Design and Implementation of REDD+ Results-based Finance at the Jurisdictional Scale through the FCPF Carbon Fund

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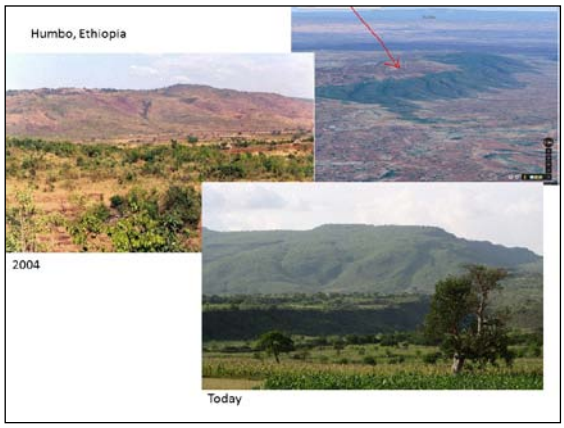
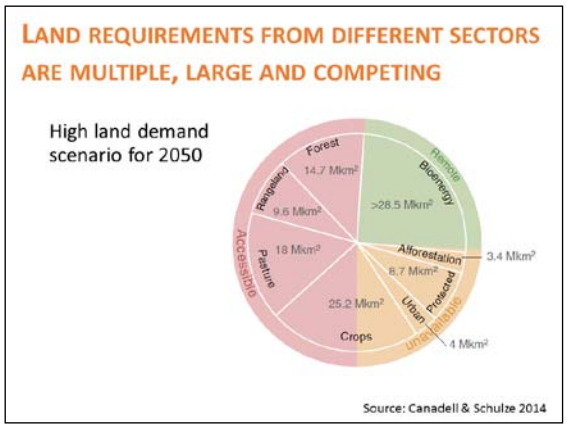


As you just learned, I do cover up the Asian countries as part of my portfolio and I will feature some of the work in the region. Unfortunately, I just returned from the region and was not able to be with you in Tokyo today. However, I hope that I can give you a short overview and a couple of examples of the work that we are doing internationally through our global programs managed by the World Bank, and give you a few examples of the work we do specifically in the Asia region, which may be of most interest for you. Let me start with a quick example just to give you a sense of how our work is about.

What you see here are pictures from the Humbo landscape in Ethiopia. In the upper left is a denuded hillside in 2004, and the picture at the bottom right is as it is today. Clearly, it is much greener, more forested, and much richer in carbon. You see the same landscape seen from space in the upper right. That is precisely the kind of transformation we hope to achieve through the financing and the funds provided by the World Bank. The example that you see here was at the scale of 500,000 hectares approximately, and generated about seven million tons of CO2 equivalent in terms of emission reductions over a 10-year period. While this was pioneering, significant, and we learned

many things from that, and in fact this was even placed at the BioCarbon Fund[1] of the World Bank, we want to take this experience to a very different scale, including to another initiative of the BioCarbon Fund, the Initiative for Sustainable Forest Landscapes[2] (ISFL), and in particular the Forest Carbon Partnership Facility that you should learn about.



With that example in mind, let me give you a bit of a background to set the stage for our work. This is a statistic in background that you are probably very well aware of. What you see here in this chart is the increasing requirements from different sectors on land, which are multiple large and competing. What you see in the colors in this pie chart is the land area globally that is accessible in pink, remote in green, and unavailable in yellow, for instance, because it is urban. What you see in the pie chart on top of that labeled with the black font is the demand for land as protected by the middle of the century. As you can see, very quickly in the scenario we will be running out of land (certainly accessible land) to accommodate all the land users that are needed for forests, for crop lands, for bioenergy, and etcetera.

Just this as a backdrop, you will obviously know that transforming landscapes in this context is very challenging. It requires a number of innovations. I want to touch on three areas in particular

[1] https://wbcarbonfinance.org/Router.cfm?Page=BioCF&ItemID=9708&FID=9708
[2] http://www.biocarbonfund-isfl.org/

of how we engage people differently in an innovative fashion to make this transformation possible, how we harness technology to get results, achieve that scale, and measure that scale, but also how we leverage finance differently from how we have done it in the past.

