(Q1:コンサベーション・インターナショナル 浦口) いろいろなスタンダードが開発されている中で、クレジットをどういう枠組にひも付けるかが問題になるだろう。タイと VCS で最近タギングがあったことについて、Naomi さんに説明をいただきたい。

(Swickard) In terms of linking different systems, the VCS announced collaboration with Thailand last week, where the Thailand has a standard of its own, particularly focused at additional sustainable development benefits that they would like to see layered on top of projects. The VCS has a system for tagging the actual serial number of a credit to show that the project or that particular unit has an additional certification. We have added the possibility to tag a VCU with the requirements that exists in Thailand.

One option potentially in terms of linking a number of fragmented markets that we see emerging in the region, might be to allow a third-party standard (whether that is the VCS or others) to provide credits to national systems such as Japan or Australia for example, where those programs meets the high level requirements of a country. If additional requirements were needed for a particular country, they could be layered on top of an existing standard to meet the needs a particular country and allowed those units to be used. That could create a lot of flexibility for a jurisdiction to use one system that can then access multiple markets.

(Q2: 林野庁 田中) Winrock International の Sarah さんが最後に述べた Result-based compensation について、何が result として期待されるものなのか、compensation とはどういうことを想定されているのか。

(Walker) That is something that has to be defined. It is not something that is universally decided. That is going to different at different places. I think experience will have to show what kinds of level of results are required. There have been different examples of that. For example, Winrock worked on a PES¹ Project in Vietnam where local farmers were encouraged to reduce deforestation. If they prove that they had reduced their deforestation on their parcel, each farmer was responsible for a specific area of land within their community. And if that farmer showed that the deforestation there had been reduced, they received payments over time. This was actually a water project. It also has a carbon component, but it was mostly improve water quality crediting. That would be an example of results-based payment. They do not get the money until they show that they have

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<sup>&</sup>lt;sup>1</sup> Payment for Ecosystem Services

actually conducted the activity.

In terms of what the distribution and benefit is going to be, again that is going to vary a lot from project-to-project. I think that is one of the things that we all have talked quite a bit about is not promising local community members lots of money. Because there are a lot of REDD project activities, a lot of the benefits that are being conducted might actually be related around improved agricultural knowledge, or improved land use planning capabilities, or getting rights to their lands. The actual monetary payments component of it might be very small or in some cases might not exist. I think that is going to be something that a lot of projects at the pilot level have really struggled with, is what can they promise local communities, and how to introduce this topic to them, when to introduce the idea of carbon payments. Are they introducing this to the local communities as a development program? And only the carbon benefit payment system gets broadened over time. When along the development of the program, does the benefit decision get made? Because there has been a lot of experience with projects promising money to local communities and that never happened. I guess we are all very familiar with. I think we have to make sure we do not make that same mistake over and over again.

(Q3: Tokyo university \*Celine\*) I have a question to Sarah. What is the criteria that you showed for a country in your LEAF Project? Another question is what is the methodology to make the alert system? For example, this area is the camping for logging, and this area is fire. Which methodology do you use for making alert system?

(Walker) The choice of which countries are included in the LEAF project was a US AID decision. To assist in predicting where an activity is expected to take place in the future, a number of spatial modeling tools have been developed by scientists using GIS system. The idea is that it uses different layers of spatial data. Land cover, roads, elevation, water, population centers, even things like location of sawmills, location of agricultural distribution centers. Then, the model examines the data from a historic perspective, so it compares different data layers to land cover maps of different time periods. It analyzes different combinations of these proxy indicators to determine which combination results in the best prediction of future activities. For example, things like the location of sawmills, sometimes that is actually a very good indicator of future deforestation because it integrates other drivers together, integrates where the roads are, integrates where there are people who know how to do these skills, it integrates a number of things altogether in one factor. It can be used as a way of predicting where, for example, future deforestation would take place.

This spatial modeling method is often used by Winrock, , but there are multiple approaches that can be taken. Part of the decision to use a certain method will be the accuracy and precision requirements needed in any projections. The method used will also be dependent on the spatial

requirements of the national or sub-national system developed. For example, a decision will need to be made regarding whether a projection of the *location* of future activities is required and if so, for which types of activities.

