# Appendices

Name	Affiliation	Location	Date
Saw Kaw Muh Too (Henry)	BHN	Hpa-an, Kayin State, Myanmar	2019/2/11
Zar Ni	BHN	Hpa-an, Kayin State, Myanmar	2019/2/11
	BHN	Hpa-an, Kayin State, Myanmar	2019/2/11
	BHN	Hpa-an, Kayin State, Myanmar	2019/2/11
Nicola Williams	The Asia Foundation	Yangon, Myanmar	2019/2/22
Kyi Phyo	MEE Net Myanmar	Yangon, Myanmar	2019/2/22
Peter Barwick	United Nations	Yangon, Myanmar	2019/2/21
Naw Thet Thet Htun	Karen Women Empowerment Group	Yangon, Myanmar	2019/2/21
Aung Myint	Renewable Energy Association Myanmar	Yangon, Myanmar	2019/2/21
Pyi Pyi Thant	Heinrich Böll Stiftung Myanmar	Yangon, Myanmar	2019/2/18
Khin Ma Ma Myo	Myanmar Institute of Gender Studies	Yangon, Myanmar	2019/2/17
Fukio Tsuji	Peace Winds Japan	Hpa-an, Kayin State, Myanmar	2019/2/16
Saw Tha Moo	Local organisation	Yangon, Myanmar	2019/2/15

# Appendix 1: Semi-structured Interviews

Ugan Manandhar	WWF Myanmar	Yangon, Myanmar	2019/2/13
Akio Takahashi	Institute of Advanced Studies on Asia, The University of Tokyo	Tokyo, Japan	2019/3/11
Ashley South	Independent researcher	Skype	2019/3/27

### **Appendix 2: Brief History of Ethnic Armed Organisations**

#### Appendix 2-1: British Colonial Period

Two methods of governance were used during the British colonial period. One was direct governance in the flat plain regions of present-day Tanintharyi region, Rakhine state, Bago region, and Ayeyarwady region, which were then called Burma proper or ministerial Burma. In contrast, peripheral areas such as the Shan kingdom were left autonomous (Myint-U, 2011; Burke et al., 2017; Nemoto, 2014). The colonial government also supported the construction of Christian mission schools, which then expanded mainly amongst the Kachin, Chin, and Karen peoples (Encyclopedia Britannica, 2018). The colonial government appointed members of minorities who were primarily Christian to be part of the military and the police, thereby connecting them to British rule (Myint-U, 2011).

At this time, Myanmar was a part of the British colony of India, and many people of different classes from India, including merchants and moneylenders, began to migrate into Myanmar. Bamar farmers often gave up their land to repay debts owed to Indian moneylenders (Encyclopedia Britannica, 2018). In colonial Burma, the upper class was mainly made up of the British; the middle class of Chinese, Indians, Karen, and Bamar; and the lower class of working-class Indians and Bamar (Nemoto, 2014). Antagonism between ethnic groups deepened as a result. However, it is not sufficient to simply say that a firm ethnic consciousness formed during the colonial period and led to the outbreak of the civil war, as misgovernment following independence also contributed significantly (Kubo, 2014).

### Appendix 2-2: Kayin State<sup>9</sup>

Independence from the British following the Second World War was also the beginning of the long period of conflict between ethnic groups. During the war, the independence forces of General Aung San and others switched from cooperating with the Japanese to resisting them and, after the war, turned to wresting independence from the British. During this series of political events, the first Panglong Agreement was concluded in February 1947 and signed by General Aung San and various minority peoples. However, the minority peoples participating were limited to the Shan, Kachin, and Chin, with the Karen and Karenni (or Kayah) being mere observers. The Mon and Arakan did not attend the conference. Aung San was assassinated shortly after in July 1947. His successor, U Nu, became prime minister and Myanmar gained independence from Britain in 1948. However, as priority had been given to independence itself, the Karen state demanded by

<sup>&</sup>lt;sup>9</sup> Kayin, the name of the state as established by the Myanmar government, has been used, but Karen is used for the ethnic group.

the Karen people was not established at the outset, and conflicts with the Karen National Union (KNU), which was established in 1947, began in 1949 (Nemoto, 2014). The national military used methods such as encouraging the internal collapse of ethnic armed organisations (EAOs) by approaching dissatisfied lower-ranking members of the EAO leadership (Jolliffe, 2014). As a result, EAOs that separated from or re-joined the KNU during the long history of the conflict include Nationwide Ceasefire Agreement signatories Democratic Karen Benevolent (Buddhist) Army and KNU/Karen National Liberation Army Peace Council (Saferworld and Karen Peace Support Network, 2019).

### Appendix 2-3: 8888 Uprising

The democratic movement inspired by student fatalities in confrontations between students at the Rangoon Institute of Technology (RIT, today Yangon Technological University) and the police in 1988 brought about the retirement of Ne Win, but was also connected to a Tatmadaw coup d'état and ultimately the beginning of the military regime that lasted until 2011. The students who had formed the democratic movement organised the All Burma Students' Democratic Front and became active in areas controlled by the Kachin Independence Organization (KIO) and KNU (Myanmar Peace Monitor, 2016).

The military regime, which feared that the student movement would strengthen the movement for democracy, clamped down on the universities, closing undergraduate education at Yangon Technological University until 2011 and at Yangon University until 2013, with only the graduate school accepting students (University of Yangon, n.d.; Yangon Technological University, n.d.). This resulted in the lack of well-educated human resources.

#### Appendix 2-4: Push for a Bilateral Ceasefire

The push for a bilateral ceasefire began to strengthen in the 1990s. The Thailand government, which had deepened ties with the Myanmar government since the second half of the 1980s, placed pressure on EAOs in areas along the Thailand border to participate in peace negotiations. The Thailand government also pressured a group of 8,000 to 10,000 internally displaced ethnic Mon to return to Myanmar (Jolliffe and South, 2014), and in 1995 the New Mon State Party, which was primarily active in Mon state, concluded a ceasefire agreement with the government (Kramer, 2012). Although ceasefire agreements had been concluded with a number of groups, the push for ceasefires waned with the 2004 overthrow of Khin Nyunt, who had supported them (Durieux and Dhanapala, 2008). Peace was left unachieved and the next push for ceasefires would have to wait for the beginning of the Thein Sein administration.

### Nationwide Ceasefire Agreement Non-signatories

Amongst the NCA non-signatories are the members of the Northern Alliance, which have been active and engaged in many battles in recent years (Raleigh, 2018). The Northern Alliance was established in 2016 by four non-ceasefire EAOs: the KIO, Arakan Army (AA), Ta'ang National Liberation Army, and Myanmar National Democratic Alliance Army. The KIO spearheaded the establishment of the Northern Alliance (Bynum, 2018). After this, the four EAOs established the Federal Political Negotiation and Consultative Committee together with three others: the United Wa State Army (UWSA), Shan State Progress Party, and National Democratic Alliance Association-East Shan State (NDAA) (Tønnesson et al., 2019). The UWSA boasts the largest forces of any EAO in Myanmar (Yun, 2017) and is thought to maintain a close relationship with China, which touches the border of the UWSA's special administrative district (Myint-U, 2011), and has had an impact on the four EAOs of the Northern Alliance (Tønnesson et al., 2019). China is thought to be acting as a broker between the Northern Alliance and the Myanmar government (Mangshang and South, 2019). The China–Myanmar Economic Corridor, which is proceeding under the Chinese 'One Belt, One Road' initiative, runs from the town of Muse in Shan state through the former capital of Mandalay and connects to Kyaukphyu in Rakhine state. The condition of this route is of serious importance to China (United States Institute of Peace, 2018). Below, the origins of the main NCA non-signatories are examined.

