

MINISTRY OF EDUCATION
THE REPUBLIC OF THE UNION OF MYANMAR

PREPARATORY SURVEY REPORT
ON
THE PROJECT FOR IMPROVEMENT OF
EDUCATION COLLEGE
IN
THE REPUBLIC OF THE UNION
OF MYANMAR

SEPARATE VOLUME
SURVEY REPORT ON ENVIRONMENTAL
AND SOCIAL CONSIDERATIONS

JUNE, 2014

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

YAMASHITA SEKKEI INC.
KRI INTERNATIONAL CORPORATION
BINKO INTERNATIONAL LTD.

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Environmental Checklist

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ABBREVIATION

ADB	: Asian Development Bank
AIDS	: Acquired Immunodeficiency Syndrome
BOD	: Biochemical Oxygen Demand
CCA	: Child-Centered Approach
CO	: Carbon Monoxide
COD	: Chemical Oxygen Demand
dB	: Decibel
DDR	: Due Diligence Report
DEPT	: Department of Education Planning and Training
DFMC	: District Farmland Management Committee
DG	: Director General
DO	: Dissolved Oxygen
EC	: Electrical Conductivity
ECD	: Environmental Conservation Department
EIA	: Environmental Impact Assessment
EMP	: Environmental Management Plan
EFA	: Education for All
FY	: Fiscal Year
GAD	: General Administration Department
GPS	: Global Positioning System
HIV	: Human Immunodeficiency Virus
IEE	: Initial Environmental Examination
IUCN	: International Union for Conservation of Nature and Natural Resources
JICA	: International Cooperation Agency
K ₂ O	: Potassium Oxide
Ma	: Mega Annum (a million years)
MIC	: Myanmar Investment Commission
MOECAF	: Ministry of Environmental Conservation and Forestry
MOE	: Ministry of Education
NCEA	: National Commission on Environmental Affairs
NECC	: National Environmental Conservation Committee
NEP	: National Environmental Policy
NGO	: Non Governmental Organization
NO ₂	: Nitrogen Dioxide
NO ₃	: Nitrate
O/M	: Operation and Maintenance
OP	: Operational Policy
ORP	: Oxidation Reduction Potential
pH	: (Hydrogen Ion Concentration Index)
PAPs	: Project Affected Persons
PM ₁₀	: Particulate Matter 10
PPE	: Personal Protective Equipment
RAP	: Resettlement Action Plan
RC	: Reinforced Concrete
R/S-FMC	: Region /State Farmland Management Committee
SO ₂	: Sulfur Dioxide
SS	: Suspended Solids
STD	: Sexually Transmitted Disease
TEC	: Taungoo Education College
TDS	: Total Dissolved Solid
TFMC	: Township Farmland Management Committee
TSLRD	: Township Settlement and Land Records Department
TTDC	: Taungoo Township Development Committee

TF : Task Force
UNAIDS : Joint United Nations Programme on HIV/AIDS
UNCED : United Nations Conference on Environment and Development
USEPA : United States Environmental Protection Agency
WHO : World Health Organization

CHAPTER 1 INTRODUCTION

1.1 Background

Upgrade of basic education is one of the most important themes for the Government of Myanmar. It can be said that Net Intake Rate in the primary education is relatively good while the drop-out rate of students is still very high. It is considered that not only poverty and seasonal labor of their parents but also quality of the education, particularly teacher-centered approach of teaching which could obstruct motivation of the students to learn, have been provoking the situation.

To achieve one of the most important goals, EFA (Education for All) by 2015, programs in accordance with the Thirty-Year Long-Term Education Development Plan and EFA National Action Plan (2003-2015) has been implemented. Also, the Government of Myanmar currently focuses on the programs on free compulsory education, upgrade of school conditions, improvement of capacity of teachers and their employment and so on.

Total 21 Education Colleges including the new Lashio Education College spread out all over the country are the institutes to train teachers in basic education and play an important role for upgrade of basic education and promulgation of the Child-Centered Approach (CCA).

Most of the Education Colleges, however, don't have enough resource to function well. On the other hand, necessity of the new model of the Education College is considered by the Government, in which 4-year study system instead of 2-year would be introduced in the future.

In this connection, the Government of Myanmar has been planning to relocate and renovate Education Colleges and reinforce their function (hereinafter referred to as “the Project”).

1.2 JICA Preparatory Survey

Upon the request from the Government of Myanmar and considering the background, the Japan International Cooperation Agency (JICA) sent a JICA Preparatory Survey Team to Myanmar and conducted a Survey on “Project for Improvement of Education College” (hereinafter referred to as “the Survey”) in cooperation with the Ministry of Education (MOE) as the official counterpart of the Myanmar side in 2012 and 2013 in order to clarify existing condition of 20 Education Colleges.

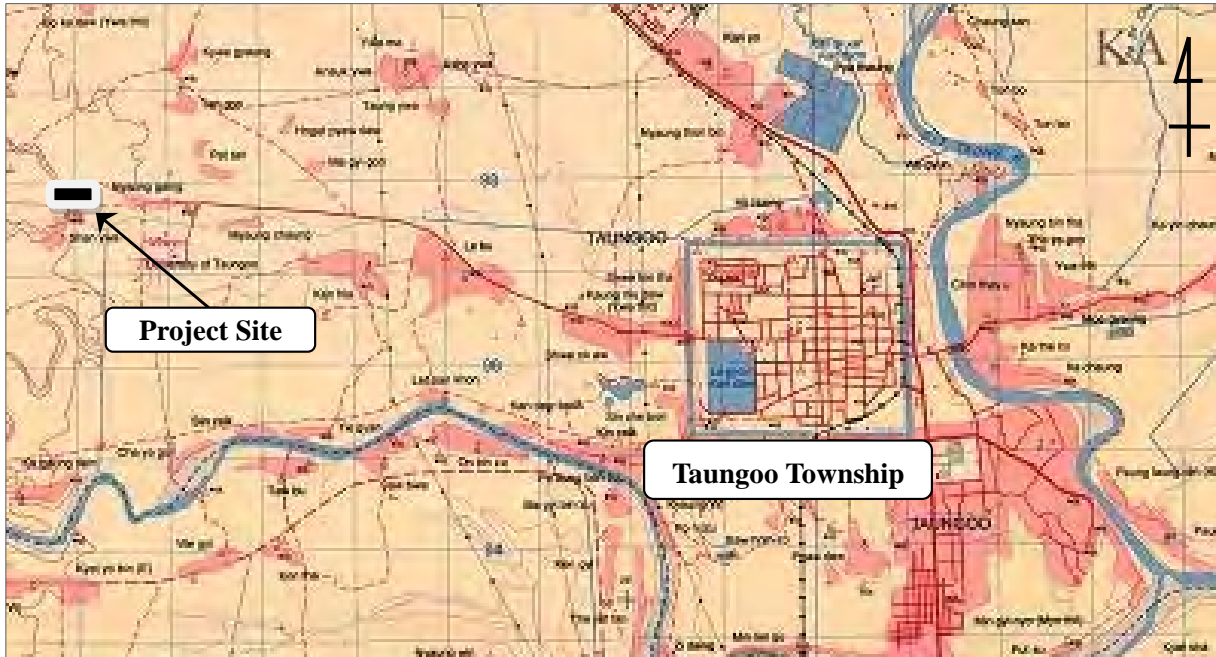
Based on the survey results, the existing Taungoo Education College has been selected among the 20 colleges for the Project to be funded by the Japan's Grant Aid scheme.

In this regard, an environmental and social considerations study for a new Taungoo Education College to be constructed was conducted by the JICA Preparatory Survey Team hiring a local consultant in 2013 in accordance with relevant available laws and regulations in Myanmar as well as the JICA policy on environment and the JICA guidelines for environmental and social considerations.

CHAPTER 2 PROJECT DESCRIPTION AND COMPONENT

2.1 Project Location

The project site is situated in Sin Seik Village Tract of the Taungoo Township, Bago Division. The geographic location of the project site is between Latitude N18 57.428 and Longitude E96 21.200 where faces the Taungoo Road (or Htee Hlaing Road), connecting the New Yangon-Mandalay Highway road in the west and Taungoo Town in the east as shown in Figure 2.1.1.



Source: Taungoo Agriculture and Irrigation Department, (Base Map: Sheet No. 1896 05 Bago Division First edition 2005, Survey Division, Ministry of Agriculture and Irrigation). Amended by JICA Preparatory Survey Team

Figure 2.1.1 Project Site Location

The area coverage of the project site is 41.19 acres ($\approx 167,000 \text{ m}^2$) where is a flat paddy and farmland (See Figure 2.1.2- Figure 2.1.5). Details of the project site and the surroundings are described in Chapter 4.



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Figure 2.1.2 Project Site and the Surroundings
(See Chapter 4)



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Figure 2.1.3 Old Tombs in the Project Site
(See Chapter 4)



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**Figure 2.1.4 Small Scale Irrigation Channel
in the Project Site**
(See Chapter 4)



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**Figure 2.1.5 One of the Two Small Pathways
in the Project Site**
(See Chapter 4)

2.2 Basic Design and Components for Facilities

Basic design and components for facilities to be constructed by the project are shown as summarized in Table 2.2.1.

Table 2.2.1 Basic Design and Components for Facilities

Facilities	Basic Specification	Total Floor Area (m ²)	Floor Number	Height (m) Approx.
Administration Building (including an Assembly Hall)	Principal, Department Head Rooms, Department Rooms Administrative Office, Print Room, Library, Care Room etc.	2,457	2	10
Teaching Building	Class Rooms(20), Laboratories(4), Industrial Art, Domestic Science, Art, Music, LL, Computer, Audiovisual Rooms, etc.	4,257	2	10
Hostels	Hostel A:capacity 200 trainees × 2 buildings = 4,192m ² Hostel B:capacity 300 trainees × 2 buildings = 6,318m ²	10,510 (4 hostels)	2	10
Elevated Water Tanks*	Tank Capacity of 15m ³ × 2 tanks (RC structure)	Approx.12 (2 tanks)	-	22
Ancillary Facilities	Pump Room, Electric Room, Gym, Agricultural Storages, etc.	300 (Total)	1	4
Dining Hall with Kitchen	500 persons × 2 shifts	675	1	5
Practicing School**	760 Students	2,671	2	10
Staff Houses***	Principal's House (36 feet × 25 feet) (RC) House for vice principal(32 feet × 38 feet) (RC) (1 story) Low level Staff House(36 feet× 25 feet) (4 rooms) (1 story) /Brick noggin-Brick + Wood) Staff House (48 feet × 32 feet) (RC) (1 story) House for Head of Department (32 feet × 38 feet) (RC) (1 story)	1 house 1 house 5 houses 5 houses 3 houses	1,615	1 4
Others	Agriculture Practicing Field, Physical Play Ground, etc.	-	-	-

Note:

* As the basic facility for the project, two elevated water tanks each of which has a capacity of 15m³ (approximately 2.5m cubed) and an enough height to obtain a necessary water pressure are planned to be constructed roughly in the central location of the project site of which total area is 41.19 acres (≈167,000 m²)

** Myanmar side construction.

*** Total staff number and housing number will be subject to modification due to Myanmar side construction.

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Figure 2.2.1 shows a draft layout of the facilities to be constructed which is subject to modification keeping the specification summarized in Table 2.2.1 unchanged.

In addition, Figure 2.2.2- Figure 2.2.8 show each facility plan of Administration Building, Teaching Building, Hostel and Dining hall.

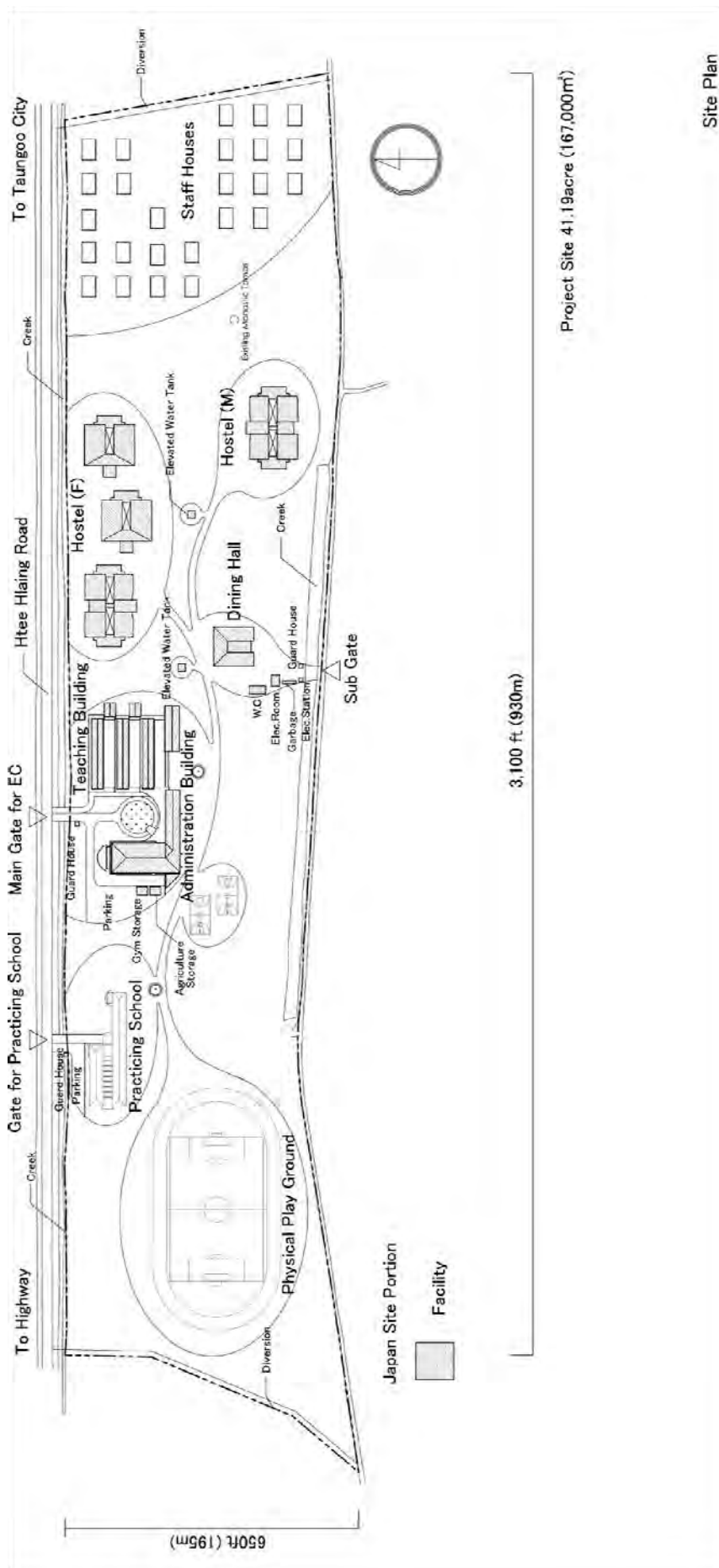
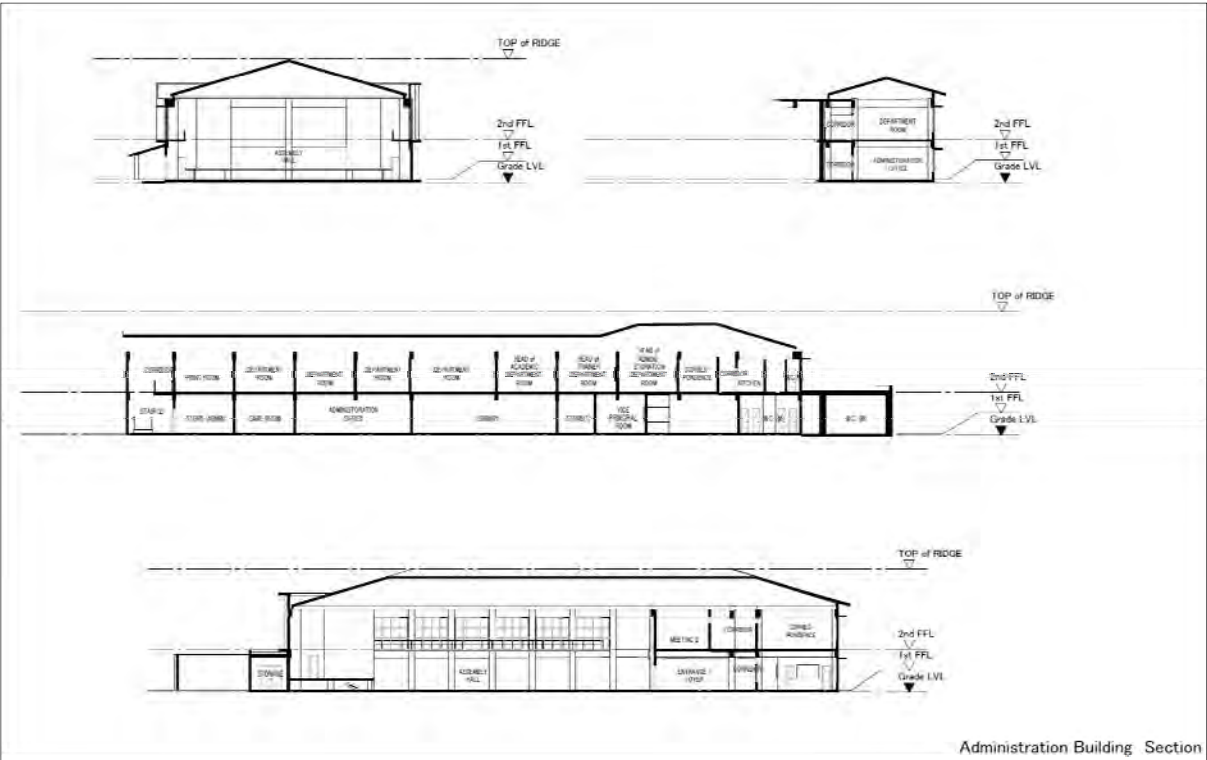
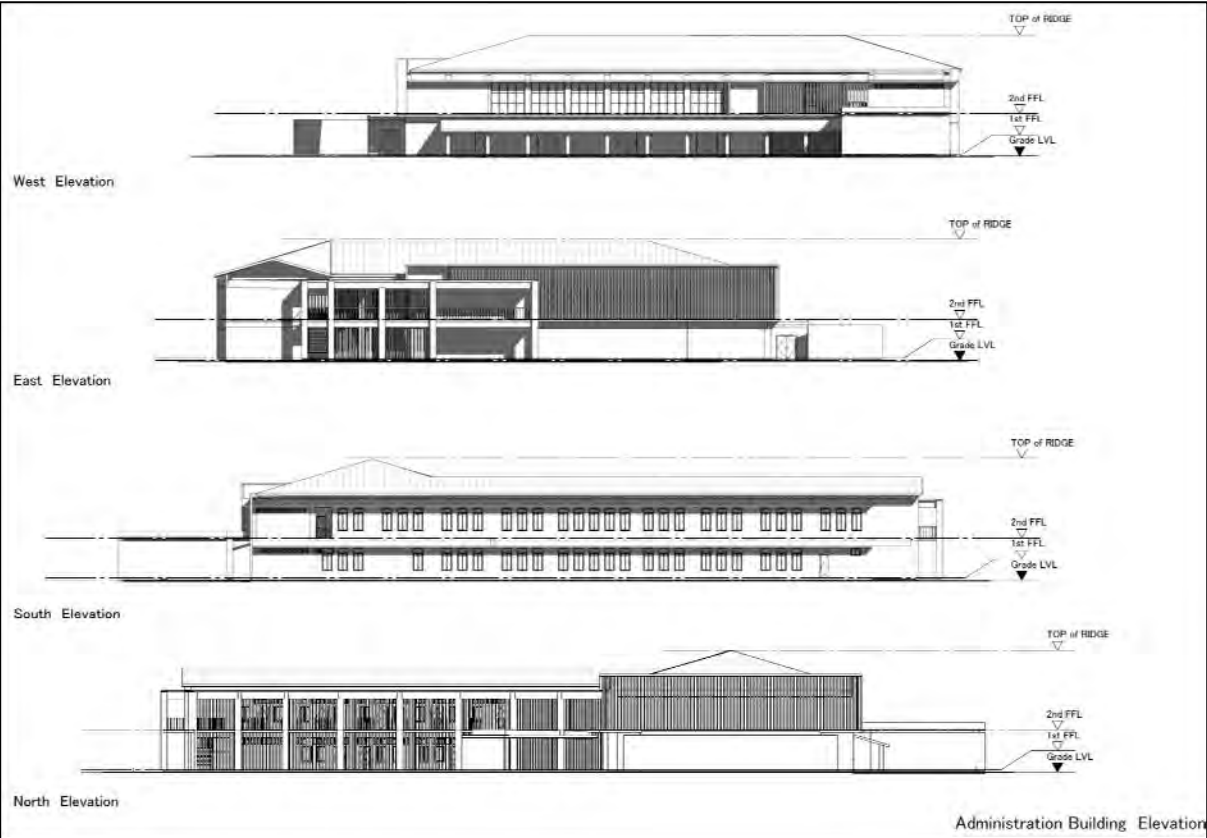


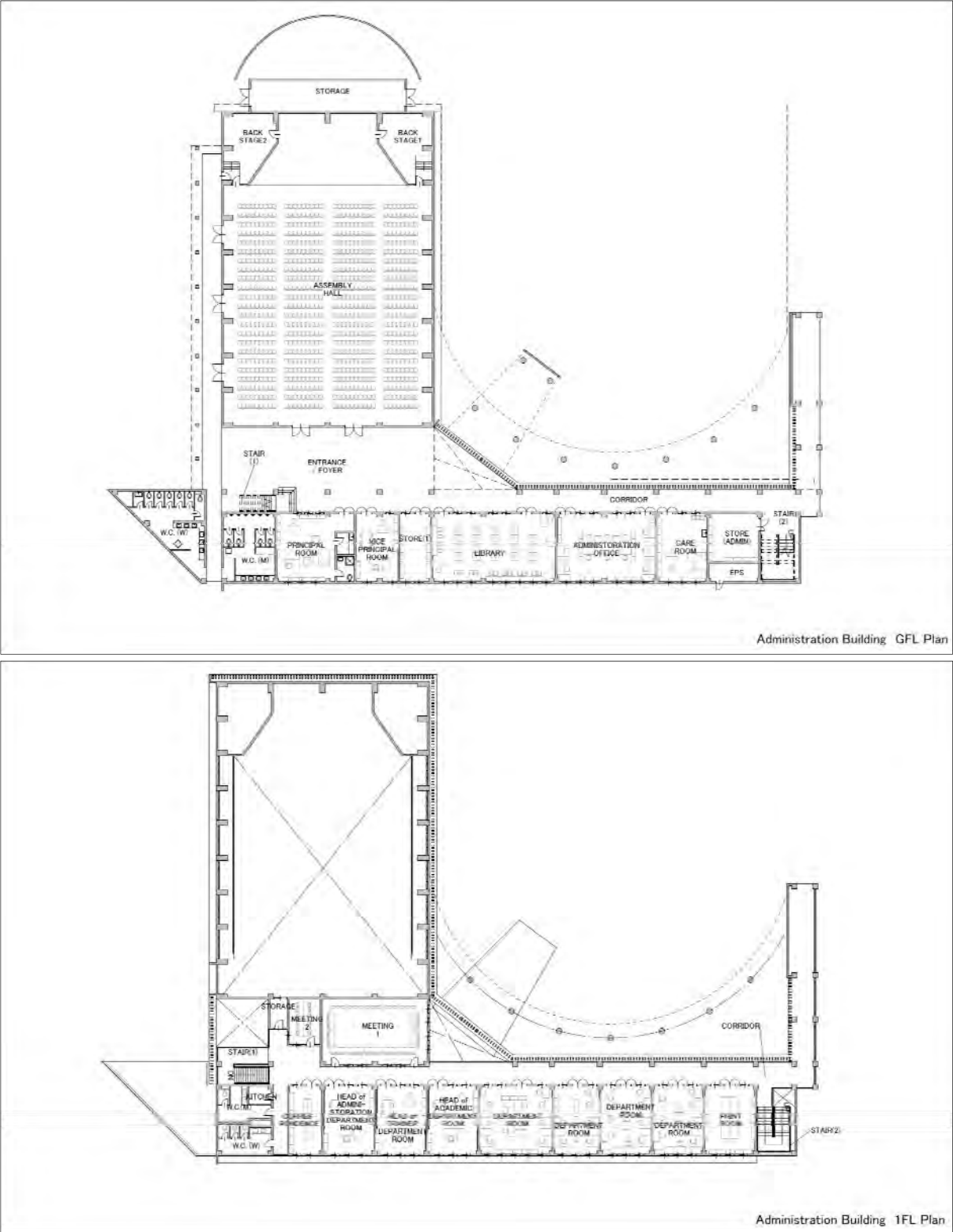
Figure 2.2.1 Proposed Layout of the Taungoo Education College

Note: The layout may be subject to modification keeping specification of facilities to be constructed unchanged
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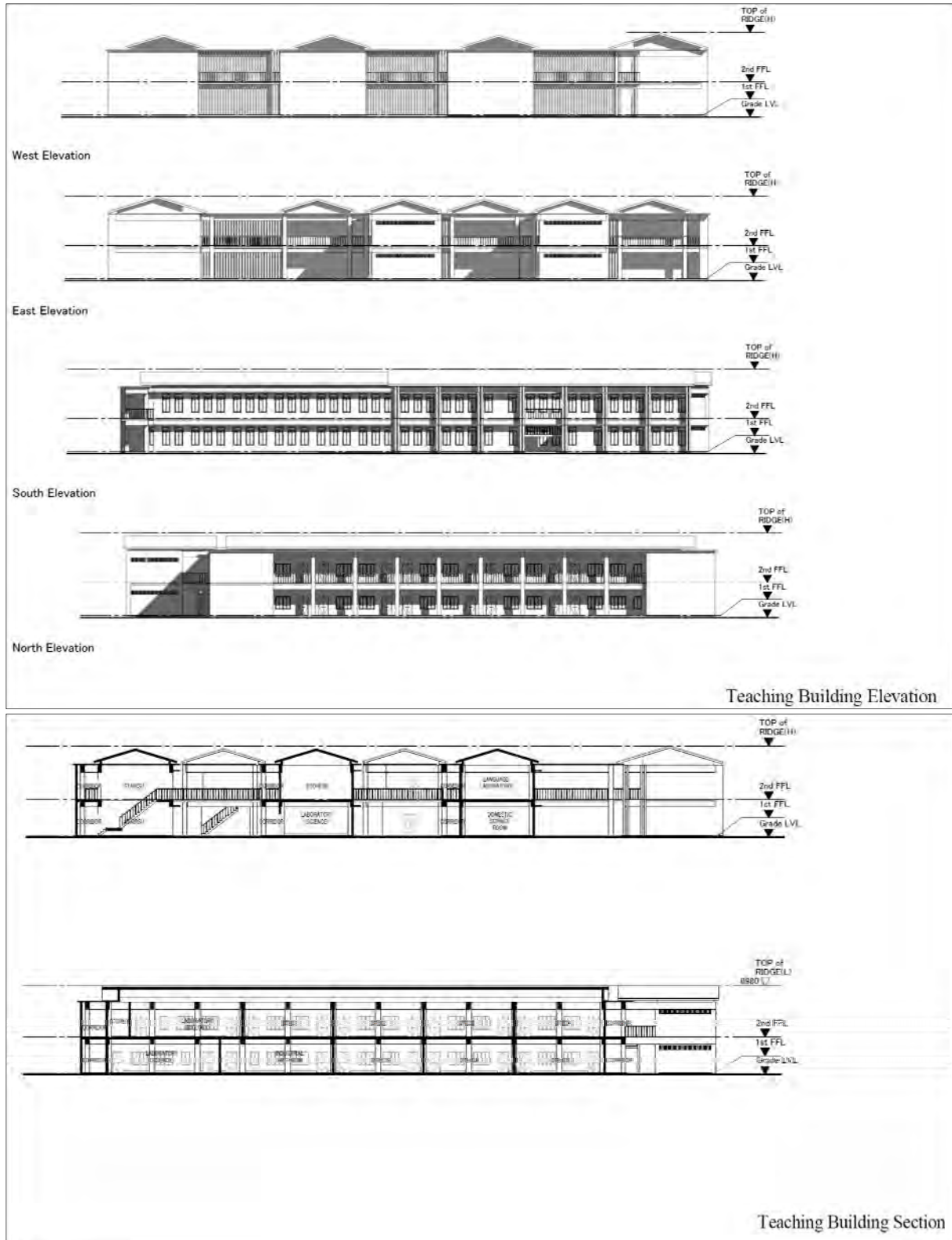
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Figure 2.2.2 Plan of Administration Building (Elevation & Section)



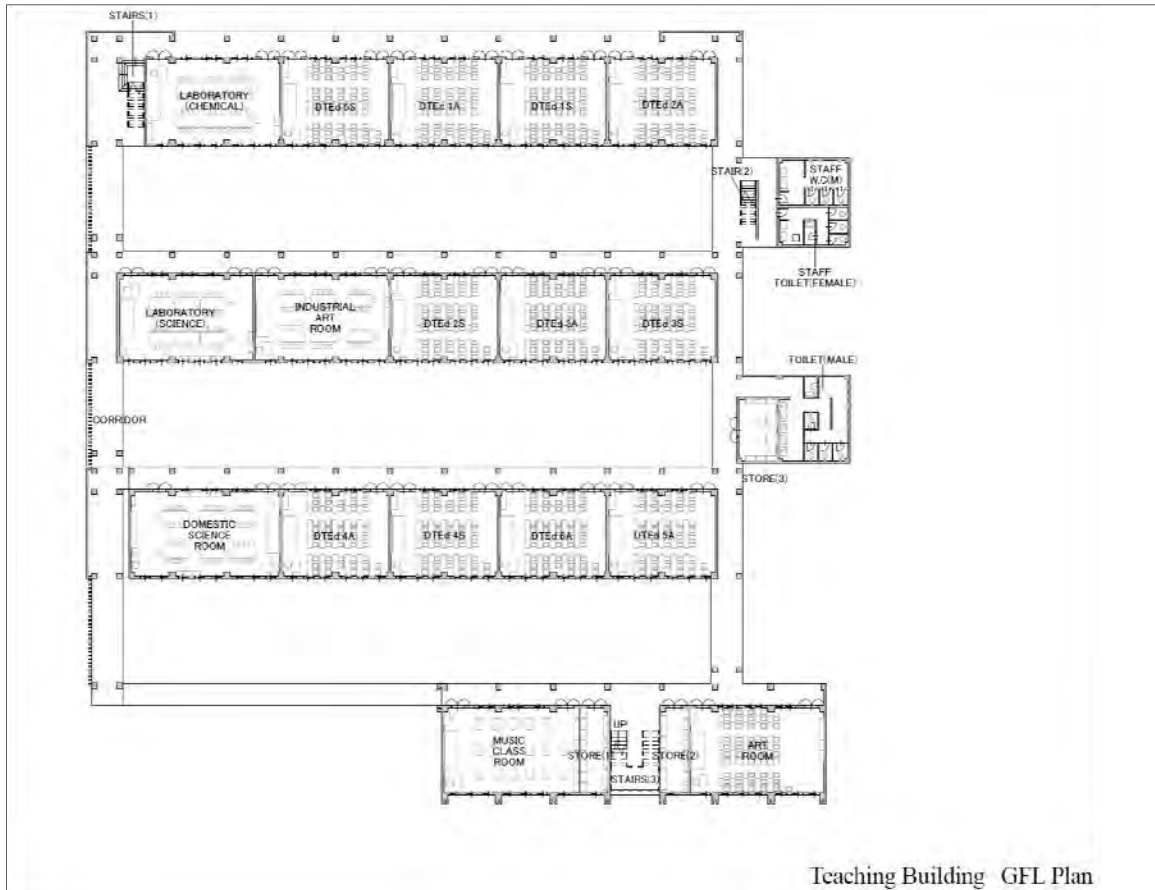
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Figure 2.2.3 Plan of Administration Building (Ground Floor & 1st Floor)

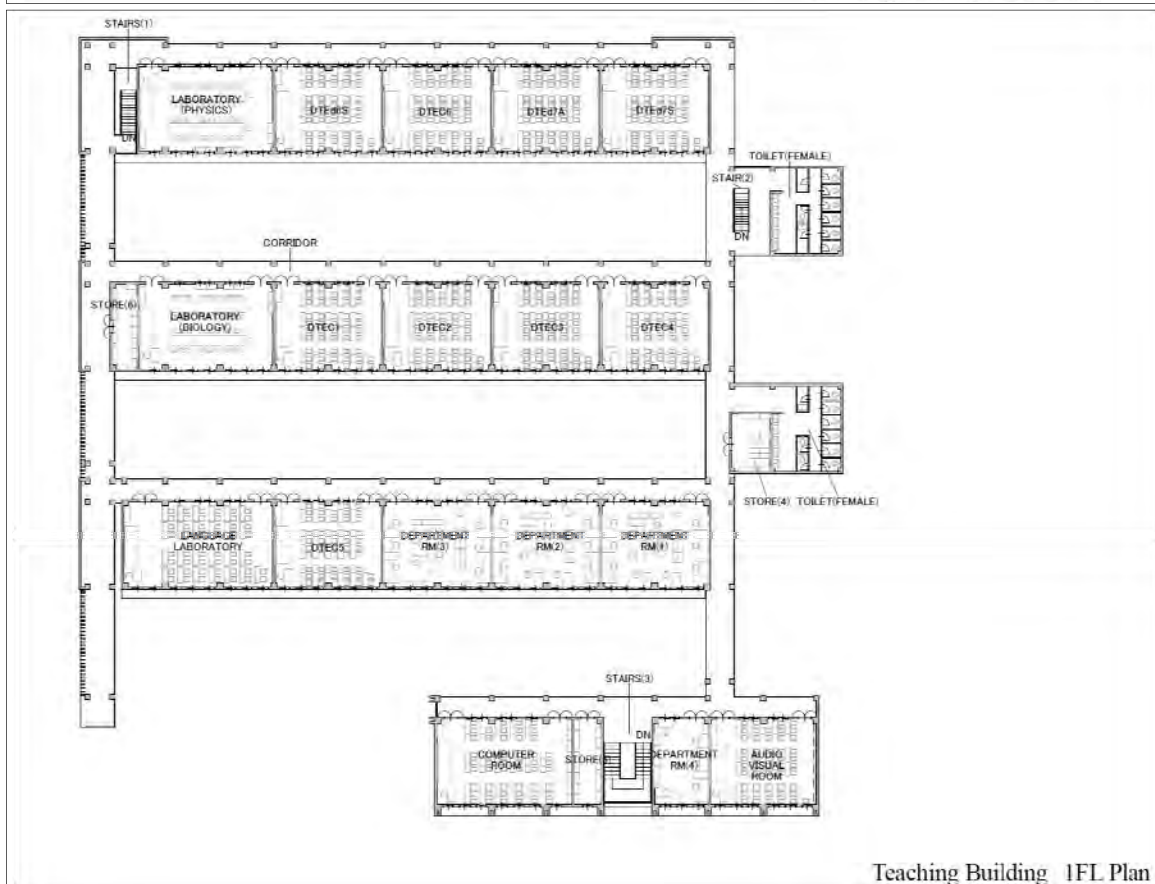


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Figure 2.2.4 Plan of Teaching Building (Elevation & Section)



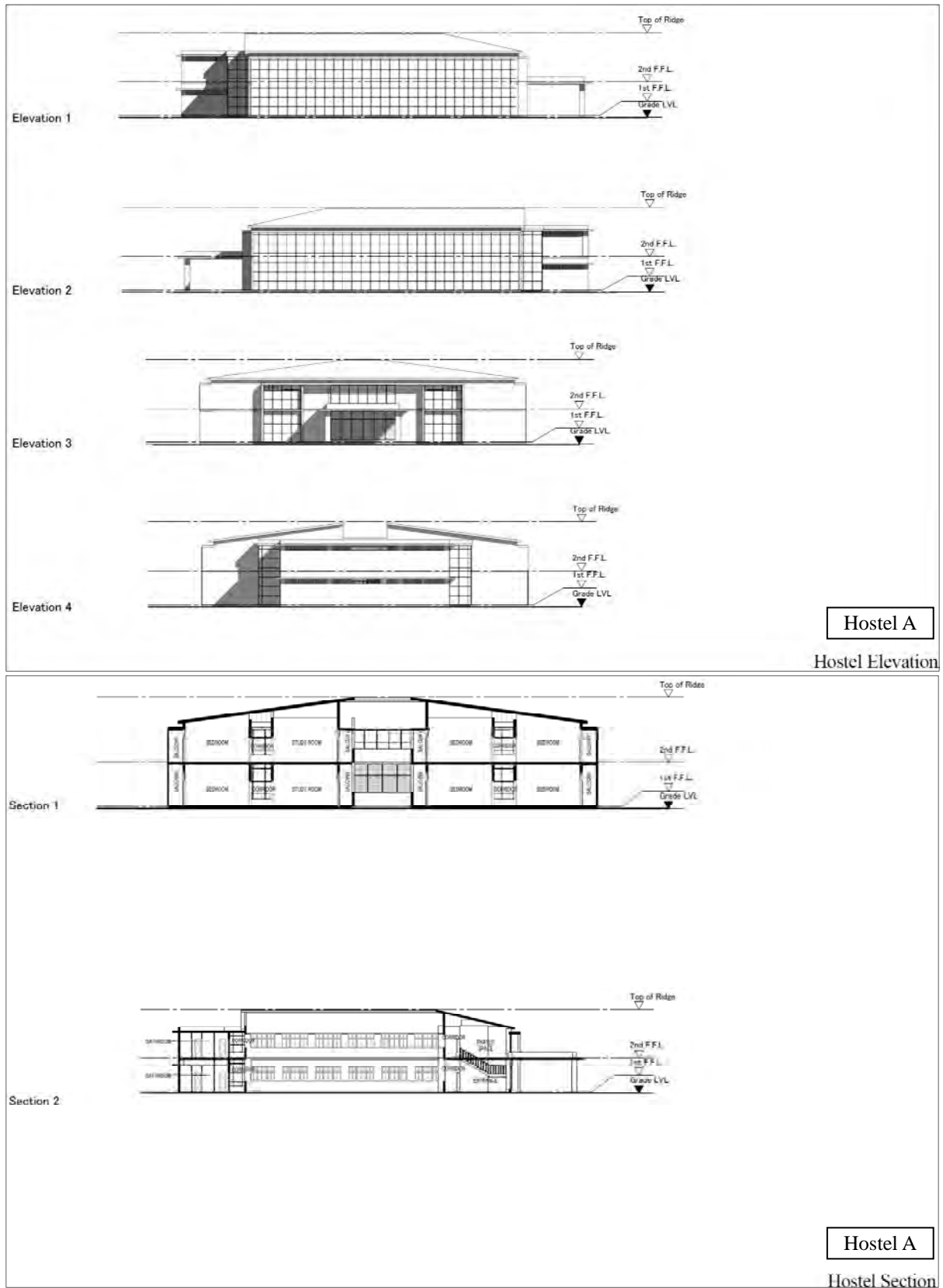
Teaching Building GFL Plan



Teaching Building 1FL Plan

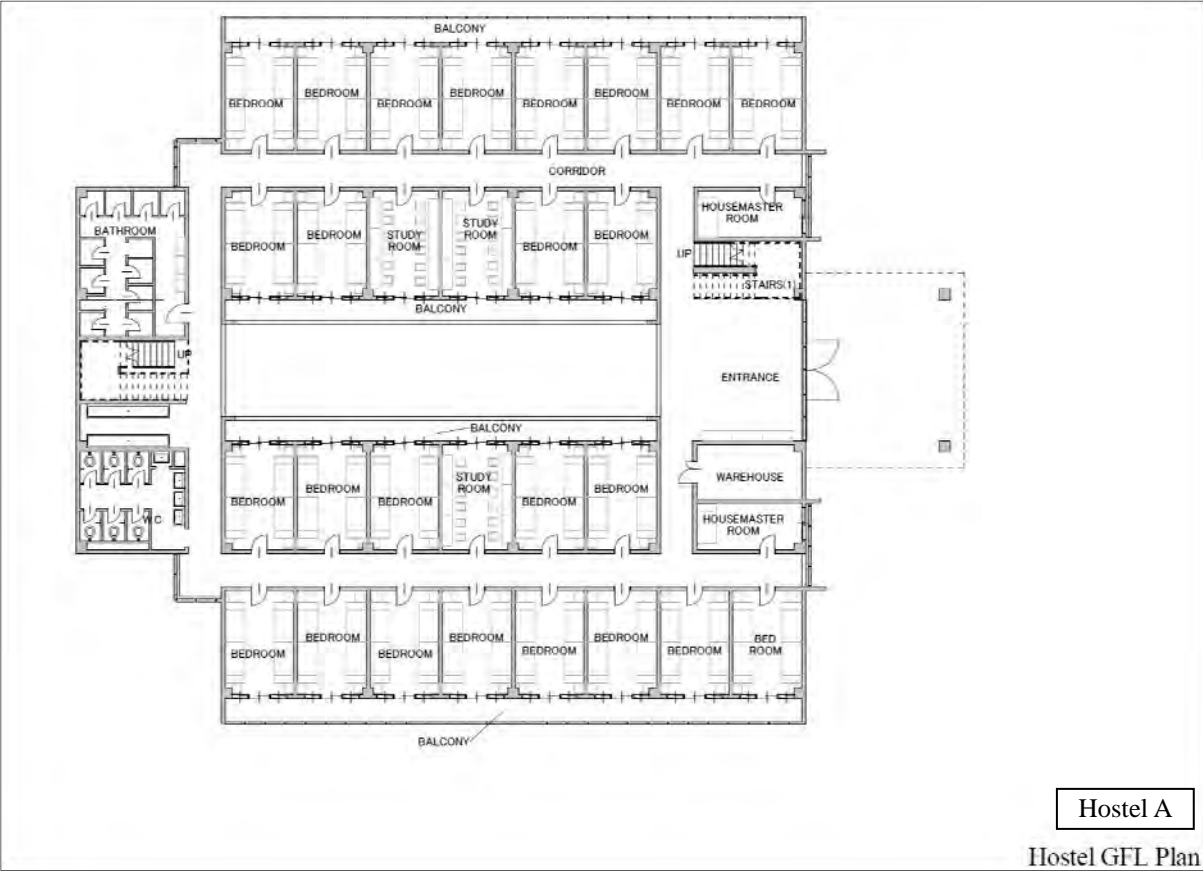
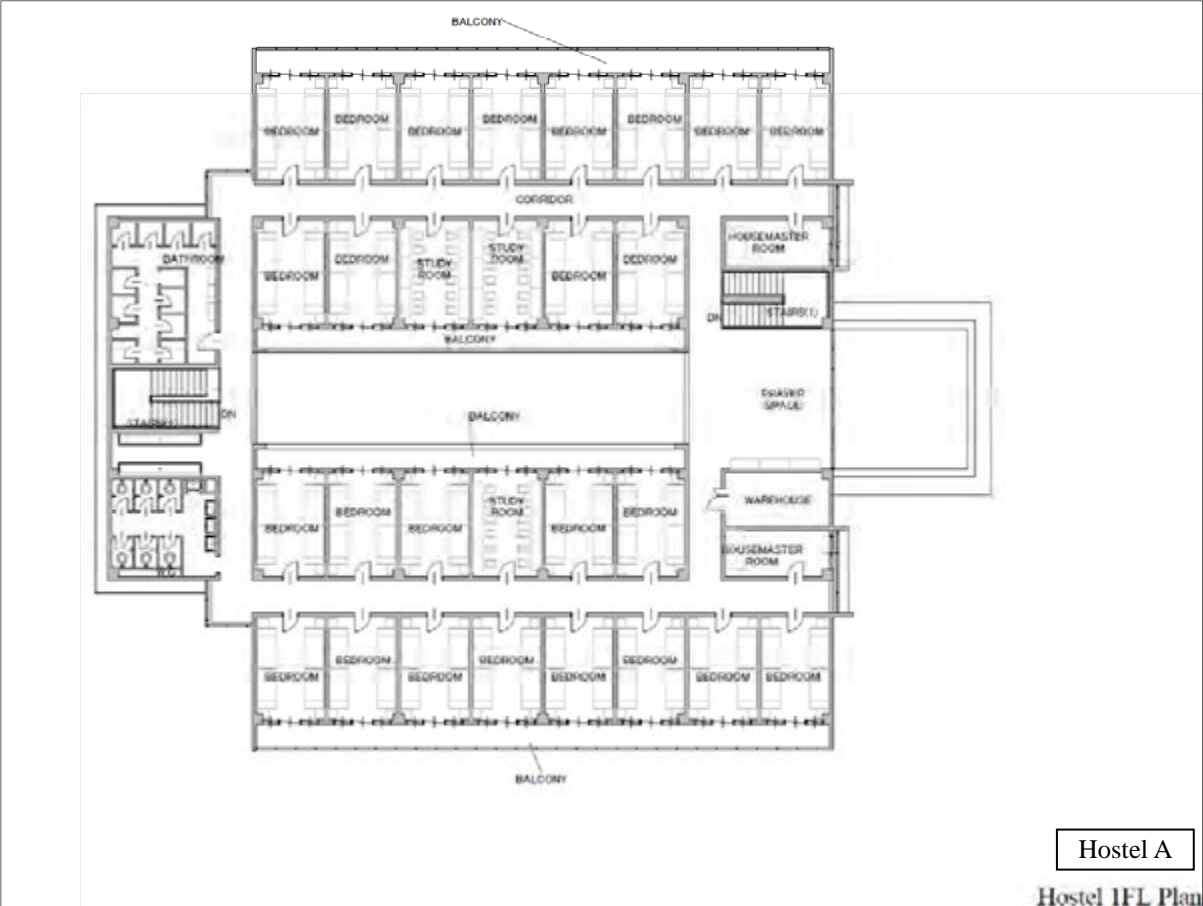
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Figure 2.2.5 Plan of Teaching Building (Ground Floor & 1st Floor)



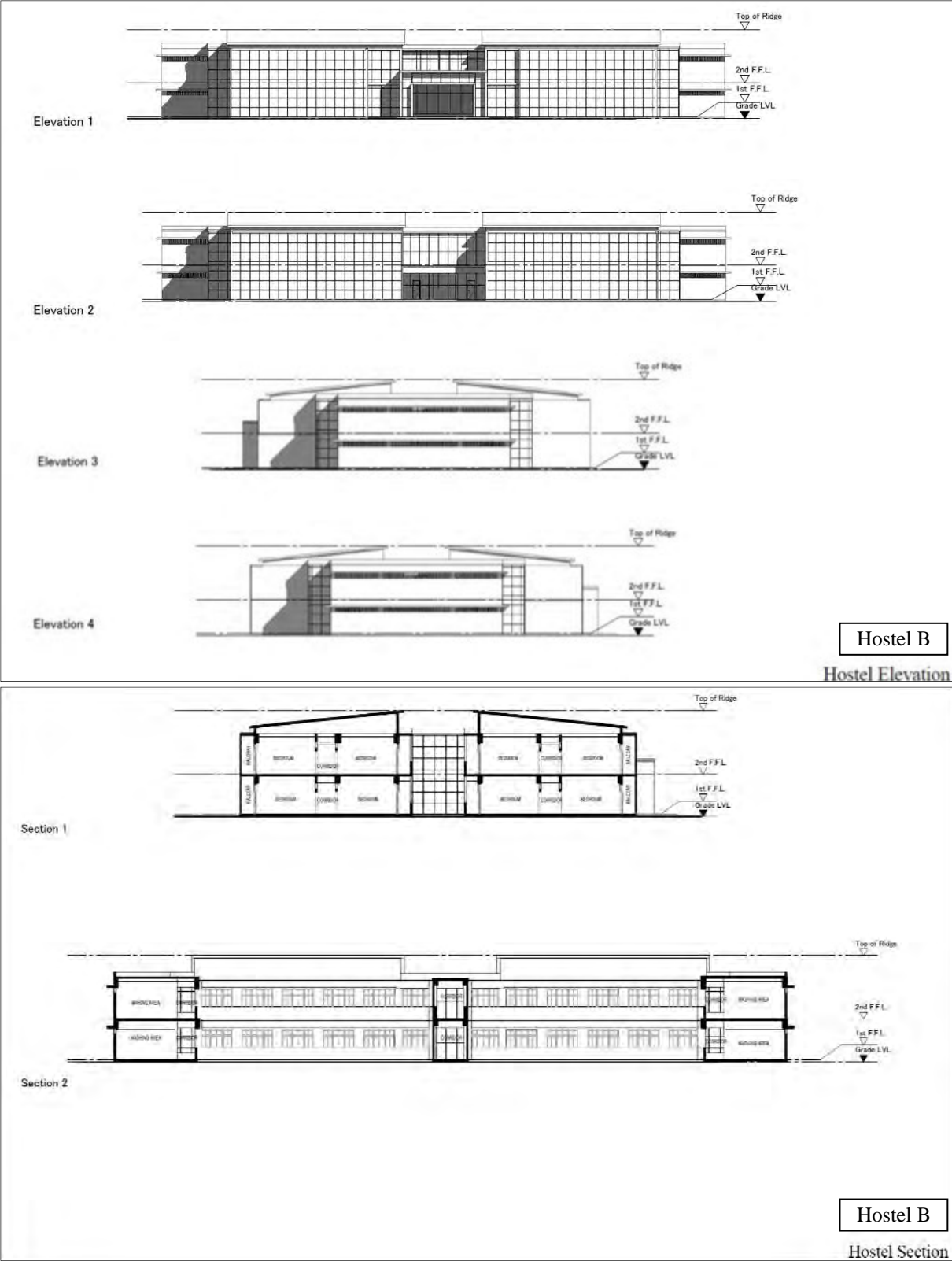
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Figure 2.2.6 Plan of Hostel A (Elevation & Section)



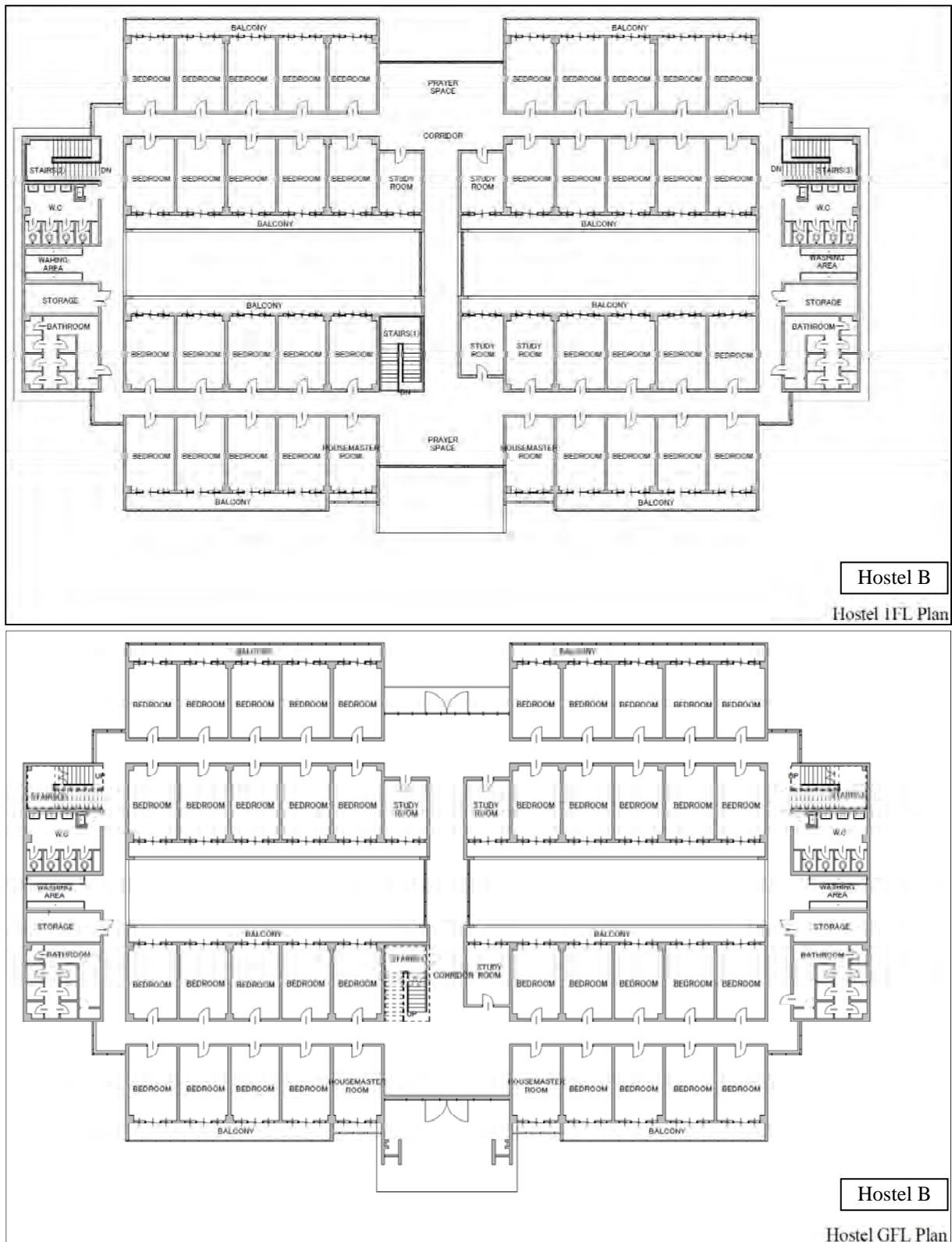
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Figure 2.2.7 Plan of Hostel A (Ground Floor & 1st Floor)



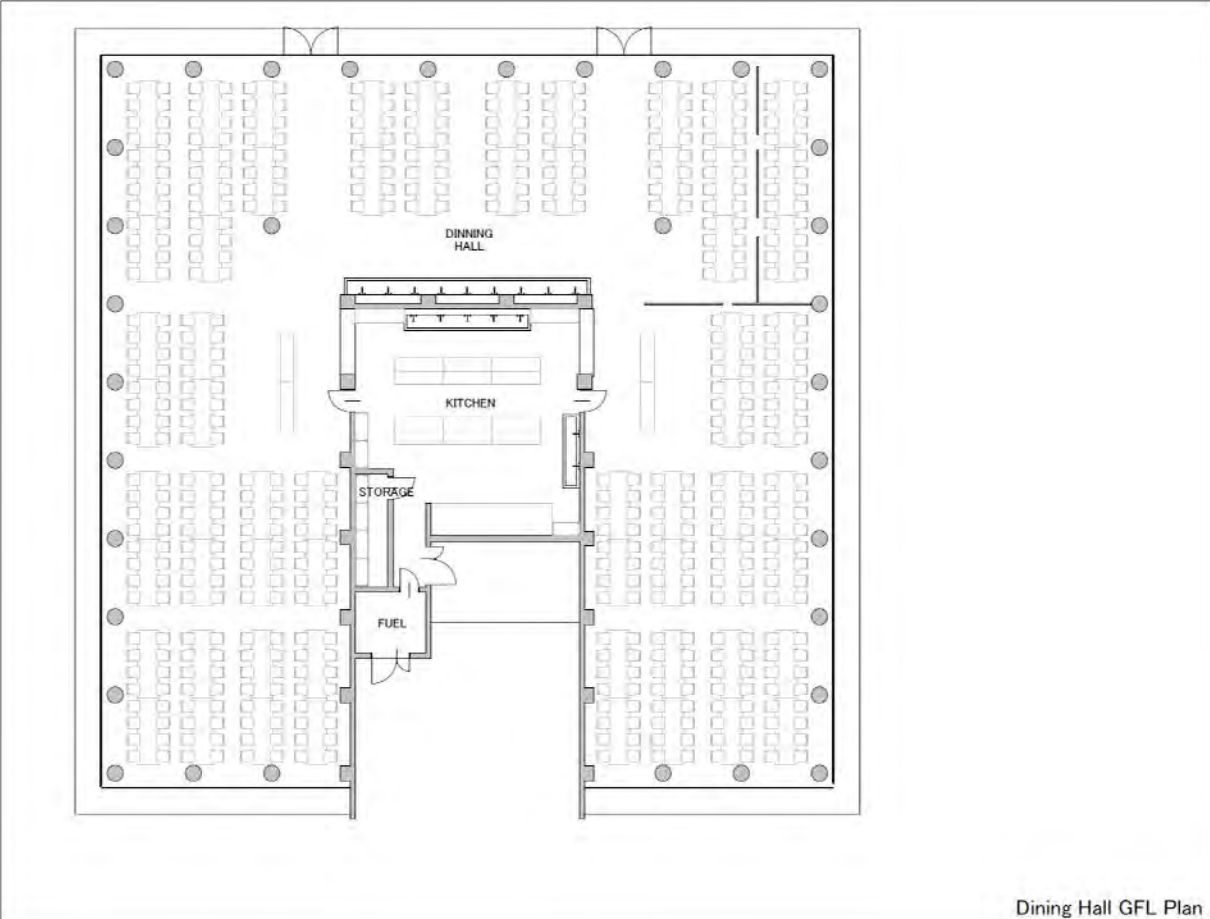
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Figure 2.2.8 Plan of Hostel B (Elevation & Section)



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Figure 2.2.9 Plan of Hostel B (Ground Floor & 1st Floor)



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Figure 2.2.10 Plan of Dining Hall

CHAPTER 3 ENVIRONMENTAL MANAGEMENT SYSTEM IN MYANMAR

3.1 Relevant Policy and Legislation on Environment

3.1.1 Constitution (2008)

Of the State Constitution (2008), the following Articles stipulate environmental protection.

- Article 45 : The State shall protect natural environment of the country
- Article 390 : It shall be the duty of every citizen of Myanmar to protect the natural environment

3.1.2 National Environmental Policy (1994)

The National Commission on Environmental Affairs (NCEA)¹ adopted the National Environmental Policy (NEP) in 1994 to ensure the incorporation of environmental concerns in planning for economic development as follows.

- To achieve harmony and balance between socio-economic, natural resources and environment through the integration of environmental considerations into the development process enhancing the quality of the life of all its citizens.
- Environmental Protection is should always be the primary objective in seeking development.

NEP emphasizes "the responsibility of the State and every citizen to preserve its natural resources in the interest of present and future generations".

3.1.3 Myanmar Agenda 21 (1997)

In order to develop national strategies for the implementation of the Global Agenda 21, NCEA formulated a blue print, the Myanmar Agenda 21, in 1997 in response to the call of the Earth Summit (UNCED). Namely, the Myanmar Agenda is;

- To mobilize and focus national efforts to achieve sustainable development.
- To facilitate the incorporation of environmental considerations in the development process of the economic and social sectors.

Thus, the Myanmar Agenda 21 may serve as a framework for integrating environmental considerations in future national development plans as well as sectoral and regional development plans in Myanmar.

3.1.4 Environmental Conservation Law (2012)

The Environmental Conservation Law was signed by the President on 30th March 2012 of which objectives are as follows. The law consists of 14 chapters and 42 articles.

- To implement the Myanmar National Environmental Policy.
- To lay down the basic principles and give guidance for systematic integration of the matters of environmental conservation in the sustainable development process.
- To emerge a healthy and clean environment and to conserve natural and cultural heritage.
- To reclaim ecosystems as may be possible which are starting to degenerate and disappear.
- To manage and implement for decrease and loss of natural resources and for enabling the sustainable use beneficially.
- To implement for promoting public awareness and cooperation in educational programmes.

¹ The National Commission for Environmental Affairs (NCEA), formed under the Ministry of Foreign Affairs in 1990, had played a role as a central/focal coordinating body for environmental matters, particularly adopting national policies on environment until 2011. At that time, the Minister of Foreign Affairs was the only one who had been involved in the international environmental conferences, for that reason who tried to organize and set up environmental governance in Myanmar.

- To promote international, regional and bilateral cooperation.
- To cooperate with Government departments, organizations, international organizations, non-government organizations and individuals.

3.1.5 Other Relevant Legislations on Environment

Besides the above, there are several laws and regulations relating to the environmental matters administered by various relevant ministries in Myanmar as summarized in Table 3.1.1 and Table 3.1.2

Table 3.1.1 Principal Legislations on Environment of Myanmar

Law and regulation	Year	Purpose
Factory Act	1951	To make effective arrangements in every factory for disposal of waste and effluence, and for matters of health, cleanliness and safety.
Public Health Law	1972	To promote and safeguard public health and to take necessary measures in respect of environmental health.
Territorial Sea and Maritime Zone Law	1977	To define and determine the Maritime Zone, Contiguous Zone, Exclusive Economic Zone and Continental Shelf and the right of the Union of Myanmar to exercise general and exclusive jurisdiction over these zones and the Continental Shelf in respect of preservation and protection of the marine environment, its resources and prevention of marine pollution.
Fishing Rights of Foreign Vessels Law	1989	To conserve fisheries and to enable systematic operation in fisheries with participation of foreign investors.
Marine Fisheries Law	1990	To conserve marine fisheries and to enable systematic operation in marine fisheries.
Forestry Law	1992	To implement forest policy and environmental conservation policy, to promote the sector of public cooperation in implementing these policies, to develop the economy of the State, to prevent destruction of forest and biodiversity, to carry out simultaneously conservation of natural forests and establishment of forest plantations and to contribute to the fuel requirements of the country.
National Environmental Policy	1994	To establish sound environment policies in the utilization of water, land, forest, mineral resources and other natural resources in order to conserve the environment and prevent its degradation.
Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law	1994	To protect wildlife, wild plants and conserve natural areas, to contribute towards works of natural scientific research, and to establish zoological gardens and botanical gardens
Myanmar Mines Law	1996	To implement mineral resources policy.
Fertilizer Law	2002	To boost development of the agricultural sector, control fertilizer businesses, and to facilitate conservation of soil and the environment.

Source: 1) United Nations Development Programme, 'The World of Information: Asia and Pacific Review', *The Economic and Business Report*, 1997 Sixteenth Edition; 2) United Nations Development Programme, 1998; 3) *Human Development Report*, United Nations Development Programme, New York.

Table 3.1.2 Major Legislation on Environment by Sector

Sectors	Relevant Laws and Acts on Environment
Administrative	1. Territorial Sea and Maritime Zones Law, 1977 2. Emergency Provisions Act, 1950 3. Essential Supplies and Services Act, 1947 4. Police Act, 1945 5. Poisons Act, 1919 6. Explosive Substances Act, 1908 7. Towns Act, 1907 8. Village Act, 1907 9. Yangon Police Act, 1899 10. Explosives Act, 1887 11. Penal Code, 1861 of Offences Affecting the Public Health, Safety, Convenience, Decency and Morals.
Agriculture and Irrigation	12. Plant Pest Quarantine Law, 1993 13. Pesticide Law, 1990 14. Embankment Act, 1909
Culture	15. Protection and Preservation of Cultural Heritage Region Law, 1998
City Development	16. Development Committees Law, 1993 17. Mandalay City Development Law, 1992 18. City of Yangon Development Law, 1990 (Amended in 1995 and again in 1996) 19. Underground Water Act, 1930 20. Water Power Act, 1927 21. City of Yangon Municipal Act, 1922 (The Law Amending the City of Yangon Municipal Act, 1991) 22. Yangon Water-works Act, 1885
Finance & Revenue	23. Myanmar Insurance Law, 1993
Forestry	24. Protection of Wild Life and Wild Plants and Conservation of Natural Areas Law, 1994 25. Forest Law, 1992

Sectors	Relevant Laws and Acts on Environment
Health	26. National Food Law, 1997 27. Traditional Drug Law, 1996 28. Prevention and Control of Communicable Diseases Law, 1995 29. National Drug Law, 1992 30. Union of Myanmar Public Health Law, 1972
Hotels and Tourism	31. Myanmar Hotel and Tourism Law, 1993
Industrial	32. Private Industrial Enterprise Law, 1990 33. Factories Act, 1951 34. Oilfield (Workers and Welfare) Act, 1951 35. Petroleum Act, 1934 36. Oilfields Act, 1918
Livestock and Fisheries	37. Animal Health and Development Law, 1993 38. Freshwater Fisheries Law, 1992 39. Myanmar Marine Fisheries Law, 1990 (The Law Amending the Myanmar Marine Fisheries Law, 1993) 40. Law Relating to Aquaculture, 1989 41. Law Relating to the Fishing Rights of Foreign Fishing Vessels, 1989 (The Law Amending the Law Relating to the Fishing Rights of Foreign Fishing Vessels, 1993)
Mining	42. Myanmar Gemstone Law, 1995 43. Myanmar Pearl Law, 1995 44. Myanmar Mines Law, 1994 45. Salt Enterprise Law, 1992 46. Land Acquisition (Mines) Act, 1885
Science and Technology	47. Science and Technology Development Law, 1994
Transportation	48. Highways Law, 2000 49. Motor Vehicles Law, 1964 (The Law Amending the Motor Vehicles Law of 1964 enacted in 1989) 50. Myanmar Aircraft Act, 1934 51. Inland Steam Vessels Act, 1917 52. Ports Act, 1908 53. Defile Traffic Act, 1907 54. Yangon Port Act, 1905 55. Canal Act, 1905 56. Obstruction in Fairways Act, 1881

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3.1.6 International Treaties and Agreements on Environment Issues

Myanmar has made commitments to international treaties and agreements on environmental issues as shown in Table 3.1.3.

Table 3.1.3 International Treaties and Agreements on Environmental Issues

International Environmental Conventions/Protocols/Agreements	Date of Signature	Date of Ratification	Date of Member	Cabinet Approval Date/No.
Plant Protection Agreement for the South-East Asia and the Pacific Region, Rome, 1956		4/11/1959 (Adherence)	4/11/1959	
Treaty Banning Nuclear Weapons Test in the Atmosphere in Outer Space and Under Water, Moscow, 1963	14/8/1963	15/11/1963 (Ratification)		
Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea-Bed and Ocean Floor and in the Subsoil there of, London, Moscow, Washington, 1971	11/2/1971			
Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons, and on their Destruction, London, Moscow, Washington, 1972	10/4/1972			
International Convention for the Prevention of Pollution from Ships, London, 1973	(Accession)	undertakes to give effect to this Convention under para 1 & 2 of Article 1 of the Protocol of 1978		
Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, London, 1973		4/8/1988 (Accession)	Except for Annexes III, IV and V of the Convention	
United Nations Convention on the Law of the Sea, Montego Bay, 1982	10/12/1982	21/5/1996(Ratification)		
United Nations Framework Convention on Climate Change, New York, 1992 (UNFCCC)	11/6/1992	25/11/1994 (Ratification)		41/94 9/11/94

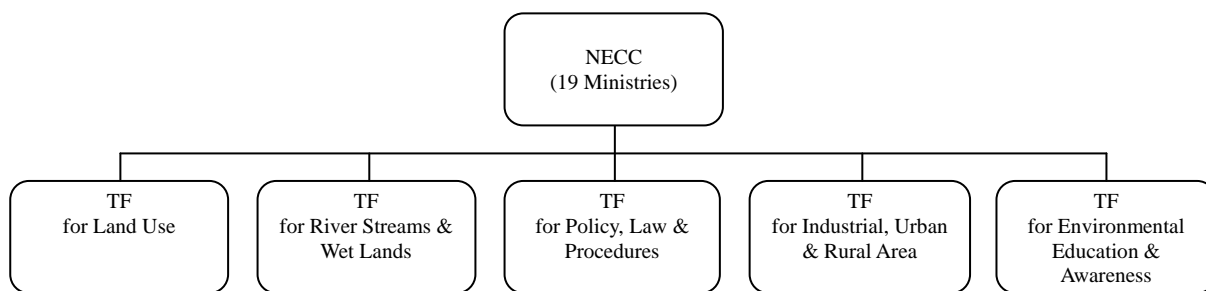
International Environmental Conventions/Protocols/Agreements	Date of Signature	Date of Ratification	Date of Member	Cabinet Approval Date/No.
Convention on Biological Diversity, Rio de Janeiro, 1992	11/6/1992	25/11/1994 (Ratification)		41/94 9/11/94
Treaty on the Non-Proliferation of Nuclear Weapons, London, Moscow, Washington, 1968		2/12/1992 (Accession)		
Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and their Destruction, Paris, 1993	14/1/1993			
International Tropical Timber Agreement (ITTA), Geneva, 1994	6/7/1995	31/1/1996 (Ratification)		
Vienna Convention for the Protection of the Ozone Layer, Vienna, 1985		24/11/1993 (Ratification)	22/2/1994	46/93
Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 1987		24/11/1993 (Ratification)	22/2/1994	46/93
London Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, London, 1990		24/11/1993 (Ratification)	22/2/1994	46/93
The Convention for the Protection of the World Culture and Natural Heritage, Paris, 1972		29/4/1994 (Acceptance)		6/94 9/2/94
ICAO ANNEX 16 Annex to the Convention on International Civil Aviation Environmental Protection Vol. I Aircraft Noise	(Accession)			
ICAO ANNEX 16 Annex to the Convention on International Civil Aviation Environmental Protection Vol. II Aircraft Engine Emission	(Accession)			
Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space Including the Moon and Other Celestial Bodies (Outer Space Treaty), London, Moscow, Washington, 1967	22/5/1967	18/3/1970 (Ratification)		
Agreement on the Networks of Aquaculture Centres in Asia and the Pacific, Bangkok, 1988		22/5/1990 (Accession)		
South East Asia Nuclear Weapon Free Zone Treaty, Bangkok, 1995	15/12/1995	16/7/1996 (Ratification)		
United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and / or Desertification, Particularly in Africa, Paris, 1994 (UNCCD)		2/1/1997 (Accession)	2/4/1997	40/96 4/12/96
Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, D.C., 1973; and this convention as amended in Bonn, Germany, 1979 (CITES)		13/6/1997 (Accession)	11/9/1997	17/97 30/4/97
Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, New York, 1994		21/5/1996 (Accession)		
Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, Rome, 1973		8/9/1994 (Acceptance)		
ASEAN Agreement on the Conservation of Nature and Nature Resources, Kuala Lumpur, 1985	16/10/1997			
Cartagena Protocol on Biosafety, Cartagena, 2000	11/5/2001			13/2001 22/3/01
ASEAN Agreement on Transboundary Haze Pollution	10/6/2002	13/3/2003 (Ratification)		7/2003 27/2/03
International Treaty on Plant Genetic Resources for Food and Agriculture, 2001		4/12/2004 (Ratification)	29/6/2004	
Kyoto Protocol to the Convention on Climate Change, Kyoto, 1997		13/8/2003 (Accession)		26/2003 16/7/03
Stockholm Convention on Persistent Organic Pollutants (POPs), 2001		18/4/2004 (Accession)	18/7/2004	14/2004 1/4/04

Source: National Commission of Environmental Affairs (NCEA) during 1959 and 2004

3.2 Organizations for Environmental Management

3.2.1 National Environmental Conservation Committee (NECC)

The National Environmental Conservation Committee (NECC) of the Lower House (*Pyithu Hluttaw*; similar to the Congress in Myanmar Language) is a policy maker which consists of 19 Ministries and five Task Forces as shown in Table 3.2.1.



