

Risk Management Framework

Project Name: Greater Yangon Water Supply Improvement Project (Phase 2)

Country: Republic of the Union of Myanmar

Sector: Water

Officers in charge:

- Operational staff
- Engineering staff:
- Country office staff:

Potential project risks	Assessment
1. Stakeholder Risk	Probability: (1) L (2) L (3) L
(Description of risk)	Impact: (1) H (2) M (3) L
(1) Lowering of the priority by a change of government -Last general election was held in Nov 2015.	Analysis of probability and impact: (1) The government has changed in April 2016, and the impact may be relatively high.
(2) Low priority of the project in the national policy.	(2) This project has one of the highest priority in Yangon Water Master Plan 2013, which is extensively known to YCDC. In addition, this project is indispensable for improvement of living condition in Yangon in terms of water supply services, and a part of this project has already been started by YCDC.
(3) Conflict with the vested interest of parties and public.	(3) Although Stakeholder Meetings were not held during F/S, the Yangon regional government will relocate the illegal houses in the region soon. Therefore, the probability of occurrence of conflict with the vested interest of parties and public might be low.
	Mitigation measures: Mutual understanding on this project among the related authorities and public.
	Action during the implementation: -Hold SHM -Hold Project Coordination Committee meeting
	Contingency plan (if applicable):
2. Executing Agency Risk	
2.1. Capacity Risk	Probability: (1) L (2) L
(Description of risk)	Impact: (1) M (2) M
(1) Lack of personnel, financial resources and rights' necessary for implementation of the project	Analysis of probability and impact: (1) <u>Skilled Personnel</u> : 1,311 ⇒ Sufficient <u>Financial resources</u> : 91,393 mill. Kyat (2015 Budget for WSD) out of 339,719 mill. Kyat (2015 total Budget of YCDC) ⇒ cost for non-eligible portion is assumed as 155,236 mill. Kyat for 10 years (15,524 mill. Kyat/year. about 4.6% of total annual budget of YCDC)
(2) Lack of reliability/capacity of financial management and procurement process	<u>Rights</u> : YCDC/WSD has responsibility for water supply improvement in Yangon City. (2) Financial capacity of relevant department of YCDC for water business is being improved by the JICA technical assistance. Procurements for construction has been in progress in Phase 1 project starting May 2016. Therefore, the risk will be mitigated in terms of both financial management and procurement process.
	Mitigation measures: (1) Assignment of experienced persons (2) Learn from the Phase 1 project outcome and improve relevant process (if required)
	Action during the implementation: (1) Collaboration with PMU of Phase 1 project (2) Learn from the Phase 1 project outcome and improve relevant process (if required)
	Contingency plan (if applicable):
2.2. Governance Risk	Probability: M
(Description of risk)	Impact: H
(1) Delay of budget approval by the cabinet	Analysis of probability and impact: YCDC/WSD prepares budgets, Mayor/Regional government reviews them, and submits to the Ministry of Finance and Revenue (MoFR), which in turn submits the Budget to the parliament through the President's Office for approval.
	Mitigation measures: Mutual and earlier consensus formation
	Action during the implementation: Hold Project Coordination Committee meeting
	Contingency plan (if applicable):

Potential project risks	Assessment
2.3. Fraud & Corruption Risk	Probability: L
(Description of risk)	Impact: L
(1) Fraud, waste and abuse due to defect and/or lack of a system in the entity	<p>Analysis of probability and impact:</p> <ul style="list-style-type: none"> -YCDC has Inspection Department for monitoring of expenditures. -Actual expenses are compared to the planned expenses in budget. YCDC/WSD is required to report and explain significant variations to Mayor/Regional government for approval. -The accounting system is paper-based. -A financial management system will be prepared by the PMU for the project. The PMU for Kokkova project has already been established for construction work. <p>Mitigation measures:</p> <ul style="list-style-type: none"> -Adjustment of the existing financial and procurement management <p>Action during the implementation:</p> <ul style="list-style-type: none"> -Collaboration with the PMU of Phase 1 project -Learn from the Phase 1 project outcome and improve relevant process (if required) -OJT of members in the PMU through the Phase 1 project <p>Contingency plan (if applicable):</p>
3. Project Risk	
3.1. Design Risk	Probability: (1) L (2) L (3) M
(Description of risk)	Impact: (1) H (2) M (3) H
(1) Failure of tender due to improper contract package (2) Deterioration in quality due to capacity shortage of contractors (3) Vulnerability to external factors such as foreign exchange loss	<p>Analysis of probability and impact:</p> <p>(1) Contract package is proposed to divide into five packages and project cost for each package is about 100 million USD which is considered to be sufficient amount for ICB. The size of contract package is decided considering the capacity of international contractor based on the interviews. Therefore, probability might be mitigated.</p> <p>(2) Although Phase 1 project is in progress, probability depends on condition of pre-qualification and/or capacity/experience of the YCDC in international bidding of projects.</p> <p>(3) Physical contingency and price escalation are considered in the project cost estimates. Therefore, probability might be mitigated.</p> <p>Mitigation measures:</p> <ul style="list-style-type: none"> (1) Adjustment in the contract package through subsequence interviews and upon reference to related international loan projects. (2) Setting of proper pre-qualification conditions (e.g., financial capacity in terms of provision of rolling capital for the works) (3) Verification of possibility of additional budget allocation <p>Action during the implementation:</p> <ul style="list-style-type: none"> (1) Subsequence interviews and reference to related international loan projects (2) Collect and review information on PQ conditions of related projects in Myanmar and similar cases of practices in other countries (3) Collection of information from relevant entity through questionnaire <p>Contingency plan (if applicable):</p>
3.2. Program & Donor Risk	Probability: (1) L
(Description of risk)	Impact: (1) M
(1) Conflict with other projects by other donors	<p>Analysis of probability and impact:</p> <p>(1) JICA has financed Phase 1 and technical assistance projects and based on discussion with YCDC other donors are not planning to finance proposed components under this project.</p> <p>Mitigation measures:</p> <ul style="list-style-type: none"> (1) Continuous information exchange and monitoring <p>Action during the implementation:</p> <ul style="list-style-type: none"> (1) Holding periodical meetings <p>Contingency plan (if applicable):</p>

Potential project risks	Assessment
3.3. Delivery Quality Risk	Probability: (1) M (2) L
(Description of risk)	Impact: (1) M (2) L
(1) Deterioration of project effect due to shortage of maintenance cost and maintenance capacity	Analysis of probability and impact: (1) Annual maintenance and operation cost is 5.5% (18,778 mill. Kyat) of YCDC total budget in 2015. OM expenditure will increase and reach to 32,073 mill. Kyat (9.4%) after completion of Kokkowa system. Therefore, increase of water tariff will be considered in two stages in order to cover the OM expenditure.
(2) Suspend or delay due to contingencies such as natural disasters	(2) Although project area adjoins the river, these are protected by the embankment and also the ground level of proposed site will be raised by YCDC. The construction schedule is to be established with premise that construction speed should slow down and affect the critical-path of works during rainy season.
	Mitigation measures: (1)-Technical assistance project -Examination of water tariff scheme -Optimization of water tariff (2) Establishment of contingency plan for construction
	Action during the implementation: (1) -Holding technical seminar and training as a part of OJT -Discussion on application of improved water tariff scheme with YCDC including Mayor -Monitoring and interviews with the customers (2) Including examination of countermeasures for contingencies into the TOR of construction
	Contingency plan (if applicable):
4. Other Risk	Probability: H/M/L
(Description of risk)	Impact: H/M/L
	Analysis of probability and impact:
	Mitigation measures:
	Action during the implementation:
	Contingency plan (if applicable):
5. Overall Risk Rating	Probability: H/M/L
(Overall comments)	Impact: H/M/L

1/ Descriptions in the risk management matrix can be brief and concise. In order to record the description of each risk as well as the evidence for the team's assessment, a separate sheet should be prepared to describe the details.



၂၀၁၇ ခုနှစ်၊ ဇန်နဝါရီလ (၁၁)ရက် ဗုဒ္ဓဟူးနေ့ (၀၉:၃၀)နာရီ ထန်းတပင်မြို့နယ် ကုက္ကိုမြစ်ရေပေး
 ဝေရေးစီမံကိန်းရုံးတွင် ကျင်ပပြုလုပ်သော ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ အင်ဂျင်နီယာဌာန
 (ရေနှင့်သန့်ရှင်းမှု)နှင့် ဂျပန်အပြည်ပြည်ဆိုင်ရာပူးပေါင်းဆောင်ရွက်ရေးအေဂျင်စီ (JICA)တို့ ပူးပေါင်း
 ဆောင်ရွက်သည့် Greater Yangon Water Supply Improvement Project (Phase-2) ဖြစ်သော
 ကုက္ကိုမြစ်ရေပေးဝေရေးစီမံကိန်း၏ Stakeholder Meeting အခမ်းအနားမှတ်တမ်း

