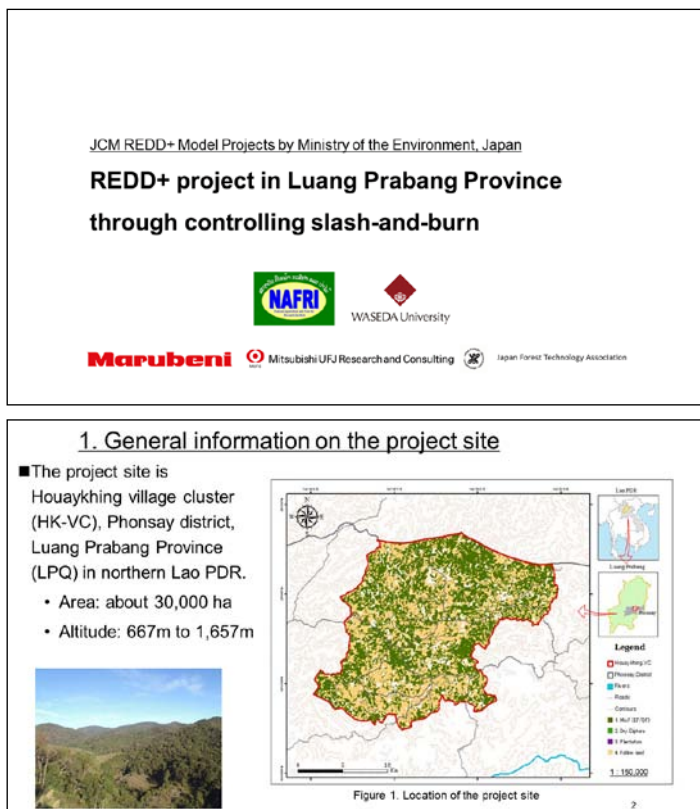


REDD+ Project in Luang Prabang Province through Controlling Slash-and-burn
Masahiro Amano (Waseda University)



Information on the Project Site

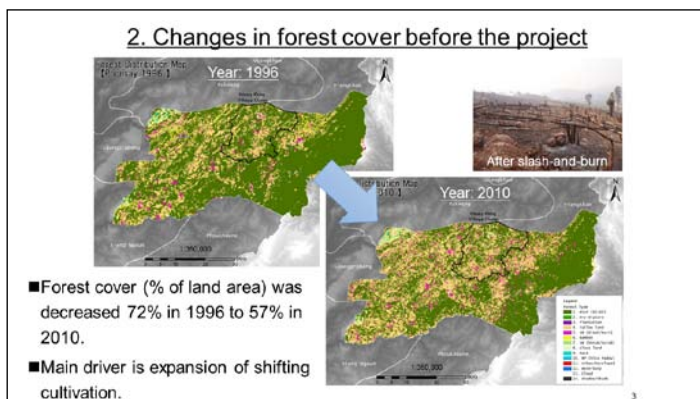
Just as Kanematsu is receiving funding from the Ministry of the Environment, we also have two REDD+ projects that are ongoing. Waseda University, Mitsubishi UFJ Research and Consultants, Marubeni¹, and the Mr. Suzuki's Japan Forest Technology Association, these four groups are carrying out these projects.

We have chosen a Phonsay village cluster in Luang Prabang Province in Laos for this project.

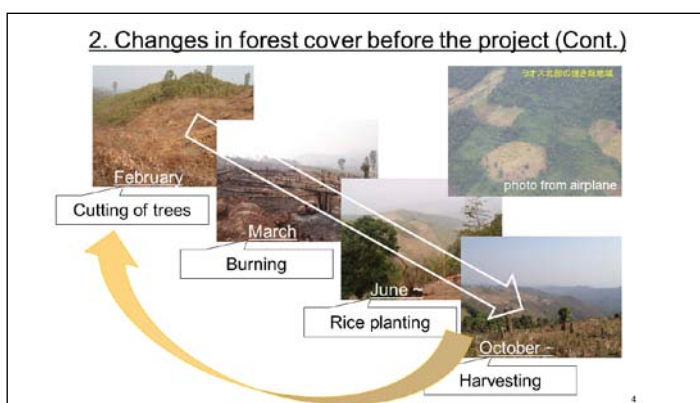
¹ <http://www.marubeni.co.jp/>

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Changes in Forest Cover before the Project

