



Policy
Alternatives
Research
Institute

[Workshop on the Future Direction of Rural
Electrification in Myanmar]

Power Integration with Myanmar

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Overview of our research initiative

■ Research counter-part

- Energy Research Institute (ERI), Chulalongkorn University
- ERIA, member of Energy Research Institute Network

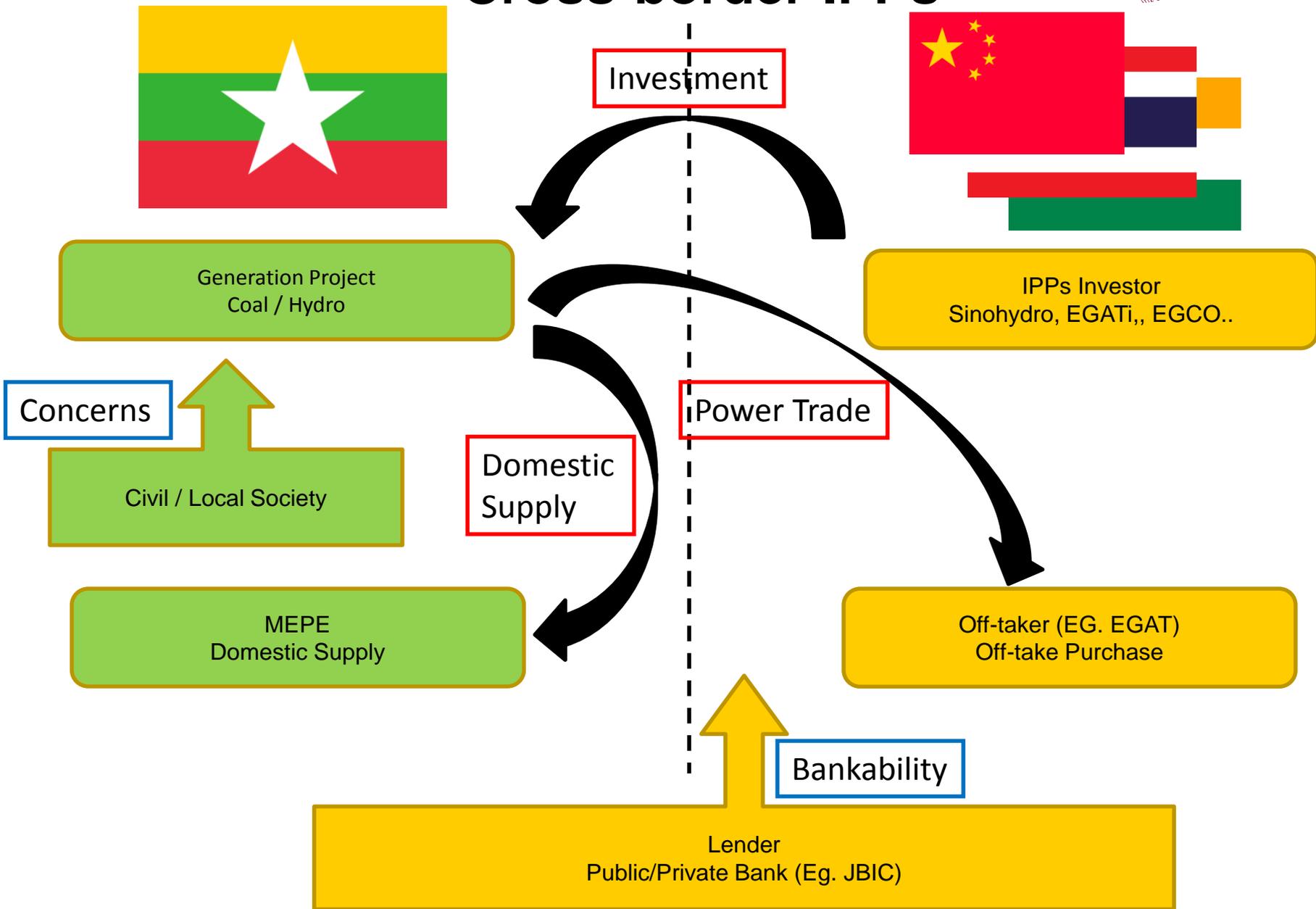
■ Research period

- 1st phase: October 1st 2013 – June 30th 2014
- 2nd phase: July 1st 2014- June 30th 2015
- 3rd phase: July 1st 2015-Mar31st 2016

