

Dramas of the CPR's¹: Logical Development to Take Lessons for REDD+ Implementation
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I think some of you already noticed that the title of my presentation is a parody of an influential and famous book, edited by Elinor Ostrom about 12 years ago, *The Drama of the Commons*. Yes, it is, but the content of my presentation is original. My first name is Makoto; it means 'the truth'. I am fated and destined to tell you true and real drama of CPR's.



¹ Common Pool Resources

Two attributes of Common Pool Resources (CPRs)

- **Low excludability:**
 - It is difficult to exclude individuals from using goods.
 - Similar to 'public goods'.
- **High subtractability:**
 - The benefits gotten by one individual can not be consumed by others.
 - Similar to 'private goods'.

The first drama is a new drama of CPR's stimulated by REDD+.

CPR is defined as a resource with attributes of low excludability and high subtractability. Low excludability refers to the attribute that it is difficult to exclude individuals from using goods. It is something like public goods. High subtractability refers to the attribute that the benefits gotten by one individual cannot be consumed by others. It is similar to private goods.

Classification of goods in terms of their attributes

		SUBTRACTABILITY	
		Low	High
EXCLUSION	Difficult	Public Goods	CPRs <i>"vulnerable"</i>
	Easy	Toll Goods/ Club Goods	Private Goods

This table shows the characteristics of CPR's comparing to other goods such as public goods, private goods, and club goods.

Conditions for self-governing associations/ collective actions

- To avoid social losses, the users of a CPR will:
 - organize themselves
 - take collective actions
 - form self-governing associations
 - *under certain conditions.*

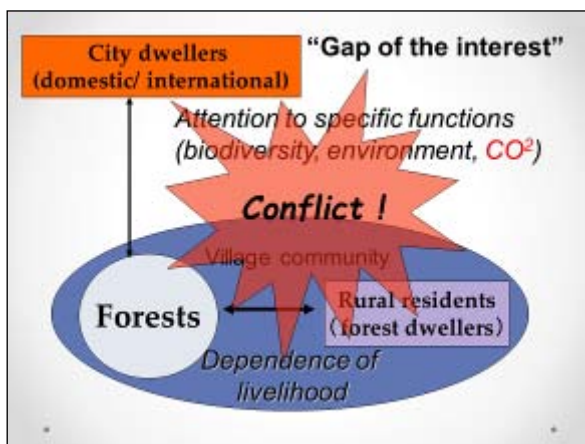
→ So what are the conditions for it?
- Some scholars identified factors to help for predicting situation for a successful CPR regime.
 - Ostrom (1990) suggested a list of 8 **design principles** that characterize the configuration of rules devised and used by long-enduring CPR institutions.

Many scholars of CPR's share the common idea. To avoid social losses the users of CPR will

organize themselves, take collective actions, and form self-governing associations under certain conditions. What are the conditions for it? As you know, some scholars identified factors to help predict situations for a successful CPR regime. One of them was Ostrom. She suggested a list of eight design principles that characterize the configuration of rules devised and used by long-enduring CPR regimes.



These are the 'Design Principles' shown by Ostrom and her colleagues. Clearly defined boundaries, collective-choice arrangements, and also nested enterprises for CPR's that are part of larger systems. It means that a CPR is not isolated.



Nested enterprises often cause problems "gap of the interest" shown in the slide. City dwellers are interested in attention and also attention to specific functions such as biodiversity, environment, and you are interested in CO₂. But the rural residents, rural people, or local people who depend on livelihood are different from city dwellers in terms of interest. Then conflicts occurred. How should we overcome this problem and contradiction?



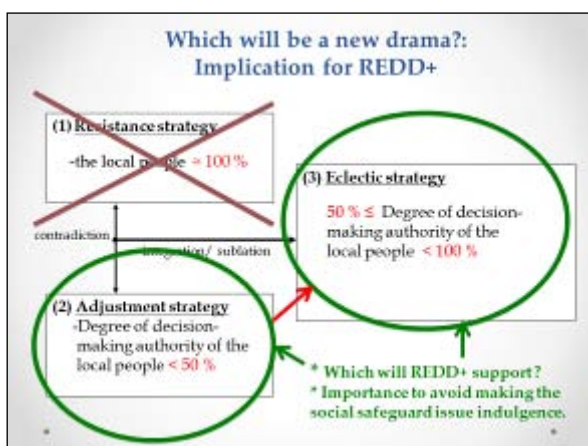
I conceptualize three strategies for sustainable resource use and management. The first one is resistance strategy. Here, people do not adapt to globalization and mostly refuse involvement by outsiders in order to preserve their autonomy. An example is *chisan chisho* in Japanese. The second one is adjustment strategy. Here, people assimilate the benefits of globalization. The third one is in between, or an eclectic strategy. This is a compromise that incorporates a partial resistance strategy and a limited adjustment strategy. Collaborative governance of natural resources could be achieved under this strategy. This type of governance is organized through collaboration among various stakeholders who have a range of interests in local resource use and management.



