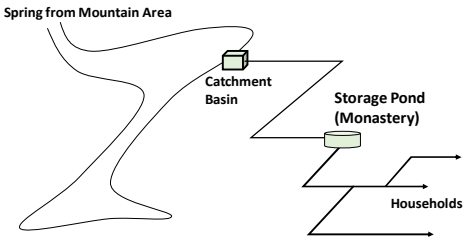
Construction Cost	:	5.1	Mil. JPY
Design & Supervision Cost	:	1.0	Mil. JPY
Total Cost	:	6.1	Mil. JPY

Proposed Drawing:

(1) Current Water Supply System

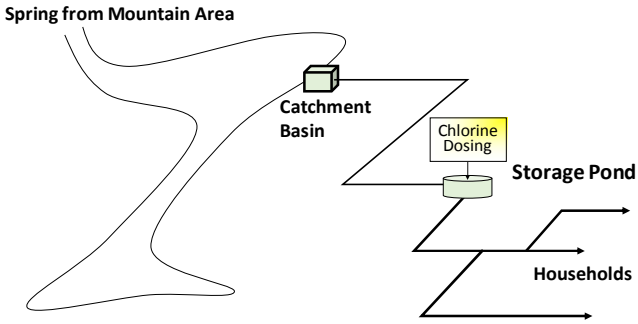


Schematic System of Dug Well



Schematic System of Spring Water Supply

(2) Expected Water Supply System



State/Region:Tanintharyi Region　　Township:Launglon　　Village Tract:Pyin Htain

Current Conditions:

50% of households in the village tract owns private dug well whose depth is around 20-40', and produce sufficient water despite the seasonal change. In addition, DRD manages one tube well, whose depth is around 120', inside the secondary school, and supply water to school and neighboring households by pipeline. (Operating frequency is 1 time per week.)

Accordingly, people living in this village tract can get water without any burden.

Improvement Effects:

DRD desires centralized control of water resources for stable and safe water supply from the dug well located at lowland area and having enough yield capacity despite seasonal change. On the other hand, neighboring village tract suffers water shortage during dry season due to the increase of saline concentration contained in underground water. Accordingly, it is desirable to propose comprehensive water supply development including surrounding village tracts through detail survey.

Project Objectives:

It is hard to say that safe water supply can be ensured in private wells. The Project aims at ensuring safe and stable water supply by centralized control of water resources

Project Scope:

Construction of the following facilities is estimated as the Project Component;

(1) Dug Well : 1 unit
(2) Elevated Tank : 1 tank
(3) Water Transmission/ Supply Pipeline : 1 lot
(4) Chlorination Facility : 1 unit

Related Projects:

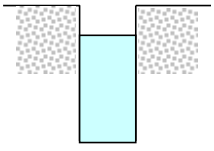
N/A

Estimated Cost:

Construction Cost	:	4.7	Mil. JPY
Design & Supervision Cost	:	0.9	Mil. JPY
Total Cost	:	5.6	Mil. JPY

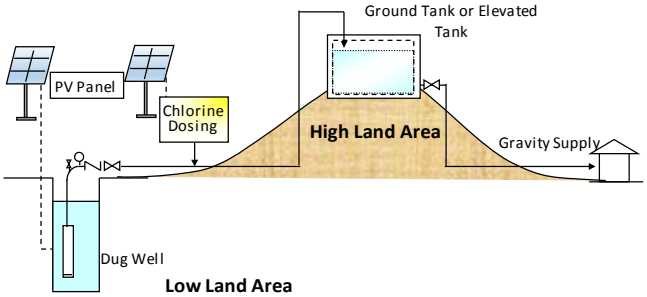
Proposed Drawing:

(1) Current Water Supply System



Schematic System of Dug Well

(2) Recommended System by DRD Laung Lon



Recommended system by DRD

State/Region:Tanintharyi Region Township:Dawei Village Tract:Wa Kone

Current Conditions:

Principal water source depends on a water springing from mountain area, and water is supplied to whole households by pipeline. Accordingly, people living in this village tract can get water without any burden because of comparatively high enough water resources.

However, underground water is used for drinking and general purpose use during March to April, due to the decrease of spring water. Although there are 50 dug wells whose depth is approximately 15', 40 wells are not able to use due to the minerals contained in water near the mining area.

Improvement Effects:

Although existing spring water capacity decreases in dry season, alternative spring water source may compensate water shortage. However, further investigation is required as follows;

- Area that suffers water shortage in dry season
- Exact numbers of existing component on spring water supply, location of water source and water supply area from each component.
- Existence of alternative water source and the spring capacity

Upon the understanding of the above items, exact component shall be determined.