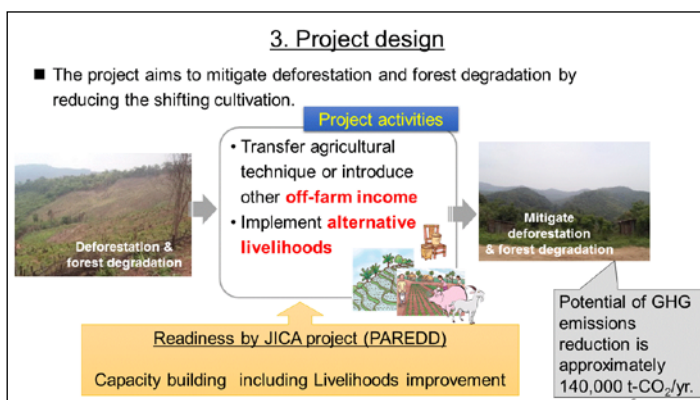


As you can see on these two maps, over the last decade or so forest cover decreased primarily due to slash-and-burn agriculture.



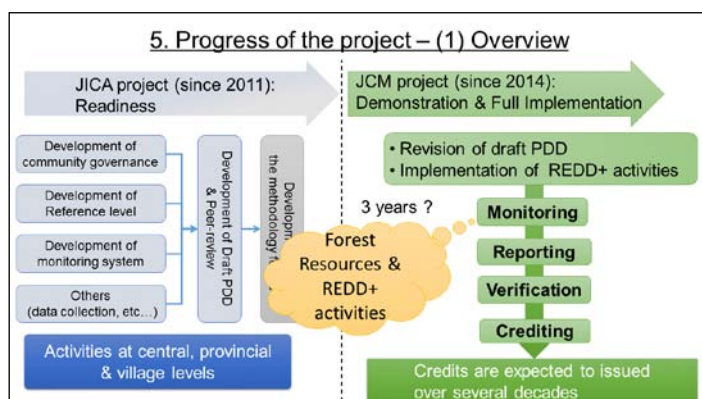
This is slash-and-burn. At the end of the dry season, trees are cut, the land is burnt, and then the harvesting follows. The upper right shows an aerial view. How to reduce slash-and-burn is the issue.

Project Design & Progress

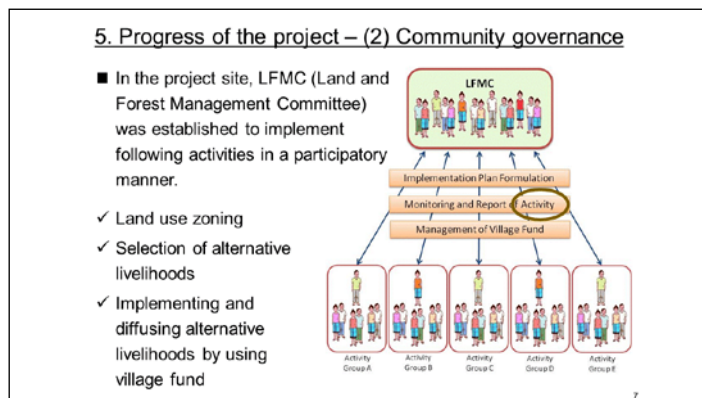


Although we would like them to stop slash-and-burn, the people living in the mountains depend on it for their livelihoods, so immediate cessation is impossible. Our project aims to mitigate deforestation and forest degradation. JICA's project continued here for five years and we took

afterwards



This is what JICA did. After we recognized that the preparation phase was over we decided to go on to a trial implementation period. Monitoring went on for a year. At the beginning, the project was supposed to begin after JICA's capacity building was over. Forest resource monitoring was the primary activity that only lasted for but a very short three years, so an evaluation of the results was not complete. Therefore, we decided to complete an evaluation and cover some areas that had not been covered by JICA. We are continuing monitoring and are working on proceeding with REDD+ activities.