TF: Task Force

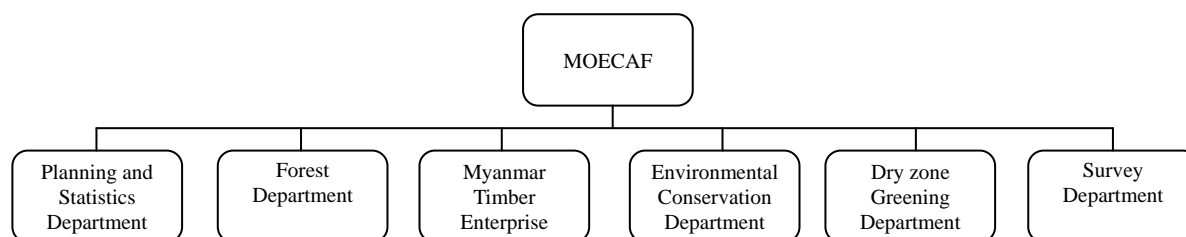
Source: MOECAF

Figure 3.2.1 National Environmental Conservation Committee

3.2.2 Ministry of Environmental Conservation and Forestry (MOECAF)

After the selected government in 2010, the Ministry of Forestry was reformed into the Ministry of Environmental Conservation and Forestry (MOECAF) in 2011 as a national level agency to coordinate and handle environmental related issues and matters including the implementation of international environmental agreements signed by government, law enforcements and information dissemination.

Since then the National Commission for Environmental Affairs (NCEA) was cancelled and MOECAF has been acting as the focal coordinating body for country's overall environmental management and environmental matters. Under the MOECAF, there are five departments as shown in Figure 3.2.2.



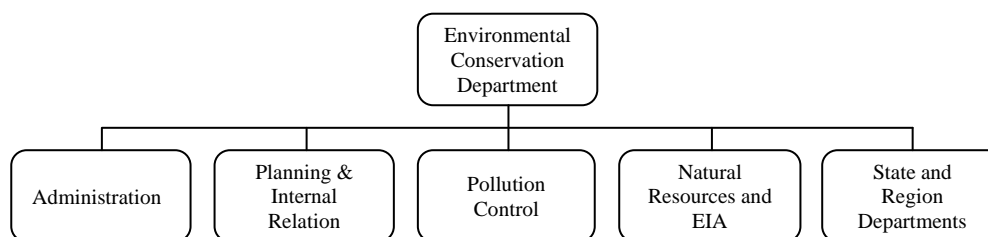
Source: MOECAF

Figure 3.2.2 Departments of Ministry of Environmental Conservation and Forest

The Environmental Conservation Department (ECD) was created in October 11, 2012 to take responsibility for the effective implementation of environmental conservation and management in Myanmar. The objectives of ECD are as follows.

- ✓ To implement the national environment policy
- ✓ To develop short, medium and long term strategy, policy and planning for the integration of environmental consideration into the sustainable development process
- ✓ To manage natural resources conservation and sustainable utilization
- ✓ To manage the pollution control on water, air and land for environmental sustainability
- ✓ To cooperate with government organization, civil societies, private and international organizations for the environmental affairs.

MOECAF is planning to organize sub divisions under ECD and extend the man power in near future with the aim of effectively implement and manage the environmental regulations and resources in country wide as shown in Figure 3.2.3.



Source: MOECAAF

Figure 3.2.3 Sub Divisions of Environmental Conservation Department (Draft)

3.2.3 Sectoral Framework

Different ministries and official entities involved in dealing with environmental issues also have their own policies, capacities, processes, legislations, and budgets for the environmental issues they have. Governmental organizations and their prime environmental issues are summarized in Table 3.2.1.

Table 3.2.1 Governmental Organizations and Relevant Environmental Issues

Governmental Organizations	Environmental Issues													
	Air Pollution	Water Pollution	Banned Pesticides	Environment in Factory	Toxic chemicals	Solid Waste	Energy	Water Supply	Waste Water Treat	Forest and Desert	Biodiversity	Natural Resources	Natural Disaster	Environmental Education
Ministry of Environmental Conservation and Forestry	√	√	√	√	√	√	√	√	√	√	√	√	na	√
Ministry of Agriculture and Irrigation	-	√	√	-	√	√	-	√	-	√	-	√	-	√
Ministry of Livestock and Fisheries	-	-	-	-	-	-	-	-	-	-	-	√	-	-
Ministry of Industry	-	√	na	-	√	√	-	na	√	-	-	-	-	-
Ministry of Health	na	√	na	na	√	√	-	√	-	-	-	-	-	√
Ministry of Energy	-	-	-	-	-	-	√	-	-	-	-	na	-	-
Ministry of Electric Power	-	-	-	-	-	-	-	na	-	-	-	na	-	-
Ministry of Transport	-	-	-	-	-	-	-	√	-	-	-	na	-	-
Ministry of Home Affairs	-	na	-	-	-	-	-	-	-	-	-	-	√	-
Ministry of Labour	√	√	-	√	-	-	-	-	√	-	-	-	-	-
Ministry of Mine	√	na	-	-	na	na	-	-	-	-	-	√	-	-
Ministry of Science and Technology	na	na	na	-	√	√	√	-	-	-	-	-	-	√
Ministry of Education	-	-	-	-	-	-	-	-	-	-	-	-	-	√
Ministry of National Planning and Economic Development	-	√	-	-	-	-	-	-	-	-	-	-	-	-
Ministry of Progress of Border Areas, National Races and Development Affairs	-	-	-	-	-	-	-	√	-	√	-	-	na	-
Myanmar Investment Commission	-	√	-	-	-	-	-	-	-	-	-	√	-	-
National commission for Water and Sanitation	-	na	-	-	-	-	-	√	-	-	-	-	-	-
Industrial Development Central Committee	√	√	-	-	-	-	-	-	-	-	-	-	-	-
Disaster Prevention Central Committee	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yangon City Development Committee	√	√	-	-	√	√	-	-	√	-	-	-	-	-
Mandalay City Development Committee	√	√	-	-	√	√	-	-	√	-	-	-	-	-

Note: √ ; Relevant Organization, - ; No responsible, na; Lack of information

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3.2.4 Environmental NGOs

There are NGOs cooperating in the environmental activities of Myanmar as follows.

- Red Cross
- Fire Volunteer Service
- Forest Resources and Environment Development Association
- Wildlife Conservation Society
- California Academy of Science
- International Center for Integrated Mountain Development
- Botanic Gardens Conservation International
- Conservation on Biodiversity
- Smithsonian Institution
- Wild Birds Society of Japan
- Asian Elephant Specialist Group

3.3 Environmental Impact Assessment System

Points to keep in mind on introduction of EIA Systems in Myanmar mentioning below are volatile situation as of August 2013.

3.3.1 Environmental Conservation Rules

As precise regulations for the Environmental Conservation Law (2012), an Environmental Conservation Rules was drafted by the Ministry of Environmental Conservation and Forest which was approved by the Cabinet on 11th June 2013 and being reviewed in the Parliament as of August 2013. Contents of the Draft Environmental Conservation Rules are shown in Table 3.3.1 (which however may be subject to modification), in which environmental impact assessment (EIA) is specified.

Table 3.3.1 Topics of Deaft Environmental Conservation Rules

No.	Topic	No.	Topic
1.	Title and Definition	9.	Urban Environment
2.	Duties and Powers of ECC	10.	Waste Management
3.	Duties and Powers of Ministry	11.	Conservation of Natural Resource & Natural Heritage
4.	Duties and Powers of Department	12.	Environmental Impact Assessment
5.	Environmental Management Fund	13.	Prior Permission
6.	Environment Emergency	14.	Prohibition
7.	Environment Standards	15.	Offers and penalties
8.	Environment Conservation	16.	Miscellaneous

Source: Myanmar Environmental Conservation Law, and Status of Environmental Rules and Guidelines Preparation, Hla Maung Thein, Deputy Director General, Environmental Conservation Department, MOECAF

3.3.2 EIA Procedures

According to MOECAF, regulations on EIA have been developed having a technical assistance from ADB (Asian Development Bank), which are being discussed in the Parliament for a final approval as of August 2013.

In addition, a draft Environmental Impact Assessment (EIA) Rules has been prepared by the Ministry of Environmental Conservation and Forestry (MOECAF) which consists of 7 Chapters as shown in Table 3.3.2.

Table 3.3.2 Chapters of EIA Rules (Draft)

Chapter	Topic	Chapter	Topic
I	Titles and Definitions	V	Investigation
II	Establishment of EIA Process	VI	Reporting, Review and Approval
III	Screening	VII	Monitoring
IV	Scoping	-	-

Source: Draft Environmental Impact Assessment (EIA) Rules, MOECAF

- In accordance with the draft EIA rules, a draft list of projects categorization for IEE/EIA as well as a draft flowchart for IEE/EIA has been prepared by MOECAAF as relevant guidelines for IEE/EIA procedures.
- MOECAAF held a public consultation meeting with regard to the EIA procedures for the private sector on 26th July 2013. Based on the comments expressed by the consultation, revisions of the draft rules and its procedures are being revised as of August 2013.
- On the other hand, the Myanmar Investment Commission (MIC) has asked all the development projects passing through to conduct proper EIA from middle half of 2012.

3.3.3 National Environmental Quality Standards

According to MOECAAF, circumstances of preparation on environmental quality standards in Myanmar are summarized as follows. (However, points to keep in mind on introduction of the standards in Myanmar mentioning below are volatile situation as of August 2013.)

- So far, MOECAAF has referred to relevant standards on environment of public entities such as World Bank Group and ADB.
- However, sub-committees under 19 ministries of Myanmar are discussing introduction of national environmental quality standards under cooperation of ADB as of August 2013.
- Laying down an environmental standard on industrial waste water quality has priority over national environmental quality standards to be prepared.
- The Myanmar Government tries to prepare a standard in one sector within six months.

CHAPTER 4 ENVIRONMENTAL AND SOCIAL CONDITION IN PROJECT AREA

4.1 Pollution

4.1.1 Air Quality

An ambient air quality monitoring survey was carried out in March, 2013 of which main aim is to reveal the preconstruction background ambient air quality status around the project site as well as the urban area of Taungoo Township.

Table 4.1.1 presents the air quality monitoring sites.

Table 4.1.1 Air Quality Monitoring Sites

Monitoring Sites	Monitoring Date	GPS Position	Level above the ground (m)	Description
Point 1	28 th March 2013	N 18°57'3.4'' E 96°21'3.8''	1.5	Shan Ywar Monastery (South of the project site)
Point 2	29 th March 2013	N18°56'5.8'' E 96 25'6.7''	1.5	East of the project area (West of the Center of Taungoo Township)

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The extreme weather which might affect the results was not observed during the baseline air monitoring period.

The results of the air quality are summarized in Table 4.1.2. In addition, Table 4.1.2 shows analytical comparisons between the major air pollutants monitored and relevant WHO and USEPA standards.

Table 4.1.2 Air Quality (24 hours average) Monitored and WHO/USEPA Standards

Monitoring Site	CO (ppm)*	NO ₂ (ppb)**	SO ₂ (ppb)***	PM ₁₀ (µg/m ³)
Point 1	1	42	2	148
Point 2	1	44	1	125
WHO (Air Quality Guidelines)	10**** (mg/m ³ /8 hour)	40 (µg/m ³ -annual mean)	20 (µg/m ³ -24 hour mean)	50 (µg/m ³ -24 hour mean)
USEPA (NAAQ)	9 (ppm-8 hour)	100 (ppb-1 hour)	75 (ppb-1 hour)	150 (µg/m ³ -24 hour)

* CO : 1 ppm ≙ 1.146 mg/m³

** NO₂ : 42 ppb ≙ 79.04µg/m³, 44 ppb ≙ 82.80µg/m³

*** SO₂ : 2 ppb ≙ 5.24µg/m³, 1 ppb ≙ 2.62µg/m³

**** The World Health Organization's guidelines for carbon monoxide exposure (WHO, 1987)

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According to Table 4.1.2, it can be understood that NO₂ and PM₁₀ in the two points monitored show higher values than those of WHO Standards. Possible reasons for those air pollutants which showed higher values than each WHO standard are considered as follows.

- NO₂: Influence of exhaust gases of vehicles of Taungoo Road as more than 68 cars of the daily traffic volume excluding motorbikes were observed in the road.
- PM₁₀: In addition to the exhaust gases of the traffic cars in the Taungoo Road, it is considered that soil particles from surrounding field at a dry season when the monitoring surveys were carried out might have some impacts on the monitoring results.

4.1.2 Water Quality

In-situ water quality tests were performed at 6 water sampling points of surface water (SW) and the ground water (GW) in and around the project area. Table 4.1.3 shows the sampling points.

Table 4.1.3 Sampling Points for Water Quality Tests

Sampling Point	Sample Type	GPS Position	Geographic Location
SW-1	Surface water	18°57'23.00"N, 96°21'11.70"E	The irrigation inlet near southern boundary of the site
SW-2	Surface water	18°57'24.90"N, 96°21'05.40"E	E-W crossing of the irrigation channel in the middle of the site
GW-1	Ground water	18°57'22.10"N, 96°21'47.00"E	Nyaung Gaing village (out of the project site)
GW-2	Ground water	18°57'18.20"N, 96°21'23.90"E	Shan Ywar Monastery (out of the project site)
GW-3	Ground water	18°57'20.50"N, 96°20'53.70"E	A small village, southern part of the site (out of the project site)
GW-4	Ground water	18°57'35.10"N, 96°20'52.70"E	Myin Sa Khwet village (not in project site)

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The results of the tests are shown in Table 4.1.4.

Table 4.1.4 Results of In-situ Water Quality Tests

Parameters	SW-1	SW-2	GW-1	GW-2	GW-3	GW-4
pH	6.60	5.45	6.72	5.60	5.0	5.83
EC (μS/cm)	262.83	231.50	245.00	192.58	178.58	190.25
TDS (ppm)	131.50	116.00	122.42	96.08	89.33	95.00
Temp (°C)	31.32	27.13	28.28	27.32	27.67	27.98
Turbidity (FNU)	12.21	26.07	1.33	5.59	3.88	3.97
DO (mg/l)	6.00	4.80	4.90	4.80	5.82	5.20
ORP	-21.32	-59.74	-64.07	-21.35	4.63	-10.47
Fecal Coliforms (cfu/100ml)	0	0	0	1.1x10 ⁴	0	0
E.coli (cfu/100ml)	0	0	0	0	0	0
Total Coliforms (cfu/100ml)	0	0	0	1.1x10 ⁴	0	0
SS (Suspended Solids) (mg/l)	146	136	179	123	95	93
Total Hardness (mg/l)	96	68	96	52	100	104
BOD (mg/l)	1.0	1.5	1.0	1.0	0.5	1.0
Alkalinity (mg/l)	36	24	32	28	36	24
COD (mg/l)	4.78	3.31	1.104	3.68	5.52	3.31
Fe (mg/l)	0.001	0.001	0.001	0.001	0.004	0.002
Chloride (mg/l)	127.996	123.996	86.99	44.99	107.99	116.99
Salinity (ppt)	nil	nil	nil	nil	nil	nil

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For the analysis of the water quality monitored, some Japanese relevant standards on water quality are applied. Initially, Table 4.1.5 shows the Environmental quality standards for conservation of the living environment (rivers) of Ministry of Environment of Japan is used for the analysis, especially for surface water quality at sampling points of SW-1 and SW-2.

Table 4.1.5 Environmental Quality Standards for Conservation of the Living Environment (Rivers)

Item class	Water Use	Standard Value				
		pH	BOD	SS	DO	Total Coliform
AA	Water supply class 1, conservation of natural environment, and uses Listed in A-E	6.5 ≤ pH ≤ 8.5	≤ 1mg/L	≤ 25 mg/L	≥ 7.5 mg/L	≤ 50MPN/100mL
A	Water supply class 2, fishery class 1, bathing and uses Issued in B-E	6.5 ≤ pH ≤ 8.5	≤ 2mg/L	≤ 25 mg/L	≥ 7.5 mg/L	≤ 1,000MPN/100mL
B	Water supply class 3, fishery class 2, and uses Issued in C-E	6.5 ≤ pH ≤ 8.5	≤ 3mg/L	≤ 25 mg/L	≥ 5 mg/L	≤ 5,000MPN/100mL
C	Fishery class 3, industrial water class 1, and uses Issued in D-E	6.5 ≤ pH ≤ 8.5	≤ 5mg/L	≤ 50 mg/L	≥ 7.5 mg/L	-
D	Industrial water class 2, agricultural water, and uses Issued in E	6.0 ≤ pH ≤ 8.5	≤ 8mg/L	≤ 100 mg/L	≥ 2 mg/L	-
E	Industrial water class 3 and conservation of environment	6.0 ≤ pH ≤ 8.5	≤ 10mg/L	Floating matter such as garbage should not be observed.	≥ 2 mg/L	-

Remarks 1. Standard values are based on daily average values. The same applies to the standard values of lakes and coastal waters.

2. At intake for agriculture, pH shall be between 6.0 and 7.5 and DO shall be more than 5 mg/L. The same applies to the standard values of lakes

Source : Ministry of Environment, Japan (<http://www.env.go.jp/en/water/wq/wp.pdf>)

According to Table 4.1.4 and Table 4.1.5, it can be considered that surface water qualities (pH, BOD, SS, DO and Total Coliform) at SW-1 and SW-2 are close to the standard values of the Item class D (for agricultural water) except the values of pH at SW-2 and SS at SW-1 and SW-2 which show higher values than the Environmental Quality Standards for Conservation of the Living Environment (Rivers) of Japan.

In addition, Table 4.1.6 shows analytical comparisons between the major parameter (pH, EC, DO, SS and COD) of surface water monitored at SW-1 and SW-2, and the Agricultural Water Quality Standards of the Japanese Ministry of Agriculture, Forestry and Fisheries.

Table 4.1.6 Surface Water Quality Monitored and Agricultural Water Quality Standards of Japan

Sampling Point	pH	EC ($\mu\text{S/cm}$)	DO (mg/l)	SS (mg/l)	COD (mg/l)
SW-1	6.60	262.83	6	146	4.78
SW-2	5.45	231.50	4.8	136	3.31
Agricultural Water Quality Standard of Japan*, **	6.0~7.5	300 or less	5 or more	100 or less	6 or less

* The Agricultural Water Quality Standard by the Ministry of Agriculture, Forestry and Fisheries of Japan is for paddy-field rice.

** Only some items of the Japanese standards are shown in this table to make compilations the parameters monitored in the study.

Note: Refer to Table 4.1.4 at Chapter 4

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According to Table 4.1.6, it can be understood that pH at the point of SW-2 and Suspended Solid (SS) of the points at SW-1 and SW-2 show higher values than the Agricultural Water Quality Standard of Japan.

Possible reasons for the pH (SW-2) and SS (SW-1 and SW-2) which showed higher values than those Japanese standards are considered as follows.

- pH : Influence of anaerobic digestion of organic substances in the water at SW-2 which had retained for long time in the dry season when the water sampling was done.
- SS : Less surface water quantity and contamination of soil dusts from surface of the less cultivated farmland due to the dry season when the water sampling was done.

4.1.3 Solid Waste

Solid waste management in Taungoo is carried out under the responsibility of Taungoo Township Development Committee (TTDC).

According to TTDC, the situation of solid waste management can be summarized as follows

- A proper solid waste collection and management system are only available in the center (urban) area of Taungoo Township.
- A solid waste disposal site is located at Taungoo Cemetery in the southwestern part of Taungoo.
- Amount of treated solid waste in the center area in Taungoo can be estimated at 0.2 kg/day/person (= collecting amount 20 ton/day/100,000 people served in the center area).
- Daily generation amount of solid waste of the existing Taungoo Education College is 0.1 ton/ day

In addition, TTDC is planning a segregation collection system in the service area of Taungoo. Even though at the planning stage, TTDC requests the new Taungoo Education College to cooperate segregation discharge of solid waste will be generated in the college facilities as part of environmental education if the college use the TTDC collection services.

In the rural areas and satellite towns of Taungoo Township there are no proper solid waste collection system.

4.1.4 Soil Quality

A soil sample survey in the project site was conducted by the JICA Preparatory Survey Team on March 2013. Table 4.1.7 shows the sampling points.

Table 4.1.7 Sampling Points of Soil Sample Survey

Sampling Point	Type of Sample	GPS Coordinate	Geographic Location
S-1	Soil	18°57'27.80"N, 96°20'54.90"E	Near NW corner of the site
S-2	Soil	18°57'24.60"N, 96°20'53.90"E	Near SW corner of the site
S-3	Soil	18°57'26.30"N, 96°21'11.00"E	In the middle of the site
S-4	Soil	18°57'27.40"N, 96°21'27.70"E	Near NE corner of the site
S-5	Soil	18°57'23.60"N, 96°21'29.00"E	Near SE corner of the site

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The chemical analytical results of the Soil Sample Survey are provided in Table 4.1.8.

Table 4.1.8 Chemical Analytical Results of Soil Sample Survey

Sampling Points	Moisture (%)	Organic Carbon (%)	Humus (%)	NO ₃ -N (%)	Total N (%)	Water Soluble SO ₄ (mg/kg)	Exchangeable Cation (mg/kg)			Water Soluble Na (mg/kg)	Available Nutrients (mg/kg)		pH 1:2.5
							Ca	Mg	K		P	K ₂ O	
S-1	3.569	0.243	0.419	0.167	0.127	314	2669	319	61	87	2.29	7.47	6.090
S-2	2.614	0.400	0.690	0.115	0.126	370	1600	559	55	189	1.03	6.776	6.490
S-3	2.285	0.320	0.552	0.233	0.143	352	1868	319	45	20.0	1.23	5.527	6.860
S-4	1.288	0.277	0.477	0.028	0.124	352	1468	159	40.0	ND	3.87	4.863	6.300
S-5	2.257	0.598	1.031	0.036	0.215	333	1602	559	60.0	40.0	1.85	7.369	5.890

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According to the data, it can be evaluated that the soils are slightly-moderately acid, very low organic carbon, very low to low total nitrogen and low available nutrients (P and K₂O).

4.1.5 Noise

A noise monitoring was conducted from 16th to 17th March 2013 for identifying background noise levels around the project site. The locations of the noise monitoring are shown in Table 4.1.9.

Table 4.1.9 Location of Noise Monitoring Point

Monitoring Point	GPS Position	Description of Sampling Point
N-1	18°57'21.90"N, 96°21'47.10"E	Nyaung Gaing village (about 500 m east of the project site)
N-2	18°57'20.40"N, 96°21'22.90"E	Shan Ywa Monastery (several 10 m south of the project site)
N-3	18°57'20.40"N, 96°20'54.00"E	A small village, (several 10 m south of the project site)
N-4	18°57'35.00"N, 96°20'52.70"E	Myin Sa Khwet village (about 500 m north of the project site)

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Table 4.1.10 provides a summary of the noise monitoring results in which relevant noise standards of Thailand and Japan are shown for analytical comparisons. In addition, noise levels of every hour at 4 monitoring sites can be plotted as shown in from Figure 4.1.1 to Figure 4.1.4.

According to Table 4.1.10, it is understood that noise levels of each monitoring site shows less than 50 dB(A) which is classified as "A and B" of residential areas of the Environmental Quality Standard for Noise in Japan. However, as far as maximum levels concerned, more than 55 dB (A) levels have been observed, possible reasons for which can be considered as follows.

- Vehicular traffic nearby the village, especially traffic peak time.
- Alarm song from the monastery compound that ring thrice a day.

Table 4.1.10 Noise Level Monitored (dB(A)) and Thailand and Japan Noise Standards

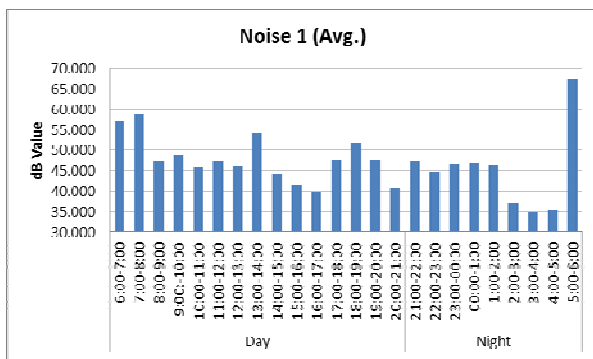
Item	N-1	N-2	N-3	N-4	
24 hours dB(A)	46.70	42.78	45.35	47.16	
Maximum dB(A)	61.72	58.80	68.81	59.10	
Minimum dB(A)	34.80	35.42	36.82	38.98	
Thailand*	Continuous Sound Level		70		
Japan*	AA	Daytime		50 or less	
		Nighttime		40 or less	
	A and B	Daytime		55 or less	
		Nighttime		45 or less	
	C	Daytime		60 or less	
		Nighttime		50 or less	
	Area A facing roads with two or more lanes		Daytime		60 or less
			Nighttime		55 or less
Area B facing roads with two or more lanes, and area C facing a road with one or more lanes		Daytime		65 or less	
		Nighttime		60 or less	

* Source: Notification of Environmental Board No. 15 B.E.2540 (1997) under the Conservation and Enhancement of National Environmental Quality Act B.E.2535 (1992) dated March 12, B.E.2540 (1997) (A-weighted Equivalent Continuous Sound Level)

** Source: Environmental Quality Standards for Noise in Japan (Environment Agency Notification No. 64, September 30, 1998)

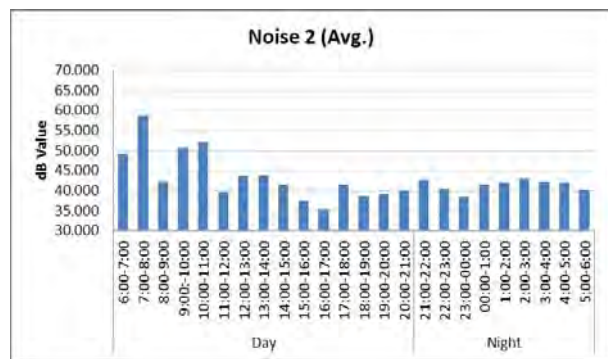
Daytime (6:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 6:00 a.m. of the following day)
AA : applied to areas where quietness is specially required, such as those where convalescent facilities and welfare institutions are concentrated.	
A : applied to areas used exclusively for residences.	
B : applied to areas used mainly for residences.	
C : applied to areas used for commerce and industry as well as for a significant number of residences.	
"Lane" refers to a longitudinal strip of road with uniform width to enable a single line of cars to travel safely and without hindrance.	

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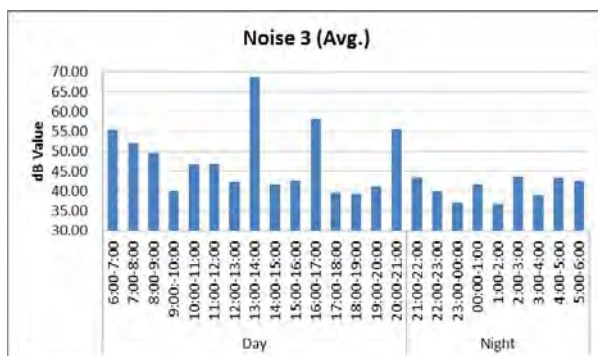
JICA Preparatory Survey Team

Figure 4.1.1 Noise Level at N-1



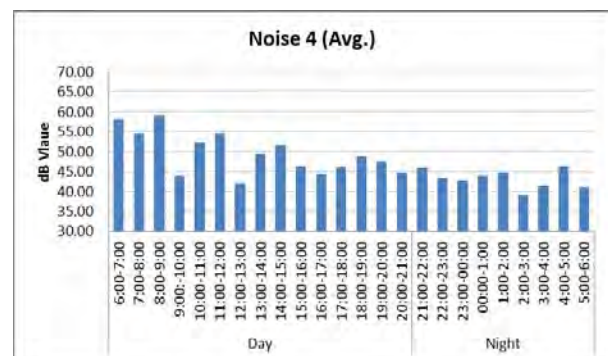
JICA Preparatory Survey Team

Figure 4.1.2 Noise Level at N-2



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Figure 4.1.3 Noise Level at N-3



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Figure 4.1.4 Noise Level at N-4

4.1.6 Ground Subsidence

There is no evidence of ground subsidence in and around the project area at present and no record is also found.

4.1.7 Offensive Odors

For the circumstances below, there is no offensive odor in and around the project area.

- The proposed project area is located in open fields or wide areas of farmlands where no housing or residential area in the site is identified at all.
- In addition, surrounding villages are located far away (the nearest is in several kilo meters) from the site.

4.2 Natural Environment

4.2.1 Climate

As the Latitudinal limit of Taungoo Township is between 18° 56' N and 19° 10' N, the Township falls within the Humid Tropical Zone having the Tropical Savanna Climate (Koppen's climate classification).

(1) Temperature

Table 4.2.1 shows the average monthly temperature in Taungoo Township including rainfall data of 55 years during between 1950 and 2005.

Table 4.2.1 Average Monthly Temperature and Rainfall of Taungoo Township
(55 years from 1950 to 2005)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg./ Total
Max. Temperature (C)	24.74	34.10	36.46	38.36	34.10	30.25	30.06	29.54	31.18	32.26	31.70	24.30	31.42
Mini. Temperature (C)	15.54	17.00	21.20	24.52	24.54	24.14	23.92	24.00	23.34	23.34	20.10	17.36	21.58
Mean Temperature (C)	18.66	25.62	28.84	31.42	28.44	26.68	27.00	26.80	27.66	28.58	25.88	20.85	26.37
Total Rainfall (Average) (mm)	6.80	0.40	8.20	20.00	199.60	369.8	449.00	265.20	197.80	41.00	8.20	8.20	1,574.20

Source: Department of Meteorology and Hydrology, Ministry of Transport

(2) Rainfall

Average monthly rainfall of Taungoo Township collected in every 15 years during 1950 and 2005 are shown in Table 4.2.2. The main source of precipitation is from southwest monsoon wind. The raining season (i.e., wet, humid season) normally starts from around middle of a May, sometimes it starts earlier from the month of an April, until end of an October.

Table 4.2.2 Average Monthly Rainfall of Taungoo Township (mm)
(Every 15 years from 1950 to 2005)

Years	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1950-1965	8.6	2.3	8.4	36.8	228.3	452.1	535.9	561.3	419.1	233.7	34.3	21.3
1966-1981	12.7	0.1	5.1	33.0	274.3	467.4	563.9	599.4	340.4	172.7	55.9	15.2
1982-1997	3.6	7.6	15.2	43.2	210.8	472.4	518.2	604.5	391.2	178.3	75.2	13.7
1990-2005	2.5	7.6	17.8	45.7	320.0	454.7	515.6	566.4	378.5	160.0	63.5	7.6

Source: Department of Meteorology and Hydrology, Ministry of Transport (Unit: converted from inch to mm)

(3) Wind

Data on wind speeds as well as wind directions in Taungoo in 2012 are shown in Table 4.2.4 and Table 4.2.5 as well as Table 4.2.6 and Table 4.2.7 respectively.

According to those data, it can be evaluated that most probable prevail wind directions by season in Taungoo are summarized in Table 4.2.3.

Table 4.2.3 Prediction of Most Probable Prevailing Wind Direction in Taungoo (2012)

Season	Month	Prevail Wind Direction at 09:30 MST	Prevail Wind Direction at 18:30 MST
Winter 1	January to February	S - SE	S - SE
Summer	March to May	S - SE	S - SE
Rainy	June to October	S	S - SE
Winter 2	November to December	NW -N	NW - W

N: North, S: South, NW: North West, SE: South East

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Table 4.2.4 Daily Wind Speed in Taungoo (1)

(STATION : TAUNGOO, YEAR : 2012, TIME: 09:30 M.S.T, UNIT: m.p.h)

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	3.6	4.8	1.2	2.4	1.2	1.2	1.2	2.4	2.4	1.2	1.2	1.2
2	1.2	2.4	1.2	1.2	1.2	2.4	2.4	1.2	2.4	1.2	1.2	1.2
3	1.2	3.6	2.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	3.6
4	1.2	1.2	1.2	1.2	2.4	1.2	1.2	3.6	1.2	1.2	1.2	3.6
5	1.2	1.2	2.4	1.2	1.2	1.2	1.2	2.4	1.2	1.2	2.4	1.2
6	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.4	3.6	2.4	1.2	1.2
7	3.6	6	1.2	1.2	1.2	1.2	1.2	2.4	2.4	1.2	1.2	1.2
8	3.6	4.8	2.4	2.4	4.8	1.2	1.2	1.2	1.2	1.2	1.2	1.2
9	3.6	1.2	2.4	1.2	2.4	1.2	1.2	4.8	3.6	1.2	1.2	1.2
10	4.8	1.2	2.4	2.4	1.2	3.6	1.2	6	1.2	1.2	1.2	1.2
11	4.8	2.4	2.4	1.2	2.4	2.4	1.2	1.2	1.2	2.4	2.4	1.2
12	1.2	1.2	1.2	3.6	3.6	1.2	1.2	1.2	1.2	1.2	3.6	3.6
13	2.4	1.2	1.2	4.8	2.4	2.4	1.2	2.4	1.2	1.2	3.6	2.4
14	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	3.6
15	4.8	1.2	2.4	1.2	2.4	1.2	1.2	1.2	3.6	1.2	1.2	1.2
16	1.2	1.2	1.2	6	1.2	1.2	1.2	1.2	1.2	1.2	4.8	3.6
17	1.2	2.4	3.6	1.2	3.6	4.8	1.2	3.6	1.2	1.2	4.8	4.8
18	0	3.6	1.2	1.2	1.2	3.6	1.2	1.2	1.2	1.2	2.4	2.4
19	1.2	2.4	1.2	3.6	1.2	2.4	2.4	3.6	1.2	2.4	4.8	2.4
20	4.8	1.2	1.2	1.2	2.4	4.8	1.2	1.2	1.2	3.6	1.2	2.4
21	3.6	1.2	1.2	3.6	3.6	3.6	1.2	1.2	1.2	1.2	1.2	3.6
22	3.6	2.4	3.6	2.4	3.6	4.8	1.2	1.2	3.6	2.4	1.2	3.6
23	1.2	1.2	3.6	2.4	1.2	1.2	1.2	1.2	2.4	1.2	1.2	3.6
24	3.6	1.2	3.6	2.4	2.4	2.4	1.2	1.2	1.2	1.2	1.2	3.6
25	1.2	1.2	4.8	1.2	2.4	1.2	1.2	1.2	1.2	1.2	3.6	1.2
26	1.2	1.2	1.2	2.4	1.2	2.4	2.4	1.2	1.2	1.2	1.2	2.4
27	2.4	1.2	2.4	2.4	1.2	1.2	1.2	1.2	1.2	2.4	1.2	4.8
28	3.6	2.4	1.2	2.4	4.8	3.6	1.2	1.2	1.2	1.2	2.4	3.6
29	6	1.2	4.8	3.6	1.2	3.6	2.4	1.2	1.2	1.2	1.2	1.2
30	4.8	-	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.4	1.2	1.2
31	3.6	-	2.4	-	1.2	-	4.8	2.4	-	1.2	-	1.2

Source: Department of Metrology and Hydrology

Table 4.2.5 Daily Wind Speed in Taungoo (2)

(STATION : TAUNGOO, YEAR : 2012, TIME: 18:30 M.S.T, UNIT: m.p.h)

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	1.2	0.0	0.0	1.2	2.4	1.2	1.2	1.2	2.4	1.2	0.0	0.0
2	0.0	0.0	0.0	1.2	1.2	0.0	1.2	4.8	4.8	2.4	0.0	1.2
3	0.0	0.0	1.2	0.0	2.4	1.2	1.2	2.4	3.6	1.2	0.0	0.0
4	0.0	0.0	1.2	2.4	3.6	2.4	1.2	1.2	1.2	3.6	1.2	1.2
5	0.0	0.0	1.2	3.6	4.8	2.4	1.2	1.2	1.2	4.8	0.0	1.2
6	1.2	0.0	1.2	3.6	3.6	1.2	1.2	4.8	1.2	1.2	1.2	0.0
7	2.4	0.0	0.0	2.4	2.4	2.4	1.2	1.2	1.2	0.0	0.0	0.0
8	1.2	1.2	0.0	3.6	1.2	1.2	1.2	1.2	3.6	1.2	0.0	0.0
9	0.0	0.0	0.0	1.2	1.2	1.2	2.4	1.2	2.4	0.0	0.0	0.0
10	1.2	1.2	1.2	1.2	2.4	3.6	1.2	1.2	0.0	1.2	1.2	0.0
11	1.2	0.0	0.0	1.2	3.6	1.2	1.2	1.2	1.2	1.2	0.0	0.0
12	0.0	1.2	2.4	1.2	3.6	2.4	1.2	1.2	1.2	0.0	1.2	1.2
13	2.4	0.0	3.6	0.0	2.4	1.2	1.2	1.2	1.2	1.2	1.2	0.0
14	0.0	0.0	1.2	0.0	3.6	1.2	1.2	2.4	1.2	1.2	0.0	1.2
15	1.2	1.2	0.0	1.2	6.0	1.2	1.2	3.6	1.2	0.0	3.6	1.2
16	0.0	0.0	0.0	1.2	6.0	2.4	1.2	1.2	1.2	2.4	6.0	1.2
17	0.0	0.0	0.0	1.2	1.2	2.4	1.2	1.2	1.2	1.2	3.6	1.2
18	0.0	0.0	0.0	1.2	3.6	2.4	1.2	1.2	1.2	0.0	2.4	0.0
19	2.4	2.4	1.2	2.4	1.2	2.4	2.4	1.2	1.2	0.0	1.2	0.0
20	0.0	1.2	3.6	2.4	1.2	2.4	1.2	1.2	1.2	1.2	1.2	0.0
21	0.0	2.4	2.4	2.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0
22	0.0	1.2	4.8	6.0	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0
23	0.0	0.0	2.4	1.2	4.8	1.2	1.2	2.4	1.2	1.2	0.0	1.2
24	0.0	0.0	2.4	1.2	3.6	1.2	1.2	1.2	1.2	1.2	0.0	0.0
25	0.0	0.0	3.6	1.2	2.4	1.2	2.4	2.4	0.0	0.0	0.0	0.0
26	0.0	1.2	0.0	1.2	1.2	1.2	1.2	1.2	2.4	0.0	1.2	0.0
27	0.0	0.0	1.2	2.4	1.2	2.4	1.2	1.2	1.2	1.2	0.0	2.4
28	2.4	0.0	2.4	3.6	3.6	4.8	1.2	1.2	0.0	1.2	1.2	0.0
29	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.0	0.0	0.0	0.0
30	1.2	-	0.0	1.2	3.6	1.2	2.4	1.2	0.0	1.2	0.0	0.0
31	0.0	-	0.0	-	1.2	-	1.2	3.6	-	1.2	-	0.0

Source: Department of Metrology and Hydrology

Table 4.2.6 Daily Wind Direction in Taungoo (1)

(STATION : TAUNGOO, YEAR : 2012, TIME: 09:30 M.S.T)

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	NE	NW	SE	SE	SE	S	S	S	SE	S	SE	W
2	W	NW	SE	SE	S	S	SE	SE	S	S	SE	NW
3	W	NW	SE	S	S	SE	S	S	S	SE	SE	NW
4	W	NE	E	SE	SW	S	S	S	SE	SE	W	SW
5	SE	W	NE	S	SW	S	S	S	W	SE	NW	NW
6	SW	NE	NE	SE	S	S	S	S	N	S	NE	NW
7	NNW	NW	SW	SE	E	SE	S	S	NW	SE	E	SW
8	NW	N	NE	SE	S	S	S	S	SE	NW	NE	E
9	NW	SE	NE	SE	SE	S	S	S	S	NW	E	NE
10	N	SE	NW	NE	S	S	S	S	SE	S	W	NE
11	N	SE	S	SW	S	SE	S	SE	SE	S	NW	E
12	N	E	SE	SE	S	SE	S	SE	S	SE	NW	NW
13	W	SW	S	S	S	S	SE	S	S	E	N	W
14	NW	SW	S	SE	SE	S	SE	SE	SW	SE	N	NW
15	NW	NE	SE	SE	SE	S	SE	S	S	SE	NW	NW
16	SW	NE	S	S	S	S	SE	S	S	NE	NW	NW
17	W	NE	N	S	S	S	S	S	S	N	NW	NW
18	Calm	NW	NE	S	S	S	SE	S	S	E	NE	NW
19	N	W	SE	S	SE	S	SE	S	SE	NW	NE	NW
20	N	S	S	S	SW	S	S	S	S	NW	SE	S
21	W	S	S	SE	S	S	S	SE	SE	NE	N	NE
22	SW	S	S	S	S	S	S	NE	S	W	NW	NW
23	NE	S	SE	S	S	S	S	S	S	NW	SE	NE
24	N	SE	S	S	S	S	S	SE	SW	W	N	NE
25	NE	E	S	S	S	S	SE	SE	SE	NW	S	NE
26	NE	S	SE	S	S	S	S	SE	S	E	SE	W
27	E	S	SE	S	S	S	S	SW	W	NW	SE	NE
28	NE	SE	S	SE	SE	S	S	SW	SW	N	S	NE
29	N	S	S	S	S	SE	S	SW	S	E	NE	W
30	NE	-	S	SE	SE	S	S	SE	SE	NW	SW	N
31	NE	-	S	-	S	-	S	SE	-	E	-	SW

Source: Department of Metrology and Hydrology

Table 4.2.7 Daily Wind Direction in Taungoo (2)

(STATION : TAUNGOO, YEAR : 2012, TIME: 18:30 M.S.T)

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	W	Calm	Calm	SE	SW	S	SE	S	S	SE	Calm	Calm
2	Calm	Calm	Calm	S	E	Calm	S	S	SW	S	Calm	NW
3	Calm	Calm	S	Calm	SW	SE	S	SE	S	SE	Calm	Calm
4	Calm	Calm	NE	SE	S	S	S	SE	N	S	NW	W
5	Calm	Calm	N	S	W	SW	SW	SE	SW	S	Calm	NW
6	NW	Calm	NE	S	S	SW	S	S	NE	SE	W	Calm
7	NW	Calm	Calm	SE	SW	E	SE	S	SW	Calm	Calm	Calm
8	W	S	Calm	S	NW	S	S	S	S	SE	Calm	Calm
9	Calm	Calm	Calm	NE	S	S	S	SE	S	Calm	Calm	Calm
10	W	SE	W	SE	S	S	W	S	Calm	S	NW	Calm
11	W	Calm	Calm	NE	S	S	W	SE	SE	SE	Calm	Calm
12	Calm	W	SW	SE	SE	S	S	S	SW	Calm	W	NW
13	S	Calm	S	Calm	S	SE	S	S	SW	W	NW	Calm
14	Calm	Calm	SE	Calm	S	SE	SE	S	SE	W	Calm	NW
15	W	NW	Calm	SE	SE	S	S	SE	S	Calm	S	N
16	Calm	Calm	Calm	SE	NE	S	SE	SE	SE	NE	NW	NW
17	Calm	Calm	Calm	S	SE	S	SE	SE	SE	E	NW	NW
18	Calm	Calm	Calm	S	SE	SE	SE	SE	S	Calm	SW	Calm
19	W	S	SE	S	S	SE	SE	SE	SW	Calm	SE	Calm
20	Calm	S	S	SE	SW	S	S	S	SW	W	SE	Calm
21	Calm	S	S	SE	SW	S	S	SW	SW	NW	SW	Calm
22	Calm	SW	S	S	S	SE	NW	S	SE	NW	Calm	Calm
23	Calm	Calm	S	S	S	S	SE	SW	S	W	Calm	NE
24	Calm	Calm	S	E	SE	SE	SE	S	S	W	Calm	Calm
25	Calm	Calm	SE	NE	SE	S	S	S	Calm	Calm	Calm	Calm
26	Calm	SE	Calm	S	S	SE	S	SW	SW	Calm	SE	Calm
27	Calm	Calm	SE	S	SW	SE	W	SW	E	E	Calm	NW
28	NW	Calm	S	S	SE	S	S	SW	Calm	W	SE	Calm
29	Calm	S	S	S	SE	SE	SE	SE	Calm	Calm	Calm	Calm
30	NW	-	Calm	SE	S	S	S	SE	Calm	NW	Calm	Calm
31	Calm	-	Calm	-	SE	-	SE	SE	-	NW	-	Calm

Source: Department of Metrology and Hydrology

4.2.2 Geology, Topography and Soil

(1) Geology

Geomorphically, Taungoo is situated on the west bank of Sittaung River, lying between the Shan Plateau or the Eastern Highlands to the east and the Pegu Yoma to the west. The stratigraphic order or the geological succession of rock units in Taungoo area can be observed from top to bottom, the younger to the older in geologic age as shown in Table 4.2.8.

Table 4.2.8 Stratigraphic Succession of the Geologic Units in Taungoo Area

Geologic Units	Geologic Age	Major Lithology
Younger Alluvium	Holocene (0 -0.1 Ma)	Silty sands, gravels, Laterites, lateritic soils
Older Alluvium	Pleistocene (0.1 - 1.8 Ma)	Valley-filled deposits; pebbly-gravelly sands
Irrawaddy Formation	Pliocene – Pleistocene (1.8 - 5.3 Ma)	Loosely cemented Sandstones
Upper Pegu Group	Miocene (5.3 - 23.3 Ma)	Sandstone and shale alternations
Igneous and Metamorphic Units	Cretaceous?	Granites, Granite-Gneiss & related igneous rocks

Note: Ma; mega annum (a million years)

Source: Department of Geology, Taungoo University, 2012

Igneous rocks are found in the eastern part of Taungoo where the topography is higher and the sedimentary rock units of the Upper Pegu Group are exposed in the western part of Taungoo area. Central portion, being located between Bogo Yoma and Eastern Highland, is underlay by the Irrawaddy Formation which is also overlaid by the Older Alluvium and then followed by the younger alluvium at the top in stratigraphic position.

(2) Topography

The topography of Taungoo Township can be divided into three parts;

- I. Western Hilly Region
- II. Central Lowland
- III. Eastern Hilly Region

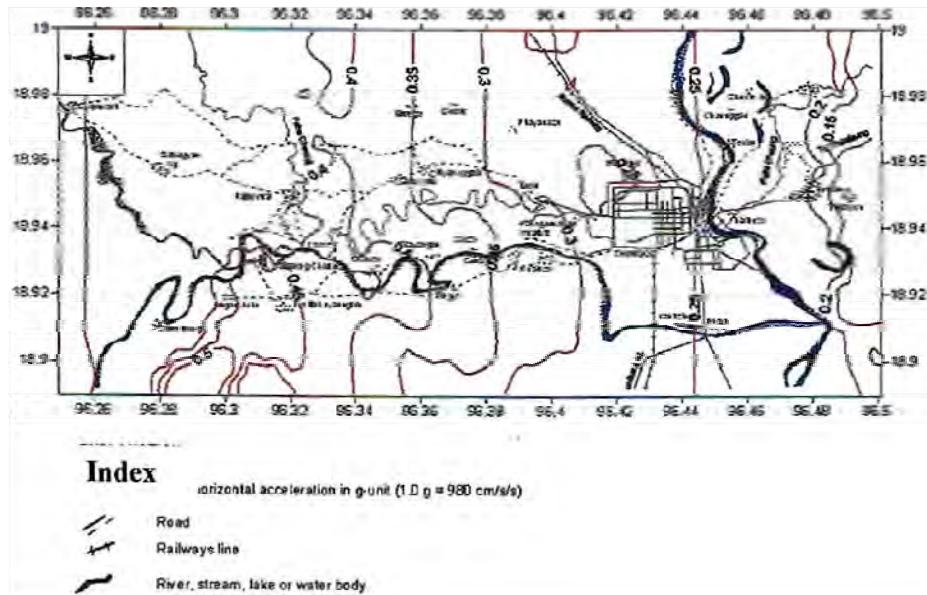
For that reason, the land is high in the western part of Taungoo which becomes gradually lower in the central part, and rises again in the eastern part. The central low land area of Taungoo is situated along the Sittaung River which covers one third of Taungoo Township where is fertile because of the annual flooding of Sittaung River. As a consequence of that the Sittaung valley is densely populated area.

(3) Soil

Various types of soil occur in and around Taungoo area due to differing reliefs from east to the west. Gleysols (Meadow Soil), Meadow Swampy Soil, Ferrasols (Yellow Brown Forest Soil), Lithosols (Turfy Primitive Soil), Mountainous Red Earths are mostly found in this area. According to the Soil and Land Use Survey of Taungoo District by Taungoo Township Administrative Department (2012), most of the area is covered by Ferrasols (Brown Forest Soils) with the 69.3 % of the area. The second types are Lithosols (Turfy Primitive Soil) by 12.8%, Mountainous Red Earth Soil by 1.9% and Meadow Swampy Soil by 0.4%.

4.2.3 Earthquake

Taungoo lies between the Sagaing Fault and the Papum Fault in the Central Cenozoic Belt. The earthquake hazard of the Taungoo area is mainly caused by the right lateral movement along the Sagaing Fault which is running north-south along the eastern flank of Bago Yoma. The earthquake hazard of the Taungoo area is fairly high according to the Seismic zone map of Myanmar (See Figure 4.2.1).



Source: Maung Thein and Tint Lwin Swe, 2006

Figure 4.2.1 Earthquake zoning map around Taungoo area
(based on horizontal ground acceleration in g-unit)

According to g-unit, four earthquake zones are categorized as follows.

- I. Moderate Zone (0.1-0.15 g)
- II. Strong Zone (0.2-0.3 g)
- III. Severe Zone (0.3-0.4 g)
- IV. Destructive Zone (0.4-0.5 g)

Taungoo could be quite vulnerable to earthquake damage that can be expected in the Server zone. However, earthquake hazards with damage and destruction can range from moderate to considerably high depending on the ground condition and building types. Summary of historical and recent earthquakes in Myanmar are listed in Table 4.2.9.

Table 4.2.9 Earthquakes in Myanmar

Date/Year	Location	Magnitude and/or brief description
868	Bago	Shwemawdaw Pagoda fell
875	Bago	Shwemawdaw Pagoda fell
1429	Innwa	Fire-stopping enclosure walls fell
1467	Innwa	Pagodas, solid and hollow, and brick monasteries destroyed
24 Jul. 1485	Sagaing	3 well known pagodas fell
1501	Innwa	Pagodas, etc. fell
13 Sept. 1564	Bago	Pagodas including Shwemawdaw and Mahazedi fell
1567	Bago	Kyaikko Pagoda fell
1582	Bago	Umbrella of Mahazedi Pagoda fell
9 Feb. 1588	Bago	Pagodas, and other buildings fell
30 Mar. 1591	Bago	The Great Incumbent Buddha destroyed
23 Jun. 1620	Innwa	Ground surface broken, river fishes were killed after quake
18 Aug. 1637	Innwa	River water flush
10 Sept. 1646	Innwa	N/A
11 Jun. 1648	Innwa	N/A
1 Sept. 1660	Innwa	N/A
3 Apr. 1690	Innwa	N/A
15 Sept. 1696	Innwa	4 well known pagodas destroyed
8 Aug. 1714	Innwa	Pagodas, etc. fell; the water from the river gushed into the city
4 Jun. 1757	Bago	Shwemawdaw Pagoda damaged
2 Apr. 1762	Sittway	M=7; very destructive violent earthquake felt over Bengal, Rakhine up to Chittagong.
27 Dec. 1768	Bago	Ponnyayadana Pagoda fell
15 Jul. 1771	Innwa	N/A
9 Jun. 1776	Innwa	A well- known pagoda fell

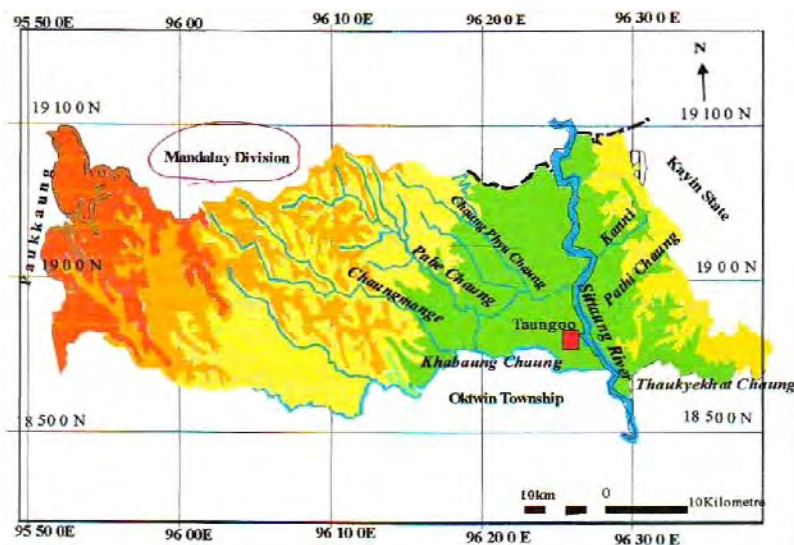
Date/Year	Location	Magnitude and/or brief description
26 Apr. 1830	Innwa	N/A
21 Mar. 1839	Innwa	Old palace and many buildings demolished;
23 Mar. 1839	Innwa	pagodas and city walls fell; ground surface broken; the river's flow was reversed for sometime; Mingun Pagoda shattered; about 300 to 400 persons killed
6 Feb. 1843	Kyaukpyu	eruption of mud volcanoes at the Rambye (Ramree) Island
3 Jan. 1848	Kyaukpyu	The civil line and other buildings were damaged
24 Aug. 1858	Pyay	Collapsed houses and tops of pagodas at Pyay, Henzada, and Thayetmyo and felt with some damages in Innwa, Sittway, Kyaukpyu and Yangon
8 Oct. 1888	Bago	Mahazedi Pagoda collapsed
23 May 1912	Yatsauk	M=8, The largest earthquake in Myanmar. Felt in most of the southeast Asian countries
6 Mar. 1913	Bago	Shwemawdaw Pagoda lost its finial
5 July 1917	Bago	Shwemawdaw Pagoda fell
10 Sept. 1927		N/A
17 Dec. 1927		M=7; extended to Dedaye
8 Aug. 1929	Near Taungoo	Bent railroad tracks, bridges and culverts collapsed, and loaded trucks overturned (Swa Earthquake)
5 May 1930	South of Bago	M=7.3, Imax=IX; in a zone trending north-south for 37 km south of Bago (on the Sagaing Fault line); about 500 persons in Bago and about 50 persons in Yangon killed
3 Dec. 1930	Nyaunglebin	M=7.3, railroad tracks twisted (Pyu Earthquake); about 30 persons killed
27 Jan. 1931	East of Indawgyi	M=7.6, Imax=IX; numerous fissures and cracks (Myitkyina Earthquake)
10 Aug. 1931	Pyinmana	N/A
27 Mar. 1931		N/A
16 May 1931		N/A
21 May 1931		N/A
12 Sept. 1946	Tagaung	M=7.5
16 Jul. 1956	Sagaing	M=7.0 Several pagodas severely damaged (40 to 50 persons killed)
8 Jul. 1976	Bagan	M=6.8 Several pagodas in Bagan Ancient City were severely damaged (only 1 person killed)
5 Jan. 1991	Tagaung	M=7 (6.8 in other records)
22 Sept. 2003	Taungdwingyi	M=6.8 Severe damaged to rural houses and religious buildings (7 persons killed)
24 Mar. 2011	Tachileik	M= 6.8 Severe damage in Tarlay Town north of Tachileik (74 official death toll)
11 Nov. 2012	Thabeikkyin	M=6.8 Severe damage in Thabeikkyin Town, suffered in Shwebo, Singu areas (33 casualties)

Source: Soe Thura Tun, 2012

4.2.4 Hydrology and Ground Water

(1) Physiographic Features and Major River Basin

Around Taungoo Township, there are many tributaries in the Sittaung River System. Some of them take their sources on the western hilly region, Bago Yoma and some from the eastern hilly, Shan Plateau region which are Khabaung, Chaung Phyu, Thauk Ye Khat, Phathi, Kanni Chaungs (stream) as shown in Figure 4.2.2.



Source: Land Record and Survey department, Ministry of Agriculture and Irrigation

Figure 4.2.2 Regional Physiographic Features and Major River Basin around Taungoo

Chaung Phyu and Chaugn Ma Nge flowing into the Sittaung River, overflow on the western side of the river in the rainy season. Thus their inundation does harm to the cultivation where they flow passing through.

Prominent lakes are Lakephoke Inn, Thayet Aai, Shwe Tatar inn, Htanthapin Inn locating along both western and eastern side of Sittaung River. Although most of them are abundance of water in the rainy season, they become dry in the summer.

(2) Ground water

The loosely cemented sandstones of the Irrawaddy Formation are good aquifer which yields good quality and high discharge of ground water available at varying depth ranging from 15m to over 30 m in Taungoo. The aquifer runs northwest to southeast across the town as it is generally controlled by the regional geology and structural trends of the rock units.

4.2.5 Landscape

Landscape of the project area can be summarized as follows.

- The configuration is flat farmlands with a small irrigation canal crossing inside the area.
- There are two access lanes crossing the project site.
- There are three tombs having a small pagoda on top of each.

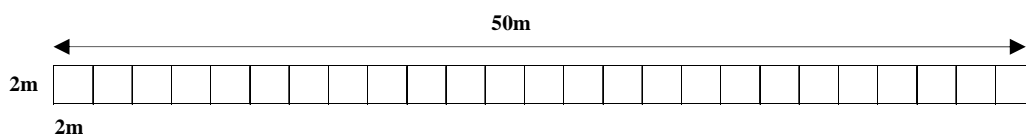
4.2.6 Flora

In order to identify flora in the project area, the following methodology, data collection and analysis were employed for the field study.

(1) Methodology and Data collection

A Global Positioning System (GPS) was used to navigate and mark coordinates between sample plots around the project site.

In order to obtain essential ecological data for predicting flora, belt transect was laid down and observed as shown in Figure 4.2.3.



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Figure 4.2.3 Lay out design of the belt transect

- In each sub-plot along the belt transect every plant species were listed and counted.
- Care has been taken to cover different elevation, slope, aspects, drainage and density gradients to study overall spectrum of species diversity.
- In addition all plant species around the area were recorded and listed.

Location and environmental parameters of the belt transect are summarized in Table 4.2.10.

Table 4.2.10 Location and Environmental Parameters of the Belt Transect

Parameters	Data
Location (Latitude/ Longitude)	N18°58' 25.8" / E96°21' 27.1"
Elevation	66m
Belt Transect Size	2m×50m
Gradient	Flat
Aspect	N6 NNE
Soil Colour	Brown
Soil Moisture	Dry
Wind Exposure	Weak

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- The families were identified by using key to the families of the flowering plants, issued by Department of Botany, Yangon University (1994).
- Specimen identification was performed with the use of literatures by Backer *et al.*, 1963, and Kress *et al.* 2003 and confirmed at Herbarium in Department of Botany, University of Yangon.

(2) Data Analysis

As a quantitative analysis, variations such as density, relative density, frequency, and relative frequency of each species were calculated.

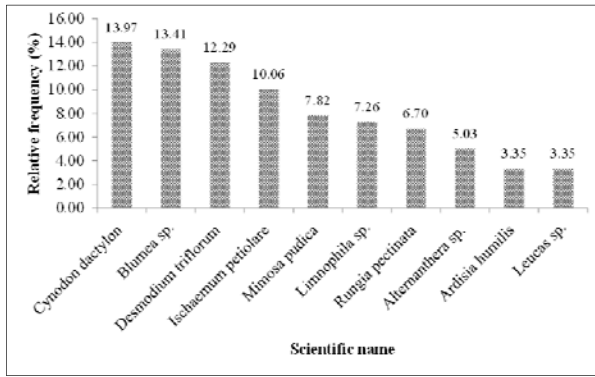
Diversity statistics applied to the data, generated in this study were calculated using the software package; Species Diversity & Richness IV (SDR) for window 2007.

Table 4.2.11, and Figures from 4.2.4 to 4.2.7 show the result of data analysis of flora (plant species) seen in the project area.

Table 4.2.11 Ranking of Frequency/Relative Frequency of Plant Species

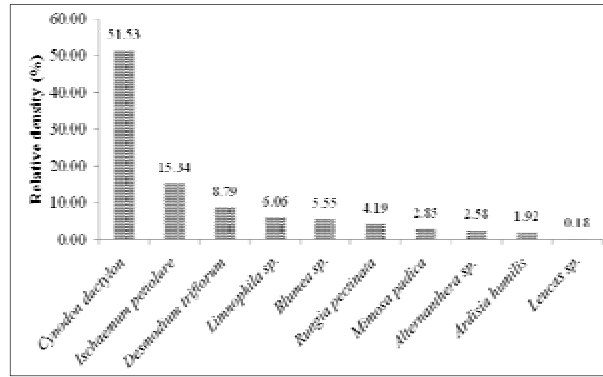
No.	Scientific Name	Frequency	Relative Frequency (%)
1	<i>Cynodon dactylon</i> (L.) Pers.	1.00	13.97
2	<i>Blumea</i> sp.	0.96	13.41
3	<i>Desmodium triflorum</i> (L.) DC.	0.88	12.29
4	<i>Ischaemum petiolare</i> Hock.	0.72	10.06
5	<i>Mimosa pudica</i> L.	0.56	7.82
6	<i>Limnophila</i> sp.	0.52	7.26
7	<i>Rungia pectinata</i> (L.) Nees	0.48	6.70
8	<i>Alternanthera</i> sp.	0.36	5.03
9	<i>Ardisia humilis</i> Vahl	0.24	3.35
10	<i>Leucas</i> sp.	0.24	3.35
11	<i>Hedyotis diffusa</i> Willd.	0.16	2.23
12	<i>Melochia corchorifolia</i> L.	0.12	1.68
13	<i>Phyllanthus simplex</i> Retz.	0.12	1.68
14	<i>Alysicarpus vaginalis</i> (L.) DC.	0.08	1.12
15	<i>Clerodendrum indicum</i> (L.) Kuntze	0.08	1.12
16	<i>Ludwigia octovalvis</i> (Jacq.) Raven	0.08	1.12
17	<i>Sida acuta</i> Burm. f.	0.08	1.12
18	<i>Urena lobata</i> L.	0.08	1.12
19	<i>Clerodendrum infortunatum</i> Gaerth.	0.04	0.56
20	<i>Glochidion fagifolium</i> Miq.	0.04	0.56
21	<i>Heliotropium indicum</i> L.	0.04	0.56
22	<i>Hyptis rhomboidea</i> Marts & Gal	0.04	0.56
23	<i>Indigofera trita</i> L.	0.04	0.56
24	<i>Lindernia antipoda</i> (L.) Alston	0.04	0.56
25	<i>Scoparia dulcis</i> L.	0.04	0.56
26	<i>Streptocaulon tomentosum</i> Wight & Arn.	0.04	0.56
27	<i>Syzygium kurzii</i> (Duthie) N.P.Balakr.	0.04	0.56
28	<i>Vernonia cinerea</i> Less.	0.04	0.56
Total			100.00

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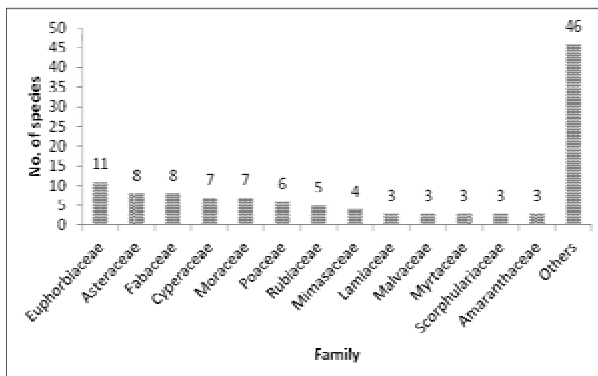
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Figure 4.2.4 Relative Frequency of Leading Ten Species



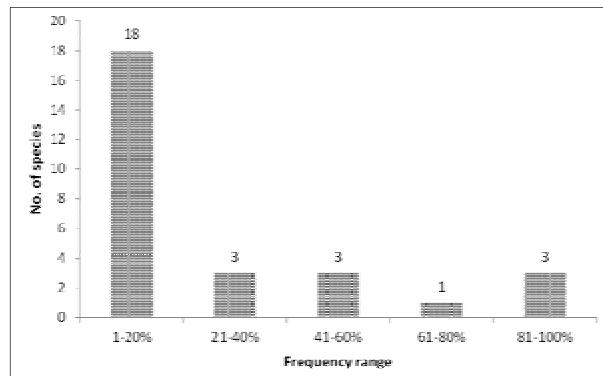
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Figure 4.2.5 Relative Density of Leading Ten Species



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Figure 4.2.6 Dominant Family by Numbers of Species



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Figure 4.2.7 Species Distribution by Frequency Classes

4.2.7 Fauna

(1) Butterflies

Table 4.2.12 shows butterfly species recorded in the project site.

Table 4.2.12 Recorded Butterfly Species in the Project Area

Species	Common name	Family	Abundance Status
<i>Danaus chrysippus</i>	Plain Tiger	Danaidae	Very Common
<i>Euploea core godartii</i>	Crow	Danaidae	Common
<i>Danaus limniace</i>	Blue tiger	Danaidae	Common
<i>Papilio polytes zomulus</i>	Common Mormon	Papilionidae	Very Common
<i>Junonia almana</i>	Peacock Pansy	Nyamphalidae	Common
<i>Junonia atlites</i>	Grey Pansy	Nyamphalidae	Common
<i>Eurema hecabe</i>	Common Grass Yellow	Pieridae	Very Common
<i>Catopsilia pyranthe</i>	The Mottled Emigrant	Pieridae	Very Common
<i>Catopsilia pomona</i>	Emigrant	Pieridae	Very Common
<i>Melanitis phedima ganapati</i>	The Dark Evening Brown	Satyridae	Common

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In addition, Table 4.2.13 shows a list of species diversity of butterflies in the project area showing the diversity index of butterfly according to different classification schemes (Index/Item), e.g., Shannon-Wiener species diversity Index value (H') = 2.91 which suggests that the diversity value is moderate in the project area.

Table 4.2.13 Species Diversity of Butterflies in the Project Site

Index/Item	Value
Shannon Diversity H' (range)	2.906 (2.613-3.146)
Simpson's Index (1-D)	0.867(0.819-0.900)
Brillouin's H	2.485(2.241-2.683)
Evenness E'	0.680
Number of equally common species	8
No. of species	10
N	40

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(2) Birds

Table 4.2.14 shows a list of bird species recorded during the field survey in the project site.

Table 4.2.14 Bird Species Recorded during the Field Survey in the Project Site

Scientific name	Common Name	Family	IUCN Red List Status
<i>Cypsiurus balasiensis</i>	Asian Palm Swift	Phalacrocoracidae	NL
<i>Egretta garzetta garzetta</i>	Little egret	Ardeidae	NL
<i>Accipiter badius</i>	Shikra	Accipitridae	NL
<i>Sterptopelia chinensis</i>	Spotted Dove	Columbidae	NL
<i>Halcyon smyrnensis</i>	White-throated Kingfisher	Alcedinidae	NL
<i>Ploceus philippinus</i>	Baya weaver	Ploceidae	NL
<i>Passer montanus</i>	Eurasian tree sparrow	Passeridae	NL
<i>Lonchura striata</i>	White-rumped munia	Passeridae	NL
<i>Acridotheres tristis tristis</i>	Common Myna	Sturnidae	NL
<i>Motacilla alba</i>	White wagtail	Motacillidae	NL
<i>Pycnonotus cafer</i>	Redvented Bulbul	Pycnonotidae	NL
<i>Orthotomus sutorius</i>	Common Tailorbird	Cisticolidae	NL
<i>Copsychus saularis</i>	Oriental Magpie-Robin	Muscicapidae	NL
<i>Corvus macrorhynchos</i>	Large-billed crow	Corvidae	NL

Note: NL = Not in the list or Not listed (i.e., it is not endangered and threatened species listed in IUCN red data box)

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(3) Reptile and Amphibian

Table 4.2.15 shows a list of reptile and amphibian species recorded in the project site.

Table 4.2.15 Recorded Reptile and Amphibian Species in the Project Site

Scientific name	Common name	Family	IUCN Status	Remark
<i>Naja kaouthia</i>	Monocellate cobra	Elapidae	Lc	Interviewed
<i>Bungarus fasciatus</i>	Banded krait	Elapidae	Lc	Interviewed
<i>Daboia russellii siamensis</i>	Russell's Viper	Viperidae	Lc	Interviewed
<i>Ptyas korros</i>	Indo-Chinese rat snake	Colubridae	Lc	Interviewed
<i>Ahaetulla nasuta</i>	Indian vine snake	Colubridae	Lc	Observed
<i>Rhabdophis subminiatus</i>	Red-necked keelback	Colubridae	Lc	Observed
<i>Xenochrophis piscator</i>	Chequered keelback	Colubridae	Lc	Observed
<i>Holobatrachus tigerinus</i>	Indian bull frog	Dicroglossidae	Lc	Interviewed
<i>Fejervarya limnocharis</i>	Paddy frog	Dicroglossidae	Lc	Interviewed
<i>Fejervarya limnocharis limnocharis</i>	Paddy frog	Dicroglossidae	Lc	Observed
<i>Polypedates leucomystax</i>	Common Tree frog	Rhacophoridae	Lc	Interviewed
<i>Duttaphrynus melanostictus</i>	Common toad	Bufoidea	Lc	Interviewed
<i>Microhyla ornata</i>	Ornate sand frog	Microhylidae	Lc	Observed
<i>Kaloula pulchra</i>	Painted bull frog	Microhylidae	Lc	Interviewed
<i>Eutropis carinatus</i>	Common sun skink	Scincidae	Lc	Interviewed
<i>Calotes versicolor</i>	Garden fence lizard	Agamidae	Lc	Interviewed

Note: Lc = Least Concern

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(4) Mammals

Table 4.2.16 shows a list of mammal species recorded in the project site.

Table 4.2.16 Recorded Mammal Species in the Project Site

Scientific name	Common name	Family	IUCN Status	Remark
<i>Callosciurus pygerythrus</i>	Grey squirrel	Sciuridae	Lc	Observed
<i>Bandicota banglensis</i>	Lesser bandicoot rat	Muridae	Lc	Interviewed
<i>Niviventer fulvscens</i>	White belleyed rat	Muridae	Lc	Observed
<i>Bandicota indica</i>	Greater bandicoot rat	Muridae	Lc	Interviewed

Note: Lc = Least Concern

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(5) Aquatic Ecology

1) Aquatic fauna

In order to identify aquatic fauna in the project area, the following methodology, data collection and analysis were employed for the field study.

<Methodology and Data collection>

- ✓ The water body of the irrigation canal was studied for aquatic fauna.
- ✓ Fishes were collected with the help of the fishermen during the survey period.
- ✓ Traps were also used to get various types of fish like surface dwellers and bottom dwellers.
- ✓ Fishes were photographed soon after the collection and measurements were also taken for key characteristics.
- ✓ Fishes were then preserved in 10% formalin solution for further identification in the laboratory.
- ✓ Fishes were then identified according to Jayaram (1981), and Talwar and Jhingram (1991).

As the result of data analysis of aquatic fauna seen in the project area, Table 4.2.17 shows a list of fish species recorded in the irrigation canal during the survey period.

Table 4.2.17 Fish Species Recorded in the Irrigation Canal

Scientific Name	Common Name	Family	Remark
<i>Puntius chola</i>	Barb	Cyprinidae	Observed
<i>Labeo calbasu</i>	Carp	Cyprinidae	Observed
<i>Cirrhinus mrigala</i>	Carp	Cyprinidae	Interview
<i>Clarias batrachus</i>	Walking catfish	Claridae	Observed
<i>Heteropneustes fossilis</i>	Stinging catfish	Heteropneustidae	Observed
<i>Anabas testudineus</i>	Climbing perch	Anabantidae	Interview
<i>Monopterus albus</i>	Asian swamp eel	Synbranchidae	Interview
<i>Mystus montanus</i>	Striped dwarf catfish	Bagridae	Observed
<i>Mystus vittatus</i>	Catfish	Bagridae	Observed
<i>Mystus bleekeri</i>	Catfish	Bagridae	Observed
<i>Mystus leucophasis</i>	Catfish	Bagridae	Observed
<i>Channa striatus</i>	Striped snakehead	Channidae	Observed
<i>Channa orientalis</i>	Brown snakehead	Channidae	Observed
<i>Channa panaw</i>	Green snakehead	Channidae	Observed
<i>Oreochromis spp</i>	Mozambic cichlid	Cichlidae	Interview

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According to Table 4.2.17, it can be evaluated that these are the most common fishes around Myanmar and are not considered as endangered and threatened species in the list of IUCN.