တက်ရောက်သူများ

ဦးမြင့်ဦး	ဌာနမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးမျိုးသိန်း	ဒု-ဌာနမှူး (၂)	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးခင်မောင်ဖူး	လက်ထောက်ဌာနမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးမြင့်စိန်	လက်ထောက်ဌာနမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးညီညီသန့်	လက်ထောက်ဌာနမှူး	မြို့ပြစီမံကိန်းနှင့်မြေစီမံခန့်ခွဲမှုဌာန (မြောက်ပိုင်းခရိုင်)
ဦးစိုးကြိုင်	ဌာနခွဲမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးဇော်မင်း	ဌာနခွဲမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးသန်းဟန်	ဌာနခွဲမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးသန့်ဇင်ဦး	ခရိုင်မှူး (တောင်ပိုင်း)	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးတင့်ဇော်	ဌာနစုမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးအောင်ကိုဦး	ဌာနစုမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးအောင်ထွဋ်လင်း	ဌာနစုမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးဖုန်းနိုင်	ဌာနစုမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဒေါ်ခင်စန်းဝင်း	ဌာနစုမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဦးအောင်မင်းဦး	အငယ်တန်းအင်/ယာ-၂	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဒေါ်လင်းလင်းချစ်	အငယ်တန်းအင်/ယာ-၂	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဒေါ်ထိုက်ထိုက်ခိုင်	ဒု-ကြီးကြပ်ရေးမှူး	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
ဒေါ်စန္ဒာဝင်း	စာရင်းကိုင်-၂	အင်ဂျင်နီယာဌာန (ရေနှင့်သန့်ရှင်းမှု)
✓ ဒေါ်သီသီထွန်း	Environmental Expert	JICA Study Team
ဦးကျော်မိုးလွင်	ဦးစီးအရာရှိ	လမ်းဦးစီးဌာန၊ ဆောက်လုပ်ရေးဝန်ကြီးဌာန
ဦးအေးနိုင်ထွန်း	ဦးစီးမှူး	မြေစာရင်းဦးစီးဌာန (ထန်းတပင်မြို့နယ်)
ဦးစိုင်းဖူးကြည်	မြို့နယ်အုပ်ချုပ်ရေးမှူး	အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန (ထန်းတပင်)
ဦးနိုင်ဝင်း	ဒု-ဦးစီးမှူး	အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန (မြောက်ပိုင်းခရိုင်)
ဦးဝင့်ဖြိုးလှိုင်	ဒု-ဦးစီးမှူး	အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန (လှိုင်သာယာ)
ဦးကေပလ	သနပွင်ကျောင်း	အညာစုရွာ
ဦးပညာဇောတ	ညောင်းစိုးကျောင်း	ကတွယ်ရွာ
ဦးအောင်မျိုးကျော်လင်း	ကျေးရွာအုပ်ချုပ်ရေးမှူး	ကတွယ်ရွာ
ဦးမြင့်ဝင်း	ရာအိမ်မှူး	ပန်တိုင်ရွာ
ဦးချစ်ကို	ရာအိမ်မှူး	အညာစု

ဦးဌေးမြင့်	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဦးကြည်ဝင်း	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဦးကျော်မြင့်	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဦးသောင်းညွန့်	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဒေါ်ပြုံး	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဦးကုလားလေး	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဒေါ်တင်	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဦးမြင့်ဆွေ	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဒေါ်မြင့်မြင့်စန်း	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဦးကံသိန်း	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဦးအောင်နိုင်ဦး	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဦးအောင်မွှေး	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဒေါ်လှလှစန်း	လယ်ပိုင်ရှင်	ပန်တိုင်ရွာ
ဦးကျော်ဦး	လယ်ပိုင်ရှင်	သနပွင်ရွာ
ဦးရွှေထိုက်	ရပ်ဖိရပ်ဖ	အညာစု
ဦးအေးရွှေ	ရပ်မိရပ်ဖ	ပန်တိုင်ရွာ
ဦးမြင့်စိုး	ရပ်မိရပ်ဖ	ပန်တိုင်ရွာ
ဒေါ်အိမွန်မွန်ဇော်	စာရေး	ပန်တိုင်ရွာ
ဒေါ်ခင်ချိုချိုအေး	ဌာနခွဲစာရေး	အင်ဂျင်နီယာဌာန(ရေနှင့်သန့်ရှင်းမှု) မှတ်တမ်းတင်သူ

မတက်ရောက်နိုင်သူများ

ဦးမြင့်ဇော်သန်း	ဒုတိယဌာနမှူး	အင်ဂျင်နီယာဌာန(ရေနှင့်သန့်ရှင်းမှု)	တာဝန်
ဦးသိန်းမင်း	ဒုတိယဌာနမှူး	အင်ဂျင်နီယာဌာန(ရေနှင့်သန့်ရှင်းမှု)	တာဝန်
ဦးသက်လွင်	လက်ထောက်ဌာနမှူး	အင်ဂျင်နီယာဌာန(ရေနှင့်သန့်ရှင်းမှု)	တာဝန်
ဦးနေလင်း	ခရိုင်မှူး(မြောက်ပိုင်း)	အင်ဂျင်နီယာဌာန(ရေနှင့်သန့်ရှင်းမှု)	တာဝန်
ဦးတင်ဝင်းအောင်	ခရိုင်မှူး(အနောက်ပိုင်း)	အင်ဂျင်နီယာဌာန(ရေနှင့်သန့်ရှင်းမှု)	တာဝန်
ဦးပြည်ကျော်ဟိန်း	ဌာနစုမှူး (JICA)	အင်ဂျင်နီယာဌာန(ရေနှင့်သန့်ရှင်းမှု)	တာဝန်
ဦးနေမျိုးထွန်း	ပြည်သူ့လွှတ်တော်ကိုယ်စားလှယ်	ထန်းတပင်မြို့နယ်	
ဦးဖေချစ်	အမျိုးသားလွှတ်တော်ကိုယ်စားလှယ်	ထန်းတပင်မြို့နယ်	
ဦးဖုန်းကျော်ဇံဦး	တိုင်းဒေသကြီးလွှတ်တော်ကိုယ်စားလှယ်	မဲဆန္ဒနယ်အမှတ်(၁) ထန်းတပင်မြို့နယ်	
ဦးဌေးမော်	တိုင်းဒေသကြီးလွှတ်တော်ကိုယ်စားလှယ်	မဲဆန္ဒနယ်အမှတ်(၂) ထန်းတပင်မြို့နယ်	

ရည်ရွယ်ချက်

၁။ ကုက္ကိုပြုစုရေးပေးဝေရေးစီမံကိန်းဆောင်ရွက်ရန်အတွက် နောက်ထပ်လိုအပ်သည့်မြေနေရာဝယ်ယူနိုင်ရန်နှင့် စီမံကိန်းနှင့်ပတ်သက်သော အသေးစိတ်အချက်အလက်များကို သိရှိနားလည်စေရန်။

ဆွေးနွေးချက်များ

၂။ ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ အင်ဂျင်နီယာဌာန(ရေနှင့်သန့်ရှင်းမှု) ဌာနမှူး ဦးမြင့်ဦးက ကုက္ကိုမြစ်အတွင်း ရေချိုအများဆုံးရရှိနိုင်မည့်နေရာအား ရှာဖွေခဲ့ရာ ရန်ကုန်မြစ်နှင့် ဧရာဝတီမြစ်ကြား နှစ်ခုမှ ရေငန်ဝင်ရောက်မှုမရှိသည့် နေရာကို ရှာဖွေတွေ့ရှိခဲ့ကြောင်း၊ စီမံကိန်းဆောင်ရွက်ရန်အတွက် ၂၀၁၃ ခုနှစ်မှ စတင်ကာ ကုက္ကိုမြစ်ကြောင်းတစ်လျှောက် ကြည့်ရှုဆောင်ရွက်ခဲ့ကြောင်း၊ လူဦးရေများပြားလာသည်နှင့်အမျှ ရေထပ်မံလိုအပ်လာသည့်အတွက် JICA နှင့် ပူးပေါင်းဆောင်ရွက်ပြီး ကုက္ကိုမြစ်ရေပေးဝေရေးစီမံကိန်းအပြင် ပန်းလှိုင်မြစ်နှင့်တိုးမြစ် ရေပေးဝေရေးလုပ်ငန်းကိုလည်း ကြိုတင်လေ့လာမှုများရှိပါကြောင်း၊ ကုက္ကိုမြစ်သည် ရေအနည်းဆုံးရရှိသည့် နွေရာသီကာလ၌ပင် တစ်နေ့လျှင် ရေဂါလန် သန်း ၉၀၀၀ ထုတ်ပေးနိုင်မည့် အနေအထားရှိသည့်အတွက် ယခုနေရာကို စီမံကိန်း ဆောင်ရွက်ရန် နေရာအဖြစ် ရွေးချယ်ခြင်းဖြစ်ကြောင်း၊ ပထမတွင် နီးစပ်ရာရွာများနှင့် ရေအခက်အခဲရှိသောနေရာများသို့ ပေးဝေနိုင်ရန် ရေဂါလန် သန်း(၂၀)သာ သတ်မှတ်ရည်ရွယ်ထားသော်လည်း JICA ၏ အကူအညီဖြင့် ရေဂါလန် သန်း (၆၀) တိုးမြှင့်သတ်မှတ်ခဲ့ပါကြောင်း၊ ရေသန့်စင်စက်ရုံတည်ဆောက်ရန်အတွက် မြေလိုအပ်သည့်အတွက် ယခုလာရောက်ရှင်းပြခြင်းဖြစ်ကြောင်း၊ Stakeholder Meeting သည် စီမံကိန်းနှင့်ပတ်သက်သည့် အချက်အလက်များကို သိရှိနားလည်စေရန်အတွက် ရှင်းပြရသည့် မှတ်တမ်းဖြစ်ပါ ကြောင်း အဖွင့်အမှာစကားပြောကြားပါသည်။