■ Research rationale

- Necessity of further power development for enhancing the rural electrification in Myanmar
- Utilization of the richer neighboring countries' capital in crafting win-win relationship
- Specifically, “cross-border IPPs” are strategic examples to achieve win-win relationship

Cross-border IPPs



IPP investment in Myanmar from Thailand



- EGAT plans power import increase - 10,000 MW from Coal fired, 10,000 MW from Hydropower. Despite of the previous plan (1,500MW), EGAT considers to add up to 10,000 MW from Myanmar.
- Coal fired;
 - Dawei; 7,000MW by EGCO, Ital-Thai, and Mitsubishi Corporation
- Hydropower (The Salween River)
 - Tasang; 6,300MW by Ratchaburi, and Three Gorges (三峡集团)
 - Hutghi; 1,190MW by EGATi, and Sino-Hydro (中国水電)
- Example scale comparison ...
 - Okutadami Dam (560MW)
 - Kurobe Dam (335MW)

However, the plan remains the “long-sitting” not moving forward.

Stakeholder Meeting

2013			2014					
OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
⇒⇒⇒ Literature Surveys		● WS1 BKK	⇒⇒⇒ (Un)Structured Hearing		● WS2 BKK	⇒⇒⇒ Structured Hearing		● WS3 NPT
Step 1: Identify the barriers on each case study			Step 2: Analyse the socio- economic factors in identified barriers			Step 3: Seek for how to remove the identified barriers		