2) Benthos species

Four immature dragonfly nymphs were found as benthic species in the surface layer of the sediment of the irrigation canal.

The recorded nymph species were *Itinogomphus rapax*, *Brachydiplax sobrina*, *Brachythemis contaminata*, and *Neurothemis tullia tullia*.

The tadpoles of the paddy frog species *Fejervarya limnocharis* was also found as benthic species living in the sediment.

3) Plankton species

A total of 13 plankton species were found in the irrigation canal as shown in Table 4.2.18 which are very common seen in Myanmar and are not considered as endangered and threatened species in the list of IUCN.

In addition, among the species recorded, five species were zooplankton species and eight species were found as phytoplankton species.

The species of *Cyclops Scutifer* as zooplankton and *Staurastrum Bibrachiatum* as phytoplankton species were commonly found in the aquatic area.

The plankton species are primary products of the natural water body supporting the aquatic ecology which are essential prey of the small vertebrates and fishes in aquatic habitat.

Table 4.2.18 Plankton Species Recorded in the Irrigation Canal

Scientific Name	Family	Phylum/Division
<i>Notholca acuminata</i>	Brachionidae	Rotifer
<i>Lecane sp</i>	Lecanidae	Rotifer
<i>Cyclops scutifer</i>	Cyclopoida	Arthropoda
<i>Diatomus sp.</i>	Diatomidae	Arthropoda
<i>Bosminopsis sp.</i>	Bosminidae	Arthropoda
<i>Synedra affinis</i>	Fragilariaceae	Chrysophyta
<i>Oscillatoria limnetica</i>	Oscillatoriaceae	Cyanophyta
<i>Gyrosigma attenuatum</i>	Naviculaceae	Chrysophyta
<i>Nitzschia sp.</i>	Nitzschiaceae	Chrysophyta
<i>Staurastrum bibrachiatum</i>	Desmidiaceae	Chlorophyta
<i>Staurastrum ophiura</i>	Desmidiaceae	Chlorophyta
<i>Staurastrum tohopekaligense</i>	Desmidiaceae	Chlorophyta
<i>Pediastrum tetras</i>	Hydrodictyaceae	Chlorophyta

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4.3 Social Environment

4.3.1 Demography and Community

(1) Taungoo Township

Taungoo Township is mainly consisted of Wards (Quarters), Village Tracts (minimum administrative unit) and Villages.

According to the demographic data collected from the Taungoo Township General Administrative Department, Ministry of Home Affairs, Taungoo Township can be summarized as follows:

- Taungoo Township consists of 27 Wards in Taungoo Town and 37 Village Tracts which is composed of 251 villages (Table 4.3.1 and Table 4.3.2).
- Total population of Taungoo Township including the villages was estimated to have over 0.2 million in 2012 (Table 4.3.1 and Table 4.3.2).
- Dominant ethnic group in Taungoo Township is Burma (82.3% of the total population) (Table 4.3.3)
- Dominant religious group in Taungoo Township is Buddhist (90% of the total population) (Table 4.3.4)

Table 4.3.1 Household and Population by Ward in Taungoo Township

Ward	House	Household	Population(a) (under 18 years old)			Population (b) (above 18 years old)			Total (a)+(b)
			Male(a)	Female(a)	Total (a)	Male(b)	Female(b)	Total (b)	
Ward(1)	557	767	569	501	1,070	985	1,237	2,222	3,292
Ward(2)	1,991	2,159	1,233	1,384	2,617	3,734	3,987	7,721	10,338
Ward(3)	422	461	226	225	451	885	1,053	1,938	2,389
Ward(4)	292	305	139	146	285	425	548	973	1,258
Ward(5)	168	214	74	73	147	355	467	822	969
Ward(6)	297	401	135	159	294	625	752	1,377	1,671
Ward(7)	146	173	103	78	181	338	406	744	925
Ward(8)	298	347	192	220	412	641	748	1,389	1,801
Ward(9)	514	516	408	418	826	867	1,059	1,926	2,752
Ward(10)	394	441	282	200	482	670	860	1,530	2,012
Ward(11)	1,056	1,214	724	961	1,685	1,968	2,387	4,355	6,040
Ward(12)	506	506	813	995	1,808	826	1,085	1,911	3,719
Ward(13)	409	508	320	318	638	1,021	1,311	2,332	2,970
Ward(14)	370	547	289	339	628	1,017	1,236	2,253	2,881
Ward(15)	197	211	84	86	170	341	483	824	994
Ward(16)	425	367	199	211	410	603	737	1,340	1,750
Ward(17)	313	338	155	151	306	646	763	1,409	1,715
Ward(18)	1,099	1,316	947	914	1,861	2,181	2,878	5,059	6,920
Ward(19)	1,618	1,618	1,107	1,173	2,280	2,656	3,195	5,851	8,131
Ward(20)	1,205	1,219	964	922	1,886	2,518	2,779	5,297	7,183
Ward(21)	613	646	416	362	778	1,213	1,551	2,764	3,542
Mingvinyo	1,265	1,270	1,235	1,321	2,556	2,164	2,675	4,839	7,395
Chintayoo	863	887	784	752	1,536	1,497	1,812	3,309	4,845
Tapinshwehtee	233	234	387	276	663	2,056	1,868	3,924	4,587
Mingyiswe	300	316	168	210	378	417	526	943	1,321
Natshinnaung	659	665	536	565	1,101	1,773	1,638	3,411	4,512
Tawonngge	90	157	123	193	316	218	239	457	773
Total	16,300	17,803	12,612	13,153	25,765	32,640	38,280	70,920	96,685

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

Table 4.3.2 Household and Population by Village Tract in Taungoo Township

Village Tract	House	Household	Population(a) (under 18 years old)			Population (b) (above 18 years old)			Total (a)+(b)
			Male(a)	Female(a)	Total (a)	Male(b)	Female(b)	Total (b)	
Ngaphaeinn	982	1,003	553	571	1,124	1,366	1,645	3,011	4,135
Doinn	754	755	661	679	1,340	1,056	1,165	2,221	3,561
Padae	617	617	555	539	1,094	814	848	1,662	2,756
Kyinchauung	762	762	730	713	1,443	925	1,044	1,969	3,412
Ashaesin	748	748	640	588	1,228	842	925	1,767	2,995
Anauntsin	555	555	690	813	1,503	703	832	1,535	3,038
Taphanpin	826	745	705	675	1,380	1,134	1,307	2,441	3,821
Moekaung	1,199	1,264	1,210	1,149	2,359	2,190	2,480	4,670	7,029
Zeedine	816	816	664	674	1,338	1,124	1,342	2,466	3,804
Kanne	806	806	747	730	1,477	1,177	1,244	2,421	3,898
Kunepin	647	647	634	632	1,266	879	924	1,803	4,698
Kyaunttine	762	821	801	802	1,603	1,430	1,465	2,895	4,498
Dotaung	1,652	1,652	1,408	1,366	2,774	2,738	2,543	5,281	5,055
Shansugyi	562	581	465	478	943	843	969	1,812	2,755
Kinseik	1,275	1,275	1,012	992	2,004	1,576	1,880	3,456	5,460
Shwelayinn	728	728	712	710	1,422	1,092	1,228	2,320	3,742
Saunpinchaung	207	207	246	244	490	380	362	742	1,232
Laybue	602	605	145	60	205	1,054	1,332	2,386	2,591
Sinseik	1,397	1,389	910	958	1,868	1,970	2,355	4,325	6,193
Phayamasu	327	327	167	209	376	435	515	950	1,326
Bokadaw	742	764	636	609	1,245	968	1,105	2,073	3,318
Thankone	192	192	113	102	215	240	298	538	753
Sutat	436	436	266	232	498	638	691	1,329	1,827
Chauungphyu	339	339	264	258	522	494	577	1,071	1,593
Pwechatkone	341	341	236	225	461	475	521	996	1,457
Mukeyaykyi	791	791	887	593	1,480	1,224	1,308	2,532	4,012
Naypukone	691	696	601	607	1,208	1,051	1,096	2,147	3,355
Kyaunekone	1,046	1,046	904	874	1,778	1,834	1,918	3,752	5,530
Mahin	866	866	1555	1667	3222	2830	2333	5163	8385
Indine	631	624	455	433	888	1051	1218	2269	3157
Kanyoe	775	807	645	613	1,258	1,226	1,417	2,643	3,901
Watkuksein	654	654	736	601	1,337	906	930	1,836	3,173
Saparkyawe	715	715	573	675	1,248	1,092	988	2,080	2,248
Zeekone	852	875	656	777	1,433	1,129	1,319	2,448	3,881
Kaninnyaung	721	721	648	676	1,324	823	768	1,591	2,915
Nagarmaunk	578	578	144	174	318	1,155	1,113	2,268	2,586
Seikphootaung	1,585	1,585	1,238	1,283	2,521	2,627	2,729	5,356	7,877
Total	28,179	28,333	24,212	23,981	48,193	43,491	46,734	90,225	135,967

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

Table 4.3.3 Ethnic Groups in Taungoo Township

Races	Persons	%
Kachin	67	0.03
Kaya	978	0.42
Kayin	19,715	8.53
Chin	227	0.10
Mon	73	0.03
Myanmar (Burma)	193,086	82.8
Yakhine	182	0.08
Shan	4,829	2.09
Others	13,495	5.83
Total	232,652	100.00

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

Table 4.3.4 Religious Groups in Taungoo Township

Religion	Persons	%
Buddhist	209,084	90
Christian	8,716	4
Hindu	4,480	2
Islam	10,372	4
Total	232,652	100

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

(2) Sin Seik Village Tract

The project area belongs to Sin Seik Village Tract where the estimated population is over 6,000 (Table 2.2.28). Sin Seik is the name of village and also representing one of the Village Tracts in Taungoo which comprises of 13 villages, out of which there are three villages nearby the proposed project site, namely Nyaung Gaing, Shan Ywar and Myin Sa Khwet (See Table 4.3.5).

Table 4.3.5 Household and Population of Surrounding Villages of the Project Area

Village	House	Household	Population(a) (under 18 years old)			Population (b) (above 18 years old)			Total (a)+(b)
			Male(a)	Female(a)	Total (a)	Male(b)	Female(b)	Total (b)	
Nyaung Gaing	57	62	82	105	187	48	47	95	282
Shan Ywa	34	35	60	67	127	16	23	39	166
Myin Sa Khwet	69	76	103	119	222	48	56	104	326
Total	160	173	245	291	536	112	126	238	774

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

4.3.2 Economic Activities

(1) Labour force

Most of the working population in the whole Taungoo Township is agriculture (15,200 persons) and general labours (56,870 persons). Other occupation is government staff (2,300 persons), manufactures (2,200 persons), livestock breeders (7,580 persons) and traders (650 persons) in the whole Taungoo Township (Table 4.3.6).

Table 4.3.6 Occupational Structure in Taungoo Township

Government Staff	Labour	Agriculture	Livestock	Trading	Industrial
2,300	56,870	15,200	7,580	650	2,200

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

Table 4.3.7 shows the approximate annual income per person of Taungoo Township based on a few census populations only.

Table 4.3.7 Income of Resident per Year in Taungoo Township

Year	Population	Income per year (Kyat)
2008-2009	268	338,251
2009-2010	275	474,447

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

(2) Agriculture

Main types of land cultivation in Taungoo Township are cultivated lands, forest lands, virgin lands and other lands. The most dominant cultivated land is Le land (paddy) followed by Ya land (dry farms) with 71,541 acres and 9,949 acres respectively as shown in Table 2.2.34.

Table 4.3.8 Cultivated Lands in Taungoo Township (Acre)

Le Land (Paddy)	Ya Land (Farmland)	Kaing/Kyune* Land	Garden Land	Taungya** Land	Forest Land	Virgin Land	Other	Total
71,541	9,949	357	5,231	5	221,972	16,827	116,189	442,071

Note* : Kaing/Kyune = Alluvial lands in the rivers,

Note** : Taungya = Hillside lands in mountainous regions

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

Paddy is a main crop of Taungoo Township with 71,541 acre (Le Land) where monsoon paddy is cultivated, out of which only 7,500 acre is cultivated for summer paddy. Other important crops are groundnut, sesame, Sunflower, Pedisein (Green Mung Bean) and Sugar Cane with the cultivated areas between 3,000 and 5,000 acres. Matpe (Green gram, type of bean in Myanmar language) is a special crop for this township with the cultivated area of 16,000 acres in 2012 (Table 4.3.9).

Table 4.3.9 Main Crops in Taungoo Township

Crops	Cultivated Land (Acre)	
	Season	Area
Paddy	Summer	7,500
	Rainy	71,541
Groundnut	Rainy	1,481
	Cold	2,208
Sesame	Summer	1,538
	Rainy	3,682
Sunflower	Summer	4,844
Bean (MatPe)	Summer	16,000
Bean (Pedisein)	Summer	3,425
Sugar Cane	Summer	3,767

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

(3) Livestock

Table 4.3.10 shows a list of major livestock in Taungoo Township.

Table 4.3.10 Livestock in Taungoo Township

Buffalo	Cow	Chicken	Pig	Duck
328	139	200,849	925	8,600

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

4.3.3 Land Use

Table 4.3.11 shows condition of land use in the Sin Seik village tract where the project area is located.

Table 4.3.12 Land Use in Sin Seik Village Tract

Land Use	Acres	%
Le (Paddy Field)	3,215	62.84
Ya (Farmland)	75	1.47
Pasture	794	15.52
Railways	51	1.00
Roads	195	3.81
Irrigation lands	73	1.43
Streams	288	5.63
Village Lands	282	5.51
Cemetery	143	2.80
Others	1,826	35.69
Total	5,116	100.00

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

4.3.4 Traffic and Public Transportation

(1) Traffic Volume of Taungoo Road

Traffic volume of the Taungoo Road on February 2013 was recorded at a toll gate located on the entrance of Taungoo Road which connects Yangon and Nay Pyi Taw Highway Road in the west and Taungoo Town in the east.

Phyu is located about 50 Km to the south of Taungoo and the traffic data shown in Table 4.3.13 is counted for the cars travelling on the Taungoo Road from Taungoo to Phyu and from Phyu to Taungoo. Nay Pyi Taw, on the other hands, is located in a few miles to the north of Taungoo and the traffic data shown in Table 4.3.13 is also counted for Taungoo to Nay Pyi Taw and from Nay Pyi Taw to Taungoo through the Taungoo Road.

According to the volume data in Table 4.3.13, estimated numbers of cars traveling on the Taungoo Road during one month were more than 1,907 and the daily traffic volume also were more than 68, excluding motorbikes.

Table 4.3.13 Traffic Volume at the Toll Gate for the Taungoo Road

Feb. 2013	Class1				Class2				Class 3				Class 4			
	PH-TG	TG-PH	NP-TG	TG-NP	PH-TG	TG-PH	NP-TG	TG-NP	PH-TG	TG-PH	NP-TG	TG-NP	PH-TG	TG-PH	NP-TG	TG-NP
1	10	9	4	3	5	5	7	7	0	0	1	0	3	2	0	0
2	6	5	6	7	9	9	8	8	1	0	0	0	4	1	0	0
3	7	8	7	7	10	9	9	8	1	1	0	0	2	2	0	0
4	8	8	6	6	11	10	11	11	1	0	0	0	3	1	0	0
5	8	12	4	4	10	13	0	0	0	0	1	0	3	1	0	0
6	11	6	5	4	10	12	3	3	2	0	1	1	4	0	0	0
7	10	10	6	7	7	8	9	7	1	0	0	0	4	0	0	0
8	10	9	4	4	8	8	4	3	2	0	2	0	2	4	0	0
9	8	10	6	5	12	14	5	6	2	3	0	0	3	2	0	0
10	11	10	8	8	10	10	10	9	3	2	0	0	2	2	0	0
11	15	15	6	5	16	17	5	6	1	3	0	0	1	3	0	0
12	16	12	7	6	10	11	7	7	3	4	0	0	3	0	0	0
13	5	5	1	2	12	8	6	5	2	2	0	0	1	3	0	0
14	10	0	4	4	15	10	6	5	1	2	0	0	2	1	0	0
15	8	8	6	6	10	11	5	5	3	5	1	0	3	0	0	0
16	10	11	5	5	15	10	4	4	1	2	2	0	3	4	0	0
17	12	13	5	4	11	11	4	5	2	4	0	0	2	2	0	0
18	4	4	4	4	15	12	2	3	2	2	1	0	3	2	0	0
19	8	7	3	3	9	9	3	3	1	0	1	0	1	2	0	0
20	5	6	2	1	10	9	5	4	1	1	0	0	2	2	0	0
21	6	6	3	3	8	8	10	10	1	2	2	0	1	3	0	0
22	11	9	5	6	10	15	6	7	1	0	0	0	3	3	0	0
23	10	9	3	3	10	10	4	3	0	0	1	0	2	3	0	0
24	13	10	4	4	10	19	4	4	2	0	1	0	2	2	0	0
25	16	12	7	6	10	10	5	4	1	0	1	0	1	2	0	0
26	6	5	2	1	19	10	5	4	3	4	0	0	1	2	0	0
27	16	13	5	4	10	11	11	10	3	0	1	0	1	2	0	0
28	9	8	4	5	9	9	5	4	4	4	2	0	2	2	0	0
Total	269	240	132	127	301	298	163	155	45	41	18	1	64	53	0	0

Class 1 = Van, Saloons TG = Taungoo
Class 2 = four-wheel-Drive Cars PH = Phyu
Class 3 = Light trucks NP = Nay Pyi Taw
Class 4 = Express Busses

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(4) Public Transportation

As major public transportation systems in Taungoo, bus services are available as shown in Table 4.3.14.

Table 4.3.14 Bus Lines of Taungoo Township

Name of Bus Line	Bus Line	Total Bus			Total
		Big	Middle	Small	
Ktumadi 1	1	0	0	35	35
Ktumadi 2	1	0	0	10	10
Taungoo-Phyue	1	0	20	5	25
Tapinshwee 1	1	0	18	0	18
Bayintnaung	1	4	9	0	13
Tapinshwee 2	1	4	0	0	4
Shwekyauethit	1	2	0	0	2
Shwetwintama	1	2	0	0	2
Bayintnaung	1	0	5	0	5
Tapinshwee 3	1	5	0	0	5
Carlay 1	1	0	10	0	10
Carlay 2	1	0	9	0	9
Myayatanar	1	17	0	0	17
Moehein	1	19	0	0	19
GEC	1	0	0	45	45
Sinphyutaw	1	0	0	7	7
Total	16	53	71	102	226

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

4.3.5 Infrastructure and Public Facilities

(1) Electricity

Electricity usage in Taungoo Township is shown in Table 4.3.15.

Table 4.3.15 Electricity usage in Taungoo Township

Requirement(kW)	Received (kW)
16,311.9	45,839.8

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

(2) Public Facilities

Table 4.3.16 shows public Facilities in Taungoo Township. Approximate locations of major such facilities are summarized in Figure 4.3.1 (See next page).

In the health sector of Taungoo Township, there are one hospital with 200 bedded, one hospital with 16 bedded, three public hospitals, seven rural health centers and 47 clinics. There are 73 medical doctors and 63 nurses in there hospitals, clinics and healthcare centers.

Table 4.3.16 List of Public Facilities in Taungoo Township

Education Facilities	Number	Health Facilities	Number
High School	8	Hospital (200 bedding)	1
Middle School	6	Hospital (16 bedding)	1
Middle School (Branch)	1	Public Hospital	3
Middle School (Affiliated)	3	Rural Health Centre	7
Primary School	155	Clinic	47
Primary School	20	(No. of Doctor)	(73)
Monastic School	4	(Nurse)	(63)
University	3		
College	1		
Nurse Training School	1		

Source: Taungoo Township General Administrative Department, Ministry of Home Affairs, 2012

4.3.6 Archaeological and Cultural Property

(1) Historical City of Taungoo

Taungoo was a capital city of the dynasty in about 500 years ago so that historical artifacts, above ground and also underground are generally abundant in Taungoo.

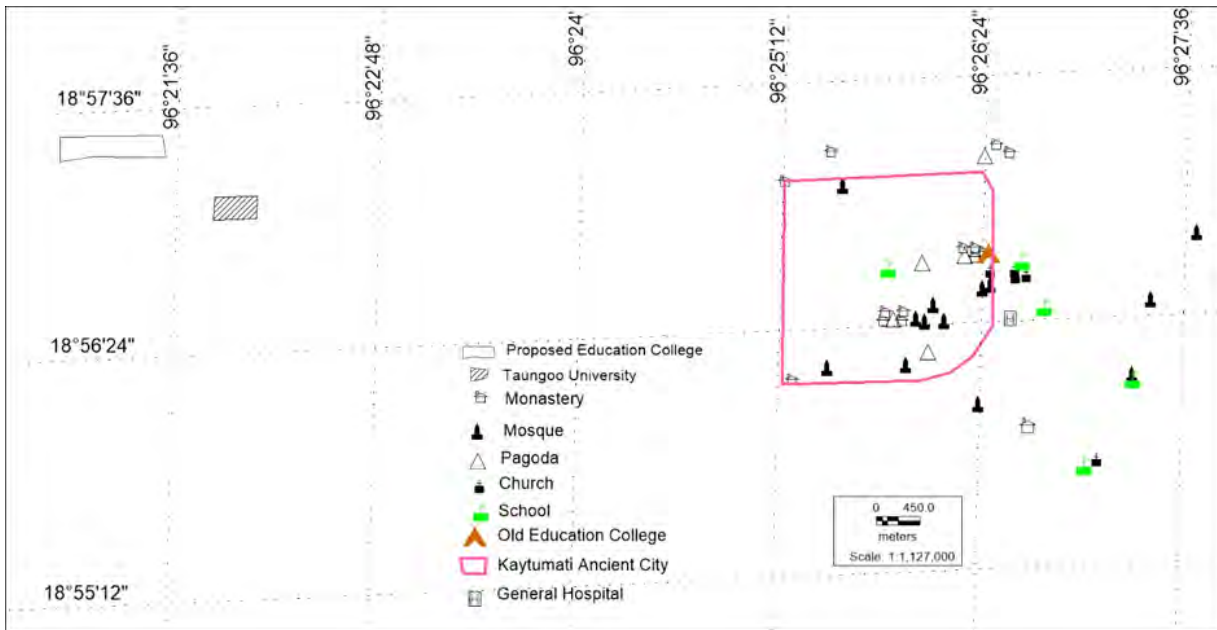
The project site is located in several miles from the old palace site, city walls and moats related to *Kaytumati* ancient city of Taungoo. Distances between the project site and, archaeological and cultural sites including major public facilities in Taungoo are summarized in Table 4.3.17.

Table 4.3.17 Distance from Project Site to Archaeological/Cultural Sites and Public Facilities

Cultural/Archaeological Sites and Public Facilities	Distance from Project Site (km)
Kaytumati Ancient City	7.1
Taungoo University	1.4
Cultural sites (Pagoda, Church and Mosque)	8 - 10
General Hospital	9.6

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In addition, approximate locations of such sites and facilities are shown in Figure 4.3.1.



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Figure 4.3.1 Location of Project Site, Cultural/Archaeological Sites and Public Facilities

(2) Shan Ywa Monastery

There is a monastery named by Shan Ywa Monastery (about 300 years old) facing south of the project land.

(3) Monument Tombs

Three tombs are closely situated in the project site. It is known that the remains of the former successive incumbent monks' remains have been buried in the tombs. The names such monks are not inscribed on the tombs (See Chapter 5).

(4) Individual Gravestone

A gravestone made of bricks has been constructed in the land plot No. 26 of the project site (located in the western part of the project area, a few meters to the west side of the public access lane under a standing tree). There is an inscription on the gravestone in which a name of the person who died at the age of 70 in 1356 ME (i.e., in 1994) is written in Myanmar language.

According to surrounding villagers, the gravestone was built by the former farmers who had right for farming in that area for a long time before the land was purchased by one of the farmers who have right for farming in the project site (or PAPs: Project Affected Persons).

Therefore, it is considered that this gravestone is for an individual one which does not have historical and cultural values.

CHAPTER 5 INTERVIEW AND MEETING WITH STAKEHOLDER

Interviews with questionnaires and meetings with stakeholders were conducted by the JICA preparatory survey team in consultation and collaboration with MOE to explain and disclose the project descriptions, in order to get baseline data and information of social conditions, and to identify and discuss opinions, perceptions and possible impacts with regard to the project implementation. The interviews and meetings conducted in 2012 and 2013 were comprised of three (3) phases as shown in Table 5.1.1. Namely, a meeting on land acquisition exclusively held by MOE in 2012 is “Phase 0” of which details appear in Chapter 7. Interviews and meeting held by the JICA Team in cooperation with MOE in 2013 are Phase 1 and 2 of which details are discussed in this Chapter 5 (below).

Table 5.1.1 Phase of Interviews and Meetings

Phase	Description	Period	Details in
0	Consultation meeting with regard to land acquisition and compensation	Dec. 2012	Chapter 7
1	Data collections and meetings for Environmental and Social Considerations Study	Mar. 2013	Chapter 5
2	Stakeholders Meetings on Environmental and Social Considerations for the project	May. 2013	Chapter 5

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5.1 Interviews and Key Meetings (Phase 1)

Table 5.1.2 shows interviews and key meetings which were held in March 2013 to get mainly general information and data for the environmental social considerations study as well as stakeholders’ notion and perception about the project.

Table 5.1.2 Interviews and Key Meeting (Phase1: March 2013)

Date (2013)	Venue in Taungoo	Participants	Description
14 th March	Royal Kaytumadi Hotel	<ul style="list-style-type: none"> Headmistress, administer of Taungoo Education Collage Senior Citizens of Taungoo JICA Preparatory Survey Team Local Consultant 	Kick off Meeting for Environmental and Social Considerations Study (See Appendix 5.1.1)
	Township General Administrative Department Office	<ul style="list-style-type: none"> Headmistress and administer of Taungoo Education College Local Consultant 	Data Collection
15 th March	Taungoo General Administrative Department Office	<ul style="list-style-type: none"> Administer of Taungoo Education College Local Consultant 	Data Collection
	Nyaung Gaing village	<ul style="list-style-type: none"> Head of the village tract Villagers (as respondents) Local Consultant 	Questionnaire Survey
	Forest Department, Land Record Department, Taungoo Township Development Committee,	<ul style="list-style-type: none"> The officers Local Consultant 	Data Collection
16 th March	Shan Ywa Monastery	<ul style="list-style-type: none"> Head of the village tract Villagers (as respondents) Land Users Local Consultant 	Explanatory Meeting (See Appendix 5.1.2) Questionnaire Survey
	Toll Gate (Taungoo)	<ul style="list-style-type: none"> Toll Gate officer Local Consultant, 	Data Collection
	Myin Sar Kwat Village	<ul style="list-style-type: none"> Head of Village Tract, Villagers (as respondents) Local Consultant 	Questionnaire Survey
	Shan Ywa Village	<ul style="list-style-type: none"> Respondents and Local Consultant 	Questionnaire Survey
17 th March	Taungoo Education College	<ul style="list-style-type: none"> Elderly persons Key social representatives of Taungoo Ministry of Education, Local Consultant, 	Consultation Meeting (See Appendix 5.1.3)

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5.1.1 Interviews (Phase 1)

Interviews using a questionnaire were performed as shown below.

(1) Method

1) Purposes

- To get socio-economic condition around the project site.
- To understand the surrounding peoples' opinions, perceptions and possible impacts with regard to the project.

2) Interview Method

- Face to face survey using a structured questionnaire (See Appendix 5.1.4)

3) Target Villages

- The following three villages located in the surrounding of the project site
 1. Nyaung Gaing Village
 2. Shan Ywa Village
 3. Myin Sar Kwet Village

4) Respondents

- Total 60 villagers live in the three villages (See Appendix 5.1.5, 5.1.6 and 5.1.7)

(2) Result

Table 5.1.3, 5.1.4 and 5.15 shows data of the survey which are summarized as follows

1) Attribution of the Respondents

- ✓ Among those respondents, 34 persons (57%) are Males and 26 persons (43%) are Females.
 - Therefore, it can be evaluated that the answers are equally represented for both male and female population of the survey area.
- ✓ 57% of the respondents are primary school and 32% are middle school graduations.
 - Namely 89% of the respondents are basic education level.
 - Therefore, the answers generally represented persons of basic education level.
- ✓ 80% of the respondents are farmers.
 - Followed by government staff (11%), dependents (7%) and other.

2) Socio-Economic Condition of the Respondents

- ✓ All respondents bought their daily food from the market.
- ✓ The main source of drinking water of all respondents is from tube wells.
- ✓ All respondents drain their waste water to the surrounding open ground.
- ✓ 92% of the respondents pile up their solid waste outside the houses on the ground and 8% of the respondents dispose solid waste to the landfill site.

- The respondents never throw away their wastes to public water bodies such as river, canal, streams or ponds.
- ✓ 48% of the respondents answered that there is no serious diseases in the surveyed area and 52% of the respondents mentioned there are some disease problems
 - Most common diseases are communicable diseases (15%) and disease of digestive system (12%), followed by disease of respiratory system, heart and cardiovascular disease, eye and skin.
 - Types of communicable diseases are unknown.

3) Perception of the Project

- ✓ 80 % of respondents have got the messages and information about the project.
 - For those who knew the project, they received the project information from community leaders, family members, friends and office staff.
 - They never receive project information from the public media.
 - All respondents want to established PR activities under the project implementation processes.
 - They want a PR channel through mass media such as newspaper, radio and TV.
- ✓ 62 % of the respondents reply that the file of complaints against project through the community leader is the best way, which are followed as follows.
 - A face to face contact with project staff is the second most convenient way (32%).
 - A Telephone contact in another convenient way to file the complaints on the impacts of the project (6%).
- ✓ All respondents perceive that there are no possible and serious negative impacts of the projects on environment, social and health conditions.
- ✓ All these respondents agree to the project.

Table 5.1.3 Attribution of the Respondents

Variable		Number	%	
Gender	Male	34	57	
	Female	26	43	
Age	(average)	(47.22 years old)		
Major Occupation	Dependent	4	7	
	Gathering flora/fauna in the forest	1	2	
	Farmer	48	80	
	Fisherman	0	0	
	Aqua-culture	0	0	
	Employee	0	0	
	Government Officer	7	11	
	Student	0	0	
Other	0	0		
Household income/ year	(average)	(1,338,333 kyat/year)		
Education Level	None	0	0	
	Primary education	34	57	
	Middle school	19	32	
	High school	4	6	
	Graduate	1	2	
	Post Graduate	0	0	
	Monastic school	2	3	
Household Information	Status in the household	Household leader	35	58
		Spouse	14	23
		Relative	10	16
		Resident	1	2
	Number of household members (average)		5	persons
	Number of male (average)		2	persons
Number of female (average)		3	persons	

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Table 5.1.4 Socio-Economic Condition of the Respondents

		Variable		Number	%	
Environmental Problem, Facility, Social Problem, Public Health.	Environmental Problems	Solid waste	None	60	100	
			Low	0	0	
			Moderate	0	0	
			High	0	0	
		Wastewater	None	60	100	
			Low	0	0	
			Moderate	0	0	
			High	0	0	
		Dust	LOW	56	93	
			Moderate	4	7	
			High	0	0	
		Noise	Low	60	100	
			Moderate	0	0	
			High	0	0	
		Bad odor from waste	None	60	100	
			Low	0	0	
			Moderate	0	0	
			High	0	0	
		Facility	Shortage of drinking/ consumption water	None	60	100
				Low	0	0
	Moderate			0	0	
	High			0	0	
	Shortage of electricity		(No electricity)			
	Transportation	Low	59	98		
		Moderate	1	2		
		High	0	0		
	Flood	None	60	100		
		Low	0	0		
		Moderate	0	0		
		High	0	0		
	Solid waste management	None	60	100		
		Low	0	0		
		Moderate	0	0		
		High	0	0		
	Social Problems	Safety in life and property	None	60	100	
			Low	0	0	
			Moderate	0	0	
			High	0	0	
		Crime	Low	60	100	
			Moderate	0	0	
			High	0	0	
		Drug	None	60	100	
			Low	0	0	
			Moderate	0	0	
			High	0	0	
		Unemployment	None	52	87	
			Low	8	13	
			Moderate	0	0	
			High	0	0	
		Migration	None	60	100	
Low			0	0		
Moderate			0	0		
High			0	0		
Land Acquisition		Nothing	60	100		
	Inform government authorities	0	0			
	Inform DDC	0	0			
	Inform community leaders	0	0			
Public Health and Health Status	Source of Food	Self-plantation	0	0		
		Natural resources/ fishery/ forest/ river	0	0		
		From market(average kyat/month)	60	100		
		Other	0	0		
	Source of drinking water	Tap water	0	0		
		Rain Water	0	0		
		Ground water well	60	100		
		River/ canal	0	0		
	Household wastewater management	Discharge to the ground	60	100		
		Discharge to public drainage system	0	0		
		Discharge to public river/ canal	0	0		
		Discharge to the garden	0	0		
		Other	0	0		
	Solid waste management	Pile up outside the house	55	92		
		Landfill	5	8		
		Open burn	0	0		
Make fertilizer		0	0			

Variable		Number	%	
		Throw away to public river/ canal/ area	0	0
		Other	0	0
	Sickness and disease	No sickness	7	12
		yes	53	88
	Type of diseases	Communicable disease	9	15
		Disease of digestive system	7	12
		Disease of respiratory system	5	8
		Heart and cardiovascular disease	5	8
		Skin disease and allergy	1	2
		Eye disease	4	7
		Ear disease	0	0
		No disease	29	48
	Sickness treatment	Nothing	7	12
		Take herbal medicine	0	0
		Buy medicine at drug store	0	0
		See the doctor at hospital	53	88
		Other	0	0
	Public health service (Physician/ Nurse)	Sufficient	60	100
		Insufficient	0	0
	Location of public health center/ hospital	Near/ Convenient	60	100
		Far/ Inconvenient	0	0
	Medical charges	Free	3	5
		Government support	0	0
		Medical charge	57	95

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Table 5.1.5 Perception of the Project by the Respondents

Variable		Number	%	
Perception of the Project	Receiving of project information	No	12	20
		Yes	48	80
	Source of project information	Person i.e. community leaders, family members, friends, project staffs, government officers	60	100
		Mass media i.e. newspaper, radio, TV	0	0
		Press media i.e. leaflet, poster, newsletter	0	0
		Activities i.e. meeting, seminar, group discussion	0	0
		Other	0	0
		Need of Public Relation activities	No	0
	Yes	60	100	
	Public Relation Channel	Person i.e. community leaders, family members, friends, project staffs, government officers	0	0
		Mass media i.e. newspaper, radio, TV	60	100
		Press media i.e. leaflet, poster, newsletter	0	0
		Activities i.e. meeting, seminar, group discussion	0	0
		Other	0	0
	The most convenient way for you to submit/ lodge complaints	Face to face communication with project staff	19	32
		Via community leader	37	62
		Telephone	4	6
		Post	0	0
		Internet	0	0
		Other	0	0
	Environmental Impact	No	60	100
		Yes	0	0
	Social Impact	No	60	100
		Yes	0	0
Health Impact	No	60	100	
	Yes	0	0	
Overall agreement with Taungoo Education College Project	Disagree	0	0	
	Agree	60	100	
	No comment	0	0	

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5.1.2 Meetings and Discussions (Phase 1)

In the course of the interviews and relevant meetings and discussions held in March 2013, several opinions and requests expressed by the villagers have been identified by MOE and the JICA Preparatory Survey Team as summarized below.

(1) General Recognition by the Surrounding Villagers on the Project

Broad recognition of villagers on the project can be summarized below.

- The project is acceptable for the development of education in their community.
- The project will support the development of education of the country.

(2) Major Requests and Comments from Villagers

The following shows requests and comments from the persons who have (had) right for faming in the project site (or the Project Affected Persons: PAPs) and the local people around the project area.

- ✓ To repair the roads
 - The existing University Road located in the southern limit of the project area.
 - Repair in this regard means to upgrade it better than the present condition.
- ✓ To construct the two new public access roads across the project area.
 - As replacements of the two existing roads which are planned to be demolished in the construction phase.
- ✓ To create job opportunities
 - Local people are willing to work in construction of the project as well as in the new Taungoo Education College.
- ✓ To enroll the village children in the new Taungoo Education College (TEC)
- ✓ To supply Electricity to the nearby villages.
- ✓ They totally agree with the project.
 - The project could help promote the educational status of their children.



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Figure 5.1.1 Interviews Survey
(Nyaung Kaing Village)



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Figure 5.1.2 Interviews Survey
(Myin Sar Kwet Village)

5.2 Stakeholders Meetings (Phase 2)

As part of the environmental and social considerations study, three (3) stakeholders meetings were held by MOE initiative in cooperation with the JICA Preparatory Survey Team on May 2013 as follows.

5.2.1 Outlines of the Stakeholders Meetings (Phase 2)

(1) Objectives

- ✓ To explain about project contents to the stakeholders by MOE.
- ✓ To discuss opinions, expectations, objections and comments with regard to the Education College Project in Taungoo and its land acquisition between the stakeholders and MOE.
- ✓ To response countermeasures of MOE for and against those opinions, expectations, objections and comments to the stakeholders.

(2) Proponent

MOE as the proponent initiated, organized and convened all stakeholders meetings for the project in Taungoo.

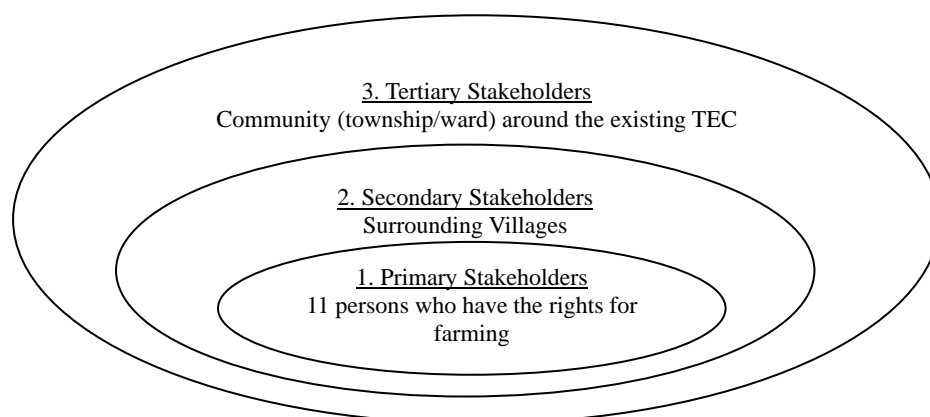
(3) JICA Guidelines for Environmental and Social Considerations

All stakeholder meetings were held and convened with reference to the JICA Guidelines for Environmental and Social Considerations (April 2010).

(4) Target Groups of the Stakeholders Meetings

The stakeholders meetings were held to the three target groups as shown below and in Figure 5.2.1.

- Primary : 11 persons who have the rights for farming (PAPs) in the project site
- Secondary : Residential population surrounding the project site (adjacent farmers)
- Tertiary : Residential population in communities around the existing TEC



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Figure 5.2.1 Framework of Three Stakeholders Meetings

5.2.2 Outcomes of the Stakeholders Meetings (Phase 2)

An instruction letter, No. 1 Pa Sa La/1451(Sa)/Stakeholders Meeting (13) dated 29th April 2013, addressed to the Principal for Taungoo Education College was issued by the Director General, Department of Education Planning and Training (DEPT) of the Ministry of Education to commence the necessary stakeholders meetings for the rehabilitation of Taungoo Education College (See Appendix 5.2.1).

(1) Primary Stakeholders Meeting

Table 5.2.1 shows summary of the Primary Stakeholders Meeting.

Table 5.2.1 Summary of the Primary Stakeholders Meeting

Item	Description
Date/Time	20 th May, 2013/ 2 PM– 4 PM
Venue in Taungoo	Existing Taungoo Education College
Organizer	U San Lwin, Director of MOE
Facilitator	Daw Kyu Kyu, the headmistress of Taungoo Education College
Target Stakeholders	11 persons who have the rights for farming in the proposed project site
Total Participants	27
Agenda	Agenda 1 <ul style="list-style-type: none"> • The objective of the project and its components • Selection of the project site and required lands for the project • Compensation methods for land acquisition by MOE
	Agenda 2 <ul style="list-style-type: none"> • The environmental and social consideration study • Condition of land acquisition
	Agenda 3 <ul style="list-style-type: none"> • Impacts on daily livelihoods of the peoples by the project • Two public access roads which are to be demolished • The tombs inside the proposed project area are to be demolished • Irrigated water canals which are to be demolished • Trees and a well which are to be demolished
Recorded by	<ul style="list-style-type: none"> • Taungoo Education College (U Myint Thu) • Local Consultant

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Outcomes of the Primary Stakeholders Meeting are as follows.

- ✓ Most of the discussion points for the Agenda 3 in the Primary Stakeholders Meeting were focused on the land acquisition progress and issues.
- ✓ Negative opinions and objections on the Agenda 3 were not expressed from the participants.
- ✓ Minutes of meeting and a participant list of the Primary Stakeholders Meeting are attached in Appendix 5.2.2.



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Figure 5.2.2 Primary Stakeholders Meeting (MOE Speech)



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Figure 5.2.3 Primary Stakeholders Meeting (Participants)

(2) Secondary Stakeholders Meeting

Table 5.2.2 shows summary of the Secondary Stakeholders Meeting.

Table 5.2.2 Summary of the Secondary Stakeholders Meeting

Item	Description
Date/Time	21 st May, 2013/ 2PM – 4 PM
Venue in Taungoo	Shan Ywar Monastery, Shan Ywar village
Organizer	U Win, Deputy Director of MOE
Facilitator	Daw Kyu Kyu, the headmistress of Taungoo Education College
Target Stakeholders	Residents from the villages around the project site, especially adjacent farmers
Total Participants	37
Agenda	Agenda 1 <ul style="list-style-type: none"> • The objective of the project and its components • Selection of the project site • Necessity of land acquisition for the project
	Agenda 2 <ul style="list-style-type: none"> • The environmental and social consideration study
	Agenda 3 <ul style="list-style-type: none"> • Impacts on daily life and livelihood by the project implementation • Possible increase in the number of traffic accidents by daily commute • Nuisance and social unrest would be caused by the project implementation • Demolition of two private path ways in the project site • Demolition of Tombs of late-monks in the project site • Demolition of an irrigation channel for water right in the project site • Demolition of a well, trees and small shed in the project candidate site
Recorded by	<ul style="list-style-type: none"> • Taungoo Education College (U Myint Thu) • Local Consultant

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Outcomes of the Secondary Stakeholders Meeting are as follows.

- ✓ Most of the discussion points for the Agenda 3 in the Secondary Stakeholders Meeting were focused on the land acquisition progress and issues.
- ✓ However, the following opinions were expressed from the participants' side.
 - Renovation of the University Road (facing south of the project site).
 - Traffic safety for children caused by the increase in the number of vehicles by the project.
- ✓ Negative opinions and objections on the Agenda 3 were not expressed from the participants.
- ✓ Minutes of meeting and a participant list of the Secondary Stakeholders Meeting are attached in Appendix 5.2.3.



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Figure 5.2.3 Secondary Stakeholders Meeting (Explanations)



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Figure 5.2.4 Secondary Stakeholders Meeting (Participants)

(3) Tertiary Stakeholders Meeting

Table 5.2.3 shows summary of the Tertiary Stakeholders Meeting.

Table 5.2.3 Summary of the Tertiary Stakeholders Meeting

Item	Description
Date/Time	22 nd May, 2013/10 AM – 12 noon
Venue in Taungoo	Existing Taungoo Education College
Organizer	U Win, Deputy Director of MOE
Facilitator	Daw Kyu Kyu, the headmistress of Taungoo Education College
Target Stakeholders	The residential population around the existing Taungoo Education College
Total Participants	37
Agenda	<ul style="list-style-type: none"> · The objective of the project and its components · Selection process of the project site · Necessity of the relocation of the Taungoo Education College
	<ul style="list-style-type: none"> · The environmental and social consideration study
	<ul style="list-style-type: none"> · Impacts on daily life including conveniences and commute would be caused by the project · Impacts on business circumstances would be caused by the project implementation
Recorded by	<ul style="list-style-type: none"> · Taungoo Education College (U Myint Thu) · Local Consultant

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Outcomes of the Tertiary Stakeholders Meeting are as follows.

- ✓ The following opinions were expressed from the participants' side.
 - It will be 37-minutes-drive from the downtown area to the project site the parents have to give more time for daily transportation for their children. (Commuting issue)
 - Students need to leave their houses for communing to the school earlier than ever. (Commuting issue)
 - The project site is located in the open space outside the town, wet in raining season, cold wind blow in the winter season so that the children will be exposed to get weathering issues. (Safety Issue)
 - The school for girls which will be located too close to the University of Taungoo so that there could be at risk for social problems between the University students and the school girls. (Safety Issue)
- ✓ Minutes of meeting and a participant list of the Tertiary Stakeholders Meeting are attached in Appendix 5.2.4.



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Figure 5.2.5 Tertiary Stakeholders Meeting (Participants)



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Figure 5.2.6 Tertiary Stakeholders Meeting (Q&A)

5.3 Conclusion

5.3.1 Three Tombs in the Project Site

As specified in Chapter 4, there are three tombs in the project site which were built in several decades ago for late monks in Shan Ywa Monastery located in south of the project site.

As per discussion with the monks of the monastery, those tombs are the relics enshrined or enclosed of the monks who once presided at the monastery in the past.

With regard to the three tombs, in accordance with communications with the present chief priest of the Shan Ywa Monastery, the monastery has allowed that those tombs can be moved or cleared with the following conditions.

- Moving or clearing the tombs is allowed for regional development purposes.
- If anything is found while moving or clearing the tombs, those remains shall be floated to a river according to ritual.

In addition, in the course of the stakeholders meetings, there were no specific negative opinions and complaints against demolition of the tombs among the participants.

In conclusion, an agreement contract with regard to demolition of the tombs was issued and signed by the abbot (Presiding monk) of Shan Ywa Monastery and three representatives of local participants in each stakeholder meeting, dated 22nd May 2013, the last day of the three successive stakeholders meetings (See Appendix 5.3.1).

5.3.2 Two Pathways in the Project Site

As specified in Chapter 4, there are two pathways in the project site which, according to the chief monk of the monastery, were constructed by the Shan Ywa Monastery in the past for the convenience of surrounding villagers. Namely, those pathways are not official roads under control by Taungoo Township Development Committee (TTDC) and other governmental entities, which was confirmed in a meeting and a field reconnaissance conducted by TTDC officials and JICA Preparatory Survey team in August 2013.

With regard to the two pathways which shall be demolished for the project, the chief monk of the monastery mentioned that once the new education college is built, new roads for the monastery must be constructed.

In addition, in the course of the interviews and the stakeholders meetings, opinions, requests and others on the demolition of the two pathway expressed by villagers and the participants which are summarized as follows.

- Constructions of diversion pathways in the project area in replace of the existing pathways to be demolished by the project are necessary against possible negative social impacts on their daily life caused by the demolitions.

In conclusion, an agreement contract with regard to demolition of two pathways with a condition of construction of diversion ones in the project site was issued and signed by the abbot (Presiding monk) of Shan Ywa Monastery and three representatives of local participants in each stakeholder meeting, dated 22nd May 2013, the last day of the three successive stakeholders meetings (See Appendix 7.3.17).

5.3.3 Countermeasures

For the opinions and requests for the project expressed by the villagers, MOE issued an official correspondent letter, No. 1PSL/2768/E&S Study (13) dated 27th August 2013 addressed to Chief Consultant at the JICA Preparatory Survey Team (See Appendix 7.3.17) in which countermeasures shown in Table 5.3.1 are mentioned by Director General, DEPT at MOE.

Table 5.3.1 Countermeasures by MOE

Summary of Opinions/Requests	MOE Countermeasures
Construction of two roads*	These roads will be done if the budget proposal is approved.
Construction of Fence (For safety)	Fencing of the project site will be done as soon as getting approval of budget proposed**.
Deployment of security guards (For safety)	As soon as project start, MOE has plan to appoints the security guards. We will appoint the security guards as a high priority of villagers from villages around the project site
Repair of the University Road	We*** have a plan to consult with Taungoo City Development Committee or Township Development Committee for repairing this road.
Operation of School Buses (for Commuting issue)	If the construction is completed and the practicing school and Education college is opened, MOE will consult with District and Township administrators for the operation of school buses based on the requirement.
Priority employment of near villagers for the project (construction and operation stages)	High priority for employment of near villagers for the project construction as well as operation stages. More priority for construction, however, for the operational stage MOE will consider to appoint the near villagers if necessary.
Priority of school enrolment of children of near villages	Around the project site there are 13 villages with 1389 households and 6516 population. The number of student from grade 1 to grade 9 is 837. There is only 1 affiliated middle school with 81 middle school students. So there is high potential for enrollment of children of near village.
Village electrification (Make official request to relevant official entries)	Electricity for village where the EC constructed will be more high priority than other surrounding villages. The other surrounding villages will be depending on the State/Regional Government.

Note: * Two pathways in the project site

** A budget of 143.91million kyat for the fence has been proposed by DG, DEPT of MOE to the Minister for Education on 19th August2013 (See Appendix 7.3.15).

*** MOE

Source: Sending the Information related to Environmental and Social Consideration Study for the project of the Rehabilitation of Taungoo Education Colleges, Director General Mr. Ko Ko Thin, DEPT, MOE, 27th August 2013

CHAPTER 6 ENVIRONMENTAL AND SOCIAL CONSIDERATIONS (INITIAL ENVIRONMENTAL EXAMINATION: IEE)

6.1 Procedures on Environmental Impact Assessment in Myanmar

As reviewed in Chapter 3, the Ministry of Environmental Conservation and Forestry (MOECAF) was reformed from the Ministry of Forestry by the Myanmar Government in 2012. Subsequently the Environmental Conservation Law came into force on 30th March 2012. However, regulations on Environmental Impact Assessment (EIA) and permissions have not been established in Myanmar.

According to MOECAF, the regulations on EIA have been developed having a technical assistance from ADB (Asian Development Bank), which are being discussed in the Parliament for a final approval as of August 2013. Therefore the approval period and details of the EIA regulations are unknown at the moment.

6.2 JICA Guidelines for Environmental and Social Considerations

In accordance with a screening process stipulated in the JICA Guidelines for Environmental and Social Considerations (April 2010) (hereinafter referred to as “the JICA Guidelines”, a construction project of Education College in Taungoo (hereinafter referred to as “the Project”), which has been proposed as one of the projects discussed in the “Project for Improvement of Education College in The Republic of The Union of Myanmar”, has been classified as Category B (See Table 6.2.1).

Table 6.2.1 Project Categorization by the JICA Guidelines

Category	Description
A	Proposed projects are classified as Category A if they are likely to have significant adverse impacts on the environment and society. Projects with complicated or unprecedented impacts that are difficult to assess, or projects with a wide range of impacts or irreversible impacts, are also classified as Category A. These impacts may affect an area broader than the sites or facilities subject to physical construction. Category A, in principle, includes projects in sensitive sectors, projects that have characteristics that are liable to cause adverse environmental impacts, and projects located in or near sensitive areas.
B	Proposed projects are classified as Category B if their potential adverse impacts on the environment and society are less adverse than those of Category A projects. Generally, they are site-specific; few if any are irreversible; and in most cases, normal mitigation measures can be designed more readily.
C	Proposed projects are classified as Category C if they are likely to have minimal or little adverse impact on the environment and society.

Source: JICA Guidelines for Environmental and Social Considerations (April 2010)

For project classified in Category B, an “Initial Environmental Examination (IEE) level study” is required by the JICA Guidelines as shown in Table 6.2.2.

Table 6.2.2 IEE defined by the JICA Guidelines

Item	Definition
IEE	Initial Environmental Examination (IEE) level study” is a study that includes an analysis of alternative plans, a prediction and assessment of environmental impacts, and a preparation of mitigation measures and monitoring plans based on easily available information including existing data and simple field surveys.

Source: JICA Guidelines for Environmental and Social Considerations (April 2010)

Followed by the JICA Guidelines, the Ministry of Education (MOE) as the project proponent and owner conducted an IEE as environmental and social considerations for the Project in Taungoo in cooperation with the JICA Preparatory Survey Team.

Namely, for the implementation of the IEE including an Environmental Management Plan (EMP), information and data on the natural and social environment, and socio-economic conditions within the project area were reviewed and studied as well as stakeholders meetings were held in the Environmental and Social Considerations Study as shown in Chapter 5 by hiring a qualified local consultant from March to August of 2013 and etc.

6.3 Project Alternative

Several alternatives were discussed in the course of the design stage considering environmental, social and financial differences. It has been recognized that those differences will be dependent mainly on circumstances of the project site, due to the nature of project components (relevant principal facilities to be constructed by the project are the same) as summarized in Table 2.1.1 at Chapter 2.

Therefore, selected two candidate sites shown in Table 6.3.1 were compared as the project alternatives as follows, which are summarized in Table 6.3.2.

Table 6.3.1 Two Alternative Candidate Sites

Option	Village name	Location	
		Latitude	Longitude
Option 1	Tha Win Nge Village	N19 04.868	E96 22.493
Option 2	Sin Seik Village Tract	N18 57.428	E96 21.200

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- ✓ Area for Option 1 is a vacant land where resettlement does not generate, but is a Government planning area for retired military personnel housings.
- ✓ Area for Option 2 is exclusively for farmland (no resident) where resettlement does not generate.
- ✓ Total area to be requires for Option 1 is wider than that of Option 2 of which circumstances require more cost for necessary infrastructures such as construction of fences for Option 1 if compared to Option 2.
- ✓ Distance from the Taungoo center to Option 1 is farther than that of Option 2 of which circumstances require more cost for necessary infrastructures such as connection to existing power supply lines (3km from Option 1 meanwhile 1km from Option2) for Option 1 as well as requires more commuting time to Option 1 if compared to Option 2.
- ✓ Options 1 dose not face an arterial road (National Road No.1) which requires an access road to the site (1.5 km distance from the road: 1.2 km is to be paved and 0.3 km is to newly be constructed).
- ✓ Option 2 faces both of the Taungoo Road and the University Road which does not require any access road.
- ✓ Numbers of village around Option 1 are fewer than that of Option 2 of which circumstances dose not ensure that sufficient number of students from the villages can enroll the practicing middle school in Option 1.
- ✓ Security for students (especially female) in Option 1 site is considered weaker than that of Option 2 due to the land situation which is located a distance away from the arterial road and others.

Table 6.3.2 Comparison of the Project Sites Alternatives

Evaluation Items		Option 1 (Tha Win Nge Village)	Option 2 (Sin Seik Village Tract)
Physical Environment	Land Required (to be acquired) (Acre)	70.22	46.98
	Type of Land	Vacant Land (Not Farm Land) (Planning area for retired military personnel housings)	Farm Land
	Located from Taungoo Center (Mile)	13	5
Social Environment	Resettlement	No	No
	Villages around the project sites	A few villages	More villages than Option 1
	Risk (Security for Students, especially for Female)	Weak	Good
Infrastructures	Distance from existing power lines (km)	3	1
	Distance from nearest arterial road (km)	1.5	0
		· 1.2 km :to be paved · 0.3 km: to be constructed	· Facing to Taungoo Road · Facing to University Road
	Water Supply Services	No Deep well: to be constructed	No Deep well: to be constructed
	Drainage Systems	No	Yes Open Ditch Drainage Systems
Total Cost*		Higher than Option 2	Less than Option 1

* Given that construction cost for facilities is constant for both options

Source: DEPT, MOE , modified and amended by the JICA Preparatory Survey Team

Based on the above comparisons, Option 2 has been selected as the suitable site for the project taking into account no possibility of resettlement, less negative and more positive social impacts as well as fewer costs in association with the less land area to be acquired.

6.4 Without-Project (Zero Option)

Consequences for selection of zero option of the project are considered as follows.

- ✓ All land plots for the project site, of which project affected persons (PAPs: who had rights for farming in the site) agreed to sell each plot to MOE and most of the PAPs have been compensated by MOE, will not be used.
- ✓ Impacts on natural and social environment caused by the construction and operation of the proposed project will not occur at all.
- ✓ MOE will find other projects on education college and necessary project sites for which further more budgets of MOE will be required.

Considering minor environmental and social impacts (discussed below) caused by the project and financial constraints of MOE, it is evaluated that the selection of zero option (no project) of the project is not realistic.

6.5 Scoping and TOR for Environmental and Social Considerations

6.5.1 Scoping Results

“Scoping” in the environmental and social considerations study defined in the JICA Guidelines is that “scoping means choosing alternatives for analysis, a range of significant and potentially significant impacts, and study methods”. Table 6.5.1 shows the scoping result for the proposed project.

Table 6.5.1 Scoping Results

Category	No.	Environmental Item	Rating		Reasons
			Const. Phase	Ope. Phase	
Pollution Control	1	Air Quality	B-	C	<p><u>Construction Phase:</u> Worsening of surrounding ambient air caused by exhaust gases and dusts emitted from operation of heavy vehicles, equipment and trucks is predicted during construction and installation period.</p> <p><u>Operation Phase:</u> There is no possibility of generation of air pollutants which have negative impacts on ambient air caused by the operation of the new education college. However, using vehicles for commuting to the college will discharge exhaust gases.</p>
	2	Water Quality	B-	C	<p><u>Construction Phase:</u> Water pollution caused by construction work and installation work, operation of heavy vehicles, equipment and trucks, and waste water of workers and labors is predicted.</p> <p><u>Operation Phase:</u> There is possibility of water pollution caused by discharge of waste water from sanitation facilities and kitchen.</p>
	3	Wastes	B-	C	<p><u>Construction Phase:</u> Generation of construction waste soil, demolition waste and debris are expected.</p> <p><u>Operation Phase:</u> Generation of domestic waste from facilities is expected.</p>
	4	Soil Contamination	C	C	<p><u>Construction Phase:</u> There is possibility of soil contamination due to oil spills from relevant construction vehicles and equipment, and transport trucks.</p> <p><u>Operation phase:</u> There is possibility of soil pollution caused by discharge of waste water from sanitation facilities and kitchen.</p>
	5	Noise and Vibration	C	C	<p><u>Construction Phase:</u> Generation of noise caused by construction vehicles and heavy equipment is expected.</p> <p><u>Operation Phase:</u> Using vehicles for commuting to the college will discharge traffic noise</p>
	6	Subsidence	D	C	<p><u>Construction Phase:</u> Due to school facilities 'construction, construction work and installation work which cause of subsidence is not predicted.</p> <p><u>Operation Phase:</u> Ground water consumption rate is not clear for the facilities</p>
	7	Odor	D	D	Construction work and installation work as well as operation which cause of bad odor are not expected
Natural Environment	8	Protected Areas	D	D	Protected area and national parks are not existed in and around the project site
	9	Ecosystem	C	C	Rare and protected species and habitats of flora and fauna have not been identified in and around the project site of existing paddy field so far. In order to make sure impacts on ecosystem, reviews of flora and fauna are required.

Category	No.	Environmental Item	Rating		Reasons
			Const. Phase	Ope. Phase	
	10	Hydrology	D	D	Construction work and installation work as well as project operation which impacts on river stream and river bed of the nearest revivers are not expected.
	11	Topography and Geology	D	D	Large scale excavation and earth fill are not expected due to construction of school facilities of 2 stories
Social Environment	12	Land Acquisition /Resettlement	C	C	Before Construction Phase: Based on the land acquisitions have been done by MOE, 11 affected persons (who have rights for faming in the area) have been identified. Meanwhile, residential houses are not existed at all in the project site of paddy field so that physical resettlements of houses are not required at all.
	13	Impoverished Peoples Ethnic Minorities and Indigenous Peoples	D	D	Impoverished (absolute deprivation) people and PAPs are not identified in the project site As well ethnic minorities and indigenous peoples are not identified in and around the project site.
	14	Living and Livelihood	B+	C	Construction Phase: A temporary employment of the surrounding villagers is expected for the construction work and installation work Operation Phase: A temporary employment of the surrounding villagers is expected in the Operation Phase. Impacts on livelihood of the PAPs by the land acquisitions are necessary to be calculated. And make sure the countermeasures for the removal of the two pathways in the project site.
	15	Land use and Regional Resources	B-	C	Construction Phase: There is possibility of negative impact on surrounding farmlands caused by discharge of waste water from construction work and installation work, and worker's office and sleeping quarters to existing drainages. Operation Phase: There is possibility of negative impact on surrounding farmlands caused by discharge of waste water from sanitation facilities and kitchen of the facilities to existing drainages.
	16	Water Right/Use of Water	C	C	There is a branch irrigation channel constructed in the project site of which water right has been mainly set up for the site. The channel will be demolished by the project. Extend of the right is to be cleared.
	17	Social Infrastructures and Services	B-	C	Construction Phase: Negative impacts on surrounding road traffic congestion by increase in the number of heavy vehicles, equipment and transport trucks are temporally predicted during construction period. Operation Phase: Negative impacts on surrounding road traffic congestion by increase in the number of vehicles for commuting to the Education College and practicing school are predicted in the operation phase.
	18	Heritage	C	D	Local archeological, historical, cultural, and religious heritages are not existed in the project area excluding some small monuments (tombstones) of a late chief priest of the nearest Buddhist monastery (temple) are in the project site. The monuments maybe demolished by the project.
	19	Social Capital and Social Organization such as decision making bodies	D	D	Any impacts on social capital and social organization gender are not expected by the project
	20	Damage and Benefit	D	D	The project is construction and operation of educational facilities by which such inequality of damage and benefit is not predicted around the project site
	21	Landscape	D	D	Any negative impacts on the surrounding landscape are not expected by the construction of school facilities of 2 stories in the paddy field area as well as two small size elevated water tanks (15m ³ capacity each) are planned to be constructed roughly in the central location of the project site of which area is 41.19 acres.
	22	Gender Issue	D	D	Any impacts on gender are not expected by the project
	23	Rights of the Child	D	D	Any impacts on rights of the child are not expected by the project
	24	Risk of infectious diseases such as HIV/AIDS	B-	C	Construction Phase: Temporary influxes of migrant labors increase the risks of STD such as HIV/AIDS during the construction period. Operation Phase: Project is a construction of educational facilities. However, such risks are unknown in the operation phase.
	25	Working Conditions/Work Safety	C	C	Construction Phase: Deterioration of occupational safety and working condition associated with the construction work is anticipated if not properly managed. Operation Phase: There will be general educational related activities for college staff during the operation phase. Therefore it is considered that the working conditions for the staff will be moderate.
Others	26	Accidents	C	C	Construction Phase: Accidents associated with construction work is predicted Operation Phase: Increase in traffic accidents associated with commuting to college/school is considered.
	27	Transboundary or Global Issues	D	D	This project is construction and operation of educational facilities by which such impacts on transboundary or global issues such as climate change practically are not predicted during construction and operation phases

A+/- : Significant positive/negative impact is expected.

B+/- : Positive/negative impact is expected to some extent.

C+/- : Extent of positive/negative impact is unknown. (A further examination is needed, and the impact could be clarified as the study progresses)

D : No impact is expected.

Note: Const. Phase: Construction Phase (includes Construction work and Installation work), Ope. Phase: Operation Phase

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6.5.2 TOR for Environmental and Social Considerations Study

In accordance with the Scoping Results shown in Table 6.5.1, a Terms of Reference (TOR) prepared for the environmental and social consideration study for the project is shown in Table 6.5.2.

Table 6.5.2 TOR for Environmental and Social Considerations Study

Environmental Item	Study Item	Study Method
Alternatives	i. Environmental conditions of alternative sites ii. Social conditions of alternative sites iii. Infrastructures around alternative sites iv. Total cost	i. –iv. Site reconnaissance, literature reviews and interviews around each site and meetings with relevant officials and stakeholders. Based on these studies, meetings and proposed project components, the most suitable project site is comprehensively evaluated at the planning stage.
Air Pollution	i. Present traffic volume ii. Air quality in and around the site iii. Impact during construction and installation	i. Review of existing data and interviews ii. Air quality simple monitoring and site reconnaissance iii. Based on the above studies, simple calculation of necessary numbers of construction vehicles and equipment, and trucks to be used for the construction and installation is evaluated.
Water Pollution	i. Water quality in and around the site ii. Impacts during construction and operation phases	i. Surface and ground water quality simple monitoring and site reconnaissance. ii. Based on the above monitoring and reconnaissance as well as construction methods, the impacts during construction and operation are evaluated.
Wastes	i. Construction solid waste management ii. Domestic solid waste management	i. Interviews with relevant official entities ii. Interviews with relevant official entities
Soil Contamination	i. Construction method to be applied ii. Construction vehicle and equipment to be used	i. Site reconnaissance and construction plans ii. Site reconnaissance and construction plans
Noise and Vibration	i. Construction method to be applied ii. Construction vehicle and equipment to be used iii. Vehicle for commuting	i. Site reconnaissance and interviews ii. Site reconnaissance and interviews iii. Site reconnaissance and interviews
Subsidence	i. Ground water and water consumption	i. Natural Condition Study Results
Ecosystem	i. Present condition of flora and fauna in the project site	i. Review of existing data, field reconnaissance and simple sampling
Land Acquisition /Resettlement	i. Due diligence review of the land acquisition ii. Identification possible project affected persons iii. Opinions on the land acquisitions of project affected persons and relevant stakeholders iv. Evaluation of the land acquisition	i. Review of plans like Resettlement Action Plan (RAP), relevant policy, laws and regulations on land acquisition and compensations, the land acquisition progress, land use, socio-economic status. ii. Site reconnaissance, interview with relevant official entities. iii. Stakeholder meetings and interviews iv. Preparation of a Due Diligence Report (DDR), and a simple RAP (if necessary)
Living and Livelihood	i. Project policy ii. Impacts on Livelihood	i. Discussion with relevant official entities ii. Calculation of impacts on livelihood
Land use and Regional Resources	i. Construction method and equipment ii. Waste water treatment facility	i. Site reconnaissance and interviews ii. Site reconnaissance and interviews
Water Right/Use of Water	i. Water supply areas of the irrigation channel ii. Persons who have water right of the irrigation channel	i. Site reconnaissance and interviews ii. Site reconnaissance and interviews
Social Infrastructures and Services	i. Present traffic volume ii. Construction vehicle and equipment to be used iii. Commuting methods and public transportation	i. Review of existing data and interviews ii. Site reconnaissance and interviews iii. Meetings, interviews and discussions with stakeholders
Heritage	i. History of the monuments (tombs) ii. People's perception to the monuments (tombs)	i. Interviews with the nearest monastery ii. Stakeholders meetings and discussions
Risk of infectious diseases such as HIV/AIDS	i. Health situation in the project area ii. Health education activates	i. Interviews ii. Review of relevant laws and regulations
Working Conditions/Work Safety	i. Occupational safety systems ii. Relevant to law and regulation	i. Review of relevant laws and regulations ii. Review of relevant project reports
Accidents	i. Present traffic volume	i. Review of existing data and interviews
Stakeholders Meetings	i. Opinions of stakeholders in and around the project site	ii. Meetings with three different targets to be initiated by MOE - Project affected persons (Primary target) - Surrounding villagers (Secondary target) - Residents around the existing Education College (Tertiary target)

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6.6 Results of Environmental and Social Considerations Study

6.6.1 Air Pollution

(1) Construction Phase

During the construction phase, heavy vehicles and equipment, and trucks to be used in the project site will generate exhaust gases. The phase for the new TEC is scheduled to be total 15 months (15months for the construction work of which final month is planned to be allocated for the installation work of education equipment).

1) Construction Work Period

In the first place, heavy vehicles and equipment required for the 15-month construction work are summarized in Table 6.6.1.

Table 6.6.1 Heavy Vehicle/Equipment Input for 15-month Construction Work

Heavy Vehicle and Equipment	Inputs			(d) Gross Number (8hours/day) =(a)×(b)/8×(c)	(e) Number/day For 15 months (7days/week) =(d)/(365/12×14)	(f) Number/day for 15 months (5 days/week) =(d)/(365/12×14) ×7/5
	(a) Days	(b) Hours/Day	(c) Number/ Day			
Dump Truck	100	8	3	300	0.66	0.92
Concrete Mixer	150	8	5	750	1.64	2.30
Truck Crane	215	5*	1	134*	0.29	0.41
Backhoe	50	8	3	150	0.33	0.46
Total	515	29	12	1,334	2.92	4.09

Note: Total construction period is 15 months (456.25days = 365 days /12 months ×15months)

* Calculation is 8 hours per day basis

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In accordance with Table 6.6.1, it is understood that the inputs of heavy vehicles and equipment will be limited for 15 months of the construction work as follow.

- In cases where the construction work will be carried out for 7 days a week (including weekends), it can be calculated that a total number of those vehicles and equipment to be operated is approximately three (3) vehicles per day for the 15 months.
- In cases where the construction work will be carried out for 5 days a week (excluding weekends), it can be calculated that a total number of those vehicles and equipment to be operated is approximately four (4) vehicles per day for the 15 months.
- Thus, it can be considered that such vehicles and equipment are operated in the range of three or four per day (8 hours) in gross for the 15-month construction period.

2) Installation Work Period

In the second place, the installation work is planned to be scheduled in the fifteenth month (namely the final month) of the 15-month construction work period as follows.

- A total of 11 days is allocated for the installation work in the final month.
- A total of two days is allocated in the 11 days for a land-transportation for the education equipment (the round-trip from/to Yangon).
- One heavy transport truck is planned to be operated for the land-transportation in the two days (the truck is not to work in the project site).
- Heavy equipment and vehicles for the construction work is planned to be utilized for the installation for the 11 days.

Accordingly, it is understood that the inputs of the transport truck will be limited for installation work. Namely, a rapid increase in the number of heavy trucks used for the construction and installation work is not predicted for the final month.

Meanwhile, due to the fact that the project site is an open and flat paddy and farmland, it is considered that exhaust gases from several numbers of those vehicles and equipment are easily diffused into surrounding ambient environment.

However, in dry season, dust of dried soil can easily be stirred up by such heavy vehicle and equipment operation on site.

(2) Operation Phase

During the operation phase, the facilities and system shown in below to be operated in the project site will generate exhaust gases

1) Kitchen Facility

Circumstances of combustion gas which will be generated from a kitchen facility which is planned to be constructed in the new TEC are summarized as follows.

- Rice husk (which is used as fuel for the present kitchen of the existing TEC) is planned to be used as fuel for the kitchen in the new TEC.
- The kitchen is planned to be used in regulated times (2 times/ day) of morning and evening.
- Surroundings of the kitchen of the new TEC are open paddy and farmlands where the combustion gas is to easily be diffused into surrounding ambient environment

2) Hostel

Hostels in the new TEC are planned to be connected to the electricity distribution system in the new TEC. Therefore, air pollutants will not be emitted from the facilities at all.

3) Backup system

As a back-up power supply, a diesel engine generator which shall have an equivalent environmental performance of such generators designated as “Tier III (the 3rd exhaust emission) control construction machine” by Japanese Ministry of Land, Infrastructure, Transport and Tourism is planned to be operated in limited utilization based on an assumption of the power failure frequency (0.5 hour per day of 15days per month).

