FREL/FRL on UNFCCC: Overview and Analysis of Submitted FREL/FRLs

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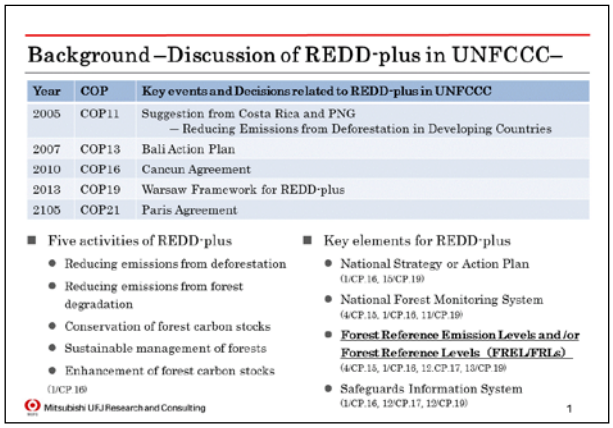
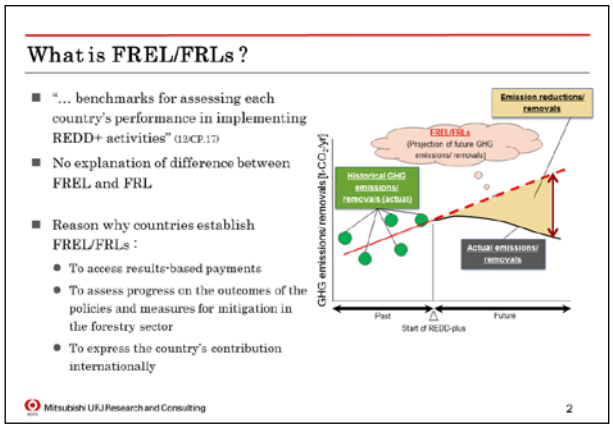


These are some of the flows of the discussions about the UNFCCC over the years. I will be elaborating on COP16, the Cancun Agreement where the framework or the design of the REDD+ was agreed upon. REDD+ has five activities, and some of the key elements were decided, such as the action plan, national plan, forest monitoring plan for REDD+, establishing forest reference levels/forest reference emission levels, safeguard information provisioning system, and also reporting.

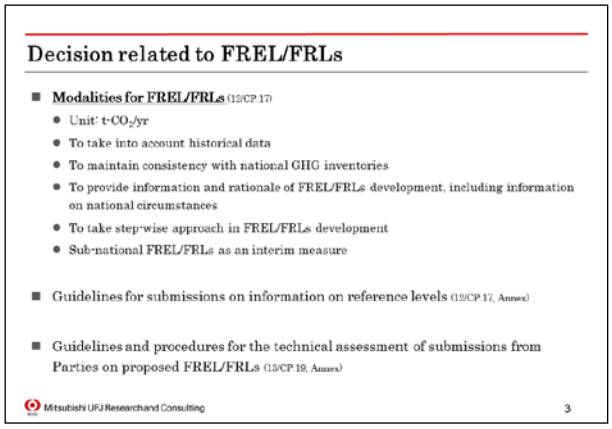
What are FREL/FRLs?



I would like to talk about our main topic of FREL. What are reference levels? I would like to draw from documents from COP17. The reference level is a benchmark for assessing each country's performance in implementing REDD+ activities. The differences between FREL and FRL are not in the UNFCCC documents.

I would like to explain to you the overview of the concept. Data about past deforestation and emissions from forests are calculated to figure out the past trend of emissions. The red dotted line shows the reference if REDD+ is not adopted. If the REDD+ is carried out, then emissions are reduced or absorbed and the difference is shown in brown, which is the emission removal. This is used to as the indicator for success, and the reference level is used to produce a result.

A reference level is created to be able to see the difference indicated in brown. If countries start doing REDD+, they will get results-based payments. We need to visualize how much of a result was achieved. Also in each country, the forestry policies can be also measured of its level of successes quantitatively, so the countries can visualize how much effort the countries have made to international society.