(Nashanda) Matsumoto was saying that you are thinking to develop REDD+ guidelines on bilateral carbon offset mechanism. Are you considering both a market and fund-based or only market?

(松本) 日本が作る二国間オフセット・クレジット制度の中で、オフセットになるのか クレジットになるのかはまだ明確ではないが、マーケットベースでの資金になると思う。

(Rahayu) I think we agree there is no disincentive scheme in the negotiation in UNFCCC. When the sub-national has some kind of reduction and another sub-national increase emission, it means you apply disincentive mechanism. In my perception, in order to eliminate the disincentive scheme, they deserve to have the incentive as they get according to the reduction. I want to invite your clarification.

(Busch) I understand your question is; the UNFCCC REDD system is not in place yet, so what is happening in the interim time period? In Indonesia, there is the case of the bilateral agreement with Norway with the intention to take a first pilot province in Central Kalimantan, and then later scale up to a second pilot province, and then after a few years to a national system. I believe this would be contingent upon finance being available from the Norwegian government above what is been provided so far. This that I have described would be equally applicable to a bilateral funding arrangement as it would be to a full United Nations Agreement coming down the road.

It would be the decision of the Indonesian government about the revenue sharing, how much would be shared between a site, a district or a province with the national government from reductions. I know that this in the Draft National Strategy, this revenue sharing, the sub-national reference levels are included in the Draft National Strategy, so each of these elements that I have shown are I know something that is being considered as part of the government national strategy. I have seen in my experience just a little of the debate that does take place between different parties in Indonesia with different ideas of how to structure the benefit sharing. I hope that what we have provided can help a little bit for that.

(Q6: 広島大学 奥田) Participatory monitoring には大変興味があるのだが、 $QA^2$ 、 $QC^3$ といったデータの質の担保は長期モニタリングを行う場合に一番問題になる部分だと思う。 Sara さんはデータのインテグレーションが必要だと言われていたが、逆にいろいろなところでいろいろなデータをいろいろな方法で取るとインテグレーションはもっと難しくなるのではないか。

Busch さんはリファレンス・レベルという提案をされたが、その場合は森林からも相当の  $CO_2$  が出ている。単に森林伐採をした量だけで  $CO_2$  の排出量に変換すると、森林からの排出をきちんとモニタリングしないとリファレンス・レベルという意味では比較が難しくなると思うが、どうか。

(Walker) You are right. All of those issues are very important to consider and think about. I think this is a big issue for national scale governments. As you mentioned, there is different players using different methods in different location within their own country. The national government is going to have to decide whether or not they are going to allow that data to be integrated into their national database or not, they will have to figure out how they will decide which methods can be used. If one project uses one field measurement method here and another uses another there, whose responsibility is it to show that that is a valid method and they are just going to allow it, say 'yes, I am sure you did a good job' or do they have to meet some kind of requirements to show that it does meet a certain precision and accuracy level. Is that enough? Even if the data was collected in a different way, if still has a precision and accuracy, can that still be integrated with other data or not? I think that is a decision the governments going to have to make. I think it will be important for the governments, the national level, to at least indicate to projects what they think they might do because right now a lot of projects are spending a lot of energy on data collection and if they are not going to be able to integrate it to the national level, that would be quite a waste of resources.

It is also the same thing with the QA/QC. I think the government is going to need to come up with some regulations related around what precision requirements are going to be required for different types of data. Then in terms of the degradation issue, degradation is a big issue in a lot of countries. Selective logging is happening legally, and legally sometimes selective logging happening first and then deforestation. There is going to be a lot of decisions that need to be made around what level of data are we going to try to get at for degradation. Perhaps for deforestation the accuracy level and the precision levels, are different than for degradation. A country may decide to allow larger error bars in estimates of degradation emissions than deforestation, at least at first.

I think this is very important to think about in terms of the historic versus the future. Maybe in the

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<sup>&</sup>lt;sup>2</sup> Quality Assurance

<sup>&</sup>lt;sup>3</sup> Quality Control

future, we can have very good records of degradation, but they do not exist for the past. How will those different precision levels be looked at when we are developing, deciding how many credits to generate. In the past, you have very low levels of data on degradation. What kinds of proxies are going to be allowed for degradation? I think that is going to be big decision that needs to be made. For some countries where, for example, charcoal production is the main driver of the degradation, can you use completely non-spatial proxies for degradation like the amount of charcoal an average family uses, and then multiply that by the number of families. I think we have to think a little bit outside-the-box in terms of degradation, especially on the historic side.