6.6.2 Water Pollution

(1) Construction Phase

Construction workers and labors will generate human waste which will be discharged as waste water. Total construction workers and labors are estimated to a total of 116,000 persons for the 15 month construction work as well as 4 persons (Procurement supervisor, management staff, tech worker and labor) per day for the 11days’ installation work, by which daily average numbers of such workers and labors are summarized as shown in Table 6.6.2.

Table 6.6.2 Workers and Labors necessary for the Construction and Installation Work

Period	Labor Force	Persons
Construction Work	Total construction workers and Labors for 15 months	116,000
	Daily Average Numbers of Workers/Labors (6 working days/week basis)	300
Installation Work	Daily installation workers and Labors for 11 days in the final month.	4

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- It can be considered that a daily average of such workers and labors to be mobilized will be approximately 300 (persons/day) for the construction work including the 11 days’ installation work.

- The daily amount of human waste from the workers and labors can be considered about 300 (L/day) for the construction work including the 11 days' installation work as average on the basis that excretion amount unit of one L /person/day (for 8 working hours) is applied.
- For the treatment of the human waste for the construction including the 11 days' installation work, in conformity to a Japanese standard of 3 latrines per 60 persons for construction areas, five temporally sanitation facilities (each of which has 3 squat type latrines connecting to a septic tank having a capacity for 60 persons of general type seen in Myanmar) are planned to separately be constructed in the area
- On the other hand, considering nature of construction for a general college school building and installation of the education equipment, it can be predicted that quantity of water used for the construction on site will be limited.

(2) Operation Phase

Waste water from the new TEC is planned to be treated with aerated waste water treatment facilities as follows.

- BOD removal efficiency of the aerated waste water treatment facilities to be installed is more than that (40% of BOD removal efficiency) of the standard septic tanks (anaerobic biological treatment systems) generally used in Myanmar.
- Treated water is planned to be discharged to the nearest drainage system.
- Liquid solutions used for chemical and science practical trainings in classes of the new TEC are general ones such as hydrochloric acid (35%) and etc., of which quantities used for one training are limited of several hundred milliliters whereby a general disposal method of dilution with water for such solutions is planned to be discharged as domestic waste water.

6.6.3 Wastes

(1) Construction Phase

Considering nature of construction of a general school building and installation of education equipment, it can be predicted that debris and wastes which are generated during the construction work and the installation work will not be hazardous wastes such as toxic chemical substances and radioactive waste but be general "industrial wastes" which are generally collected, transported and treated by all contractors' management for the construction and the installation.

(2) Operation Phase

It is considered that wastes generated from the students and staff of the new TEC will be so called "domestic solid waste" including sludge of waste water treatment facilities.

Table 6.6.3 and Table 6.6.4 show the data on students, pupils and staff of the existing TEC and the new TEC respectively.

The pupils and some of the teaching staff of the "Commuting" category are/will be not always in each TEC.

Therefore, adjustments on the basis of the 24 hours per day and 7 days per week were made on the numbers of the "Commuting" category for the calculation of the daily generation amount of solid waste of each TEC as shown in Table 6.6.3 and Table 6.6.4.

Table 6.6.3 Students/Pupils and Staff of the Existing TEC

Category	Unit	Students of Existing TEC		Pupils of Affiliated Primary and Lower Secondary Schools of Existing TEC		Teaching Staff for Existing TEC	
		Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
Boarding	Person	245*	245	0	0	71	71
	Days/Week	7	7	0	0	7	7
	Hour/Day	24	24	0	0	24	24
Commuting	Person	0	0	723	161.38	62	18.45
	Day/Week	0	0	5	7	5	7
	Hour/Day	0	0	7.5 (8am-3:30pm)	24	10 (7am-17pm)	24
Total Adjusted Values	Person	495.84 (= 245+71+161.38+18.45)					

* DTEd 1st yr and 2nd yr, excluding DTEC
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Table 6.6.4 Students/Pupils and Staff of the New TEC

Category	Unit	Students of New TEC		Pupils of Affiliated Primary and Lower Secondary Schools of New TEC		Teaching Staff for New TEC	
		Actual	Adjusted	Actual	Adjusted	Actual	Adjusted
Boarding	Person	1,000	1,000	0	0	81	81
	Days/Week	7	7	0	0	7	7
	Hour/Day	24	24	0	0	24	24
Commuting	Person	0	0	760*	169.64	80	23.81
	Day/Week	0	0	5	7	5	7
	Hour/Day	0	0	7.5 (8am-3:30pm)	24	10 (7am-17pm)	24
Total Adjusted Values	Person	1,274.45 (=1,000+81+169.64+23.81)					

* 80 pupils / grade × 9 grads + 40 kindergarten
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As reviewed in Chapter 4, a daily generation amount of solid waste of the existing TEC is 0.1 ton/ day (Source: TTDC).

Therefore, a solid waste generation rate per person of the existing TEC can be obtained by calculating the daily generation amount divided by the adjusted value of the existing TEC as shown in Table 6.6.5.

Table 6.6.5 Solid Waste Generation Rate of the Existing TEC

Item	Value	Solid Waste Generation Rate (kg/day/person)
Daily Generation Amount (ton)*	0.10	0.20
Adjusted Value of Existing TEC (persons)	495.84	

* Data source: Interview with TTDC (See Chapter 4)
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In accordance with Table 6.6.4 and Table 6.6.5, a daily generation amount of solid waste of the new TEC is calculated as shown in Table 6.6.6. Namely approximately 255 kg of solid waste will be generated daily in the new TEC.

Table 6.6.6 Daily Generation Amount of Solid Waste of the New TEC

Item	Value	Daily Generation Amount (kg)
Adjusted Value of New TEC (persons)	1,274.45	254.89
Solid Waste Generation Rate (kg/person)	0.20	

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A solid waste management for the new TEC is planned by MOE as follows.

- The present relevant public (solid waste management) services of TTDC are planned to be used.

- A solid waste storage and -collection point is planned to be constructed in the new TEC.

In order to use the relevant TTDC public services, MOE has proposed to allocate a budget of 1,267,200Kyat/year for 2 times/week collection of the solid waste of the new TEC as shown in Table 6.6.7. (See Appendix 6.6.1)

Table 6.6.7 Calculation Bases for Solid Waste Management Budget

Item	Description	Remarks
Collection Frequency	2 times/week	4 weeks/month
Fuel Cost	4 gallon/ time (round trip)	3,300 Kyat/gallon
Service Charge	Free of Charge (0 Kyat)	Solid Waste Management by TTDC
Calculation	$(2 \text{ (times/week)} \times 4 \text{ (weeks/month)}) \times 12 \text{ (month/year)} \times (3,300 \text{ Kyat/gallon} \times 4 \text{ gallon/time}) + 0 \text{ Kyat}$	
Total	1,267,200 Kyat/Year	

Source: DEPT, MOE

In addition, MOE has also proposed to allocate a budget of 172,800kyat/4times/year for de-sludge for waste water treatment facilities to be constructed in the new TEC as shown in Table 6.6.8. (See Appendix 6.6.2)

Table 6.6.8 Calculation Bases for De-Sludge Budget

Item	Description	Remarks
De-Sludge Frequency	4 times/year	-
Fuel Cost	13,200 Kyat / time	For a de-sludge service car
Service Charge	30,000 Kyat/ time	De-Sludge service by TTDC
Calculation	$(4 \text{ (times/year)} \times ((13,200 \text{ Kyat/time}) + 30,000 \text{ (Kyat/time)}))$	
Total	172,800 Kyat/Year	

Source: DEPT, MOE

6.6.4 Soil Contamination

(1) Construction Phase

Soil contamination caused by oil spills from heavy vehicles and equipment as well as a transport truck is predicted during the construction work and the installation work. However, it is considered that those spills are temporal troubles which can be managed by daily visual inspection and be avoided by use of such vehicles and equipment, and the trucks periodically maintained.

(2) Operation Phase

Soil contamination caused by waste water (mainly human excreta and domestic wastewater) from the new TEC is predicted during the operation phase.

In this regard, as mentioned in the item 6.6.2 of Water Pollution, the waste water from the new TEC is planned to be treated with aerated waste water treatment facilities of which BOD removal efficiency is more than that of the standard septic tanks (anaerobic biological treatment systems) generally used in Myanmar.

6.6.5 Noise and Vibration

(1) Construction Phase

During the construction work, heavy vehicles and equipment, and a truck as well as electrical drills to be used will generate noise with the following circumstances.

- As noted in the item 6.6.1, it can be considered that such vehicles and equipment are operated in the range of three or four per day (8 hours) in gross for the 15-month construction work (Table 6.6.1), and one transport truck as well as electric drills per day (8 hours) for the 11 days installation

- work.
- Due to the fact that the project site is an open and flat paddy and farmland (with few receptor around the site), it is considered that noises generated from several numbers of those vehicles and equipment and a truck as well as electrical drills are diffused into surrounding ambient environment.
 - Generally noise at construction site can be regarded as a simple sound source whereby noise level will decay by 6 dB in distance doubles because that noise is inversely proportional to the square of the distance.

As far as vibration concerned, piling for the foundation is not planned for the construction.

(2) Operation Phase

Due to the fact that the project is a general educational facility, operation of the new TEC will not generally generate noise and vibration. However, the following points can be discussed for the operation.

- As a back-up power supply, a diesel engine generator which shall have an equivalent environmental performance of such generators of low noise emission (e.g. Rated speed 50 Hz, unloaded average sound pressure level in all around 7m is approximately 60 dB (A)) generally used in Japan is planned to be operated in limited utilization based on an assumption of the power failure frequency (0.5 hour per day of 15days per month).
- Discharge of traffic noise by the use of wheeled vehicles for the school commuting is predicted. However, the vehicles seen in Taungoo are generally relatively new (last 10 years old) types of used Japanese cars (which are satisfied with the “Permissible Limit of Automobile Noise (1971) of Japan” of which Cruising Noise is regulated at 70 dB (A) of 1971 year regulation of which value in from 1999 to 2001 year is 72 dB (A) for passenger cars of which riding capacity (number of seats include driver's) of 10 people or less) whereby heavy noise level is not predicted by the commute to the new TEC with such vehicles.

6.6.6 Subsidence

During the operation phase, a total 242 m³ per day of ground water as captive consumption for the new TEC is planned to be pumped up with two water wells as follows.

- As the result of natural condition study, a total capacity of 392 m³ per day (=196 m³/day × 2) of two wells is designed in order not to have negative impact on the existing ground water level.
- The captive consumption of 242 m³ per day is less than the total capacity of two wells of 396 m³ per day.
- Therefore, it is considered that land subsidence is not predicted by the use of ground water consumption of 242 m³ per day for the new TEC.

6.6.7 Ecosystem

Based on the field studies discussed in Chapter 4 as well as available literatures' reviews, primeval forests, tropical rain forests, ecologically valuable habitats as well as threatened plant and animal species have not been observed in and around the project site.

Overall habitat value in the project site is assumed to be moderate as summarized in Table 6.6.9.

Table 6.6.9 Habitat Features of the Project Site

Criterion	Features	Remark
Flora and Fauna	Threatened species	Nil
Communities easily influenced	Mixed vegetation and water body	Potential human disturbance
Migratory Birds	No record	Nil
Wildlife Corridor	Low	Rice field
Representativeness	Moderate	Mixed vegetation and water body
Natural Diversity	Low	Some parts disturbed
Rarity and Distinctiveness	Moderate	Rice field support the biodiversity
Naturalness	Moderate	Mixed vegetation and rice field
Pest Species	Insect pests and field rat	Seasonal
Long –term viability	Moderate	Potential human pressure
Adjacent habitat values	Low	Rice field
Degree of existing modification	Low	Human activities
Sensitivity to disturbance	Moderate	Mixed vegetation
Overall habitat value	Moderate	Naturalness of the rice field

Note: Nil = Nothing or non-existence (i.e., there are no threatened species of Fauna and Flora in the project area)

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6.6.8 Land Acquisition and Resettlement

As reviewed in Chapter 5 and Chapter 7, land acquisition for the project was implemented by MOE as follows.

(1) Relevant Meetings

A land acquisition consultation meeting was first ever held on 3rd Dec. 2012 (regarded as the Cut-off-date for the land acquisition) by MOE to discuss the land acquisition issues (compensation methods and values) with the participants of the persons who had rights for farming in the project site (Project Affected Persons: PAPs) and relevant stakeholders. After that, stakeholders meetings and questionnaire surveys on the project were held around the communities and the existing TEC as summarized in Table 6.6.10 and below

Table 6.6.10 Relevant Meetings with Stakeholders

Date	Objectives	Description
3 rd Dec. 2012	Land Acquisition Consultation Meeting	12 participants (including 7 PAPs)
15 th Mar. 2013	Questionnaire Survey	Nyaung Gaing Village
16 th Mar. 2013	Questionnaire Survey	Myin Sar Kwat Village and Shan Ywan Village
17 th Mar. 2013	Land Acquisition Consultation Meeting	27 participants (MOE, elders and Taungoo representatives)
20 th May. 2013	Primary Stakeholders Meeting	Target: PAPs (27 participants)
21 st May. 2013	Secondary Stakeholders Meeting	Target: Surrounding of the Project Site (37 participants)
22 nd May.2013	Tertiary Stakeholders Meeting	Target: Surrounding of the Existing TEC (37 participants)

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- As a result of the questionnaire surveys, it has been confirmed that all 60 respondents have expressed their agreements for the project.
- The project summary and the land acquisition have adequately been explained and discussed among relevant PAPs and relevant stakeholders
- Requests from the relevant stakeholders have been expressed such as; Construction of diversion pathways (roads) in the project site, improvement of road of south of the project site, Priority employment of the surrounding villagers in the construction phase, priority school enrollment of the surrounding villagers children, special considerations for female students on safety, commuting considerations and etc.
- MOE has a plan for countermeasures for the requests from the relevant stakeholders.

(2) Resettlement

The project site is in the existing paddy and farmland where residential households are not existed, thus, involuntary resettlements were not arisen at all by the land acquisition.

(3) Compensation

Compensation methods for the land acquisition agreed were as follows.

- Compensation price : 20Lakh Kyat/acre
- Compensation methods: Cash compensation and alternative lands (value of 20 Lakh Kyat/acre)

The compensation situations are summarized in Table 6.6.11 and below.

Table 6.6.11 Compensation Situations

Compensation Situations	Original PAPs	Final PAPs
Persons agreed about the Cash Compensation	7	7
Persons agreed about the Cash Compensation and the Alternative Lands	1	1
Persons not agreed about the compensation methods	3	0 (excluded)
Total	11	8

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- Seven (7) among the 11 original PAPs agreed about the cash compensation of 20 Lakh Kyat/acre.
- One (1) among the 11 original PAPs agreed about the cash compensation and alternative lands of same value of 20 Lakh Kyat/acre.
- Three (3) among the 11 original PAPs did not agree about the compensation methods of both cash and alternative lands.
- As for the three who did not agreed about the compensation methods, MOE finally decided to exclude the three persons' land plots from the project site which were agreed among relevant stakeholders.
- Thus, the 11 original PAPs came to eight (8) persons which are referred to as the Final PAPs.
- For the alternative lands, two plots among the land plots acquired by MOE have been allocated to the relevant PAP.
- The two plots of 1.78 acre have been decided by MOE to be excluded from the project site for the alternative lands, by which total area of the project site is 41.19 acre.

(4) Payment and Budget

Payment status and the budgets for the compensations are summarized in Table 6.6.12 and below.

Table 6.6.12 Payment Status and Budget for the Compensations

Payment Status	Final PAPs	Budget	Remarks
Compensated	7	MOE Welfare Fund	MOE Welfare Fund will be reimbursed by the Ministry of Finance and Revenues in the 2014 fiscal budget of MOE
Advance Payment only	1	MOE Welfare Fund	Unpaid amount is scheduled to be paid by the end of March 2014 using the 2014 fiscal budget of MOE

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- Seven (7) PAPs among the eight (8) of the Final PAPs eligible for the compensation have been compensated by MOE in the methods of cash compensation and alternative lands.
- Advance payment has been paid to the remaining one (1) PAP, of which unpaid amount is scheduled to be paid by the end of March 2014.
- MOE initially allocated 500 Lakh Kyat from its internal budget of "Welfare Fund".
- The fund can be reimbursed in the next fiscal year budget in cases where a MOE budget proposal has been approved by the Ministry of Finance and Revenue.

(5) Grievance Redress System

A grievance redresses system consisted of MOE, TEC, TTDC, RLRD and others has been proposed to be organized by MOE for the land acquisition and project (See Chapter 7).

6.6.9 Living and Livelihood

(1) Work Opportunity

For the opinions on priority employment of near villagers which were expressed in relevant stakeholders meetings, MOE has replied as follows (See Chapter 5).

- There will be high priority for employment of near villagers for the project construction as well as operation phases.
- More priority for construction, however, for the operational stage MOE will consider to appoint the near villagers if necessary.

Therefore, work opportunities of nearby villagers are expected in construction and operation phases

(2) Impacts on Livelihood by the Land Acquisition

The impacts on total annual incomes for each affected person (Final PAPs) as well as the compensation value can be calculated by using the annual profitability losses of the affected lands as evaluated in below.

- Impacts on livelihood are less than 10% of the total annual incomes of each Final PAPs.
- The compensation of 20 Lakh Kyat/acre has a value of from 14 year to 15 year profitability of the paddy and farmland. (Note: Inflation rate is not considered in the evaluation)

(3) Demolition of Two Pathways

As the countermeasures against demolitions of the two private pathways in the project site, diversion pathways for the conveniences of daily life of surrounding villagers are planned to be constructed by MOE in the both side of the project site.

(4) Possible Impacts during Rainy Season

During rainy seasons, excavated areas in the project site of which soil is planned to be used for the earth filling will be submerged by rain water.

- Thus, it is predicted mosquito will be generated during the seasons.
- However, the present situation of the project site is paddy and farmland where is irrigated and is submerged by rainwater during rain seasons.
- Therefore, it can be considered that the future situation of submerging by rain water is not so different from the present situation.
- The mosquito can be cleaned up by the general countermeasures such of use of commercially available insecticides and mosquito nets.

6.6.10 Land Use and Regional Resources

(1) Construction Phase

There is possibility of negative impact on surrounding farmlands caused by discharge of waste water from construction workers and labors to the nearest existing drainages.

However, as discussed in the item 6.6.2, for the treatment of the human waste, in conformity to a Japanese standard of 3 latrines per 60 persons in construction areas, total five temporally sanitation facilities (each of which has 3 squat type latrines and is connecting to a septic tank having a capacity for 60 persons of general type used in Myanmar) are planned to separately be constructed in the construction area.

(2) Operation Phase

As discussed in the item 6.6.2, waste water of the new TEC are planned to be treated with aerated waste water treatment facilities. The treated waste water is planned to be discharged to an existing drainage located in north of the project site of which water is practically utilized for farmlands of east of the project site. Thus, it is considered that the quality of treated waste water can be controlled by the proper operation and maintenance of the treatment facilities as well as emergency procedures for the possible negative impacts on the farmlands.

6.6.11 Water Right and Use of Water

Water right for irrigation distributed by a irrigation channel constructed in the project area is allocated to not only project site but also farmlands of a total area of 12.84 acres of seven persons who have right for farming in the lands, where are located in the east (the downstream area) of the project site. In answer to MOE's inquiry through the existing TEC, all those 7 persons expressed abandonment of the water right for the sake of the project. As for the reasons of the abandonment, it can be considered the following points.

- Experiences of usage of the irrigation water by those farmers are substantively less because that the operation of the irrigation channel was started in the early stage of this year of 2013.
- Those farmers may focus on beans which require less water rather than the paddy rice for cultivation in the farmlands.

6.6.12 Social Infrastructures and Services

(1) Construction Phase

As summarized in Table 6.6.1, heavy vehicles and equipment used for the construction work are operated in the range of three or four per day (8 hours) in gross for the 15- month construction period as well as one transport truck is operated in two days (the round-trip from/to Yangon) for the 11days installation period in the final month of the 15-month construction period. Therefore, it is considered that surrounding road traffic congestion by increase in several numbers of heavy vehicles and equipment, and transport trucks is limited during for the 15-month construction phase of the construction work of 15-month and the installation work of one month.

(2) Operation Phase

According to MOE, a plan on bus services to school to be operated by the New TEC will be discussed for the conveniences of the TEC operation. The details are unknown at the moment of this reporting. However, in cases where bus services to school are applied, the following points are envisioned.

- It can be considered that buses to be operated will be a few numbers which are intended not for large-scale public transportation bus services for whole city coverage but for the limited use of the school commuting.
- Number of the buses and operation time may be limited due to the nature of a boarding college as well as the priority enrollment of the surrounding villagers' children for Practicing School of the new TEC.
- Therefore, it can be considered that surrounding road traffic congestion by increase in the number of buses to school will be limited for the operation phase.

6.6.13 Heritage

Demolition of three tombs of late monks in the project site has been agreed by the relevant stakeholders and the Shan Ywa Monastery.

6.6.14 Risk of Infectious Diseases such as HIV/AIDS

Even though priority recruitment of workers and labors live in surrounding villages are planned by MOE, it is considered that migrant workers and labors with specific skills probably be mobilized by contractors. According to JICA, the three major infectious diseases in Myanmar are malaria, HIV/AIDS and tuberculosis (source: <http://www.jica.go.jp/myanmar/english/index.html>). Table 6.6.13 shows HIV and AIDS estimates in Myanmar (2012), by which risks of HIV and AIDS for workers and labors are considered during the 15-month construction work as follows.

Table 6.6.13 HIV and AIDS Estimates in Myanmar (2012)

Item	Figure
Number of people living with HIV	200,000 [170,000 - 220,000]
Adults aged 15 to 49 prevalence rate	0.6% [0.5% - 0.6%]
Adults aged 15 and up living with HIV	190,000 [160,000 - 210,000]
Women aged 15 and up living with HIV	63,000 [55,000 - 71,000]
Children aged 0 to 14 living with HIV	N/A
Deaths due to AIDS	12,000 [9,700 - 14,000]
Orphans due to AIDS aged 0 to 17	N/A

Source: UNAIDS Home Page (<http://www.unaids.org/en/regionscountries/countries/myanmar/>)

In accordance with Table 6.6.13, a probable number of persons who are HIV positive can be calculated based on 0.6% among those of the 116,000 construction workers and labors who are planned to be mobilized for the construction work (See Table 6.6.2). Namely it is predicted that total 696 persons will be HIV positive during the 15 month construction period.

As regards such risks during the installation work, four (4) persons per day are planned to be allocated for 11days (See Table 6.6.2). Therefore, it can be calculated based on the 0.6% that no person will be HIV positive for the installation labors and workers.

6.6.15 Working Conditions/Work Safety

Due to the nature of general construction work and methods will be applied for the construction of the new TEC, it is considered that working conditions will have nothing special such as using toxic chemical substances and methods required for high-rise buildings. Therefore, work safety can be managed by general considerations and relevant law and regulations on work safety. However, there have been no specific rules for Occupational safety and Personal Protective Equipment (PPE) so far in Myanmar.

In this regard, it is considered that Factories Act 1951 is regarded as the existing Legal framework related to occupational safety in Myanmar which provides requirements concerning with working hours, working days, overtime, and certain health and safety measures. The Factories Act 1951 discusses Safety and Health which can be summarized below.

- The employer has an obligation to protect workers from occupational hazards relating to the physical facilities, harmful substances, and environment factors at the workplace.

The first law on safety and health in workplaces is being drafted by the Ministry of Labour, Employment and Social Security and will be promulgated in 2013.

6.6.16 Accidents

Numbers of vehicles used for construction and for commuting are limited as discussed in the item 6.6.1. Therefore, rapid increases in the number of vehicles in surrounding roads are not considered during construction stage.

As mentioned the item 6.6.12, bus service to school will be discussed by MOE for the operation stage. However, number of buses as well as operation time will be limited for school commuting use only.

6.7 Impact Assessment on Environment and Social

Based on the results of environmental and social consideration study, impacts caused by the project on environment and social are assessed as summarized in Table 6.7.1.

Table 6.7.1 Environmental and Social Impact Assessment

Category	No.	Assessment Item	Rating at the Scoping		Impact Assessment by the Study		Reasons
			Const. Phase	Ope. Phase	Const. Phase	Ope. Phase	
Pollution Control	1	Air Quality	B-	C	B-	D	<p>Construction Phase: Total numbers of heavy vehicles and equipment to be used for construction for 15 months are several numbers per day.</p> <ul style="list-style-type: none"> - Those vehicle and equipment are required to be well maintained and equipped with general devices of exhaust emission control with the responsibility of contractors under the supervision of MOE. - Soil dust easily is diffused by such vehicle and equipment operation during dry season. <p>Operation Phase: In cases where bus services to school (which is planned to be discussed by MOE) are operated, it is considered that the buses will be limited to a few numbers with limited operation for the commuting purpose per day. Therefore, If those buses are well maintained and equipped with general devices of exhaust emission control, no impact is predicted.</p>
	2	Water Quality	B-	C	B-	B-	<p>Construction Phase: Waste water generated are human waste and general waste water for construction which generally are managed by introducing on-site temporally toilet facilities with the responsibility of each contractor under the supervision of MOE.</p> <p>Operation Phase: Waste water generated are human waste and general waste water of the school staff, students and pupils which are planned to be treated with aerated waste water treatment facilities</p>
	3	Wastes	B-	C	B-	D	<p>Construction Phase: Construction waste and debris will be managed by each contractor's responsibility under the supervision of MOE.</p> <p>Operation Phase: Solid waste and sludge of aerated waste water treatment facilities will be generated from the facilities is planned to be collected by TTDC public services.</p>
	4	Soil Contamination	C	C	D	D	<p>Construction Phase: Heavy vehicle and equipment of which numbers mobilized are several per day. Oil spills will be small from such vehicle and equipment which can be managed by each contractor's responsibility under the supervision of MOE.</p> <p>Operation Phase: Waste water generated are human waste and general waste water of the school staff, students and pupils which are planned to be treated with aerated waste water treatment facilities</p>
	5	Noise and Vibration	C	C	B-	D	<p>Construction Phase: Total numbers of heavy vehicles and equipment to be used for construction for 15 months are confined to several numbers per day.</p> <ul style="list-style-type: none"> • Those vehicle and equipment are to be well maintained and equipped with necessary silencers with the responsibility of contractors under the supervision of MOE. <p>Operation Phase: In cases where bus services to school (which is planned to be discussed by MOE) are operated, it is considered that the buses will be limited to a few numbers with limited operation for the commuting purpose per day. Therefore, If those buses are well maintained and equipped with silencer, no impact is predicted.</p>
	6	Subsidence	D	D	N/A	N/A	A total 242m ³ per day of groundwater for the new TEC's captive consumption is planned to be pumped up with two water wells of 392 m ³ per day which is designed in order not to have negative impact on the existing groundwater level.
	7	Odor	D	D	N/A	N/A	Construction work and methods as well as project operation which cause bad odor are not envisaged.

Category	No.	Assessment Item	Rating at the Scoping		Impact Assessment by the Study		Reasons
			Const. Phase	Ope. Phase	Const. Phase	Ope. Phase	
Natural Environment	8	Protected Areas	D	D	N/A	N/A	National parks, natural reservoirs and ported areas do not exist in and around the project site.
	9	Ecosystem	C	C	D	D	Endangered species and ecosystem to be protected do not exist in and around the project site.
	10	Hydrology	D	D	N/A	N/A	Construction work and methods as well as project operation which damage hydrology are not envisaged.
	11	Topography and Geology	D	D	N/A	N/A	Construction work and methods as well as project operation which damage Topography and Geology are not envisaged.
Social Environment	12	Land Acquisition/Resettlement	C	C	B-	D	<p>Necessary land acquisition was carried out by MOE as follows.</p> <ul style="list-style-type: none"> Resettlement did not exist The project summary and the land acquisition have adequately been explained and discussed among relevant PAPs and stakeholders All eight PAPs (project affected persons) agreed to abandon their right of farming in the project site. Total lands acquired by MOE for the Project was 42.97 acre. However, alternative lands of 1.78 acre were included in the total lands whereby, the final area for the project site has come to 41.19 acre The compensation methods were cash compensation and alternative lands with the value of 20 Lakh Kyat /acre. Cash compensations for seven among the eight PAPs were paid in cash using MOE's internal budget of Welfare Fund which can be can be reimbursed in the next fiscal year national budget. Remaining one PAP is scheduled to be paid by the end of March 2014. A public notice on the land acquisition was issued by Taungoo Settlement and Land Records Department for which objections were not appaeled at all. Grievance Redress Mechanism has been proposed by MOE for the land acquisition and project implementation. <p>However, it may be considered that there have some possibilities of new opinions and/or requests from the PAPs before and during the construction stage.</p>
	13	Impoverished Peoples Ethnic Minorities and Indigenous Peoples	D	D	N/A	N/A	<ul style="list-style-type: none"> Ethnic minorities and indigenous peoples do not exist in the project area. Incomes of all eight PAPs are more than the World Bank's international poverty line of US\$ 1.25/day.
	14	Living and Livelihood	B+	C	B+	B+	<p><u>Construction Phases:</u></p> <ul style="list-style-type: none"> Based on MOE countermeasure, work opportunities of nearby villagers are expected in both construction and operation phases. Diversions for the existing pathways are planned to be constructed by MOE <p><u>Operation Phase:</u> Level of mosquito in rainy season can be managed by general countermeasures.</p> <p><u>Impacts on Livelihood:</u></p> <ul style="list-style-type: none"> Less than 10% of the total annual incomes of each PAP are lost by the land acquisition. Compensation of 20 Lakh Kyat/acre has a value of 14 to 15 year profitability of the paddy & farmland.
	15	Land use and Regional Resources	B-	C	D	D	<p><u>Construction Phase:</u> Waste water generated are human waste and general waste water of workers and labors which will be managed by introducing on-site temporally toilet facilities with the responsibility of each contractor under the supervision of MOE</p> <p><u>Operation Phase:</u> Waste water generated are human waste and general waste water of the school staff, students and pupils which are planned to be treated with aerated waste water treatment facilities</p>

Category	No.	Assessment Item	Rating at the Scoping		Impact Assessment by the Study		Reasons
			Const. Phase	Ope. Phase	Const. Phase	Ope. Phase	
	16	Water Right/Use of Water	C	C	D	D	<u>Construction and Operation Phase</u> : All seven farmers who have irrigation water right have expressed their abandonment of the water right of the irrigation canal which will be demolished for the project.
	17	Social Infrastructures and Services	B-	C	D	D	<u>Construction and Operation Phases</u> : Impacts on surrounding social infrastructure and service are not predicted.
	18	Heritage	C	D	D	N/A	Demolition of three tombs of late monks in the project site was agreed by the relevant stakeholders and the Shan Ywa Monastery.
	19	Social Capital and Social Organization such as decision making bodies	D	D	N/A	N/A	There is no such a social capital and organization which will be damaged by the construction and operation of the project.
	20	Damage and Benefit	D	D	N/A	N/A	There is no such damage and benefit will be influenced by the construction and operation of the project.
	21	Landscape	D	D	N/A	N/A	Project is a construction and operation of general college facilities.
	22	Gender Issue	D	D	N/A	N/A	Project is a construction and operation of general college facilities.
	23	Rights of the Child	D	D	N/A	N/A	Project is a construction and operation of general college facilities.
	24	Risk of infectious diseases such as HIV/AIDS	B-	C	B-	B-	<u>Construction Phase</u> : the three major infectious diseases in Myanmar are malaria, HIV/AIDS and tuberculosis. Appropriate education and instruction on health and sanitation to such workers and labors as well as surrounding villagers, possibility of outbreak of such diseases especially STD such as HIV and AIDS are required to be implemented by each contractor's responsibility under the supervision of MOE. <u>Operation Phase</u> : Due to a nature of Education College, it is not predicted that outbreak of STDs by the operation.
	25	Working Conditions/ Work Safety	C	C	B-	D	<u>Construction Phase</u> : There is no relevant law and regulation on worker safety for construction work. Therefore, relevant rules and norms shall be decided by each contractor's responsibility under the supervision of MOE. <u>Operation Phase</u> : There is no construction work in the operation of the project
Others	26	Accidents	C	C	B-	B-	<u>Construction Phase</u> : Education on traffic accidents which is predicted by the construction vehicles and safe drive to the drivers and surrounding peoples are required to be carried out by each contractor's responsibility under the supervision of MOE. <u>Operation Phase</u> : Education on traffic accidents and safety to the staff, students and pupils, and surrounding peoples are required to be carried out by the new TEC
	27	Transboundary or Global Issues	D	D	N/A	N/A	Project is a construction and operation of general college facilities.
A+/- : Significant positive/negative impact is expected.							
B+/- : Positive/negative impact is expected to some extent.							
C+/- : Extent of positive/negative impact is unknown. (A further examination is needed, and the impact could be clarified as the study progresses)							
D : No impact is expected.							

Note: Const. Phase: Construction Phase (includes Construction work and Installation work), Ope. Phase: Operation Phase

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6.8 Countermeasures and EMP (Draft)

Considering the environmental and social impact assessment as summarized in Table 6.7.1, Table 6.8.1 shows countermeasures and a draft environmental management plan (EMP) for the project.

Table 6.8.1 Countermeasures (Proposed EMP)

No.	Impacts	Proposed EMP	Implementing Organization	Responsible Organization	Cost and Others	
Construction Phase	1	Air Quality	<ul style="list-style-type: none"> Visual inspection and monitoring of exhaust of heavy vehicles, equipment and trucks Water spraying for heavy vehicles, equipment and trucks operation on site in dry season 	Contractor(s)	Supervised by MOE	Water is procured by contractor(s)
	2	Water Quality	Construction and management of on-site toilets for workers and labors	Contractor(s)	Supervised by MOE	Constructed by contractor(s)
	3	Wastes	<ul style="list-style-type: none"> Surplus soil management by back-filling Construction waste and debris management Industrial waste management by the use of relevant industrial waste collection and treatment company Periodical de-sludge activities by the use of TTDC public services Waste oil collection and treatment by the use of relevant waste oil waste collection companies. 	Contractor(s)	Supervised by MOE	Managed and treated by contractor(s)
	5	Noise and Vibration	<ul style="list-style-type: none"> Periodical inspection of silencers of heavy vehicles, equipment and trucks 	Contractor(s)	Supervised by MOE	Visual inspection (common sensation) by contractor(s)
	12	Land Acquisition/Resettlement	<ul style="list-style-type: none"> Activation of the function of the proposed Grievance Redress Committee for the project Holding of necessary meetings for discussing opinions and/or requests from the PAPs by the committee 	Grievance Redress Committee	MOE	Meeting expense
	24	Risk of infectious diseases such as HIV/AIDS	Implementation of Health and Sanitation education focusing on infectious diseases including Sexually Transmitted Diseases (STD) to workers, labors and surrounding villagers	Contractor(s)	Supervised by MOE	Implemented by contractor(s)
	25	Working Conditions/Work Safety	<ul style="list-style-type: none"> Preparation of work safety rules Preparation of most basic personal protective equipment (PPE) such as gloves, helmets, safety shoes and working uniforms 	Contractor(s)	Supervised by MOE	Provided by contractor(s)
	26	Accidents	<ul style="list-style-type: none"> Compliance with national and local traffic rules Traffic safety education to the heavy vehicles, equipment and trucks' drivers, and surrounding villagers Preparation relevant warning boards and signs 	Contractor(s)	Supervised by MOE	Implemented by contractor(s)
Operation Phase	2	Water Quality	<ul style="list-style-type: none"> Periodic maintenance and monitoring of aerated waste water treatment facilities based on O/M manuals and instructions of such facilities 	TEC	MOE	Visual inspection
	26	Accidents	<ul style="list-style-type: none"> Compliance with national and local traffic rules Traffic safety education to the staff, students and pupils, as well as students and pupils parents and surrounding villagers Preparation relevant warning boards and signs 	TEC	MOE	Meeting expense and printed materials as necessary

Note: Construction Phase includes Construction work and Installation work
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6.9 Monitoring Plan

Table 6.9.1 shows a monitoring plan for the draft EMP which is required to be done by responsible organizations specified in the table in both construction and operation phases.

Table 6.9.1 Monitoring Plan

Phase	Environmental Item	Monitoring Item	Location	Frequency	Responsible Organization
Construction	Air Pollution	Visual inspection of discharge conditions of exhaust gases (such as black smoke) of heavy vehicles, equipment and trucks and keep of the inspection logbook.	On -site	Daily	Contractors
		Soil dust diffusions in dry season for water spraying	On -site	Daily (Dry Season only)	Contractors
	Wastes	Waste composition, quantity and treatment method and keep of the inspection logbook.	On -site	Once/month	Contractors
	Noise and Vibration	Visual inspection (common sensation) of silencers of heavy vehicles, equipment and trucks and keep of the inspection logbook.	On -site	Daily	Contractors
	Land Acquisition/ /Resettlement	Record of minutes of meetings for the discussion of the PAPs' opinions and/or requests as well as the responses and countermeasures discussed and settled	Meeting Venues	Once/month	MOE
Operation	Water Quality	Effluent (treated waste water) of aerated waste water treatment facilities in accordance with instructions on operation and maintenance of such facilities by the contractor	New TEC premises	Once/month (or instructions of the contractor)	TEC

Note: Construction Phase includes Construction work and Installation work
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A draft monitoring sheet is attached below.

Monitoring Form (Draft)

1. Construction Phase Monitoring Form

The latest results of the below monitoring items shall be submitted to the lenders as part of Quarterly Progress Report throughout the construction phase.

1.1 Response/Action to comments and guidance from Government Authority and the Public

Monitoring Item	Monitoring Results during Report Period
Number and contents of formal comments made by the public	
Number and contents of responses from Government agencies	

1.2 Pollution

Item	Monitoring Points	Frequency
Exhaust Gases	Visual Inspection (White and Black Smoke) of heavy vehicles and equipment*	Daily
Soil Dust	Soil dust diffusions in dry season (for necessary watering)*	Daily (in dray season only)
Waste	Waste composition, quantity and treatment method	Once/month
Noise & Vibration	Visual inspection (common sensation) of silencers of heavy vehicles, equipment and trucks*	Daily

Log Book: to be submitted to MOE monthly.

* If any problems, such vehicles and equipment to be sustained to use or replaced appropriate ones.

1.3 Response/Action to opinions and requests on the land acquisition from the PAPs

Monitoring Item	Monitoring Results during Report Period
Number and contents of formal opinions and requests on the Land Acquisition made by the PAPs	
Number and contents of responses and countermeasures from Government agencies	

PAPs: Project Affected Persons

2. Operation Phase Monitoring Form

The latest results of the below monitoring items shall be submitted to the lenders on biannual basis for the first two years of operation.

2.1 Response/Actions to Comments and Guidance from Government Authorities and the Public

Monitoring Item	Monitoring Results during Report Period	Frequency
Number and contents of formal comments made by the public		Upon receipt of comments/ complaints
Number and contents of responses from Government agencies		

2.2 Pollution

Item	Monitoring Points	Frequency
Water Quality	Visual Inspection (odor, water leakage, generation of flies) and other necessary actions to be monitored as per the instruction and manuals on the operation and maintenance of aerated waste water treatment facilities to be installed	Once/month (or instructions of the contractor)

Log Book: to be submitted to MOE monthly.

* If any problems, consult with the contractor(s) and/or supplier(s) as per the instruction and manuals

CHAPTER 7 LAND ACQUISITION AND RESETTLEMENT (DUE DILIGENCE)

7.1 Project Outline

7.1.1 Background

Most of the 20 Education Colleges spread out all over Myanmar don't have enough resources to function well. On the other hand, necessity of the new model of the Education College is considered by the Government, in which 4-year study system instead of 2-year would be introduced in the future. In this connection, the Government of Myanmar has been planning to relocate and renovate Education Colleges and reinforce their function. Considering these circumstances, in 2012 and 2013, the Ministry of Education (MOE) in cooperation with the JICA Preparatory Survey Team conducted a survey to clarify existing condition of the 20 Education Colleges. As the result of the survey, the existing Taungoo Education College has been selected among the 20 colleges for the Project to be funded by the Japan's Grant Aid scheme. (See Chapter 1)

7.1.2 Project Affected Area

The project affected area is located in Sin Seik village tract in Taungoo Township of Bago division, where faces the Taungoo Road (Htee Hlaing Road) in the north as well as the University Road in the south. The area is about 42 acres where is exclusively for paddy field and farmland of bi-annual crop cultivation in the following year. Configuration of the area is a flat field in which residential households have not been identified at all. (See Chapter 2)

7.2 Legal and Policy Framework

7.2.1 Laws on Land

Table 7.2.1 shows a list of the significant laws on land ownership and land administration.

Table 7.2.1 Significant Laws on Land Ownership and Administration in Myanmar

Significant Laws	Year
Constitution of the Republic of the Union of Myanmar	2008
Land Nationalization Act	1953(repealed)*
Land Nationalization Rules	1954
The Disposal of Tenancies Law	1963
The Disposal of Tenancies Rules	1963(repealed)*
The Agriculturist's Rights Protection Law	1963(repealed)*
The Law Amending the Disposal of Tenancies Law	1965
Land Acquisition Act	1894
Transfer of Immovable Property Restriction Act	1947 (repealed)
Transfer of Immovable Property Restriction Law	1987
Registration Act	1908
The Lower Burma Land Revenue Manual	1876
The Upper Burma Land and Revenue Regulation	1889
The Lower Burma Town and Village Land Manual	1899
The City of Yangon Development Council Law	1990
The City of Mandalay Development Council Law	2002
Development Committee Law	1993
Forest Law	1992
Cantonments Act	1923
Duties and Rights of the People's Council and Executive Committees at various levels	1977
The State Laws and Order Restoration Council's Law No.8/88	1988
Duties and Rights of the Central Committee for the Management of Culturable Land, Fallow Land and Waste Land and Procedures conferring the right to cultivate land/right to utilized land	1991
Farm Land Law	2012
Fallow, Vacant and Virgin Lands Law	2012

Note: * Repealed by the enactment of the Farm Land Law 2012

Source: Guidance Note on Land Issues Myanmar, UNHABITAT and UNHCR (Amended by JICA Preparatory Survey Team)

(1) Constitution (2008)

The provision of Section 37, Sub-Section (a) in Chapter I of the Basic Principles of the Union of the State Constitution (2008) stipulates; “The Union is the ultimate owner of all lands and all natural resources above and below the ground, above and beneath the water and in the atmosphere in the Union”.

(2) Farmland Law (2012)

Due to the fact that the project site is classified as farmland, a law applied for the land acquisition for the project is the Farmland Law. The farmland Law was approved by the Union Parliament (*Pyidaungsu Hluttaw*) and signed by the President on 30th March, 2012 and then come into force on 31st August, 2012. By the enactment of the law, three existing relevant laws were repealed as specified in Table 7.2.1.

1) Right for Farming

Article No. 3 of Chapter 1 defines the “Right for Farming as follows.

- **Article No.3:** (d) “right for farming” is defined that as the State is original owner of all lands, giving permission for farming in conformity with this law and bylaw, rule and regulation of this law so that agricultural production capacity develop, excluding exploring gems, mines, petroleum, gas and natural resources below and above ground.

2) Compensation

With regard to compensation on land acquisitions for farmland, Article No. 26 and No. 27 of Chapter IX of the Farmland Law stipulate as follows.

- **Article No. 26:** Notwithstanding any provision contained in any other existing law, the Central Farmland Management Body must be coordinated with acted for suitable compensation and indemnity in the case of repossession of farmland either in the interest of the State or in the interest of the public. Confiscated farms are to be compensated without any lose. If farm is upgraded with building, it is required to compensate for such building.
- **Article No.27:** Whosoever shall not be entitled for getting compensation, if the right for farming or farmland was revoked by the Central Farmland Management Body in accordance with this law.

Therefore, compensation is made not for land ownership but for the right for farming which is given by the Government. The persons who currently use the project affected area (farmland) are entitled to receive compensation for the right for farming under the Farmland Law.

(3) Farmland Rules (2012)

The Farmland Rules was promulgated by the Ministry of Agriculture and Irrigation by using the power vested by the section-42, sub-section (a) of the Farmland law with the approval of the Union Government on 31st August, 2012. There are 13 Chapters and 117 Articles included in the rules.

1) Farmland Certificate (Registration)

Chapter II (Article 3 - Article 15) of the Farmland Rules stipulates procedures for the Farmland Certificate. In accordance with the rules, the registration procedures for getting a Right of Farming Certificate (Form - 7) are summarized in Table 7.2.2.

Table 7.2.2 Farmland Registration Procedure

Step	Procedures	Concerning Department	Process	Further Action	Time Taken
1.	<i>Form -1 (Application Form for the Right of Farming Certificate)</i>	Available from respective Ward/Village Tract Administrative Office	Submission of Application Form To Ward / Village Tract Farmland Management Committee	Application Form is Forwarding to TSLRD with the comments and recommendation of the Ward / Village Tract Farmland Management Committee	Within 30 days starting from acceptance date of application Form - 1
2.	Open the Case File (dossier) in TSLRD	TSLRD (Township Land Records Department)	Preparation for Public Notification System or Advertisement for any further Complaints (if there is anyone who has a strong reason for complaint regarding the application)	To issue Form - 2 (Official Document for Public Notification System or Advertisement for any further Complaint) which is to be announced for public notification	Within 15 days starting from the acceptance date of the application Form - 1
3.	<i>Form - 2 Notice for objection (Public Notification system for any objection with firm evidences)</i>	TSLRD	Waiting for objection to the application during notification period. The Notification is to be observed on the Notice Boards of Township Land Records Department Office and Ward / Village Tract Administrative Office		Within 30 days from the date of Notification
4.	<i>Form - 3 (Land Registration Record for the application of Right of Farming), and Form - 4 (Examination for Right of Farming)</i>	TSLRD	During the Step 3, TSLRD is simultaneously undertaking the registration of related application for Right of Farming certificate	After that, TSLRD is examining the facts and figures of the applicant by using <i>Form - 4</i>	-
5.	<i>If there is a Complaint</i>	TSLRD	TSLRD will undertake the complaint and make notification for further examination to be done by the corresponding Ward / Village Tract Farmland Management Committee	TSLRD is sending the complaint and related documents to the corresponding Ward / Village Tract Farmland Management Committee for further examinations	Within 7 days
6.	<i>Reporting the outcomes of examinations back to TSLRD</i>	Ward/Village Tract Farmland Management Committee	Preparing a report on the outcomes of examinations for the complaint	Report back to TSLRD	Within 7 days
7.	<i>Submission of the application documents for Right of Farming Certificate to Township Farmland Management Committee</i>	TSLRD	After the TSLRD has accepted the report on outcomes of examinations regarding the complaint, then submitting the application with the comments to TFMC	The application with the comments of TSLRD is being sent to TFMC	Within 30 days starting from the date of acceptance of the examination report
8.	<i>Submission of the application documents to District Farmland Management Committee</i>	TFMC (Township Farmland Management Committee)	TSLRD will examine the application documents and give comments	The application documents with the comments given by TFMC is being sent to DFMC	Within 7 days starting from the acceptance of the application documents
9.	<i>Decision of Approval / Objection from DFMC</i>	DFMC (District Farmland Management Committee)	DFMC will examine the application documents and then give decision for approval or objection	DFMC will make notification back to the TSLRD for the decision made for approval or disapproval	Within 15 days starting from the acceptance of the application documents
10.	<i>Registration Fee for Right of Farming Certificate Form - 5</i>	TSLRD	Due to the approval given by DFMC, the applicant will be charged for registration fee (500 Kyats per one holding number) which is deposited into the account of TSLRD	The registration is to be recorded in the Form - 5 for those who have the rights for farming then TSLRD will report back to the TFMC	-
11.	<i>If the applicant is rejected from DFMC then it is to be registered in Form - 6</i>	TSLRD	If the applicant is rejected or denied for the Right of Farming, it is to be registered in the Form - 6	TSLRD will report the Form -6 to the TFMC	-
12.	<i>Issuing Form - 7 to those applicants who are eligible to get the Rights of Farming Certificates</i>	TFMC	TFMC will issue Form - 7 to the applicant with regard to the approval of the DFMC	-	-
13.	<i>Issuing Form -8 to those applicants who are not eligible to get the Rights of Farming Certificates</i>	TSLRD/TFMC	TSLRD will issue Form -8 to those applicants who are not eligible to get the Right of Farming Certificates	-	-
Total time taken for the whole application process for Form - 7, Right of Farming Certificate					134 days

Note: TSLRD : Township Settlement and Land Records Department
TFMC : Township Farmland Management Committee
DFMC : District Farmland Management Committee

Source: Farmland Rules, 2012; Taungoo Township Settlements and Land Records Department, 17 August, 2013

2) Procedure of the Use of Farmlands for Other Purposes

Articles 78- 94 of Chapter IX in the Farmland Rules (2012) stipulate details of the requirements and regulations with regard to the use of farmlands for other purposes.

As stipulated in Article 80, in case that if farmlands are required for school projects, requirements for such projects are the approval of Union Education Ministry and availability of fund.

Table 7.2.3 summarizes procedures of the use of farmland for other purposes based on Articles 82 - 90 of the Farmland Rules (2012).

Table 7.2.3 Procedure for the Use of Farmlands for Other Purposes

Step	Procedures	Concerning Department	Process	Further Action	Time Taken
1.	<i>Application with Form -14</i>	TSLRD (Township Settlement and Land Records Department)	Open the dossier for using farmlands by other means on the application	Scrutinizing the requirements as listed in the Article 84 of the Rules	Within 30 days starting from the acceptance date of application
2.	<i>Submitting the application to Township Farmland Management Committee with the comments given by TSLRD</i>	TFMC (Township Farmland Management Committee)	Scrutinizing the requirements as listed in the Article 86 of the Rules	the application shall be submitted to Region / State Farmland Management Committee through the District Farmland Management Committee (DFMC) with the comments	Within 15 days starting from the acceptance date of the application in TSLRD
3.	If the application of farmlands by other means is for Paddy land (Le)	R/S-FMC (Region /State Farmland Management Committee)	Scrutinizing the application	Continued Submission of the application to Central Farmland Management Committee with the comments given by R/S-FMC	Within 30 days
4.	If the application of farmlands by other means is except Paddy land	R/S-FMC	Scrutinizing the application which has been passed by step by step	Continued submission of the application to Region / State Government with the comment given by R/S-FMC	Within 30 days
5.	<i>Issuing Form - 15</i> Approved Permit shall be issued for the Paddy lands (Le) which are to be used by other means	CFMC (Central Farmland Management Committee)	If the application is met with the requirements, the approval shall be issued regarding to the Article 87 (a)	-	-
6.	<i>Issuing Form - 15 A</i> Approved Permit shall be issued for the except Paddy lands which are to be used by other means	R/S-FMC	If the application is met with the requirements, the approval shall be issued regarding to the Article 87 (b)	-	-
Total days taken for the whole application process until the approval for the use of farmlands by other means					105 days
7.	Form - 16 Inspection Report on condition of implementations in the granted farmlands for other means, The report is to be submitted in every 6-months basis to Central Farmland Management Committee	R/S-FMC	Field inspections shall be done by DFMC and TFMC into the granted farmlands by using other means. The inspection reports with the photo documents shall be presented to R/S-FMC	If DFMC and TFMC find that the granted lands is not yet started utilizing by other means or the proposed project is not yet implemented within 6 months from the date of approval, the case shall be opened as a separate dossier, then the report shall be submitted with photo evidences to R/S-FMC	Within 6 months
8.	Presenting the case to Central Farmland Management Committee for necessary actions to be taken	CFMC	Upon receiving the case, CFMC shall analyze and scrutinize the case	After scrutinizing the case, the necessary actions shall be taken as shown in the Article 93.	-
9.	Confiscate the land	CFMC (Central Farmland Management Committee)	CFMC shall confiscate the land as it is revoked under rule (93) (a) or the land revoked by Region / State Government as it is informed under sub rule (b).	-	-

Note; TSLRD : Township Settlement and Land Records Department
TFMC : Township Farmland Management Committee
DFMC : District Farmland Management Committee
R/S-FMC : Region /State Farmland Management Committee

Source: Articles 82 - 90 of the Farmland Rules (2012)

7.2.2 JICA Policy

With regard to land acquisition by the JICA project, the “key principle of JICA policies on involuntary resettlement” is shown in below.

The key principle of JICA policies on involuntary resettlement		
<p>I. Involuntary resettlement and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives.</p> <p>II. When, population displacement is unavoidable, effective measures to minimize the impact and to compensate for losses should be taken.</p> <p>III. People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported, so that they can improve or at least restore their standard of living, income opportunities and production levels to pre-project levels.</p> <p>IV. Compensation must be based on the full replacement cost* as much as possible.</p> <p>V. Compensation and other kinds of assistance must be provided prior to displacement.</p> <p>VI. For projects that entail large-scale involuntary resettlement, resettlement action plans must be prepared and made available to the public. It is desirable that the resettlement action plan include elements laid out in the World Bank Safeguard Policy, OP 4.12, Annex A.</p> <p>VII. In preparing a resettlement action plan, consultations must be held with the affected people and their communities based on sufficient information made available to them in advance. When consultations are held, explanations must be given in a form, manner, and language that are understandable to the affected people.</p> <p>VIII. Appropriate participation of affected people must be promoted in planning, implementation, and monitoring of resettlement action plans.</p> <p>IX. Appropriate and accessible grievance mechanisms must be established for the affected people and their communities.</p> <p>Above principles are complemented by World Bank OP 4.12, since it is stated in JICA Guideline that “JICA confirms that projects do not deviate significantly from the World Bank’s Safeguard Policies”. Additional key principle based on World Bank OP 4.12 is as follows.</p> <p>X. Affected people are to be identified and recorded as early as possible in order to establish their eligibility through an initial baseline survey (including population census that serves as an eligibility cut-off date, asset inventory, and socioeconomic survey), preferably at the project identification stage, to prevent a subsequent influx of encroachers of others who wish to take advance of such benefits.</p> <p>XI. Eligibility of Benefits include, the PAPs who have formal legal rights to land (including customary and traditional land rights recognized under law), the PAPs who don't have formal legal rights to land at the time of census but have a claim to such land or assets and the PAPs who have no recognizable legal right to the land they are occupying.</p> <p>XII. Preference should be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based.</p> <p>XIII. Provide support for the transition period (between displacement and livelihood restoration).</p> <p>XIV. Particular attention must be paid to the needs of the vulnerable groups among those displaced, especially those below the poverty line, landless, elderly, women and children, ethnic minorities etc.</p> <p>XV. For projects that entail land acquisition or involuntary resettlement of fewer than 200 people, abbreviated resettlement plan is to be prepared.</p> <p>In addition to the above core principles on the JICA policy, it also laid emphasis on a detailed resettlement policy inclusive of all the above points; project specific resettlement plan; institutional framework for implementation; monitoring and evaluation mechanism; time schedule for implementation; and, detailed Financial Plan etc.</p> <p>*Description of “replacement cost” is as follows.</p>		
Land	Agricultural Land	The pre-project or pre-displacement, whichever is higher, market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of preparing the land to levels similar to those of the affected land, plus the cost of any registration and transfer taxes.
	Land in Urban Areas	The pre-displacement market value of land of equal size and use, with similar or improved public infrastructure facilities and services and located in the vicinity of the affected land, plus the cost of any registration and transfer taxes.
Structure	Houses and Other Structures	The market cost of the materials to build a replacement structure with an area and quality similar or better than those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site, plus the cost of any labor and contractors’ fees, plus the cost of any registration and transfer taxes.

Source; JICA Guidelines for Environmental and Social Considerations (April 2010)

7.2.3 Gap between Myanmar Laws and JICA Policy

Gap between relevant Myanmar law applicable for the land acquisition and the key principle of JICA policies on involuntary resettlement are assessed as summarized in Table 7.2.4.

Table 7.2.4 Gap between Myanmar Laws and JICA Policy

Items	Laws of Myanmar	JICA Policy	Gaps/ Present Situations
Farmland	<ul style="list-style-type: none"> The State is original owner of all lands, giving permission for farming in conformity with the Farmland Law. The Central Farmland Management Body must be coordinated with acted for suitable compensation and indemnity in the case of repossession of farmland either in the interest of the State or in the interest of the public. (Farmland Law) Confiscated farms are to be compensated without any lose. Whosoever shall not be entitled for getting compensation, if the right for farming or farmland was revoked by the Central Farmland Management Body in accordance with the Farmland Law. 	<p>Compensation must be based on the full replacement cost* as much as possible</p> <p>* Replacement cost for Agricultural Land is that the pre-project or pre-displacement, whichever is higher, market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of preparing the land to levels similar to those of the affected land, plus the cost of any registration and transfer taxes.</p>	<p>No Gap is found</p> <ul style="list-style-type: none"> No compensation is considered for the land ownership because that original owner of the farmland is the government. However, Rights for farming in all farmland plots of each PAPs were compensated with agreed price of 20 Lakh Kyat/acre
Structure	<ul style="list-style-type: none"> If farm is upgraded with building, it is required to compensate for such building. (Farmland Law) 	<p>Compensation must be based on the full replacement cost* as much as possible</p> <p>* Replacement cost for Houses and Other Structures is that the market cost of the materials to build a replacement structure with an area and quality similar or better than those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site, plus the cost of any labor and contractors' fees, plus the cost of any registration and transfer taxes.</p>	<p>No Gap is found</p> <ul style="list-style-type: none"> Compensation for objects such as a farming shed and trees on the Project Affected Area (project site) are include in the compensation unit price of 20 Lakh Kyat/acre. Existing two private pathways will be relocated (rebuilt) in the project area. Existing three tombs are to be demolished with permission from the nearest Monastery and agreement with surrounding villagers (no compensation is required)
Income and Livelihood losses	N/A	<p>People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported, so that they can improve or at least restore their standard of living, income opportunities and production levels to pre-project levels.</p>	<ul style="list-style-type: none"> About 15 years of the productivity of the farm land of 20 Lakh Kyat /acre was compensated to each PAPs who has right for farming in the project site. After the transaction of the land acquisition was started in 2012, the farmland is permitted to use for farming till November 2013 for the cultivation of the present crops. ,
Consultation	N/A	<p>When consultations are held, explanations must be given in a form, manner, and language that are understandable to the affected people.</p>	<ul style="list-style-type: none"> 1st consolation meeting for the land acquisition and compensation was held by MOE in Dec. 2012. After that, several relevant meetings were held in 2013.
Participation	N/A	<p>Appropriate participation of affected people must be promoted in planning, implementation, and monitoring of resettlement action plans.</p>	<ul style="list-style-type: none"> Three different targeted groups stakeholders meetings were held by MOE to share and discuss the project component, impacts and implementation and land acquisition in March 2013.
Grievance	N/A	<p>Appropriate and accessible grievance mechanisms must be established for the affected people and their communities.</p>	<ul style="list-style-type: none"> A Grievance mechanism (Committee) has officially been proposed by MOE in August 2013.

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7.3 Land Acquisition

7.3.1 Project Affected Persons and Land Plots

Table 7.3.1 shows an original list of 11 project affected persons (Original PAPs or persons who had rights for farming (Initially Identified)) and land plots initially identified by MOE.

Table 7.3.1 Project Affected Persons and Land Plots Initially Identified

No.	Original PAPs (Initially Identified)	Place of Residence	Occupation	Project Affected Land					
				Village Tract	Field No.	Land Plot No.	Type of Land	Area (acre)	Subtotal (acre)
1	U Tin Aung	Shan Ywar village	Farmer	Sin Seik	560-A	79/2	Le	1.56	2.38
				Sin Seik	560-A	80/1	Le	0.82	
2	U Myint Naing	Shan Ywar village	Farmer	Sin Seik	561-B	17	Le	0.54	1.14
				Sin Seik	561-B	98	Le	0.60	
3	Daw Nu Khin	Shan Ywar village	Farmer	Sin Seik	561-B	16	Le	0.98	2.77
				Sin Seik	561-B	18/1	Le	1.79	
4	U Soe Naing	Htankone village	Farmer	Sin Seik	561-B	82/2	Le	0.80	0.80
5	U Maung Aye	Nyaung Gaing village	Farmer	Sin Seik	560-A	A/7/1	Le	0.93	0.93
6	U Win Htike +2	Taungoo	Businessman	Sin Seik	560-A	2/3	Le	0.73	10.63
				Sin Seik	561-B	15/3	Le	0.38	
				Sin Seik	561-B	26	Le	3.69	
				Sin Seik	561-B	27	Le	1.42	
				Sin Seik	561-B	24/2	Le	0.90	
				Sin Seik	561-B	28/1	Le	0.36	
				Sin Seik	561-B	82/1	Le	0.63	
				Sin Seik	561-B	30/2	Le	1.67	
7	U Khin Maung Aye	Taungoo and Yangon	Businessman	Sin Seik	561-B	11/4	Le	3.24	20.42
				Sin Seik	561-B	81/1	Le	0.32	
				Sin Seik	561-B	101/1	Le	3.67	
				Sin Seik	561-B	23/1	Le	2.31	
				Sin Seik	561-B	24/1	Le	1.15	
				Sin Seik	561-B	25/1	Le	8.01	
				Sin Seik	561-B	106/3	Le	1.24	
				Sin Seik	561-B	15/2	Le	0.48	
8	Daw Khaing Thazin Nwe	Taungoo	Businesswoman	Sin Seik	560-A	79/1	Le	1.80	3.9
				Sin Seik	560-A	A/7/2	Le	2.10	
9	U Kyi Thein*	Taungoo	Businessman	Sin Seik	560-A	78	Le	0.67	0.67
10	Daw San San Aye*	Yangon	Businesswoman	Sin Seik	561-B	30	Le	4.22	4.22
11	U Aung Naing Soe*	Taungoo	Businessman	Sin Seik	561-B	28	Le	1.12	1.12
Total (acre)								48.98	

Note - Filed No. and Land Plot No. : See Item 7.3.6
 - Le : Paddy field
 - U Win Htike +2 : Three co-landowners and U Win Htike is the most responsible owner among three
 - * : Three PAPs who were eventually excluded from the project due to the unsuccessful negotiation for the land acquisition

Source: MOE, Taungoo Township Settlement and Land Records Department, Tabulated by JICA Preparatory Survey Team

- Among Original PAPs initially identified, there were five farmers working on the farmlands in the proposed project site who live in the nearby villages (Shan Ywar, Nyaung Gaing, Myin Sa Kwet, and Htankone).
- The rest of the Original PAPs were the 6 business persons who live in Taungoo and some areas in Yangon.
- Several land plots belonged to three PAPs (No.9- No.11) among the 11 Original PAPs were eventually excluded from the project site. (See Item 7.3.4)

7.3.2 Cut-off Date for the Land Acquisition

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.

(1) First Consultation Meeting for the Land Acquisition

The land acquisition was initiated by the Deputy Minister for MOE at a consultation meeting for land acquisition which was held on 3rd December 2012 at the Shan Yaw Monastery in the Sin Seik Village Tract in Taungoo Township as shown in Table 7.3.2. (See Appendix 7.3.1)

The meeting was organized by the Farmland Management Committee of Sin Seik Village Tract. The Committee was comprised of the Village Tract Administrator and one representative staff from the Taungoo Township Settlement and Land Records Department (TSLRD) together with the senior citizens (the local coordinators) and the project affected persons (PAPs).

Table 7.3.2 First Consultation Meeting for the Land Acquisition

Item	Description
Date/Time	3 rd December, 2012, 9:00 am
Venue	Shan Ywa Monastery, Shan Ywa village
Participants	- Local Coordinators : 3 Persons - Village Tract Administrator : 1 Person - Taungoo Township Land Record Department : 1 Person - Persons who have rights for faming (PAPs) : 7 Persons Total :12 Persons
Persons who have rights for faming who did not attend the meeting	: 4 Persons
Minutes of Meeting	- Recorded by U Maung Mya, Local Coordinator - Confirmed by U Myint Lwin, Village Tract Administrative Officer ,Sin Seik Village Tract

Source: MOE

The outline of discussions is shown below.

- Compensation at market price of the farmlands in the proposed project area was agreed to set up with the price of 20 Lakh Kyat/acre* which had been proposed by the PAPs side.
- For those among the PAPs who requested to have alternative (replacement) lands instead of money for compensation, the land management committee was asked to make arrangement to purchase the farmlands nearby the project area in order to provide them.
- For the persons who could not attend the land acquisition meeting, the committee members and the key representative persons were asked to persuade and organize them to accept any of two compensation plans.

* Reasonableness and value analysis are discussed in the item 7.6.

(2) Public Notice for the Land Acquisition

In accordance with the Farmland Law (2012), in July 2013, MOE applied a necessary process for getting a farmland certificate (right of farming certificates; Form -7) for all the farmlands which includes a final land plot map for the project under the name the headmistress of Taungoo Education College.

In this regard, a public notification for any objection to the application of the certificate with regard to the land acquisition was posted on notice boards at the Taungoo Township Settlements and Land Records Department on 30th July 2013 as well as at the Head of Village Tract Administer house. (See Appendix 7.3.2)

Based on the Farmland Law, the notification period is regulated for 30 days, namely until 31st August, 2013 any objection could be appealed for the land acquisition. Eventually, according to MOE, during the public notice period, no object was expressed for the land acquisition at all.

(3) Recognition of the Cut-off Date

Consequently, it has been recognized for the land acquisition that the cut-off date was setup (not in date of the public notice of 30th July 2013) in the first consultation meeting day of 3rd December 2012.

7.3.3 Implementation Mechanism

(1) Local Coordinators for the Land Acquisition

MOE initiated the land acquisition and compensation with the help of key representative persons or local coordinators of Taungoo Township.

The local coordinators for MOE as mediators who are senior citizens of the township were appointed by MOE for the land acquisition as shown in Table 7.3.3.

Table 7.3.3 Local Coordinators of Taungoo Township for MOE

Name	Description
U Myint Nyo	Businessman, a friend of U Khin Maung Aye (Chairman of CB Bank) and the (former) Deputy Minister of Education, most senior one among the local coordinators of MOE
U Maung Mya	Businessman, signed all the land acquisition contracts on behalf of MOE
U Tin Win	Businessman
U Myint Lwin	Head of Sin Seik Village Tract Administrator

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(2) Responsibility Matrix for the Land Acquisitions

Relevant entities responsible for procedures on the land acquisition are summarized in Table 7.3.4 in which No. of relevant items discussed in this report are shown.

Table 7.3.4 Responsibility Matrix for the Land Acquisition

Actions	Relevant		Relevant Entities								
	Item	Cp.	JICA	MOE	EO	TEC	GAD	TTDC	TSLRD	FMC	MOECAAF
Cut-Off Date (1 st Consultation Meeting)	7.3.2	7		⊙							
Stakeholder Meetings	5.2	5	✓ Witness	⊙		✓					
Public Notice	7.3.2	7		✓		✓			⊙		
Compensation	7.3.4 7.3.5	7		⊙		✓					
Farmland Registration and Diversion	7.2.1	7		✓					⊙	⊙	
Irrigation Channel	7.3.4	7		✓					⊙		
Grievance Redress Systems	7.8	7		⊙	✓	✓	✓	✓	✓		
Environmental Management Plan	6.7	6	✓ Support	⊙		✓					⊙
Monitoring Plan	6.8	6	✓ Support	⊙		✓					⊙

⊙: Main Responsible Organization, ✓: Responsible Organization

Cp.: Chapter in this Report

JICA : Japan International Cooperation Agency
 MOE : Ministry of Education
 EO : Educational Office in Taungoo (District/Township)
 TEC : Taungoo Education College
 GAD : General Administration Department in Taungoo
 TSLAD : Township Settlement and Land Records Department in Taungoo (under the Ministry of Agriculture and Irrigation)
 FMC : Farmland Management Committee (Township, District, Regional and State levels)
 MOECAAF : Ministry of Environmental Conservation and Forest

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7.3.4 Land Plots Acquired

Table 7.3.5 summarizes the conditions of the land plots acquired by MOE having cooperation of the local coordinators for the project. (Relevant documents: Appendix 7.3.3 - Appendix 7.3.11)

Table 7.3.5 Land Plots Acquired by MOE

No.	Final PAPs (Conclusively Identified)	Transaction Date	Land Plot No.	Land Area (acre)	Compensation		
					Method	Amount (Lakh Kyat)	Status (as of end of August 2013)
1	U Tin Aung	6 th Dec, 2012	79/2,80/1	2.38	Cash	47.6	Compensated
2	U Myint Naing	6 th Dec, 2012	17, 98	1.14	Cash	22.8	Compensated
3	Daw Nu Khin	6 th Dec, 2012	16,18/1	2.77	Cash	55.4	Compensated
4	U Soe Naing	6 th Dec, 2012	82/2	0.80	Cash	16.0	Compensated
5	U Maung Aye	19 th Dec, 2012	A/7/1*	0.93	Cash	18.6	Compensated (0.93 acre of Plot No. A/7/1 was utilized for the alternative land 1)*
6	U Win Htike +2	20 th May, 2013	2/3, 15/3, 26, 27, 24/2, 28/1, 82/1, 30/2, 31**	10.63	Cash	212.6	Compensated (0.85 acre of Plot No.31 was utilized for the alternative land 2)**
7	U Khin Maung Aye	17 th Jun, 2013	11/4, 81/1, 101/1, 23/1, 24/1, 25/1, 106/3, 15/2	20.42	Cash	408.4	Advance payment of 112 Lakh Kyat was paid on 17 th June 2013. The rest of 296.4 Lakh Kyat will be paid not later than the end of March 2014.
8	Daw Khaing Thazin Nwe	12 th Aug, 2013	79/1, A/7/2	3.90	Cash & Alternative lands	(78.0) (total value) 42.4*** (2.12 acre for cash compensation)	The PAP agreed with MOE's compensation proposals of alternative lands of 1.78 acre*, ** (0.93 acre of Plot No. A/7 and 0.85 acre of Plot No.31), and cash compensation for the remaining 2.12 acre***. <i>Advance payment for cash compensation of 15 Lakh Kyat (of 42.4 Lakh Kyat) for the 2.12 and the rest of 27.40 Lakh Kyat will be paid not later than the end of March 2014. (as of 27th Aug. 2013) ****</i>
Total lands acquired by MOE for the Project		42.97 acre		Total Value		859.40 Lakh Kyat (= 42.97acre × 20 Lakh Kyat/acre)	
Actual Total Project Area		41.19 acre (= 42.97- 1.78*)		Total Cash Amount		823.80 Lakh Kyat (= 859.40-(1.78 × 20 Lakh Kyat/acre)*)	

1 Lakh = 100,000

* 0.93 acre of Plot No. A/7/1 was utilized for the alternative land 1 for No. 8

** 0.85 acre of Plot No.31 was utilized for the alternative land 2 for No. 8

*** Cash compensation for the remaining 2.12 acre

**** After an MOE plan for remaining compensation was issued on 27th Aug. 2013, the compensation was done on 28th Aug. 2013 by MOE (See Appendix 7.3.11 and Appendix 7.3.17)

Note: - Land Plot No. : See Item 7.3.6

- Unit price of cash compensation agreed among PAPs and MOE: 20 Lakh Kyat/acre

- U Win Htike +2 : Three (3) co- holders of rights for farming. U Win Htike is the most responsible one among three.

Source: MOE, Taungoo Township Settlement and Land Records Department, Tabulated by JICA Preparatory Survey Team

(1) Alternative Lands

One of the PAPs, Daw Khaing Thazin Nwe, requested MOE to have both compensation methods of alternative (replacement) land(s) and cash compensation for the disposal of land plots of No. 79/1 and A/7/2. In this regard, the following two land plots already acquired by MOE were selected as the alternative lands.