Activities depend on local conditions. We realized that, even within the same village, ethnicity, income levels, and when people migrated to the area matter significantly in implementing the project. We wanted to evaluate the effectiveness of activities and move towards issuing carbon credits based on inventories determined after monitoring, but we recognized that we needed to do some more work.

5. Progress of the project – (3) Reference level

- **Reference scenario**
 - Continue to expand shifting cultivation area
 - Decrease fallow period
- **Method to estimate GHG emissions**
 - Equation: Based on the 2006 IPCC Guidelines
 - Activity data (land area):
 - ✓ Historical: Estimated by remote sensing
 - ✓ Projected: Estimated by using model which takes into account social-economic information
 - Parameters: Developed by field survey (a few data are obtained from the IPCC)


Year	Reference level GHG emissions (t-CO ₂ /yr)
1994	249,000
2000	222,000
2005	289,000
2010	216,000
2015	275,000
2016	286,000
2017	300,000
2018	317,000
2019	337,000
2020	359,000

This shows the reference levels. This is the size of the of the project area at the sub-national level within Luang Prabang province. We participated in the JICA project and established the reference levels checking to make sure that the entire area was covered, but looking at it now, I am not sure if we were able to do so. Regardless, we calculated these levels and if we commence with activities, 140,000 tons worth of credit would be generated per year.

5. Progress of the project – (4) Monitoring system

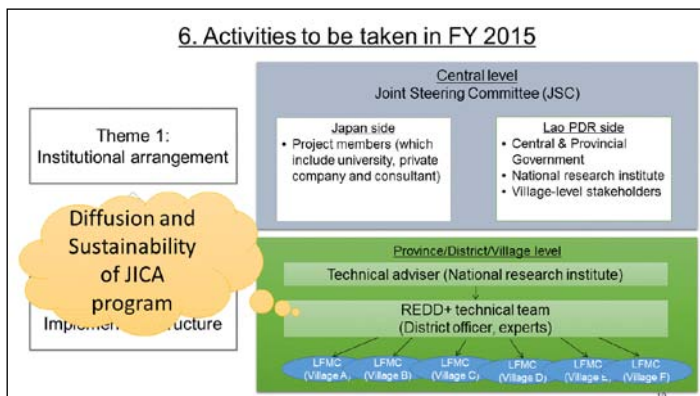
- **Satellite imagery analysis**
 - Use LANDSAT-TM to estimate changes in area of each forest type
- **Participatory forest carbon monitoring**

Participatory forest carbon monitoring enables local communities and peoples to improve environmental awareness and build a long-term forest management system.

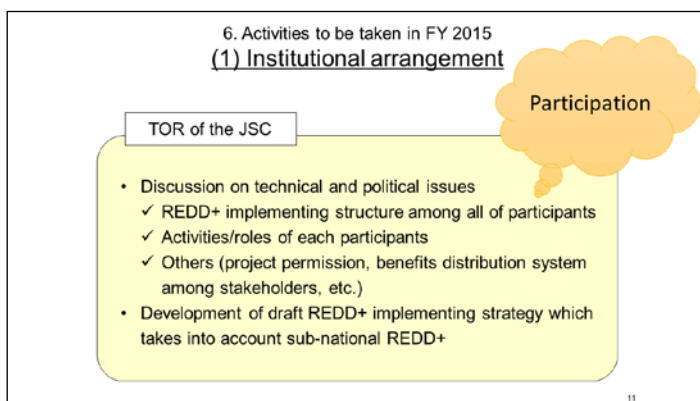


However, we realized that there was much to do to be able to move this towards implementation. Mr. Suzuki was in charge of monitoring and he worked with the local populace to do so, while we conducted aerial surveys. Through monitoring we expected local people to notice some changes in the forests and to come up with some specific actions, but it was not that easy. Even if people recognize deforestation, they totally depend on the forest for their livelihoods. We realized that need to make sure that other sources of income are available and that people actually have the abilities required for other work.