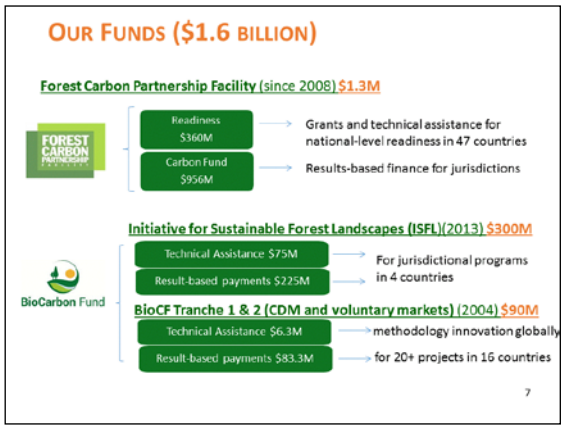
The Challenge We Address

As a bit more background, we obviously implement these funds with climate financing through the World Bank Group, which is development organization, and so we try to achieve two objectives. One is to make a contribution through piloting emission reduction schemes at scale, to make a contribution to global mitigation, and make a dent into the roughly 25% of global greenhouse gas emissions coming from the forest and land use sector. At the same time we want to achieve and promote development objectives, address poverty, boost their prosperity, and to create development opportunities for people living in and around forests. We have dual objectives, which makes this very challenging and requires climate smart ways of achieving both at the same time.

Now, what we have at the World Bank are two major funds. You have heard just a moment ago a little bit about the Forest Carbon Partnership Facility, and I just mentioned also another fund, which is significant, the BioCarbon Fund, and in particular the Initiative for Sustainable Forest Landscapes. Between those two funds alone we have roughly USD$1.6 billion in carbon sinks, carbon finance, and for sustainable forests, landscape transformation, and forest development. Both funds pioneer an

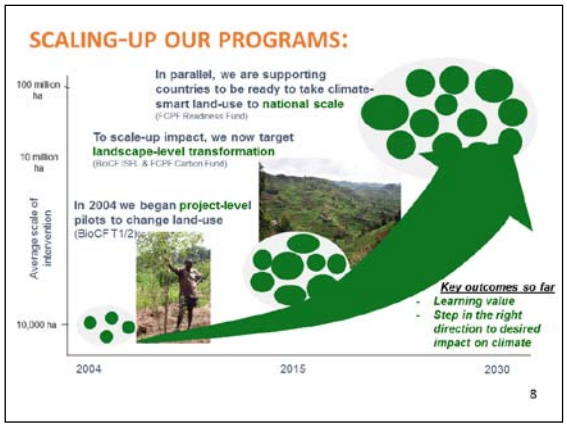
incentive-based mechanism scheme, results-based finance for emission reduction at scale. That work actually entails work across the sectors including environment, agriculture, energy, and extractives. I will show you in a moment that we work with over 50 countries in all major regions, and we have an active collaboration with the private sector both through the International Finance Corporation[3] (IFC), the private sector arm of the World Bank, as well as other commodity corporates at the global and local level.

Our Funds



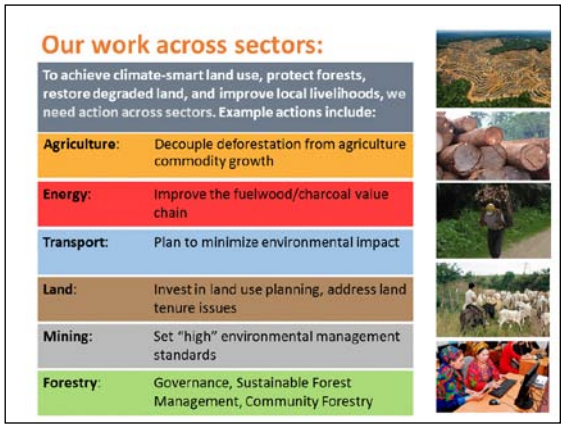
Here we have a different view on the funding that we are working with. The numbers changed almost on a monthly basis. They have changed quite significantly after initial measures were made at the Conferences of Parties in Paris just a month ago. Currently we have roughly USD$1.6 billion across these two major funds in the Forest Carbon Partnership Facility, which you see at the top. We basically operate two windows. One is the readiness fund, which supports technical assistance and capacity building at the national level in about 50 countries, and the sister fund is the Carbon Fund, which was capitalized with almost $1 billion US for results-based finance for jurisdictions that implement REDD+ programs at that scale. Below you see the respective number for the Initiative for Sustainable Forest Landscapes. Again, it is well capitalized with USD$300 million approximately, a portion of which can go to technical assistance, but the lion's share of that would also go towards results-based payments.