This figure is an overview to compare the three strategies. In the resistance strategy, local people should be the main actors, and with the philosophy of autonomy attributed as closer. In the adjustment strategy, the main actors are NGO's, consultants, and etcetera, but with the philosophy of environmental conservation and a sense of citizen. Openness is also attributed. For the eclectic strategy, local people will be main actors, but they collaborate with various stakeholders, including NGO's and consultants.



The important issue here is the difference in the degree of decision-making authority among these three strategies. The first one is resistance strategy; the local people have almost all the decision-making power. In the adjustment strategy, local people only have less than 50% power. It means that they cannot decide by themselves about their future. In the eclectic strategy, the local people have more than half and less than 100%.



Which will be a new drama? Which will REDD+ support? The resistance strategy is closed because they do not want to collaborate with outsiders. Then it will not be a candidate. We can consider about the two strategies, adjustment and eclectic. Under adjustment strategy, the local people do not have power. I am not sure exactly about their present status and situation, but in the near future we have to shift from the second strategy to the third strategy where the local people have their own authority to decide their future, but they collaborate with outsiders, including NGO's and consultants. It is very important to avoid making the social safeguard issue be indulgence.

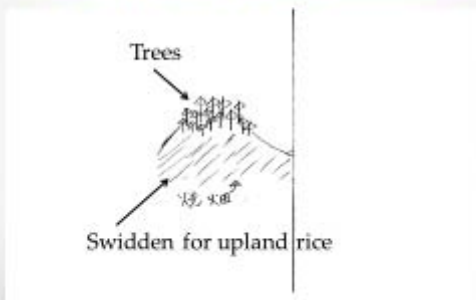
2. An original drama of sustainable local resource use



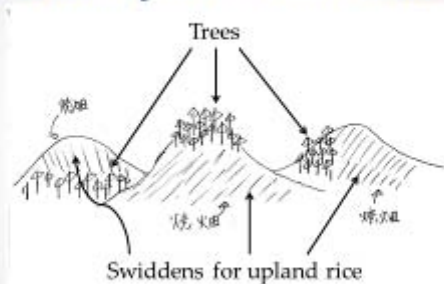
Various uses of rattan basket by the Kenyah in East Kalimantan

So it is very important to know the local reality, as you know, but it is not so easy. This is the second original drama of sustainable local resource use.

A picture shown by a scholar in 1987 at Samarinda, or a capital city of East Kalimantan



Reality in Apo Kayan, or central plateau of Borneo island



This is a picture shown by a scholar in 1987 at Samarinda in East Kalimantan when I started to stay there for three years, at the beginning of my three-year stay. The people does not cut trees at the top of the mountain when practicing shifting cultivation. I was so impressed, “Oh, this is what we call local knowledge or traditional ecological knowledge.”

In reality, after that I visited and started fieldwork for three years in East Kalimantan, there were trees at the top of the mountain, too. I was so confused, but it is valuable lesson to elaborate my original

research.

Questions

- Was understanding of the scholar wrong?
 ← Field reality denied the explanation by the scholar.
- How do the Kenyah people explain their local praxis?
 → "I stopped cutting trees because I have already got enough area of swidden for this year."
- For other praxis, such as rotation system of swiddens, how do they explain the reason?
 → "To reduce labor input for weeding is the most important factor to keep the rotation."
- Importance to discover the gap in between **emic** and **etic** perspectives

Questions: was understanding of the scholar wrong because it contradicts with the field reality? How do the Kenyah people explain their local practice? They said, "I stopped cutting trees because I have already got enough area of swidden for this year"

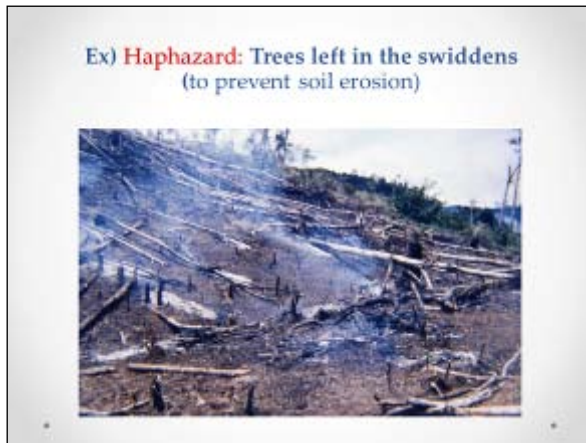
Also, for the other praxis such as rotation system, because the rotation system is very important to sustain their soil fertility, they said, "To reduce labor input for weeding is the most important factor to keep the rotation".