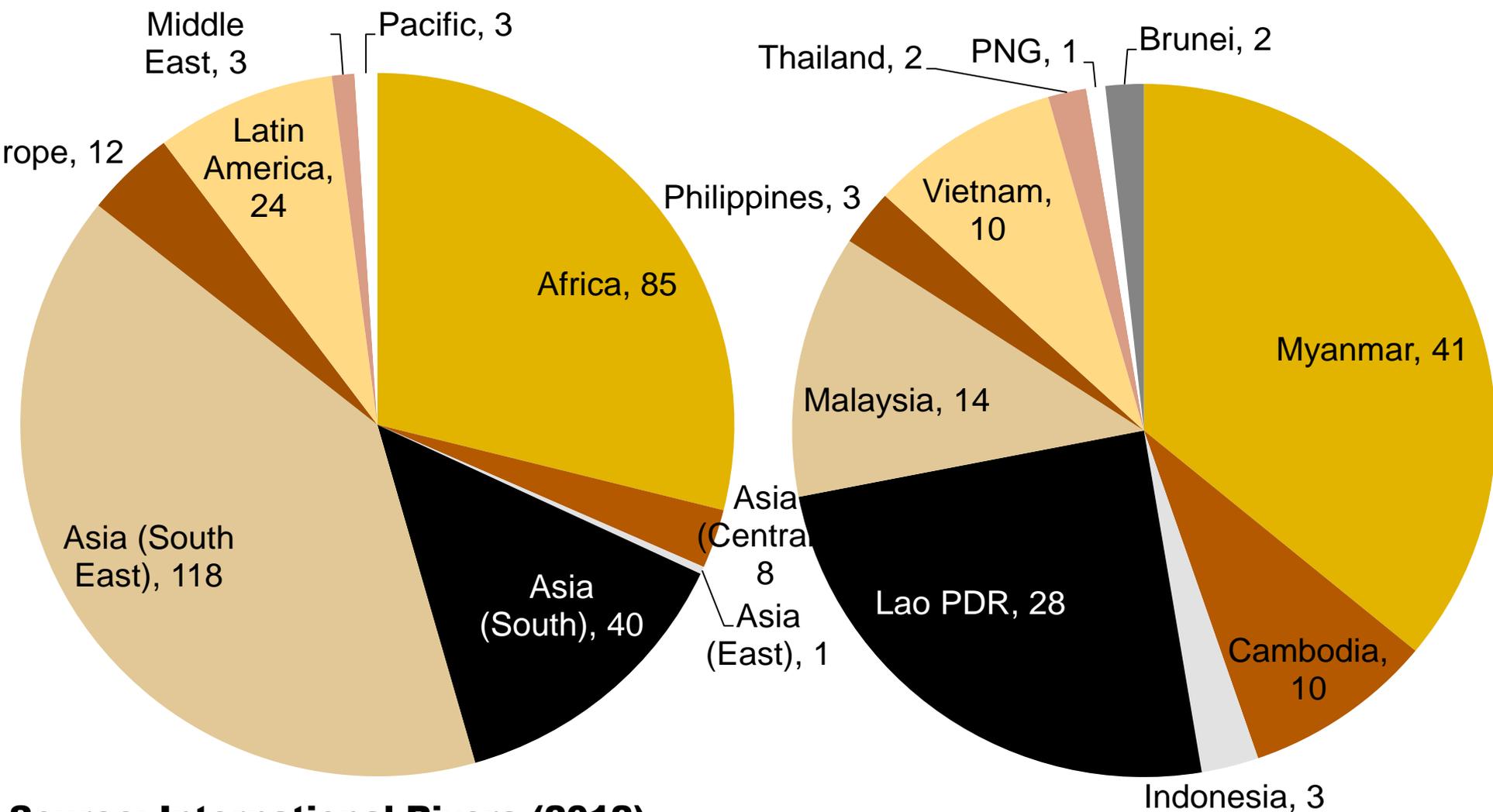
Framework for barrier analysis

- Current status of literatures
 - Previous study of IPP mostly focuses on the political and institutional barriers
 - Contrary, major literatures on barriers in FDI discusses wider range of barriers including social aspect
 - UN DESA (2005) indicates the typological approach to analyse barriers multi-dimensionally; (1) Technical, (2) Economic, (3) Political, (4) Legal, (5) Social and (6) Environmental aspects

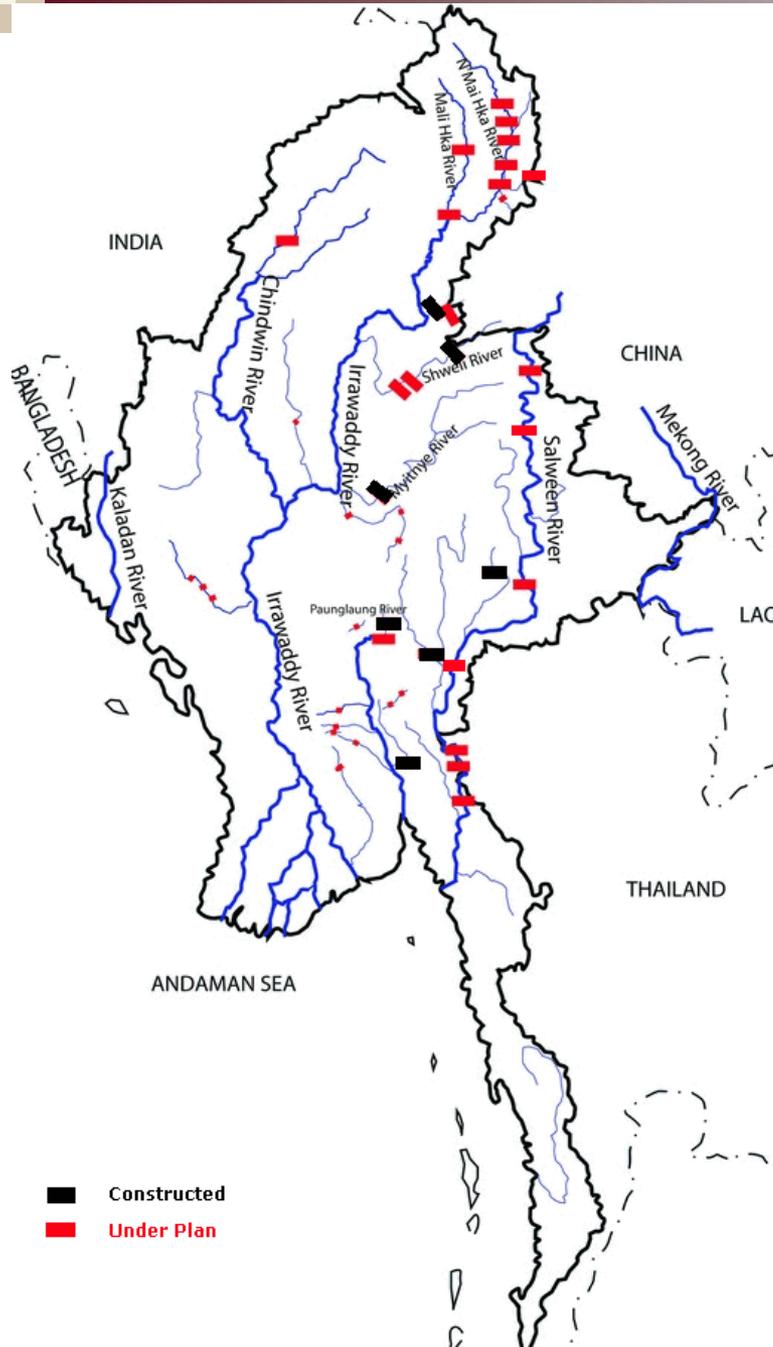
	Economic Barrier	Social Barrier
Coal-fired plant	<ul style="list-style-type: none"> •Due to the comparably high operational cost, it is difficult to make the project bankable. •Moreover, It is difficult to get lender such as World Bank and Asian Development Bank. 	<ul style="list-style-type: none"> •Recent environmental NGOs movement should be severer in near future. •A compensation payment attached to its relocation is not so huge as mega hydro.
Hydro Plant	<ul style="list-style-type: none"> •Though its initial cost is huge, operational cost is low. •With the scale of economy, huge hydro (eg 7,000mw: Tasan) should be economically feasible. 	<ul style="list-style-type: none"> •Larger and larger hydro plants have severer social/environmental impacts. •Also, the dam location is mostly in armed conflict areas.