Activities to Be Taken in FY 2015



We established a committee and in July we started consultation with the local people. However, given the present situation for locals in Luang Prabang, it was not practical for us to expect that they would come up with alternate income generating activities, so we realized the need for an organization to provide continuous support. This year we created technical teams in six villages. However, someone going to the villages intermittently would not be effective, so we decided to have them live in the villages. Villagers that wish to stop contributing to deforestation and take up a new vocation can go and seek support from the technical teams, some of which are already in place. Capacity building has already been completed by JICA, so we have used those capabilities and have embedded two people in each village to support the locals and contribute to sustained reductions in deforestation. This is what we believe is necessary in order to sustain what JICA's project had achieved.



First of all, we needed certain institutional arrangements for REDD+ activities, and the participation of local people was very important. First, we valued the participatory approach. Second, we monitored forest changes and the progress of REDD+ activities. Third, we also monitored participation. Currently we are in the demonstration phase, and experts and local people have been working together.

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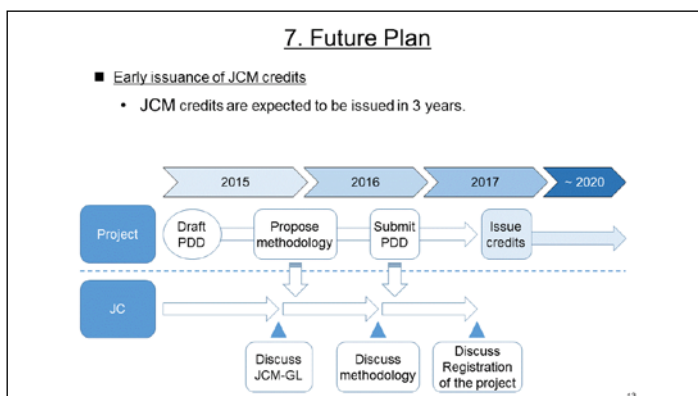
6. Activities to be taken in FY 2015
(2) Implementing structure

- Establish the REDD+ technical team
 - Purpose of the REDD+ technical team
 - ✓ Provide technical advice to villagers
 - ✓ Manage and facilitate REDD+ activities to villagers
 - ✓ Expand the REDD+ activities to other clusters.
 - National research institute provides technical supports and training to the team.
 - Villagers implement REDD+ activities in cooperation with the REDD+ technical team.

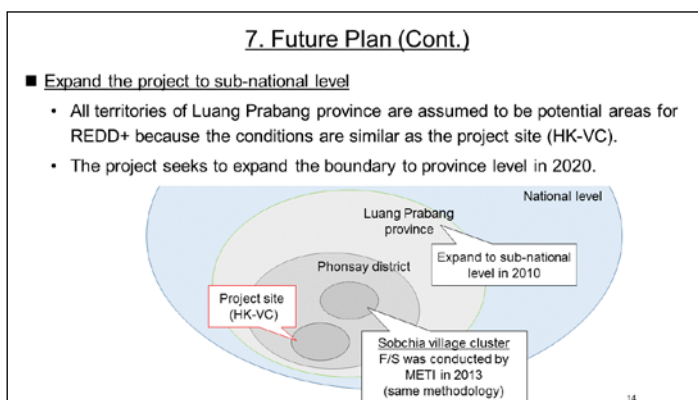
Our Reference level
(1) Carbon stock
(2) REDD+ activities
(3) participation

At this step, we were first only concerned with carbon stock reference levels. However, REDD+ requires more than just the evaluation of carbon stocks to prevent deforestation. Therefore, we decided to think about reference in REDD+ activities. We decided to look at how to improve by referencing the participation level of the locals. This is the performance required of the Cancun and Durban² agreements. We used the performance level as a reference.