I noticed the importance to discover the gap in between 'emic' and 'etic' perspectives. Emic is refers to their own way of thinking, and etic referred to our thinking or perspective.

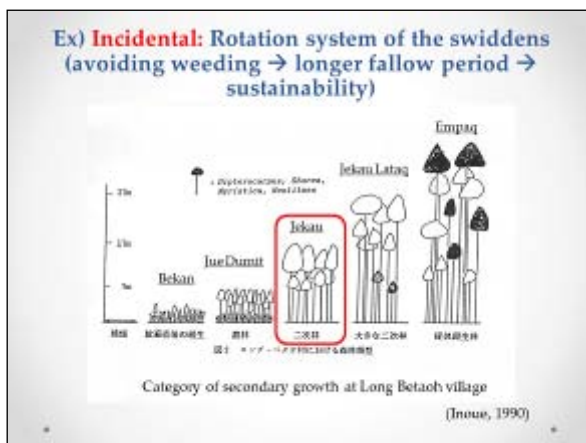
Category of sustainable resource utilization (Inoue 1998; Inoue 2000; Inoue 2011)

- **Haphazard su/偶発的なsu**: the mode of utilization whereby unconscious action brings about sustainable use of resources.
- **Incidental su/副産物としてのsu**: the mode of utilization whereby conscious actions for other purposes achieve sustainable use.
- **Intended su/意識的なsu**: the mode of utilization whereby sustainable resource management is intended. Some regulations are incorporated into customary law.

I conceptualized three categories of sustainable resource use. The first one is haphazard, the second one is incidental, and the third one is intended. The first mode of utilization is the unconscious action brings about sustainable use of resources. The second one is the mode of utilization whereby conscious action for other purposes achieves sustainable use. The third one is the mode of utilization whereby sustainable resource management is intended. Some regulations are incorporated into customary law.



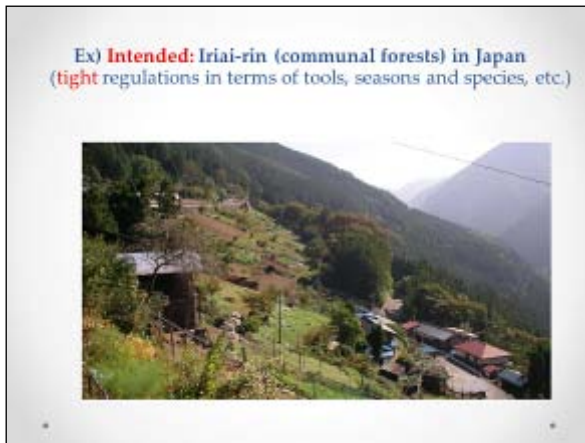
This is the example of the haphazard sustainable use. Trees are left in the swiddens to prevent soil erosion, but it is by chance.



This is an incidental one, the rotation system. They categorize secondary vegetation in accordance with succession stage after harvesting rice. Then they cut *jekau* here to make swidden again. It means they wait until the vegetation grows up to the stage of *jekau*. It is not for sustainability but for avoiding much labor for weeding.

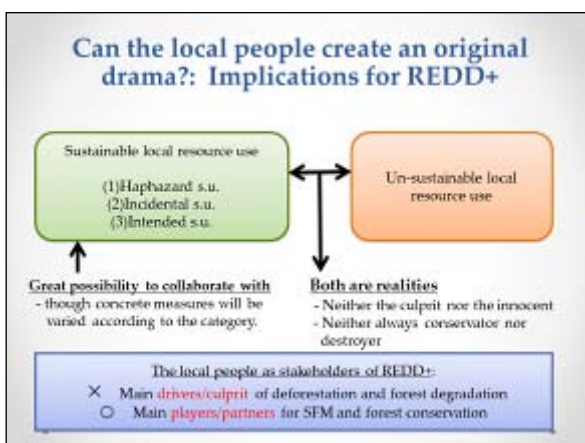


This is also an example of incidental one.