၃။ ဆက်လက်၍ အင်ဂျင်နီယာဌာန(ရေနှင့်သန့်ရှင်းမှု) ဒုတိယဌာနမှူး ဦးမျိုးသိန်းက ရန်ကုန်မြို့တော်စည်ပင်မြို့တော်စည်ပင်သာယာရေးကော်မတီ အင်ဂျင်နီယာဌာန(ရေနှင့်သန့်ရှင်းမှု)နှင့် ဂျပန်အပြည်ပြည်ဆိုင်ရာ ပူးပေါင်းဆောင်ရွက်ရေးအေဂျင်စီ(JICA) တို့ပူးပေါင်းဆောင်ရွက်သည့် ကုက္ကိုမြစ်ရေပေးဝေရေးစီမံကိန်း၏ အကြောင်းအရာ၊ အကျိုးကျေးဇူးများကို သိရှိနားလည်အောင် စီမံကိန်းဧရိယာအတွင်းရှိ ဘာသာရေးဆိုင်ရာများ၊ ဌာနဆိုင်ရာများ၊ လူမှုအဖွဲ့အစည်းများနှင့် ကျေးရွာသူ/သားများအား ဖိတ်ခေါ်၍ ရှင်းပြခြင်းဖြစ်ကြောင်း၊ ရန်ကုန်မြို့ရေပေးဝေရေးသမိုင်းကြောင်းကိုရှင်းလင်းရာ ၁၈၄၂ခုနှစ်မှ စတင်ကာ ရေတွင်းကြီး (၃၀)ဖြင့် ဆူးလေဘုရားကြီးအနီးရှိ ရွာကြီးများသို့ ပေးဝေခဲ့ကြောင်း ထိုမှတစ်ဆင့် ကန်တော်ကြီးကန်၊ အင်းလျားကန်၊ လှော်ကားကန်၊ ဖူးကြီးကန်၊ ငမိုးရိပ်ကန်များ အဆင့်ဆင့်တည်ဆောက်လာပြီး ၂၀၀၅ခုနှစ်တွင် ရေသန့်စင်စက်ရုံ စတင်၍တည်ဆောက်ပြီး ပေးဝေလာခဲ့ကြောင်း၊ ၂၀၁၄ ခုနှစ်တွင် ဒုတိယအဆင့်အနေဖြင့် ငမိုးရိပ်ရေသန့်စင်စက်ရုံတည်ဆောက်ပြီးပေးဝေခဲ့ကြောင်း၊ ယခုစီမံကိန်းသည် Phase -2 ဖြစ်ပြီး ဒဂုံမြို့သစ် (တောင်ပိုင်း)မြို့နယ်တွင် Phase -1 ဆောင်ရွက်လျက်ရှိရာ ယင်းစီမံကိန်းမှ ဒဂုံမြို့သစ်(အရှေ့၊ တောင်၊ မြောက်၊ ဆိပ်ကမ်း)မြို့နယ်များ၊ သာကေတနှင့် ဒေါပုံမြို့နယ်များသို့ ရေပေးဝေနိုင်မည်ဖြစ်ပါကြောင်း ညောင်နှစ်ပင် ရေသန့်စင်စက်ရုံတည်ဆောက်ထားသကဲ့သို့ပင် ယခုကုက္ကိုမြစ် ရေပေးဝေရေးစီမံကိန်းကိုလည်း မြင်တွေ့ရမည်ဖြစ်ပါကြောင်း၊

ရန်ကုန်မြို့ရေပေးဝေရေးသမိုင်းတွင် အများဆုံးရေပေးဝေနိုင်မည့် စီမံကိန်းတည်ရှိရာ ဒေသအဖြစ် ဖြစ်တည် လာမှာဖြစ်ကြောင်း၊ အဓိကအားဖြင့် ရေအခက်အခဲဖြစ်နေသည့် လှိုင်သာယာမြို့နယ်နှင့် ရေအခက်အခဲရှိသည့် မြို့တွင်းမြို့နယ်များသို့ ဖြည့်ဆည်းပေးနိုင်ရန်အတွက် ဤစီမံကိန်းကို ဆောင်ရွက်ခြင်းဖြစ်ကြောင်း၊ စီမံကိန်း ကာလသည် ၂၀၁၆ ခုနှစ်မှ ၂၀၂၄ အထိ ဖြစ်ပြီး စီမံကိန်းကာလပြီးဆုံးပါက ရန်ကုန်မြို့သို့ပေးဝေလျက်ရှိသော ရေဂါလန် ၂၀၅ သန်း အပြင် ရေဂါလန် သန်း (၆၀)ကို ထပ်မံဖြည့်တင်းပေးဝေသွားနိုင်မည်ဖြစ်ကြောင်း၊ JICA နှင့် ပူးပေါင်းဆောင်ရွက်လျက်ရှိသော လဂွန်းပြင် ရေပေးဝေရေးစီမံကိန်းပြီးစီးပါက ရန်ကုန်မြို့သို့ သောက်သုံးရေ နေ့စဉ် ရေဂါလန် သန်း (၄၀)ပေးဝေနိုင်မည် ဖြစ်၍ နောင်အနာဂတ်တွင် ရေဂါလန်ပေါင်း ၃၀၅ သန်း ဖြန့်ဝေသွား နိုင်မည်ဖြစ်ပါကြောင်း ပြောကြားပါသည်။ စီမံကိန်းဆောင်ရွက်ခြင်းအားဖြင့် ဆိုးကျိုးများထက် အပေါင်း လက္ခဏာအပြုသဘောဆောင်သည့် ကောင်းကျိုးအမြောက်အမြားရှိပါကြောင်း ဥပမာအနေဖြင့် ရန်ကုန်မြို့သူမြို့ သားများအတွက် တစ်နေ့ ရေဂါလန် သန်း ၆၀ ပေးဝေနိုင်ခြင်း၊ ရန်ကုန်မြို့၏ရေပေးဝေမှုစနစ် တိုးတက် ကောင်းမွန်လာခြင်း၊ ဤစီမံကိန်းမှရေကို သုံးစွဲခြင်းအားဖြင့် ရန်ကုန်မြို့တွင် မြေအောက်ရေစုပ်ယူသုံးစွဲမှု လျော့နည်း လာနိုင်ခြင်း၊ အကျိုးဆက်အနေဖြင့် မြေကျွံကျမှုများဖြစ်ပေါ်ခြင်းမှ ကာကွယ်နိုင်ခြင်း၊ မြေအောက်ရေ အတွင်းသို့ ရေငန်ဝင်ရောက်မှုကြောင့် မြေအောက်ရေညစ်ညမ်းမှုမှ ကာကွယ်နိုင်ခြင်း၊ ရေပိုမိုပေးဝေနိုင်ခြင်း ကြောင့် လူမှုစီးပွားရေးဘဝဖွံ့ဖြိုးတိုးတက်လာခြင်း၊ စက်မှုလုပ်ငန်းများ ဖွံ့ဖြိုးလာခြင်း၊ ရေကောင်းရေသန့် လုံလောက်စွာရရှိသဖြင့် ကျန်းမာရေးနှင့်ပိုမိုညီညွတ်စွာနေထိုင်လာနိုင်ခြင်း၊ အထူးသဖြင့် ရေသန့်စင်စက်ရုံ တည်ဆောက်မည့် ဤဒေသ၌ အလုပ်အကိုင် အခွင့်အလမ်းများ ပိုမိုရရှိစေနိုင်ခြင်း၊ ဒေသအတွက် ဂုဏ်ယူစရာ စီမံကိန်းအဖြစ် ပေါ်ပေါက်လာမည်ဖြစ်ပါ၍ စီမံကိန်းအောင်မြင်ရေး ဝိုင်းဝန်းကူညီဆောင်ရွက်ပေးနိုင်ရန် တိုက်တွန်းအပ်ပါကြောင်း ရှင်းလင်းပြောကြားပါသည်။

၄။ ထို့နောက် တက်ရောက်လာကြသူများက ကုက္ကိုမြစ်ရေပေးဝေရေးလုပ်ငန်းများ အဆင်ပြေချောမွေ့ အောင်မြင်စွာ ဆောင်ရွက်နိုင်ရေးနှင့် စီမံကိန်းနှင့်ပတ်သက်သည့် သိလိုသည်များကို ဆွေးနွေးမေးမြန်းရာ ဌာနမှူး ဦးမြင့်ဦးက ပြန်လည်ရှင်းလင်းပြောကြားပါသည်။

- ၅။ အစည်းအဝေးမှ အောက်ပါဆွေးနွေးချက်များအား မှတ်တမ်းတင်ရန် ဆုံးဖြတ်ခဲ့ကြပါသည်-
- | | |
|--|--------------------------------|
| | မှတ်တမ်းတင်ဆောင်ရွက်ရန် |
| ဆွေးနွေးသည့်အကြောင်းအရာ | |
| <ul style="list-style-type: none"> (က) စီမံကိန်းအတွက်လိုအပ်သော မြေ (၄၂)ဧက ကျော် ဝယ်ယူရေးနှင့် ပတ်သက်၍ သင့်တော်သည့်ဈေးနှုန်းဖြစ်စေရေး တာဝန်ရှိသူများ မှ သက်ဆိုင်ရာသို့ အဆင့်ဆင့်တင်ပြ ဆောင်ရွက်ရန်။ (ခ) မြေဝယ်ယူနိုင်ရေးအတွက် Stakeholder Meeting ကျင်းပပြုလုပ် သည့် နေ့ကို Cutoff Date ဖြင့် သတ်မှတ်ပြီး ဝယ်ယူရန်။ | |