### • Ethnic Armed Organisations Originating in the Communist Party of Burma

After independence from Britain, one combatant that the independent government had to fight was the Communist Party of Burma (CPB). It was established in 1939, primarily by Aung San, but fractured after the Second World War and entered into armed conflict with the government following independence (Bi, 2012). The Kuomintang invaded Shan around 1950, having lost its war against the Chinese Communist Party (Nemoto, 2014). In the early 1960s, the China–Myanmar relationship was positive enough for the government to cooperate with China in mopping up the Kuomintang army. However, in 1962, the military regime followed the coup d'état by Ne Win and China shifted its policies to support foreign communist parties. This changed the Myanmar–China relationship, which further deteriorated due to the revolt in 1967. As the relationship between the two countries worsened, China's government turned to supporting the CPB. The CPB controlled 100,000 km<sup>2</sup> at the height of its power, including nearly all of the border between China and Myanmar (excluding Muse) (Bi, 2012; Kramer, Russell, and Smith, 2018; Kramer, 2012). However, beginning in the latter half of the 1970s, China's government reduced its support for the CPB due to a shift in its foreign policy. Although the CPB proceeded to produce opium as a separate source of funds, it ultimately collapsed internally in 1989, with each ethnic

group forming its own EAO: in north-east Shan, the Myanmar National Democratic Alliance Army (MNDAA) of the Kokang, the UWSA of the Wa, and the NDAA of the Mong La Shan and the Aka; and in north-east Kachin state, the New Democratic Army–Kachin (NDA-K) of the Kachin. The military regime took this as an opportunity to begin peace negotiations directed by Khin Nyunt, who would later become prime minister, eventually concluding a ceasefire agreement (Bi, 2012).

These four EAOs were allowed to turn the areas they controlled into special administrative districts and engage in sophisticated forms of self-rule (Bi, 2012). The narcotics business produced great wealth, and the UWSA became the world's largest producer of heroin (Myint-U, 2011). The cultivation of alternative crops was promoted under government leadership, but the cultivation of heroin was never eradicated (Bi, 2012).

Afterwards, the four EAOs took different paths. The UWSA continues to obtain great wealth from the narcotics business, has more than 30,000 soldiers and weapons, including surface-to-air missiles (Myint-U, 2011), boasts the largest forces of any EAO, and is considered the 'world's mightiest non-state army' (Yun, 2017). In the UWSA-controlled area, most residents are connected to China's electric grid, Chinese is spoken, and the towns are prosperous (Myint-U, 2011). In the NDAA-controlled area, Mong La has become famous for casinos and the illegal wildlife trade (Myint-U, 2011). In contrast, the MNDAA broke up following armed conflict with the national military in 2009, and a portion of it has been converted into the Border Guard Force (BGF), described later. In the same year, the NDA-K was also converted into the BGF (Kramer, 2012).

### Kachin State and Shan State

In recent years, combat has most repeatedly broken out in north-east Myanmar, specifically Shan state and Kachin state (Raleigh, 2018). Shan has historically been governed by local lords (*sawbwa*), and even during the British colonial period, with the exception of those who opposed colonial rule, these lords were allowed to remain and their authority was reinforced (Myint-U, 2011). Those who converted to Christianity, such as the Kachin mountain people, were given appointments within the colonial government. Christian schools were constructed in Kachin, which increased the level of education (Burke et al., 2017). At the beginning of Burmese independence, the Shan agreed to participate in the Burmese government and federation. Their right to a certain degree of self-governance was recognised, but because of the civil war with the CPB, the situation in Shan deteriorated. The local lords were arrested during the 1962 coup d'état. The rights of minority peoples were weakened during the period of Burmese socialism and self-

government was abolished (Nemoto, 2014). As the scope of the war expanded, the KIO was formed by the Kachin people in Kachin, and the Shan State Army<sup>10</sup> was formed in Shan.

The military regime adopted the infamous 'four cuts' strategy in the 1960s to deprive the EAOs of food, funds, intelligence, and recruits from villages. Villagers were unable to farm and some were forcibly moved to locations with no access to food or medical care (Smith, 1994; Burke et al., 2017). These forced relocations continued even after ceasefire agreements had been concluded with the leaders of the minority peoples (JICA and Yachiyo Engineering Co., 2013; Jolliffe, 2014; Kubo, 2014).

As a result, many villagers were displaced. Those whose villages were burned down or who evacuated their homes due to nearby combat were also displaced. The 'four cuts' strategy is not merely a relic of the past and is reported to have been used in conflicts between the AA of Rakhine state and the Tatmadaw in 2019 (Pwint, 2019); 99,000 people were displaced in the 3 years of conflict that reignited beginning in 2011 in the northern part of the country, such as in Kachin and Shan (Benson and Jaquet, 2014; Visser, 2016). Repatriating these people and improving their living environment are major challenges (Arraiza and Leckie, 2018).

The KIO agreed to a ceasefire that lasted from 1994 until 2011 (Bynum, 2018). This ceasefire involved selling the abundant resources of Kachin state to Chinese companies, which helped line the pockets of the Tatmadaw and KIO leaders and was unpopular with local residents (Tønnesson and Nilsen, 2018). However, there were certainly few conflicts in Kachin in 2000 and the situation had become more stable. KIO and Tatmadaw soldiers were seen at local festivals in Kachin. People were not displaced in Kachin in 2006, although some were in 2016 (Burke et al., 2017). The impetus for the ceasefire violation is said to be the administration's demand that the KIO convert into the BGF (Visser, 2016; Myanmar Peace Monitor, n.d.-a). In 2009, the Myanmar government demanded that EAOs enlist in the BGF based on the 2008 Constitution and remain under the command of the Tatmadaw. The demand to convert into BGF was, in actuality, a demand to put them under the control of the national armed forces, a difficult demand for the EAOs to accept (Myint-U, 2011). In recent years, the KIO has lost a lot of territory in combat and is thought to be leaning towards dialogue with the government (Tønnesson et al., 2019).

<sup>&</sup>lt;sup>10</sup>This became the base of the armed wings of the Shan State Progress Party and Restoration Council of Shan State: the Shan State Army–North and Shan State Army–South.