For intended sustainable use, this is *Iriai* communal forest in Japan. They have tight regulations in terms of tools, seasons, and species.

This is also an example of the intended one by the Kenyah people in Kalimantan. They have loose regulations.



Can the local people create an original drama? There is a great possibility to collaborate with them even though concrete measures will be varied according to the categories. At the same time, we can also observe unsustainable forest resource use. Actually, both are realities. They are neither the culprit nor innocent, also neither always conservator nor destroyer. When we regard the local people as stakeholders of REDD+, we should not regard them as main drivers or culprits, but main players and partners for sustainable

forest management. Even though this is common sense in the field of community forestry and participatory forest management, I am not sure if REDD+ stakeholders consider and agree to this or not.



PFM's challenging road to REDD+

- Is REDD+ activities through incentivizing forest conservation under existing PFM regimes promising?
- Mainly degraded and/or low value forests (Inoue, 2004; Ribot et al., 2006) ← forests are of little or no interest to powerful actors → difficult to maintain
- Many and small in size → increases transaction costs per ton on CO₂ sequestered (Balooni & Lund, 2013)
- Deforestation outside 'conservation islands' (partially 'leakage') → also occurs in the countries as global leaders in decentralized forest management (Balooni & Lund, 2013)

Next, let us focus on the forestry activities. I have to show you a hard drama of participatory forest management.

This is a challenge of participatory forest management to REDD+. My question is, "Are REDD+ activities through incentivizing forest conservation under existing participatory forest management regime promising or not?" Mainly degraded and low value forests were allocated to the local people, because forests are of little or no interest to powerful actors. It is very clear it is very difficult to maintain in good forest condition. Allotments to the people are mainly small in size. It increases transaction costs per ton on CO₂ sequestered. Deforestation outside conservation islands, and partially leakage, also occurs even in the countries as global leaders in terms of decentralization.

Evidence: Statistics from five global leaders in decentralized forestry (Balooni & Lund, 2013)

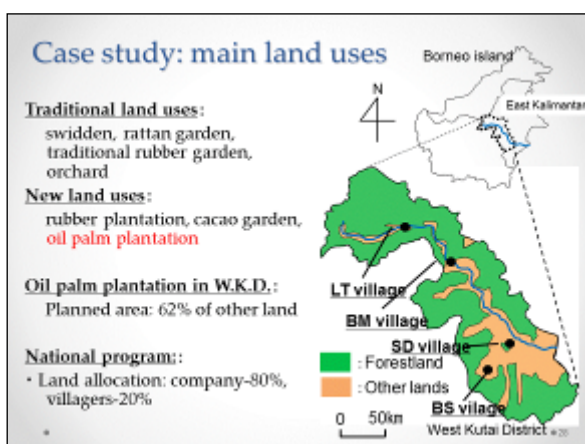
Country	Program	No. of decentralized management units	Average forest size per management unit (ha)	Share of forest area under decentralized management (%)	Annual forest area change rate during 2005-2010 (%)
India	JFM	112,816	218	36	4.66
Nepal	CF	17,685	93	45	-6.77
Philippines	CBFM	1,786	907	21	7.7
Mexico	Ejidos	8,400	5400	70	-2.92
Tanzania	CBFM, JFM	2,323	1,775	12	-10.77

↑ Many ↑ Small ↑ Deforestation happened

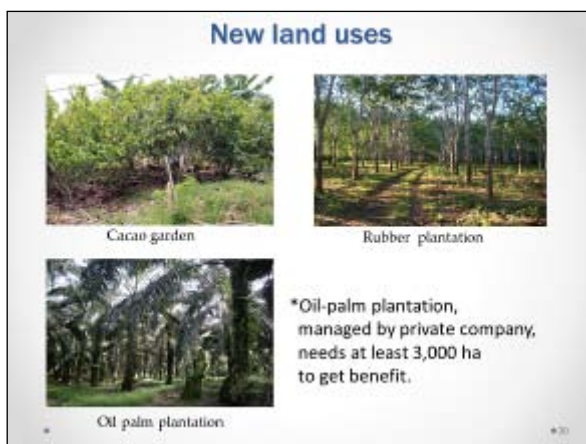
This shows the evidence; five leading countries in terms of participatory forest management. There are also many units, each unit is small, and also deforestation happened.



In order to overcome the difficulties, we have to expand our perspective. We should not limit our view only to forest sector. This is the last drama; implicative drama of sustainable livelihood based on various land uses.



I will show you the results of the fieldwork at four indigenous people's villages. It is better to show you the picture.