ဆွေးနွေးသည့်အကြောင်းအရာ

မှတ်တမ်းတင်ဆောင်ရွက်ရန်

- (ဂ) စီမံကိန်းဧရိယာရှိ ကတွယ်ရွာ၊ပန်တိုင်ရွာ၊အညာစုရွာ များရှိ မြေပိုင်ရှင်၊ လယ်ပိုင်ရှင်များ နစ်နာဆုံးရှုံးမရှိစေရေး အတက်နိုင်ဆုံး ညှိနှိုင်းဆောင်ရွက်ရန်။
- (ဃ) ဤစီမံကိန်းမှ တစ်နေ့လျှင် ရေဂါလန် သန်း(၆၀)ပေးဝေနိုင်မည်ဖြစ်ပြီး ၂၀၂၄ ခုနှစ်တွင်ပြီးစီးရန် လျာထားချက်အား မှတ်တမ်းတင်ရန်။
- (င) စီမံကိန်းဆောင်ရွက်သည့်အခါ လုပ်သားအင်းအားလိုအပ်လာမည်ဖြစ်သည့်အတွက် ဒေသခံ ကျေးရွာသူ/သားများအား အလုပ်အကိုင်အခွင့်အလမ်း ဦးစားပေးစေလိုကြောင်း ဆရာတော်၏ မေတ္တာရပ်ခံချက်အား မှတ်တမ်းတင်ရန်။
- (စ) မြေတန်ဖိုးနှင့်ပတ်သက်၍ သက်ဆိုင်ရာမှ ဘက်စုံစဉ်းစား၍ သတ်မှတ်ပေးသော သင့်လျော်သည့်ပမာဏအား လက်ခံစေလိုကြောင်း ဆရာတော်၏ မိန့်ကြားချက်အား မှတ်တမ်းတင်ရန်။
- (ဆ) မြေပိုင်ရှင်များအနေဖြင့် မိမိတို့မြေပိုင်ဆိုင်မှုအား တင်ပြရန်လိုအပ်ကြောင်း၊ နစ်နာမှုများမရှိစေရေးအတွက် ညှိနှိုင်းတင်ပြပေးမည်ဖြစ်ကြောင်း၊ ထန်းတပင်မြို့နယ် အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာနမှ မြို့နယ်အုပ်ချုပ်ရေးမှူး၏ ပြောကြားချက်အား မှတ်တမ်းတင်ရန်။
- (ဇ) ဤဒေသတွင် ဌာနဆိုင်ရာမှ စီမံကိန်းကြီးတစ်ခု လာရောက်တည်ဆောက်ပေးခြင်းအတွက် ဒေသဖွံ့ဖြိုးတိုးတက်လာမည်ဖြစ်၍ ဝမ်းမြောက်ဝမ်းသာ ကြိုဆိုပါကြောင်းနှင့် ကျေးဇူးတင်ပါကြောင်းနှင့် ပန်တိုင်ရွာ ရပ်မိရပ်ဖဖြစ်သော ဦးမြင့်စိုး၏ ပြောကြားချက်အား မှတ်တမ်းတင်ရန်။
- (ဈ) မြောက်ပိုင်းခရိုင် အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာနမှ ဦးနိုင်ဝင်း၊ လှိုင်သာယာမြို့နယ် အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာနမှ ဦးဝင်းဖြိုးလှိုင်၊ ထန်းတပင်မြို့နယ်မြေစာရင်းဦးစီးဌာနမှ ဦးအေးနိုင်ထွန်းနှင့် လမ်းဦးစီးဌာနမှ ဦးကျော်မိုးလွင်တို့မှလည်း အဆိုပါစီမံကိန်းသည် နိုင်ငံတော်အဆင့် စီမံကိန်းကြီးဖြစ်ပြီး ဒေသခံများအတွက် အကျိုးကျေးဇူးများသဖြင့် စီမံကိန်းဖြစ်မြောက်အောင် ပူးပေါင်းပါဝင်ဆောင်ရွက်မည်ဖြစ်ပါကြောင်း ပြောကြားချက်အား မှတ်တမ်းတင်ရန်။

ဆွေးနွေးသည့်အကြောင်းအရာ

မှတ်တမ်းတင်ဆောင်ရွက်ရန်

(ည) ကတွယ်ကျေးရွာအုပ်ချုပ်ရေးမှူး ဦးအောင်မျိုးကျော်လင်းက စီမံကိန်းသည် ကျေးရွာပြည်သူလူထုများအတွက် အကျိုးများသည့် စီမံကိန်းဖြစ်သည့်အတွက် အောင်မြင်စေလိုကြောင်းနှင့် မြေကိစ္စနှင့် ပတ်သက်၍လည်း ဌာနဆိုင်ရာနှင့် တောင်သူများ ညှိနှိုင်းဆောင်ရွက်ပေးစေလိုကြောင်း ပြောကြားချက်အား မှတ်တမ်းတင်ရန်။

အထွေထွေ

၆။ အစည်းအဝေးကို (၁၀: ၄၅) နာရီတွင် ရုပ်သိမ်းပါသည်။



မှတ်တမ်းတင်သူ

(ဒေါ်ခင်ချိုချိုအေး၊ ဌာနခွဲစာရေး)

စာအမှတ်၊ ၄၆၀၈ / ၀၂၇၄ / စည်ပင် - ယာ (ရ-သ)
ရက် စွဲ၊ ၂၀၁၇ခုနှစ် ဇန်နဝါရီလ ၁၆ ရက်
ဖြန့်ဝေခြင်း

အစည်းအဝေးတက်ရောက်သူများနှင့်မတက်ရောက်နိုင်သူများ

မိတ္တူကို

အတွင်းရေးမှူး၊ ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ
ကော်မတီဝင်(၄)၊ ရန်ကုန်မြို့တော်စည်ပင်သာယာရေးကော်မတီ
မျှောစာတွဲ
ရုံးလက်ခံ

Greater Yangon Water Supply Improvement Project (Phase-2)
Stakeholder Meeting
11 Jan 2017 (Wed)
9:30 AM

Participants List

YCDC,Engineering Department(Water & Sanitation)		U Myint Oo (Department Head)	
YCDC,Engineering Department (Water &Sanitation)		U Myo Thein (Dy.CE)	
YCDC,Engineering Department (Water &Sanitation)		U Khin Maung Hpu (A.CE)	
YCDC,Engineering Department (Water &Sanitation)		U Myint Sein (A.CE)	
YCDC, City Planning & Land Administration Department	(Northern District)	U Nyi Nyi Thant (A.CE)	
YCDC,Engineering Department (Water &Sanitation)		U Soe Kyaing (Division Head)	
YCDC,Engineering Department (Water &Sanitation)		U Zaw Min (Division Head)	
YCDC,Engineering Department (Water &Sanitation)		U Than Han (Division Head)	
YCDC,Engineering Department (Water &Sanitation)		U Thant Zin Oo (District Officer)	
YCDC,Engineering Department (Water &Sanitation)		U Tint Zaw (Section Head)	
YCDC,Engineering Department (Water &Sanitation)		U Aung Ko Oo (Section Head)	
YCDC,Engineering Department (Water &Sanitation)		U Aung Htut Linn (Section Head)	
YCDC,Engineering Department (Water &Sanitation)		U Phone Naing (Section Head)	
YCDC,Engineering Department (Water &Sanitation)		Daw Khin San Win(A.E)	
YCDC,Engineering Department (Water &Sanitation)		U Aung Min Oo (J.E 2)	
YCDC,Engineering Department (Water &Sanitation)		Daw Linn Linn Chit (J.E 2)	
YCDC,Engineering Department (Water &Sanitation)		Daw Htike Htike Khaing (D.SE)	
YCDC,Engineering Department (Water &Sanitation)		Daw Sandar Win (Account - 2)	
JICA Study Team		Daw Thi Thi Htun (Environmental Expert)	
Road Department ,Ministry of Construction	Yangon	U Kyaw Moe Lwin (Township Officer)	behalf of Director
Land Record Department	Htan Tapin Township	U Aye Naing Htun (Officer),	
General Administration Department	Htan Tapin Tsp.	U Sai Hpu Kyi (Township Administrator)	
General Administration Department	Northern District	U Naing Win	behalf of District Administrator
General Administration Department	Hlaing Thar Yar Tsp.	U Wint Phyo Hlaing	behalf of Township Administrator

Religious Leader	Anya Su Village	U Kay Wa La	Monk
Religious Leader	Ka Twel Village	U Pyin Nyar Zaw Ta	Monk
Village Administrator	Ka Twel Village	U Aung Myo Kyaw Linn	
Village Sub-administrator	Pan Taing Village	U Myint Win	
Village Sub-administrator	Anya Su Village	U Chit Ko	
Villager (Land Owner)	Pan Taing Village	U Htay Myint	
Villager (Land Owner)	Pan Taing Village	U Kyi Win	
Villager (Land Owner)	Pan Taing Village	U Kyaw Myint	
Villager (Land Owner)	Pan Taing Village	U Thaug Nyunt	
Villager (Land Owner)	Pan Taing Village	Daw Pyone	
Villager (Land Owner)	Pan Taing Village	Daw Tin	
Villager (Land Owner)	Pan Taing Village	U Kalar Lay	
Villager (Land Owner)	Pan Taing Village	U Myint Swe	
Villager (Land Owner)	Pan Taing Village	U Myint Soe	
Villager (Land Owner)	Pan Taing Village	Daw Myint Myint San	
Villager (Land Owner)	Pan Taing Village	U Kan Thein	
Villager (Land Owner)	Pan Taing Village	U Aung Naing Oo	
Villager (Land Owner)	Pan Taing Village	U Aung Mhway	
Villager (Land Owner)	Pan Taing Village	Daw Hla Hla San	
Villager (Land Owner)	Thanatpin Village	U Kyaw Oo	
Villager (Land Owner)	Anya Su Village	U Shwe Htike	
Villager (Land Owner)	Pan Taing Village	U Aye Shwe	
Villager (Clerk)	Pan Taing Village	Daw Ei Mon Mon Zaw	
YCDC,Engineering Department, (Water &Sanitation)		Daw Khin Cho Cho Aye (Section clerk)	

Purpose

1. For Kokkowa Water Supply Project, to acquire additional land and to understand detail information about the project by holding Stake Holder Meeting.