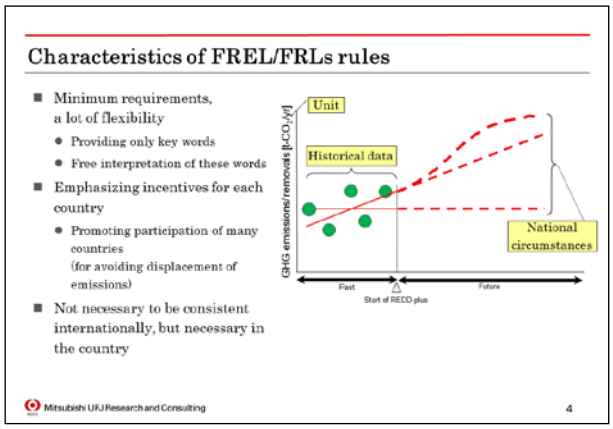


As for the related rules for creating FREL and FRLs, I would like to elaborate on modalities for FREL/FRL[1] that was determined in COP17. This is the only rule for creating the reference level.

[1] http://unfccc.int/resource/docs/2011/cop17/eng/09a02.pdf#page=17

The unit is tons CO2 per year. It also takes into account past historical data. It maintains consistency with national greenhouse gas inventories. They must show how they created reference level from accumulated information. They also need to make improvements. Finally, the reference level should cover the entire nation, but if it is not possible then it can start at sub-national level first.

There are also two guidelines according to UNFCCC. The first are the guidelines for submissions of information on reference level[2]. How is the reference level created and what sort of information needs to be provided to UNFCCC are provided in the guidelines. The second are guidelines and procedures for the technical assessment of submissions from Parties on proposed FREL/FRL[3]. UNFCCC-certified reviewers will conduct a technical investigation based on the guidelines.



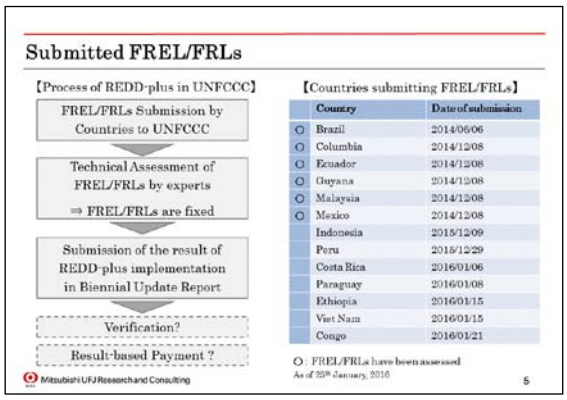
I will share some of the characteristics of the rules. Modalities for FREL/FRL have minimum requirements and have high degrees of flexibility. For instance, the unit is tons of CO2 per year and they need to incorporate historical data. There are a number of selected keywords, but the interpretation of reference levels and method used in determining them is mostly left open. Examples include averaging historical data or to create a linear regression from past data. They might say we will have more population and much economic activity, so the forest may be reduced and/or have a higher reference level.

The freedom of flexibility means that, as long as you ensure the transparency, you can freely create and design the system. No strict restrictions are provided, so this allows many countries to participate and prevents the displacement of emissions to other countries. Displacement means, if one country does REDD+ very well, but the neighboring country may not, then the citizens of one country may go to a neighboring country and log their trees. We would like to avoid this.

Another characteristic is that, although international consistency is not essential, consistency within each country is. Due to the level of freedom afforded each country, it is impossible to have international consistency. However, for the modalities for FREL/FRL, there is a requirement to be consistent within the country according to their national inventory of greenhouse gas emissions.

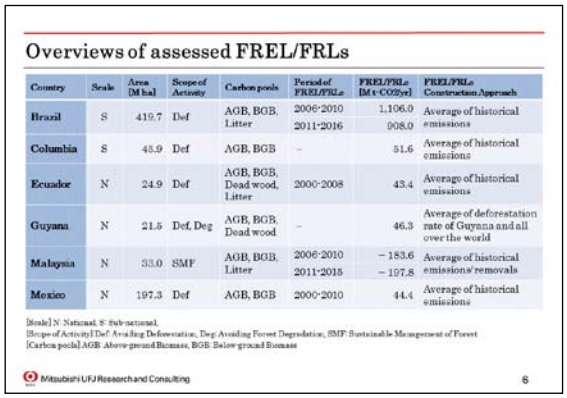
[2] http://unfccc.int/resource/docs/2011/cop17/eng/09a02.pdf#page=19
[3] http://unfccc.int/resource/docs/2013/cop19/eng/10a01.pdf#page=36