How has hydro been invested?

Chinese Hydro-investment in Myanmar



Source: International Rivers (2012)



No	Name of Plant	Capacity	Shareholders
1	Myitson(AyeyardyBasin)	6,000 MW	CPI (China)
2	Yenam(AyeyardyBasin)	1,200 MW	CPI (China)
3	Kawanglangphu	2,700 MW	CPI (China)
4	Pisa (AyeyardyBasin)	2,000 MW	CPI (China)
5	Wutsok(AyeyardyBasin)	1,800 MW	CPI (China)
6	Chipwi(AyeyardyBasin)	2,800 MW	CPI (China)
7	Laza(AyeyardyBasin)	1,900 MW	CPI (China)
8	Chipwinge(AyeyardyBasin)	99 MW	CPI (China)
9	Tapain(1)	240 MW	DUHD (China)
10	Tapain(2)	168 MW	DUHD (China)
11	Gawlan(Nawchankha)	100 MW	YPIC (China)
12	Wuxhongze(Nawchankha)	60 MW	YPIC (China)
13	Hkankan(Nawchankha)	140 MW	YPIC (China)
14	Tongxingqiao(Nawchankha)	320 MW	YPIC (China)
15	Lawndin(Nawchankha)	435 MW	YPIC (China)
16	Konlon(Upper Thanlwin)	1,400 MW	Hanergy(China)
17	Naungpha	1,000 MW	Hydro China
18	Mantaung	200 MW	Hydro China
19	Tarsang	7,110 MW	Three Gorges + Ratchaburi
20	Hutgyi	1,360 MW	Sinohydro+ EGATi
21	Ywathit	600 MW	DUHD (China)
22	KengTong (Namlwai)	96 MW	YNPG (China)
23	Wantapeng(Namlwai)	25 MW	YNPG (China)
24	Solu(Namlwai)	165 MW	YNPG (China)
25	Mongwa(Namlwai)	50 MW	YNPG (China)
26	Kengyan(Namlwai)	28 MW	YNPG (China)
27	Heku(Namlwai)	88 MW	YNPG (China)
28	Htamanthi	1,200 MW	NHPC (India)
29	Shwesarye	660 MW	NHPC (India)
30	Laymyo	500 MW	DUHD (China)
31	Tanintharyi	600 MW	Italian-Thai
32	Mawleik	520 MW	China Guodian
33	Nampon	130 MW	DUHD (China)
34	Namtabat	110 MW	DUHD (China)
35	Namkha	200 MW	YNPG (China)
36	Shweli(2)	520 MW	HuanengLancang
TOTAL		36,524	