Explanation

2. U Myint Oo (Head of Department), Water and Sanitation Engineering Department, Yangon City Development Committee, he said that when searching between Yangon River and Ayeyarwaddy River which not include salt water point, we

founded that Kokkowa River can get more freshwater. To implement the project, we checked along the Kokkowa River since 2013. According to the water demand due to increased population, we also doing survey (FS study) of Pan Hlaing River and Toe River for water supply. Kokkowa River can get water 9000 MGD even in dry season so that we choose that place for project. At first, although we decided to distribute only 20 MGD for some village (near Kokkowa River) and some area where is difficult to get water, but we considered to upgrade up to 60 MGD supporting by JICA. We need some land to construct water treatment plant so we are doing Stake Holder Meeting like that. This Stakeholder meeting is for understanding of this project and reflecting by the villagers regarding about that.

3. Continuously, U Myo Thein (Deputy Chief Engineer), Water and Sanitation Engineering Department, he explained about the content of Kokkowa water supply project cooperation with YCDC (Yangon City Development Committee) and JICA (Japan International Cooperation Agency). We invited the people who lives in project area such as religious, departmental, some organizations and villagers to understand the profit of this project. And then he explained about the history of Yangon City Water Supply. In 1842, water supply started by 30 wells and distributed to the village near Sule Pagoda. After that implemented such as Kandawgyi Lake, Inya Lake, Hlawgar Reservoir, Phuugyi Reservoir and Ngamoeyeik Reservoir. In 2005, we constructed water treatment plant and can supply water from WTP. In 2014, we can supply water from Ngamoeyeik WTP Phase-2. This project is Phase 2 for Dagon Myo Thit (South) Township. Phase 1 also implementing and we will supply water to Dagon Myo Thit (East, South, North, Seikkan) Township/ Tharkaeta Township/Dawpon Township. This Kokkowa Water Supply Project also will be like as Nyaunghapin (Ngamoeyeik) WTP. This project area will be the biggest water supply area among Yangon water supply history. Mainly, this project is for Hlaingtharyar which is facing with difficulty to get fresh water. Project period is 2016 to 2024, after project we can plus 60 MGD to current supply amount 205 MGD. If Lagunbyin water supply project is finished, which is implementing by cooperation with JICA, we can produce 40 MGD so that we will supply total 305 MGD in future. By implementing this project, we will get more profit than disadvantage. For example, we can supply 60 MGD to Yangon people. Yangon water supply system will be developed. By using this river water, we can reduce using ground water. So, we can protect ground subsidence. Then, we can protect salt water intrusion and pollution into ground water. By supplying more water, economic and industrial business will be developed. We can live healthy by getting clean and enough water. Especially, we can get job opportunity for some people who lives nearby villages even though there are some small negative impact due to this project like as air pollution / noise and risks of hazard during the construction and operation stage. This project will be proud for this region, so please cooperate to get succeed of this project. And it'll be compensated for every loss affected by the project as per entitlement matrix for each owner depending on their type of losses by following JICA guidelines.
4. And then, participants asked questions for this project, U Myint Oo (Head of Department) explained the countermeasures.
5. Discussion / Comments
 - (a) To submit concern department for land acquisition (42 Acre) which is required for project with appropriate price.
 - (b) To recognize as 2nd Cutoff date for the date of SHM for land acquisition.
 - (c) To negotiate for fair price with Katwe Village, Pantai Village, Anyarsu Village land owner and farm owner not to abase them.
 - (d) To record that this project is targeted to be finished in 2024 and will distribute water 60 MGD.
 - (e) To record that the request of Monk: when the project is started, to consider for job opportunity of the people who

lives near the project area.

- (f) To record that Monk's speech to the villager: to accept the land price which is decided appropriately by Yangon Regional Government as per entitlement matrix.
- (g) To record the speech of Htan Ta Pin Township officer from General Administration Department: it's needed to submit and show the proof of ownership for the compensation.
- (h) To record the speech of village leader: warmly welcome and thanks to the Government because their village have to be developed due to this kind of big project.
- (i) To record the speech of U Naing Win (Northern District, Government Administration Department), U Wint Phyoo (Hlaing Thar Yar Township, GAD), u Aye Naing Htun (Htan Tapin Land Record Department), U Kyaw Moe Lwin (Road Department, MOC): they said that they will cooperate and perform for this project to be implemented successfully as it's the Government level project and there are a lot of positive impacts and benefits to native people of the project area.
- (j) To record the speech of U Aung Myo Kyaw Linn (Ka Twel Village Administrator) : this project is a beneficial project not only for villagers but also for the Yangon Region People ,so he wants the success of it and to negotiate between land owner and concerned departments for required land acquisition.

Meeting finished (10:45am).

Recorder

Daw Khin Cho Cho Aye, Section Clerk

Letter No – 4608/0274/SiPin-Yar (Ya-Tha)

Date – 16th January, 2017.

Distributed to –

Participants and Non-Participants.

Copy to –

Secretary, Yangon City Development Committee.

Committee member (4), Yangon City Development Committee.

Office Received.

Minutes of Meeting
Stakeholder Meeting
On Greater Yangon Water Supply Improvement Project (Phase-2)
9:30 AM-10:45AM
11 Jan 2017 (Wed)

1. Opening Speech

First of all, U Myint Oo, (Head of Department), Water and Sanitation Engineering Department, YCDC made an opening speech for the Stake Holder Meeting for understanding of this project among participants.

2. Project Component, project history implementation schedule, cutoff date, Project Impacts, entitlements for land acquisition and others

2-1. Project history, Components and Schedule

U Myo Thein (Deputy Chief Engineer), Water and Sanitation Engineering Department, he explained about the project components of Kokkowa water supply project having cooperation with YCDC (Yangon City Development Committee) and JICA (Japan International Cooperation Agency) by the Power Point Presentation showing the following points.

- 1) Yangon City Water Distribution System History
- 2) Water Resources & Water Distribution Plan
- 3) Location Plan for Future Water Distribution Zone System
- 4) Location Plan of KokkowaRiver Water Supply Project
- 5) Location Plan of KokkowaWater Treatment Plant
- 6) Scope of Worksof PhaseI (KokkowaWTP system)
- 7) Implementation Schedule of the Project
- 8) Greater Yangon Water Supply Improvement Project Phase II Submission Proposal to Union Parliament for KokkowaWater Supply Project
- 9) KokkowaWater Supply Project (Water Quantity Survey)

In addition, U Myo Thein Deputy Chief Engineer (DYCE) orally explained the following points to the participants

2.2 Possible Environmental and Social Impacts and the Proposed Countermeasures

- ✓ With regard to possible environmental and social impacts caused by the project, the JICA study predicted those impacts and proposed the countermeasures, namely; based on the JICA Study, basically significant negative impacts on environment and social caused by the WTP construction and operation have not been identified.
- ✓ However, some minor impacts have been predicted in construction and operation stages as explained below.

Stage	Possible Impact	Proposed Countermeasures
Construction	1. Impacts on Air quality by operation of heavy equipment and vehicles	✓ Vehicles shall be covered tightly when transporting construction materials.

		<ul style="list-style-type: none"> ✓ Spray water to reduce dust in the construction site during the dry season. ✓ Idling stop, muffler installation shall be executed in construction period
	2. Generation of surplus excavated soil	✓ Excavated soil and sludge will be disposed in existing disposal site as construction waste and general waste, respectively.
	3. Impacts on Noise by operation of heavy equipment and vehicles	<ul style="list-style-type: none"> ✓ Construction noise shall be reduced to the regulation value of WHO standard by the appropriate management of construction equipment/vehicles. ✓ Construction plan, period, negative effect shall be opened to the residents in the construction period.
	4. Lands acquisitions	✓ Necessary lands are to be procured by relevant laws and regulations of Myanmar, JICA Policy of Replacement costs.
	5. Increase in risks of hazard is probably expected among the construction workforce.	<ul style="list-style-type: none"> ✓ Provide protective equipment and uniform to workers including masks, gloves and boots by contractor. ✓ Regular monitoring of construction site and safety education shall be executed by contractor.
Operation Stage	✓ Improper management of sludge could contaminate soil and surface/underground water.	✓ Excavated soil and sludge will be disposed in existing disposal site as construction waste and general waste, respectively.

2.3 JICA Policy on compensations and entitlements for the JICA Project

Every loss affected by the project will be compensated as per entitlement matrix for each owner depending on their type of losses as explained below by following JICA guidelines as well as JICA policy on compensation for land acquisition of “full replacement cost”.