Project Objectives:

The village tract is located at mining area, and many kinds of mineral may be contained in underground water near the mining site.

Skin trouble is reported to the village committee. Although a causal relation to water quality is not clarified because of no diagnosis result, exchange of water source is expected from the underground water to the spring water.

Project Scope:

Construction of the gravity water supply system from the spring water source is estimated as the Project Component;

(1) Catchment Basin : 1 tank
(2) Water Transmission/ Supply Pipeline : 1 lot
(3) Chlorination Facility : 1 unit

Related Projects:

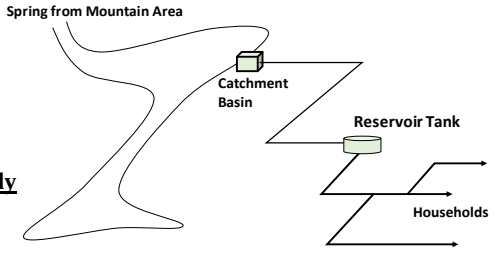
N/A

Estimated Cost:

Construction Cost	:	4.7	Mil. JPY
Design & Supervision Cost	:	0.9	Mil. JPY
Total Cost	:	5.6	Mil. JPY

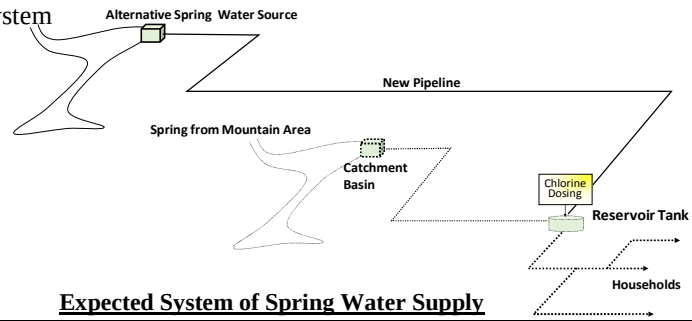
Proposed Drawing:

(1) Current Water Supply System



Schematic System of Spring Water Supply

(2) Expected Water Supply System



Expected System of Spring Water Supply

State/Region:Tanintharyi Region Township:Mytta(Sub-TS) Village Tract:Hein Dar

Current Conditions:

Water supply circumstances differs depending on villages. Principal water source in Hein Dar village is spring water and water is supplied to each household through pipeline from the reservoir owned by the mining company. In addition, 20% of household has private dug well. On the other hand, another five villages use underground water, and river water especially in dry season. Hein Dar and Myaung Pyo village is located at comparatively high land area, and face serious shortage of underground water in dry season. Moreover, Myaung Pyo village suffers water borne diseases due to minerals in underground water.

Improvement Effects:

Since Myaung Pyo village is located at comparatively high land area, it is difficult to receive water from mountain area. There are some spring water sources around five to 10 miles away from the village. However, since water source is located in another village tract, it is difficult to develop from water right and land ownership for piping installation.

As alternative water resource development, it is one way to seek the potential of deep underground water. If water quality and yield capacity satisfy water supply condition in the village, application is desirable.

Project Objectives:

Improvement of safe and bountiful water supply in Myaung Pyo village suffering water borne diseases.

Project Scope:

(1) Procurement of following well excavating machinery and auxiliaries to DRD, and engineering guidance with two months
- Well Excavator (300m Class), Excavating Tools, Air Compressor, Hauling Truck, Screen and Casing (10,000m), Well Logging Equipment

(2) Procurement of water quality meter and engineering guidance with 0.5 months
- TDS Meter, pH meter, Turbidity Meter, Spectrophotometer and Arsenic Concentration Meter

Related Projects:

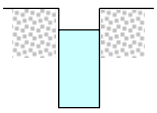
Development of water supply system by gravity flow from mountain spring is being carried out at Kyat Paung Chaung village by the Norwegian Refugee Council (NRC).