Hydro in Thanlwin

Project	Capacity	Cross-border	State	Developer	Builder	Status
Kun Long	1400MW	China	Shan		Hanergy, Goldwater	Proposed
Nong Pa	1000MW	China	Shan	HydroChina, MEP	HydroChina	Proposed
Tasang (Mai Tong)	7110MW	Thailand	Shan	Ratchaburi, Sinohydro, Three Gorges	Sinohydro, Three Gorges	Under Construction
Ywathit	4000MW	Thailand	Kayah	Datang, Shwetaung		Proposed
Weigyi (Mae Saring1)	4540MW	Thailand	Karen			Susepended
Dagwin (Mae Saring2)	800MW	Thailand	Karen			Suspended
Hatgyi	1360MW	Thailand	Karen	EGATi, Sinohydro, Goldwater	Sinohydro	Proposed

What are barriers to implement mega-hydros?

Case1: Kun Long Dam

- In 2010, due to refusal of the Kokang resistance army to become a Border Guard Force (BGF), the Myanmar Army launched an offensive and seized control of the area, causing over 30,000 people to flee across the Chinese border.
- the Shan Human Rights Foundation (SHRF) reported that the construction of the dam in Kunlong township is not stable since it is close to the Kokang and Wa self-administrative regions, and there has been recent new displacement of villagers in Kutkhai due to skirmishes between Myanmar Army troops and the Ta'ang National Liberation Army (TNLA) as well as the KIA (Kachin Independence Army).
- According to SHRF, the construction of access roads to the Kunlong dam site has led to large scale land confiscation and destruction of houses, impacting over 60 villages with a population of around 20,000 people. The villagers have been given no compensation. At the dam site, about 500 workers are being employed at cement and gravel production plants.

Case2: Tasang Dam

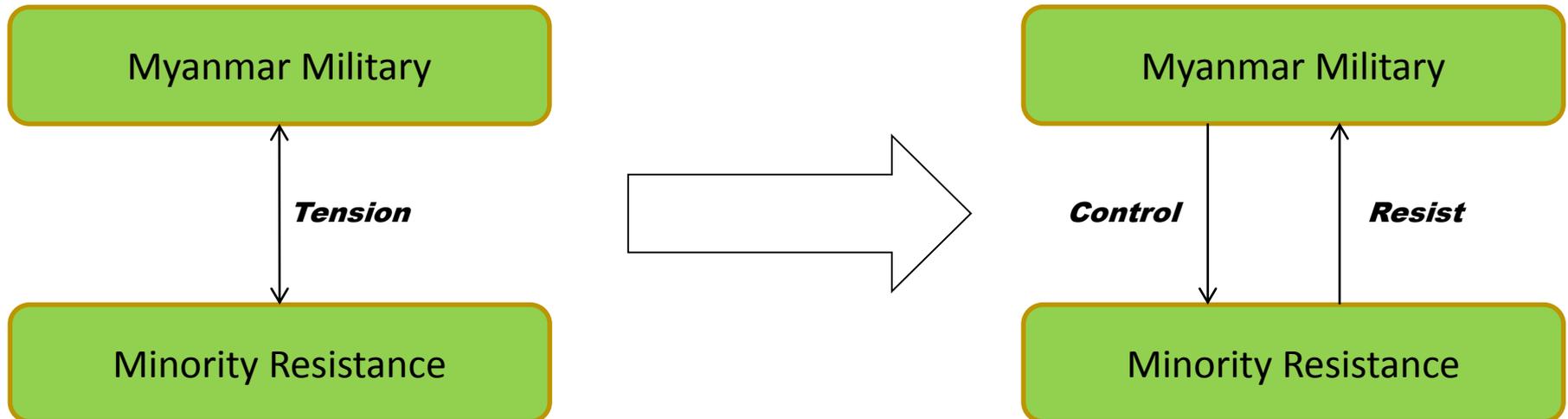
- Under a massive scorched earth campaign by the Myanmar Army starting in 1996, over 300,000 people have been forcibly relocated from their lands in southern Shan State, including from areas around the planned Tasang project site.
- SHRF reported that residents in areas slated to be flooded by the Tasang Dam were forced to work for Myanmar Army troops providing security for teak logging in the potential reservoir area. As a result of these serious abuses, there has been an ongoing influx of refugees into Thailand from Shan State.
- There are ongoing armed conflicts near the project site. In November 2013, clashes between the Shan State Army-South and the Myanmar Army took place near Ta Sob Bu on the Salween River.