[3] http://www.ifc.org/



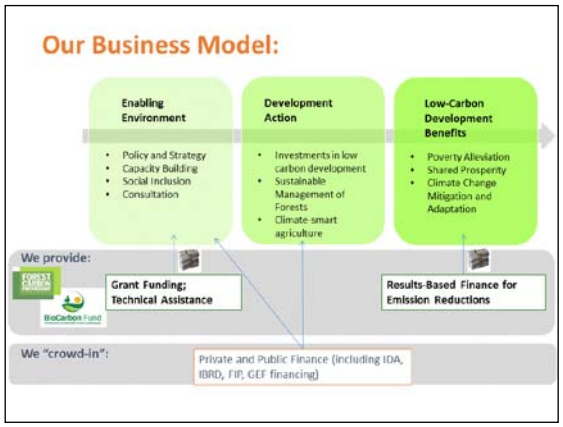
Here visually is a representation what we try to achieve over time over the work across these funds over the next 10-15 years. What you would see at the bottom left is the kind of example I started out with, projects that started at the scale of tens or hundreds of thousands of hectares and achieved perhaps a few million tons of CO2 in terms of emission reductions. Through the funds that I just described, the ISFL and the FCPF carbon fund, we want to take this experience to a different scale and get into the millions of hectares with the idea that eventually under the incentive mechanisms under the Climate Change Convention, this could be split up to entire countries going to the things in absolutely like hundreds of millions of hectares in terms of accounting for carbon across these large areas. This is very much the objective to pilot this middle section of this curve that you see here going from project to jurisdictional level implementation of these transformational schemes.

Here is the global map of the countries we are working with. The green ones that are highlighted and labeled are the ones that are currently in the pipeline for the FCPF Carbon Fund and/or the BioCarbon Fund Initiative for Sustainable Forest Landscapes. You see we are nicely covered in all major regions, including some major countries in the Asia region, which is perhaps of most interest to the participants here in Tokyo.



We indicated that this work entails cross cutting work and integration across various sectors. In fact, many of the drivers are obviously outside of the forest sector per se in the agriculture or energy sector for instance, so one of the challenges and the areas of work that we pursue is to, for instance, we decouple deforestation from agricultural commodity growth, or provide energy without poaching on the forest resource, just as two of the examples shown here.

Our Business Model



What is the business model of these funds? Again, this applies to both funds (the Forest Partnership Facility as well as BioCarbon Fund), and this will resemble what is probably known to you as the three phase approach from the Cancun Agreement from some years ago under the COP. Starting on the left with financing, it is grant financing largely for the creation of an enabling environment or in countries in the development of polices and strategies; build capacities mostly at the national level, but also establish sound mechanisms for social inclusion and consultation. Both funds' resources will offer this enabling environment set of activities.

The second and key phase is on the basis of this capacity to develop actions that would result in emission reductions and mitigation actions in the long term. This is where other sources of finance come into the picture, and here we actually rely mostly on finance coming from other funds other than the ones that we manage ourselves. Here is where the private and public financing comes in through

IDA, the World Bank's own investments, Forest Investment Program[4], or Global Environment Facility[5] (GEF) financing, and provide private sector is important source of financing here as well to finance the actions that would result in emission reductions and mitigation results in the long term. Of course, the other major source of financing that we have is then from results-based finance for verified emission reductions that were achieved in a fashion that achieves both development objectives and climate objectives at the same time.

This is our basic phased model and this follows basically the framework under the Climate Change Convention. This is the kind of framework that many countries are putting in place. Many are still in the first box on the left, but are transitioning swiftly to the second box. Soon I think will have schemes that will be implementing the scheme on the ground. I will give you a few examples of those in just a moment.

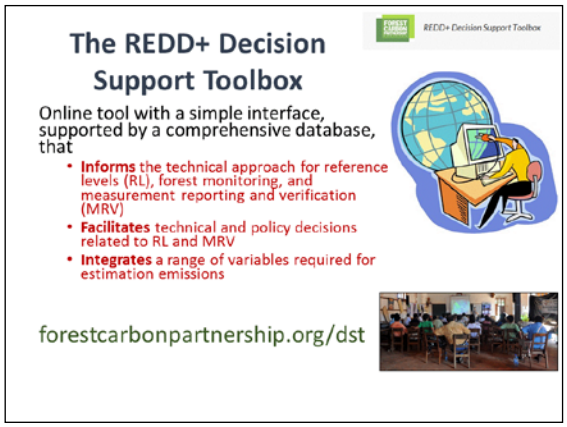
[4] http://www.climateinvestmentfunds.org/cif/node/5
[5] https://www.thegef.org/gef/

This is a visual impression here that stakeholder engagement is very important, also for scaling. This involves the involvement of stakeholders at all levels from national down to jurisdictions and the community levels. Much of what these funds have achieved so far is the establishment of sound institutional structures and the engagement of stakeholders, which is one of the prerequisites for successful implementation on the ground and the scaling up thereon. I can discuss that in more detail if that is of interest in particular.