Estimated Cost:

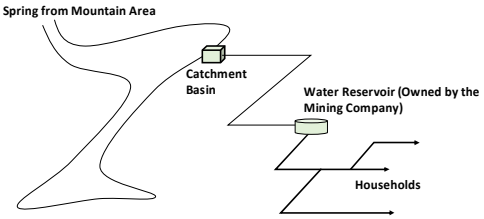
Well Excavator	:	275.0	Mil. JPY
Water Quality Analyzer	:	3.0	Mil. JPY
Design & Supervision Cost	:	55.6	Mil. JPY
Total Cost	:	333.6	Mil. JPY

Proposed Drawing:

(1) Current Water Supply System



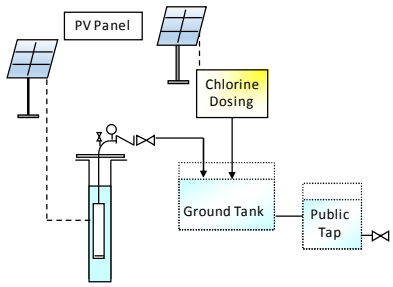
Schematic System of Dug Well



Schematic System of Spring Water Supply (Hein Da village)

(2) Proposed component (Deep Well)

Renewable energy such as photovoltaic generation system is applicable for the operation of pump although water extraction is basically done by a pump with engine.



State/Region:Tanintharyi Region Township:Myeik Village Tract:Nan Daw Yar

Current Conditions:

Water supply circumstances differs depending on villages. Principal water source in Nan Daw Yar village is spring water and underground water. Remaining five villages use underground water from dug wells. Water service population decreases in dry season by the decrease of spring capacity due to drought.

On the other hand, underground water development is expected because the number of the well is insufficient in neighboring Areas of Nan Daw Yar village tract

Improvement Effects:

Improvement of water service ratio in dry season is expected in Nan Daw Yar and neighboring village tract.

Project Objectives:

(1) Installation of the gravity water supply system from the spring water source in Nan Daw Yar village tract aiming at the improvement of water shortage in dry season

(2) Underground water development in neighboring Areas of Nan Daw Yar village tract aiming at the improvement of water supply circumstances

Project Scope:

(1) Nan Daw Yar Village Tract

Construction of the gravity water supply system from the spring water source is estimated as the Project Component;

- Water Transmission/ Supply Pipeline : 6 lots
- Water Reservoir : 6 tanks
- Chlorination Facility : 6 units

(2) Neighboring Area of Nan Daw Yar Village Tract

Provision of the well excavating machinery and auxiliaries to DRD

* Estimated cost is allocated to the Hein Dar village water supply scheme.

Related Projects:

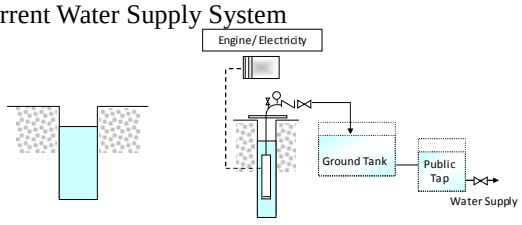
Although spring water supply system has been established at Kaung Mha village in the year 2013-2104 by corroboration of DRD and UNICEF, system is halting the operation due to serious damage.

Estimated Cost:

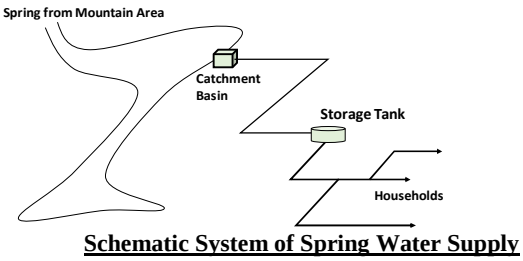
Construction Cost	:	37.7	Mil. JPY
Design & Supervision Cost	:	7.5	Mil. JPY
Total Cost	:	45.2	Mil. JPY

Proposed Drawing:

(1) Current Water Supply System

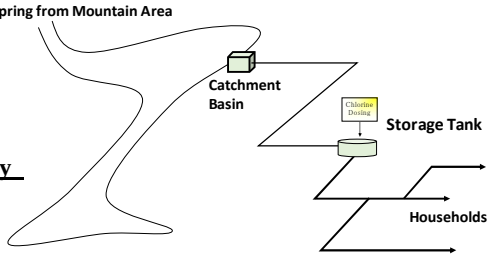


Schematic System of Dug Well & Tube Well



Schematic System of Spring Water Supply (Nan Daw Yar village)

(2) Proposed component (Gravity Water Supply System)



Proposed System applying Spring Water Supply (Nan Daw Yar village Tract)

State/Region:Tanintharyi Region Township: Tanintharyi Village Tract:Maw Tone West

Current Conditions:

Water supply circumstances differs depending on villages. Principal water source of four villages, which are Nan Say Pyin, Nyaung Sin Dount, Than Phat and Htein Htae village, is spring water and underground water. On the other hand, remaining one village, which is Ka Daut Kan village, depends on underground water as water source. In this village tract, almost 100% of household can get water despite the seasonable change. Therefore, people living in this village doesn't bear a burden of water fetching to water sources.