This is the traditional land uses. Rubber garden are different from modernized rubber plantation. Also, rattan was also the main income source in the past. For orchard, they call them *lembo*. Swidden agriculture is very important to get their staple food, rice.

These are new land uses by them; cacao garden, and rubber plantation subsidized by the government, and also oil palm plantation. Oil palm plantation by the private company needs at least 3000 hectares to get benefits. It means a large area, big scale.

Peoples' preference of land use
(Inoue et al, 2013)

Ranking	LT village	BM village	BS village	SD village
1st	Swidden agriculture	Rubber plantation	Traditional rubber garden	Rubber plantation
2nd	Traditional rubber garden	Traditional rubber garden	Swidden agriculture	Traditional rubber garden
3rd	Rubber plantation	Cacao garden	Rubber plantation	Swidden agriculture
4th	Cacao garden	Swidden agriculture	Orchard	Orchard
5th	Orchard	Orchard	Rattan garden	Oil-palm plantation
6th	Rattan garden	Oil-palm plantation	Oil-palm plantation	Rattan garden
7th	Oil-palm plantation	Rattan garden		

This shows the results. Green color indicates traditional land uses.

Results
(Terauchi et al, 2010; Inoue et al, 2013)

- Rubber plantation & traditional rubber garden: high preference ← because of high profitability
- Swidden agriculture: high & medium preference ← important in terms of staple food security
- Orchard: medium preference ← because of medium profitability
- Rattan garden: low preference → but still important as safety-net because of flexibility of production
- Oil-palm plantation: low preference ← because of social anxiety though expecting high profitability
- Combination of various land use ← in accordance multiple livelihood needs ← based on respective attributes of each land use

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They have high preference for rubber plantation and traditional rubber gardens because of high profitability. Also, they have high and medium preference of swidden agriculture because it is important in terms of staple food security. They have medium preference of orchard because of medium profitability. They have low preference of rattan garden, but still important as a safety-net because of flexibility of production. And they have low preference of oil-palm plantation because of social anxiety even though they are expecting high profitability. Thus, they combine various land uses in accordance with multiple livelihood needs based on respective attributes of each land use.

Policy Implication for REDD+
(Terauchi et al, 2010; Inoue et al, 2013)

- Desirable institutional/project design:
 - be profitable,
 - be implemented without social anxiety,
 - be expected to satisfy various **livelihood** needs,
 - not only on forest land but also non-forest land (agricultural land, etc.),
 - on condition that safety-net (forest ecosystem, swidden agriculture) for their **livelihood** is ensured.

→ What is 'livelihood'?

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Livelihood
(Chambers and Conway, 1992; DFID, 1999)

- Definition
 - A livelihood comprises the capabilities, assets and activities required for a means of living.
- Sustainability of the livelihood
 - A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.
- Four dimensions for analysis
 - Environmental / Economic / Social / Institutional

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We induced policy implication for REDD+ from this case study. Desirable institutional and project design should be profitable, should be implemented without social anxiety, should be expected to

satisfy various livelihood needs, and should be made not only on forest land but also non-forest land including agriculture land etc. It should also be based on condition that safety-net including forest ecosystem and swidden agriculture for their livelihood is ensured.

Messages to REDD+ experts from four dramas

- Degree of decision-making authority of the local people :
 - hopefully be increased
- Shift of REDD+ experts' mindset, based on the local reality :
 - the local people: as main drivers/culprit of deforestation
 - → as principal players/partners of forest conservation and sustainable forest management
- Difficulties of Participatory Forest Management:
 - Allocation of degraded and/or low value forest
 - High transaction cost ← many, and small size
 - Deforestation outside 'conservation islands'
- Institutional design:
 - Livelihood-oriented institution, including variety of activities on both of agricultural and forest lands

I would like to summarize the messages to REDD+ experts from four dramas that I told you today. The first is that the degree of decision-making authority of the local people should hopefully be increased. It means that from the second strategy (adjustment strategy) to the third strategy (eclectic strategy/ collaborative governance). It is very important.

The second, shift of REDD+ experts' mindset based on the local reality is required. It means that shift from to regard the local people as main drivers or culprit of deforestation to regarding as principal players or partners of forest conservation and sustainable forest management.

Three: participatory forest management faces difficulties such as allocation of degraded and low value forest, and high transaction cost due to many and small sized allotments. Deforestation outside conservation islands also occurred.

The fourth is that institutional design should be constructed in a broader perspective. It means the livelihood-oriented institutions, including a variety of activities on both agriculture and forest land will be required.

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