### Rakhine State

In recent years, Rakhine has garnered increased attention due to the Rohingya refugee problem,<sup>11</sup> but the AA has also become increasingly active and engaged in more combat. The AA was organised comparatively recently, in 2009, and was periodically active in Kachin, which is controlled by the KIO, with which the AA maintained a cooperative relationship. However, from 2015 onwards, the AA moved its activities to Rakhine and southern Chin (Tønnesson et al., 2019). At first the AA was thought to have had only 1,000 members in 2011 (Burma News International, 2017), but it grew rapidly by recruiting through social network services and is now thought to have 7,000 members (*The Irrawaddy*, 2019). The AA's adversary is not the Rohingya Muslim population but the Tatmadaw. The Tatmadaw appear to be occupied with the Northern Alliance and announced a 4-month unilateral ceasefire in December 2018, which covered Shan and Kachin in the north-east (Nyein, 2019). Combat has since intensified (*The Irrawaddy*, 2019). (The 4-month unilateral ceasefire did not include Rakhine [Lat, Tun, and Thu, 2018].)

<sup>&</sup>lt;sup>11</sup> The Rohingya refugee problem is extremely politically sensitive and is not dealt with in this paper, as the issue has a different background and should be understood in a different way than the discussion of minority peoples in this chapter.

# Appendix 3: Materials Used in Chapter 4

# Appendix 3-1: Questionnaire in English

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Overview														
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Mini-grid's Barrier													
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Financial Barriers													
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stakeholders:													
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Insufficient customers' capital	custor	mers' a	access	to fina	ance is	also li	mited.						
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Mini-grid's Barrier													
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Small market size										Low demand			
Small market size										Cost-revenue gap			
Small market size										Fee collection			
Low demand										Cost-revenue gap			
Low demand										Fee collection			
Cost-revenue gap										Fee collection			
Go to next page													

Social/Cultural Bar	miore											
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Technical Barriers	Extremely import.	Very strongly in	Strongly important	Moderately impo	Equally important	Moderately imp.	Strongly important	Very strongly in	Extremely important	Poliant			
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Technology gap										Lack of interoperability with main grid			
Technology gap										Intermittency			
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Lack of interoperability with main grid										Intermittency			
Lack of interoperability with main grid										O&M			
Intermittency										0&М			
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	Gene	ral inforn	nation						
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		Gas							
		Electrical	power						
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		Solar pho	tovoltaics						
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		Research	& Academ	nia					
		NGOs & A	Associatio	าร					
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		Media							
		Public at l	large						
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		·							

## Appendix 3-2: Questionnaire in Burmese

# အေသးစားလွ်ပ္စစ္ဓာတ္အားေပးစနစ္၏ အခက္အခဲမ်ား

ဤစစ္တမ္းေကာက္ယူရျခင္း၏ ရည္ရြယ္ခ်က္မွာ စြမ္းအင္ရရွိမႈႏွင့္ပတ္သက္ၿပီး အလား အလာေကာင္းသည့္ အေသးစားလ်စစ္ဓာတ္အားေပးစနစ္မ်ားကို ထိေရာက္စြာ အသံုးျပဳရာတြင္ အဟန္႔အတား ျဖစ္ေနသည့္အေၾကာင္းအရာမ်ားကို ေမျမန္းရန္ျဖစ္ပါသည္။ အစိုးရမွ ခ်မွတ္ ေဆာင္ ရြက္ေနသည့္ စီမံကိန္းေပါင္းမ်ားစြာ ရွိၿပီးျဖစ္ေသာ္လလည္း အေသးစားလွ်ပ္စစ္ဓာတ္အားလုိင္းမ်ားမွာ ယခုတိုင္ အခ်ႏိဂၢိဳနည္းေနပါေသးသည္။

ဤစစ္တမ္းေကာက္ယူျခင္းတြင္ စြမ္းအင္မူဝါဒနယ္ပယ္တြင္ အက်ယ္တဝင့္ အသံုးျပဳေန သည့္ (Analytic Hierarchy Process, (AHP)) ေခၚ အဆင့္သတ္မွတ္ခ်က္ အရ စီစစ္သည့္ နည္းလမ္းတစ္ခုကို အသံုးျပဳသြားပါမည္။

# အခက္အခဲ အမ်းအစားမ်ား

၁။ ေငြေၾကးဆိုင္ရာ အခက္အခဲမ်ား၊၂။ စီးပြားေရးဆိုင္ရာ အခက္အခဲမ်ား၊ ၃။ လူမႈေရး/ယဥ္ေက်းမႈ ဆိုင္ရာ အခက္အခဲမ်ား၊ ၄။ စည္းမ်ဥ္းစည္းကမ္းဆုိင္ရာ အခက္အခဲမ်ား၊ ၅။ နည္းပညာဆိုင္ရာ အခက္အခဲမ်ား

# ဥပမာ

ပထမဦးစြာ ကားအသစ္တစ္စီး ဝယ္ျခင္းျဖင္ဲ့ဥပမာေပးၿပီး စတင္ လုပ္ေဆာင္ပါမည္။ လူႀကီးမင္းအေနျဖင့္ ကားအသစ္တစ္စီး ဝယ္ရန္ စဥ္းစားမယ္ဆိုပါစို႔။ ဒီဇိုင္း(ပံုစံ) ႏွင့္ ေစ်း(တန္ဖိုး) ဟူသည့္ အဂၤါရပ္ (၂) ခုကို ထည့္သြင္းစဥ္းစားရပါမည္။

လူႀကီးမင္းအေနျဖင့္ ေစ်း(တန္ဖိုး)သည္ ဒီဇုိင္း(ပံုစံ)ႏွင့္ယွဥ္လ ွ်င္ အလြန္အမင္းအေရးႀကီးသည္ဟု ယူဆပါက ေစ်း(တန္ဖိုး)ဘက္ျခမ္းတြင္ (၇) ကို အမွန္ျခစ္( 🗸 ) ျခစ္ေပးရပါမည္။

ဥပမာ	နံလ်စ်႔နတ်စ	အလြန္အမင္း အေရးႀကီး	အလြန္ အေရးႀကီး	အေတာ္အသင့္	တန္းတူ အေရးႀကီး	အေတာ္အသင့္	အလြန္ အေရးႀကီး	အလြန္အမင္း အေရးႀကီး	ହ ଜ୍ୟାନ የ ଦ୍ୟୁତ የତ୍ରାନ ଜ୍ୟାନ የ የ የ የ የ የ የ የ የ የ የ የ የ የ የ የ የ የ የ	
ကား ၀ယ္ျခင္း	၉	2	ງ	9	Э	9	ງ	2	၉	
ဒီဓိုင္း (ပံုစံ)				~						ေစ်း (တန္ဖိုး)

# ျခစ္ေပးရပါမည္။

အျခားတစ္ဘက္တြင္ လူႀကီးမင္းအေနျဖင့္ ဒီဇုိင္းသည္ ေစ်းႏႈန္းထက္ အနည္းငယ္ ပိုအေရးႀကီး သည္ဟု ထင္ျမင္ယူဆပါက ဒီဇုိင္းဘက္ျခမ္းတြင္ (၃) ကို အမွန္ျခစ္ (✔)