Improvement Effects:

Improvement of water service ratio can be expected by the installation of gravity water supply systems.

Project Objectives:

(1) In order to secure enough water supply in four villages applying the gravity water supply system, expansion of the facility is applied by the exchange of diameter of pipeline, construction of water reservoirs, etc.

(2) In order to improve the water service ration in dry season, gravity water supply system is installed to Ka Daut Kan village having no water supply system.

Project Scope:

Construction of the gravity water supply system from the spring water source is estimated as the Project Component;

- Catchment Basin : 1 tank
- Water Transmission/ Supply Pipeline : 1 lot
- Water Reservoir : 5 tanks
- Chlorination Facility : 5 units

Related Projects:

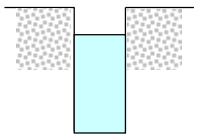
N/A

Estimated Cost:

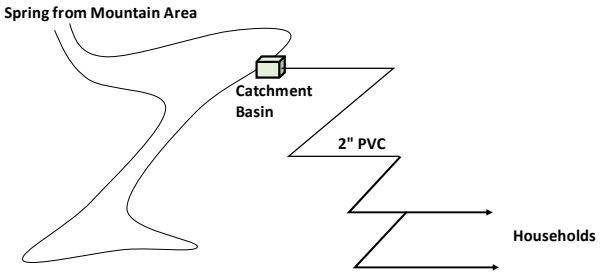
Construction Cost	:	13.5	Mil. JPY
Design & Supervision Cost	:	2.7	Mil. JPY
Total Cost	:	16.2	Mil. JPY

Proposed Drawing:

(1) Current Water Supply System

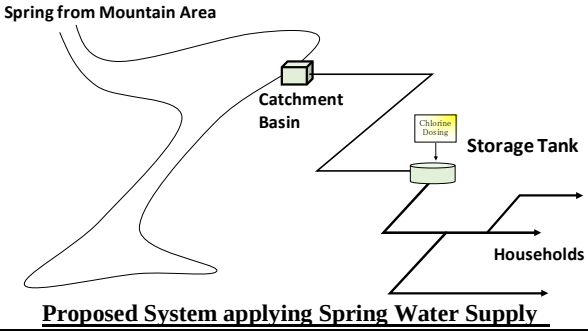


Schematic System of Dug Well



Schematic System of Spring Water Supply

(2) Proposed component (Gravity Water Supply System)



Proposed System applying Spring Water Supply

State/Region:Tanintharyi Region	Township: Tanintharyi	Village Tract:Tha Kyet

Current Conditions:

This village tract is located at highland area. Therefore it is difficult to receive water from the spring water source near mountain area, and principal water source depends on the underground water. There are 550 dug wells, which is around 50% of total household. Some wells have a problem about color of underground water due to soluble iron. However, water is used as drinking and general purpose. In addition, 450 out of 550 dug wells is not able to use due to drought in dry season, although these wells supply enough amount of water in rainy season. From the above, it takes around one hour for water fetching to the limited wells in dry season.

Improvement Effects:

Tube well, whose depth is 120', in Chout Mile village provides enough amount of water despite a seasonal change. Accordingly, if water quality and yield capacity satisfy water supply condition, deep underground water development will ensure safe and bountiful water supply through whole year.

Project Objectives:

Underground water development for ensuring safe and bountiful water supply through whole year.

Project Scope:

(1) Procurement of following well excavating machinery and auxiliaries to DRD, and engineering guidance with two months
- Well Excavator (300m Class), Excavating Tools, Air Compressor, Hauling Truck, Screen and Casing (10,000m), Well Logging Equipment

(2) Procurement of water quality meter and engineering guidance with 0.5 months
- TDS Meter, pH meter, Turbidity Meter, Spectrophotometer and Arsenic Concentration Meter

Related Projects:

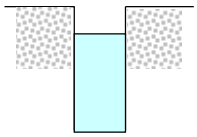
N/A

Estimated Cost:

Estimated cost is allocated to the Hein Dar village water supply scheme.

Proposed Drawing:

(1) Current Water Supply System



Schematic System of Dug Well

(2) Proposed component (Deep Well)

Renewable energy such as photovoltaic generation system is applicable for the operation of pump although water extraction is basically done by a pump with engine.