- Land plot No. A/7/1 of which rights for farming belonged to U Maung Aye (0.93 acre)
- Land plot No.31 of which right for farming belonged to U Win Htike +2 (0.85 acre)

The PAP agreed with the MOE's compensation proposals of the alternative lands of 1.78 acre (0.93 acre + 0.85 acre), as well as the cash compensation at 20 Lakh Kyat/acre for the remaining 2.12 acre (3.90 acre – 1.78 acre) (See: Appendix 7.3.11).

(2) Land Plots excluded from the Project

Due to unsuccessful negotiations for the land acquisitions, three persons initially recognized as the Original PAPs and three land plots were identified no longer negotiable for the acquisition and excluded from the project site.

Table 7.3.6 shows such land plots and Original PAPs excluded from the project site.

Table 7.3.6 Land Plots Excluded from the Project Site

Parsons who have Right for Farming	Place of Residence	Occupation	Land Plot No.	Land Area (acre)	Negotiation on the Land Acquisition	MOE Decision
U Kyi Thein	Taungoo	Businessman	78	0.67	Not agreed to accept the compensation amount and alternative lands	MOE made a final decision to exclude the land plot
Daw San San Aye	Yangon	Businesswoman	30	4.22	Not agreed with the unit price of 20Lakh/acre	MOE made a final decision to exclude the land plot
U Aung Naing Soe	Taungoo	Businessman	28	1.12	Not agreed to accept the compensation amount and alternative lands	MOE made a final decision to exclude the land plot
Total Area of Lands Excluded (acre)				6.01	-	-

Source: MOE, Taungoo Township Settlement and Land Records Department, Tabulated by JICA Preparatory Survey Team

(3) Structural Objects and Trees

Structural objects and principal trees in the project site are summarized in Table 7.3.7.

Table 7.3.7 Structural Objects and Trees

No.	Location (Plot No.)	Category	Type	Remarks	Quantity	Relocation
1.	80/1	Structural Object	Tomb	Monument tomb for late monks	3	No
2.	26	Structural Object	Gravestone	Individual gravestone	1	No
3.	30/2, 26, 25/1, 106/3, 11/4, 23/1, 101/1, 17, 16, 79/2, 80/1, A/7/2	Structural Object	Irrigation Channel	Channel No.: MR-3. Ministry of Agriculture and Irrigation	1	No
4.	25/1, 82, 17, 98, 18/1	Structural Object	Pathway	Private pathways	2	Yes
5.	79/1*	Structural Object	Hut*	Simple rest hut for framing	1	No
6.	79/1*	Structural Object	Water Well*	Abandoned structure	1	No
7.	79/1, A/7/2*	Tree	Palm*	Minimal economic values	15	No
8.	79/1, A/7/2*	Tree	Mango*	Minimal economic values	2	No
9.	79/1, A/7/2*	Tree	Others*	General species	Several	No

* Hut, Water well and trees are located in the plot of one of the PAPs (Daw Khaing Thazin New)

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- **No. 1 and No. 2 in Table 7.3.7:** Three tombs and one individual gravestone have been agreed to be demolished (See Chapter 4, Chapter 5, Appendix 5.3.1 and Appendix 7.3.12).
- **No. 3 in Table 7.3.7:** Due to the farmland diversion for the project as a governmental project of MOE, the irrigation channel of MR-3 constructed by the Ministry of Agriculture and Irrigation as a branch of the irrigation network can be subject to demolish (The water right See the Item (4) below and Table 7.3.9).
- **No.4 in Table 7.3.7:** Alternative two private pathways are planned to be constructed by the MOE in the project site (See Chapter 5).
- **No. 5 and No. 6 in Table 7.3.7:** The hut and water well are located in the land plots of one of the PAPs (Daw Khaing Thazin Nwe) whose land acquisition contract contains a statement saying that the standing trees and other surface objects found in the farmlands are inclusive in the compensation amount of 20 Lakh Kyat/acre (See Appendix 7.3.11).
- **No. 7, No.8 and No.9 in Table 7.3.7:** As well, principal trees are mainly found in the eastern part of the project site, especially in the land plots of one of the PAPs (Daw Khaing Thazin Nwe) whose land acquisition contract contains a statement saying that the standing trees and other surface objects found in the farmlands are inclusive in the compensation amount of 20 Lakh Kyat/acre (See Appendix 7.3.11).

As far as trees in the project site concerned, some trees have minimal economic values such as the

palm trees and mango trees as shown in Table 7.3.8.

However, the rest of the trees sparsely seen in the site are general species as summarized in Table 7.3.8, thereby it can be considered that those general ones do not have economic and natural values such as fruit trees and specific valuable species at all.

Table 7.3.8 Trees seen in the Project Site

No.	Scientific Name	Family Name	Myanmar Name	Remarks
1	<i>Albizia lebbek</i> (L.) Benth.	Mimosaceae	Anyar-kokko	Eastern part*
2	<i>Anthocephalus cadamba</i> Miq.	Rubiaceae	Ma-u	
3	<i>Ardisia humilis</i> Vahl	Myrsinaceae	Kyetma-oak	
4	<i>Barringtonia acutangula</i> (L.) Gaertn.	Lecythidaceae	Ye-kyi	
5	<i>Bombax ceiba</i> L.	Bombacaceae	Let-pan	
6	<i>Borassus flabellifer</i> L.	Arecaceae	Htan	Eastern part* (Palm Tree)
7	<i>Carallia brachiata</i> (Lour.) Merr.	Rhizophoraceae	Mani-awga	
8	<i>Careya arborea</i> Roxb.	Lecythidaceae	Ban-bwe	
9	<i>Cassia fistula</i> L.	Caesalpiniaceae	Ngu	
10	<i>Ceiba pentandra</i> (L.) Gaertn.	Bombacaceae	Hmo Pin	Eastern part*
11	<i>Erythrina</i> sp.	Fabaceae	Kathit	
12	<i>Eucalyptus albens</i> Benth.	Myrtaceae	Eucalit	
13	<i>Eugenia magacarpa</i> Craib	Myrtaceae	Thabye byu	
14	<i>Ficus benjamina</i> L.	Moraceae	Nyaung thabye, Nyaung lun	Eastern part*
15	<i>Ficus religiosa</i> L.	Moraceae	Bawdi-nyaung	Eastern part*
16	<i>Ficus rumphii</i> Blume	Moraceae	Nyaung	Eastern part*
17	<i>Ficus</i> sp. (1)	Moraceae	-	
18	<i>Ficus</i> sp. (2)	Moraceae	-	
19	<i>Lagerstroemia speciosa</i> (L.) Pers.	Lythraceae	Pyinma	
20	<i>Lannea coromandelica</i> (Houtt.) Merr.	Anacardiaceae	Nabe	
21	<i>Litsea glutinosa</i> (Lour.) C.B. Rob.	Lauraceae	Ondon, Tagu	
22	<i>Mangifera indica</i> L.	Anacardiaceae	Tha-yet	Eastern part*(Mango Tree)
23	<i>Mitragyna parvifolia</i> (Roxb.) Korth.	Rubiaceae	Hetin	
24	<i>Musa</i> sp.	Musaceae	Nget-pyaw	
25	<i>Nauclea orientalis</i> L.	Rubiaceae	Ma-u	
26	<i>Oroxylum indicum</i> (L.) Kurz	Bignoniaceae	Kyaung-sha	
27	<i>Samanea saman</i> (Jacq.) Merr.	Mimosaceae	Kokko	
28	<i>Senna siamea</i> (Lam.) Irwin & Barneby	Caesalpiniaceae	Mazali	
29	<i>Streblus asper</i> Lour.	Moraceae	Okhne	
30	<i>Terminalia bellerica</i> Roxb.	Combretaceae	Thit seint	

Eastern part*: the principal trees which are predominantly found in land plots of the eastern part of the project site
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(4) Irrigation Water Right (Other than the Project Site)

According to Taungoo Township Settlement and Land Records Department (SLRD), farmlands located to east (the downstream area) of the project site are endowed with the water right of the irrigation channel in the project site.

Table 7.3.9 shows a list of data on entitlement to the irrigation water right in the farmlands located to east (the downstream area) of the project site.

Table 7.3.9 Entitlement to the Irrigation Water Right next to East of the Project Site

Sr.	Name	No.	Holding No.	Area	Remark
1	U Soe Paing	1	8/2+ A/7/4	3.81	
2	U Hla Sein	1	9/2	3.55	
3	U Naing Aye	1	9/5	1.1	
4	U Maung Aye	1	A/7/1	1.51	
5	U Thein Aung	1	9/3	1.1	
6	U Win Myint	1	9/4	1.1	
7	U Kyi Thein	1	78	0.67	
Total		7		12.84	

Source: U Bo Bo Aung Surveyor (3), Taungoo Settlement and Land Records Department (SLRD)

In answer to MOE's inquiry through the existing TEC, all those 7 persons listed in Table 7.3.9 including Ms. Daw Khin Thazin Nwe (A land plot of A/7/1 in Table 7.3.9 is a replacement land for Ms.

Daw Khin Thazin New) who have right for farming in the lands where irrigation water rights are endowed have expressed abandonment of the water rights by signing an acknowledgement letter for the sake of the project (See Appendix 7.3.13).

As for possible reasons for the abandonment, in accordance with discussions with relevant officials and field visits, it can be considered the following points.

- Experiences of usage of the irrigation water by those famers are substantively less because that the operation of the irrigation channel was started in the early stage of year of 2013.
- Those farmers may focus on beans which require less water rather than the paddy rice for cultivation in the farmlands.

(5) Cultivation Period

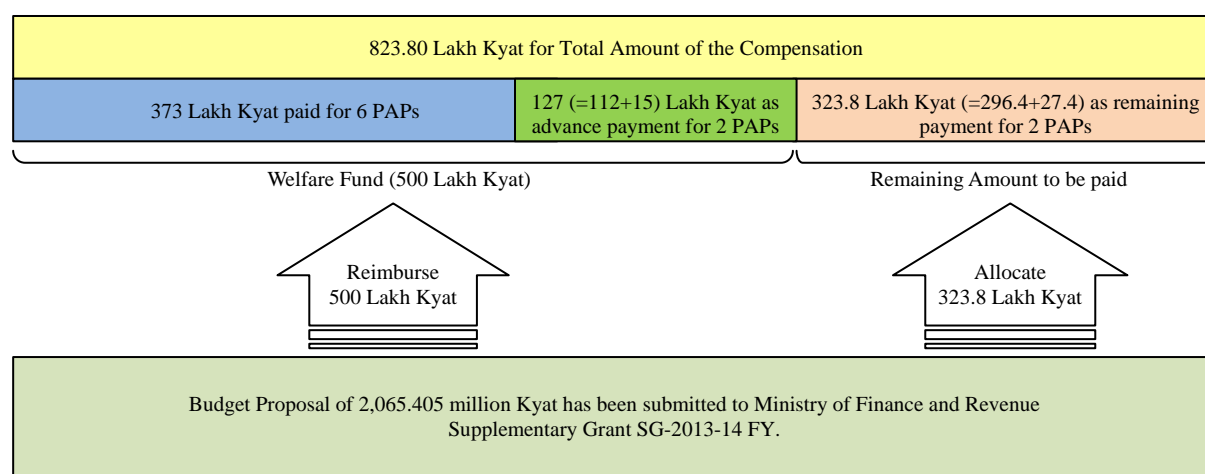
With regard to cultivation of crops seeded before the land acquisition, agreements were made on 9th August, 2013 between MOE and seven PAPs as follows (See Appendix 7.3.14).

- Completely stop cultivation in the land by 30th November 2013.
- After that, never continue to cultivate in the land.

7.3.5 Budgets and Payments

For the sake of compensations for the land acquisition, MOE initially allocated 500 Lakh Kyat from an internal budget of “Welfare Fund” of MOE. The fund can be reimbursed in the next fiscal year budget in cases where a MOE budget proposal (2,065.405 million Kyat including 823.80 Lakh Kyat of the compensation amount) submitted on 19th August 2013, has been approved by the Ministry of Finance and Revenue (See Appendix 7.3.15 and 7.3.16).

As shown in Figure 7.3.1 and Table 7.3.10, among the PAPs to be compensated, a total 373 Lakh Kyat for six PAPs was fully paid by MOE, the remaining 127 Lakh Kyat has been planned to be used as advance payments for other two PAPs (Source: MOE compensation plan issued on 27th August 2013, See Appendix 7.3.17).



Prepared by the JICA Preparatory Survey Team based on MOE information as of 27th August 2013

Figure 7.3.1 Conceptual Diagram on Budgets Allocation for Land Acquisition

Table 7.3.10 Schedule of Payment for Remaining Two PAPs (as of 27th August 2013)

PAPs	2013							2014		
	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
U Khin Maung Aye	112 Lakh → 17 June									296.4 Lakh → Not later than end of March
Daw Khaing Thazin Nwe			Replace 1.78 acre →							27.40 Lakh for 2.12 acre (15 Lakh in advance) → Not later than end of March

(Note: After this MOE plan for remaining compensation was issued on 27th Aug. 2013, the cash compensation of the total 42.4 Lakh Kyat for 2.12 acre of Daw Khaing Thazin Nwe was actually paid on 28th Aug. 2013 by MOE (See Appendix 7.3.11 and Appendix 7.3.17))

Source: DEPT, MOE

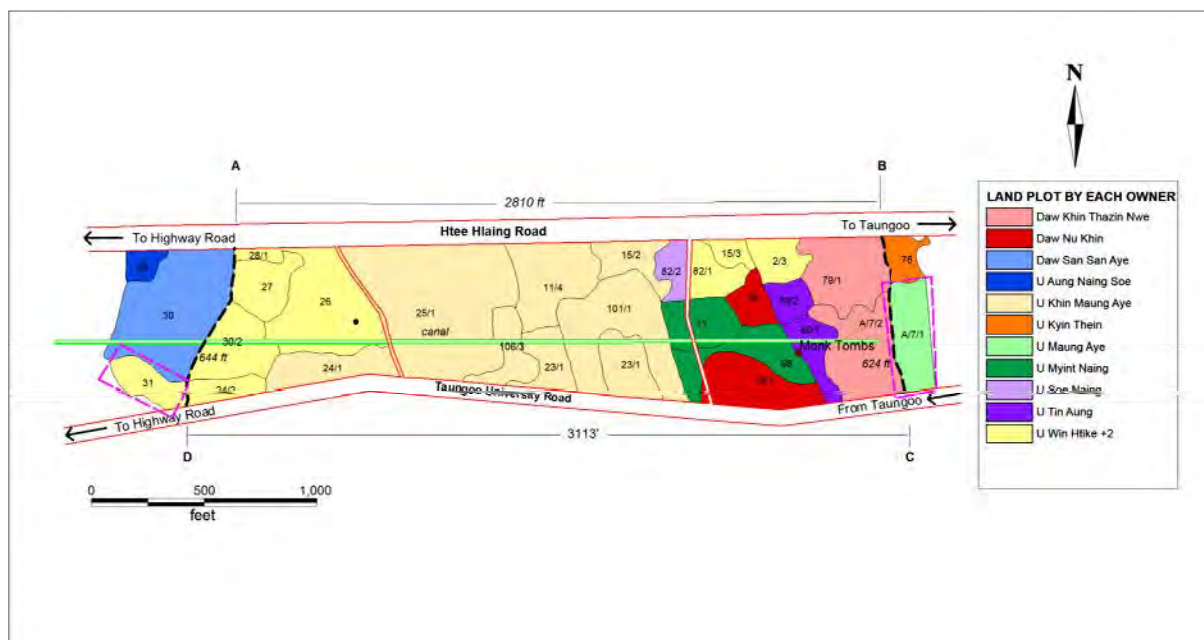
According to MOE, after issuing the compensation plan dated 27th August 2013 (See Appendix 7.3.17), the cash compensation of the total 42.4 Lakh Kyat for 2.12 acre of the one PAP (Daw Khaing Thazin Nwe) was paid on 28th August 2013 using an additional allocation of the Welfare Fund of MOE (See Appendix 7.3.11).

Therefore, a remaining 296.4 Lakh Kyat of another PAP (U Khin Maung Aye) is only scheduled to be paid by the end of March 2014 as shown in Table 7.3.10.

7.3.6 Maps for Project Affected Land

(1) Land Plot Map

Figure 7.3.2 shows a sketch map of land plots of the project area in which such plots excluded from the project are included (See the item of 7.3.4).



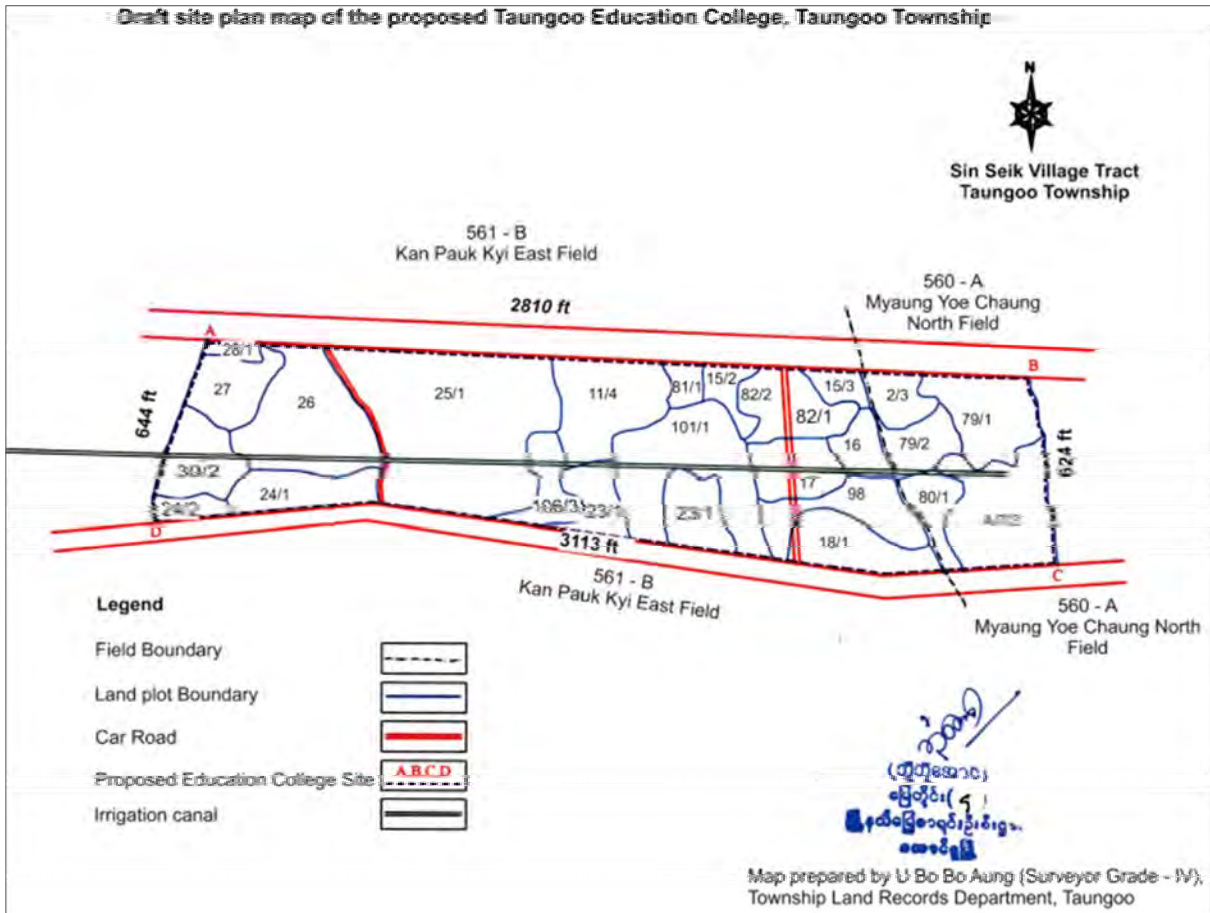
Prepared by the JICA Preparatory Survey Team based on data from Taungoo Township Settlement and Land Records Department

Figure 7.3.2 Land Plot Map of the Project Area
(Including Plots excluded from the Project)

- In the map, plot No.78 (colored in orange) on the upper right as well as No.28 and No.30 (colored in dark blue and right blue) on the upper left are the land plots excluded from the project site.
- In the map, plot No. A/7/1 (colored in right green) on the lower right as well as plot No.31 (colored in beige) on the lower left are the land plots (shown in the dotted rectangular blocks) where were used as the alternative lands to acquire the land plots of 79/1 and A/7/2 (colored in pink) of which rights for faming belonged to Ms. Daw Khin Tazin Nwe.

(2) Site Plan Map for the Project

Figure 7.3.3 shows a draft site plan map for the project officially prepared by the Taungoo Township Settlement and Land Records Department (TSLRC).



Note: Original map is written in Myanmar language (which is translated into English on the map)

Source: Taungoo Township Settlement and Land Records Department

Figure 7.3.3 Site Plan Map (Drat) for the Project

- In the map, the four land plots excluded from the project as well as the two land plots acquired by MOE where were used as the alternative lands have been eliminated (See the items of 7.3.4).
- Details of each land plot are summarized in Table 7.3.1
- Total area for the project is 41.19acre. (See Table 7.3.4)

7.4 Household Finance and Livelihood Condition

In order to identify household finances and livelihood conditions, the project affected persons (PAPs) were interviewed as follows.

- Total number of PAPs interviewed was 7 persons.
- Namely, 63.64% of all Original PAPs initially recognized (11 PAPs) were interviewed.
- Several land plots belonged to three among the Original PAPs, however, were later on excluded from the project, by which 87.5 % of the Final PAPs conclusively identified were interviewed.

Table 7.4.1 shows the household finance and livelihood condition of PAPs interviewed.

Table 7.4.1 Household Finance and Livelihood Condition of PAPs

Name of PAPs (random order)	Sex	Age	Occupation	Status	Number of Family	House Ownership	Income/Year (Lakh Kyat)	Expenses/Month (Lakh Kyat)
U Khin Maung Aye	M	56	Business	Head	5	owned	2,400	5
Daw Khine Thazin Nwe	F	51	Business	Head	3	owned	200	3
U Tin Aung (U Soe Paing*)	M	30	Farmer	Son	5	owned	130	3
U Myint Naing	M	44	Farmer	Head	4	owned	300	5
Daw Nu Khin	F	74	Farmer	Spouse	6	owned	60	2
U Soe Naing	M	46	Farmer	Head	5	owned	50	3
U Maung Aye	M	52	Farmer	Head	4	owned	50	2

1 Lakh = 100,000

Note: interviewed with * U Soe Paing who is son of U Tin Aung

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The data of Income/Year in Table 7.4.1 are used for impact analysis in the item 7.5.4 below.

In addition, according to data in Tale 7.4.1 and income data of U Win Htike +2 (200, 220 and 240 Lakh Kyat respectively) shown in Table 7.4.5, it can be calculated that daily income per each family member of the PAPs' households are more than the World Bank definition of the International Poverty Line of US\$ 1.25/day/capita.

7.5 Impact on Livelihood by the Land Acquisition

Impact on livelihood of each PAP caused by the land acquisition was qualitatively analyzed by calculating possible productivity and profitability of the farmland in the project site as follows.

7.5.1 Cultivation Condition

Based on the interviews with project affected persons (farmers) as well as nearby villages' farmers, relevant data on dominant crops cultivated, such corps' yields and market prices and so on were collected to calculate productivity and profitability of the farmland for the proposed project area in this section.

First of all, the following shows general views of cultivation of the farmland indentified in the interviews.

- The dominant crop in the farmland is paddy grown in the rainy season.
- Summer-paddy has been started to cultivate at a small scale (only 12% of the farmland) since the early of 2013 when a branch of irrigation channel was connected in the farmland.
- Beans are also cultivated in winter season only after the rainy paddy has been harvested.

Table 7.5.1 shows conditions of the cultivation of the farmland. In accordance with data of yield and market prices in the table, maximum profits from crops (farm products) per acre of the farmland in the project site can be obtained as shown in Table 7.5.1, which are used to calculate profitability discussed in the item 7.5.2 below.

Table 7.5.1 Cultivation Condition of the Farmland

(a) Crop	(b) Measured Unit** (measure basket for grain crops)	(c) Yield/acre (Min. - Max.) (Tin)	(d) Market price of Crop per Tin (Min. - Max.) (Kyat)	(e) Maximum Earning from Crop/acre (Kyat)	(f) Maximum Expenditure /acre (Kyat)	(g) Maximum Profit from Crop/acre (Kyat) = (e) - (f)
Paddy (rainy season)	Tin:	60 - 70	3,600 - 3,800	266,000	150,000	116,000
Paddy (summer season)*	Tin:	50 - 60	3,600 - 3,800	228,000	130,000	98,000
Beans (green grams)	Tin:	4 - 6	12,000 - 18,000	108,000	90,000	18,000

* For the paddy grown in summer season, not all the farmlands are cultivable as it is depending on the location of farmlands where are either near to irrigation canals or amount of water available.

** Tin: Myanmar traditional measure basket for grain crops, e.g., approximately 1 Tin of paddy = 50 pounds; 1 Tin of beans = 72 pounds

Note: The market prices were calculated based on preceding three years (2010, 2011, 2012, and 2013). Yield in column (c) and expenditure in column (f) were calculated based on data collected from the project affected five farmers and other farmers around the project area.

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7.5.2 Productivity

Annual maximum productivities of the farmland in the project site cultivated by the five farmers among PAPs before the land acquisition can be calculated from data of yield and annual cultivation area as shown in Table 7.5.2.

Table 7.5.2 Annual Maximum Productivity of the Farmland

(h) PAPs (Farmers) (random order)	(i) Farmland acquired by MOE (acre)	(j) Farmland Area before Acquisition (acre)	Annual Cultivation Area by Crop (acre)			Maximum Annual Productivity of Each Crop (Tin)		
			(k) Rainy Paddy	(l) Summer Paddy	(m) Beans	(n) Rainy Paddy = (c) × (k)	(o) Summer Paddy = (c) × (l)	(p) Beans = (c) × (m)
U Tin Aung	2.38	7.38	7.38	2	-	516.6	120	-
U Myint Naing	1.14	6.14	6.14	-	5	429.8	-	30
Daw Nu Khin	2.77	14.77	14.77	-	12	1,033.9	-	72
U Soe Naing	0.80	18.80	18.80	-	10	1,316.0	-	60
U Maung Aye	0.93	7.93	7.93	4	3	555.1	240	18
Total	8.02	55.02	55.02	6	30	-	-	-

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7.5.3 Profitability

Profitability of the farmland per acre is analyzed focusing attention on “(g): Maximum Profit from Crop/acre” in Table 7.5.1, “(j): Farmland Area before Acquisition” and “(k), (l) and (m): Annual Cultivation Area by Crop” in Table 7.5.2 as follows.

(1) Annual Maximum Profitability by Each Crop

An annual maximum profitability by each crop is calculated with the following formula, by which (q), (r) and (s) in Table 7.5.3 are respectively obtained.

$$((q), (r), (s)) = (g) \times ((k), (l), (m))$$

(g): Maximum Profit from Crop/acre (See Table 7.5.1)

(k), (l) and (m): Annual Cultivation Area by Crop (See Table 7.5.2)

(2) Annual Total Profit of Each Farmer:

An annual total profit of each farmer is calculated with the following formula, by which (t) in Table 7.5.3 is obtained.

$$(t) = (q) + (r) + (s)$$

(q): Annual Maximum Profitability of Rainy Paddy

(r): Annual Maximum Profitability of Summer Paddy

(s): Annual Maximum Profitability of Beans

(3) Annual Total Profit per acre of Each Farmer

An annual total profit per acre of each farmer is calculated with the following formula, by which (u) in Table 7.5.3 is obtained.

$$(u) = (t) / (j)$$

(t): Annual Total Profit per acre of Each Farmer

(j): Farmland Area before Acquisition

(4) Annual profitability per acre of the Farmland for the Project Site

Based on the parameters obtained above, an annual profitability per acre of the farmland for the project site can be calculated with the following two methods.

- “Overall Total of the Profit of the Farmers” divided by “Total of Actual (Net) Farmland Area cultivated by Five Farmers before Land Acquisition”

$$\text{Overall Total of } (t) / 55.02(\text{acre})$$

Whereby, a figure of 136,501.64, (v) in Table 7.5.3, is obtained.

- “Overall Total of Individual Profit of Each Farmer per Gross Farmland Area cultivated by Each Farmer” divided by “Five Farmers”

$$\text{Overall Total of } (u) / 5 (\text{farmers})$$

Whereby, a figure of 140,331.42, (w) in Table 7.5.3, is obtained.

Therefore, it can be considered that the annual profitability per acre of the farmland for the project site lies between 136,501.64 and 140,331.42 Kyat/acre.

Consequently, the median value of two figures, “138,416.53 (Kyat/acre)”, is applied to be used as the Profitability of the Affected Land/acre/Year as shown in Table 7.5.3.

Table 7.5.3 Profitability of the Farmland (Kyat)

(h) PAPs (Farmers) (random order)	Annual Maximum Profitability from Each Crop			(t) Annual Total Profit of Each Farmer = (q) + (r) + (s)	(u) Annual Total Profit per acre of Each Farmer = (t)/(j)
	(q) Rainy Paddy = (g) × (k)	(r) Summer Paddy = (g) × (l)	(s) Beans = (g) × (m)		
U Tin Aung	856,080.00	196,000.00	-	1,052,080.00	142,558.27
U Myint Naing	712,240.00	-	90,000.00	802,240.00	130,657.98
Daw Nu Khin	1,713,320.00	-	216,000.00	1,929,320.00	130,624.24
U Soe Naing	2,180,800.00	-	180,000.00	2,360,800.00	125,574.47
U Maung Aye	919,880.00	392,000.00	54,000.00	1,365,880.00	172,242.12
Overall Total	6,382,320.00	588,000.00	540,000.00	7,510,320.00	701,657.08
(v) Overall total of the profit of the farmers (t)/55.02 acre				136,501.64	-
(w) Overall total of individual profit of the farmers per acre (u)/5 farmers				-	140,331.42
Profitability y of the Affected Land/acre/Year = ((v)+(w))/2				138,416.53	

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7.5.4 Impact Analysis

According to the World Bank Operational Policy (OP) 4.12, 10% impact of loss is a threshold as follows.

- Impacts are considered "minor" if the affected people are not physically displaced and less than 10% of their productive assets are lost.

- In case some of the displaced persons lose more than 10% of their productive assets or require physical relocation, the plan also covers a socioeconomic survey and income restoration measures.

Therefore, in order to analyze the impacts on livelihood for the PAPs caused by the land acquisition, calculations were made as shown below and in the following tables.

(1) Land Loss

Land losses of PAPs are simply calculated how many percentage of the lands belonged to PAPs were lost by the land acquisition. The results of the impact on the land loss by the acquisition are shown in Table 7.5.4.

Table 7.5.4 Land Loss by the Land Acquisition

No.	PAPs	(TIY) Total Income/Year** (Lakh Kyat)	Compensation Method	(AL) Affected Land (acre)	(TL) Total Land of PAPs before the Land Acquisition (acre)	Land Loss by the Land Acquisition (%) = (AL) / (TL) × 100				
1	U Khin Mg Aye	2,400	Cash	20.42	700.00	2.92				
2	Daw Khine Thazin Nwe	200	1. Cash (2.12 acre) 2. Alternative land (1.78 acre)	2.12	3.90	54.36				
3	U Tin Aung	130	Cash	2.38	7.38	32.25				
4	U Myint Naing	300	Cash	1.14	6.14	18.57				
5	Daw Nu Khin	60	Cash	2.77	14.77	18.75				
6	U Soe Naing	50	Cash	0.80	18.80	4.26				
7	U Maung Aye	50	Cash	0.93	7.93	11.73				
8	U Win Htike + 2*	Co 1(U Win Hitke)	Cash	3.54	9	39.37				
		Co 2(U Myo Lwin)		3.54			(10.63)*	9	(27.00)*	39.37
		Co 3(U Zaw Min Oo)		240				3.54		9

1 Lakh = 100,000

* U Win Htike + 2*: Rights for farming of the land plots were equally shared with three (3) co- holders (equal sharing).

Co 1: U Win Htike (Head for Co-holders), Co 2 (U Myo Lwin, Lives in Yangon Businessman), Co 3 (U Zaw Min Oo Lives in Yangon, Businessman)

** Total income: All earnings from various sources including profits from farmlands which were mainly collected by the questionnaire survey and from TEC

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(2) Profitability Loss

Profitability losses of the PAPs are simply calculated how many percentage of profitability of the lands belonged to the PAPs were lost by the land acquisition. The Annual Profitability per acre of the farmland calculated in Table 7.5.3 is utilized in the analyses. The results of the impact on the profitability loss by the acquisition are shown in Table 7.5.5.

Table 7.5.5 Profitability Loss by the Land Acquisition

No.	PAPs	Total Profit/Year** (Kyat) = (TL)*** × (PAL)	Compensation Method	(AL) Affected Land (acre)	(PAL) Profitability of the Affected Land/acre/Year (Kyat)	(TPAL) Total Profitability of the Affected Land/year (Kyat) = (AL) × (PAL)	Profitability Loss by the Land Acquisition (%) = (TPAL) / (2) × 100			
1	U Khin Mg Aye	96,891,571.00	Cash	20.42	138,416.53	2,826,465.54	2.92			
2	Daw Khine Thazin Nwe	539,824.47	1. Cash (2.12 acre) 2. Alternative land (1.78 acre)	2.12	138,416.53	293,443.04	54.36			
3	U Tin Aung	1,021,513.99	Cash	2.38	138,416.53	329,431.34	32.25			
4	U Myint Naing	849,877.49	Cash	1.14	138,416.53	157,794.84	18.57			
5	Daw Nu Khin	2,044,412.15	Cash	2.77	138,416.53	383,413.79	18.75			
6	U Soe Naing	2,602,230.76	Cash	0.80	138,416.53	110,733.22	4.26			
7	U Maung Aye	1,097,643.08	Cash	0.93	138,416.53	128,727.37	11.73			
8	U Win Htike+2*	Co 1(U Win Hitke)	Cash	3.54	138,416.53	490,455.90	39.37			
		Co 2(U Myo Lwin)		3.54				138,416.53	490,455.90	39.37
		Co 3(U Zaw Min Oo)		1,245,748.77						

* U Win Htike + 2*: Rights for farming of the land plots were equally shared with three (3) co- holders (equal sharing).

Co 1: U Win Htike (Head for Co-holders), Co 2 (U Myo Lwin, Lives in Yangon Businessman), Co 3 (U Zaw Min Oo Lives in Yangon, Businessman)

** Total Profit/Year**: Calculated from the farmland based on the profitability of each person before the land acquisition

*** (TL) : Total Land of PAPs before the Land Acquisition (Table 7.5.2)

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(3) Impact Calculation

The impacts on total annual incomes for each affected person can be calculated by using the annual profitability losses of the affected lands as shown in Table 7.5.6.

Table 7.5.6 Impacts on Livelihood by the Land Acquisition

No.	PAPs	(TIY) Total Income/Year (Lakh Kyat)	(TPAL)** Total Profitability of the Affected Land/Year (Kyat)	Impact on Livelihood (%) = ((TPAL) / 100,000) / (TIY) × 100	
1	U Khin Mg Aye	2,400	2,826,465.54	1.18	
2	Daw Khine Thazn Nwe	200	293,443.04	2.70	
3	U Tin Aung	130	329,431.34	2.53	
4	U Myint Naing	300	157,794.84	0.53	
5	Daw Nu Khin	60	383,413.79	6.39	
6	U Soe Naing	50	110,733.22	2.21	
7	U Maung Aye	50	128,727.37	2.57	
8	U Win Htike+2*	Co 1(U Win Htike)	200	490,455.90	2.45
		Co 2(U Myo Lwin)	220	490,455.90	2.23
		Co 3 (U Zaw Min Oo)	240	490,455.90	2.04

1 Lakh = 100,000

* U Win Htike + 2*: Rights for farming of the land plots were equally shared with three (3) co- holders (equal sharing).

Co 1: U Win Htike (Head for Co-holders), Co 2 (U Myo Lwin, Lives in Yangon Businessman), Co 3 (U Zaw Min Oo Lives in Yangon, Businessman)

** (TPAL) : See Table 7.5.2

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The analysis suggests that the impacts on livelihood are less than 10% of the total annual incomes (from various sources) of each project affected person.

7.6 Reasonableness of the Compensation Value

Based on the interviews held by the JICA Preparatory Survey Team in 2013, past experiences of land transactions (for rights for farming) around the project site were identified as shown in Table 7.6.1.

Table 7.6.1 Past Experiences of Land Transaction

Year	Local Market or Transaction Prices (Lakh Kyat / acre)	Remarks
2007	3	Before Taungoo Road was constructed
2008	6-12	Once Taungoo Road was constructed
2009	12	After Taungoo Road was constructed
2010	12-15	<ul style="list-style-type: none"> U Khin Maun Aye, U Win Htike +2 started purchasing at a rate of 12-15 Lakh Kyat/acre Daw San San Aye purchased at a rate of 35 -40 Lakh Kyat/acre (abnormally higher than the others; considered as an aberrant value)
2011	15	<ul style="list-style-type: none"> Daw Khine Thazin Nwe, U Kyi Thein purchased
2012	15 – 20	<ul style="list-style-type: none"> U Aung Naing Soe purchased at a rate of 20 Lakh Kyat/acre
2013	30 – 50	No information on land transactions was recorded

1 Lakh = 100,000

Source: Head of Sin Seik village Tract Administration, U Myint Lwin and Farmers around the project site

- In 2007, before the Taungoo Road (or Htee Hlaing Road) was constructed, prices of the farmlands in the vicinities of the project site were known as about 3 Lakh Kyat/acre.
- In 2008, after the construction of Taungoo Road, the transaction price was increased at a rate of 6 Lakh Kyat/acre to 12 Lakh Kyat/acre depending on distance to the Taungoo Road.
- In 2010, local people got started purchasing farmlands in the vicinity of the Taungoo Road with the prices ranging from 12 Lakh Kyat/acre to 15 Lakh Kyat/acre depending on condition of lands.
- Since then others (businesspersons) have come into investments in farmlands around the project site with higher prices.

7.6.1 Reasonableness

In view of this, it is considered that “20 Lakh Kyat/acre” which was set up at the first consultation meeting for the land acquisition as shown in the item 7.3.2 can be evaluated as a reasonable unit price

for the compensation of the acquisition at the time of the end of 2012.

7.6.2 Value Analysis

A value for compensation can be evaluated in the following formula.

$$(a) / (b) = 20 \times 100,000 \text{ (Kyat /acre)} \div 138,416.53 \text{ (Kyat/acre/Year)} = 14.45 \text{ year}$$

(a): the unit compensation price of 20 Lakh Kyat/acre

(b): the Profitability of the Affected Land of 138,416.53 Kyat/acre/Year calculated in Table 7.5.3

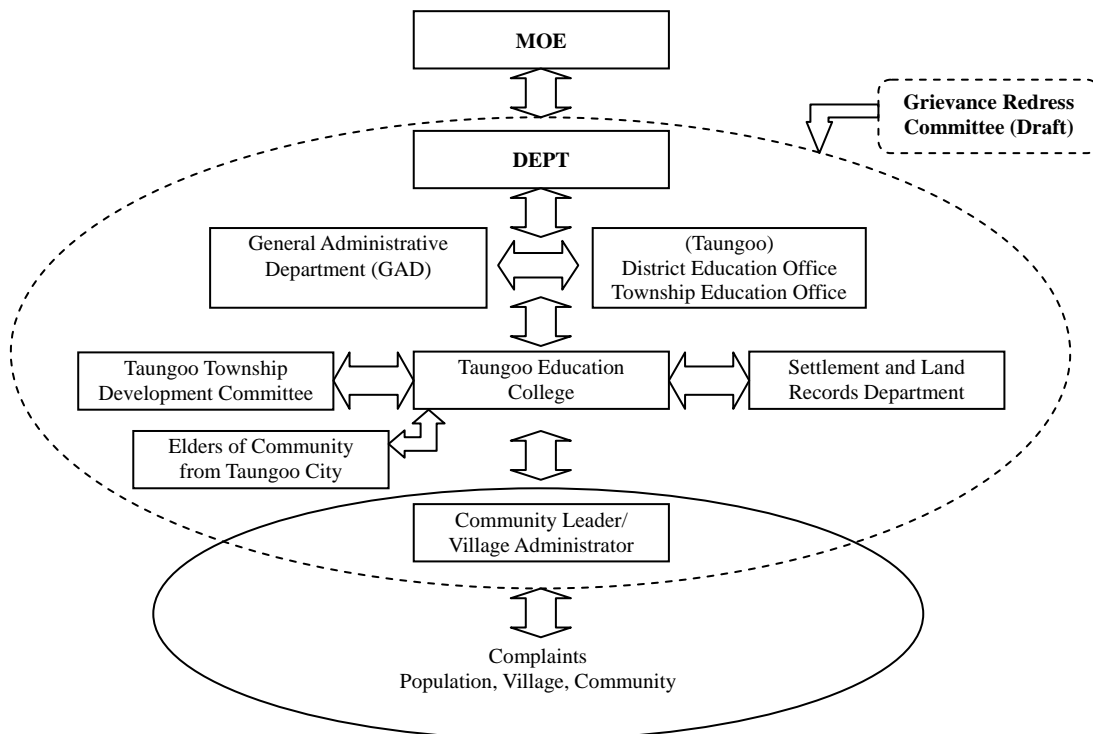
Namely, it can be concluded the compensation of 20 Lakh Kyat/acre has a value of from 14 year to 15 year profitability of the paddy and farmland. (Note: Inflation rate is not considered in the evaluation)

7.7 Consultation and Disclosure

As explained in the item of 7.3.2, the first consultation meeting for the land acquisition was held by the initiation of MOE on 3rd December 2012 at the Shan Yaw Monastery in the Sin Seik Village Tract in Taungoo Township. After that, relevant meetings on the land acquisition and the project as well as three stakeholders meetings were held in 2013 as shown in Chapter 5.

7.8 Grievance Redress Mechanism

Department of Education Planning and Training (DEPT) at MOE has proposed a grievance redress mechanism for the land acquisition and project implementation as shown in Figure 7.8.1. The mechanism is considered as a kind of committee system (See Appendix 7.3.17).



MOE: Ministry of Education, DEPT: Department of Education Planning and Training

Source: DEPT, MOE

Figure 7.8.1 Grievance Redress System

7.9 Schedule of Registration and Change of Land Use

In accordance with the Farmland Law (2012) and Farmland Rules (2012) as specified in the item 7.2.1 (Table 7.2.2 and Table 7.2.3), DEPT at MOE has started the land registration and change of land use purpose from farmland to education college with a schedule as shown in Table 7.9.1, by which the whole process of land acquisitions will be completed at the end of March 2014. (See Appendix 7.3.17)

Table 7.9.1 Schedule of Registration and Change of Land Use

Name of the Activity	2013						2014		
	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1. Submission of Form 1 to Land Record Department, Taungoo		■							
2. Announcement by form 2 by Land Record Department			■						
3. Duration of Announcement for rejection			■						
4. Submission of case to the township land management committee/association by Land record dept				■					
5. Submission of case to the District land management committee by the township land management committee/ association			■						
6. Approval by District land management committee/ association and send it to township land record department.					■				
7. Issuing form 7 to MOE by Township land management committee/association					■				
8. Submission of Form 14 to the Land Record Department						■			
9. Review by Land record department						■			
10. Submission of the case to Township land management committee/association by Land Record Department						■			
11. Submission of the case to Nay Pyi Taw Council or State/Regional Land Management Committee/ association through District land management committee/ association by Township land Management committee/ association							■		
12. Submission of the case to Nay Pyi Taw Council or state/Regional Cabinet by Nay Pyi Taw Council or State/Regional Land Management Committee/ association								■	
13. Issuing form 15 by Central Land Management Committee/ Association or Issuing form 15-A by Nay Pyi Taw Council or State/Regional Land Management Committee/ association									■

Notes: The whole process of land acquisitions will be completed at the end of March 2014. (The process is followed by the rules and regulations of the land used for farming and land used for other purposes enacted 31st 2012)

Source: DEPT, MOE

CHAPTER 8 RECOMMENDATIONS

8.1 Construction Phase

- Construction norms and regulation such as time restriction (e.g. from 9:00a.m to 5:00 p.m.) and weekend restriction (e.g. no construction work on Sundays) shall be discussed among stakeholders especially people live in the surroundings of the project site.
- Construction warning boards (Safety measures, Restrictions and etc.) shall be prepared and tracked in the project site.
- Construction workers and labors shall appropriately be provided with personal protection equipment such as helmets, gloves, protective shoes, working clothes and etc.
- Construction fences shall be installed.
- Security guards shall be deployed in the construction phase as per relevant laws and regulations.
- Two diversions for the path ways in the project site shall be constructed before the construction phase, especially before the commencement of earth filling.
- With regard to the three tombs situated in the project site, if anything is found while moving or clearing the tombs, those remains shall be floated to a river according to ritual.
- If any ancient objects (antiquities and/or remains) are found during the construction, such information shall be informed to the Archaeology Department and Historical Research Department at the Ministry of Culture.

8.2 Operation Phase

- If necessary, it is desirable that any countermeasures against the demolition of the irrigation channel in the project site are discussed among the stakeholders who have rights to farming in the relevant area of east side of the project site even though who agreed abandonment of such rights and MOE.
- In cases where school buses for the project are operated by MOE, the buses to be utilized shall be undergone a regular check and equipped with appropriate mufflers (silencers) as well as education and instruction on traffic safe and rules shall be periodically implemented to the students, their parents and the surrounding population as well as to the drivers.
- In addition, timetables for the school buses shall be considered and decided to avoid the traffic rush hours.
- It is desirable that separation discharge of solid waste is introduced in each facility in order to cooperate a TTDC future plan on separation collection system of solid waste in Taungoo.

8.3 Others

- Major trees seen in the project site may be left as they are as much as possible (by considering the layout of the facilities to be constructed).
- The three monument tombs may be left as they are as much as possible (by considering the layout of the facilities to be constructed).

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a) N (b) N (c) - (d) N	(a) Environmental Conservation Rules, EIA Procedures and National Environmental Quality Standards have been drafted by MOECAAF and are being discussed for approvals as of August 2013. (According to MOECAAF, the regulations on EIA have been developed by MOECAAF having a technical assistance from ADB (Asian Development Bank) and referring to the JICA Guidelines for Environmental and Social Considerations, which are being reviewed and discussed in the Parliament for a final approval as of August 2013 in reference to opinions from relevant Ministries and industries. Therefore the approval period and details of the EIA regulations are unknown at the moment.) (At the December of 2013, the approval situations were same situations of the AUGUST) (b) Therefore, there has not been developed an EIA report on the Taungoo Educational College (hereinafter referred to as "TEC") project. (c) N/A (d) According to MOECAAF, however, an EMP (Environmental Management Plan) will be required at least for the project. At the timing before the approval of the EIA regulations, based on a discussion between MOECAAF and MOE held on August 2013, MOECAAF has agreed to accept and evaluate an environmental and social considerations report to be prepared by the JICA Preparatory Survey Team in replace of the EMP and other necessary documents which will be required by the new rules and procedures.
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a) Y (b) Y	(a) The first land acquisition consultation meeting was held on 3rd Dec. 2012 (can be considered as the Cut-off-date for the land acquisition) by MOE to discuss the land acquisition issues with 11 persons "who have rights for farming" (hereinafter referred to as "Land Users") in the project site at that time and relevant stakeholders. After that, Stakeholders Meetings (SHM) and questionnaire surveys on the project were held in the surrounding villages of the project site as well as communities around the existing TEC as follows. ① 3rd Dec. 2012 Land Acquisition Consultation meeting, 12 participants (including 7 Land Users) ② 15th Mar. 2013 Questionnaire Survey (Young Aging Village) ③ 16th Mar. 2013 Questionnaire Survey (Main Sir Kat Village and Shan Yawn Village) ④ 17th Mar. 2013 Land acquisition consultation meeting 27 participants (MOE, elders and representatives of Taungoo) ⑤ 20th May. 2013 Primary Target SHM (for Land Users) 27 participants ⑥ 21st May. 2013 Secondary Target SHM (for surrounding peoples) 37 participants ⑦ 22nd May. 2013 Tertiary Target SHM (for surrounding of Existing EC) 37 participants As a result of the Questionnaire Surveys, it has been confirmed that all 60 respondents have expressed their agreement for the project. The final project site proposal excluding three land users among 11 land users has been agreed among relevant stakeholders. Compensation value (20Lakh Kyat/acre) and the Compensation methods (cash and alternative lands have been agreed between the land users and MOE. As mentioned above, adequate explanations and discussions on the project summary and the land acquisition have been carried out as well as the final land acquisition plan has been approved among relevant stakeholders (b) For requests (See below*) expressed from the questionnaires respondents and participants of SHMs, Director General at DEPT of MOE issued a concrete plan (including necessary budgets and coordination with relevant official entities) for countermeasures for these requests dated on 27th August 2013 addressed to the Chief Consultant at JICA Preparatory Survey Team as well as it C.C. (Carbon Copy) was delivered to the JICA Myanmar office.
	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a) Y	(a) In 2012, two proposed alternative sites were compared for the project. Namely, access (distance from the city center), surrounding infrastructures (electricity, arterial road and drainage and so on), considerations on safety for women students, benefit for surrounding villagers (Priority enrollment of surrounding children), construction costs such as fences to be required and so on were discussed to compare. Finally, the present project site was selected on Dec. 2012 as the final decision.

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
2 Pollution Control	(1) Air Quality	(a) Do air pollutants, (such as sulfur oxides (SOx), nitrogen oxides (NOx), and soot and dust) emitted from the proposed infrastructure facilities and ancillary facilities comply with the country's emission standards and ambient air quality standards? Are any mitigating measures taken? (b) Are electric and heat source at accommodation used fuel which emission factor is low?	(a)N (b)N	<p>(a) Generation source of air pollutants will be from a kitchen facility to be constructed in the new TEC. A kitchen in the existing TEC uses rice husk as the fuel. Rice Husk is planned to be used as fuel for the kitchen in the new TEC as well. The kitchen is planned to be used in regulated times of two times per day (in morning and evening).</p> <p>As a back-up power supply, a diesel engine generator which shall have an equivalent environmental performance of such generators designated as "Tier III (the 3rd exhaust emission) control construction machine" by Japanese Ministry of Land, Infrastructure, Transport and Tourism is planned to be operated in limited utilization based on an assumption of the power failure frequency (0.5 hour per day of 15days per month).</p> <p>Hostels in the new TEC are planned to be connected to the electricity distribution system in the new TEC by which no emission of air pollutants will be expected.</p> <p>There are no national environmental Air quality standards and discharge standards in Myanmar at present.</p> <p>(b) Boardinghouses will be connected to the nearest grid systems by which no emission of air pollutants will be expected.</p> <p>On the other hand, the proposed project site is a flat and broad paddy and farmland, in addition, number of the surrounding receptors are limited.</p>
	(2) Water Quality	(a) Do effluents or leachates from various facilities, such as infrastructure facilities and the ancillary facilities comply with the country's effluent standards and ambient water quality standards?	(a)Y/N	<p>(a) Waste water from the new TEC is planned to be treated with aerated waste water treatment facilities and then the treated waste water is planned to be discharged to the nearest drainage system (creeks). Standard septic tanks (anaerobic biological treatment of 40% BOD treatment efficiency) in Myanmar which are used in the existing TEC and the Taungoo University located close to the project site are simple penetration treatment types, however due to the soil condition of the project site is composed of silt stratum in which water penetration into the underground cannot be expected.</p> <p>In addition, liquid solutions used for chemical and science practical trainings in classes of the new TEC are general ones such as hydrochloric acid (35%) and etc. of which quantities used for one training are limited of several hundred milliliters whereby a general disposal method of dilution with water for such solutions in order to reduce impact on surrounding environment is planned to be discharged as domestic waste water.</p> <p>Based on above, therefore the aerated waste water treatment facilities are planned to be installed for the new TEC. Therefore, it is expected that there is no negative impact on surrounding environment if appropriate operation and maintenance of such aeration facilities is done by the new TEC.</p> <p>On the other hand, In Myanmar, there is an industrial waste water discharge standards but no environmental standards on water quality.</p>
	(3) Wastes	(a) Are wastes from the infrastructure facilities and ancillary facilities properly treated and disposed of in accordance with the country's regulations?	(a)N	<p>(a) <Domestic Solid Waste> :Wastes from the new TEC will be domestic solid waste. Taungoo Township Development Council (TTDC) has responsibility for solid waste management in Taungoo Township. However, according to TTDC, the new TEC is to be constructed in far from the center of Taungoo, therefore, collection and transportation will be charged for the waste from the new TEC. In this regard, MOE has proposed to allocate a budget of 1,267,200Kyat/year for 2 times/ week collection of solid waste management by TTDC services.</p> <p><Sludge from waste water purification systems>: In addition, MOE has proposed to allocate a budget of 172,800kyat/4times/year for de-sludge activities for the new TEC to be done by the TTDC services.</p> <p>On the other hand, TTDC is planning to introduce a separation collection system of solid waste. Therefore, TEC will be requested to co-operate separation discharge of its solid waste as part of environmental education.</p>
	(4) Soil Contamination	(a) Are adequate measures taken to prevent contamination of soil and groundwater by the effluents or leachates from the infrastructure facilities and the ancillary facilities?	(a)N	<p>(a) Soil contamination by waste water (human excreta and domestic waste water) discharged from the new TEC is predicted during the operation phase. As mentioned in the item (2) Water Quality of 2. Pollution control, water quality, the waste water from the new TEC is planned to be treated with aerated waste water treatment facilities. Therefore, it is expected that there is no negative impact on surrounding soil.</p>

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
	(5) Noise and Vibration	(a) Do noise and vibrations comply with the country's standards?	(a)Y/N	<p>(a) As a back-up power supply for the new TEC, a diesel engine generator which shall have an equivalent environmental performance of such generators of low noise emission (e.g. Rated speed 50 Hz, unloaded average sound pressure level in all around 7m is around 60 dB (A)) generally used in Japan is planned to be operated in limited utilization based on an assumption of the power failure frequency (0.5 hour per day of 15days per month).</p> <p>In addition, discharge of traffic noise by the use of wheeled vehicles for the school commuting is predicted. However, the vehicles seen in Taungoo are generally relatively new (last 10 years old) types of used Japanese cars (which are satisfied with the "Permissible Limit of Automobile Noise (1971) of Japan" of which Cruising Noise is regulated at 70 dB (A) of 1971 year regulation of which value in from 1999 to 2001 year is 72 dB (A) for passenger cars of which riding capacity (number of seats include driver's) of 10 people or less) whereby heavy noise level is not predicted by the commute to the new TEC with such vehicles.</p> <p>On the other hand, there are no national environmental noise and vibration standards in Myanmar at present.</p>
	(6) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	(a)N	<p>(a) During the operation phase, a total 242 m3 per day of ground water as captive consumption for the new TEC is planned to be pumped up with two water wells as follows.</p> <ul style="list-style-type: none"> - As the result of natural condition study, a total capacity of 392 m3 per day (=196 m3/day × 2) of two wells is designed in order not to have negative impact on the existing ground water level. - The captive consumption of 242 m3 per day is less than the total capacity of two wells of 396 m3 per day. <p>Therefore, it is considered that land subsidence is not predicted by the use of ground water consumption of 242 m3 per day for the new TEC.</p> <p>On the other hand, according to TTDC, there is no standard of quantity of ground water pump-up in Myanmar.</p>
	(7) Odor	(a) Are there any odor sources? Are adequate odor control measures taken?	(a)N	<p>(a) Solid waste including organic matter such as kitchen waste discharged from the new TEC is planned to be collected by TTDC public service. Therefore, it can be predicted that odor will not be generated from the new TEC.</p>

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
3 Natural Environment	(1) Protected Areas	(a) Is the project site or discharge area located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a)N	(a) No protected area is located in and around the project site.
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? (b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? (c) Is there a possibility that changes in localized micro-meteorological conditions, such as solar radiation, temperature, and humidity due to a large-scale timber harvesting will affect the surrounding vegetation? (d) Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments, such as rivers? Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?	(a)N (b)N (c)- (d)N	(a) The project site does not encompass primeval forests, tropical rain forests, ecologically valuable habitats. (b) The project site does not encompass protected habitats of endangered species designated by the country's laws or international treaties and conventions. (not designated area such as forest and others) (c) N/A (d) Demolition of a branch stream of irrigation systems which has been operated to be used since early stage of 2013 in the project site is not expected to have negative impact on surrounding ecosystem. In addition, qaste water from the new TEC is planned to be treated with aerated waste water treatment facilities. Therefore it is considered that no impact on surrounding ecosystem is predicted.
	(3) Hydrology	(a) Is there a possibility that hydrologic changes due to the project will adversely affect surface water and groundwater flows?	(a)N	(a) There is no surface water such as rivers in and around the project site. Demolition of the branch stream of irrigation systems as mentioned in the item (2) above is not expected to have negative impact on surface water and ground water.
	(4) Topography and Geology	(a) Is there a possibility the project will cause large-scale alteration of the topographic features and geologic structures in the project site and surrounding areas?	(a)N	(a) Large scale excavation is not planned in the project site where is a flat paddy and farmland. However, a method of earth filling is planned to be applied for the construction of each facility of the new TEC, necessary soil for which is planned to be procured by partially excavating of surface soil of the site. Levels of the earth filling and excavating are around 1m and the areas excavated are planned to be used as temporal regulation ponds during heavy rain. Therefore, it can be considered that the earth filling and excavating are limited levels which possible impacts on topography and geology in the project site are small.

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? (b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement? (c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? (d) Is the compensations going to be paid prior to the resettlement? (e) Is the compensation policies prepared in document? (f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? (g) Are agreements with the affected people obtained prior to resettlement? (h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan? (i) Are any plans developed to monitor the impacts of resettlement? (j) Is the grievance redress mechanism established?	(a)- (b)- (c)Y (d)Y (e)N (f)- (g)Y (h)Y (i)N (j)Y	(a) Resettlement is not caused by the project. (b) Resettlement is not caused by the project. (c) The first consultation meeting on land acquisition was held by MOE on 3rd Dec. 2013, in which compensation values of 20 Lakh Kyat/acre and methods were basically agreed by the participants. (d) Seven (7) among the eight (8) of the land users (or Project Affected Persons: PAPs) finally eligible for the compensation have been compensated by MOE in the methods of cash compensation and alternative lands. For the alternative lands, two plots among the land plots acquired by MOE have been allocated to the relevant land user (PAP). The two plots of 1.78 acre have been decided by MOE to be excluded from the project site for the alternative lands, by which total area of the project site will be 41.19 acre. (e) Advance payment has been paid to the remaining one (1) land user (PAP) among the eight (8), of which unpaid amount is scheduled to be paid by the end of March 2014. (f) There is no residential house at all in the project site where is the existing paddy and farmland whereby resettlement is not caused by the project. (g) As specified the item (2) Explanation to the Local Stakeholders at 1 above, the project summary and the land acquisition have adequately been explained and discussed among relevant land users (PAPs) and relevant stakeholders (h) MOE initially allocated 500 Lakh Kyat from its internal budget of "Welfare Fund". The fund can be reimbursed in the next fiscal year budget in cases where a MOE budget proposal submitted by DG at DEPT, MOE on 19th August 2013 has been approved by the Ministry of Finance and Revenue. (i) Less than 10% of total annual income of each land user (PAP) has been confirmed as impacts on the livelihood caused by the land acquisitions. However, Monitoring plans on land acquisition have not been proposed by MOE. Therefore, it is necessary that preparation of the monitoring plan is to be recommended to MOE.

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment	(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	(a)N	<p>(a) <Impacts on Living and Livelihood>: Less than 10% of total annual income of each land user (PAP) has been confirmed as impacts on the livelihood caused by the land acquisitions of which compensation of 20 Lakh Kyat/acre is an equivalent value of about 15 year profitability of the paddy and farmland. Receptors are very limited around 2km of the project site which is a paddy and farmland. Therefore, impacts on living and livelihoods of the land users (PAPs) and surrounding villagers are not predicted. Impacts of traffic congestions and accidents are predicted by the commute to the new TEC, however, which are limited times in morning and evening of 5 days per week. Therefore, such impacts can be managed by operating school buses which is under planning by MOE, considering staggered and group commuting to the new TEC and implementing safe traffic educations to parents and surrounding peoples.</p> <p><Irrigation Water Right>: Water right for irrigation distributed by a irrigation channel constructed in the project area is allocated to not only project site but also farmlands of a total area of 12.84 acres of seven persons who have right for farming in the lands, where are located in the east (the downstream area) of the project site. In answer to MOE's inquiry through the existing TEC, all those 7 persons expressed abandonment of the water right for the sake of the project. As for the reasons of the abandonment, it can be considered the following points.</p> <ul style="list-style-type: none"> - Experiences of usage of the irrigation water by those famers are substantively less because that the operation of the irrigation channel was started in the early stage of this year. - Those farmers may focus on beans which require less water rather than the paddy rice for cultivation in the farmlands. <p><Rainwater Drainage>: North side of the project site faces a rainwater drainage system of which water is actually used for farmlands of the east of the site. As mentioned in the item (2) of 2, impacts on the farming activities can be managed by proper operation and maintenance of the aerated waste water treatment facilities. With regard to areas where are planned to be excavated in the project site for the earth filling, those areas are planned to be used as temporal regulation ponds during heavy rain, thus it is predicted that mosquito will be generated during rainy season. However, it is considered that the mosquito can be cleaned up by the general countermeasures such of periodic cleaning, fish stock (if possible) and use of commercially available insecticides (such as mosquito coils and others) where necessary.</p>
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a)N	(a) Local archeological, historical, cultural, and religious heritages are not existed in the project area (excluding three tombs constructed in 70 years ago are in the project site). However, demolition of the tombs has been agreed by the land users, surrounding villagers and the Shan Ywa Monastery. In accordance with communications with the present chief priest of the Shan Ywa Monastery, if anything is found while moving or clearing the tombs, those remains shall be floated to a river according to ritual.
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken? (b) Is there a possibility that landscape is spoiled by construction of high-rise buildings such as huge hotels?	(a)N (b)N	<p>(a) There no specific landscape to be considered in the project site where is located in a flat and broad paddy and farmland.</p> <p>(b) The project is construction of school facilities. Namely two stories' facilities are planned to be constructed as main structures.</p> <p>Two small size elevated water tanks (15m3 capacity each and about 22 m high) are planned to be constructed roughly in the central location of the project site of which area is 41.19 acres (167,000 m2).</p> <p>In addition, a method of earth filling is planned to be applied for the construction of each facility of the new TEC, necessary soil for which is planned to be procured by excavating of surface soil of the site. Levels of the earth filling and excavating are around 1m and the areas excavated are planned to be used as temporal regulation ponds during heavy rain. Therefore, it can be considered that project facilities as well as the earth filling and excavating of around 1m are limited levels which possible impacts on landscape in the project site are small.</p>
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples? (b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(a)N (b)-	(a) (b) Ethnic minorities and indigenous peoples are not identified in and around the project site.

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project? (b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials? (c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.? (d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(a)N (b)N (c)N (d)N	(a)(b) (c) (d) Due to the nature of general construction work and methods will be applied for the construction of the new TEC, it is considered that working conditions will have nothing special such as using toxic chemical substances and methods required for high-rise buildings. There have been no specific rules for Occupational safety and Personal Protective Equipment (PPE) so far in Myanmar. In this regard, it is considered that Factories Act 1951 is regarded as the existing Legal framework related to occupational safety in Myanmar which provides requirements concerning with working hours, working days, overtime, and certain health and safety measures. The first law on safety and health in workplaces is as of August 2013 being drafted by the Ministry of Labour, Employment and Social Security and will be promulgated in 2013.
5 Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? (b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts? (c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?	(a)N (b)- (c)N	(a) <Noise and Vibration>: It is considered that air pollution and noise and vibration caused by the use of heavy vehicles and equipment to be used for the construction are predicted during the construction period. However, due to the fact that the project site is an open and flat paddy and farmland, it is considered that exhaust gases, noise and vibration, dusts by the use of well maintained heavy vehicles and equipment are easily diffused into surrounding ambient environment for the construction period. <Soil contamination>: Soil contamination by oil spills from engines and hydraulic systems of heavy vehicles and equipment to be used for the construction is predicted only for the construction period. However, the operation of such vehicle and equipment is estimated to several numbers per day, it is considered that the quantity of oil spills are limited which can be managed by daily visual inspections <Wastes> In addition, it can be considered that waste water and solid waste during the construction, which are generally controlled by contractors, are managed by daily oversight and visual inspection. <Dust>: Dust of dried soil stirred up by such heavy vehicle and equipment operation on site especially in dry season, can be managed by water spring. (b) Due to the nature of general construction methods are applied for the construction of the new TEC, it is considered that impacts on natural environment are limited and small. (c) It can be considered that there will be social impacts such as traffic congestions, traffic accidents and STD like HIV/AIDS and so on which can basically be managed by the introduction of time regulations for the construction and implementation of safety and public health education to workers as well as the surrounding peoples.
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? (b) What are the items, methods and frequencies of the monitoring program? (c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? (d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(a)N (b)N (c)N (d)N	(a)(b)(c)(d) Monitoring plans and the systems have not been prepared by MOE. However, it is predicted that extent of possible impacts by the project are small, therefore, sophisticated monitoring which use accurate and advanced equipment are not required, but simple monitoring by doing general oversights, visual inspections and periodical inspections and etc. are enough for the project . Those points above shall be recommended to MOE and contractors through MOE.

Category	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Roads, Railways and Bridges checklist should also be checked (e.g., projects including access roads to the infrastructure facilities). (b) For projects, such as installation of telecommunication cables, power line towers, and submarine cables, where necessary, pertinent items described in the Power Transmission and Distribution Lines checklists should also be checked.	(a)N (b)N	(a) N/A (b) The new TEC is planned to be connected to electricity grid systems and telecommunication network. However, the connections is relatively small scale, therefore, it is considered that there are no impacts caused by the connections.
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a)N	(a) N/A

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

Appendix 5.1.1


Kick off Meeting for Environmental and Social Considerations Study (Meeting Memo)

Kick Off Meeting for Environmental and Social Consideration Study for Rehabilitation of Education college

နေ့စွဲ ။ ၁၄.၃.၂၀၁၃ ၊ နံနက် ၁၀:၀၀နာရီ
 နေရာ ။ တော်ဝင်ကေတုမတီဟိုတယ်၊တောင်ငူ
 ၁။ JICA, Consultant Mr.Igarashi နှင့် REM, Consultant ဒေါ်ခင်ဥမ္မာထွေး တို့သည် တောင်ငူပညာရေး
 ကောလိပ်သစ်စီမံကိန်းအတွက် အသေးစိတ်အချက်အလက်များကိုညှိနှိုင်းခြင်းနှင့် ကွင်းဆင်းအစီအစဉ်
 (အကြမ်း)ကို ဆွေးနွေးကြပါသည်။
 ၂။ တက်ရောက်လာသူများကို ဒေါ်ခင်ဥမ္မာထွေးမှ မိတ်ဆက်စကားပြောကြားခြင်းနှင့် တောင်ငူပညာရေး
 ကောလိပ်သစ်စီမံကိန်းအတွက်မြေရရှိထားမှုအခြေအနေအသေးစိတ်လုပ်ဆောင်မည့်အချက်များပတ်ဝန်း
 ကျင်ဆိုင်ရာလေ့လာမှုများကိုပြောကြားပါသည်။ တက်ရောက်လာသူများမှစီမံကိန်း အတွက်ပါဝင်ကူညီပေး
 မည်ဖြစ်ကြောင်းပြောကြားသည်။ ၁၅.၃.၂၀၁၃နေ့ ကွင်း ဆင်းမည့် အစီအစဉ်ကိုရေးဆွဲကြပါသည်။
 တက်ရောက်သူများစာရင်းနည်းပါး

စဉ်	နေ့ရက်/အချိန်	တက်ရောက်သူအမည်	ရာထူး/အလုပ်အကိုင်
၁	၁၄-၀၃-၂၀၁၃ နံနက် ၁၀နာရီ	Mr. Igarashi	JICA, Consultant
၂		ဒေါ်ခင်ဥမ္မာထွေး	REM, Consultant
၃		ဒေါ်ကြူကြူ	ကျွေးအုပ်ကြီး၊တောင်ငူပညာရေးကောလိပ်
၄		ဦးဟရန်သွဲပမ်	။
၅		ဒေါ်နန်းသခင်ဦး	REMအဖွဲ့
၆		ဦးမြင့်ညို	ကျေးရွာအုပ်ချုပ်ရေးမှူး
၇		ဦးမြင့်သူ	ဦး၊ မိမိ၊ ဝ
၈		ဦးမောင်အေး	။
၉		ဦးတင်ဝင်း	။
၁၀		ဦးမောင်မောင်	။
၁၁		ဦးသိန်းနိုင်ဦး	မြေစာရင်းဦးစီးဌာန

Resource & Environment Myanmar Ltd မှ မှတ်တမ်း တင်သည်။

မှတ်တမ်းတင်သူ

 ဒေါ်ခင်ဥမ္မာထွေး
 (REM, အကြံပေး)

Appendix 5.1.1










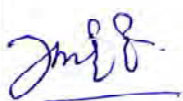
Kick off Meeting for Environmental and Social Considerations Study
(Participants List)

တောင်ငူပညာရေးကောလိပ်စီမံကိန်း

(Taungoo Education College Project)

အစည်းအဝေးတက်ရောက်သူများ

ရက်စွဲ။ ၂၀၂၀ ခု ၂၀ ၂၀၂၁

စဉ်	အမည်	နေရပ်	လက်မှတ်
၁။	ဒေါ်ကြူကြူ	တောင်ငူပညာရေးကောလိပ်	
၂။	ဦးမြင့်ညို	တောင်ငူမြို့မိမိမြို့ မ	
၃။	ဦးဖောင်မြ	"	
၄။	ဦးမြင့်လွင်	ဆင်ဆိပ်	
၅။	ဒေါ်ခင်စုမ္မာအေး	REM	
၆။	မနန်းသင်ဦး	REM	
၇။	ဦးဟာဂျိဘွယ်	တောင်ငူပညာရေး ကောလိပ်	
၈။	ဦးစော်သူ	တောင်ငူမြို့မိမိမြို့ မ	
၉။	ဦးစောဝေစောဝေ	"	
၁၀။	ဦးအုန်းစိန်	အစောင့်	

Recorded by Resource & Environment Myanmar Ltd.



(Sign)

Ms. Khin Ohanmar Htwe
Principal Consultant

Appendix 5.1.1

(English Translation)

Kick Off Meeting for Environmental and Social Consideration Study for Rehabilitation of Education college

Date: 14.3.2013, 10:00AM

Venue: Royal Kaythumadi Hotel, Taungoo

Participants: JICA Consultant, Team Leader (REM) , Headmistress and Administer Taungoo
Education College, Elder Persons of Taungoo Town

1. JICA Consultant and Team leader (REM) discussed the detail project description and tentative schedule.
2. Team leader (REM) explained about the objectives of the project, detailed information on the project and plan map of the project to attending persons.
3. All attending persons discussed about the next program of the project.

Table List of Attending Persons

Sr.	Date/ Time	Name of Attending Persons	Position
1	14.3.2013,10:00AM	Mr. Igarashi	JICA, Consultant
2		Daw Khin Ohnmar Htwe	Social Team Leader (REM)
3		Daw Kyu Kyu	Headmistress, Taungoo Education College
4		U Ha Yan Bwe Pon	Administer, Taungoo Education College
5		Daw Nant Thazin Oo	Member, (REM)
6		U Myint Nyo	Elder Person, Taungoo Town
7		U Myint Thu	Elder Person, Taungoo Town
8		U Maung Aye	Elder Person, Taungoo Town
9		U Tin Win	Head of Sinseik Village Tract
10		U Maung Maung	Elder Person, Taungoo Town
11		U Them Naing Oo	Land Record Department, Taungoo

Recorded by Resource & Environment Myanmar Ltd.