ဥပမာ	နံလြန္႔ အလြန္	အလြန္အမင္း အေရးႀကီး	အလြန္ အေရးႀကီး	အေတာ္အသင့္	တန္းတူ အေရးႀကီး	အေတာၞအသင္ ္	အလြန္ အေရးႀကီး	အလြန္အမင္း အေရးႀကီး	‡ଠା∉ ଅପି≹∬	
ကား ဝယ္ျခင္း	၉	2	ງ	9	С	9	ງ	2	၉	
ဒီဓိုင္း (ပံုစံ)								~		ေစ်း (တန္ဖိုး)

ေငြေၾကး	ျမန္မာႏိုုင္ငံ၏ ဘ႑ာေရးဆိုင္ရာအခန္းက႑၏ ဖြံ႕ ၿဖိဳးမႈနည္း
ရယူသံုးစြဲႏုိင္မႈ	ေသာေၾကာင္္ ေငြေၾကးရယူသံုးစြဲႏိုင္မႈဆိုင္ရာ အခက္အခဲမ်ား
ေငြအရင္းအႏွီး ကုန္က်ေငြ မ်ားျခင္း	ဘ႑ာေငြမ်ား ရယူႏုိင္သည့္တုိင္ အရင္းအႏွီး ကုန္ေက်ငြမ်ားမွာ (အတိုးႏႈန္းမ်ား၊ ေခ်းေငြ အဖိုးအခမ်ား) ျမင့္မားေနပါသည္။
၊ ကပ ၊ + သံုးစြဲသူ၏	အသံုးျပဳသူမ်ားအတြက္ ေငြေၾကးရယူသံုးစြဲခြင့္ကိုလည္း
ေငြအရင္းအႏွီး	ကန္႔သတ္ထားပါသည္။
မလံုေလာက္ျခင္း	
ေငြေၾကးလဲလွယ္မႈ ျပႆနာ	ရန္ပံုေငြဘ႑ာမ်ားကို ႏုိင္ငံျခားေငြျဖင့္ ရယူရာတြင္ လုပ္ငန္းရွင္ မ်ားအေနျဖင့္ ျမန္မာက်ပ္ကို ေျပာင္းယူ ရသည့္အခါ ႏုိင္ငံေတာ္ ဘ႑ာအခြန္ႏွင့္ ပတ္သက္သည့္ အခက္အခဲမ်ားကို ႀကံဳေတြ႕ေစ ပါသည္။

အခဲမ်ားကို ပိုင္းျခား ေဖာ္ျပထားပါသည္။

**ေငြေၾကးဆိုင္ရာ အခက္အခဲမ်ား** ဤက႑တြင္ သက္ဆုိင္ရာစီးပြားေရးလုပ္ငန္းရွင္မ်ား (ကုမၸဏီမ်ား)ထံမွ အျပန္အလွန္ေဆြးေႏြးမႈ မ်ား ႏွင့္ စာအုပ္ စာေစာင္၊ စာတမ္းမ်ားတြင္ စူးစမ္းေလ့လာမႈမ်ားကို အေျခခံကာ ေအာက္ပါ အခက္

**အေသးစားလွ်ပ္စစ္ဓာတ္အားလိုင္း၏ အခက္အခဲ** ယခု အေသးစားလွ်ပ္စစ္ဓာတ္အားလိုင္းမ်ားႏွင့္ပတ္သက္ၿပီး ေမးခြန္းမ်ားကိုေျဖေပးေစလိုပါသည္။

ေငြေၾကးဆုိင္ရာ အခက္အခဲမ်ား	အလြန္႔အလြန္ အေရးႀကီး	အလြန္အမင္း အေရးႀကီး	အလြန အေရးႀကီး	အေတာ္အသင့္ အေရးႀကီး	တန္းတူ အေရးႀကီး	အေတာ္အသင့္ အေရးႀကီး	အလြန အေရးႀကီး	အလြန္အမင္း အေရးႀကီး	အလြန္႔ အလြန္ အေရးႀကီး	
	୧	2	ງ	9	о	9	ງ	2	୧	
ေငြေၾကး ရယူသံု <b>းစြဲႏုိ</b> င္မႈ										ေငြအရင္းအႏွငီး ကုန္က်ေငြ မ်ားျခင္း
ေငြေၾကး ရယူသံု <b>းစြဲႏု</b> ိင္မႈ										သံုးစြဲသူ၏ ေငြအရင္းအႏွီး မလံုေလာက္ျခင္ း
ေငြေၾကး ရယူသံုးစြဲႏုိင္မႈ										ေငြေၾကးလဲလွယ္မႈ ျပႆနာ
ေငြအရင္းအႏွိဳ း ကုန္က်ေငြ မ်ားျခင္း										သံုးစြဲသူ၏ ေငြအရင္းအႏွငီး မလံုေလာက္ျခင္ း
ေငြအရင္းအႏွီ း ကုန္က်ေငြ မ်ားျခင္း										ေငြေၾကးလဲလွယ္မႈ ျပႆနာ
သံုးစြဲသူ၏ ေငြအရင္းအႏွိဳ း မလံုေလာက္ျခ င္း										ေငြေၾကးလဲလွယ္မႈ ျပႆနာ

ေက်းဇူးျပဳ၍ ေအာက္ပါ အတြဲလိုက္ ယွဥ္ကြဲခ်က္မ်ားကို ေျဖေပးေစလိုပါသည္။

အေသးစား ေစ်းကြက္	ျမန္မာႏုိင္ငံ၏ ျပန္ျဖစ္ၿမဲစြမ္းအင္ေစ်းကြက္ ပမာဏသည္
အရြယ္အစား	အေသးစားအဆင့္သာ ျဖစ္ပါသည္
ရလိုအား နည္းေနျခင္း	ဖုန္းအားသြင္းျခင္းႏွင့္မီးထြန္ျခင္း စသည့္ အေျခခံအသံုးျပဳျခင္းမ်ား တြင္သာမကပဲ လွ်ပ္စစ္ဓာတ္အား လိုအပ္ခ်က္ ဖန္တီးေပးျခင္းသည္ ေရရွည္စီးပြားေရးလုပ္ငန္းအျဖစ္ ေဆာင္ရြက္ရန္ အေရးႀကီးပါသည္။
အခြန္ ကုန္က်စရိတ္ ကြာဟခ်က္ - အခြန္ ေကာက္ခံသည့္ ပံုစံ	အသံုးျပဳသူမ်ားအေနျဖင့္ ေပး(ေဆာင္)ႏိုုင္မႈႏွင့္ ကုန္က်စရိတ္မ်ား အၾကား ထိန္းညွိရန္ အခက္အခဲ
အသံုးျပဳခ စုယူျခင္း (ေကာက္ယူျခင္း)	အသံုးျပဳခ ေကာက္ယူျခင္းဆိုင္ရာ အခက္အခဲမ်ားကို ေလ်ာ့ခ်သင့္ ပါသည္။