Future Plans



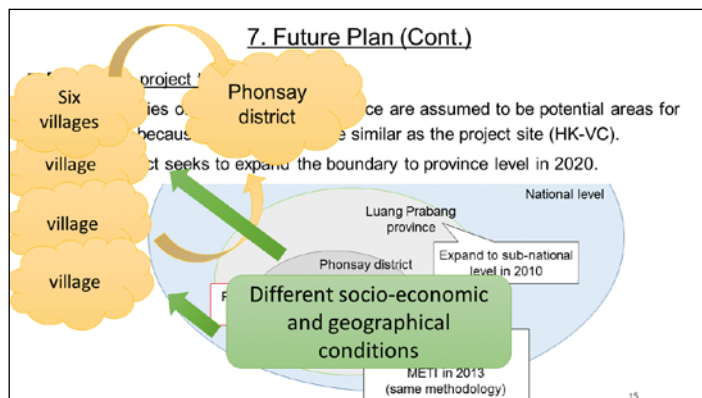
This shows our future plan, but I will not go into details.



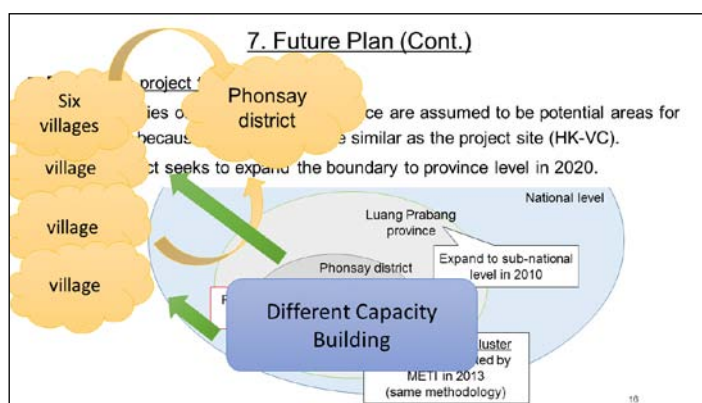
We are now at this village level project site. This should be scaled up to the provincial level and then the sub-national level will be reached. We thought of running several projects at the same time,

² <http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf>

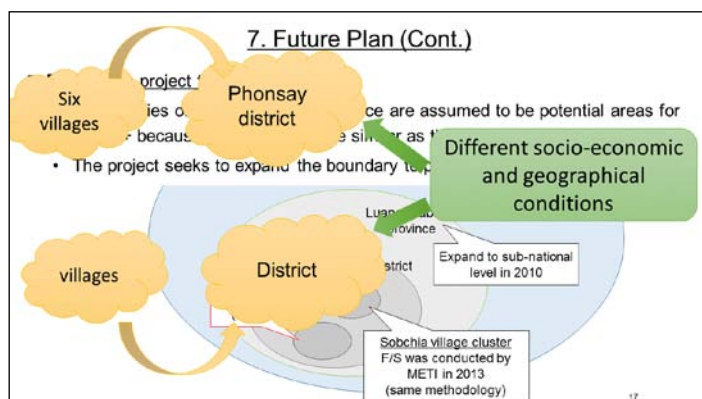
but while thinking about effective REDD+ and also the reference levels, we decided to have this bottom-up approach in order to carry on the reference levels to the sub-national level.



From the initially targeted six villages, we would like to eventually expand this project to Phonsay District. We also have to look at the geographical conditions and the socioeconomic conditions.



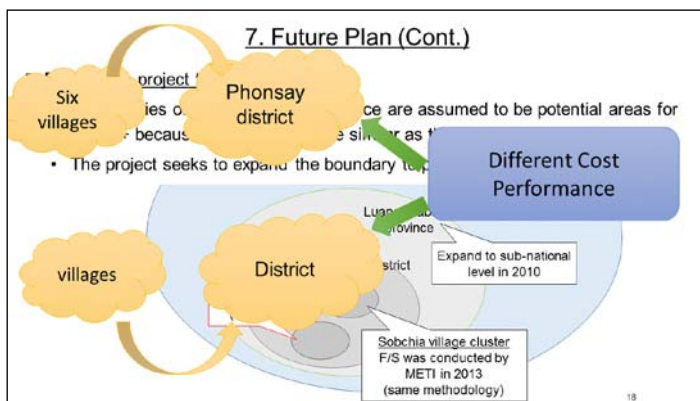
Each district and village has different conditions in these regards. Also, the required capacity to be built also differs from site to site. We have reached the point where we are able to see inclusion of more than just carbon stocks in the reference level.