(Sign)

Ms. Khin Ohnmar Htwe
Principal Consultant

Appendix 5.1.2

Minutes of Meeting of Explanatory Meeting on the Project
(16th March 2013)

**တောင်ငူပညာရေးကောလိပ်တည်ဆောက်ရန်အတွက်
သက်ဆိုင်သူများထံမှအကြံဉာဏ်များရယူရန် တွေ့ဆုံညှိနှိုင်းမှုအစည်းအဝေး**

နေ့စွဲ ။ ။ ၁၆.၃.၂၀၁၃ ၊ နံနက် ၁၀:၀၀နာရီ
နေရာ ။ ။ ရှမ်းရွာဘုန်းကြီးကျောင်းတောင်ငူ

မေးမြန်းသူ	သဘောထားနှင့်အကြံပေးချက်	ပြန်လည်ဖြေကြားခြင်း(ခေါ်ဝေါ်ဥပမာတွေနှင့်ခေါ်ကြကြူ)
ဦးဝင်းဘို၊လယ်သမား မြင်းစားကွက်ရွာ	မြင်းစားကွက်ရွာသည်ယခုကောလိပ် တည်ဆောက်မည့်နေရာရှိခြတ်လမ်း ကိုအလုပ်ခွင်သွားရန်နှင့်ဘုန်းကြီး ကျောင်းဆွမ်းရှိုင့်ပိုရန်သုံးနေရ ကြောင်း၊စီမံကိန်းလုပ်ငါးကလမ်းပိတ် လျှင်သွားလာရေးခက်ခဲမည်ထင်ပါ သဖြင့်မည်သို့လုပ်ဆောင်ပေးမည် ကိုသိလိုကြောင်း။	-စီမံကိန်းတည်ဆောက်ရေးကာလတွင် လမ်းကိုခွင့်ပေးထားမည်ဖြစ်ပြီး၊စီမံကိန်းပြီးပါက ကောလိပ်နေရာ၏ဘေးနှစ်ဖက်တွင်လည်း ခြတ်လမ်း ၂ခုဖောက်လုပ်မည်ဖြစ်ကြောင်းနှင့် ဆရာတော်(ရှမ်းရွာဘုန်းကြီး)နှင့်ညှိနှိုင်းပြီး ပါကြောင်းပြန်လည်ဖြေကြားခဲ့သည်။
ဦးတင်ဦး၊လယ်သမား ညောင်ကိုင်းရွာ	ညောင်ကိုင်းရွာအနီးတွင် တောင်ငူတက္ကသိုလ်နှင့်ညောင်ကိုင်း ဆေးရုံရှိပြီးယခင်ကမီးရရှိခဲ့သည်။ ခေတ္တမီးရရှိပြီး ယခုမရရှိတော့ ကြောင်း ပညာရေးကောလိပ် တည်ဆောက်ပြီးပါကရွာအတွက်မီး ရရှိရန် ဆောင်ရွက်ပေးလိုကြောင်း။	ပညာရေးကောလိပ်တည်ဆောက်ပြီးပါက ပတ်ဝန်းကျင်ရွာများမီးရရှိရေးကို သက်ဆိုင် ရာမြို့နယ်အုပ်ချုပ်ရေးမှူးမြို့နယ်လျှပ်စစ်ဌာန တို့ကိုတင်ပြပေးမည်ဟုဖြေကြားခဲ့သည်။
ဦးနိုင်လင်းအောင်၊ လယ်သမား ညောင်ကိုင်းရွာ	ပညာရေးကောလိပ်စီမံကိန်းကြောင့် ပတ်ဝန်းကျင်ကျေးရွာများရွေ့ပြောင်း ရမည်လားသိချင်ကြောင်း။	ရွေ့ပြောင်းပေးမည့်အစီအစဉ်မရှိပါနှင့်စိတ်မပူ ရန်ဖြေကြားခဲ့သည်။
ဒေါ်မြင့်မြင့်ခိုင်၊ လယ်သမား မြင်းစားကွက်ရွာ	ပညာရေးကောလိပ်အသစ်တွင် ကျောင်းသားများ ဉာဏ်ပေးပေး ပညာသင်ယူနိုင်မည်လားမေးမြန်းခြင်း။	ယခုလောလောဆယ်ပညာရေးကောလိပ်သည် အလယ်တန်းအဆင့်ထိသာသင်ကြားနိုင်သည်။ ပညာရေးကောလိပ်အသစ်တွင်မူအထက်တန်း

ဦးသန်းထွန်း လယ်သမား မြင်းစားကွက်ရွာ	ရှမ်းရွာဘုန်းကြီးကျောင်းမီးရရှိရန် ဆောင်ရွက်ပေးစေလို	အထိပညာသင်နိုင်မည်အစီအစဉ်ရှိပါသည်။ ဆက်လက်လုပ်ဆောင်ရန်တင်ပြသွားပါမည်။
ဦးမြင့်လွင်၊အုပ်ချုပ်ရေး မှူး၊ဆင်စိပ်ကျေးရွာ အုပ်စု	ပညာရေးကောလိပ်အသစ်ပြီးပါက တောင်ငူပညာရေးကောလိပ်အသစ် မှတောင်ငူမြို့တွင်းသို့အထူးကားလိုင်း သစ်ဆွဲပေးရန်အကြံပေးခြင်း။ ပညာရေးကောလိပ်အသစ်စီမံကိန်း ဧရိယာကိုသတ်မှတ်ပြီးပါကခြံစည်းရိုး ခတ်ရန်အကြံပေးခြင်း။	ဆက်လက်လုပ်ဆောင်ရန်တင်ပြသွားပါမည်။
ဦးနိုင်လင်းအောင်၊ လယ်သမား မြင်းစားကွက်ရွာ	လွန်ခဲ့သောနှစ်က တောင်ငူမှ ရွှေတံခါးမီးရထားစီမံကိန်းရှိခဲ့ရာ ယခုဆက်လက်ဆောင်ရွက်မှုမရှိ ကြောင်း မည်သို့လုပ်ဆောင်မည် သိပါသလားမေးမြန်းခြင်း	ပညာရေးကောလိပ်စီမံကိန်းနှင့်မသက်ဆိုင်ပါ။

Resource & Environment Myanmar Ltd မှ မှတ်တမ်း တင်သည်။

မှတ်တမ်းတင်သူ



အိုင်စင်ညွှာထွေး
(REM, အကြံပေး)

Appendix 5.1.2

Participant List
(The Meeting on 16th March 2013)

တောင်ငူ ပညာရေး ကောလိပ် စီမံကိန်း
(Taungoo Education College Project)
အစည်းအဝေး တက်ရောက်သူများ

၁၆
မေလ ၂၀၁၃ ၂၇.3.2013

စဉ်	အမည်	အဖွဲ့ဝင်ပိုင်စာ	လက်မှတ်
၁	ဒေါ်စာဝင်းနီ	ဒေါ်စာဝင်းနီ	
၂	မ.ကျော်သွင်စိုး	"	
၃	ဦးဇော်ဇော်	"	
၄	မ.သန်းလွင်	"	
၅	ဦးအောင်စိန်	"	
၆	ဦးစိုးမင်း	"	
၇	ဒေါ်စာဝင်းနီ	ဒေါ်စာဝင်းနီ	
၈	ဦးစိုးမင်း	ဦးစိုးမင်း	
၉	ဦးမောင်မောင်	"	
၁၀	ဦးမောင်မောင်	ဦးမောင်မောင်	
၁၁	ဦးမောင်မောင်	ဦးမောင်မောင်	
၁၂	ဦးမောင်မောင်	ဦးမောင်မောင်	
၁၃	ဦးမောင်မောင်	ဦးမောင်မောင်	
၁၄	မ.လှိုင်	မ.လှိုင်	
၁၅	မ.လှိုင်	မ.လှိုင်	
၁၆	မ.လှိုင်	မ.လှိုင်	

(Taungoo Education College Project)

အထူးအထူးတက်ရောက်သူများ

နေ့စွဲ: 17.3.2013



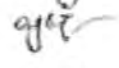

စဉ်	အမည်	အမှတ်လိပ်စာ	လက်မှတ်
၁၇	မချယ်ရီစိန်	၅၁၆၊ ၅၁	Chali
၁၈	အောင်စော	"	ခင်ကျော်စိန်
၁၉	မာဝင်းကြည်	မြင်းအားခွက်	မာဝင်း(ခ)အောင်
၂၀	ဒေါ်မြင့်မြင့်စိန်	"	မြင့်
၂၁	ဦးအောင်ကျော်	မြင်းအားခွက်	ဦးအောင်
၂၂	ဦးကျော်စိန်	"	ကျော်
၂၃	အောင်စွန်း	၅၁၆၊ ၅၁	အောင်
၂၄	ဦးကျော်စိန်	"	ကျော်
၂၅	အောင်စွန်း	"	အောင်
၂၆	အောင်စွန်း	မြင်းအားခွက်	အောင်စွန်း
၂၇	ဦးကျော်စိန်	၅၁၆၊ ၅၁	ကျော်
၂၈	ဦးကျော်စိန်	"	ကျော်
၂၉	ဦးကျော်စိန်	"	ကျော်
၃၀	ဦးကျော်စိန်	"	ကျော်
၃၁	ဦးကျော်စိန်	"	ကျော်
၃၂	ဦးကျော်စိန်	"	ကျော်

၆

Note : Date of 17th in the List was mistake. 16th was correct

တောင်ငူ ပညာရေး ကောလိပ် စီမံကိန်း
(Taungoo Education College Project)
အစည်းအဝေး တက်ရောက်သူများ

နေ့စွဲ 17.3.2013

စဉ်	အမည်	နေရပ်လိပ်စာ	လက်မှတ်
၃၃	နိုးနိုးအိ	ပုဂံလမ်း	
၃၄	နိုးနိုးအိ	ရွာမိရွာ	
၃၅	နိုးနိုးအိ	ရွာမိရွာ	
၃၆	နိုးနိုးအိ	ရွာမိရွာ	
၃၇	နိုးနိုးအိ	"	

Note : Date of 17th in the List was mistake. 16th was correct

Appendix 5.1.2

Minutes of Meeting of Explanatory Meeting on the Project (English Translation)

Opinions, comments, and complaints of the participants recorded in the stakeholder meeting held on 16th Mar, 2013 in Shan Ywar Monastery

Date: 16th Mar, 2013

Venue: Shan Ywar Monastery

No.	Name/ Occupation / Address	Opinions / Comments	Countermeasures expressed by MOE
1.	U Win Bo Farmer, Myin Sar Khwet village	People from Myin Sar Khwet village are using the existing public access lane as a short-cut to go for work to their farmlands located behind Shan Ywar village. For that reason, how would you manage when the project is started?	MOE will plan to construct two new public access roads on both side of the project site once the construction activity is commenced.
2.	U Tin Oo Farmer, Nyaung Gaing village	We need Electricity for our village, Nyaung Gaing even though it is near to the University and the Hospital, there is no electricity so far. Last time we got electricity then stopped later	MOE will pass this information to the Township Administrative Department and Department of Electrical Power of Taungoo Township for further action to be taken.
4.	U Naing Lin Aung Farmer, Nyaung Gaing	Once the project is done. Because of the nearest to the surrounding villages, are we and the villages going to be mobilized.	MOE said there is no such plan and no need to be worry.
5.	Daw Myint Myint Khaing Farmer, Myin Sar Khwet village	Can the students attend for grade 9 and grade 10 in the teacher training school in the new Education College?	Currently the teacher training school is planned to build for Middle School. Later it is going to be extended to a High School.
6.	U Than Tun Farmer, Myin Sar Khwet village	We want Shan Ywar Monastery to be electrified.	

7.	<p>U Myint Lwin Village Tract Administrative Officer, Sin Seik village tract</p>	<p>The special line-bus should be implemented from Taungoo to the proposed Education College site.</p> <p>The fence should be constructed around the boundary of the project site.</p>	
8.	<p>U Naing Lin Aung Farmer, Myin Sar Kwat village</p>	<p>During last four years, there was a railway project from Taungoo to Shwe Ta Gar but there is any progress so far.</p> <p>(not related to the proposed project)</p>	

Recorded by Resource & Environment Myanmar Ltd.



(Sign)

Ms. Khin Dhanmar Htwe
Principal Consultant

Appendix 5.1.2

Participants List (English Translation)

16th March 2013

	Participants	Village	Sign
1	U Tin Soe	MyinSaKwat Village	
2	U Kyaw Lwin Oo	MyinSaKwat Village	
3	U Myint Lwin	MyinSaKwat Village	
4	U Than Tun	MyinSaKwat Village	
5	U Tin Ngwe	MyinSaKwat Village	
6	U Naing Aye	MyinSaKwat Village	
7	U Tin Win Naing	Shanywa Village	
8	U Naing Linn Aung	MyinSaKwat Village	
9	U Yu Mg Mg	MyinSaKwat Village	
10	U Mg Zaw	Kanhla Village	
11	U Kyaw Thin	Shanywa Village	
12	U Thein Tan	Shanywa Village	
13	U Win Bo	MyinSaKwat Village	
14	U Ko Lay	Shanywa Village	
15	U Nyunt	Shanywa Village	
16	Daw Nu Khin	Shanywa Village	
17	Ma Cherry San	Shanywa Village	
18	Ma Khin Saw	Shanywa Village	
19	Ma Win Kyi	MyinSaKwat Village	
20	Daw Myint Myint Khine	MyinSaKwat Village	
21	Ko Zaw Moe	MyinSaKwat Village	
22	U Kyaw Myine	MyinSaKwat Village	
23	U Thint Lwin	Shanywa Village	
24	U Hla Myint	Shanywa Village	
25	U Myint Naing	Shanywa Village	
26	U Thein Lwin	MyinSaKwat Village	
27	U Mg Pu	NyaungKaing Vilage	
28	U Myint Lwin	NyaungKaing Vilage	
29	U Naing Aye	NyaungKaing Vilage	
30	U Soe Paing	NyaungKaing Vilage	
31	U Yu	NyaungKaing Vilage	
32	U Mynt Zaw	NyaungKaing Vilage	
33	U Soe Linn Tun	NyaungKaing Vilage	
34	U Zaw Win	Shanywa Village	
35	U Hla Po	NyaungKaing Vilage	
36	U Thaung Htay	MyinSaKwat Village	
37	Ma Hla Than	MyinSaKwat Village	

Appendix 5.1.3

Minutes of Meeting of Consultation Meeting on Land acquisition
for the requirement of the Rehabilitation of Taungoo Education College
(17th March 2013)



ပဲခူးတိုင်းဒေသကြီး တောင်ငူခရိုင်၊ တောင်ငူမြို့
တောင်ငူပညာရေးကောလိပ် တည်ဆောက်ရန် မြေနေရာရရှိရေးအတွက် တွေ့ဆုံခြင်းနှင့်
အစည်းအဝေး

- အစည်းအဝေးကျင်းပမည့်ရက် - (၁၇-၃-၂၀၁၃)(တနင်္ဂနွေနေ့)
- အစည်းအဝေးကျင်းပမည့်အချိန် - နံနက် (၁၀:၀၀)နာရီ
- အစည်းအဝေးကျင်းပမည့်နေရာ - စည်ခန်းမ၊ တောင်ငူပညာရေးကောလိပ်


အစည်းအဝေးတက်ရောက်သူများကိုပူးတွဲဖော်ပြပါမည်။

ဆွေးနွေးချက်/ဆုံးဖြတ်ချက်များ

- ၁။ မြေအဖွဲ့ခေါင်းဆောင် ဆိုက်ဥပမာတို့မှ တွေ့ဆုံဆွေးနွေးခြင်းနှင့် ပတ်သက်၍ ရှင်းလင်းဆွေးနွေးပါသည်။
- ၂။ ပညာရေးကောလိပ်အသစ် တည်ဆောက်ခြင်းသည် မြန်မာ့လူထုအတွက် မြို့အတွက် မော်ဒန်ကျင့်ကျေရွာတို့အတွက် အထူးအရေးအကြီးအကြောင်းပညာရေးရရှိပြီးနှင့် JCA တို့ ပူးပေါင်းကာတည်ဆောက်ပေးရန်ဖြစ်ကြောင်း၊ ဆင်ဆိပ်တင်စုတွင်ရှိ၍ ညောင်ကိုင်းရွာ မြစ်တစ်ဖက်ရွာ၊ ရွှမ်းရွာတို့ပတ်ဝန်းကျင်တွင်တိုင်းရင်းနှင့် ရင်းရွာရှိကလေးသူငယ် ရပ်ရွာသူ နှိုင်းထိမ်းထိမ်း အလုပ်အကိုင်များတိုးတက်စွဲမြဲပြီးလာနိုင်ကြောင်း၊ ၎င်းတို့အဖွဲ့အစည်းအနေဖြင့် မြေဆိုလျှာနေရာ ရေနေရာများယူခဲ့ကြောင်း၊ ရွှမ်းရွာဘုန်းကြီးကျောင်းသို့သွား၍ အသံဆူညံမှု တိုင်ခဲ့ကြောင်း၊ ၁၆-၃-၂၀၁၃ ရက်နေ့တွင် ရွှမ်းရွာဘုန်းကြီးကျောင်းသို့ ရပ်ရွာလူထုနှင့် ဆွေးနွေးခဲ့ကြောင်း၊ ရွှမ်းရွာဘုန်းကြီးကျောင်း၏ သမိုင်းအထောက်အထားများ မေးမြန်း ခဲ့ကြောင်း၊ ယခုဆိုမိလိန်းကိစ္စသည် စီးပွားရေးလုပ်ဆောင်ခြင်းမဟုတ်ဘဲ ပညာရေးကိုမြှင့်ရန် အတွက် ထုတ်ဆောင်ခြင်းဖြစ်ကြောင်း JCA မှ နှင့် ပုံသားထောက်ပံ့မည်ဖြစ်ပြီး ကျန်လိမ္မော် ပညာရေးရရှိပြီးနောက်သာ ဆက်လက်ပြုလုပ်ရမည်ဖြစ်ကြောင်း ရှင်းလင်းဆွေးနွေးပါသည်။
- ၃။ ပညာရေးဆိုင်ခန်းနှင့်ထုတ်လုပ်ရေးဦးစီးဌာန ညွှန်ကြားရေးမှူးမှသည် တောက်ပိတောက်တိုင် တင်ပြဆွေးနွေးပါသည်။
- ၄။ တောင်ငူပညာရေးကောလိပ်ဆို Model ၆၀ အဖြစ်ထောက်ပံ့ခြင်းဖြစ်ကြောင်း (၄) ခုစီသင်ပို့ပို့ ကောလိပ်အဖြစ်မြှင့်တင်ရန်ဖြစ်ကြောင်း JCA မှ အဆောက်အဦ (၈)ခုသာ ဆောက်လုပ်ပေးမှာ ဖြစ်ကြောင်း၊ ၂၀၁၄ခုနှစ် ၂၈၈၈ ခုသာ ထုတ်ခန်းတင်နိုင်မှာဖြစ်ကြောင်း၊ ပညာရေးဆိုင်ခန်း ကောလိပ်ဖြစ်ခဲ့ပါက အထက်တန်းကျောင်းပါ တွဲဖက်နှင့်လှမ်းနိုင်တာဖြစ်ကြောင်းရှင်းလင်း ဆွေးနွေးပါသည်။
- ၅။ ဒုတိယညွှန်ကြားရေးမှူး ဦးတိုးထောက်ပံ့မည် တောက်ပိတောက်တိုင်ရွင်းလင်း ဆွေးနွေး ပါသည်။

- ၆။ ICAမှ လာသော အမည်ပြုရည်ရွယ်ခဲ့ကြောင်း ကောင်း(၂၀)ခက်ကောင်းလှင်သာစာ ဆင်ခဲ့ကြောင်း သို့မဟုတ် အထွေ နိုင်ငံ၏ တက်ထုတ်လိုအပ်မှုတစ်ခုခု လျော့ချခဲ့ကြောင်း အဆောင်(၃)ဆောင်သာဆောက်ပေးတော့မည်ဖြစ်ကြောင်း တက်နိုင်သမျှသာပုံပိုးပေးတော့ မည်ဖြစ်ကြောင်း ယခုလောလောဆယ် သိန်း၃၅၀ကို ပ.စ.လ ဝန်ထမ်းသက်သာမှု စိုက်ထုတ်ပေးခြင်းဖြစ်ကြောင်း၊
 အထူး တစ်ခုလိုလိုလည်း အရာဝတ် ခေတ္တ တင်ပေးရမည်ဖြစ်ကြောင်း RSM၏ အရာဝတ် ခိုလှည့် ICA တိုတင်ပေးရမည်ဖြစ်ကြောင်း အကယ်၍မြေပိုင်ခွင့်မှာကားကန်ကွက်ခဲ့လျှင် ယခုစီမံကိန်းကို ရုပ်ပစ်ရတော့မှာဖြစ်ကြောင်း၊ မြေကိစ္စအဖွဲ့အထင်မရှိမှသာလျှင် တဆင်ပြေနိုင်မှာဖြစ်ကြောင်း၊
 သို့မဟုတ် Clear မြစ်မှသာ ဖြစ်နိုင်ကြောင်း ဆောင်ထင်ထားခဲ့သည့် ၎င်းကော ၎င်းကော ရခဲ့လျှင် မည်သည့်အတွက်ကြောင့်ကောလျှာသည်လူ အရာဝတ် တင်ရမည်ဖြစ်ကြောင်း ရှင်းလင်းဆွေးနွေးပါသည်။
- ၇။ မြို့မိမြို့မ ဦးမြင့်ညိုမှလည်း ကောက်ပါအတိုင်းတင်ပြဆွေးနွေးခဲ့ပါသည်။
- ၈။ ယခုပညာရေးကောလိပ်လှာထားမြေနေရာသည် ယခင်ဝယ်ယူထားသူများက တစ်ကော (၃)သိန်းခန့်သာပေးရကြောင်း၊ ယခုတစ်ကောလျှင်သိန်း(၂၀)ပေးဝယ်ထားကြောင်း၊ ၎င်းကောမြေညိုမြေညိုအောင် မြေညိုပေးမည်ဖြစ်ကြောင်း မြေအစားလိုချင်သူများက မြေအစားပေးစရာလည်း အဆင်သင့်ထားရှိပါကြောင်း၊ ယခုလှာထားမြေပေါ်ရှိ မြေပိုင်ခွင့် များကို မြေလယ်ပျံစွာ စာချုပ်ချုပ်ဆိုသည့် ဝန်ထုတ်ရန်လည်း ထားနေခဲ့ပါကြောင်း၊ ယခုလက်ရှိသီးနှံများရုပ်သိမ်းပြီးပါက နောက်ထပ်ထပ်မံခိုက်ရန် ထားပြန်ထားပြီး ဖြစ်ပါကြောင်း ရုပ်ရွာသူရွာနှင့် ပူးပေါင်းကာ တာပြန်ထားမှုရှိပါကြောင်း RSM အဖွဲ့အဖွဲ့ မြင့် မိမိတို့ကနေမိမိသည့်အတိုင်း ကြောင့်ကြောက်သောကံဖြစ် ခက်ထက်လုပ်ဆောင်နိုင် ပါကြောင်း ရှင်းလင်းဆွေးနွေးသွား ပါသည်။

မှတ်တမ်းတင်သူ


 (မြင့်သူ)
 ဦးစီးအရာရှိ
 ကောင်ပညာရေးကောလိပ်
 တောင်ငူမြို့။

Appendix 5.1.3

Participants List
(17th March 2013)

တောင်ငူပညာရေးကောလိပ်စီမံကိန်း
 (Taungoo Education College Project)
 အစည်းအဝေးတက်ရောက်သူများ
 ၆၄၇ - ဝဟာရေကောလိပ်
 ဝက် 10:30 - 12:00
 ရက်စွဲ 17.3.2013

စဉ်	အမည်	ဆုတ်လိပ်စာ / Phone	လက်မှတ်
၁	ဦးကျော်စွာ	ဇနီးမရှိ	
၂	ဦးအောင်စံ	ဦးအောင်စံ	
၃	ဦးအောင်	ဦးအောင် (ကောလိပ်)	
၄	ဦးအောင်	ဦးအောင်	
၅	ဦးအောင်	ဦးအောင်	
၆	ဦးအောင်	ဦးအောင်	
၇	ဦးအောင်	ဦးအောင်	
၈	ဦးအောင်	ဦးအောင်	
၉	ဦးအောင်	ဦးအောင်	
၁၀	ဦးအောင်	ဦးအောင်	
၁၁	ဦးအောင်	ဦးအောင်	
၁၂	ဦးအောင်	ဦးအောင်	
၁၃	ဦးအောင်	ဦးအောင်	
၁၄	ဦးအောင်	ဦးအောင်	
၁၅	ဦးအောင်	ဦးအောင်	
၁၆	ဦးအောင်	ဦးအောင်	
၁၇	ဦးအောင်	ဦးအောင်	
၁၈	ဦးအောင်	ဦးအောင်	
၁၉	ဦးအောင်	ဦးအောင်	
၂၀	ဦးအောင်	ဦးအောင်	

တောင်ငူပညာရေးကောလိပ်စီမံကိန်း
(Taungoo Education College Project)

အစဉ်အဆက်တက်ရောက်သူများ

နေ့စွဲ 17.3.2013

စဉ်	အမည်	မူရင်းအိမ်စာ / Phone	လက်မှတ်
၁၈၁	ဒေါ်ခင်ဦးဗွားဗွား	REM, Social 0949301881	On
၁၈၂	ဒေါ်ခင်စုစု	REM 09421103421	Xhile
၁၈၃	ဒေါ်ခင်စုစု (REM)	095192143	Aung
၁၈၄	ဒေါ်ခင်စုစု (REM)	09-485302677	Zin
၁၈၅	ဒေါ်ခင်စုစု	09 53503267	Cin
၁၈၆	ဒေါ်ခင်စုစု	09 53503267	Cin
၁၈၇	ဒေါ်ခင်စုစု	09 4200 250 61 ကောလိပ်စီမံကိန်း 0973 681 511 ကောလိပ်စီမံကိန်း	Ky Ky
၁၈၈	ဒေါ်ခင်စုစု	ကောလိပ်စီမံကိန်း	Ht
၁၈၉	ဒေါ်ခင်စုစု	ကောလိပ်စီမံကိန်း	Si
၁၉၀	ဒေါ်ခင်စုစု	ကောလိပ်စီမံကိန်း	F

Appendix 5.1.3

(English Translation)

Date of meeting: 17th Mar, 2013 (Sunday)
Time: 10:30 am
Venue: Meeting Room, Taungoo Education College

1. **Daw Khin Ohnar Htwe** from REM explained the objective of meeting and discussed as shown below;

- MOE and JICA will be constructing Education College in the proposed area located in Sin Seik village tract especially around the villages of Shan Ywar, Nyaung Gaing and Myin Sar Khwet. The new Education College could bring great beneficial to those who live in the surrounding villages, to the public, and to the township as well. Generally, the learning opportunity of the children will be higher, Knowledge level and job opportunities are also expected to be better in accordance with the better educational status of your children in near future. For our study team, REM, we have been studying for both physical and social conditions in and around the project area. We took the samples of soil and water, we monitored the prevailed condition of air quality and noise level as well. We also conducted a stakeholder meeting on 16th Mar, 2013 in Shan Ywar Monastery with the project affected people and the local communities around the project area. In this meeting we discussed openly on what we are doing and what is the opinion of the people towards the project. We also observed and collected information on the cultural aspects of the area from the presiding monks of the Shan Ywar Monastery. This project is not making a business but for promoting educational status of our country. JICA will support only one third of the total cost then MOE will be taking care for the rest of the expenditure in this regard.

2. **U San Lwin**, Director from the Department of Educational planning and Training under MOE discussed the following;

- The proposed Taungoo Education College is planned to make it as a model Education College in Myanmar as it is to be promoted to 4-year-degree course. JICA is only responsible for construction of 8 buildings. The construction activity could be able to start in June in 2014. Once it has become an Education Degree College, the High School will be incorporated in it.

3. **U Ko Lay Win**, Deputy Director of MOE also discussed as shown below;

- Previously, JICA had a plan to donate 100%. All of the 21 Education Collages in Myanmar were surveyed. However, due to the shortage of JICA budget, the plan was changed for budget reduction. JICA will be supporting for a certain portion of it finally. At present, a total amount of money, 350 Lakhs, has been approved from the Welfare Fund of MOE for land acquisition and compensation. The present study is to prepare a report in order to submit to JICA survey team for the whole condition of environmental and social issues as REM is being conducting. In case of that if all of the land owners are rejecting, the proposed project is going to be stopped. It could be fine, only when if there is no complaints and against from land acquisition problems. It should have 100% clearance in this regard. Previously, we proposed that the amount of land that we are acquiring was about 48 acres. However, if 41 acres of lands are only available at present, we have to submit the report to MOE and JICA for what are the constraints in land acquisition accordingly.

4. **U Myint Nyo**, the senior citizen and local coordinator, also discussed the followings;

- During a last few years back, the market price of the farmlands in the project area was only about 3 Lakh/acre, by which price most of the current land owners had purchased. The compensation value now MOE offers is at the rate of 20 Lakh/acre. We, as for the local coordinators, will try our best to fulfill the required amount of land acres, to reach until 48 acres. For those who would like to get replacement lands instead of cash compensation, we will be trying to get the replacement lands. Currently, some land plots were acquired and made the contracts with the land owners then we will proceed to get the registration certificate of the farmlands then will continue to change the farmlands to the La-Na – 39-type lands accordingly. We have requested to the farmers, with the help of the village administrative officer, that the compensated farmlands in the project site should not be cultivated anymore once the current crops are harvested. For that reason, REM survey team can make necessary investigation without any doubt at all.

Meeting Minutes recorded by
Myint Thu
Staff Officer
Taungoo Education College

Appendix 5.1.3

Participants List (English Translation)

17.3.2013

No.	Participants	Position	Sign
1	U San Lwin	Director, Ministry of Education	
2	U Ko Lay Lwin	Deputy Director, Ministry of Education	
3	U Soe Than	Ministry of Education	
4	U Kyi Sein	Ministry of Education	
5	U Tin Aung	Headmaster, Taungoo Township	
6	U Tin Win	Taungoo Town Elderly Person	
7	U Thaung Naing Oo	Land Record Department, Taungoo	
8	U Myint Lwin	Head, Sinseik Village Tract	
9	U Zaw Win	NyaungKaing Village	
10	U Soe Paing	NyaungKaing Village	
11	U Myint Naing	NyaungKaing Village	
12	U Magung Htwe	KMA Construction	
13	U Saw Htay	Taungoo Town Elderly Person	
14	U Myint Thu	Taungoo Town Elderly Person	
15	U Maung Mya	Taungoo Town Elderly Person	
16	U Myint Nyo	Taungoo Town Elderly Person	
17	U Ye Myint	Taungoo Town Elderly Person	
18	U Yin Htay	Taungoo Town Elderly Person	
19	U Ye Win	Taungoo Town Elderly Person	
20	Daw Kyu Kyu	Headmistress, Taungoo Education College	
21	U Ha Yan Bwe Pon	Officer, Taungoo Education College	
22	Daw Khin Pyone Wai	Taungoo Education College	
23	Daw Aye Chit	Taungoo Education College	
24	Daw Khin Ohmmar Htwe	REM Co.	
25	U Thu Ya Aung	REM Co.	
26	Daw Khatta Soe	REM Co.	
27	Daw Nan Thazin Oo	Taungoo Town Elderly Person	

Appendix 5.1.4

Questionnaire survey form in collecting general data of the Respondents from three villages around the project area; Nyaung Gaing, Shan Ywar, Myin Sar Kwat

Questionnaire ID.....
Date.....Month.....2013
Name of interviewer.....

Socio-Economics and Attitude Study “Taungoo Education College Project”

Japan International Cooperation Agency (JICA) is going to support the development for the education sector of Myanmar and recently conducting study for rehabilitation the education colleges in the Union of Myanmar. Present study concerns on opinion of the local people and stakeholders on the project, its possible impacts on environment and land settlement issues.

Interviewee name.....
Name of Village.....

Part 1 General Data of the Respondent

1. Sex

(1) Male (2) Female

2. Age.....years

3. Major Occupation

<input type="checkbox"/> (1) None	<input type="checkbox"/> (2) Gathering flora/ fauna in the forest
<input type="checkbox"/> (3) Farmer	<input type="checkbox"/> (4) Fisherman
<input type="checkbox"/> (5) Aqua-culture	<input type="checkbox"/> (6) Employee
<input type="checkbox"/> (7) Government Staff	<input type="checkbox"/> (8) Student
<input type="checkbox"/> (9) Other.....	

4. Household income per year.....Kyat/ year

5. Education Level

<input type="checkbox"/> (1) None	<input type="checkbox"/> (2) Primary school
<input type="checkbox"/> (3) Middle school	<input type="checkbox"/> (4) High school
<input type="checkbox"/> (5) Graduate	<input type="checkbox"/> (6) Post Graduate

Part 2 Household Information

6. Status in the household

(1) Household leader (2) Spouse (3) Relative
 (4) Resident (5) Other.....

7. Number of household member.....

Divided into.....males.....females

Part 3 Current Environmental Problem, Facility, and Social Problem

11. What is the current problem in your community?

Current Environmental Problem	Severity of Problem			
	None(1)	Low(2)	Moderate(3)	High(4)
Environmental Quality				
1. Solid Waste				
2. Wastewater				
3. Dust from construction				
4. Noise from construction				
5. Bad odor from waste				
Facility				
6. Shortage of drinking/ consumption water				
7. Shortage of electricity				

8. Inconvenient transportation				
9. Flood				
10. Solid waste management				
Social				
11. Safety in life and property				
12. Crime				
13. Drug				
14. Unemployment				
15. Migration				
16. Land Acquisition				
17. Other (identify.....)				

12. What do you do with the above problems?

- (1) Nothing (go to Part 4)
- (2) Inform government authority
- (3) Inform Community Leader
- (4) Other (specify).....

Part 4 Public Health and Health Status

14. What is your source of food? (multiple selection)

- (1) Self-Plantation
- (2) Natural resources/ fishery/ forest/ river
- (3) From Market, Identify Cost
- (4) Other (specify).....

15. What is the source of drinking water?

- (1) Tap water
- (2) Rain water
- (3) Groundwater well
- (4) River/ Canal
- (5) Bottle water
- (6) Other (specify).....

16. How do you manage wastewater from household?

- (1) Discharge to the ground
- (2) Discharge to public drainage system
- (3) Discharge to Public River/ canal
- (4) Discharge to septic tank
- (5) Discharge to the garden
- (6) Other (specify).....

17. What is your solid waste management?

- (1) Pile up outside the house
- (2) Landfill
- (3) Burning
- (4) Make fertilizer
- (5) Collecting and pending for government service
- (6) Throw away to Public River/ canal
- (7) Other (specify).....

18. Have you and your family members been sick and see the doctor?

- (1) No
- (2) Yes (multiple responses)
 - (1) Communicable disease such as Malaria
 - (2) Disease of digestive system
 - (3) Disease of respiratory system
 - (4) Heart and cardiovascular disease
 - (5) Skin disease and allergy
 - (6) Eye disease
 - (7) Ear disease
 - (8) Other(specify).....

19. How do you treat your sickness?

- (1) Nothing
- (2) Take herbal medicine
- (3) Buy medicine at drug store
- (4) See the doctor at the hospital
- (5) Other (specify).....

20. What is current status of public health services?

20.1 Physician / Nurse

- (1) Sufficient
- (2) Insufficient

20.2 Specialist Physician(Surgeon, Environmental and Occupational Medicine)

- (1) Sufficient
- (2) Insufficient

20.3 Location of public health station/ hospital

- (1) Near / Convenient
- (2) Far / Inconvenient

20.4 Medical Charge

- (1) Free
- (2) Government Support
- (3) Medical Charge

Part 5 Perception of the Project

21. Have you been informed about Taungoo Education College Project?

- (1) No (2) Yes, by (multiple responses)
 (1) Person i.e. community leaders, family members, friends, project staffs, government officers, etc.
 (2) Mass media i.e. newspaper, radio, TV
 (3) Press media i.e. leaflet, poster, newsletter
 (4) Activities i.e. meeting, seminar, group discussion
 (5) Internet, website
 (6) Other (specify).....

22. Do you think that the project should conduct public relation activities and inform more information about the project?

- (1) No (2) Yes, by (multiple responses)

 (1) Person i.e. community leaders, family members, friends, project staffs, government officers, etc.
 (2) Mass media i.e. newspaper, radio, TV
 (3) Press media i.e. leaflet, poster, newsletter
 (4) Activities i.e. meeting, seminar, group discussion
 (5) Internet, website
 (6) Other (specify).....

23. If you have any complain, what is the most convenient way for you to complain about the project?

- (1) Face-to-face with project staffs (2) Via community leaders
 (3) Telephone (4) Post
 (5) Internet (6) Other (specify).....

24. Do you feel worried about environmental impact during operational phase of the project?

1. No 2. Yes
If Yes, specify -----

25. Do you feel worried about social impact during operational phase of the project?

1. No
2. Yes, specify -----

26. Do you feel worried about health impact during operational phase of the project?

1. No
2. Yes, specify -----

27. What do you want the rural development in your Communities?

28. Do you have additional mitigation measures and any other suggestions to this project?

29. Opinion and Suggestion toward the project Development

30. Overall, do you agree with Taungoo Education College Project?

- (1) No
 (2) Yes
 (3) No comment

*****Thank you very much*****

Appendix 5.1.5

Respondents List of Questionnaire Survey
Nyaung Gaing Village
(15th March 2013)

တောင်ငူပညာရေးကောလိပ်စီမံကိန်း
(Taungoo Education College Project)
အစဉ်အဝေးတက်ရောက်သူများ

၅
နေ့စွဲ၊ 17.3.2013

စဉ်	အမည်	နေထိုင်လိပ်စာ	လက်မှတ်
၁.	ဦးဖေ၊ ကွမ်	ရွှေဘိုကုန်း	
၂.	ဒေါ်တင်စွ	"	ဒေါ်တင်စွ
၃.	ဒေါ်မွှေ	"	
၄။	ဒေါ်မြခင်	။	ဒေါ်မြခင်
၅။	ဦးသိန်းအောင်	။	
၆.	ဦးမင်းအောင်	။	
၇.	ဦးယု	"	U
၈။	ဦးတင်လွင်	"	
၉.	ဦးစိုးလွင်	"	
၁၀။	ဒေါ်စုစု	"	
၁၀။	ဒေါ်တင်အေး (၁)	"	ဒေါ်တင်အေး!
၁၂.	ဒေါ်တင်လှ	"	လှစင်
၁၃။	ဒေါ်တင်အေး (၂)	။	
၁၄.	ဒေါ်ကြည်သိန်း	"	
၁၅.	ဦးစိုးလွင်	"	
၁၆.	ဦးသိန်းစိန်	"	
၁၇.	ကျော်စွန်စိန်	။	
၁၈.	ဦးမောင်လှိုင်	"	
၁၉.	ဦးစိုးလွင်	"	
၂၀။	မမေမေစိန်	"	

Appendix 5.1.5

Respondents List
Nyaung Gaing Village
(English Translation)

15.3.2013

	Participants	Village	Sign
1	Daw Tin Nge	Nyaung Gaing	
2	Daw Mwe	Nyaung Gaing	
3	Daw Mya Khin	Nyaung Gaing	
4	U Thine Aung	Nyaung Gaing	
5	U Myint Zaw	Nyaung Gaing	
6	U Yu	Nyaung Gaing	
7	U Tint Lwin	Nyaung Gaing	
8	U Soe Lwin	Nyaung Gaing	
9	Daw Myint	Nyaung Gaing	
10	Kaw Tin Aye 1	Nyaung Gaing	
11	Daw Tin Hla	Nyaung Gaing	
12	Daw Tin Aye2	Nyaung Gaing	
13	Daw Kyi Than	Nyaung Gaing	
14	U Soe Paing	Nyaung Gaing	
15	U Than Naing	Nyaung Gaing	
16	U Kaw Mon Khaing	Nyaung Gaing	
17	U Maung Pu	Nyaung Gaing	
18	U Myo Lwin	Nyaung Gaing	
19	Ma Maw Maw Win	Nyaung Gaing	
20	U Myint Lwin	Nyaung Gaing	

Appendix 5.1.6

Respondents List of Questionnaire Survey
Shan Ywar Village
(16th March 2013)

တောင်ငူပညာရေးကောလိပ်စီမံကိန်း
 (Taungoo Education College Project)
 အစည်းအဝေးတက်ရောက်သူများ

နေ့စွဲ: 16.3.2013 10:00A
1:30PM

စဉ်	အမည်	နေရပ်လိပ်စာ	လက်မှတ်
၁.	ဒေါ်ကျော်စင်	ရွာကြီး	
၂.	ဒေါ်စင်စွန်	"	
၃.	ဒေါ်စင်စင်ညွန့်	"	
၄.	ဒေါ်အိန်	"	
၅.	ဒေါ်အိန်ကျော်	"	
၆.	ဒေါ်စင်ညွန့်	"	
၇.	ဒေါ်ပုစိန်	"	
၈.	ဒေါ်အောင်	"	
၉.	ဒေါ်အိန်	"	
၁၀.	ဒေါ်အိန်ကျော်	"	
၁၁.	ဒေါ်အိန်	"	
၁၂.	ဒေါ်အိန်	"	
၁၃.	ဒေါ်အိန်	"	
၁၄.	ဒေါ်အိန်	"	စာ:
၁၅.	ဒေါ်အိန်	"	ကျ.
၁၆.	ဒေါ်အိန်	"	Chali
၁၇.	ဒေါ်အိန်	"	ဝေသာစ
၁၈.	ဒေါ်အိန်	"	စာအုပ်စာအုပ်
၁၉.	ဒေါ်အိန်	"	စာအုပ်
၂၀.	ဒေါ်အိန်	"	စာအုပ်

Appendix 5.1.6

Respondents List
Shan Ywar Village
(English Translation)

16.3.2013 10:00 AM

	Participants	Village	Sign
1	U Kyaw Tint	Shan Ywar	
2	U Tint Lwin	Shan Ywar	
3	U Tin Win Naing	Shan Ywar	
4	U Nyunt	Shan Ywar	
5	U Thein Tan	Shan Ywar	
6	U Myint Naing	Shan Ywar	
7	U Hla Myint	Shan Ywar	
8	Daw Nu Khin	Shan Ywar	
9	U Ko Lay	Shan Ywar	
10	Daw Cherry San	Shan Ywar	
11	Daw Khin Saw	Shan Ywar	
12	U Zaw Win	Shan Ywar	
13	Daw Than Than New	Shan Ywar	
14	Daw Than Aye	Shan Ywar	
15	U Myat Naing	Shan Ywar	
16	Daw Shal Li San	Shan Ywar	
17	Daw Thaug	Shan Ywar	
18	Daw Maw Li Than	Shan Ywar	
19	Daw Khin Saw	Shan Ywar	
20	Daw Nyunt Yin	Shan Ywar	

Appendix 5.1.7

Respondents List of Questionnaire Survey
Myin Sa Kwet Village
(16th March 2013)

တောင်ငူပညာရေးကောလိပ်စီမံကိန်း
 (Taungoo Education College Project)
 အစည်းအဝေးတက်ရောက်သူများ

16.3.2013
 နေ့စဉ် 17.3.2013 10:00 AM
 1:00 PM AM

စဉ်	အမည်	နေရပ်လိပ်စာ	လက်မှတ်
၁။	ကိုကျော်သွင်းဦး	မြင့်ပကျပ်	
၂။	ဒေါ်ဝင်းကြည်	"	
၃။	ကိုသုတေဇ်မောင်	"	
၄။	ကိုနိုင်လင်းမောင်	"	
၅။	ကိုဝင်းသိန်း	"	
၆။	ဦးကျော်ဖြူ	"	
၇။	ကိုနိုင်စော	"	
၈။	ကိုစောစော	"	
၉။	ကိုစောစိန်	"	
၁၀။	သက်ပွင့်	"	
၁၁။	ဒေါ်ဖြူမာမာ	"	
၁၂။	ကိုစင်စင်	"	
၁၃။	ဦးစင်စင်	"	
၁၄။	ဦးဖြူမာမာ	"	
၁၅။	ဦးစင်စင်	"	
၁၆။	မအေးမာမာ	"	
၁၇။	မအေးမာမာ	"	
၁၈။	မအေးမာမာ	"	
၁၉။	မအေးမာမာ	"	
၂၀။	မအေးမာမာ	"	

Appendix 5.1.7

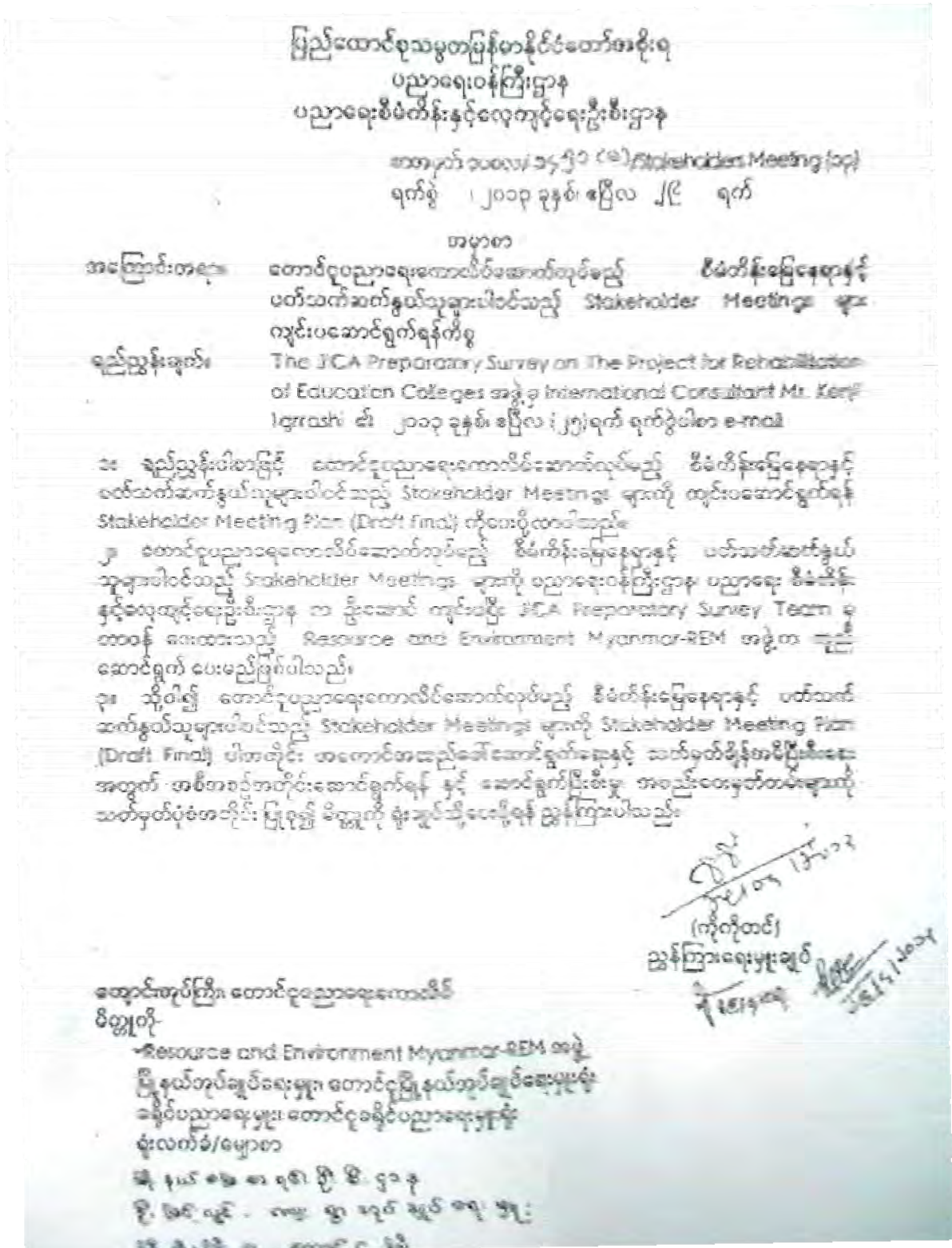
Respondents List Myin Sa Kwet Village (English Translation)

16.3.2013 10:00AM-1:00PM

	Participants	Village	Sign
1	U Kyaw Lwin Oo	Myin Sa Kwet	
2	Daw Win Kyi	Myin Sa Kwet	
3	U Yu Maung Maung	Myin Sa Kwet	
4	U Naing Lin Aung	Myin Sa Kwet	
5	U Win Bo	Myin Sa Kwet	
6	U Kyaw Myaing	Myin Sa Kwet	
7	U Naing Aye	Myin Sa Kwet	
8	U Thaug Htay	Myin Sa Kwet	
9	Ko Zaw Moe	Myin Sa Kwet	
10	Daw Myint Myint Khine	Myin Sa Kwet	
11	U Tin Oo	Myin Sa Kwet	
12	U Tin Ngwe	Myin Sa Kwet	
13	U Myint Lwin	Myin Sa Kwet	
14	U Than Tun	Myin Sa Kwet	
15	Daw Aye Mar	Myin Sa Kwet	
16	Daw Moe Moe Khine	Myin Sa Kwet	
17	Daw Khin Mar Nyo	Myin Sa Kwet	
18	Ma Than Hla	Myin Sa Kwet	
19	U Thein Naing	Myin Sa Kwet	
20	U Tin Ngwe	Myin Sa Kwet	

Appendix 5.2.1

Instruction Letter of MOE to commence the Stakeholder Meetings



Appendix 5.2.1

(English Translation)

Government of the Republic of the Union of Myanmar
Ministry of Education
Department of Education Planning and Training

No. 1 Pa Sa La/1451(Sa)/Stakeholders Meeting (13)

Date: 2013 April 29

Subject: Instruction Stakeholder Meetings for Land Issue on Rehabilitation Programme of Taungoo Education College

Reference: Email dated 25 April 2013 by Mr. Kenji Igarashi, the International Consultant, the JICA Preparatory Survey on The Project for Rehabilitation of Education Colleges

1. According to email/letter referred, Stakeholder Meeting Plan (Draft Final) was received for the land issue for construction of Taungoo Education College
2. Stakeholder Meetings will be held by leading role of Ministry of Education, Department of Education Planning and Training, and the Resource and Environment Myanmar-REM team will help as assigned by JICA Preparatory Survey Team.
3. Therefore, Stakeholder Meetings will be conducted as per guidelines in Stakeholder Meeting Plan (Draft Final) and Completion Records, Meeting Minutes and other documents have to be prepared as per guided formats, and to submit copy to department accordingly.

Ko Ko Tin
Director General

To:
Headmaster

Copy to:
Resource and Environment Myanmar – REM team
Township Administrative Officer, Township Administration Office, Taungoo
District Education Officer, Department of Education, Taungoo District

Office Copy
Township Land Record Department
U Myint Lwin, Village Tract Administrative Officer
Senior Citizens, Taungoo Town

Appendix 5.2.2

Meeting minutes of the Primary Stakeholder Meeting
(Recorded by Taungoo Education College)
(20th May 2013)

တောင်ငူပညာရေးကောလိပ်တည်ဆောက်ရေးပထမအဆင့် လူထုအစည်းအဝေး

နေ့ရက် - ၂၀-၅-၂၀၁၃ (တနင်္လာနေ့)

အချိန် - နေ့လယ် (၂ : ၀၀)နာရီ

နေရာ - ပညာရေးကောလိပ်၊ စည်စန်းမ

အစည်းအဝေးတက်ရောက်သူများစာရင်းကို မှူးတွဲတင်ပြထားပါသည်။

REM အဖွဲ့ခေါင်းဆောင်မှ အစည်းအဝေးကို အစီအစဉ်သုံးရပ်ဖြင့် ကျင်းပပြုလုပ်မည်ဖြစ်ကြောင်း ဦးစွာတင်ပြပါသည်။

(၁) ရည်ရွယ်ချက်နှင့် ပါဝင်ဖွဲ့စည်းပုံ (အကျဉ်းချုပ်)

(၂) ပတ်ဝန်းကျင်နှင့် လူမှုဆက်ဆံရေး

(၃) ဓားပြန်းဆွေးနွေးခြင်း၊ အကြံဉာဏ်ရယူခြင်း တို့ဖြစ်ကြောင်း ပဏာမပြောကြားပါသည်။

ပညာရေးစီမံကိန်းနှင့် ခေတ်မီ ဝေဖန်ခြင်း၊ ဝေဖန်ခြင်းကြားရေးမှူး ဦးစန်းလွင်မှ အောက်ပါအတိုင်း တင်ပြဆွေးနွေးပါသည်။

အခြေခံပညာဦးစီးဌာနသည် ပညာရေး၏ ဝင်ရောက်မှုဖြစ်ကြောင်း အခြေခံပညာပိုင်မြို့သော ပညာရေးစနစ်ဖွဲ့စည်းခြင်း၊ ဆရာအတတ်ပညာအရည်အချင်းလည်းကောင်း၊ ဝန်ထမ်းရရှိမှုလုံခြုံရေး၊ ပညာရေး စနစ်ဖွဲ့စည်းမှု အနှစ်(၂၀)စီမံကိန်းရေးဆွဲထားကြောင်း၊ ယင်းစီမံကိန်းထဲတွင် ပညာရေးကောလိပ် တောင်းဆိုထားမှုများ တည်ဆောက်ရန်ပါဝင်ကြောင်း။

အဓိကအနေဖြင့် ဆရာစိတ်ဓာတ်ပြုပြင်ရန် လိုအပ်ကြောင်း၊ ဆရာအတတ်ပညာကို ယခုလက်ရှိ (၄)လတန်းဖြတ် ပို့ချလျက်ရှိရာတွင် ဆရာ၊ဆရာမ များ အဖို့နားရစ်မရှိကြောင်း၊ ထို့အတွက် သင်တန်း (၃)ခုအစားသင်တန်း(၂)ခုသို့ ပြောင်းရန်လိုအပ်ကြောင်း။

ဆရာများထပ်တိုးခေါ်ရန်လိုအပ်ကြောင်း၊ မြန်မာနိုင်ငံ၏ အလယ်ပိုင်းဒေသရှိသော တောင်ငူ ကို Model EC အဖြစ်ရွေးချယ်ခြင်းဖြစ်ကြောင်း၊ မြို့ပိတ်များ အကူအညီယူ၍ တိုင်တိုင်ပင်ပင် ညှိညှိနှိုင်းနှိုင်း လုပ်ဆောင်နေကြောင်း၊ REM အဖွဲ့အကူအညီ၊ JICA အဖွဲ့အကူအညီတို့ဖြင့် ယခု စီမံကိန်းကြီးကို အကောင်အထည်ဖော်ရန် ကြိုးပမ်းနေကြောင်း၊ သင်တန်းသား/သင်တန်းသူများ လက်တွေ့သင်ကြားစာအုပ်များသို့ လိုက်လံ၍စစ်ဆေးရန်လွယ်ကူကြောင်း-အခြေခံပညာကို

ရန်ကင်းရန်ကင်းကြောင်း (၅ - ၄ - ၂) ပုံစံရှိရာမှ (၅ - ၄ - ၃) ပုံစံ (၆ - ၃ - ၃) ပုံစံသို့ အကောင်အထည်ဖော်ရန်ရှိကြောင်း၊ အောက်မြန်မာပြည်ရှိ EC (၄) ကျောင်းကို အဆောင်များတိုးချဲ့ နေကြောင်း-

အခြေခံကျောင်းများ တိုးချဲ့ရန် ရန်ကင်းကြောင်း- ဆရာအင်အား တိုးချဲ့ရန်ရှိကြောင်း-ယခု ပညာရေး ကောလိပ်ကို အင်အား (၁၀၀၀) နေ့ နည်းပန်းထားကြောင်း ကျား(၃၀၀) မ(၇၀၀) မှန်းထားကြောင်း၊ အရေးကြီးသည့် အားကစားကွင်း၊ မီတာ(၄၀၀)ရှိကွင်းများ လိုအပ်ကြောင်း၊ ကမ္ဘာ့ဘဏ်မှရရှိသော ထားသောစည်းမျဉ်း စည်းကမ်းများအတိုင်း REM အဖွဲ့မှ Data များကောက်ယူနေကြောင်း JICAမှ OK ဟု မီးစိမ်းပြလိုက်လျှင် Japanနိုင်ငံမှ OK ဖြစ်မည်၊ December အထိ စီမံကိန်းကိစ္စ တင်/ရုံ လုပ်နေ ရမည်ဖြစ်ကြောင်း -Teaching Aids များ၊ စာရင်းကောက်ယူထားပြီး ဖြစ်ကြောင်း၊ ယမန်နှစ် October လက ကွင်းဆင်းစစ်ဆေးခဲ့သောနေရာသည် ၈၀(၇၀) နေ့ ရှိကြောင်း သို့သော်လည်း မြို့နံ့ ဝေး ဖြစ်၊ လုံခြုံစိတ်ရမှုများအားနည်းခြင်း၊ သွေးလာရစေရုံဖြစ်ကြောင်း ပယ်ဖျက်ရကြောင်း

လက်ရှိရေးချယ်ထားသောနေရာသည် သွားလာရေး အဆင်ပြေမှုရှိလုံခြုံမှုရှိကြောင်း လျှပ်စစ် သွယ်တန်းမှု အဆင်ပြေကြောင်း - ပတ်ဝန်းကျင်ကျေးရွာများရှိသဖြင့် ဆရာ/ဆရာမများ သင်ကြားမှု လေ့ကျင့် ရန် - လေ့ကျင့် ရေးအလယ်တန်း ကျောင်းအတွက် ကျောင်းသားများရရှိင်၊ ရှိနိုင်ကြောင်း လိုအပ်သော မြေဧကလည်းအပြည့် ရှိကြောင်း၊ ဧရိယာအနေဖြင့် (၂၀၂၃၀၀) ဧကရန်၊ မီတာရှိကြောင်း သင်တန်းသား (၁၀၀၀) ပိုရသည့် ဆရာ/ဆရာမ (၁၉၁၂) လေ့ကျင့် ရေးဆရာမ (၈၀) လေ့ကျင့် ရေး ကျောင်းသား/ကျောင်းသူ (၇၂၀) နေ့တိုင်ခွင့် မီသားစုဝင်ပေါင်း (၁၀၀)ရှိကြောင်း

အဆောက်အဦး အနေဖြင့် အုပ်ချုပ်ရေး အဆောက်အအုံ (၂)ထပ် စုဝေး နန်းမ (၁)ထပ် စားသောက်ခန်းမပညာအိမ်ဆောင်လေ့ကျင့် ရေးကျောင်း ဆရာ/ဆရာမ နေအိမ်တို့သည် (၁)ထပ်ဆောင် ဖြစ်ကြောင်း နေအိမ်ပေါင်း အခန်း(၂၀၀)ခန့် ရှိကြောင်း အမျိုးအစားအနေဖြင့် သံမဏိ ကောင် / တန်း အမိုးတို့ပါပင်ကာ ကွန်ကရစ်အဆောက်အအုံဖြစ်ကြောင်း

မြန်မာအစိုးရတက်မှ ဝန်ထမ်းအိမ်ရာများ၊ လေ့ကျင့် ရေးကျောင်း၊ မြေစည်းမျိုး၊ မြေတန် တိုးတို့ မြေစွမ်းပေး၊ တည်ဆောက်ပေးရမည်ဖြစ်ကြောင်း မြေယာလျှော်ကြေးပေးမှု နည်းစနစ်များလည်း ရထားပြီးဖြစ်ကြောင်း ပညာရေးဝန်ကြီးဌာန အနေဖြင့် ပတ်ဝန်းကျင် ကျေးရွာများအပေါ် ပညာရေး တိုးတက်မြှင့်တင်ရေး သာသနာရေး ကျန်းမာရေး အသိအမြင်များပေးဖို့ အသင့် ရှိကြောင်း မြေကြားခံပါသည်။

REM အဖွဲ့အဖွဲ့ခေါင်းဆောင် ဒေါ်ခင်ဥမာလွေးမှ ပညာရေးကောလိပ်သစ် တည်ဆောက်ရေး အစီအစဉ် (၂)ကို ဆောင်ပါအတိုင်း ရှင်းလင်းဆွေးနွေးတင်ပြ အပ်ပါသည်။

ကောင်စုပညာရေးကောလိပ်သစ် တည်ဆောက်မှုအပေါ် ကူညီပံ့ပိုးမည့် သူများသည် ပညာရေး ဝန်ကြီးဌာန၊ ကောင်စုမြို့နယ်ရှိ ဌာနဆိုင်ရာများ၊ JICA နှင့် မြန်မာ့သယံဇာတနှင့် ပတ် ဝန်းကျင် (REM) ကောင်စုမြို့မမြို့မမြို့များ ပတ်ဝန်းကျင်ကျေးရွာများမှ ပြည်သူလူထုများဖြစ်ကြောင်း၊ မိမိတို့ REM အဖွဲ့သည် ပတ်ဝန်းကျင်နှင့် လူမှုစီးပွားလေ့လာသူများဖြစ်ကြောင်း၊ မိမိတို့၏ လုပ်ငန်းတာဝန်သည် တည်ဆောက်မည့် နေရာတွင် မြေအိမ်လွှာလေ့လာခြင်း၊ ရေဖျန်းမှုကောက်ယူခြင်း၊ ရှမ်းရွာတန်းတော်ကြီး ကျောင်းတွင် အသံစုစည်းမှု တိုင်းတာခြင်း၊ ဂေဟစနစ်လေ့လာခြင်း၊ ရှမ်းရွာတန်းတော်ကြီးကျောင်းတွင် ရှမ်းရွာ ၊ ဆောင်ကိုင်းရွာ၊ မြင်းစားရွက်ရွာသူ / သားများနှင့် တွေ့ဆုံဆွေးနွေးခြင်း၊ မြင်းစားရွက်ရွာတွင် ရွာသူ / သားများအား

လူမှုစီးပွားရေးအခြေအနေနှင့် စီမံကိန်းအပေါ် သဘောထားများ မေးမြန်းခြင်း၊ ရှမ်းရွာဘုန်းတော်ကြီးကျောင်း၏ သမိုင်းအထောက်အထားများကို မေးမြန်းခြင်းတို့ ပြုလုပ်ခဲ့ကြောင်း၊ ကျောင်းဆောက်လုပ်ရန် ဝယ်ယူထားသည့် မြေအတွင်းပါဝင်သည့် သံယာဉ်ကိစ္စ ဖယ်ရှားရန် ဘုန်းတော်ကြီး၏သဘောတူညီမှုရရှိ ထားပြီးဖြစ်ကြောင်း ရှမ်းရွာဘုန်းတော်ကြီး ဒေါက်လုပ်ထားသည့် လူသွားလမ်း (၂)လမ်းပိတ်ဆို့မည့် ကိစ္စလည်း မြေကည်အောင် ညှိနှိုင်းထားပြီးဖြစ်ကြောင်း၊ စီမံကိန်း မြေ စရိယာ အတွင်းပါဝင်သည့် မြေ ဝိုင်းရှင်များနှင့် ညှိနှိုင်းထားသောမြေယာဝိုင်းရှင်များ၊ ဝယ်ယူပြီး စကပိုင်ရှင်များနှင့် ညှိနှိုင်းရန်ကျန်ရှိသော ဦးကြည်သိန်း(၀.၆၇)ဧက၊ ဒေါ်စန်းစန်းအေး (၄.၂၂)ဧက၊ ဦးအောင်နိုင်စိုး (၁.၁၂)ဧက တို့ကျန်ရှိနေသေးကြောင်း၊ ယခုတက်ရောက်လာသည့် ဝယ်ယူရှင်များ ကိုယ်စားလှယ် များအနေဖြင့် ရောင်းချနိုင်က ရောင်းချမရနိုင်ကြောင်း ငွေနုဆိုင်ရာများက မည်သို့ မည်ပုံညှိနှိုင်း ရေးနိုင်ပါမည် လဲဟုပြောကြားသွားပါသည်။

မြို့မမြို့စ ဦးမြင့် ညိုမှ အောက်ပါအတိုင်းဆွေးနွေးတင်ပြသွားပါသည်။

ယခင်ရွေးချယ်ထားသော ကျောင်းမြေနေရာသည် လွန်စွာ စေတနာထက် ဖဲစာသိုသက်သို့ဖြစ်နေ ကြောင်း၊ မီးသုတ်ရန်ခက်ခဲကြောင်း လုံခြုံမှုအားနည်းကြောင်း၊ ယခုနေရာသည်ယခင်ကတစ်စက သုံးသိန်းတောင်များကြောင်း၊ ပညာရေးဝန်ထမ်း(ကြီး ဦးအေးကြူနှင့် ညှိနှိုင်း၍ တစ်စကသိန်း(၂၀)ပေး မည်ဟု ညှိနှိုင်းခဲ့ကြောင်း၊ (၄၀)ကျော်ပြေးဖြစ် ၍ (၅၀)ဧကကိုမမြောင်းစေကြောင်း မိမိတို့အနေဖြင့် မြေအစား သားနိုင်မည် နေရာကို လိုက်လံစုံစမ်းနေကြောင်း ကျန်(၁၀)ဧကကို တတ်နိုင်သမျှ တက်ရောက်လာသူများက ရှုထောင့်ပေးစေလိုကြောင်း မြေပြကြားသွားပါသည်။

ဒေါ်စန်းစန်းအေး၏ ကိုယ်စားလှယ်မှ မိမိတို့သည် (၄.၂၂) ဧကပိုင်ဆိုင်ကြောင်း၊ တစ်စကသိန်း (၄၀)ခန့် နှင့် ဝယ်ထားရကြောင်း၊ ထိုအတွက်ရောင်းချနိုင်မည်မဟုတ်ဘဲ ၎င်းနှင့် အလားတူမြေ အစားထိုး ပေးစေချင်ကြောင်း ပြောကြားသွားပါသည်။

မြို့နယ်အုပ်ချုပ်ရေးမှူးမှလည်း မြေကိစ္စများကိုရှင်းလင်းပြောကြားသွားပြီး ကိုယ်စားလှယ်များ ကိုလည်း မြေဝိုင်းရှင်များအားသဘောပေါက်အောင် ပြန်လည်ပြောကြားစေလိုကြောင်း ပြောပါသည်။ ယခုကျောင်းနေရာသည် ယခင်အ.ထ.က (၃)ကိုသိမ်းထားသောကျောင်းဖြစ်ကြောင်း၊ ပညာရေး ကောလိပ်အဆစ်တည်ဆောက်ပြီးပါက ယခင်နာမည် အ.ထ.က (၃)သို့ ပြန်လည် ပေးမည် ဖြစ်ကြောင်း တောင်းလဲတောင်းခံထား ကြောင်း ပညာရေးဌာနမှရှင်းလင်းပြောကြားသွားပါသည်။

ပညာရေးကိစ္စ နယ် ပယ်ဖွံ့ဖြိုးရေးကိစ္စဖြစ်၍ အားလုံးဝိုင်းဝန်းဆောင်ရွက်မှုကြပေကြောင်း ပြောကြားရင်း အစည်းအဝေးကို (၃ : ၄၅) နာရီတွင် ဖွဲ့စည်းပါသည်။

မှတ်တမ်းတင်သူ

ဦးမြင့်သူ
(ဦးစီးအရာရှိ)၊
ကောလိပ်ပညာရေးကောလိပ်

Appendix 5.2.2

Participant list of the Primary Stakeholder Meeting
(20th May 2013)

PARTICIPANTS LIST				
Meeting Title: ပထမဦးစွာ ပညာရေး၊ ကောလိပ်စာပို့ဆောင်ရေး၊ ပထမဆင့် အစည်းအဝေး (၁)				
Venue: ပညာရေး ကောလိပ်			Date: 20-5-2013	Time: PM 2:00
No.	Name	Organization	Position	Signature
1	U San Lwin	DEPT, MOE	Director	
2	ဦးစော	ဆန်ပဲခူးခရိုင်အဖွဲ့	ဥက္ကဋ္ဌ	
3	ဦးစိုးကျော်	ကိစ္စ	အုပ်ချုပ်ရေးမှူး	
4	ဦးစိုးဦး	ဆန်ပဲခူး	ဥက္ကဋ္ဌ	
5	ဦးစိုးဦး	ဆန်ပဲခူး	"	
6	ဦးစော	"	"	
7	ဦးစော	"	"	
8	ဦးစော	"	"	
9	ဦးစော	K.M.A	"	
10	ဦးစော	ဦးစော	"	
11	ဦးစော	ဦးစော	"	
12	ဦးစော	ဦးစော	"	
13	ဦးစော	ဦးစော	"	
14	ဦးစော	ဦးစော	"	
15	ဦးစော	ဦးစော	"	
16	ဦးစော	ဦးစော	"	
17	ဦးစော	ဦးစော	"	
18	ဦးစော	ဦးစော	"	
19	ဦးစော	ဦးစော	"	
20	ဦးစော	ဦးစော	"	
21	ဦးစော	ဦးစော	"	
22	ဦးစော	ဦးစော	"	
23	ဦးစော	ဦးစော	"	
24	ဦးစော	ဦးစော	"	

PARTICIPANTS LIST

Meeting Title				
Venue			Date: - -	Time:
No	Name	Organization	Position	Signature
25	Daw Khin Aungmar Hlaing	REAC	consultant	<i>[Signature]</i>
26	Dr. Kyaw Lin	"	11 PM	<i>[Signature]</i>
27	Daw Khin Aungmar	"		<i>[Signature]</i>
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Appendix 5.2.2

Meeting minutes of the Primary Stakeholder Meeting (English Translation)

Date : 20-05-2013 (Monday)
Time : 14:00 PM
Place : Meeting Room, Taungoo Education College, Taungoo

The Participant List is attached here in.

Team Leader of REM, Ms. Khin Ohnmar Htwe, announced the following agenda.

1. Project's purpose and Frames (brief outline of the project)
2. Environmental and social consideration studies of REM
3. Opinions, Complaints, Comments and Questions from the Stake holders.

1. U San Lwin, Director of the Department of Educational planning and training presented and discuss as follow;

- Department of basic education is the fundamental stage of education system, which is depend on the basic education's firmness. So, the quality of teachers training has to be firm. We are planned 20 years project to strong the education system. We need to recruit new teachers. Then, we have to establish new education college. Including that project, Taungoo is the place where to build the model EC. Now we are trying to implement this project by the supports of JICA and REM.
- The plan of this college is to attend almost 1000 students who are going to become teachers, out of which about 300 are males and 700 are females. It needs play grounds and 400 meter fields. REM team collected the data according to World Bank's rules and regulations. This project will still check to process until December. We already collect the teaching aids data. Survey area from Last year October was about 70 Acres. But that's rejected because it's too far from the town, not safety and inconvenience.
- Current chosen place is more convenient, safe, and easy to connect the electricity and very good environment. That place also has the surrounding villages and it will have the potential of students to attend Middle School to train the training teachers. It have the area of (202300) square meter and it is enough space to build an education college.
- The proposed plan have two story building for Administration, one story building of Assembly hall, Dining hall, Hostels and trainers' accommodations . The trainers' accommodations are one story buildings and it will be up to 200 buildings. All of them are reinforce-concrete buildings. From the Myanmar government side, staffs' housing, Training school, fences and cost of land will support for this project. The proper compensation system are utilized for land acquisition for this project. For conclusion, on behalf of education ministry, we are ready to support the upgrading education, religious and health for the surrounding villages.