# အခဲမ်ားကို ပိုင္းျခား ေဖာ္ျပပါသည္။

**စီးပြားေရးဆိုင္ရာ အခက္အခဲမ်ား** ဤက႑တြင္ သက္ဆုိင္ရာစီးပြားေရးလုပ္ငန္းရွင္မ်ား (ကုမၸဏီမ်ား) ထံမွ အျပန္အလွန္ေဆြးေႏြးမႈ မ်ား ႏွင့္ စာအုပ္စာေစာင္၊ စာတမ္းမ်ားတြင္ စူးစမ္းေလ့လာမႈမ်ားကို အေျခခံကာ ေအာက္ပါ အခက္

စီးပြားေရးဆုိ င္ရာ အခက္အခဲမ်ား	အလြန္႔အလြန္	အလြန္အမင္း အေရးႀကီး	အလြန္ အေရးႀကီး	အေတာ္အသင့္	တန္းတူ အေရးႀကီး	အေတာ္အသင့္	အလြန္ အေရးႀကီး	အလြန္အမင္း အေရးႀကီး	ಕರ್ನು ಗ್ರೇಲಿಕ್	
	୧	2	ງ	9	С	9	ງ	2	୧	
အေသးစား ေစ်းကြက္ အရြယ္အစား										ရလုိအား နည္းေနျခင္း
အေသးစား ေစ်းကြက္ အရြယ္အစား										အခြန္ ကုန္က်စရိတ္ ကြာဟခ်က္
အေသးစား ေစ်းကြက္ အရြယ္အစား										အသံုးျပဳခ ေကာက္ယူျခင္း
ရလုိအား နည္းျခင္း										အခြန္ ကုန္က်စရိတ္ ကြာဟခ်က္
ရလုိအား နည္းျခင္း										အသံုးျပဳခ ေကာက္ယူျခင္း
အခြန္ ကုန္က်စရိတ္ ကြာဟခ်က္										အသံုးျပဳခ ေကာက္ယူျခင္း

ႏိုင္ငံတကာအဖြဲ႕ အစည္းမ်ားႏွင့္ဆက္စပ္ ျဖစ္လာသည့္ ဆန္႔က်င္ဘက္ ဆိုးက်းမ်ိဳား	နဂိုရွိၿပီးသည့္ အေသးစားလွ်ပ္စစ္လုိင္းမ်ား၏ လုပ္ငန္းအေျခ အေနသည္ ႏုိင္ငံတကာအဖြဲ႔အစည္းမ်ား၏ ကူညီမႈျဖင့့ အေသးစားလွ်ပ္စစ္ဓာတ္အားလိုင္းမ်ား တပ္ဆင္ၿပီးသည့္ ေနာက္ပိုင္းအေျခအေနမ်ားသည္ ၎၏ မတုိင္မီအေျခအေနမွ ေျပာင္းလဲသြားပါသည္။
လူမ်း/ဘာသာစကား ကြဲလြဲမႈ	ျမန္မာစကားမေျပာ(ႏိုင္)သည့္ လူနည္းစု တုိင္းရင္းသားမ်ား ေနထိုင္သည့္ ဧရိယာမ်ားႏွင့္ လွ်ပ္စစ္မီးမရသည့္ေဒသမ်ားမွာ ထပ္တူက်ေနပါသည္။
အတန္းပညာ တတ္ေျမာက္မႈ ကြာဟခ်က္	ႏုိင္ငံတကာမွ သက္သာသည့္ ေခ်းေငြေထာက္ပံ့သူမ်ား၏ ေခ်းေငြစံႏႈန္းျပည့္မီရန္မွာ ယံုၾကည္စိတ္ခ်ရမႈအရ သာမက အတန္းပညာတတ္ေျမာက္မႈ ကြာဟခ်က္မ်ားေၾကာင့္ တစ္ခါ တစ္ရံ ေဒသခံကုမၸဏီမ်ားအတြက္ အခက္အခဲရွိပါသည္။
အရည္အေသြး မျပည့္မီျခင္းအေပၚ သေဘာထားအျမင္	၂၄ နာရီ၊ တစ္ပတ္(ရက္သတၱပတ္) ရရွိရန္မွာ ခက္ခဲပါသည္။ အသံုးျပဳသူမ်ား၏ သေဘာထားအျမင္ လိုအပ္ပါသည္။

အခဲမ်ားကို ပိုင္းျခား ေဖာ္ျပထားပါသည္။

**လူမႈေရး/ယဥ္ေက်းမႈဆိုင္ရာ အခက္အခဲမ်ား** ဤက႑တြင္ သက္ဆုိင္ရာစီးပြားေရးလုပ္ငန္းရွင္မ်ား (ကုမၸဏီမ်ား)ႏွင့္ အျပန္အလွန္ေဆြးေႏြးမႈ မ်ား ႏွင့္ စာအုပ္စာေစာင္၊ စာတမ္းမ်ားတြင္ စူးစမ္းေလ့လာမႈမ်ားကို အေျခခံကာ ေအာက္ပါ အခက္

လူမႈေရး/ယဥ္ေက်းမႈ ဆုိင္ရာ အခက္အခဲမ်ား	အလြန္႔အလြန္ အေရးႀကီး	အလြန္အမင္း အေရးႀကီး	အလြန္ အေရးႀကီး	အေတာ္အသင့္ အေရးႀကီး	တန္းတူ အေရးႀကီး	အေတာ္အသင့္ အေရးႀကီး	အလြန္ အေရးႀကီး	အလြန္အမင္း အေရးႀကီး	အလြန္႔ အလြန္ အေရးႀကီး	
	6	2	ງ	9	о	9	ງ	2	၉	
ႏိုင္ငံတကာအဖြဲ႕ အစည္းမ်ားႏွင့္ဆက္စပ္ ျဖစ္လာသည္္ ဆန္႔က်င္ ဘက္ ဆိုးက်းမ်ိဳား										လူမ်းိ/ဘာသာ စကား ကြဲလြဲမႈ
ႏိုင္ငံတကာအဖြဲ႕ အစည္းမ်ားႏွင့္ဆက္စပ္ ျဖစ္လာသည္္ ဆန္႔က်င္ ဘက္ ဆိုးက်းမ်ဳိား										အတန္းပညာ တတ္ေျမာက္မႈ ကြာဟခ်က္
ႏိုင္ငံတကာအဖြဲ႕ အစည္းမ်ားႏွင့္ဆက္စပ္ ျဖစ္လာသည္္ ဆန္႔က်င္ ဘက္ ဆိုးက်းမ်ဳိား										အရည္အေသြး မျပည့္မီျခင္း အေပၚ သေဘာ ထား အျမင္
လူမ်းိ/တာသာစကား ကြဲလြဲမႈ										အတန္းပညာ တတ္ေျမာက္မႈ ကြာဟခ်က္
လူမ်းိ/ဘာသာစကား ကြဲလြဲမႈ										အရည္အေသြး မျပည့္မီျခင္း အေပၚ သေဘာ ထား အျမင္
အတန္းပညာ တတ္ေျမာက္မႈ ကြာဟခ်က္										အရည္အေသြး မျပည့္မီျခင္း အေပၚ သေဘာ ထား အျမင္