FREL/FRLs of Each Country

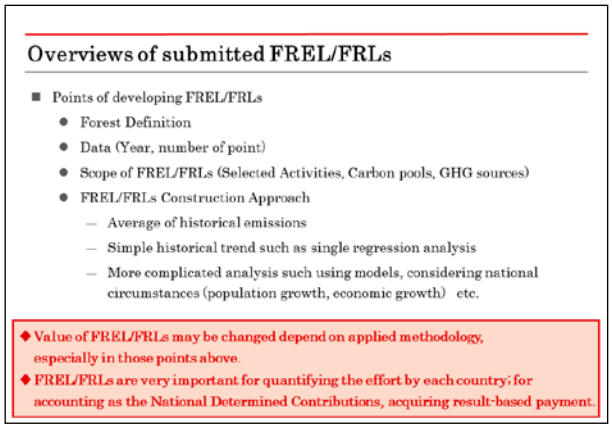


According to the flow on the left-hand side I have sorted out some of the processes of reference levels of REDD+. The countries will submit reference levels to UNFCCC, it will be assessed by technical experts, and the reference level is determined after the assessment. Countries will then implement activities, and once results are obtained and reported in the biennial update report (BUR), results will be submitted again to UNFCCC. Rules up until the submission of the BUR have been decided, but the rules to verificate results and make payments will be discussed at subsequent COPs or UNFCCC.

The right-hand side list shows the dates and countries who submitted FREL/FRLs. This is accurate as of January 25, 2016 and today is January 28th. Chile and Zambia have submitted their results in the past three days for a total of 15 countries. The circles on the left indicate the countries who have underwent technical assessments, a total of six.

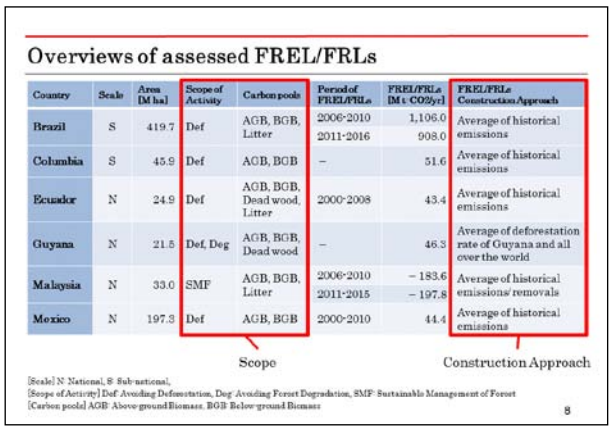


These are the reference levels of those six countries. It shows the scale (national/sub-national), activities, and reference levels. The area is different for each, so the reference levels are all different. Taking Malaysia as an example, the negative numbers indicates that they are absorbing CO2 to the tune of 183.6 and 197.8 tons of CO2 per year. Malaysia will be absorbing CO2 even if left as is, but they have expressed a desire to increase the amount absorbed.



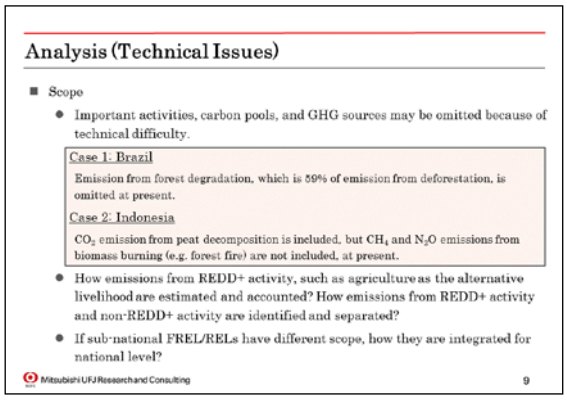
In order to create these reference levels, what are the important points? The value will change based on four points. The first is that the definition of 'forest' varies among countries. Second is that, although there is rule that requires the use of historical data, the value will vary depending on the year and number of points of time. The third is the scope of the reference level. REDD+ has five activities, so depending on which activities were selected or if all the activities we covered, the values will change. Will it incorporate carbon pools, biomass, or fallen litter? Fourth is the construction approach of the reference levels. Will an average or regression analysis of the historical data be used? Will a model be used? Reference levels vary according to the approach taken.

The reference level will be used as indices, so I would like to again emphasize that they are very important. They are important because they will be used for national determined contributions and will be used as a basis for results-based performance payments.