2. REM Team leader Daw Khin Ohnmar Htwe presented and discussed the agenda (2) as follows;

- The organizations which will support the education college are Ministry of Education, Government Departments of Taungoo Township, JICA, and REM, the Senior citizens of Taungoo and people from the surrounding villages. We, REM Team is the Environmental and Social consultant. Our Job scope is collecting Soil samples, water samples, measuring noise and air quality to understand the existing environmental condition in and around the project site. In addition to that we made extensive discussions with the villagers of Shan Ywar, Nyaung Gaing, Myin Sar Khwet Villages, for getting the opinions related to the project and surveying upon the historical background of Shan Ywar village monastery.
- We, REM on behalf of MOE, already had the agreement on demolition of the Tombs of the late monks (late monks of the presiding monks of Shan Ywar monastery). The Demolition of

two private path ways in the project area was discussed and already got an agreement with the people from nearby villages and the presiding monk of Shan Ywar village.

- In the project area, most of the lands are negotiated and acquired. The following points on the land acquisitions in the project area were briefly explained to the participants showing the presentation.
 - Selection process of the candidate project land
 - Necessity of the Land acquisition
 - Compensation methods
 - Compensation and the acquisition schedules
- In addition, on behalf of MOE, we (REM) explained to the participants the land acquisitions for some of the land plots are still under negotiation between some farmers who have rights for farming in the relevant lands and MOE, e.g., U Kyi Thein (0.67 acres), Daw San San Aye (4.22 acres) and U Aung Naing Soe (1.12 acres). For the land acquisition the following opinions were expressed from the participants.

2.1 U Myint Nyo, the senior citizen of Taungoo, presented and discussed as follows;

- The place that MOE has chosen last time was very far from town, difficult to connect the electricity and very weak in safety point of view. So, we had negotiated with deputy minister of Education, U Aye Kyu, and set up the price as 20 Lakh per acre. We now received 40 acres. We need a little more acre to cover the entire proposed project site. So, we are looking for the replacement lands. Please help us to fulfill the rest acres for our project.

2.2 The representative of Daw San San Aye

- Said that she owns 4.22 acres that was bought at the rate of 40 lakh per acre. So she does not want to sell it and wants to get the replacement land which should be located along side of the Taungoo Road and closer to the east.

2.3 Township General Administrative Officer

- Presented about the lands and asked the representatives to explain the land owner.
- The existing education college was previously the place of Basic Education High School No.3 (B.E.H.S 3) for that reason when the new Education College is finished, we will give back this place to B.E.H.S (3). This is for the development of education, please help and cooperate with us till to an end.

3. Opinions, Complaints, Comments and Questions from the Stake holders.

- Apart from the land acquisition issues as discussed earlier by the participants, there was no comments and objections regarding to the demolition of the tombs and two public accessed roads in the project area as Ms. Ohnmar has explained earlier in the meeting.
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The meeting accomplished at 15:45 Hour.

Recorded by U Myint Thu

(Staff Officer), Taungoo Education College

Appendix 5.2.2

Participants List of the Primary Stakeholder Meeting (English Translation)

Meeting Title- Rehabilitation of Taungoo Education College (Primary Stakeholder Meeting)				
Venue: Taungoo Education College			Date: 20th May, 2013	Time: 2:00 pm
No.	Name	Organization	Position	Signature
1	U San Lwin	DEPT, MOE	Director	
2	U San Kyaw	Department of Basic Education	District Education Officer	
3	U Myint Lwin	Kan Hla village	Head of Sin Seik village tract administration	
4	U Soe Naing	Htan Kone village	Farmer/landowner	
5	U Soe Paing	Nyaung Gaing village	Farmer/landowner	Son of U Tin Aung
6	U Maung Aye	Nyaung Gaing village	Farmer/landowner	
7	Daw Nu Khin	Shan Ywar	Farmer/landowner	
8	U Myint Naing	Shan Ywar	Farmer/landowner	
9	U Maung Htwe	K.M.A	Farmer/landowner	On behalf of U Khin Maung Aye
10	U Maung Mya	Senior Citizen/coordinator	Businessman	
11	U Aye Kyaw	Township Development Committee	Assistant Director	
12	Ma Myint Myint Htay	Yangon	Landowner	On behalf of Daw San San Aye
13	U Thein Zaw Win	Township General Administrative Department	Township General Administrative Officer	
14	U Myint Thu	Senior Citizen/coordinator	Businessman	
15	U Tin Win	Senior Citizen/coordinator	Businessman	
16	U Hlan pwe pone	Education College	Department Head (Admin)	
17	Daw Kyu Kyu	Education College	Headmistress	
18	Daw Aye Chit	Education College	Assistant Headmistress	
19	Daw Khin Hnin Yee	Teacher Training School	Headmistress	
20	Daw Khin Pyone Wie	Education College	Department Head (Training)	
21	U Myint Nyo	Senior Citizen/coordinator	Businessman	
22	U Thaug Naing Oo	Land Record Department	Assistant Township Officer	
23	U Tin Aung	Township Education Department	Township Officer	
24	U Aung Moug	Township Education Department	Assistant Township Officer	
25	Daw Khin Ohnmar Htwe	REM	Principal Consultant	
26	Dr. Kyaw Linn Oo	REM	Project Manager	
27	Daw Khatta Soe	REM	Assistant social expert	

Appendix 5.2.3

Meeting minutes of the Secondary Stakeholder Meeting
(Recorded by Taungoo Education College)
(21st May 2013)

တောင်ငူပညာရေးကောလိပ်တည်ဆောက်ရေးဒုတိယအဆင့် လူထုအစည်းအဝေး

နေ့ရက် - ၂၁-၅-၂၀၁၃ (အင်္ဂါနေ့)

အချိန် - နေ့လည် (၂ : ၀၀)မှာစီ

နေရာ - ရှမ်းရွာတန်းကြီးကျောင်း

အစည်းအဝေးတက်ရောက်သူများ စာရင်းကို ပူးတွဲတင်ပြထားပါသည်။

REM အဖွဲ့မှ ဒေါ်ခင်ဥဗ္ဗာထွေးမှ ဆောက်ပါအတိုင်း ရှင်းလင်းဆွေးနွေးသွားပါသည်။

မိမိတို့ REM သည် ဤနေရာသို့ ပထမအကြိမ်ကွင်းဆင်းပြီးဖြစ်ကြောင်း၊ ဆင်ဆိပ်ကျေးရွာ အုပ်စုရှိ ရွာပေါင်း (၁၃)ရွာမှ ကိုယ်စားလှယ်များ၊ အထူးသဖြင့် ရှမ်းရွာ၊ ညောင်ကိုင်းရွာ၊ မြင်းစားရွက်ရွာ ရှိ ကျေးရွာသူ/သားများနှင့် ပထမအကြိမ် ဆွေးနွေးပြီးဖြစ်ကြောင်း၊ ဤပညာရေးကောလိပ်သစ်ကြီး စီမံကိန်းအောင်မြင်အောင် ဘယ်လိုပုံစံနဲ့လုပ်မလဲ၊ ဘာအကျိုးကျေးဇူးရမလဲ၊ ပညာရေးမြှင့်တင်မှုအတွက် ဘယ်လိုအကူအညီပေးမလဲဆိုတာတွေ ဆွေးနွေးညှိနှိုင်းပြီးဖြစ်ကြောင်း၊ ယခုဒုတိယအကြိမ်အနေဖြင့် ပြန်လည်ဆွေးနွေးသွားမည်ဖြစ်ကြောင်း၊ စီမံကိန်းရည်ရွယ်ချက်နှင့် ပါဝင်ပူးပေါင်းရန် စီမံကိန်းမြေနေရာ ရွေးချယ်ပုံ၊ စီမံကိန်းအတွက် လိုအပ်သောမြေပမာဏ၊ REM အဖွဲ့၏ လေ့လာမှုများကို ရှင်းလင်းပြောကြားသွားပါသည်။

အများထင်မြင်ယူဆသကဲ့သို့ JICA မှ အပြည့် အစုံတာဝန်ယူမည်မဟုတ်ဘဲ ဥပမာ တာဝန်တာဝန်ယူ ကြောင်း၊ ပညာရေးဝန်ကြီးဌာနက ကျန်တစ်ပုံ ကို တည်ဆောက်ရမည်ဖြစ်ကြောင်း၊ မိမိတို့အနေဖြင့် မြေဆီလွှာ နမူနာများ၊ အသံထုတ်မှုတိုင်းတာခြင်းများ၊ ကျေးရွာအလိုက်ကွင်းဆင်း၍ လူမှုစီးပွားရေးအခြေအနေနှင့် စီမံကိန်းအပေါ် သဘောထားစစ်တမ်းများ ကောက်ယူပြီးဖြစ်ကြောင်း၊ စီမံကိန်းမြေနေရာတွင် ပါဝင် သည့် တန်းကြီးအုတ်ဂူ(၂)နှင့် ပတ်သက်၍ ရှမ်းရွာတန်းတော်ကြီး၏ နှင့် ဗြူမျက်မြင့် ဖယ်ရွာနှင့် ရရှိပြီး ဖြစ်ကြောင်း၊ တန်းတော်ကြီးဖောက်လုပ်ထားသော လူသွားလမ်း(၂)လမ်းအားလည်း ကျောင်းစည်းရိုး ဆေးမှ ပြန်လည်ဖောက်လုပ်ပေးမည်ဖြစ်ကြောင်း၊ လောလောဆယ်အားဖြင့် လက်ရှိမြေဧက (၄၀.၀၆)ဧက ရရှိပြီးဖြစ်ကြောင်း၊ လိုအပ်နေသေးသည့် မြေဧကကိုလည်း ယခုတက်ရောက်လာသူများ မှပြေလည်အောင် ညှိနှိုင်းပေးစေချင်ကြောင်း ရှင်းလင်းဆွေးနွေးပါသည်။

ဆက်လက်၍ မြေယာရရှိမှုစာရင်းကို ဆွေးနွေးပါသည်။ ညှိနှိုင်းပြီး၊ ဝယ်ယူပြီးနှင့် ညှိနှိုင်းရန် ကျန်ရှိနေသူများကိုပြောပြပါသည်။ ညှိနှိုင်းရန်ကျန်သူများထဲမှ ဦးကြည်သိန်း (၀.၆၇)ဧက ပိုင်ရှင်သည် ဧကနည်းကြောင်း၊ ဒေါ်စမ်းစမ်းအေး ပိုင်မြေသည် (၄.၂၂)ဧကရှိကြောင်း၊ ၎င်းဒေါ်စမ်းစမ်းအေးက

မြေအစားလိုချင်ကြောင်းတို့အတွက် အစားပေးနိုင်မည့် မြေကွက်ကို မည်သို့မည်ပုံရှာဖွေရမည်ကို မသိ၍
ဤအစည်းအဝေးသို့ တက်ရောက်လာသူများက ဆွေးနွေးပေးစေချင်ကြောင်းပြောပါသည်။

အစည်းဝေးတက်ရောက်လာသူများထဲမှ အကြံဉာဏ် ပေးနိုင်မှုမရှိ၍ ဒေါ်စမ်းစမ်းအေးနှင့် တိုက်
ရိုက်တွေ့ဆုံညှိနှိုင်းရန်တစ်ခုသာ ရှိတော့ကြောင်းနှင့် ယခုစီမံကိန်းကြီးအပေါ် ကန့် ကွက်သူများ ရှိပါ သလားဟု
သုံးကြိမ်တိုင်တိုင် မေးမြန်း၍ တွေ့ဆုံမှုအစည်းအဝေးကို ရုပ်သိမ်းခဲ့ပါသည်။

မှတ်တမ်းတင်သူ



(ဗုဒ္ဓသူ)

ဦးစီးအရာရှိ

တောင်ငူပညာရေးကောလိပ်

Appendix 5.2.3

Participant list of the Primary Stakeholder Meeting
(21st May 2013)

PARTICIPANTS LIST				
Meeting Title: <u>တောင်ငူ ပညာရေး-အကယ်၍ စာပို့ စောကိရု 30ပါးစာစီ ရေးစာ: (၂)</u>				
Venue: <u>ဦးစိုးကုန်း ရွာ ရေကန်</u>			Date: <u>01-5-2013</u> Time: <u>PM 2:00</u>	
No.	Name	Organization	Position	Signature
1	ဒေါ်စုစု	ပညာရေး-အကယ်၍	အတွင်းရေးမှူး	[Signature]
2	ဦးမာရ်စွယ်	"	စီမံခန့်ခွဲရေး	[Signature]
3	ဦးစင်စင်	"	ဦးစီးဌာန	[Signature]
4	ဦးစင်စင်	စတုရန်း	အတွင်းရေးမှူး	[Signature]
5	ဦးကျော်စွာ	မြင်းစားရွာ	အတွင်းရေးမှူး	[Signature]
6	ဦးကျော်စွာ	အပေါင်းတို့	"	[Signature]
7	ဦးစင်စင်	စင်စင်စင်	အတွင်းရေးမှူး	[Signature]
8	အောင်စွယ်	မြို့ပိတောက်	အတွင်းရေးမှူး	[Signature]
9	အောင်စွယ်	အင်-ပျော်	အတွင်းရေးမှူး	[Signature]
10	မောင်စွယ်	အင်-ပျော်	"	[Signature]
11	အောင်စွယ်	အင်-ပျော်	"	[Signature]
12	ဦးစင်စင်	ကျေးရွာ	အတွင်းရေးမှူး	[Signature]
13	ဦးစင်စင်	ကျေးရွာ	အတွင်းရေးမှူး	[Signature]
14	ဦးစင်စင်	ကျေးရွာ	"	[Signature]
15	ဦးစင်စင်	ကျေးရွာ	"	[Signature]
16	ဦးစင်စင်	ကျေးရွာ	"	[Signature]
17	ဦးစင်စင်	ကျေးရွာ	"	[Signature]
18	ဦးကျော်စွာ	ပုသိမ်	"	[Signature]
19	ဦးကျော်စွာ	ပုသိမ်	"	[Signature]
20	ဦးကျော်စွာ	ပုသိမ်	"	[Signature]
21	ဦးစင်စင်	ကျေးရွာ	"	[Signature]
22	ဦးစင်စင်	"	"	[Signature]
23	ဦးစင်စင်	"	"	[Signature]
24	ဦးစင်စင်	"	"	[Signature]

PARTICIPANTS LIST

Meeting Title				
Venue			Date: - -	Time:
No.	Name	Organization	Position	Signature
25	Dr. Anurag K. Sankar	നവീന ട്രസ്റ്റ്	സെക്രട്ടറി	[Signature]
26	Dr. P. J. Thomas	"	"	[Signature]
27	Dr. M. J. Joseph	സെന്റർ ഫോർ റിസർച്ച്	"	[Signature]
28	Dr. M. J. Joseph	ക്രിസ്ത്യൻ മിഷൻ	"	[Signature]
29	Dr. M. J. Joseph	"	"	[Signature]
30	Dr. M. J. Joseph	"	"	[Signature]
31	Dr. M. J. Joseph	"	"	[Signature]
32	Dr. M. J. Joseph	"	"	[Signature]
33	Dr. M. J. Joseph	"	"	[Signature]
34	Dr. M. J. Joseph	സെന്റർ ഫോർ റിസർച്ച്	സെക്രട്ടറി	[Signature]
35	Dr. M. J. Joseph	ക്രിസ്ത്യൻ മിഷൻ	"	[Signature]
36	Dr. M. J. Joseph	REM CO.	consultant	[Signature]
37	Dr. M. J. Joseph	"	"	[Signature]
38	Dr. M. J. Joseph	"	"	[Signature]
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				

Note: No. 31 was deleted

Appendix 5.2.3

Meeting minutes of the Secondary Stakeholder Meeting (English Translation)

The public meeting on the rehabilitation of Taungoo Education College

Date - 21st May, 2013
Time - 2:00 PM
Venue - Shan Ywar Monastery, Shan Ywar village

The participants list is attached here.

1. Ms. Khin Ohnmar Htwe from REM Team has discussed the following.

We, REM, have already done the first phase of environmental and social consideration study in and around the project area during last time. We have extensively discussed with the representatives from 13 villages of Sin Seik village tract, especially with the residents of Shan Ywar, Nyaung Gaing, and Myin Sar Khwet villages regarding how could they support the project in order to succeed, what kind of benefits they can expect from the project, and how could they help in promoting education of the region etc. We are here for second phase of the study and making more comprehensive discussions again for the project.

On behalf of MOE, she explained the objective of the project and frame, selection process of the project candidate site, and necessity of the land acquisition for the project, and activities on the environmental and social consideration studies done by REM.

She also explained that it is not like how the people are thinking that JICA will donate for covering entire expense of this project. Actually, the JICA aid will cover only one third of the project then MOE has to take responsibility for the rest of constructions in this project. We have made field data collections in order to understand the existing environmental conditions in and around the project area such as soil and water sampling, ecology, and in-situ noise and air quality measurements, and traffic data etc., as well as for social consideration, we have collected the socioeconomic conditions of the villages nearby the project site and perspective of the local people towards the project. We have got an agreement from the presiding monk of Shan Ywar Monastery to demolish the monument tombs when the construction is commenced in the project site, as well as for the two private pathways which are to be closed during the construction and two new pathways will be constructed on both side of the project area. For the land acquisition, MOE has already acquired about 40 acres of farmlands in the proposed project site. We are here for open discussions and making negotiations with the landowners for the rest of the lands in order to come in conclusion.

She continued discussion on current status of land acquisition. The figure is categorized into three different conditions such as the lands which are already negotiated, acquired, and under negotiation respectively. For the list of under negotiation, U Kyi Thein (0.67 acre) has a small area but for Daw San San Aye (4.22 acres) who is asking for the replacement land for compensation, however, MOE has no idea on how to find out the replacement land of equivalent quality around the project area. Your comments and idea are welcome and highly appreciated.

2. The participants discussed their opinions but there is no idea and action plan to be taken for the replacement lands then decided to make a visit to the friend of Daw San San Aye to discuss about the land acquisition and compensations.

3. After inviting the opinions from the participants, she asked the question in three times to the audience that is there any against and complain for the project and then concluded the meeting at 4:00 PM.

Meeting minutes
by U Myint Thu, the Staff Officer of Taungoo Education College.

Appendix 5.2.3

Participants List of the Secondary Stakeholder Meeting
(English Translation)

Meeting Title- Rehabilitation of Taungoo Education College (Secondary Stakeholder Meeting)				
Venue: Shan Ywar Monastery, Shan Ywar village			Date: 21st May, 2013	Time: 2:00 pm
No.	Name	Organization	Position	Signature
1	Daw Kyu Kyu	Education College	Headmistress	
2	U Hlan pwe pone	Education College	Department Head (Admin)	
3	U Myint Thu	Education College	Officer	
4	U Win	DEPT, MOE	Assistant Director	
5	U Poe Sein	Myin Sar Kwat village	Farmer/land owner	
6	U Thein Han	Ka Poug Dai village	Farmer	
7	U Tin Soe	Myin Sar Kwat village	Farmer	
8	U Kyaw Htwe	Zee Pin Thar village	Farmer	
9	U Aye Min	Inn Palae village	Farmer	
10	U Myo Hlaing	Inn Palae village	Farmer	
11	U Kyaw Moe	Inn Palae village	Farmer	
12	U Myint Lwin	Kan Hla village	Head of Sin Seik Village tract administration	
13	U Win Myint	Nyaung Gaing village	Farmer	
14	U Tun Naing	Zee Pin Thar village	Farmer	
15	U Tin Aung	Nyaung Gaing village	Farmer	
16	U Myint Naing	Shan Ywar village	Farmer	
17	U Soe Paing	Nyaung Gaing village	Farmer	Son of U Tin Aung
18	U Kyaw	Padan village	Farmer	
19	Ma San Aye	Shan Yaw	Farmer	
20	Daw Tin Aye	Nyaung Gaing village	Farmer	
21	U Win Tin	Kha Paung Tain village	Farmer	
22	U Min Lwin	Kha Poug Tain village	Farmer	
23	U Win Naing	Kha Poug Tain village	Farmer	
24	U Than Win	Kha Poug Tain village	Farmer	
25	U Chit San Maung	Kan Pauk Gyi village	Farmer	
26	U Sein Myint	Kan Pauk Gyi village	Farmer	
27	U Tint Lwin	Nyaung Gaing village	Farmer	
28	U Myint Lwin	Myin Sar Khut	Farmer	
29	U Mya Thaug	Myin Sar Khut	Farmer	
30	Daw Than Than Nwet	Shan Ywar village	Farmer	
31	deleted	deleted	deleted	deleted
32	U Thaug Naing Oo	Land Record Department	Assistant Township Officer	
33	U Aye Kyaw	Township Development Committee	Assistant Director	
34	U Maung Aye	Nyaung Gaing village	Farmer	
35	U Thaug Htay	Myin Sar Khut village	Farmer	
36	Daw Khin Ohnmar Htwe	REM Co., Ltd	Principal Consultant (Social)	
37	Dr. Kyaw Linn Oo	REM Co., Ltd	Project Manager	
38	Daw Khatta Soe	REM Co., Ltd	Assistant Social Expert	

Appendix 5.2.4

Meeting minutes of the Tertiary Stakeholder Meeting
(Recorded by Taungoo Education College)
(22nd May 2013)

တောင်ပုညာရေးကောလိပ်တည်ဆောက်ရေးတော်ယအဆင့် လူထုအစည်းအဝေး

နေ့ရက် - ၂၂-၅-၂၀၁၃ (၅ဒွဟူးနေ့)

အချိန် - နံနက် (၁၀ : ၀၀)နာရီ

နေရာ - ပညာရေးကောလိပ် ဧည့် ဓနိုးမ

အစည်းအဝေးတက်ရောက်သူများ စာရင်းကို ပူးတွဲတင်ပြထားပါသည်။

REM အဖွဲ့မှ ဒေါ်ခင်ဥမ္မာကွေးမှ အောက်ပါအတိုင်း ပမဏာမရှင်းလင်းဆွေးနွေးသွားပါသည်။

ဒုတိယအကြိမ် လူထုအစည်းအဝေးကို ရှမ်းရွာဘုန်းကြီးကျောင်းတွင် ကျင်းပခဲ့ကြောင်း ဆင်မိပ် ကျေးရွာအုပ်စုရှိ ကျေးရွာပေါင်း(၁၃)ရွာမှ ကိုယ်စားလှယ်များကို ဖိတ်ကြားခဲ့ကြောင်း ပညာရေး ကောလိပ်သစ် တည်ဆောက်မည်ဖြစ်၍ လူသွားလမ်း(၂)လမ်းပိတ်ဆို့မည် ဖြစ်၍ ကျောင်းပိုင်ပြုအဖွဲ့ဝင် ဦးနေသည့် ဘုန်းတော်ကြီး၏ ဂုဏ်စွဲတို့ကို ပြုလုပ်ဆောင်ညှိနှိုင်း ဆွေးနွေးပြီးဖြစ်ကြောင်း၊

ပညာရေးကောလိပ်သစ်တည်ဆောက်မည့် ရည်ရွယ်ချက်ကို သိချောင်ကြောင်း ကောလိပ်သစ် တည်ဆောက်မည့် အတွက် လေ့ကျင့်ရေးအလကကျောင်းထားရှိကိစ္စ၊ ဤကျောင်းကိုဖွဲ့တင်၍ ပြုလုပ် နေရသော စီးပွားရေး ကိစ္စ၊ ထိမိက် မှုပိုင်ဆိုင် ထိမိက် ဤကျေးအဖွဲ့ကိုပြုလုပ်ခြင်းဖြစ်ကြောင်း၊

မိမိတို့အနေဖြင့် ဤပညာရေးကောလိပ်ကို ဧပြီ EC အဖြစ်တည်ဆောက်ချင်ကြောင်း၊ ကူညီပံ့ပိုး မည့် အဖွဲ့သည် JICA အဖွဲ့ဖြစ်ကြောင်း၊ JICA အနေဖြင့် ၃ ပုံ ၁ ပုံသာလျှင်မည်ဖြစ်ကြောင်း၊ ချက်ချင်းလျှင် ချက်ချင်းဆောက်လုပ်မှာမဟုတ်ကြောင်း၊ မိမိတို့ REM အဖွဲ့အနေဖြင့် တော်ယအဖွဲ့အဖြစ်ဖြစ်ကြောင်း၊ JICA နှင့် ပညာရေးဝန်ကြီးဌာနအကြား ဆက်သွယ်မှုကို ပြုလုပ်နေကြောင်း၊ ပွင့် လင်းမြင်သာမှုရှိရန် အတွက် မိမိတို့အနေဖြင့် ပထမအကြိမ်၊ ဒုတိယအကြိမ် လူထုအစည်းအဝေးပွဲတို့ကို ပြုလုပ်ခြင်းဖြစ် ကြောင်း ပြောကြားသွားပါသည်။

ပညာရေးစီမံကိန်းနှင့် လေ့ကျင့်ရေးဦးစီးဌာနမှ လ/ထည့်နှံကြားရေးမှူး ဦးဝင်းမှလည်း အောက်ပါ အတိုင်းဆွေးနွေးသွားပါသည်။

တောင်ပုညာရေးကောလိပ်ကို ဧပြီကောလိပ်ဖြစ်အောင် ကြိုးပမ်းနေကြောင်း၊ ပညာရေးလည်း နိမ့် ကျနေသည့်ဟု လက်ညှိုးထိုးမိနေရကြောင်း၊ ယခုအခါနိုင်ငံတော်မှ ဘဏ္ဍာငွေကို ပညာရေးကဏ္ဍ အတွက် တိုးမြှင့် ချထားပေးထားကြောင်း၊ ယခင်ကပညာရေးကောလိပ်များကို အဆင့် (၁)နှင့် အဆင့် (၂) ဟုခွဲခြားထားကြောင်း၊ သို့သော်လျှင်အပ်ချက်အရ အားလုံးအဆင့် (၁)အဖွဲ့သတ်မှတ်ထားခဲ့ကြောင်း၊ ယခု ပညာရေးကောလိပ်အတွက် ပြည်နှင့် တောင်ပုကိုမည် သည့် နေရာ ဆောက်မည်ဟုရွေးချယ်ခဲ့ကြောင်း၊

ပြည်မြို့ကလည်း ကောလိပ်အသစ် တောင်းခံခဲ့ကြောင်း၊ သို့သော်တောင်ငူသည် Centre ဖြစ်ကြောင်း၊ နေပြည်တော်နှင့် လည်း
လက်ထမ်းဖို့၌ တောင်ငူကို EC အသစ်ဆောက်လုပ်ရန်ရွေးချယ်ခဲ့ကြောင်း၊ JICA လက်ရှိပညာရေးကောလိပ်များ၏
သင်ဆောင်ကုများကိုစစ်ဆေးခဲ့ကြောင်း၊ အများအားဖြင့် သင်ဆောင်ကုပစ္စည်းများသည် သုံးမရတော့ကြောင်း၊
ကွန်ပျူတာ(၇၀)လုံးရှိလျှင် မော်ဒယ်အောက် သောကွန်ပျူတာ၊ မျက်နှာသောကွန်ပျူတာများနေကြောင်း တို့အတွက်
ပညာရေးမြှင့်တင်ရန်အတွက် ကောင်းမွန်သော သင်ဆောင်ကုပစ္စည်းများလိုအပ်ကြောင်း၊

ယခုတောင်ငူ EC အသစ်သည် ဖွဲ့စည်းလုပ်ကိုင်ပြီးဖြစ်၍ လောလောဆယ်... ပုံစံပေးပို့ပြန်ကြောင်း၊
ပညာရေးဝန်ကြီးဌာနအနေဖြင့် နောင် ပညာရေးတက္ကသိုလ်ရည်ရွယ်ထား၍ အနည်းဆုံး ၈၀(၇၀)ရှိသင့်ကြောင်း၊ အချို့ EC
များမှာ ၈၀ ၁၀၀ ကျော်ထိရှိကြောင်း၊ ကျောင်းကျယ်ဝန်းသော်လည်း ကျောင်းသား/သူအင်အား (၆၀၀)သာထားကြောင်း၊
ဆရာအင်အားလည်း အပြည့် မတွက်နိုင်ကြောင်း၊

ရန်ကင်း၊ ရန်ကုန်ပညာရေးတက္ကသိုလ်၊ တောင်ငူ၊ တောင်ကြီးတို့တွင် ဤလေ့ကျင့်ရေးကျောင်း များ နာမည်ကြီးကြကြောင်း၊
ယခုလက်ရှိလှူဒါန်းမှုဖြင့် သူရှိသော်လည်း မြေမရှိကြောင်း တို့ကြောင့် ဝိုင်းဝန်းလှုပ်ဆောင်ကြစေလိုကြောင်း၊
ဆွေးနွေးတင်ပြသွားပါသည်။

လေ့ကျင့်ရေးကျောင်း၏ မိဘကိုယ်စားလှယ် (၁)ဦးမှ အောက်ပါအတိုင်း တင်ပြဆွေးနွေးပါသည်။
ပညာရေးကောလိပ် လေ့ကျင့်ရေးကျောင်းသည် ဂုဏ်သတင်းအစဉ် အလာကြီးမားခဲ့ကြောင်း၊ ထူးချွန်သော
ကျောင်းသား/သူများစွာကို ပေးထုတ်ပေးခဲ့ကြောင်း၊ မိဘဆရာအသင်းကိုယ်စားလှယ်များ၊ မိဘများ၊
ကျောင်းအကျိုးတော်ဆောင်အဖွဲ့များမှ လေ့ကျင့်ရေးကျောင်းကို မျက်မြင်မြတ်ကြည်ရွှံ့နေကြောင်း၊ လိုအပ်သည်များဖြည့်
စွက်ပေးခဲ့ကြောင်း၊

ဆရာဆရာမများကလည်း ကျောင်းသား၊ ကျောင်းသူများကို ရင်ဆိုင်ပုဂ္ဂိုလ် ကြည့်ရှုခဲ့ကြောင်း၊ ယခုတည်ဆောက်မည့်
ပညာရေးကောလိပ်အစီအစဉ် (၆)ရပ်ခန့် ကွာဝေးသော အသွား(၃၇)မိနစ်၊ အပြန်(၃၇)မိနစ်ခန့် ဆိုင်ကယ်စီးရကြောင်း၊
မိမိတို့၏ကလေးငယ်များသည် ကျောင်းသွားလျှင် လေတိုက်မှု၊ ချိုးရွာမှုတို့ လမ်းတွင်ကြုံနိုင်ကြောင်း၊ ကျန်းမာရေးအရ
ဈားနာမှုများရှိနိုင်ကြောင်း၊ ကျောင်းလိုက်သောစိဘာသည် (၁)နာရီခန့် လုပ်ငန်းလစ်လပ်မှုရှိနိုင်ကြောင်း၊
အခြေအနေအလုံအပ် ခဲ့လျှင် ယခုခရီးထက်နီးသောနေရာကို ရွေးချယ်စေလိုကြောင်း၊ ပြန်လည် စဉ်းစားသင့်ကြောင်း တင်ပြ
သွားပါသည်။

REM အဖွဲ့မှ ဒေါ်ခင်ဥမ္မာထွေးမှ အောက်ပါအတိုင်းပြန်လည်ရှင်းလင်းခဲ့ပါသည်။ ပညာရေး ကောလိပ်ကိုနေရာအသစ်သို့
ရွေးချယ်တာသာဖြစ်ကြောင်း၊ ပညာရေးကောလိပ်နှင့် လေ့ကျင့်ရေး ကျောင်းကို ဖွဲ့စည်းပေးပေးပေးကြောင်း၊

ဖွဲ့စည်းတစ်ဖန်ပြန်လည်လုပ်ဆောင်ရန် သာမဟုတ်ဘဲ ကြီးကြပ်စောင့်ရှောက်မှုပေးရန် (၂)ဖွဲ့ကြားတွင် ရှိကြောင်း၊
ကျောင်းတစ်ဖန်ပြန်လည် ဖြစ်ပေါ်စေရန်အတွက် အချိန်မီအချိန်အတိုင်းပြန်လည်ပြုစုပေးရန်ကြောင်း၊

ယခုနေရာထက်နီးသောနေရာမရှိနိုင်ကြောင်း၊ လက်ရှိလည်ဦးခင်မောင်အေးက ၈၀(၂၀)မတည်ရင်းနှီးပေးထား၍သာ ဤအ
ခြေအနေသို့ရောက်လာကြောင်း၊ မြို့မိမြို့မများက ဆားဝန်းကျင်မြေဥက္ကန်များကို ပညာရေးအတွက်အသုံးပြုမည်ဟု
လိုက်လံပြောကြားထား၍ ယခုအကျယ်အဝန်းထိရလာကြောင်း၊ ယခုထက်နီးသော၊ ယခုကဲ့သို့မြေဧကရှိသော၊ မြေလှူမည်
သူရှိပါက လူကြီးမင်းတို့အနေဖြင့် ရွာဈေးပေး စေချင်ကြောင်း မိမိတို့အနေဖြင့် ယခုစီမံကိန်းကိုအောင်မြင်အောင်မလုပ်နိုင်ပါက
ရှက်စရာဖြစ်ကြောင်း လှူမည် သူက လှူသော်လည်း၊ မြေနေရာရွာဈေးပေးနိုင်ကရွက်စရာဖြစ်ကြောင်း တင်ပြဆွေးနွေးသွား
ပါသည်။

ဧည့်ပင်ပုလက်ကောက်ညွှန်ကြားရေးမှူးကလည်း ဝင်ရောက်ဆွေးနွေးခဲ့ပါသည်။ မိမိသည် တောင်ငူမြို့ကို သံယောဇဉ်ရှိကြောင်း ယခင်ကတောင်ငူ TTC သည် နာမည်ကြီးခဲ့ကြောင်း လှပခဲ့ ကြောင်း ဂုဏ်ယူစရာကောင်းခဲ့ကြောင်း ၊
ယခုအခါလူဦးရေထူထပ်လာမှုကြောင့် လည်းကောင်း၊ ပုံပြီးလာ မှုကြောင့်လည်းကောင်း ကားဆိုင်ကယ်ဈပ်သလောက် လမ်းများကျဉ်းမြောင်းနေပြီဖြစ်ကြောင်း၊ ယခု TTCသည်လည်း အိမ်ထောင်ရေးအဖွဲ့အစည်းနှင့် နှိုင်းယှဉ်သော်လည်း တောင်ငူပညာရေးကောလိပ် အသစ်ဖြစ်ရန်လိုအပ်လာကြောင်း ဂျပန်များအနေဖြင့် PCA အဖွဲ့ကို ထူထောင်ခဲ့သည်မှာ ယင်းပြည်သူများ၏ ထည့်ဝင်လှူဒါန်းမှုဖြင့် တည်ထောင်ခဲ့ရကြောင်း၊

PCA အဖွဲ့သည် မြန်မာနိုင်ငံအနှံ့တွင် လှည့်လည်လှူဒါန်းခဲ့ကြောင်း၊ ယင်းအဖွဲ့၏စိတ်ကွက်မှုကို မေ့သင့် ကြောင်း ထိုအတွက်ရှိတာနဲ့အရင်စကားပြီးမှ တစ်ဖန် မြေးခဲ့လှုပ်သင့် ကြောင်း ကျောင်းဆိုသည် မှာအတူတူပင် ဖြစ်ကြောင်း လေ့ကျင့် ရေးမှပုလက် အခြားကျောင်းများလည်းကောင်း၊ ထိုအတွက် ဤပညာရေးကောလိပ်သစ်ကြီး ထောင်မြင် ထောင် ပံ့ပိုးကူညီကြရမည်ဖြစ်ကြောင်း အကျယ်တဝင့် ဆွေးနွေးသွားပါသည်။

တွေ့ဆုံပွဲကို မွန်းတည့် (၁၂ :၀၀) တွင် ရုပ်သိမ်းပါသည်။

မှတ်တမ်းတင်သူ



(မြင့်သူ)

ဦးစီးအရာရှိ

တောင်ငူပညာရေးကောလိပ်။

Appendix 5.2.4

Participant list of the Tertiary Stakeholder Meeting
(22nd May 2013)

PARTICIPANTS LIST				
Meeting Title		Date: 22.5.2013 Time: AM 10:00		
Venue		Time: AM 10:00		
No.	Name	Organization	Position	Signature
1	Dr. Anuradha		Secretary	[Signature]
2	Dr. Anuradha		"	[Signature]
3	Dr. Anuradha		"	[Signature]
4	Dr. Anuradha		"	[Signature]
5	Dr. Anuradha		"	[Signature]
6	Dr. Anuradha		"	[Signature]
7	Dr. Anuradha		"	[Signature]
8	Dr. Anuradha		"	[Signature]
9	Dr. Anuradha		"	[Signature]
10	Dr. Anuradha		"	[Signature]
11	Dr. Anuradha		"	[Signature]
12	Dr. Anuradha		"	[Signature]
13	Dr. Anuradha		"	[Signature]
14	Dr. Anuradha		"	[Signature]
15	Dr. Anuradha		"	[Signature]
16	Dr. Anuradha		"	[Signature]
17	Dr. Anuradha		"	[Signature]
18	Dr. Anuradha		"	[Signature]
19	Dr. Anuradha		"	[Signature]
20	Dr. Anuradha		"	[Signature]
21	Dr. Anuradha		"	[Signature]
22	Dr. Anuradha		"	[Signature]
23	Dr. Anuradha		"	[Signature]
24	Dr. Anuradha		"	[Signature]
25	Dr. Anuradha		"	[Signature]

PARTICIPANTS LIST

Meeting Title				
Venue			Date: - -	Time:
No.	Name	Organization	Position	Signature
26	ଶ୍ରୀମତୀ		ସମ୍ପ. ମୁଖ୍ୟ	[Signature]
27	ଶ୍ରୀମତୀ		ସମ୍ପ. ସା. ମ.	[Signature]
28	ଶ୍ରୀମତୀ		ସମ୍ପ. ସା. ମ.	[Signature]
29	ଶ୍ରୀମତୀ		ସମ୍ପ. ମୁଖ୍ୟ	[Signature]
30	ଶ୍ରୀମତୀ		ଶ୍ରୀମତୀ	[Signature]
31	ଶ୍ରୀମତୀ	ଶ୍ରୀମତୀ	ସମ୍ପ. ମୁଖ୍ୟ	[Signature]
32	ଶ୍ରୀମତୀ	ଶ୍ରୀମତୀ	ସମ୍ପ. ମୁଖ୍ୟ	[Signature]
33	ଶ୍ରୀମତୀ	ଶ୍ରୀମତୀ	ଶ୍ରୀମତୀ	[Signature]
34	ଶ୍ରୀମତୀ			[Signature]
35	ଶ୍ରୀମତୀ	DEPT	A. S.	[Signature]
36	ଶ୍ରୀମତୀ	REM	consultant	[Signature]
37	ଶ୍ରୀମତୀ	"	"	
38	ଶ୍ରୀମତୀ	"	"	[Signature]
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				

Note: No. 28 was deleted

Appendix 5.2.4

Meeting minutes of the Tertiary Stakeholder Meeting (English Translation)

Public Meeting for Rehabilitation of the Taungoo Education College

Date - 22 May 2013
Time - 10:00 a.m.
Venue - Meeting Hall, Taungoo Education College, Taungoo

List of attendees is attached.

1. Daw Khin Ohnmar Htwe from REM Team made a brief as below.

The Secondary Stakeholder Meeting was organized in Shan Ywar monastery where representatives from 13 villages from Sin Zeik Village Tract were attended. There discussed and have had agreement for

- Closing two lanes inside the proposed compound
- Demolishing of tombs of reverend monks.

For the today's' representative who are tertiary stakeholders as defined by Ministry of Education and JICA, we wishes to inform the objectives and aims of the rehabilitation of the Taungoo Education College (TEC) and to discuss on other matters like impacts on changing location of the practicing school, and potential positive and negative impacts on business related with the existing Taungoo Education College (TEC).

Present TEC project is the model for further supporting work by JICA. We, REM is the third party consultant to have proper relationship and transparency among JICA, Ministry of Education, and local people. Primary and Secondary stakeholder meetings have already conducted.

2. U Win, Assistant Director from Department of Education Planning and Training, discussed as below.

There are 21 Education Colleges in the whole Myanmar. Taungoo Education College is notified as a Female school. This new school is aimed to become an Education University. After selecting among two towns of Taungoo and Pyi, Taungoo is selected. We will establish it as a Model Education College.

In this Education College project, JICA will give us only 1/3 percent of investment. Just now, we need more teachers, so we try to appoint temporary teachers. That's why, we hope to establish this Education College. We got donator already but it is not easy to get the suitable and required amount of land. Please cooperate us for the sake of our Township

Taungoo Education College will become one of the Model Schools of the Ministry. The ministry selected Taungoo City to have new education colleague with its alternative/competitor Pyay City in the same Region.

JICA examined the status of present education colleagues and found that most of the teaching aids have disordered. For example, most of the computers equipped have been old-modeled and not workable. Teaching aides are necessary for the upgrading education system of the country.

We like to receive good view and encouragement of the local people, for having newly renovated and model education colleague in the city and the region. As there have plan to upgrade into Education University in the future, an extent of about 50 acres land is necessary. In some other colleges, there are big compounds like 100 acres. Now JICA and Ministry selected Taungoo to receive donation for renovation, sufficient land is necessary now.

3. A representative of the parents of TEC students, discussed as follow.

Taungoo Education College (TEC) has a good reputation that has produced many outstanding students. Parents-Teachers Society and Supporting Committees have been watching throughout to fill up the needs.

However, the new proposed education colleague is six miles far from the city. It will take 37 minutes

motorcycle-drive time. The parents are being anxious for the health, accident and weather impacts to the students if the new compound established. So, it should be considered again to find new location nearer to the city.

Daw Khin Ohnmar Htwe of REM replied on behalf of Ministry of Education

Selecting new location is for the better compound, buildings, teaching aids for TEC and not discarding the present day location of TEC. While finding the best location for new TEC, U Khin Maung Aye has initiated with 20 acres and other persons around the location are being organized by the senior citizens to become sufficient area coverage for the new campus. It would be highly beneficial if the gentlemen/ attendees could find the nearer land with good coverage. It would be shameful for the city and the ministry, if we could not manage to have a good compound while the donors agreed for all necessary facilities of the new TEC.

3.1 The Assistant Director from City Development Committee also discussed (see details in the discussion summary).

The meeting has ended at 12:00 noon.

Meeting Minute

by: Myint Thu, Staff Officer, TEC, Taungoo.

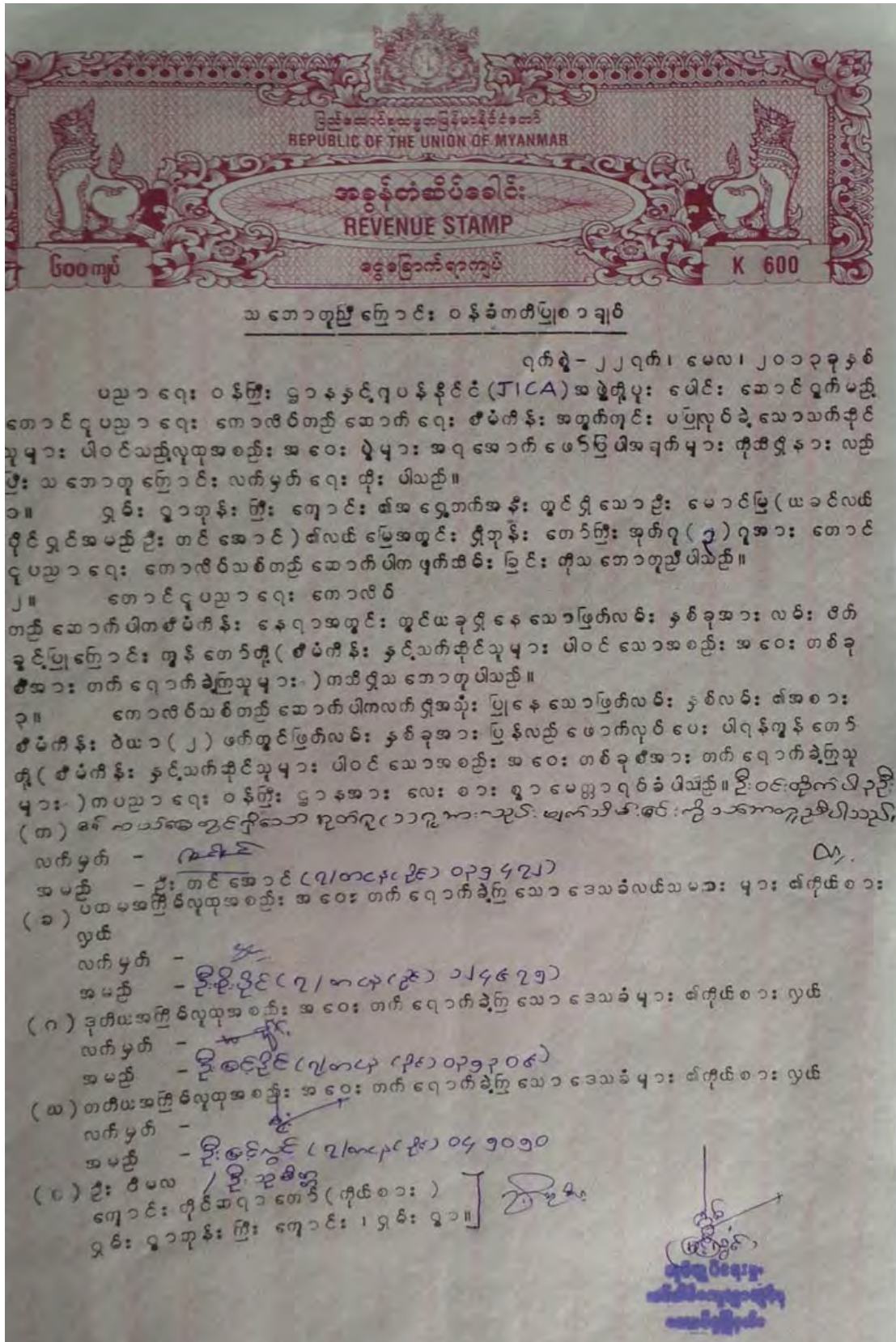
Appendix 5.2.4

Participants List of the Tertiary Stakeholder Meeting (English Translation)

Meeting Title- Rehabilitation of Taungoo Education College (Tertiary Stakeholder Meeting)				
Venue: Taungoo Education College			Date: 22nd May, 2013	Time: 10:00 am
No.	Name	Organization	Position	Signature
1	Daw Aye Aye Thein		Parent of the students	
2	Daw Khin Sane Moe		Parent of the students	
3	Daw Dasi Aung		Parent of the students	
4	U Kyaw Kyaw Lwin	Parents and Teachers Association,	Vice Chariman	
5	U Ko Ko Latt	Parents and Teachers Association,	Member	
6	U Thein Htet Aye	Parents and Teachers Association,	Patron	
7	U Ye' Myint	Parents and Teachers Association,	Patron	
8	U Zaw Hlat Tun		Parent of the student	
9	U Myo Kyaw Thu		Parent of the student	
10	U Min Min Oo		Parent of the student	
11	U Aung Ko Latt		Parent of the student	
12	U Kyaw Kyaw Aung		Parent of the student	
13	U Win Myint		Parent of the student	
14	U Ko Ko Oo	Department of Education	Assistant Township Officer	
15	U Aye Kyaw	Township Development Committee	Assistant Director	
16	U Sai Naw Hein	Township General Administrative Department	Assistant Township Officer	
17	U Myo Htay	Parents and Teachers Association,	Member	
18	U Soe Myint Maung	Parents and Teachers Association,	Member	
19	Daw Maw Maw Lwin	Parents and Teachers Association,	Member	
20	Daw Thin Thin Kyi	Parents and Teachers Association,	Member	
21	U Myint Nyo	Local Coordinator of MOE	Senior Citizen of Taungoo	
22	U Maung Mya	Local Coordinator of MOE	Senior Citizen of Taungoo	
23	U Tin Win	Local Coordinator of MOE	Senior Citizen of Taungoo	
24	U Maung Maung Lwin		Parent of the student	
25	U Thaug Shwe		Parent of the student	
26	Daw Kyu Kyu	Taungoo Education College	Headmistress	
27	U Hlan pwe pone	Taungoo Education College	Head of the Admin Department	
28	deleted	deleted	deleted	deleted
29	Daw Aye Chit	Taungoo Education College	Assistant Headmistress	
30	U Myint Thu	Taungoo Education College	Officer	
31	U Khin Hlat	Parents and Teachers Association	Secretary	
32	Daw Khin Hnin Yee	Teachers Training School	Headmistress	
33	Daw Nu Nu	Taungoo Education College	Librarian (2)	
34	Daw Khin Thazin Nwe	Affected Landowner	Businesswoman	
35	U Win	DEPT, MOE	Assistant Director	
36	Daw Khin Ohnmar Htwe	REM Co. Ltd.,	Principal Consultant (Social)	
37	Dr. Kyaw Linn Oo	REM Co. Ltd.,	Project Manager	
38	Daw Khatta Soe	REM Co. Ltd.,	Assistant Social Expert	

Appendix 5.3.1

Agreement on Demolition of Tombs and Pathways (22nd May 2013)



Appendix 5.3.1

(English Translation)

Contract of Agreement

Date: 22.5.2013

As per the stakeholder meetings for the project of the Taungoo Educational College construction project of MOE in corporation with JICA, the following have been agreed among the parties signed.

1. The three tombs located in the farmland of U Maung Mya, the old name of that farmland owner is U Tin Aung, which is located in the front side of Shan Ywar monastery, are agreed to demolish when the construction of the Taungoo Education College is commenced.
2. When the construction of the Taungoo Education College is commenced, we (participants in each stakeholder meeting) are agreed to demolish the two private path ways in the project site.
3. With regard to the existing local roads in the project area, when the construction of the Taungoo Education College is commenced, we (participants in each stakeholder meeting) agreed to request MOE to build two private path ways on both side of the project site.

(We also agree for demolition of a human tomb located in the land plot of U Win Htike + 2)

Name: **U Tin Aung (7/TaNgaNa (N) 035472) sign**

Representative (farmers) of the local participants in the Primary stakeholder

Name: **U Soe Paing (7/TaNgaNa (N) 124675) sign:**

Representative of the local participants in the Secondary stakeholder

Name: **U Myint Naing (7/TaNgaNa (N) 035306) sign:**

Representative of the local participants in the Tertiary stakeholder

Name: **U Myint Lwin (7/TaNgaNa (N) 045050 sign:**

U Wimala

On behalf of the Abbot (Presiding Monk)

Shanywa Monastery, Shan Ywar Village

Appendix 6.6.1

Plan for Solid Waste Management by MOE

**The Government of the Union of Myanmar
Ministry of Education
Department of Educational Planning and Training**

Letter No. 1PSL/ 2767 / E & S Study (13)

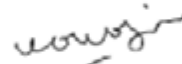
Date: 27 August 2013

Subject: Confirmation for Solid Waste Management which will be done by Township Development Committee Service with necessary fees after the completion of the Project of the Rehabilitation of Taungoo Education Colleges

After the completion of the project and at the operational stage of the Taungoo Education College, we have plan to carried out 2 times per week with budget 1267200 Kyats for a year . It is confirmed that DEPT will be carrying out Solid Waste Management which will be done by Township Development Committee.

Thank you very much for your cooperation.

Yours Sincerely,



(Ko Ko Tin)
Director General



✓ **Mr. Shigeru Yasumatsu
Chief Consultant
JICA Preparatory Survey Team
Yamashita Sekkei Inc.**

CC; **Mr. Kenji Igarashi, Environmental and Social Consideration Expert, JICA
JICA Myanmar Office, Room 701, 339 Bogyoke Aung San Road, Sakura
Tower, Yangon
Minister Office, Ministry of Education
Office copy**

Appendix 6.6.2

Plan for De-Sludge by MOE

The Government of the Union of Myanmar
Ministry of Education
Department of Educational Planning and Training

Letter No. 1PSL/2670/E & S Study (13)

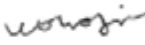
Date: 27 August 2013

Subject: Confirmation for the De-sludge of Septic Tanks which will be done by Township Development Committee Service with necessary fees after the completion of the Project of the Rehabilitation of Taungoo Education Colleges

After the completion of the project and at the operational stage of the Taungoo Education College, we have plan to carried out 4 times per a year with budget 172800 Kyats. It is confirmed that DEPT will be carrying out De-sludge of Septic Tanks which will be done by Township Development Committee.

Thank you very much for your cooperation.

Yours Sincerely,


(Ko Ko Tin)
Director General



✓
Mr. Shigeru Yasumatsu
Chief Consultant
JICA Preparatory Survey Team
Yamashita Sekkei Inc.

CC; Mr. Kenji Igarashi, Environmental and Social Consideration Expert, JICA
JICA Myanmar Office, Room 701, 339 Bogyoke Aung San Road, Sakura
Tower, Yangon
Minister Office, Ministry of Education
Office copy

Appendix 7.3.1

Minutes Meeting
of Land Acquisition Meeting
(3rd December 2012)

ဝဲစူးတို့စီးခေသကြီး၊ ခေတောင်ဥစီရိပ်၊ ခေတောင်ဥမြို့နယ် ခေတောင်ဥပညာရေးကောလိပ် တည်ဆောက်ရန် ခြေရာရရှိရေးအတွက် ခေတောင်ဥရပ် လယ်မြေစီမံခန့်ခွဲမှု ခေတောင်ဥ လယ်မြေပိုင်ရှင်များနှင့် ခေတောင်ဥမြို့နယ်တည် အစည်းအဝေး		
အစည်းအဝေးကျင်းပသည့်နေ့ရက်	- (၃-၁၂-၂၀၁၂)	
အစည်းအဝေးကျင်းပသည့်အချိန်	- နံနက်(၀၉:၀၀)နာရီ	
အစည်းအဝေးကျင်းပသည့်နေရာ	- ရှမ်းရွာဘုန်းတော်ကြီးကျောင်း	
အစည်းအဝေးတက်ရောက်သူများ		
၁။ ဦးမြင့်ညို	မြို့မမြို့ဗ	
၂။ ဦးမောင်မြ	မြို့မမြို့ဗ	
၃။ ဦးတင်ဝင်း	မြို့မမြို့ဗ	
၄။ ဦးမြင့်လွင်	ဆင်ဆိပ်ကျေးရွာ အုပ်ချုပ်ရေးမှူး	
၅။ ဦးဘိုဘိုအောင်	မြို့နယ်မြေစာရင်းဌာန	
၆။ ဦးမောင်မောင်	လယ်မြေပိုင်ရှင်(ဦးခင်မောင်အေး ကိုယ်စားလှယ်)	
၇။ ဦးမြင့်သူ	လယ်မြေပိုင်ရှင် - တောင်ငူ	
၈။ ဦးတင်အောင်	လယ်မြေပိုင်ရှင် - ရှမ်းရွာ	
၉။ ဦးမြင့်နိုင်	လယ်မြေပိုင်ရှင် - ရှမ်းရွာ	
၁၀။ ဒေါ်နုခင်	လယ်မြေပိုင်ရှင် - ရှမ်းရွာ	
၁၁။ ဦးစိုးနိုင်	လယ်မြေပိုင်ရှင် - ထန်းကျန်းရွာ	
၁၂။ ဦးမောင်အေး	လယ်မြေပိုင်ရှင် - ညောင်ကိုင်း	
အစည်းအဝေးမတက်ရောက်နိုင်သူများ		
၁။ ဦးဝင်းထိုက် ပါ(၃)	ရန်ကုန်	
၂။ ဦးကြည်သိန်း	တောင်ငူ	
၃။ ဦးအောင်နိုင်စိုး	တောင်ငူ	
၄။ ဒေါ်စမ်းစမ်းအေး	တောင်ငူ	

စဉ်	သွေးဝေမှုချက်/အုပ်ချုပ်ချက်များ	ခေတောင်ဥရပ်ရန်
၁	ခေတောင်ဥရပ်ရန်အတွက် ဦးမြင့်လွင်မှ အစည်းအဝေးခေါ်ယူခြင်းနှင့် ယက်သက်၍ ရှင်းလင်းသွေးဝေပါသည်။	
၂	မြို့မမြို့ဗ ဦးမြင့်ညိုမှ ပညာရေးကောလိပ်တည်ဆောက်ရန် ခြေရာရရှိရေးအတွက် ခေတောင်ဥရပ်လယ်မြေပိုင်ရှင်များနှင့် ထုတ်ဖော်ခြေရာရရှိရေးအတွက် ခေါ်ဝေါ်ယူခြေရာရရှိပိုင်ရှင် များက သွေးဝေမှုဦးစီးခေသကြီးအကြောင်း ယခုပညာရေးကောလိပ် နေရာတွင် ပညာရေး ကောလိပ်ပေါ်ပေါက်လာမီက မိမိတို့အတွက်ရှင်း ခေတောင်ဥရပ်ပိုင်ရှင်များအတွက်ရှင်း	

စဉ်	ဆွေးနွေးချက်/သုံးခြင်းချက်များ	ဆောင်ရွက်ရန်
	<p>များစွာအကျိုးရှိနိုင်ပါကြောင်း၊ ပညာရေးတိုးတက်ဖွံ့ဖြိုးမှုနှင့် ဆေးပညာတိုးတက်မှုရရှိနိုင်ပါကြောင်း၊ သို့ဖြစ်၍ မြေနေရာချိတ်ဆက်မှု ပုံစံပေါင်းဆောင်ရွက်ပေးကြပါရန်နှင့် ပညာရေးဧကားလိပ်စာညှိဆောက်မှုကို မည်ကဲ့သို့သဘောထားရှိကြောင်းကိုလည်း ဆွေးနွေးပေးကြရန် ပြောကြားပါသည်။</p>	
၇	<p>ဧကားရွာအုပ်ချုပ်ရေးမှူးဦးမြင့်လွင်က ပညာရေးဧကားလိပ်စာညှိဆောက်ရန် လျာထားသည့်မြေနေရာအတွင်း ပါဝင်သူ(၁၁)ဦးရှိကြောင်း၊ ဝေပုံ(၄၈)ဧကခန့်ပါဝင်ကြောင်း၊ မြေပိုင်ရှင်(၁၁)ဦးအနက်မှ (၆)ဦးနှင့် ကိုယ်စားတယ်(၁)ဦး အစည်းအဝေးတက်ရောက်လာသည့်အတွက် မိမိတို့၏သဘောထားများကို တင်ပြ၍အကြံပြုဆွေးနွေးကြပါရန်ပြောကြားပါသည်။</p>	
၄	<p>မြို့မမြို့ဖ ဦးမြင့်ညိုက ယခုတည်ဆောက်မည့် ပညာရေးဧကားလိပ်စာကိုရုံးသည် ဝယ်ယူပြန်လည်ပေးအပ် ပုဂ္ဂလိက အကျိုးစီးပွားဖြစ်ထွန်းစေသည့် စက်ရုံအလုပ်ရုံစီမံကိန်းမျိုးမဟုတ်ဘဲ ပညာရေးတိုးတက်ဖွံ့ဖြိုးမည့် စီမံကိန်းဖြစ်သည့်အတွက် ခြေတင်ရန်ကို ကာလအေးသည့်နှိုင်းပေးခြင်းသာ ဆောင်ရွက်ရမည်ဖြစ်ကြောင်း ပြောကြားပါသည်။</p>	
၅	<p>ဆောင်ရွက်ရမည့်သမားဦးတင်အောင်က မေနေ့ဝယ်ထစ်ဧကလွှင် ကျပ်သိန်း(၂၀)ခန့်စေ့ရှိပါကြောင်း၊ ယခုလိုအပ်သောဝယ်ယူမှုများကို တစ်ဧကသိန်း(၂၀)ပေး၍ ဝယ်ယူမည်ဆိုလျှင် အဆင်ပြေနိုင်ပါကြောင်း ဆွေးနွေးပါသည်။</p>	
၆	<p>ဦးမောင်အေးက လျာထားမြေအတွင်းပါဝင်နေသော အချို့လယ်သမားများက ဓမ္မကြေးဖြင့် မရောင်းဘဲမြေအစားပြန်လည်ရရှိလိုပါက ဆောင်ရွက်ပေးသင့်ကြောင်း တင်ပြဆွေးနွေးပါသည်။</p>	
၇	<p>ဧကားရွာအုပ်ချုပ်ရေးမှူးက မြေနေရာအစား လိုချင်သူများအတွက် မြေအစား ဝယ်ယူရန်လိုအပ်ပါ မိမိတို့အဖို့ ဝယ်ယူမည်ဖြစ်ကြောင်း မိမိတို့အသေအတွင်း ပညာရေးနှင့်ပတ်သက်၍ ဖွံ့ဖြိုးတိုးတက်လာမည်ဖြစ်သည့်အတွက် အသေခံများက ပညာရေးဧကားလိပ်စာညှိဆောက်ခြင်းကို လိုလိုလားလားဆန့်ကျင်ကြောင်း သိရှိရပါ၍ မြေတစ်ဧကကို ကျပ်သိန်း(၂၀)နှင့် ရောင်းချပေးကြပါရန် တိုက်တွန်းပြောကြားပါသည်။</p>	
၈	<p>မြို့မမြို့ဖ ဦးမြင့်ညိုက မြို့ပေါ်ရှိမြေပိုင်ရှင်များကိုလည်း သွားရောက်ဆွဲဆင်၍ ညှိနှိုင်းဆောင်ရွက်သွားမည်ဖြစ်ကြောင်း မြေများဝယ်ယူပြီးပါက ဆောင်းသီးနှံမတ်သိမ်းယူပြီးလျှင် ရင်းမြေများပေါ်၌ စိုက်ပျိုးခြင်းမပြုကြရန် တောင်းဆိုမှုများနှင့် ဧကားရွာအုပ်ချုပ်ရေးမှူးတို့က တာဝန်ယူပေးကြရန် ပြောကြားပါသည်။</p>	

စဉ်	ဆွေးနွေးချက်/ဆုံးဖြတ်ချက်များ	ဆောင်ရွက်ရန်
	<p style="text-align: center;">ဆုံးဖြတ်ချက်များ</p> <p>(က) ပညာရေးကောလိပ်တည်ဆောက်ရန်လျာထားသည့်မြေနေရာတွင်ပါဝင်သည့် တောင်သူများအားတစ်ဧကလျှင် သိန်း(၂၀)ကျပ်ပေးဝယ်ရန်</p> <p>(ခ) ပညာရေးကောလိပ်တည်ဆောက်ရန်လျာထားမြေနေရာတွင် မြေအစားလိုသည့် တောင်သူများအား မြေအစားဝယ်ပေးရန်</p> <p>(ဂ) မြို့ပေါ်ရှိ မြေပိုင်ရှင်များအား အသိပေးရှင်းလင်း၍ ဓလေ့ပေးခြင်းသော်လည်းကောင်း၊ မြေနေရာအစားပေးခြင်းသော်လည်းကောင်း စည်းရုံးဆောင်ရွက်ရန်</p> <p>(ဃ) တောင်သူလယ်သမားများ၏ စိတ်သဘောထားဆန္ဒတူညီကြည်ဖြူမှုအား မှတ်တမ်း ထားရှိဆောင်ရွက်ရန်</p> <p style="text-align: center;">ဆက်လက်ဆွေးနွေးရန် မရှိတော့ပါသဖြင့် အစည်းအဝေးကို (၁၁:၀၀) နာရီတွင် ရုပ်သိမ်းပါသည်။</p> <p style="text-align: center;">အတည်ပြုသူ အုပ်ချုပ်ရေးမှူး ဆင်ဆိပ်ကျေးရွာ</p> <p style="text-align: center;">မှတ်တမ်းတင်သူ (ဦးမောင်မြ)</p>	<p>မြို့မမြို့နယ်</p> <p>မြို့မမြို့နယ်နှင့် အုပ်ချုပ်ရေးမှူး</p> <p>မြို့မမြို့နယ်</p>

စာအမှတ် - ၀၁ / ၁၃၁၈၇
ရက်စွဲ - ၂၀၁၂ ခုနှစ် ဒီဇင်ဘာလ (၃) ရက်

ဖြန့်ဝေခြင်း
အစည်းအဝေးတက်ရောက်သူအားလုံး

- ပိတ္တူကို -
- မြို့နယ်အုပ်ချုပ်ရေးမှူး၊ အထွေထွေအုပ်ချုပ်ရေးဦးစီးဌာန၊ တောင်ငူမြို့နယ်။
 - မြို့နယ်ပညာရေးမှူး၊ မြို့နယ်ပညာရေးမှူးရုံး၊ တောင်ငူမြို့နယ်။
 - ရုံးလက်ခံ၊ မျောစာတွဲ။

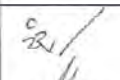







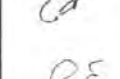
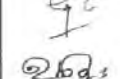


- ၄၃၅၂၅ -


ဦးမောင်မြ

Appendix 7.3.1

Participants List
(3rd December 2012)

၂၀၁၂ ခုနှစ် ဒီဇင်ဘာ ၃ ရက်နေ့တွင် တောင်ငူမြို့နယ် ဆင်ဆိပ်ကျေးရွာအုပ်စု
ရင်းနှီးမြှုပ်နှံရေးကြေးကောင်းနှင့် မြူလုပ်ဆောင် တောင်ပူပညာရေးကော်လိပ် စာညှိဆောင်ရွက်ရန်လျာထားသည့်
ပြင်နေရာတွင်ပါဝင်သူ တောင်သူများနှင့်ညှိနှိုင်းဆည်းပူးတတ်ဆုတ်သူများ လက်မှတ်ထိုးစာရင်း

စဉ်	အမည်	နေရာ	အလုပ်အကိုင်	လက်မှတ်	မှတ်ချက်
၁	ဦးမြင့်ညို	ကောင်ဂူ	မြို့မိ၊ မြို့မ		
၂	ဦးမောင်မြ	ကောင်ဂူ	မြို့မိ၊ မြို့မ		
၃	ဦးတင်ဝင်း	ကောင်ဂူ	မြို့မိ၊ မြို့မ		
၄	ဦးမြင့်လွင်	ဆင်ဆိပ်ကျေးရွာ	အုပ်ချုပ်ရေးဗဟို		
၅	ဦးဘိုဘိုအောင်	ကောင်ဂူ	မြို့မိ၊ မြို့မအရင်း ၅၁၇		
၆	ဦးမောင်မောင်	၁၁-၇၆ ကွက်	လယ်မြေပိုင်ရှင်		
၇	ဦးမြင့်သူ	၁၁-၇၆ ကွက်	"		
၈	ဦးတင်အောင်	ရွာပင်ကိုင်းရွာ	"		
၉	ဦးမြင့်နိုင်	၅၆-၅၅	"		
၁၀	ဖော်ခိုင်	၅၆-၅၅	"		
၁၁	ဦးစိုးနိုင်	ထန်းတန်းရွာ	"		
၁၂	ဦးမောင်အေး	ရွာပင်ကိုင်းရွာ	လယ်		

Appendix 7.3.1

(English Translation)

Consultation meeting with the project affected land owners and Village Tract Farmland Management Committee on the requirement of land acquisition for Rehabilitation of Taungoo Education College, Pegu Division, Taungoo District, Taungoo Township

Date of meeting - 3rd December, 2012
Time - 9:00 am
Venue - Shan Ywar Monastery, Shan Ywar village

Attendees

1. U Myint Nyo - Senior Citizen of Taungoo Township / local coordinator
2. U Maung Mya - Senior Citizen of Taungoo Township / local coordinator
3. U Tin Win - Senior Citizen of Taungoo Township / local coordinator
4. U Myint Lwin - Village Tract Administrator, Sin Seik village tract
5. U Bo Bo Aung - Township Land Record Department, Taungoo
6. U Maung Maung - Land owner / a representative person of U Khin Maung Aye
7. U Myint Thu - Land owner / the husband of Daw Khaing Thazin Nwe
8. U Tin Aung - Land owner, Shan Ywar village
9. U Myint Naing - Land owner, Shan Ywar village
10. Daw Nu Khin - Land owner, Shan Ywar village
11. U Soe Naing - Land owner, Htan Gone village
12. U Maung Aye - Land owner, Nyaung Gaing village

Land owners who did not attend the meeting

1. U Win Htike +2 - Yangon
2. U Kyi Thein - Taungoo
3. U Aung Naing Soe - Taungoo
4. Daw San San Aye - Taungoo

No.	Discussions / Decisions	Further Actions
1.	U Myint Lwin (Village Tract Administrative Officer of Sin Seik village tract) discussed the reason and purpose of the this meeting	
2.	U Myint Nyo, one of the senior citizens and the local coordinator discussed the following points: <ul style="list-style-type: none"> • In order to fulfill the required area of land for rehabilitation of Taungoo Education Project, the local residential people who live around the project area and the land owners whose land plots are located inside the proposed project area are hereby requested to discuss and negotiate on land acquisition for the project. • If the new Taungoo Education College is appeared in the present proposed project area, there would be great beneficial to our township as well as the local residential peoples who live around it. • In accordance with the development of educational sector, the local area would be developed in all aspects. For that reason, cooperative effort is necessary for the land acquisition. Please also make a discussion on what are your opinions on the proposed project. 	
3.	U Myint Lwin, the village tract administrator of Sin Seik village tract discussed as; <ul style="list-style-type: none"> • There are all together 11 persons or the project affected land owners and the total affected area is about 48 acres. Out of all the land owners, 6 land owners one representative have attended in this meeting. Your opinions and comments are highly appreciated and welcome. 	
4.	U Myint Nyo, one of the senior citizens and the local coordinator also discussed as shown below; <ul style="list-style-type: none"> • The present proposed project of Taungoo Education College is not a factory or plant project in order to get economic benefits but it is an educational development project of our country. Due to the fact that, the compensation value for the affected 	

	lands are to be set up in accordance with the local market price only.	
5.	U Tin Aung, one of the land owners as well as a farmer gave his comments and discussed as below; <ul style="list-style-type: none"> The current price of the farmlands in project area is 20 Lakh per acre. It would be suitable and acceptable, if you could offer the compensation value of 20 Lakh per acre. 	
6.	U Maung Aye, one of the land owners as well as a farmer discussed as below; <ul style="list-style-type: none"> It would be also good if you could arrange for replacement farmlands for some of the affected farmers who are willing to get replacement farmland instead of compensation money. 	
7.	U Myint Lwin, (Village Tract Administrative Officer of Sin Seik village tract) also gave his opinion as below; <ul style="list-style-type: none"> I will try to persuade and manage to buy the lands in case of that for those who would like to get replacement lands for compensation. For the sake of the fact that this project is beneficial for education development of our region, the local people are hearten and willing to accept the new Taungoo Education College project. For that reason, the land owners are recommended to sell their farmlands with the suggested compensation value at a rate of 20 Lakh / acre accordingly. 	
8.	U Myint Nyo, one of the senior citizens of Taungoo Township and the local coordinator addressed as shown below; <ul style="list-style-type: none"> I will manage to go and see with the land owners in Taungoo city who are not attended in this meeting and discuss and negotiate for necessary actions regarding land acquisition and compensation. Once the land acquisition by compensation has been done from the land owners, more cultivation is requested soon after the beans (the winter crop) are harvested. The responsibility shall go towards the farmers as well as the village tract administrative officer of Sin Seik village tract. 	
	<p>Decisions</p> <ol style="list-style-type: none"> For the project affected land owners, the farmlands which are included in the proposed project area are to be compensated with a rate of 20 Lakh/acre. For some of the project affected land owners who are willing to get replacement lands for compensation, the required amount of replacement lands are to be purchased. We will go and see with the project affected land owners who do not attend this meeting and those who live in Taungoo city shall be explained and discussed the two compensation options. To make a record of that for all the farmers and local people around the project are willing to accept the project and good attitude towards the project. <p>Confirmed By U Myint Lwin Village Tract Administrative Officer Sin Seik Village Tract</p>	<p>To be accomplished by the senior citizens / local coordinators</p> <p>To be accomplished by the senior citizens / local coordinators, and the village tract administrative officer</p> <p>To be accomplished by the senior citizens / local coordinators</p>

Ref Letter no. - 01 / Education (MOE)

Date: - 3rd December, 2012

Distribution to :

- All the participants
- Copied to:
- Township General Administrative Officer, General Administrative Office, Taungoo Township
- Township Education Officer, Township Education Department, Taungoo Township
- Office Copy, to attach.