စည္းမ်ဥ္းစည္းကမ္းဆုိင္ရာ ေဘာင္မူ၀ါဒ မရွိျခင္း	အေသးစားလွ်ပ္စစ္ဓာတ္အားလိုင္းမ်ားကို အကာအကြယ္ေပးသည္္ နည္းဥပေဒသည္ လက္ရွိတြင္ မရွိပါ။
နည္းပညာစံခ်န္စီႏႈန္းမ်ား မရွိျခင္း	နည္းပညာစံခ်န္စီးႏႈန္းမ်ား သို႔မဟုတ္ က်င္္ဝတ္စည္းကမ္းမ်ား မရွိျခင္းေၾကာင့္ အေသးစားလွ်ပ္စစ္ဓာတ္အားလိုင္းမ်ား၏ အရည္ အေသြးကို ေဖာ္ျပရန္မွာ ခက္ခဲပါသည္။
အဖြဲ႕ အစည္း၏ ေဆာင္ရြက္ႏုိင္စြမ္း	၀န္ႀကီးဌာနမ်ားမွတဆင့္ ညွိႏိႈင္းေဆာင္ရြက္ရျခင္းသည္ အခ်ိနိေပးရပါသည္။ ေနေရာင္ျခည္ စြမ္းအင္မွ တစ္ဆင့္ ဘက္ထရီပါ၀ါသံုး လွ်ပ္စစ္ဓာတ္အား အသံုးျပဳသည့္ စနစ္မ်ား (Off- Grid System)သည္ စိုက္ပ်ံိေရး ေမြးျမဴေရးႏွင့္ ဆည္ေျမာင္း၀န္ႀကီးဌာန၊ ေက်းလက္ဖြံ႕ ၿဖိဳးေရးဦးစီးဌာနေအာက္ ရွိေနခ်န္တြင္ ပင္မလွ်ပ္စစ္လုိင္းကို ခ်တ္ဆ်က္ကာ ေနေရာင္ျခည္စြမ္းအင္ႏွင့္ ပင္မလွ်ပ္စစ္လမ္းအင္ကို အလိုအေလ ွ်ာက္ေျပာင္းလဲ အသံုးျပဳသည္ စြယ္စံုသံုးလွ်ပ္စစ္ဓာတ္အားလုိင္း စနစ္မ်ား (On-Grid System)မွာမူ လွ်ပ္စစ္ႏွင္ စြမ္အင္၀န္ႀကီးဌာန ေအာက္တြင္ ေရာက္ရွိေနပါသည္။
ဓာတ္အားလိုင္းတုိးခ်ဲ႕ ရန္ အလားအလာ	ႀကိဳတင္စီစဥ္မထားဘဲ ဓာတ္အားလိုင္း တိုးခ်ဲ႕ သည့္အခါမ်ိးိတြင္ မည္လည့္နစ္နားေၾကးမွ မေပးသလို ရွိေနေသာ အေသးစားလွ်ပ္စစ္ဓာတ္အားလိုင္း လုပ္ငန္းအတြက္လည္း အာမခံ မရွိပါ။

အခဲမ်ားကို ပိုင္းျခား ေဖာ္ျပထားပါသည္။

စည္းမ်ဥ္းစည္းကမ္းဆုိင္ရာ အခက္အခဲမ်ား ဤက႑တြင္ သက္ဆုိင္ရာစီးပြားေရးလုပ္ငန္းရွင္မ်ား (ကုမၸဏီမ်ား) ထံမွ အျပန္အလွန္ေဆြးေႏြးမႈ မ်ား ႏွင့္ စာအုပ္စာေစာင္၊ စာတမ္းမ်ားတြင္ စူးစမ္းေလ့လာမႈမ်ားကို အေျခခံကာ ေအာက္ပါ အခက္

စည္းမ်ဥ္း စည္းကမ္း ဆုိင္ရာ အခက္အခဲမ်ား	အလြန္႔အလြန္ အေရးႀကီး	အလြန္အမင္း အေရးႀကီး	အလြန္ အေရးႀကီး	အေတာ္အႀင့္	တန္းတူ အေရးႀကီး	အေတာ္အသာင္ွ	အလြန္ အေရးႀကီး	အလြန္အမင္း အေရးႀကီး	အလြန္႔ အလြန္ အေရးႀကီး	
	୧	2	ງ	6	С	6	ງ	2	၉	
စည္းမ်ဥ္းစည္းကမ္ း ဆုိင္ရာ ေဘာင္မူဝါဒ မရွိျခင္း										နည္းပညာ စံခ်န္စီႏႈန္းမ်ား မရွိျခင္း
စည္းမ်ဥ္းစည္းကမ္ း ဆုိင္ရာ ေဘာင္မူဝါဒ မရွိျခင္း										အဖြဲ႕ အစည္း၏ ေဆာင္ရြက္ ႏုိင္စြမ္း
စည္းမ်ဥ္းစည္းကမ္ း ဆုိင္ရာ ေဘာင္မူဝါဒ မရွိျခင္း										ဓာတ္အားလိုင္း တုိးခ်ဲ႕ဲ ရန္ အလားအလာ
နည္းပညာ စံခ်ိနိ စံႏႈန္းမ်ား မရွိျခင္း										အဖြဲ႕ အစည္း၏ ေဆာင္ရြက္ ႏုိင္စြမ္း
နည္းပညာ စံခ်ိနိ စံႏႈန္းမ်ား မရွိျခင္း										ဓာတ္အားလိုင္း တုိးခ်ဲ႕ ရန္ အလားအလာ
အဖြဲ႕ အစည္း၏ ေဆာင္ရြက္ ႏုိင္စြမ္း										ဓာတ္အားလိုင္း တုိးခ်ဲ႕ ရန္ အလားအလာ

နည္းပညာ ကြာဟမႈ	ျပည္တြင္းမွ နည္းပညာမ်ားသည္ ႏုိင္ငံတကာမွ လက္ရွိ အသံုးခ်ေနေသာ လက္ေတြ႕ နည္းပညာမ်ားႏွင့္ တစ္ခါတစ္ ရံ ကြာျခားမႈ ရွိပါသည္။ ဥပမာ - ဒီဇုိင္းေရးဆြဲမႈ မူ၀ါဒပံုစံ
ပင္မလွ်ပ္စစ္ဓာတ္အားလိုင္းႏွင္ ့ ခ်တ္ဆ်က္မႈ မရွိျခင္း	ပင္မလွ်ပ္စစ္ဓာတ္အားလိုင္းႏွင့္ ခ်တ္ဆ်က္မႈ မရွိပါက ႀကိ <sup>®</sup> တင္စီစဥ္မထားဘဲ ပင္မဓာတ္အားလုိင္းတိုးခ်ဲ႕ ရာတြင္ ျဖစ္လာမည့္ ျပႆနာမ်ားကို တိုးလာေစပါသည္။
ျပတ္ေတာင္း ျပတ္ေတာင္း ျဖစ္ျခင္း	ျပန္ျဖစ္ၿမဲ စြမ္းအင္သည္ တစ္ခါတစ္ရံ ျပတ္ေတာင္း ျပတ္ေတာင္း ျဖစ္တတ္ပါသည္။ ဆိုလာစြမ္းအင္သံုး လွ်ပ္စစ္တြင္ ေန႔/ည ႏွင့္ ေႏြ/မိုးရာသီတို႔တြင္ အျဖစ္မ်ားၿပီး၊ ေရအားလွ်ပ္စစ္တြင္ ေႏြ/မိုး ရာသီတို႔တြင္ ျပတ္ေတာက္မႈ မၾကာခန ျဖစ္တတ္ပါသည္။ အစားထိုးေဆာင္ရြက္ရန္ စနစ္တစ္ခု လိုအပ္ပါသည္။
လုပ္ငန္းလည္ပတ္ျခင္းႏွင့္ ျပဳျပင္ ထိန္းသိမ္းျခင္း	ျပည္တြင္း ပညာရွင္မရွိပါက လုပ္ငန္းလည္ပတ္ရန္ႏွင့္ ျပဳ ျပင္ထိန္းသိမ္းရန္ ခက္ခဲေစႏုိင္ကာ တာရွည္ခံမႈအေပၚ အက်းသီက္ေရာက္ေစၿပီး အရည္အေသြးကို ထိန္းသိမ္းရန္ လုိအပ္ပါသည္။