(Swickard) I just wanted to add a couple of points to build on what Sarah said. The jurisdictional and nested work that the VCS has been developing is aimed at creating the possibility to credit at multiple scales. But at the same time, it does not have to be used that way. As Sarah was saying, right now a lot of projects are absolutely desperate for knowledge from the national government or from the sub-national governments about what the plans are, and even if those are not a 100% any indication of their data requirements, or what activities will be included, what pools will be included would be incredibly helpful for projects to have now. One of the options that I talked about was a Scenario 1 where there is a consistent baseline and possibly other supporting policies in place, but not crediting at larger scales. Even as a first phase, this step could help projects that are developed now to make sure that they will be consistent, for example, that they are collecting data in a way that will be helpful to the jurisdiction going forward.

(Walker) Sorry, it was indicated that I should speak a little bit more about participatory monitoring. As we go forward with monitoring, on thing to decide is who the actors are going to be in conducting this monitoring. National scale governments cannot be everywhere, at every time; whereas local people are living in their communities all the time. I think the need for long-term monitoring is happening at the same time as a lot of advancing technologies. Therefore, the ability of local communities to easily connect to higher levels is expanding very quickly. For example, I think it is likely that smart phones, although still novel now, in 5 or so years might be extremely common worldwide. Three years ago when I was doing fieldwork in Indonesia was my first experience withlocal people taking pictures of *me* with their phones.. Now, that would be quite commonplace. The advancement of smart phones I think is going to play a very important position in long-term monitoring systems. There are so many different levels as I mentioned where local people can supply long-term monitoring systems. I think one of the big things is going to be alerting activities, that activities are taking place, so preventing deforestation from happening by alerting authorities even in the local scale that that is taking place, and therefore stopping it before it goes further. Alerting authorities to fires that are taking place, or illegal logging that is taking place,

maybe people coming into the community and making an arrangement with some farmer that they can go log some land. In the past, there was not really a structure for how to do anything about that, but through REDD maybe that will be an additional incentive to try to curtail those activities.

(Busch) I mean I do not think I really went in too much in detail about how the reference levels are derived, whether it is the historic emission, the future emissions and so forth. But, this could easily be a flux. It could easily be emissions that of removals. With deforestation activity that is occurring, it is important to keep in mind that the magnitude of the fluxes associated with the deforestation at the present time and most places are much larger than the fluxes associated with the removals and the carbon stock enhancements. It takes 50 years or 100 years for a forest to grow to maturity in terms of carbon content, perhaps much longer in terms of biological representation. All that can be lost in a single afternoon. Yes, I think it is important to move towards a flux accounting that takes the deforestation out of the removals. But in countries where they are making choices about what to move ahead with most quickly, I think the bulk of the emissions flux is in the deforestation, and that is the most important thing to get accounted for when possible with the remaining fluxes coming when that capacity develops.

(Walker) I am also going to add a little bit. One of the things with selective logging, for example, is there might be a lot of room for using non-spatial activity data. For example, Winrock has been working a lot in different areas of world to develop emission factors not by unit area, but by volume of wood extracted. How can you related, how much tree volume of timber is extracted, what does that result in terms of emission and the forest. Can that system be used as a way to monitor degradation that allows data to be collected without adding that much more information. For example, we have been working with developing a monitoring system for monitoring emissions from FSC<sup>4</sup> logging operation. If a project is conducting logging that is under FSC, no additional information needs to be collected beyond what is already collected under FSC. They just have to go and take some initial data to parameterize the models that have been developed if they want, or they can use default factors. But then after that they just use the FSC data. I think that allows the transaction costs of adding carbon onto any kind of project to be much smaller. That monitoring module is just added to one of the VCS methodologies that Winrock developed with a number of partners.

<sup>&</sup>lt;sup>4</sup> Forest Stewardship Council: www.fsc.org/