Type of Losses	Entitled Person	Entitlements	Responsibility & Procedures
Loss of Private Land	Land owners of private land	Cash compensation at replacement cost which is equivalent to the market value	Responsibility for each procedures is shared as follows: 1. Confirmation of Assets - Implementing Consultant 2. Calculation of compensation cost- Implementing Consultant 3. Agreement of compensation cost- YCDC 4. Provision of compensation cost to PAPs - YCDC 5. Payment Procedure - YCDC
Loss of Land-based Income	Land owners of private	Cash compensation at replacement cost which is equivalent to the market value	
Loss of Fixed Assets	Owners of affected assets (living structures or stores)	Cash compensation at replacement cost which is equivalent to the market value	
	Person planted trees to be cut	Cash compensation at the current market price of the materials such as fruits obtained from the trees	
Loss of Movable Assets	Owners of movable assets	Cash compensation at the current market price if they are not able to be used after resettlement	
	Livestock		
Loss of income source	Contracted worker and self-employed person	Cash assistance for non-working period due to resettlement. Rehabilitation assistance to achieve the policy objective to improve or restore their livelihoods and standards of living in real terms.	Responsibility for each procedures is shared as follows: 1. Confirmation of livelihood - Implementing Consultant 2. Preparation of Income Restoration Program –

			YCDC, NGO 3. Monitoring – YCDC
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2.3. Cutoff date

- ✓ A cut-off date can be defined as the first date of notification on land acquisition to the Project Affected Persons (PAPs).
- ✓ Namely, any persons who occupy or insist the farming rights for the project affected areas (lands are subject to acquisition) after the cut-off date are not eligible for any compensation and consultation.
- ✓ With regard to the JICA WTP construction project, YCDC conducted the first project explanatory meeting with stakeholders on 11th and 12th April 2015 at Anyasu Village Monastery inviting relevant stakeholders including local villagers, Visage representatives, YCDC and so on.
- ✓ Therefore, 11th of April 2015 can be recognized as de facto Cut-off-date for the first land acquisition.
- ✓ In addition, the SHM (11th of Jan. 2017 can be recognized as second cut-off-date for all land acquisitions for the JICA project especially additional land for 20 acres.

3. Questions/Discussions/Comments/

Questions, Discussions and Comments were made among the stakeholders as specified below.,

Questions, Discussions, Comments	Answers, countermeasures
(a) When the project is started, YCDC shall consider for job opportunities of the people who live near by the project area.	(a)As presented in the SHM, YCDC will consider the job opportunities
(b) Land owner should accept the fair land price which will be decided appropriately by Yangon Regional Government as per entitlement matrix and JICA policy on replacement cost. (Monk – U Kay Wa La)	(b) Speech by Monk
(c)How does YCDC evaluate for the price of land per acre? (Land Owner – U Aung Naing Oo)	It'll be appraised by Yangon Regional Government depends on current price and unit price without abasing to the land owner. However, proof of land ownership is necessary to be compensated. (U Sai Hpu Kyi – Township Administrator, Htantapin tsp.)
(d) Warmly welcome and thanks to the Government because their village have to be developed due to this kind of big project. (Pan Taing Village Leader)	Comments.
(e) They said that they will cooperate and perform for this project to be implemented successfully as it's the Government level project and there are a lot of positive impacts and benefits to native people of the project area. (U Naing Win (Northern District, Government Administration Department), U Wint Phyo (Hlaing Thar Yar Township, GAD), u Aye Naing Htun (Htan Tapin Land Record Department), U Kyaw Moe Lwin (Road Department, MOC)	Comments.
(f) This project is a beneficial project not only for villagers but also for the Yangon Region People, so he wants the success of it and to negotiate between land owner and concerned departments for required land acquisition. (U Aung Myo Kyaw Linn (Ka Twel Village)	Comments.

Administrator))	
(g) To submit concerned department for the additional land acquisition (20Acre for JICA Project) which is required for project with appropriate price as per JICA policy. (U Myo Thein – Dy.CE)	Action to be taken by YCDC.
(h) To recognize as 2 nd Cutoff date for the date of this SHM for land acquisition. (U Myo Thein – Dy.CE)	Action to be taken by YCDC.
(i) To negotiate for fair price with Katwe Village, Pantai Village, Anyarsu Village land owners and farm owners not to abase them. (U Myo Thein – Dy.CE)	Action to be taken by YCDC.

Date: 16th January, 2017



Daw Thi Thi Htun
Environmental Expert
The JICA Study Team

Interviews with Six (6) Illegal Occupants and One Local Religious Facility

(1) Identification of Illegal Occupants

Since the transmission pipeline is proposed to be installed in Htantabin and Hlaing Tharyar Townships, a survey was conducted in both townships on 16th and 17th January 2017.

As a result of the survey, a total of 41 illegal occupancies were scattered around the pipeline ROW, and then six (6) illegal occupancies (houses/shops) and one (1) local religious facility were situated on the pipeline ROW as summarized in the following Figure and Table.



Source: JICA Study Team using background map of Google Earth

Figure 1 Location of Affected Household on the Pipeline ROW

Table 1 Seven (7) Illegal Occupants on the Pipeline ROW

Illegal Occupant	Township	GPS coordinates		Household/Business
1	Htantabin	16°53'9.35"N	96°0'14.75"E	Rice Storage/Mill
2	Htantabin	16°53'11.17"N	96°0'10.61"E	Bamboo shop
3	Htantabin	16°54'56.32"N	95°56'2.33"E	Noodle Shop
4	Htantabin	16°54'56.02"N	95°56'2.52"E	General Shop
5	Htantabin	16°54'56.62"N	95°56'2.02"E	Shop (Closed)
6	Htantabin	16°55'58.7"N	95°54'47.64"E	House/ Restaurant
7	Htantabin	16°56'29.70"N	95°53'13.64"E	Local religious (Buddhism) facility

Source: JICA Study Team

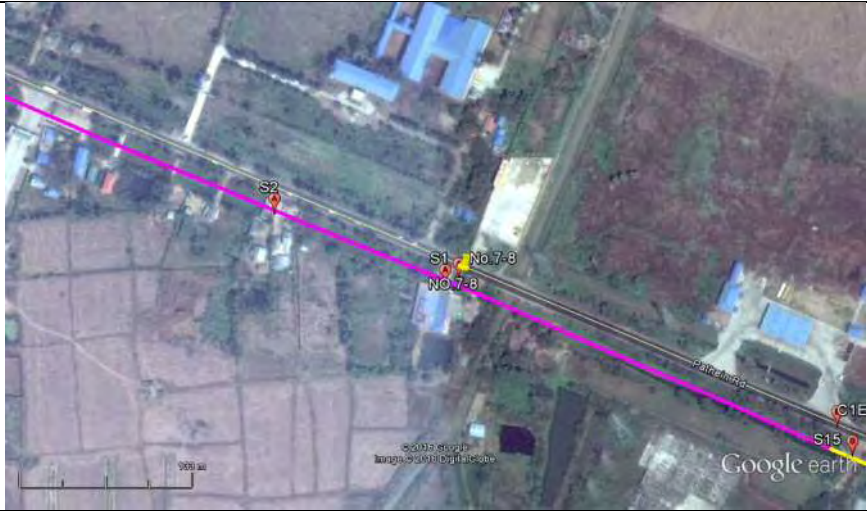


(2) Details of interview survey

1) Illegal Occupant 1

At the position No. S1, there is a rice packages storage of a rice mill. As per interview, some portion (about 1.0-1.7 m) will be affected with 18.3 m alignment from the center of Route No. 5.

This portion is located on the ROW and other parts of this facility are situated on a private land (see the following Table).

Table 2 Illegal Occupant 1

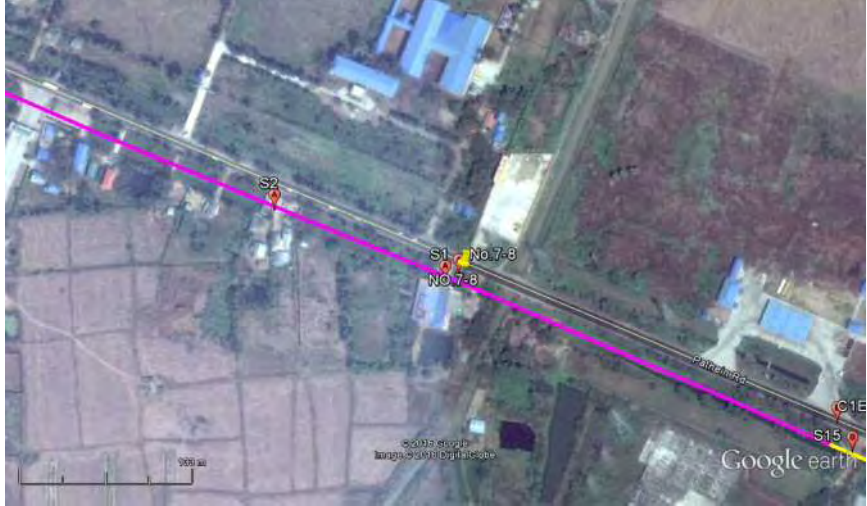
Item	Description
Position No. (GPS)	S1 (16°53'9.35"N 96°0'14.75"E)
Airborne Imagery of Google earth (S1 on Pink Line of the Alignment)	
Gender of the owner	Female
Household members	3
Type of Business	Medium scale rice mill
Regime of ownership and reference of documents	Private Owner who has a municipal license and a No.1 Ministry of Industry's license for the rice mill
Type of the Affect	Partially Affected
Affected properties:	98.4ft long fence, Sunshade of rice packages storage and 15 fruit trees, 30m x 1.7m
Construction year	2014
Current situation	Fair
Employees	10 part time employees
Interview date (Cut-off-date)	16 th Jan.2017
	