အခဲမ်ားကို ပိုင္းျခား ေဖာ္ျပထားပါသည္။

**နည္းပညာဆိုင္ရာ အခက္အခဲမ်ား** ဤက႑တြင္ သက္ဆုိင္ရာစီးပြားေရးလုပ္ငန္းရွင္မ်ား (ကုမၸဏီမ်ား)ထံမွ အျပန္သလ္လန္ေဆြးေႏြးမႈ မ်ား ႏွင့္ စာအုပ္စာေစာင္၊ စာတမ္းမ်ားတြင္ စူးစမ္းေလ့လာမႈမ်ားကို အေျခခံကာ ေအာက္ပါ အခက္

နည္းပညာဆိုင္ရာ အခက္အခဲမ်ား	အလြန္႔အလြန္ အေရးႀကီး	အလြန္အမင္း အေရးႀကီး	အလြန္ အေရးႀကီး	အေတာ္အသင့္	တန္းတူ အေရးႀကီး	အေတာ္အသင့္	အလြန္ အေရးႀကီး	အလြန္အမင္း အေရးႀကီး	အလြန္႔ အလြန္ အေရးႀကီး	
	၉	2	ງ	9	С	9	ງ	S	၉	
နည္းပညာ ကြာဟမႈ										ပင္မလွ်ပ္စစ္ ဓာတ္အားလိုင္း ႏွင္ ့ ခ်တ္ဆက္မႈ မရွိျခင္း
နည္းပညာ ကြာဟမႈ										ျပတ္ေတာင္း ျပတ္ေတာင္း ျဖစ္ျခင္း
နည္းပညာ ကြာဟမႈ										လုပ္ငန္းလည္ပတ္ျခင္း ႏွင့္ ျပဳျပင္ ထိန္းသိမ္းျခင္း
ပင္မလွ်ပ္စစ္ဓာတ္အားလိုင္ းႏွင္ ့ ခ်တ္ဆ်က္မႈ မရွိျခင္း										ျပတ္ေတာင္း ျပတ္ေတာင္း ျဖစ္ျခင္း
ပင္မလွ်ပ္စစ္ဓာတ္အားလိုင္ းႏွင္ ့ ခ်တ္ဆ်က္မႈ မရွိျခင္း										လုပ္ငန္းလည္ပတ္ျခင္း ႏွင့္ ျပဳျပင္ ထိန္းသိမ္းျခင္း
ျပတ္ေတာင္း ျပတ္ေတာင္း ျဖစ္ျခင္း										လုပ္ငန္းလည္ပတ္ျခင္း ႏွင့္ ျပဳျပင္ ထိန္းသိမ္းျခင္း

နာမည္ (လိပ္စာ) ကဒ္ျပားရွိပါက ပူးတြဲေဖာ္ျပပါ။ မရွိပါက ေအာက္ပါတို႔ကို ျဖည္္ပပါ။ အမည္ \_ ရာထူး/ဘြဲ႕ \_\_\_\_\_ အဖြဲ႕အစည္းအမည္ \_\_\_\_\_ အေတြ႕ အႀကံီမ်ား ၁။ စြမ္းအင္အခန္းက႑ႏွင့္ပတ္သက္ၿပီး အေတြ႕အႀကံဳ ရွိပါသလား။ 🗆 <mark>ရွိပါ</mark>သည္ 🗆 မရွိပါ ၂။ ရွိလ ွ်င္၊ ဘယ္ေလာက္ၾကာလဲ ) ႏွစ္ ( ၃။ ရွိလ ွ်င္၊ မည္သည့္စြမ္းအင္ အမ်ိးအီစားလဲ။ 🛛 ဒီဇယ္(ေရနံ)ဆီ 🗆 ဓါတ္ေငြ႕ 🗆 လွ်ပ္စစ္ စြမ္းအင္ 🛛 ေက်ာက္မီးေသြး 🛛 ေနေရာင္ျခည္စြမ္းအင္သံုး လွ်ပ္စစ္ (ဆိုလာ လွ်ပ္စစ္) 🛛 ေရအားသံုးစြမ္းအင္ 🗆 ဓိေလာင္စာ 🗆 စပါးခ်ဴ 🛛 အျခား ဇီဝေလာင္စာမ်ား ( ) 🛛 ေလအားလွ်ပ္စစ္ ) 🛛 အျခား ( ၄။ လူႀကီးမင္း ပါ၀င္/တာ၀န္ယူ ရသည္္ အခန္းက႑ 🗆 မူဝါဒ 🛛 သုေတသနႏွင့္ပညာရပ္သင္ၾကားမႈ 🛛 အဖြဲ႕ အစည္းမ်ား (NGOs)ႏွင့္ အသင္းအဖြဲ႕ မ်ား 🛛 လုပ္ငန္းရွင္ 🗆 မီဒီယာ 🛛 အမ်ားျပည္သူ 🛛 အျခား ( )

အေထြေထြအခ်က္အလက္မ်ား

လူႀကီးမင္း၏ ပါ၀င္ကူညီေဆာင္ရြက္ေပးမႈအတြက္ ေက်းဇူးတင္ပါသည္။

## **Appendix 4: Workshops and symposium**

Appendix 4-1: Workshop 1

# The Energy Policy Workshop

## AUGUST 15-16, 2018

## TARAPHI room, Hilton Nay Pyi Taw, Myanmar

## Hosted by

Policy Alternatives Research Institute (PARI), The University of Tokyo

## Supported by

The Association for Overseas Technical Cooperation and Sustainable Partnerships (AOTS)

and

Economic Research Institute for ASEAN and East Asia (ERIA)