Appendix 7.3.1

Participants List (English Translation)

Participants List of stakeholder meeting held by the township private community development committee with the owner of the farmland proposed for the new Education College construction

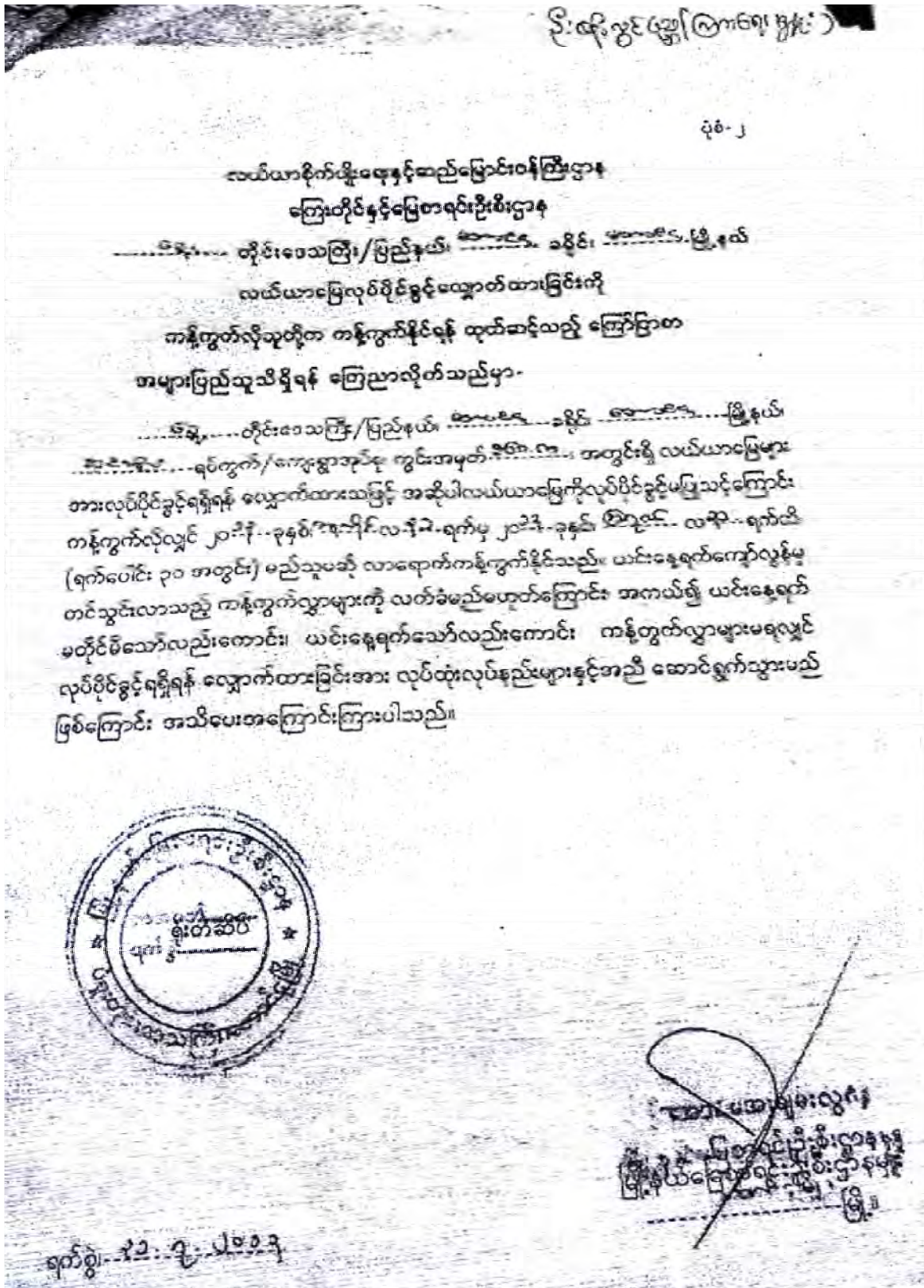
Date: 3rd Dec, 2012

Avenue: Monastery of Shan Ywar village, Sin Seik Village Tract, Taungoo Township


Sr.	Name	Address	Position	Sign	Remark
1	U Myint Nyo	Tuangoo	Member of committee		
2	U Maung Mya	Tuangoo	Member of committee		
3	U Tin Win	Tuangoo	Member of committee		
4	U Myint Lwin	Sin Seik village	Village Head		
5	U Bo Bo Aung	Tuangoo	Land Record Department		
6	U Maung Maung	Ward (11)	Owner of the farmland		
7	U Myint Thu	Ward (11)	Owner of the farmland		
8	U Tin Aung	Nyaung Khaing village	Owner of the farmland		
9	U Myint Naing	Shan Ywar village	Owner of the farmland		
10	Daw Nu Khin	Shan Ywar	Owner of the farmland		
11	U Soe Naing	Htan Gone village	Owner of the farmland		
12	U Maung Aye	Nyaung Khaing village			

Appendix 7.3.2

Public Notice
(31st July 2013)



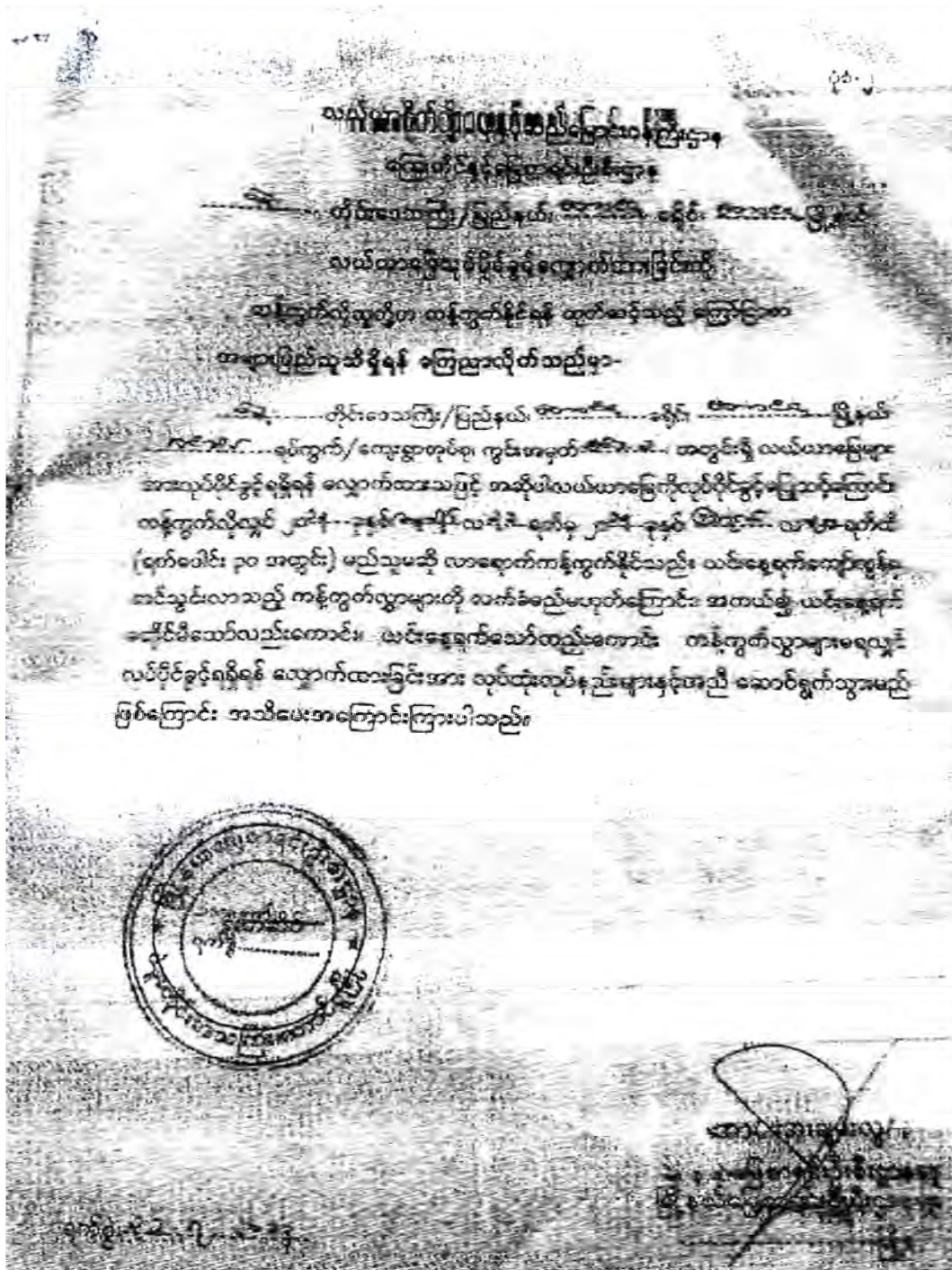
ဦးစိုးလွင် (ဥက္ကဋ္ဌ၊ ကျေးဇူးတင်)



ဝန်ကြီးဌာန၊ သယံဇာတနှင့်သိုလှော်ရေး ဝန်ကြီးဌာန၊ ဝန်ကြီးရုံး၊ နေပြည်တော်
 နံပါတ်- ၁၀၀-၀၀
 ဝန်ကြီးရုံး၊ သယံဇာတနှင့်သိုလှော်ရေး ဝန်ကြီးဌာန၊ ဝန်ကြီးရုံး၊ နေပြည်တော်
 ရေပေးကန်ထားသည့် များစွာသော ကန်၊ ကွက်လွှာပေါ် မှုသည် စာရင်း

စတင်အမှတ်	ဦးစိုက်အမှတ်	မြေမျိုး	ဧရိယာ(ဧက)	မှတ်ချက်		
၁	၄၃၂၁	၀၅၇	၂.၆၂	✓		
၂	၂၈၂၁၂	၂	၄.၇၀	✓		
၃	၂၈၂၁၀	၂	၀.၃၅	✓		
၄	၂၄၂၂	၀၅၇	၂.၂၄	✓		
၅	၂၀၂၄	၂	၂.၄၉	✓		
၆	၂၂၃	၂	၀.၇၉	✓		
၇	၀၅၇၂၂	၀၅၇	၂.၂၀	✓		
၈	၇၉၂၂	၂	၁.၅၆	✓		
၉	၀၅၇၂	၂	၀.၈၂	✓		
၁၀	၇၉၂၁	၀၅၇	၂.၈၀	✓		
၁၁	၂၈၂၇	၂	၀.၂၀	✓		
၁၂	၈၂၃	၂	၀.၂၆	✓		
၁၃	၈၂၄	၀၅၇	၀.၃၇	✓		
၁၄	၂၅၂၂	၂	၀.၂၁	✓		
ကမ်းတစ်ဖက်ရှိ မြေပုံအရ သို့မဟုတ် (၂၇.၈၂) ဧက			၂၉၂၅	၂	၀.၃၅	✓

ဝန်ကြီးရုံး၊ သယံဇာတနှင့်သိုလှော်ရေး ဝန်ကြီးဌာန၊ ဝန်ကြီးရုံး၊ နေပြည်တော်
 ဦးစိုးလွင်



Handwritten signature



အစီရင်ခံစာ

သစ်တောရေးရာဌာနမှ ပြုစုထားသော သစ်တောများ၏ ဝယ်ယူမှုပိုင်ခွင့်ပြုလက်မှတ်ရရှိရန်
ဆောင်ရွက်ထားသည့် သစ်တောများ၏ တွက်လွှာခေါ်ယူသည့် စာရင်း

စဉ်	သစ်တောအမျိုးအမည်	ဦးစိုက်ပင်အမှတ်	ပြောဆိုသူ	ဧရိယာ(ဧက)	မှတ်ချက်
၁	အိမ်ယာ	၂၆၂၂	၂၆	၀.၇၆	✓
၂	အိမ်ယာ	၂၆၂၂	၂၆	၀.၆၀	✓
၃	အိမ်ယာ	၃၁၂၄	၂၆	၇.၂၄	✓
၄	အိမ်ယာ	၃၅၂၂	၂၆	၀.၄၀	✓
၅	အိမ်ယာ	၃၆၂၃	၂၆	၀.၃၀	✓
၆	အိမ်ယာ	၃၇၂၂	၂၆	၁.၆၇	✓
၇	အိမ်ယာ	၂၆	၂၆	၃.၆၆	✓
၈	အိမ်ယာ	၃၀၂၃	၂၆	၃.၆၇	✓
၉	အိမ်ယာ	၃၇	၂၆	၀.၅၄	✓
၁၀	အိမ်ယာ	၆၈	၂၆	၀.၆၀	✓
၁၁	အိမ်ယာ	၁၆	၂၆	၀.၆၈	✓
၁၂	အိမ်ယာ	၈၂၂၂	၂၆	၀.၈၀	✓
၁၃	အိမ်ယာ	၃၈၂၃	၂၆	၁.၇၆	✓
၁၄	အိမ်ယာ	၂၆၂၃	၂၆	၁.၃၅	✓
၁၅	အိမ်ယာ	၂၉၂၃	၂၆	၂.၃၃	✓
၁၆	အိမ်ယာ	၈၂၃	၂၆	၀.၉၂	✓
၁၇	အိမ်ယာ	၂၈၂၃	၂၆	၀.၉၆	✓
၁၈	အိမ်ယာ	၃၀၆၂၃	၂၆	၁.၂၄	✓
၁၉	အိမ်ယာ	၂၅၂၃	၂၆	၈.၀၃	✓
၂၀	အိမ်ယာ	၂၆	၂၆	၁.၄၂	✓
၂၁	အိမ်ယာ	၈၂၃	၂၆	၀.၆၃	✓
အစီရင်ခံစာရေးဆရာ (၂) ဦး ဦးဖိုးစွန်း (၂) ဦး ဦးအောင်ကျော် (၂) ဦး				 အစီရင်ခံစာရေးဆရာ (၂) ဦး ဦးအောင်ကျော် 	

Appendix 7.3.2

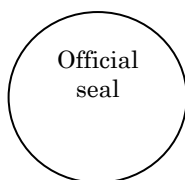
(English Translation)

Form-2

Ministry of Agriculture & Irrigation
Department of Settlement & Land Record
Bago Regional Division / State, Taungoo District, Taungoo Township

**Notice to be insisted if any for the application of land use certificate
We pronounce to the people to know**

Bago Regional Division / State, Taungoo District, Taungoo Township, Sin Seik Ward/ Village Tract, Plot No; 560 A, For the farmlands in this plot, anybody can insist from 31st Jul, 2013 to 30th Aug, 2013 (within total 30 days) for the application for the land use certificate. It is noticed that it will be processed out those application for land use in accordance with the rules & regulations if there is no insist letter at that day or before that day, but no acceptable any insist letter over due.



(Augn Aye Chan Win<Mr.>
Staff Officer
Department of Settlement & Land
Record
Taungoo

Date- 31th Jul, 2013

Appendix- 2

Bago Regional Division, Taungoo District, Taungoo Township, (Sin Seik)Village Tract, Plot No; 560 A, the list of applicants, to whom to be insisted to if any, for the land use certificate application

Sr.	Name of farmer	Holding no	Kinds of land	Areas	Remark
1	Daw Thida Aung	43/1	Farmland	2.62	
2	Daw Thida Aung	28/12	Farmland	4.3	
3	Daw Saung Hnin Pwint	28/10	Farmland	0.15	
4	U Myint Oo	24/2	Farmland	1.24	
5	U Hein Zaw +1	10/4	Farmland	1.49	
6	Daw Kyu Kyu	2/3	Farmland	0.73	
7	Daw Kyu Kyu	A7/2	Farmland	2.10	
8	Daw Kyu Kyu	79/2	Farmland	1.56	
9	Daw Kyu Kyu	80/1	Farmland	0.82	
10	Daw Kyu Kyu	79/1	Farmland	1.80	
11	U Than Naing	28/8	Farmland	0.2	
12	U Hal Po	8/3	Farmland	0.26	
13	U Aung Toe	8/4	Farmland	0.33	
14	U Aung Ngu	25/2	Farmland	0.21	
	Total farmers	9			
	Total holding	14			
	Total Area (acres)	17.95			
				Aung Aye Chan Lwin	
				Staff officer	
				DSLRL	
				Taungoo	

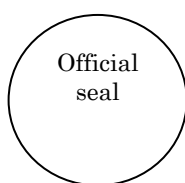
(Note; the name of applicants for EC Taungoo is Daw Kyu Kyu (Principle))

Form-2

Ministry of Agriculture & Irrigation
Department of Settlement & Land Record
Bago Regional Division / State, Taungoo District, Taungoo Township

**Notice to be insisted if any for the application of land use certificate
We pronounce to the people to know**

Bago Regional Division / State, Taungoo District, Towngoo Township, Sin Seik Ward/ Village Tract, Plot No; 561 B, For the farmlands in this plot, anybody can insist from 31st Jul, 2013 to 30th Aug, 2013 (within total 30 days) for the application for the land use certificate. It is noticed that it will be processed out those application for land use in accordance with the rules & regulations if there is no insist letter at that day or before that day, but no acceptable any insist letter over due.



(Augn Aye Chan Win<Mr.>
Staff Officer
Department of Settlement & Land
Record
Taungoo

Date- 31th Jul, 2013

Appendix- 2

Bago Regional Division, Taungoo District, Towngoo Township, (Sin Seik) Village Tract, Plot No; 561_B, the list of applicants, to whom to be insisted to if any, for the land use certificate application

Sr.	Name of farmer	Holding no	Kinds of land	Areas	Remark
1	Daw Kay Thwe Aung	29/2	Farmland	0.76	
2	Daw Kyu Kyu	24/2	Farmland	0.90	
3	Daw Kyu Kyu	11/4	Farmland	3.24	
4	Daw Kyu Kyu	15/2	Farmland	0.48	
5	Daw Kyu Kyu	15/3	Farmland	0.38	
6	Daw Kyu Kyu	30/2	Farmland	1.67	
7	Daw Kyu Kyu	26	Farmland	3.69	
8	Daw Kyu Kyu	101/1	Farmland	3.67	
9	Daw Kyu Kyu	17	Farmland	0.54	
10	Daw Kyu Kyu	98	Farmland	0.60	
11	Daw Kyu Kyu	16	Farmland	0.98	
12	Daw Kyu Kyu	82/2	Farmland	0.80	
13	Daw Kyu Kyu	18/1	Farmland	1.79	
14	Daw Kyu Kyu	24/1	Farmland	1.15	
15	Daw Kyu Kyu	23/1	Farmland	2.31	
16	Daw Kyu Kyu	81/1	Farmland	0.32	
17	Daw Kyu Kyu	28/1	Farmland	0.36	
18	Daw Kyu Kyu	106/3	Farmland	1.24	
19	Daw Kyu Kyu	25/1	Farmland	8.01	
20	Daw Kyu Kyu	27	Farmland	1.42	
21	Daw Kyu Kyu	82/1	Farmland	0.63	
	Total farmers	2			
	Total holding	21			
	Total Area (acres)	37.35			
				Aung Aye Chan Lwin	
				Staff officer	
				DSLRL	
				Taungoo	

(Note; the name of applicants for EC Taungoo is Daw Kyu Kyu (Principle))

Appendix 7.3.3

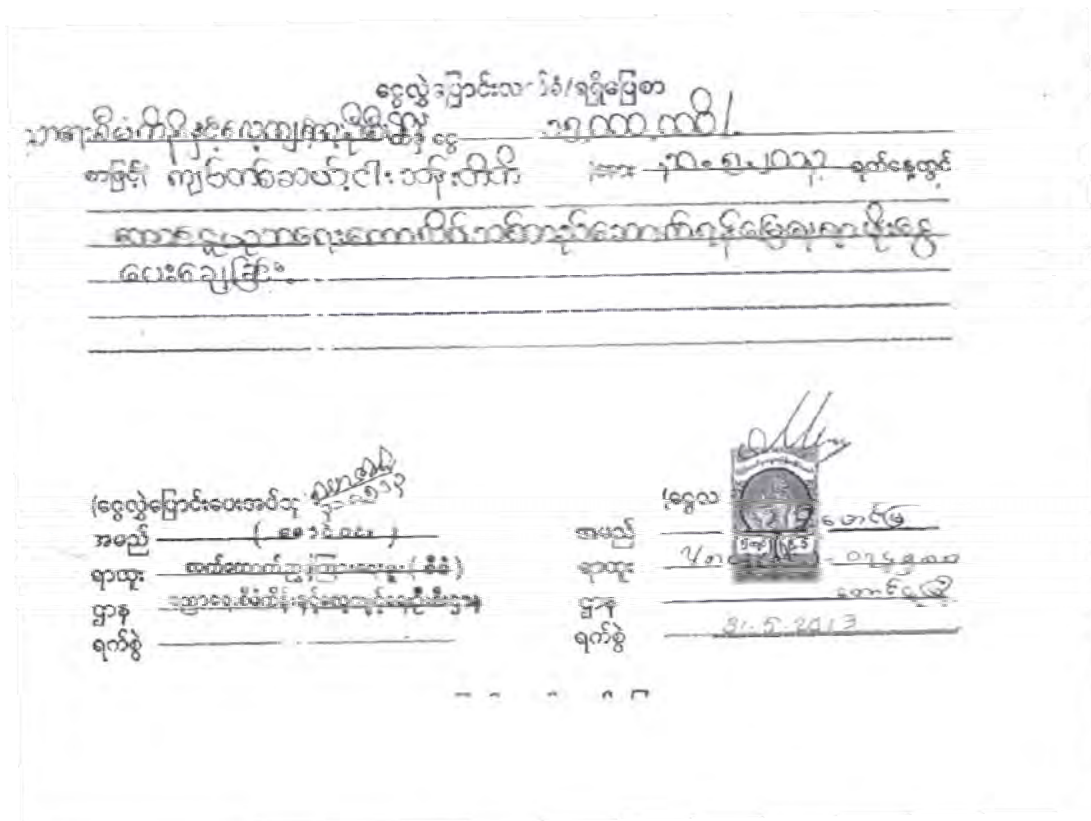
Receipts
Local Coordinator (U Maung Aye)
for Advance Payments on land acquisitions (Farming Rights) for New Taungoo Education College

Receipt 1 (24th Dec. 2012)



Receipt	
	24 th Dec. 2012
I received 35 million Kyats from Director U San Win, DEPT MOE to buy the land for the construction of EC Taungoo	
	Signature Name U Manug Mya NRC Address

Receipt 2 (24th Dec. 2012)



Receipt	
From - Department of Education Project & Training	
Amount - 15,000,000	
(in words) - (Fifteen millions kyats)	
For - Purchasing the land proposed for new EC project	
Paid By	Received By
Name - U Win	Name - U Maung Mya
Position - Assistant Director	Position - 7/Ta Nga Na
Department - DEPT Department - Taungoo	(N)074588
	Date - 31.5.2013

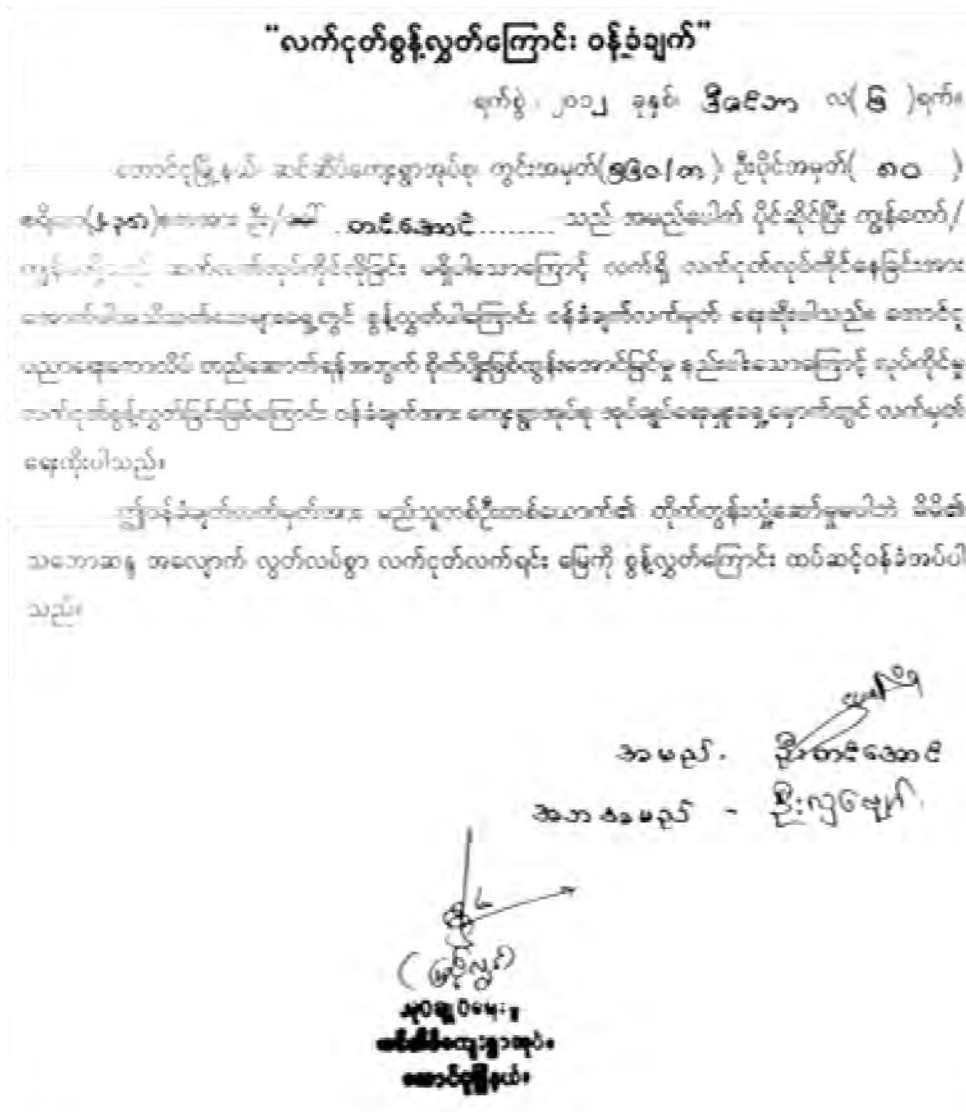
Appendix 7.3.4

Relevant Documents on Sale of Farming Right (U Tin Aung)

1. The contract between the Local Coordinator of MOE (U Maung Mya, as the buyer) and the seller (U Tin Aung), the Witnesses: U Myint Nyo (local coordinator), U Myint Lwin (Village tract administrative officer)



2. Agreement on Release of the land signed by U Tin Aung




3. The receipt of money (4,760, 000 Kyat) for selling the land (2.38 acre) signed by U Tin Aung

ငွေလက်ခံရရှိကြောင်းပြေစာ


ရက်စွဲ၊ ၆ - ၁၂ - ၂၀၁၂

ကောင်းညွန့်နယ် ဆင်ခိပ်ကျေးရွာတွင်စု ကွင်းထဲမှတ် (၅၅၀/၈) နှင့် နှိုင်းအမှတ်
 ၈၀၂/၁ နှင့် ဆိုင်ပတ် (၂.၃၈) ဧကအား နှိုင်း၏ ဝယ်ယူခံအဖြစ် သည် ၂၀၁၂ ခုနှစ်
 ဒီဇင်ဘာ (၆) ရက်နေ့တွင် ရောင်းချခဲ့ပါသည်။


သို့ဖြစ်ပါ၍ စုစုပေါင်း (၂.၃၈) ဧကအတွက် ငွေ (၄,၇၆၀,၀၀၀/-) ကျပ်
 (ကျပ် လေးဆယ့်ခုနစ်သိန်းခြောက်သောင်းတိတိ) အား လက်ခံရရှိကြောင်း ဝန်ခံတံတံ
 ပြုပါသည်။



ငွေပေးဆုသူ
ဦးဖောင့်မြ

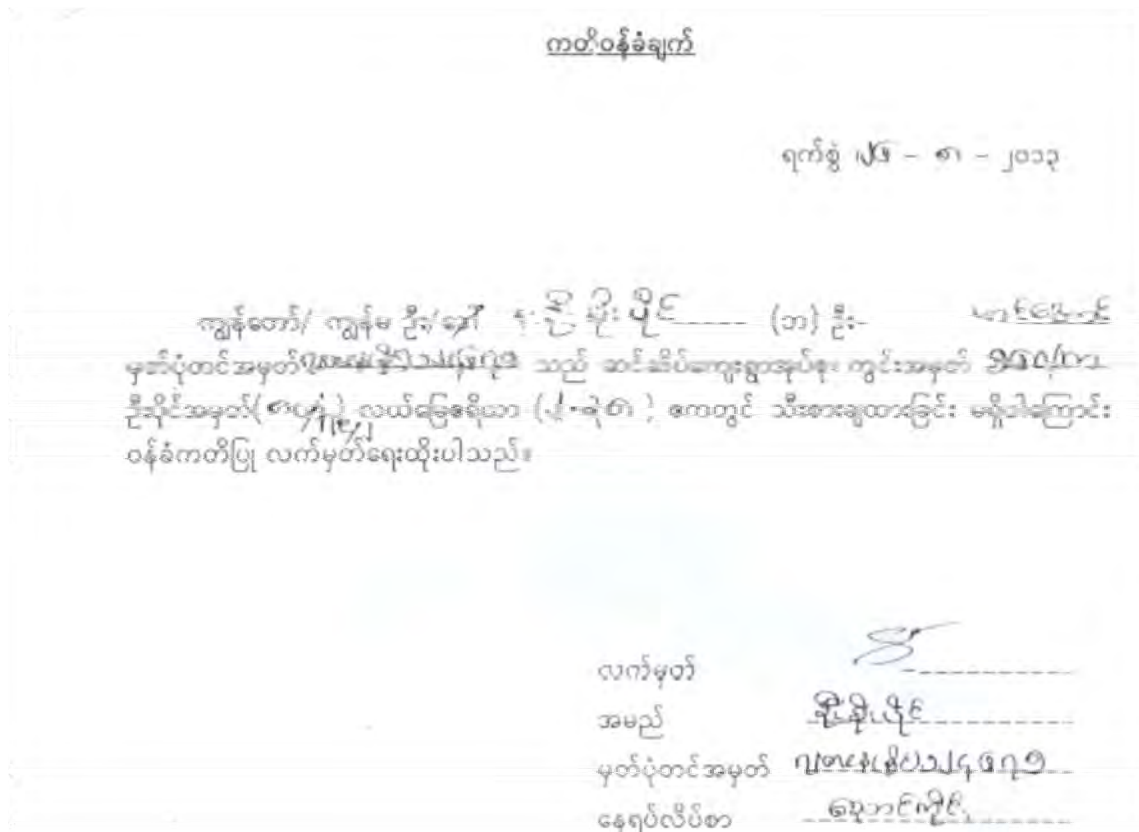


(နှိုင်း)
 မှတ်ချက်များ
 ဆင်ခိပ်ကျေးရွာတွင်
 ကောင်းညွန့်နယ်



ငွေလက်ခံရရှိသူ
ဦးတင်စော

4. Acknowledgment on “no Peasant (permanent tenant farmer)” in the farmland (Reference Document)



Acknowledgement

Date- 26th, Aug, 2013

It is acknowledged & signed below by U Soe Paing, (father’s name) U Tin Aung, ID no; 7/Ta Nga Na (N) 124675 that there is no peasants who rent her land for cultivation or no tenant farmers in her land, plot no (560 A), holding no (80/1 & 79/2) with the area of (2.38 acres) in Sin Seik village tract.

Signature- _____
 Name- U Soe Paing
 NRC (ID no)- 7/Ta Nga Na (N) 124675
 Address- Nyaung Kaing village, Taungoo

Note: This is as acknowledgement letter of U Soe Paing for no peasants in the land. U Soe Paing is son of U Tin Aung.

5. Land revenue or tax payment slips (issued for U Tin Aung for 2012-2013) (Reference Document)

ပြည်ထောင်စု အခွန်ကြေးစာရင်းစာရွက်
 ၂၀၁၂-၂၀၁၃ ခုနှစ်

စာမျက်နှာအမှတ်	အခွန်အမျိုးအစား	ပမာဏ	သက်တမ်း
၂။ ကွင်းအမှတ် ၅၅၀			
၃။ ကွင်းအမှတ် ၅၅၀			
၄။ ဦးစီးအမှတ် (၈၀)			
၅။ ချေးသက်တမ်းအရ		၅၂	
၆။ (၁) စည်းကြပ်သည့်အခွန် (အိမ်အခွန်) ဝ/၊	၈၅	၃/	၅၂
(၂) စည်းကြပ်သည့်အခွန် (အိမ်အခွန်) ဝ/၊			
(၃) ချေးသက်တမ်း			
စုစုပေါင်း			၅၂
၇။ မိမိကြေး			၅
၈။ စည်းကြပ်သည့်အခွန်			
၉။ သက်တမ်းအရ			၃/
၁၀။ ကောက်ခံရမည့်အခွန်			
၁၁။ ကောက်ခံရမည့်အခွန်			
၁၂။ ကောက်ခံရမည့်အခွန်			

ချေးသက်တမ်းအရ
 ချေးသက်တမ်းအရ
 ချေးသက်တမ်းအရ

ပြည်ထောင်စု အခွန်ကြေးစာရင်းစာရွက်
 ၂၀၁၂-၂၀၁၃ ခုနှစ်

စာမျက်နှာအမှတ်	အခွန်အမျိုးအစား	ပမာဏ	သက်တမ်း
၂။ ကွင်းအမှတ် ၅၅၀			
၃။ ကွင်းအမှတ် ၅၅၀			
၄။ ဦးစီးအမှတ် (၈၀)			
၅။ ချေးသက်တမ်းအရ		၅၂	
၆။ (၁) စည်းကြပ်သည့်အခွန် (အိမ်အခွန်) ဝ/၊	၈၅	၃/	၅၂
(၂) စည်းကြပ်သည့်အခွန် (အိမ်အခွန်) ဝ/၊			
(၃) ချေးသက်တမ်း			
စုစုပေါင်း			၅၂
၇။ မိမိကြေး			၅
၈။ စည်းကြပ်သည့်အခွန်			
၉။ သက်တမ်းအရ			၃/
၁၀။ ကောက်ခံရမည့်အခွန်			
၁၁။ ကောက်ခံရမည့်အခွန်			
၁၂။ ကောက်ခံရမည့်အခွန်			

ချေးသက်တမ်းအရ
 ချေးသက်တမ်းအရ
 ချေးသက်တမ်းအရ

ပြည်ထောင်စု အခွန်ကြေးစာရင်းစာရွက်
 ၂၀၁၂-၂၀၁၃ ခုနှစ်

စာမျက်နှာအမှတ်	အခွန်အမျိုးအစား	ပမာဏ	သက်တမ်း
၂။ ကွင်းအမှတ် ၅၅၀			
၃။ ကွင်းအမှတ် ၅၅၀			
၄။ ဦးစီးအမှတ် (၈၀)			
၅။ ချေးသက်တမ်းအရ		၅၂	
၆။ (၁) စည်းကြပ်သည့်အခွန် (အိမ်အခွန်) ဝ/၊	၈၅	၃/	၅၂
(၂) စည်းကြပ်သည့်အခွန် (အိမ်အခွန်) ဝ/၊			
(၃) ချေးသက်တမ်း			
စုစုပေါင်း			၅၂
၇။ မိမိကြေး			၅
၈။ စည်းကြပ်သည့်အခွန်			
၉။ သက်တမ်းအရ			၃/
၁၀။ ကောက်ခံရမည့်အခွန်			
၁၁။ ကောက်ခံရမည့်အခွန်			
၁၂။ ကောက်ခံရမည့်အခွန်			

ချေးသက်တမ်းအရ
 ချေးသက်တမ်းအရ
 ချေးသက်တမ်းအရ

ဤပြစ်ဒဏ်သည် အခွန်ကြေးစာရင်းစာရွက် ချုပ်ဆိုရန်
 ပြစ်ကြောင်း သတ်သေခံလက်မှတ်မဟုတ်။ အခွန်တောင်းခံသည့်
 သူများ၏ ဦးစီးအမှတ်ကို သိလိုပါက သက်ဆိုင်သူများထံရှိ ခြေတိုင်း
 စာရင်းကောက်တမ်းကြည့်ရှုနိုင် သည်။ ခြေတိုင်းစာရင်း
 (၁)ကောက်ခံရမည့်အခွန်နှင့် အခွန်ကောက်ခံသူ ထက်ရှမ်းစပါးချုပ်
 အခွန်မဝေးရ(၂)ရပ်ကွက်/ကော့ရွာစာရင်း ထုတ်ပြန်ရေးမှူး (သို့မဟုတ်)
 ၎င်း၏ကိုယ်စားလှယ်မှ တစ်ပါး တခြားသူကို အခွန်မဝေးရ

အခွန်ချုပ်ကြီးများကို တောင်းဆိုရာတွင် စတင်အောင် ငြင်းဝယ်သည့်
 မှတ်တမ်းနှင့် နှစ်တမ်း

အခွန်မဝေးရပုဂံကွက်ထုတ် အခွန်တောင်းဆိုကြောင်း ရှိကုန်စာရင်းစာရင်း (သို့မဟုတ် ၎င်းသူကို ရွာချုပ်ချေမှုန် နှစ်တမ်းကို ကြော်ငြာပျဉ်းကြားတွင် တစ်ထား ထည့်) ရက်စွဲ
နှစ်တမ်းစာရင်းကောက် တမ်းအောင်သည့်ရက်စွဲ
ခွဲစားစာရင်းစာရင်းစာရင်းစာရင်း
အခွန်ကောက်ခံသူထက်မှတ်

*This receipt is only for tax purpose. This does not serve as an evidence of land ownership. If the list of tax payable individuals is wanted, the concerned individual can make request to Land Administrator officer. Tax shall not be paid (1) if the receipt is signed by Collector or Tax Collector and (2) apart from Chief Administrator or his representative.

Record of the tax and Crop tax Evasion

Date of the issues of tax evasion notice (or the Date of the notice being pasted on Notice Board because the payer is not found in the village) -----
Amount paid after notice -----
Date of Payment -----
Tax collector's signature -----

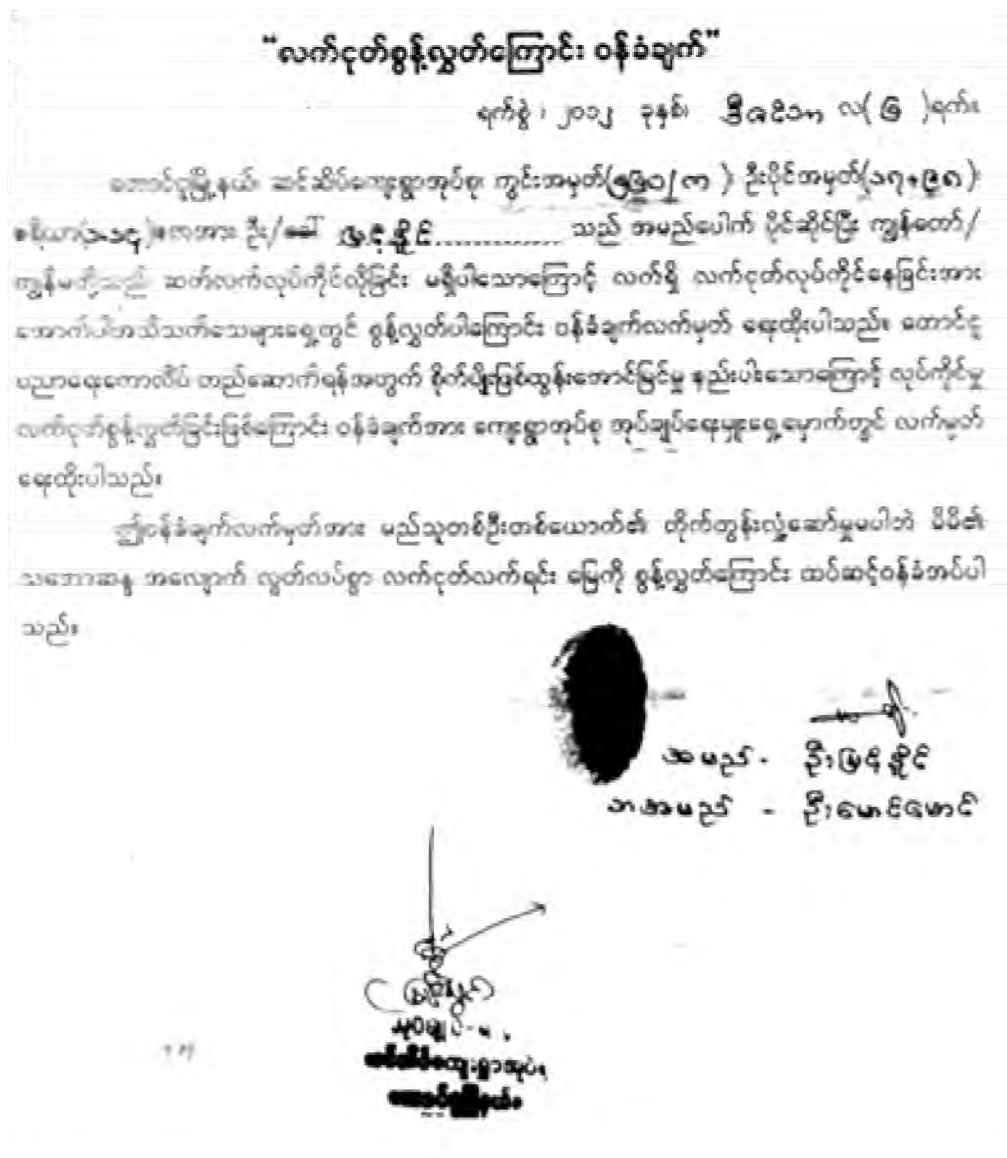
Appendix 7.3.5

Relevant Documents on Sale of Farming Right (U Myint Naing)

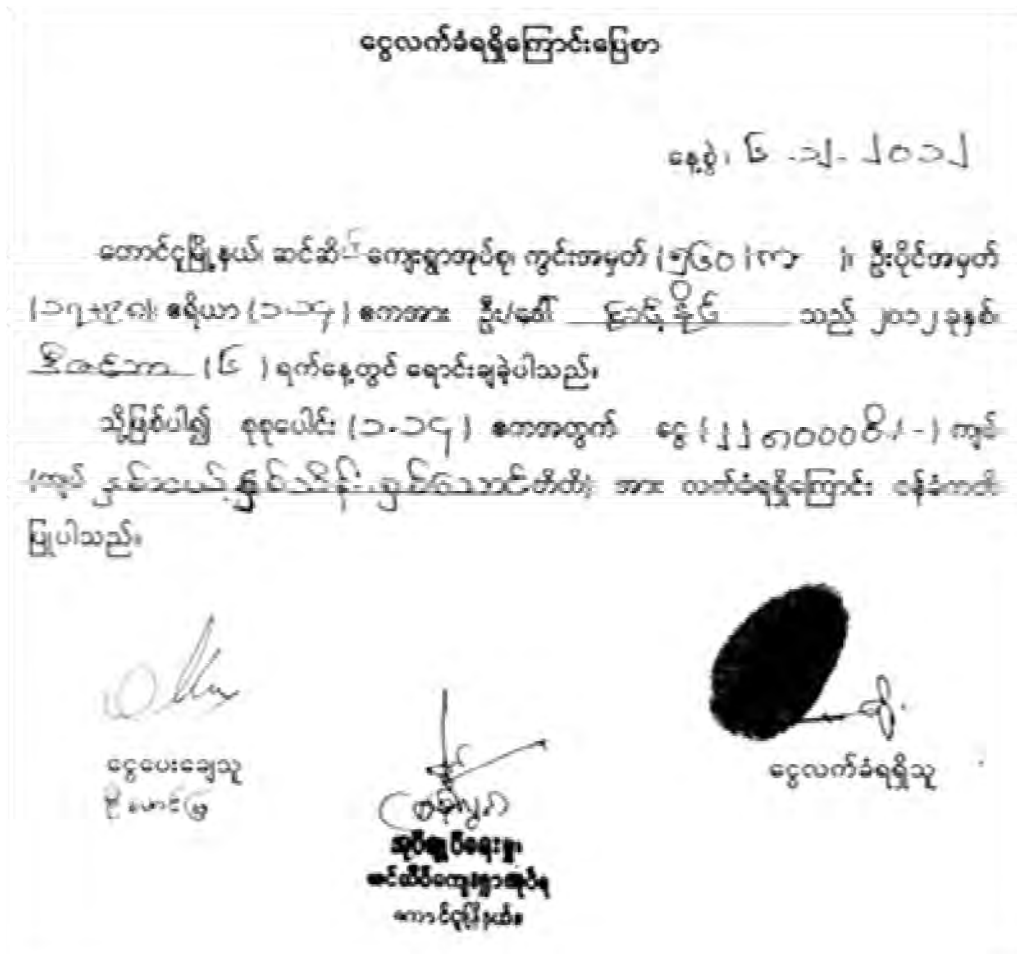
1. The contract between the Local Coordinator of MOE (U Maung Mya, as the buyer) and the seller (U Myint Naing), the Witnesses: U Myint Nyo (local coordinator), U Myint Lwin (Village tract administrative officer)



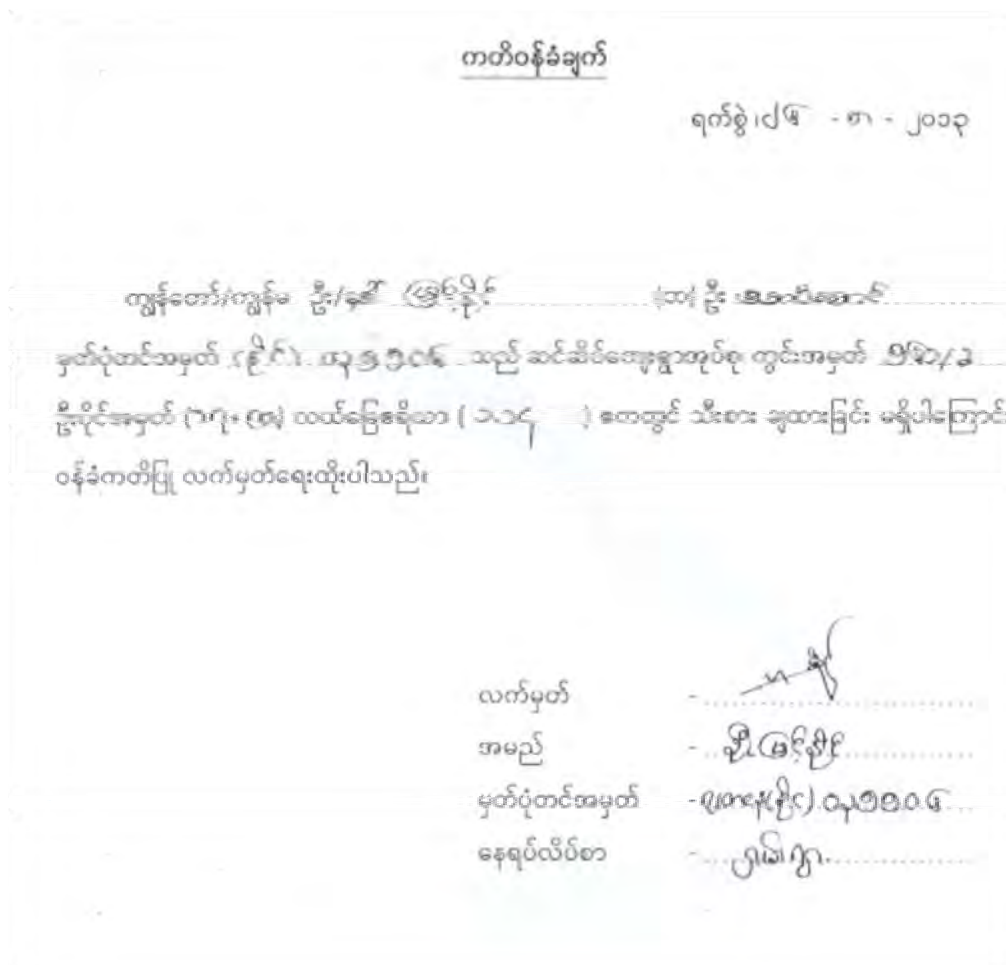
2. Agreement on Release of the land signed by U Myint Naing



3. The receipt of money (2,280, 000 Kyats) for selling the land (1.14 acre) signed by U Myint Naing



4. Acknowledgment on “no Peasant (permanent tenant farmer)” in the farmland (Reference Document)



Acknowledgement

Date- 26th, Aug, 2013
It is acknowledged & signed below by U Myint Naing, (father's name) U Maung Maung, ID no; 7/Ta Nga Na (N) 035506 that there is no peasants who rent her land for cultivation or no tenant farmers in her land, plot no (561 B), holding no (17+98) with the area of (1.14 acres) in Sin Seik village tract.

Signature- _____
Name- U Myint Naing
NRC (ID no)- 7/Ta Nga Na (N) 035506
Address- Shan Ywar village, Taungoo

Note: This is an acknowledgement letter of U Myint Naing for no peasants in his land

5. Land revenue or tax payment slips (issued for U Myint Naing for 2012-2013) (Reference Document)

အမှတ်အသား	အမည်	အခြေအနေ	နှုန်း	ပမာဏ
၁	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	၁၄၅	၁၄၅
၂	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	၁၄၅	၁၄၅
၃	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	၁၄၅	၁၄၅
၄	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	၁၄၅	၁၄၅
၅	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	၁၄၅	၁၄၅
၆	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	၁၄၅	၁၄၅
၇	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	၁၄၅	၁၄၅
၈	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	၁၄၅	၁၄၅
၉	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	၁၄၅	၁၄၅
၁၀	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	မြို့နယ်အုပ်ချုပ်ရေးဦးစီးဌာန	၁၄၅	၁၄၅

ဤပြတ်ပိုင်းသည် အခွန်ပြေစာသာဖြစ်သည်။ မြေပိုင်ရှင် ပြစ်ကြောင်း သက်သေခံလက်မှတ်မဟုတ်။ အခွန်ဆောင်ဆန်သည့် သူများ၏ ဦးပိုင်စာရင်းကို သိလိုပါက သက်ဆိုင်သူများသည် မြေပိုင်ရှင် စာရေးထံလျှောက်ထား၍ ကြည့်ရှုနိုင် သည်။ မြေပိုင်ရှင်အပါအဝင် (၁)ကော်လီမတ္တီအရာရှိနှင့် အခွန်ကောက်ခံသူ ယင်းတို့၏အသွင် အခွန်မဝေးချေ(၂)ရပ်ကွက်/ကျေးရွာအုပ်စု အုပ်ချုပ်ရေးမှူး (သို့မဟုတ်) ၎င်း၏ကိုယ်စားလှယ်မှ တစ်ပါး အခြားသူကို အခွန်မဝေးချေ

အခွန်နှင့်ဆိုင်ကြေးများကို ဆောင်ရွက်ရာတွင် စတင်ဆောင် ကြမ်းဝယ်လျှင် ဖုတ်ထားရန် ဖုတ်တမ်း

အခွန်မဝေးချေမှုကွက်တွင် အခွန်ဆောင်ဆန်ကြောင်း မှီတစ်စာဝေးအပ်သည့် (သို့မဟုတ် ၎င်းသူတို့ ရွာတွင်နေထိုင်၍ မှီတစ်စာကို ကြော်ငြာဖျက်ကြားတွင် တပ်ထား သည့်) ရက်စွဲ
မှီတစ်စာထုတ်ပြီးနောက် ထပ်ဆောင်သည့်ရက်စွဲ
ခွန်ဆောင်ဆန်သည့်ရက်စွဲ
အခွန်ကောက်ခံထုလက်ရက်

*

***This receipt is only for tax purpose. This does not serve as an evidence of land ownership.** If the list of tax payable individuals is wanted, the concerned individual can make request to Land Administrator officer. Tax shall not be paid (1) if the receipt is signed by Collector or Tax Collector and (2) apart from Chief Administrator or his representative.

Record of the tax and Crop tax Evasion

Date of the issues of tax evasion notice (or the Date of the notice being pasted on Notice Board because the payer is not found in the village) -----
Amount paid after notice -----
Date of Payment -----
Tax collector's signature -----

Appendix 7.3.6

Relevant Documents on Sale of Farming Right (Daw Nu Khin)

1. The contract between the Local Coordinator of MOE (U Maung Mya, as the buyer) and the seller (Daw Nu Khin), the Witnesses: U Myint Nyo (local coordinator), U Myint Lwin (Village tract administrative officer)



2. Agreement on Release of the land signed by Daw Nu Khin

“လက်ငုတ်စွန့်လွှတ်ကြောင်း ဝန်ခံချက်”

ရက်စွဲ ၊ ၂၀၁၂ ခုနှစ်၊ ဒီဇင်ဘာလ (၁၆) ရက်၊

တောင်ငူမြို့နယ်၊ ဆင်ဆိပ်ကျေးရွာအုပ်စု၊ ကွင်းအမှတ်(၅၆၀/က) ဦးပိုင်အမှတ်(၁၈)
 ဧရိယာ(၂.၇၇)ဧကအား ဦး/ဒေါ်စုခင် သည် အမည်ပေါက် ပိုင်ဆိုင်ပြီး ကွန်တော်/
 ကျွန်ုပ်တို့သည် ဆက်ခက်ရောင်းကိုင်ပိုင်ခြင်း မရှိပါသောကြောင့် ဆက်၌ လက်ငုတ်လုပ်ကိုင်နေခြင်းအား
 တောင်းပန်လျှော့ချပေးရန်အတွက် စွန့်လွှတ်ပါကြောင်း ဝန်ခံချက်ပေးတော်မူခဲ့ပါသည်။ တောင်ငူ
 မြို့နယ်အကျယ်အဝန်း စာညွှန်းစာအုပ်နှင့် ဆက်၌ နိုင်ငံခြားမြေပုံအောင်မြင်မှု စာညွှန်းစာအုပ်နှင့် ဆက်၌
 လက်ငုတ်စွန့်လွှတ်ခြင်းကြောင့် ဝန်ခံချက်အား ကျေးရွာအုပ်စု အုပ်ချုပ်ရေးမှူးနှင့် မှောက်တွင် လက်မှတ်
 ရေးထိုးပါသည်။

ဤဝန်ခံချက်ပေးတော်မူခြင်းအား မည်သူတစ်ဦးကောင်းကောင်း တိုက်တွန်းသည့်အခါမှပင်မိမိ၏
 သဘောဆန္ဒ အလျောက် လွတ်လပ်စွာ လက်ငုတ်လက်ရင်း မြေကို စွန့်လွှတ်ကြောင်း ထပ်ဆင့်ဝန်ခံအပ်ပါ
 သည်။

အမည်ပေါက်စုခင်၏အမည်ရေးစဉ်
 ဘ.အမည် - ဦးစွန်
 မှတ်ပုံတင်အမှတ် - ၇/၈၀၂၂၄၆၆၅၆၇၆၈၆

အသိပေးရန်အတွက်

(စွန့်လွှတ်)
 ဘ.အမည်ရေးစု
 ဆင်ဆိပ်ကျေးရွာအုပ်စု
 တောင်ငူမြို့နယ်

3. The receipt of money (5,540, 000 Kyats) for selling the land (2.77 acre) signed by Daw Nu Khin

ငွေလက်ခံရရှိကြောင်းပြေစာ

နေ့စွဲ၊ ၆ - ၁၂ - ၂၀၁၂

ဘောင်ရွှေပြုံးနယ်၊ ဆင်ခိပ်ကျေးရွာအုပ်စု၊ တွင်းဆမုတ် (၅၅၀/၈) ၊ ဦးပိုင်အမှတ်
(၁၈) ၊ ဧရိယာ (၂.၇၇) ဧကအား ဦး/ဒေါ် နှစ်ဦးသည် ၂၀၁၂ ခုနှစ်၊
ဒီဇင်ဘာလ (၆) ရက်နေ့တွင် ရောင်းချခဲ့ပါသည်။

သို့ဖြစ်ပါ၍ ရောင်းပေါင်း (၂-၇၇) ဧကအတွက် ငွေ (၅၅၄၀၀၀၀)/- တွင်
ရက်ပိုင် ဦး/ဒေါ် နှစ်ဦး နှင့် ဦး/ဒေါ် နှစ်ဦး သက်ခံရရှိကြောင်း ဝန်ခံတတ်
ပြုပါသည်။


ငွေပေးချေသူ
ဦး/ဒေါ် နှစ်ဦး


(ဦး/ဒေါ် နှစ်ဦး)
အုပ်စုအဖွဲ့ဝင်
ဆင်ခိပ်ကျေးရွာအုပ်စု
ဘောင်ရွှေပြုံးနယ်



ငွေလက်ခံရရှိသူ
ဦး/ဒေါ် နှစ်ဦး

4. Acknowledgment on “no Peasant (permanent tenant farmer)” in the farmland (Reference Document)

ကတိဝန်ခံချက်

ရက်စွဲ: ၂၆ - ၈ - ၂၀၁၃

ကျွန်တော်/ကျွန်မ ဦး/ဒေါ် နုခင် (ဘ) ဦး အောင်
 မှတ်ပုံတင်အမှတ် ၇/တၢ ဂှာ နာ (N) ၀၄၇၉၈၆ သည် ဆင်ဆိပ်လှေးရွာအုပ်စု၊ ကွင်းအမှတ် ၅၆၁/၁
 ဦးပိုင်အမှတ် (၁၈၈) လယ်ခြေစဉ့်ယာ (၂ - ၇၇၇) ဧကတွင် သီးစား ချထားခြင်း မရှိပါကြောင်း
 ဝန်ခံကတိပြု လက်မှတ်ရေးထိုးပါသည်။

လက်မှတ် 
 အမည် ဒေါ်နုခင်
 မှတ်ပုံတင်အမှတ် ၇/တၢ ဂှာ နာ (N) ၀၄၇၉၈၆
 နေရပ်လိပ်စာ ၅၆၁/၁

Acknowledgement

Date- 26th, Aug, 2013

It is acknowledged & signed below by Daw Nu Khin, (father's name) U Htaw, ID no; 7/Ta Nga Na (N) 047986 that there is no peasants who rent her land for cultivation or no tenant farmers in her land, plot no (561 B), holding no (18) with the area of (2.77 acres) in Sin Seik village tract.

Signature- _____
 Name- Daw Nu Khin
 NRC (ID no)- 7/Ta Nga Na (N) 047986
 Address- Shan Ywar village, Taungoo

5. Land revenue or tax payment slips (issued for Daw Nu Khin_for 2012-2013) (Reference Document)

Handwritten form with Burmese text and a circular official stamp. The form includes a grid with columns for 'အမျိုးအမည်' (Name), 'မြို့နယ်' (Township), 'နယ်' (District), and 'အနယ်' (Sub-township). It contains handwritten entries such as '၁၇၉' and '၁၇၉'.

Handwritten form with Burmese text and a circular official stamp. It includes a grid with columns for 'အမျိုးအမည်' (Name), 'မြို့နယ်' (Township), 'နယ်' (District), and 'အနယ်' (Sub-township). It contains handwritten entries such as '၁၇၉' and '၁၇၉'.

Text-based form with Burmese text. It contains a paragraph of text and several lines for handwritten information. The text includes 'အခွန်ပေးဆောင်သူ၏ အချက်အလက်များ' and 'အခွန်ပေးဆောင်သူ၏ အချက်အလက်များ'.

*** This receipt is only for tax purpose. This does not serve as an evidence of land ownership.** If the list of tax payable individuals is wanted, the concerned individual can make request to Land Administrator officer. Tax shall not be paid (1) if the receipt is signed by Collector or Tax Collector and (2) apart from Chief Administrator or his representative.

Record of the tax and Crop tax Evasion

Date of the issues of tax evasion notice (or the Date of the notice being pasted on Notice Board because the payer is not found in the village) -----
Amount paid after notice -----
Date of Payment -----
Tax collector's signature -----

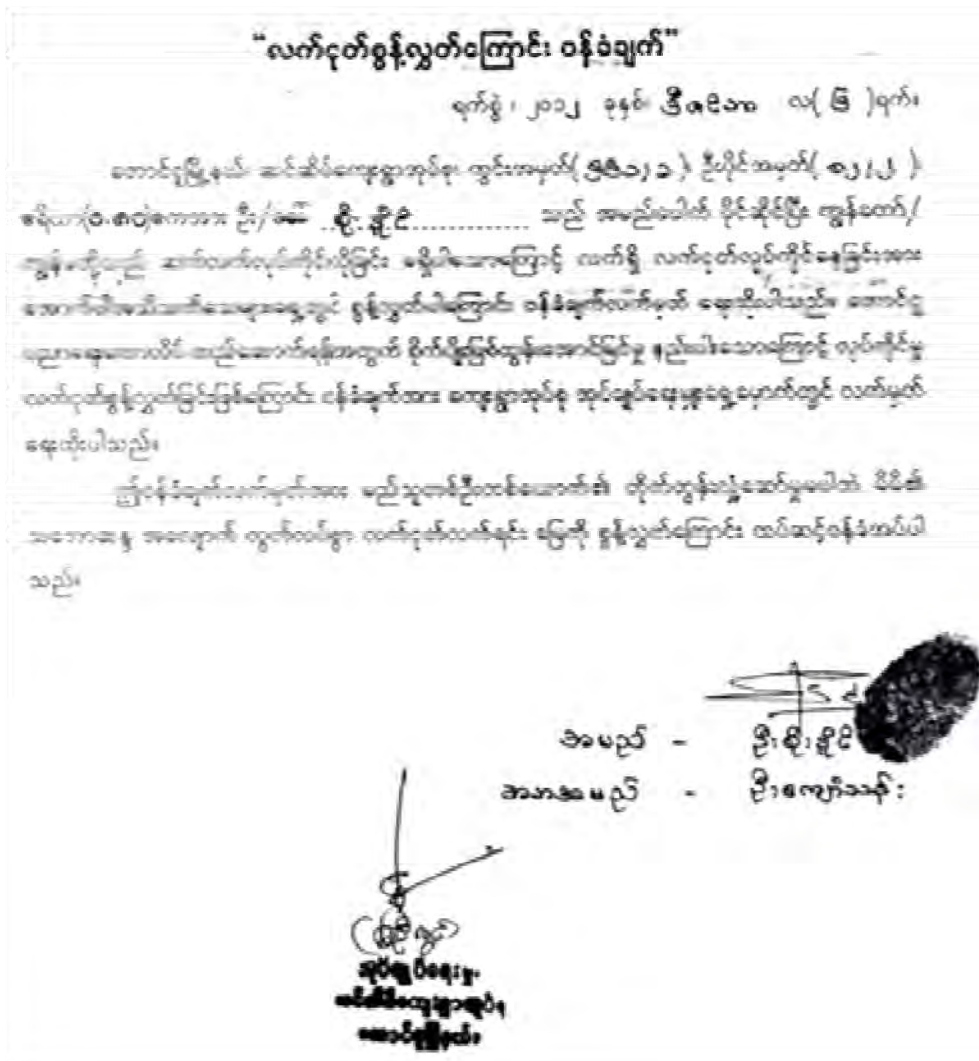
Appendix 7.3.7

Relevant Documents on Sale of Farming Right (U Soe Naing)

1. The contract between the Local Coordinator of MOE (U Maung Mya, as the buyer) and the seller (U Soe Naing), the Witnesses: U Myint Nyo (local coordinator), U Myint Lwin (Village tract administrative officer)



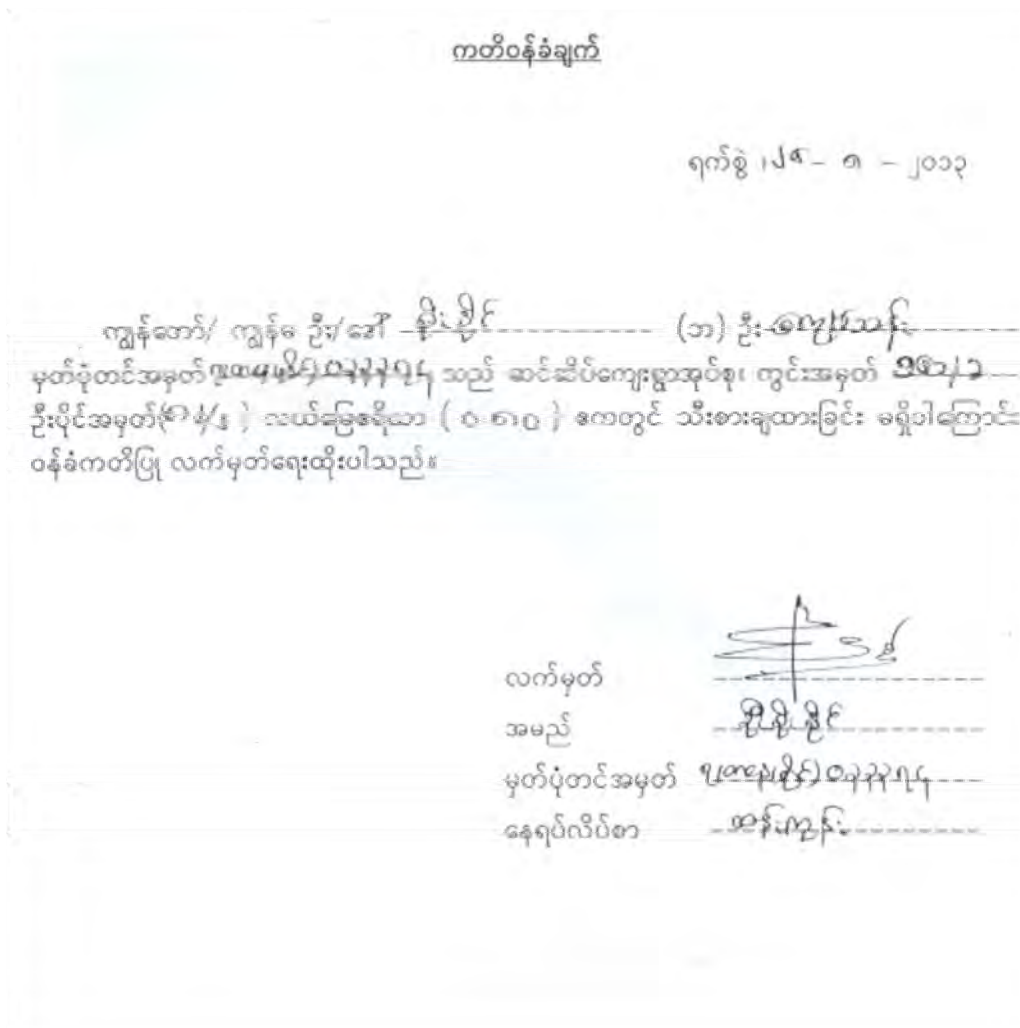
2. Agreement on Release of the land signed by U Soe Naing



3. The receipt of money (1,600, 000 Kyats) for selling the land (0.80 acre) signed by U Soe Naing



4. Acknowledgment on “no Peasant (permanent tenant farmer)” in the farmland (Reference Document)



Acknowledgement

Date- 26th, Aug, 2013

It is acknowledged & signed below by U Soe Naing, (father's name) U Kyaw Than, ID no; 7/Ta Nga Na (N) 033374 that there is no peasants who rent her land for cultivation or no tenant farmers in her land, plot no (560 B), holding no (82/2) with the area of (0.80 acres) in Sin Seik village tract.

Signature- _____
Name- U Soe Naing
NRC (ID no)- 7/Ta Nga Na (N) 033374
Address- Htan Gone village, Taungoo

5. Land revenue or tax payment slips (issued for Daw Nu Khin_for 2012-2013) (Reference Document)

မြန်မာနိုင်ငံ၊ မြန်မာနိုင်ငံတော်
၂၀၁၂ - ၂၀၁၃ ခုနှစ်

၀၁။ ကျေးရွာအမည်	အခြေစိုက်မှု ကဏ္ဍ	ဧက	ဧကယာ	သန့်ရှင်း
၀၂။ ကျွမ်းကျင်မှု	<p>ဤပြတ်ပိုင်းသည် အခွန်မြေစာသားပြင်သည်။ မြေပိုင်ရှင် ဖြစ်ကြောင်း၊ သတ်သေခံလက်မှတ်မဟုတ်။ အခွန်အောက်သို့သည့် သူများ၏ ဦးပိုင်စာရင်းကို သိလိုပါက သက်ဆိုင်သူများထံရှိ မြေပိုင် စာရေးထံလျှောက်ထား၍ ကြည့်ရှုနိုင် သည်။ မြေစာပြတ်ပိုင်းစာပါ (၁)ကော်လီထောင်အရာရှိနှင့် အခွန်ကောက်ခံသူ လက်မှတ်ပေးလျှင် အခွန်မပေးချေ(၂)ရက်တွက်/ကောက်ခံသူ အုပ်ချုပ်ရေးမှူး (သို့မဟုတ်) ၎င်း၏ကိုယ်စားလှယ်မှ တစ်ပါး အခြားသူတို့ အခွန်မပေးချေ</p>			
၀၃။ ကျွမ်းကျင်မှု				
၀၄။ ဦးပိုင်စာရင်း				
၀၅။ ဧကယာ				
၀၆။ (၁) ဧည့်ကြပ်သည့်အမည် (သို့မဟုတ်)	၀၇။ (၂) ဧည့်ကြပ်သည့်အမည် (မြေပိုင်ရှင်)	၀၈။ (၃) မြေပိုင်ရှင်		
၀၉။ နိုင်ငံခြား				
၁၀။ စည်းကြပ်သည့်ဧကယာ				
၁၁။ သင့်ရည်ပေးပါသည့်				
၁၂။ ကော်လီထောင်အရာရှိအင်အား				
၁၃။ သင့်ရည်ပေးပါသည့်				
၁၄။ ကော်လီထောင်အရာရှိလက်မှတ်				
၁၅။ မြေပိုင်ဆိုင်သူ				
၁၆။ မြေပိုင်ကြောင်း၊ ကောက်ခံသူအဖွဲ့အစည်းသားသားအဖနှင့် မြေပိုင်ဆိုင်လက်မှတ်				

အခွန်နှင့်ပိုင်ကြေးများကို စတင်ဆောင်ရွက်ရန် ခြင်းစပ်လျှင်
မှတ်သားရန် ခုတ်တမ်း

အခွန်မဆောင်ရွက်သူက သူ၏ အခွန်မတောင်းဆိုကြောင်း၊
နိုင်ငံစာရေးစာပေသည် (သို့မဟုတ်) ၎င်းသူတို့ အဖွဲ့အစည်းရှိ ဦးပိုင်စာကို
ကြော်ငြာပျဉ်းပြားတွင် တင်ထား သည့် ရက်နေ့ -----
နိုင်ငံစာရေးစာပေဆောင်ရွက် ထမ်းဆောင်သည့်နေ့
စတင်ဆောင်ရွက်ရန် -----
အခွန်အောက်ခံသူလက်မှတ်

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