Front view of the Rice mill	Interview survey at the Rice mill

Source; JICA Study Team

2) Illegal Occupant 2

At the position No. S2 there is a bamboo shop which will be affected with the 18.3 m alignment from the center of the Route No. 5 (see the following Table)

Table 3 Illegal Occupant 2

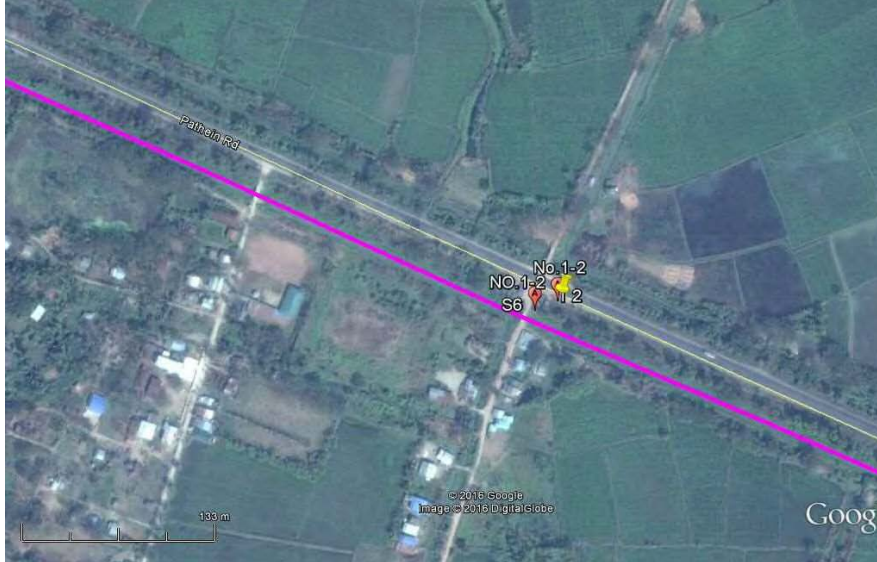


Item	Description
Position No. (GPS)	S6 (16°53' 11.17"N 96°0' 10.61"E)
Airborne Imagery of Google earth (S2 on Pink Line of the Alignment)	
Gender of the owner	Male
Household members	5
Type of Business	Bamboo Selling Business
Regime of ownership and reference of documents	Private Owner who has a Ministry of Forestry's license for the Bamboo Shop
Type of the Affect	Partially Affected
Affected properties:	bamboo shop 9.14 m x 11 m
Construction year	2014
Current situation	Fair
Employees	6 part time employees
Interview date (Cut-off-date)	17 th Jan.2017
	
Condition of Bamboo Shop	Interview with the Shop Owner

Source; JICA Study Team

3) Illegal Occupant 3

At the position of S6, there are three shops which will be affected by the 18.3m alignment from the center of the Route. The following Table summarizes S6-(a) of those three illegal occupants.

Table 4 Illegal Occupant 3

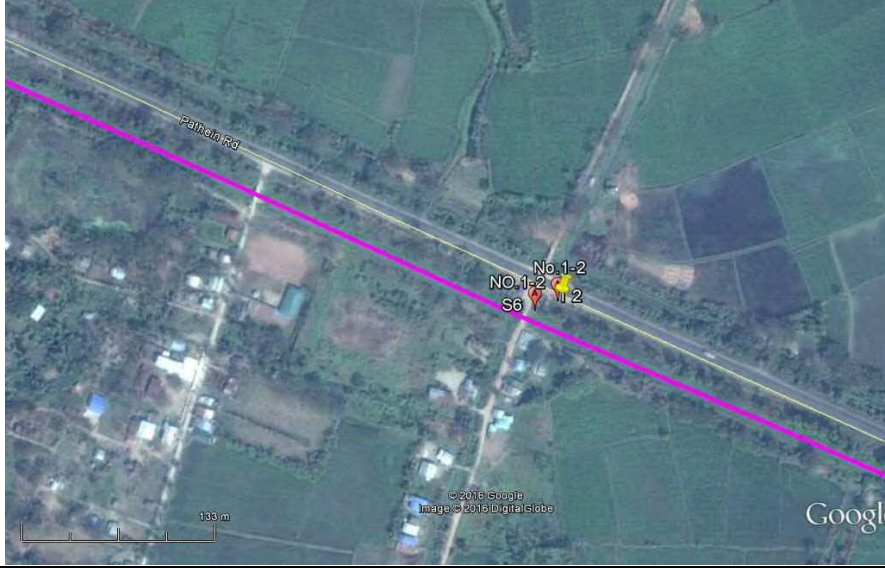


Item	Description
Position No. (GPS)	S6-(a) (16°54'56.32"N 95°56'2.33"E)
Airborne Imagery of Google earth (S6 on Pink Line of the Alignment)	
Gender of the owner	Female
Household members	4
Type of Business	Small scale general shop (cycle petroleum, betel, and vegetables selling)
Regime of ownership and reference of documents	No document
Type of the Affect	Fully Affected
Affected properties:	The shop hut of 3.96 m x 3.04 m
Construction year	2013
Current situation	Poor condition
Employees	Self-employee
Interview date (Cut-off-date)	17 th Jan.2017
	
Condition of the shop	Interview with theShop Owner

Source; JICA Study Team

4) Illegal Occupant 4

At the position of S6, there are three shops which will be affected by the 18.3m alignment from the center of the Route 5. The following Table summarizes S6-(b) on those three illegal occupants.

Table 5 Illegal Occupant 4

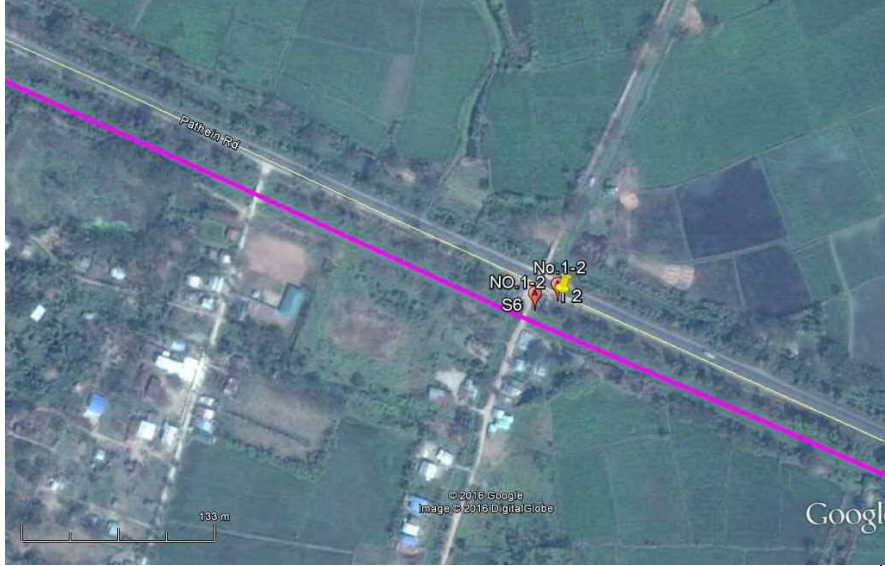


Item	Description
Position No. (GPS)	S6-(b) (16°54'56.02"N 95°56'2.52"E)
Airborne Imagery of Google earth (S6 on Pink Line of the Alignment)	
Gender of the owner	Female
Household members	2
Type of Business	Small scale, a mokehinkar (noodle) selling shop
Regime of ownership and reference of documents	No document
Type of the Affect	Fully Affected
Affected properties:	The shop hut of 4,87m x 4.57m
Construction year	2015
Current situation	Poor condition
Employees	Self-employee
Interview date (Cut-off-date)	17 th Jan.2017
	
Land measuring in front of the shop	Interview with the Shop Owner

Source; JICA Study Team

5) Illegal Occupant 5

At the position of S6, there are three shops which will be affected by the 18.3m alignment from the center of the Route 5. The following table summarizes S6-(c) on those three illegal occupants.

Table 6 Illegal Occupant 5

Item	Description
Position No. (GPS)	S6-(c) (16°54'56.62"N 95°56'2.02"E)
Airborne Imagery of Google earth (S6 on Pink Line of the Alignment)	
Gender of the owner	Male
Household members	5
Type of Business	Small scale, recycling plastic and iron pieces buyer and seller
Regime of ownership and reference of documents	No document
Type of the Affect	Fully Affected
Affected properties:	3.9m x 3.96m hut (closed)
Construction year	2015
Current situation	Poor condition
Employees	One employee (his wife)
Interview date (Cut-off-date)	17 th Jan.2017
 <p>Condition of the Shop</p>	 <p>Interview with the Shop Owner</p>

Source; JICA Study Team

6) Illegal Occupant 6

At the positions between S26 and 27 of the yellow line alignment, there are a restaurant, a gas pipeline, a bamboo shop, a temporary livestock and a local small quay which will be affected by the 18.3m alignment from the center of the Route 5. Due to the yellow line, even though the alignment is shifted from 18.3 m to 25 m from the center of the Route No. 5, the resultant (Myanmar pyithar restaurant) will be affected by the project. (See the following Table)

Table 7 Illegal Occupant 6




Item	Description
Position No. (GPS)	S6-(c) (16°55'58.7"N 95°54'47.64"E)
Airborne Imagery of Google earth (S18 on Yellow Line of the Alignment)	
Gender of the owner	Male
Household members	5
Type of Business	small scale, liquor & restaurant
Regime of ownership and reference of documents	No document
Type of the Affect	Fully Affected
Affected properties:	Restaurant and house, 21.9m x 8.2m
Construction year	2015
Current situation	Fair condition
Employees	4 part time employees
Interview date (Cut-off-date)	17 th Jan.2017
	