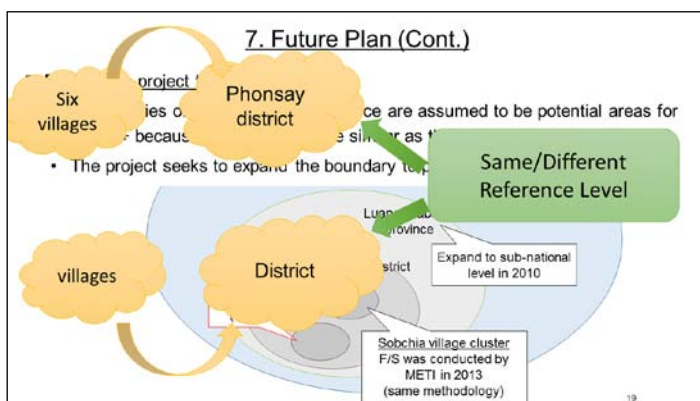
This time we are working in Phonsay District. There are three potential districts within Luang Prabang where forest resources are very rich. As we expand, I am sure we will recognize more

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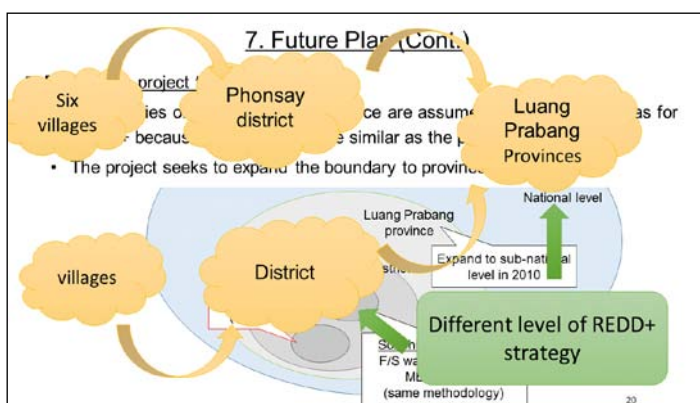
differences amongst sites. We have to anticipate this is creating the reference levels. These make for three references, and the approach should be the same.



Such consideration would not be necessary within one district or within one village, but at the district level, cost performance varies. At one site, one ton would be obtained for \$5, but at another site, because of higher pressures, one ton requires \$20 to \$30. Such differences in terms of cost performance have to be taken into consideration.

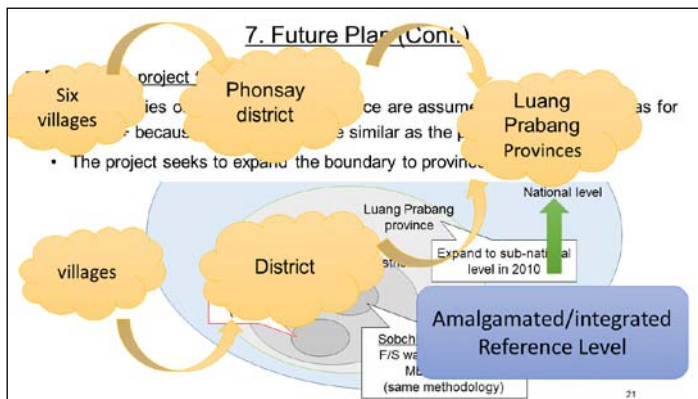


In order to come up with reference levels, we must discuss whether we should follow the same process or utilize different methods.



Finally, we would like to establish reference levels for Luang Prabang Province. At the village

level we have technical teams working with local people and they can establish reference levels in that way, at the provincial level, the level of the technical team intensity can differ. Therefore, in order to reach reference levels we have to find different ways and different processes depending on the phase. That should be kept in mind constantly. We realized that we have to change your way of thinking about reference levels.



Over the last year or so we have learned the lesson that we have to change our way of thinking about reference levels depending on what is being targeted and the size of the project. We have also learned what can be carried over from the village level to the provincial level. For consistency, we need various data, but maybe we have to have more integrated reference levels and this has not yet been discussed. We will have to do that in the third year. We need further discussions next year in order to identify the appropriate processes in order to expand to the provincial level.