	Morning / Afternoon		Evening 18:00-21:00				
14 AUG (TUE)	NA	Preparatory Dinner (w/t Central Economic commission of NLD)					
15 AUG (WED)		DINNER	Lecture 1 Overview of Energy Policy 1) Global Trend and Opportunities in Myanmar 2) Some Key Issues: - Black-out - Rural Electrification - Electricity Tariff - etc 3) Planning and Operation				
16 AUG (THU)	Lecture 2 (8:00-10:00) Participatory Session 1) Group Discussion 2) Q & A by Prof. Yoshikawa	DINNER	Lecture 3 Session Wrap-up (Group Presentation) 1) Group Presentation 2) Response from Lectures 3) Way Forward - Action Plan				

Burmese/Japanese

[Lecturer]

Prof. Hisashi Yoshikawa Project Professor, Policy Alternatives Research Institute (PARI) The University of Tokyo [Participants] 10–15 Parliament members from relevant committees (i.e. energy, environment, international)

## Appendix 4-2: Workshop 2

# <u>The Energy Policy Workshop (SESSION 2)</u> SEPTEMBER 12, 2018 TARAPHI room, Hilton Nay Pyi Taw, Myanmar

# Hosted by Policy Alternatives Research Institute (PARI), The University of Tokyo Supported by The Association for Overseas Technical Cooperation and Sustainable Partnerships (AOTS) and Economic Research Institute for ASEAN and East Asia (ERIA)

	Lecture (All Parliament Members)
12 SEP (WED)	<u>'Energy and Energy Policy in Myamanr'</u> <u>by</u> <u>Prof. Yoshikawa</u>

Burmese/Japanese

[Lecturer] Prof. Hisashi Yoshikawa Project Professor, Policy Alternatives Research Institute (PARI) The University of Tokyo [Participants] 600 Parliament members from Upper and Lower Houses

## Appendix 4-3: Workshop 3

# The Energy Policy Workshop (SESSION 3) February 18–19, 2019 TBA, Nay Pyi Taw, Myanmar

Hosted by Policy Alternatives Research Institute (PARI), The University of Tokyo

Supported by

The Association for Overseas Technical Cooperation and Sustainable Partnerships (AOTS)

and

Economic Research Institute for ASEAN and East Asia (ERIA)

	Morning / Afternoon		Evening 18:00-21:00
			Lecture 1
18 FEB	NA.	DIN	Overview of Rural Electrification (Lecture)
(MON)		DINNER	1) Importance of Rural Electrification
		~	2) Barrier of Electrification in Myanmar
			3) Removal of Barriers
			- Discussions
			Lecture 2
19 FEB		DINNER	Session Wrap-up (Group Presentation)
(TUE)	<u>NA.</u>		<ol> <li>Group Presentation</li> <li>Response from Lectures</li> <li>Way Forward</li> <li>Action Plan</li> </ol>
			- Action Plan

Burmese/Japanese

[Lecturer]

Prof. Hisashi Yoshikawa

Project Professor, Policy Alternatives Research Institute (PARI)

The University of Tokyo

Assistant Prof. Kensuke Yamaguchi

Project Assistant Professor, Policy Alternatives Research Institute (PARI) The University of Tokyo

### **Appendix 4-4: International Symposium**

### International Symposium IFI-ERIA Myanmar

Sustainable energy policies in Myanmar and the Greater Mekong Subregion

In the pursuit of economic development, energy development often widens the social divide. In the era of sustainable development, energy development must be directed to fill the social divide in our and future generations. Tackling this concern, Myanmar seeks urgent rural development, on which the Institute for Future Initiatives (IFI) has been conducting advisory work based on its policy research since 2013, supported by ERIA.

In this upcoming symposium, government officials, parliament members, political leaders, and key stakeholders will gather to discuss this issue. After the closed morning session, there are two sessions in the afternoon. In the first afternoon session, in line with our research achievement, relevant legislation for a rural development fund and a mini-grid case study will be presented by a Parliament member and the Nippon Foundation, respectively.

In the second afternoon session, we will locate the Myanmar case in the regional and international context. Since Thailand has already experienced energy development for 30 years, its Ministry of Energy will draw an implication from the experience of the Energy Conservation Fund. Other stakeholders (e.g. UN ESCAP) discuss their role in such a policy transfer as a tool for sustainable development.

#### Date: 5 June 2019

Time	Agenda	
MORNING [Closed]		
9:00 - 9:30	Registration	
9:30 - 9:40	Welcome remarks (U Han Than Minh, Chairman of CEoC, NLD)	
9:40 - 9:45	Opening remarks (Prof. Yoshikawa, UTokyo)	
9:45 - 10:00	Keynote 1: (Mr. Wataru Matsumura, IEA)	
10:00 - 10:15	Keynote 2: (U Maw Win, Deputy Director General, DRD)	
10:15-10:25	Break	
10:25 - 11:45	Research Discussion (each 20min, incl. comment) [Dr. Anbumozhi, ERIA] • Dr. Daniel del Barrio Álvarez (The University of Tokyo)	

#### Venue: Park Royal Hotel, Nay Pyi Taw

	<ul> <li>Ms. Masako Numata (The University of Tokyo)</li> <li>Dr. Kensuke Yamaguchi (The University of Tokyo)</li> </ul>
11:45 - 12:00	Further Steps / Concluding Remarks [Prof. Arima, The University of Tokyo]
12:00 - 13:30	LUNCH
Language: English	

Time	Agenda
AFTERNOON [Open]	
14:00 - 14:30	Registration
14:30 - 14:40	Opening remarks (Prof. Hisashi Yoshikawa, The University of Tokyo)
14:40 - 14:50	U Zaw Thein (International Relations Committee, Chairman, Lower House)
14:50 - 15:00	United Nations Economic and Social Commission for Asia and the Pacific message Initiatives and progress towards SDG7 in Asia (Dr. Liu Honpeng, Director, Energy Division, UN ESCAP)
15:00 – 15:45	<ul> <li>Panel Discussion 1: Policy Transfer for the sustainable ASEAN (10–15 min each) [Prof. Hideaki Shiroyama, The University of Tokyo] <ul> <li>Innovative Policy Options for low-carbon society (Dr. Noah Kittner, North Carolina University)</li> <li>Budget for Rural Electrification in Myanmar (Deputy Director General, Budget Department, MOPF)</li> <li>Thailand ENCON fund (Mr. Uthai Mungseemuengdee, Director, EPPO, Thailand)</li> </ul> </li> </ul>
15:45 - 16:00	BREAK / Photo Session
16:00 - 16:15	Keynote: ERIA's Energy Research in ASEAN (Prof. Jun Arima, The University of Tokyo)
16:15 – 17:00	<ul> <li>Panel Doscussion2: Research to Practice (10-15min for each) [Prof. Hisashi Yoshikawa]</li> <li>As a practitioner (Mr. Yuji Mori, Nippon Foundation)</li> <li>Leaning from HRD (Energy Development Committee, Lower House, Myanmar)</li> <li>Implication from Research (Prof. Hisashi Yoshikawa, The University of Tokyo)</li> </ul>
17:00 - 17:15	Closing remarks (Prof. Jun Arima)
18:00 - 20:00	DINNER
Language: English / Burmese (simultaneous)	