Condition of the Restaurant	Interview with the Shop Owner and family member

Source; JICA Study Team

7) Illegal Occupant 7

At the Position of No. S11 there is a local religious facility which will be affected with the 18.3 m alignment from the center of the Route No. 5 of which two eastern poles are at 17.3 m from the road central line. (see the following Table)

Table 8 Illegal Occupant 7

Item	Description
Position No. (GPS)	S6-(c) (16°55'58.7"N 95°54'47.64"E)
Airborne Imagery of Google earth (S11 on Pink Line of the Alignment)	
Gender of the owner	Male (Benefactor)
Household members	None (a Buddhist monk is occasionally come to the facility)
Type of Business	every Sabbath day, the monk tells the truth and about Buddhism to community. (4 times a month) Sometimes, celebrating the ceremony of novitiate, donation, and reciting the Buddhist Bible.
Regime of ownership and reference of documents	No document
Type of the Affect	Partially Affected
Affected properties:	Local religious facility
Construction year	2007
Current situation	Fair condition
Employees	-
Interview date (Cut-off-date)	17 th Jan.2017
	
Condition of the Local Religious Facility	Interview with Benefactor

Source; JICA Study Team

Minutes of Meeting
 Social Economic Interview Survey of the illegal occupancies
 on the Proposed Alignment of Transmission Pipeline
 for the Greater Yangon Water Supply Improvement Project (Phase-2)
 16th and 17th January 2017

1. Survey date

Due to the fact that the transmission pipeline is proposed to be installed in Htantabin and Hlaing Tharyar Townships, therefore, the survey was conducted in 16th and 17th January 2017 in both townships.

2. Identification of Illegal Occupants

As the results of the survey, six (6) illegal occupancies (houses/shops) and one (1) local religious facility were situated on the pipeline ROW as shown in Table 1.

Table 1 Seven (7) Illegal Occupants on the Pipeline ROW

Illegal Occupant	Township	GPS coordinates		Household/Shop/Facility	Number of Interviewee
1	Htantabin	16°53'9.35"N	96°0'14.75"E	Rice Storage/Mill	1
2	Htantabin	16°53'11.17"N	96°0'10.61"E	Bamboo shop	1
3	Htantabin	16°54'56.32"N	95°56'2.33"E	Noodle Shop	1
4	Htantabin	16°54'56.02"N	95°56'2.52"E	General Shop	1
5	Htantabin	16°54'56.62"N	95°56'2.02"E	Shop (Closed)	1
6	Htantabin	16°55'58.7"N	95°54'47.64"E	House/ Restaurant	1
7	Htantabin	16°56'29.70"N	95°53'13.64"E	Local religious (Buddhism) facility	1

3. Explanation before questionnaire interview

At the opening of the social and economic interviews, legal status, possible impacts, resettlement policy and entitlements and so on orally were explained to those seven (7) illegal occupants on the pipeline ROW by the surveyors as summarized in Table 2. The interviewees were six (6) owners of illegal households /shops and one (1) benefactor of the local religious facility (see Table 1)

Table2 Explanations on the Project and Policy on Involuntary Resettlement

No.	Expiatory Item	Description Orally Explained
1.	Project and construction of the transmission pipeline on ROW of the Route No. 5.	<ul style="list-style-type: none"> • This project can support and improve the distribution of water in the Greater Yangon by YCDC in corporation with JICA. • The Project includes a WTP at Kokkowa and about 1.6 m diameter of transmission pipeline. • This line will be passed through the Htantabin and Hlaing Tharyar townships. • Generally, the pipe alignment is about 18.3 m from the center of the Route No.5. • The pipeline ROW of pipe line is about 3 m width. • So the affected area is in 16.8 m (55 ft) and 19.8 m (65 ft) for the center of the Route No.5.
2.	Necessity of involuntary resettlement for the Project and the legal status of the occupation	<ul style="list-style-type: none"> • The transmission pipeline is planned to be constructed the pipeline ROW in which your households/shops are situated. • Your occupation status on the pipeline ROW is illegal because the land owner is the government. • Therefore, you are requested to involuntary remove your household/shop by the project.
3.	Possible environment and social impacts by the Project (mitigation measures)	<ul style="list-style-type: none"> • The possible environment and social impacts by this project are air, noise and water pollution and soil degradation during the pipe line construction. Temporary distributing the transportation because of the heavy machines and cutting the private entrances. • Air pollution will be engaged at the construction period due to the transportation the heavy machines and power generators, and exhaust emission and dusting. The mitigation plans are: <ul style="list-style-type: none"> (a) altering work practices to avoid or minimize the generation of dust, (b) Spraying water on roads and tracks,

No.	Expiatory Item	Description Orally Explained
		<ul style="list-style-type: none"> (c) Dust limit vehicle speed on unsealed private road to less than 40 km/hr. • The noise will be generated from the transportation of the heavy machines and pipes during construction stage. • Mitigation plan will be carried out: <ul style="list-style-type: none"> (a) Turn equipment off when not in use, (b) Perform regular inspection and maintenance of construction vehicles and equipment to ensure that they have good quality mufflers installed and worn parts are replaced, (c) Avoid operations at night, where possible. • Soil degradation by removing the vegetation or trees, trenching for the pipeline and muddy soil will be come out from these operation.
4.	Project policy and the Entitlements of the involuntary resettlement for the illegal occupation	<ul style="list-style-type: none"> • All the policies, processes, procedures and implementation arrangements are fully consistent with the JICA guidelines and JICA policy as well as relevant laws and regulations of Myanmar. • Namely loss of fixed and movable assets will be compensated in the replacement cost and for loss of income source will be achieve the rehabilitation assistance to restore their livelihoods. • However, the compensation for land is not eligible due to the illegal occupation.
5.	Setting up of Cut-off Date	<ul style="list-style-type: none"> • A cut-off date can be defined as the first date of the interview survey to the Project Affected Persons (PAPs) on the pipeline ROW. • Namely, any persons who occupy or insist the ownership for the project affected areas (lands are subject to acquisition, namely pipeline ROW) after the cut-off date are not eligible for any compensation and consultation.
6.	Possible resettlement schedule	<ul style="list-style-type: none"> • According to the implementation schedule, the possible resettlement schedule will be started at end of 2018 or at the middle of 2019.
7.	Contact persons of the YCDC for the resettlement	<ul style="list-style-type: none"> • U Zaw Min, Executive Engineer, YCDC (water & sanitation).

4. Opinions, Requests and Responses from YCDC

Some opinions and requests are summarized in Table 3.

Table 3 Opinion, Questions, comments and Responses by YCDC

Illegal Occupant No.	Interviewee	Opinions/Questions/Comments from Occupant	Responses and Countermeasures expressed by YCDC
1	Owner	The owner requested to shift the pipe alignment if possible.	EE, YCDC, replied that YCDC will try to find other alternative ways to shift the alignment. So, the change of the alignment route will be considered at the detailed design stage.
2	Owner	The owner requested that YCDC to make quick action while in construction stage. Because pipe line alignment passes through his house entrance. So, if possible pipe line installation should be finished in short time.	EE, YCDC, replied that it will be quick because good heavy machines and vehicles will be used for this systematically. As explained before the interview, the impacts during construction phase are small and limited time and necessary countermeasures against the impacts are proposed.
3	Owner	The owner said that she will resettle her shop during construction into another place stage due to this project is for the public water supply. But after construction of pipe line, she wants to reopen her shop here.	As explained before the interview, this structure is located on the ROW of Route No. 5 as illegal occupation, for the involuntary resettlement, the JICA policy and entitlement for the resettlement were explained to the owner. In addition, EE replied that there'll needed to maintain after construction (operation stage). Therefore, her shop cannot be re-opened on the pipeline ROW.
4	Owner	The owner commented, this project is for the public water supply, so she will remove her shop during construction stage. But after construction of pipeline, she wants to reopen the shop right here.	As explained before the interview, this structure is located on the ROW of Route No. 5 as illegal occupation, for the involuntary resettlement, the JICA policy and entitlement for the resettlement were explained to the owner. In addition, EE replied that there will needed to maintain after construction (operation stage). Therefore, her shop cannot be re-opened on the pipeline ROW.
5	Owner	The owner has neither complained nor comments on this project, because his shop has been abandoned since last year. He will remove his shop from the pipeline alignment if necessary.	EE said that they will consider for replacement cost based on JICA entitlement matrix though he has not belonged to this shop anymore.

Illegal Occupant No.	Interviewee	Opinions/Questions/Comments from Occupant	Responses and Countermeasures expressed by YCDC
6	Owner	The restaurant owner said that he will dissolve his shop by the time construction is started. And only this business is their livelihood. Therefore, he requested that he would like to dissolve his shop partially.	As explained before the interview, this structure is located on the ROW of Route No. 5 as illegal occupation, for the involuntary resettlement, the JICA policy and entitlement for the resettlement were explained to the owner. EE replied that partially dissolved might have to be decided after the detail design stage.
7	Benefactor	The benefactor said that this chapel was constructed by the instruction of his dream. So he is not willing to remove and resettle to another place. He has no another place to reconstruct.	As explained before the interview, this structure is located on the ROW of Route No. 5 as illegal occupation, for the involuntary resettlement, the JICA policy and entitlement for the resettlement were explained to the benefactor.

Date: 17th January, 2017

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