Looking at 'scope' on the previous table, Brazil targets deforestation, while Guyana targets both deforestation and degradation. Malaysia differs by aiming for sustainable forestry management. Things such as biomass, litter, and the scope of the pool differ between countries. The far right-hand side shows the construction approach. Most countries who have been assessed have been taking the past average, while Guyana is taking its own unique approach.

Analysis (Technical Issues)

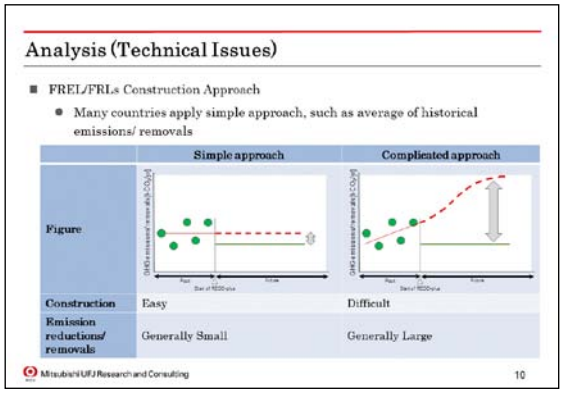


Now I will go into analysis. This is becoming more technical. About scope, important activities, and also important carbon pools and gas may be omitted because it is technically difficult, so the countries do not need to be blamed. There will be a stepwise approach to improve the situation. For instance, in the case of Brazil, research has already shown that emissions from degradation are 59% of the emissions from deforestation. However, it is technically very difficult to collect related data continuously, so they are only looking at deforestation, but I think they will start looking at degradation in the future.

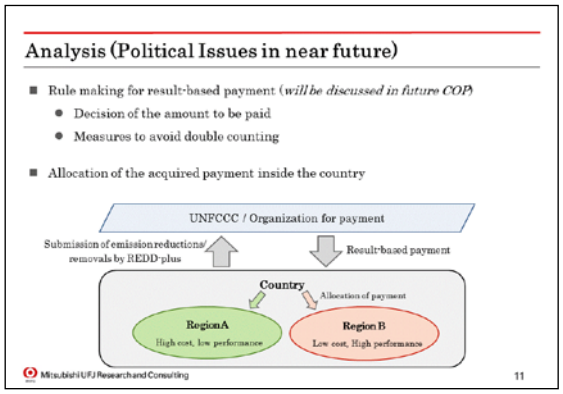
For Indonesia, the CO2 emissions from biomass are included in addition to deforestation since it is an important source of emissions. Reference levels take into account CO2 emissions from peatlands, but other gases such as methane and N2O in biomass burning are omitted and are not counted. Despite the large amount of methane and N2O released from the many forest fires last year, it is difficult to measure these emissions at this point.

Another point is that maybe there are highly productive farms bordering the forests to protect them. Do you need to count the emissions from fertilizers used in farming? Also if you do REDD+, the traditional farming fertilizers were agriculture chemicals. How do you separate out emissions from farming as part of REDD+? These details need to be discussed.

We have a temporary rule allowing for sub-national reference levels, but how are you going to integrate region A's reference levels with region B's? If the pools or scopes different, are you going to simply add them? Ensuring consistency is another technical issue.



Another technical issue is the construction approach. Most countries are taking the average of historical data to determine reference levels. This is a relatively simple methodology. However, to forecast into the future and to create the large reference level is possible, but very difficult. It is difficult not necessarily because of technical challenges, but because of the need explain to the evaluators the validity of the approach. Using simple methods has a tendency to lead to predictions of smaller emissions reductions, while using difficult methods tends to lead to larger predicted emissions reductions, so this is an area that requires further discussion.



Finally, in addition to the technical issues, there are political issues that we must consider in the near future. Since there are some people from the governments today, I would like to raise this as a pending issue.

Countries that implement REDD+ will receive payments based on the results submitted to UNFCCC and the institutions in charge of making results-based payments. However, when we talk about results, what does 'result' mean? Will payments be made at a rate of $5 per ton of CO2 of carbon emission reductions, or will they be based on the expenses incurred? There is no certain rule and no one can predict how payments will be made.

There are outstanding issues on how payments will be distributed within a country. For instance in region A it may be very costly to achieve reductions, but the reductions are limited. On the other hand, region B could minimize the cost, but could reduce emissions by quite a bit. Which region should receive more payments? That is a difficult question.

These are the issues that I would like to raise, and I look forward to seeing the next three presentations to understand how each country is proceeding.