Case3: Ywathit Dam

- Since 2010, surveying work for the Ywathit Dam in preparation for construction has been conducted jointly by a Chinese and Myanmar team. It was reported in December 2010 that a survey team was ambushed by Karenni resistance troops near Pruso, leading to the deaths of three Chinese engineers.
- In 2011, new military camps for Border Guard Force No. 1005 and special security troops were established to protect the Chinese dam builders. Also, the Myanmar Army Tactical Commander under No. 55 Regional Command based in Bawlake has been visiting the Ywathit area to monitor and strengthen security for the dam building team.
- The Karenni National Progressive Party (KNPP) reached a 14-point ceasefire agreement with the Myanmar Army in 2012. On 18 October 2013, U Chit La, the Karenni State Minister of Transport and Saw Hu Hu, Karenni State Minister of Electric Power and Industry organized a public hearing at Pasaung township to inform local people that after the completion of a new 700 MW dam on the Salween, the villagers would get electricity.

A certain narrative

- ① **Dam site are located where the serious tension exists between the national army and minority's armed group.**
- ② **When the dam was planned in such an area, local villagers are relocated and employed as a forced labor, sometimes making the political refugees from Myanmar.**
- ③ **The peace process between the national military and minority resistance is hampered.**



Echoed by Stakeholders

- The dam plans are seen by many as being one of the **strategies used by the military regime to gain foreign support and funding for its ongoing war effort. It is also viewed as a strategy to increase and maintain its control over areas of ethnic land after many decades of brutal conflict** (Salween Watch).
- The Burma Rivers Network (BRN) is holding a press conference in Yangon today to urge the Myanmar government as well as Chinese and Thai investors to immediately stop plans to build dams on the Salween River, **as this is causing conflict and directly undermining the peace process** (OCT29, 2013, Burma River Network).

What are the community's "real" concerns?

What are the community's real concerns?



Potential Concerns

I. Transparency		III-3	Fisheries
I-1	Participation in decision-making	III-4	Water Flows
I-2	Informed consent	IV. Dam Safety	
I-3	Benefit Sharing	IV-1	Earthquakes and Dam Breaks
II. Social Impact of Dams		IV-2	Flooding
II-1	Displacement	IV-3	Sudden Water Surges
II-2	Food Security	V. Militarization	
II-3	Health Concerns	V-1	Forced Relocation
II-4	Impacts on Women	V-2	Forced Labor
II-5	Loss of Culture	V-3	Land Confiscation
III. Environmental Impact		V-4	Sexual Violence
III-1	Biodiversity	VI. Mining	
III-2	Forests	VII. Mangrove Loss	

Research Plan

1. Target Community

- Community close to the Monton Hydro power

2. Questions

- What are the real concerns and how it could be eased?

3. Schedule

2014						2015					
JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
⇒⇒⇒ Literature Surveys			● WS1 BKK	⇒⇒⇒ Survey: Local Community			● WS2 BKK	⇒⇒⇒ Interview: Investors			● WS3 NPT
Step1				Step2				Step3			
To identify key barriers in Salween development				To reveal the local community's perspective				To deal with the local's concerns			

4. Outreach

- Thai Investors (EGATi, Ratch, EGCO...)

Thank you for your attention!
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