Another area of course is the role of technology in achieving these results at scale. As many of you will know and appreciate there has been a proliferation of technology in recent years in terms of how we can now map natural resources, the landscapes, forest areas, and agricultural areas at increasing scales with increasingly reliable precision.

That can and does lead in many to our countries to a high degree of confusion in terms of how to most effectively harness all this technology. One of the areas that we are supporting through the technical assistance programs are essentially capacity building on methodologies, but also decisions of the board that help countries again at the national and jurisdictional level to make the right choices in terms of the data, technologies, and the methods that they choose to achieve the results, measure, and demonstrate the results that they have achieved through their programs.

The REDD+ Decision Support Toolbox



As a bit of an advertisement of the kind of work that we have done and promoted through this work, here is an example of an online REDD+ Decision Support Toolbox[6] that helps in an interactive fashion through a web-based interface, countries to develop incrementally the reference level and design a forest monitoring approach. It pulls in various sources of globally available datasets to come up with back-of-the-envelope approximate estimates for reference levels at various scales nationally or sub-nationally going down to the district level in most countries. That helps facilitate the design of reference level and coordination and harmonization of that design at the jurisdictional level and at the national level. Several countries have used and explored this as they were preparing reference levels, for instance, reference level submissions through UNFCCC over the last couple of months, and harmonizing that with their efforts to develop a program for the FCPF Carbon Fund. This is one of the areas where we support technical work that allows the scaling from bottom up and top down at the same time through exploration of data and interactive data analysis.

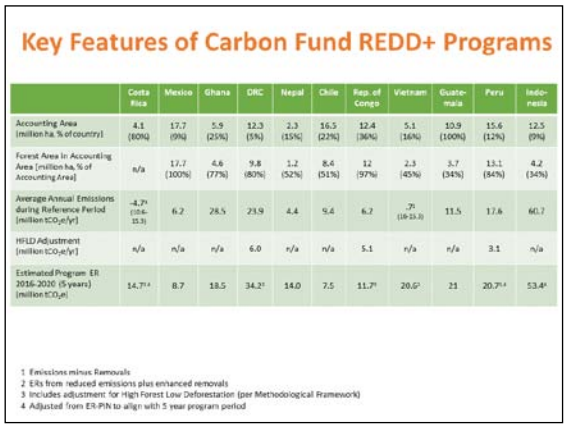
This is again just a quick snapshot of the capacity building that is necessary as a key element for scaling. Here is the training materials that we have developed with several partners that you see identified at the bottom of the slide. This is material that we have been rolling out and are rolling out going forward as countries are preparing programs for Carbon Fund financing.

[6] https://redd-dst.ags.io/accounts/login/

Another area that I would like to point out here are the standards that have been developed in the context of the work, in particular of the FCPF Carbon Fund so far, but also the readiness fund. One area of innovation is the notion and definition of readiness. Of course, many of you will appreciate that readiness has been a key element of the REDD+ negotiations for the last couple of years. Through the work of the FCPF as well as other programs like the UN-REDD[7], we have a much better understanding what the key ingredients are now for effective REDD+ preparation and implementation. We have developed an assessment framework that many countries are currently using as a they come out of several years of capacity building at the national level and are transitioning in to a climate finance phase to assess their progress and identify the gaps including financing gaps.

The second picture that you see here is the Carbon Fund Methodological Framework[8], which was developed in participation with many of our countries and our donors that essentially has established a technical guidance under which the Carbon Fund programs need to operate. It specifies certain requirements on how reference levels need to be designed and the quality standards that need to be met as emission reductions are measured, reported, and verified. That is effectively amounting to a standard under which all these programs need to operate.

Also on the legal side we have made headway. We have developed general conditions for future emission reduction payment agreements. That is a piece of legal work that fundamentally defines the relationship between the sellers and buyers of carbon, or the relationship between the donors and the contributors to the fund and the REDD countries that will generate emission reductions through the implementation of the programs. I can go into any of these areas in a bit more detail. I just wanted to point out that through the work that we have done, from the perspective of scaling, it is very important to have sound frameworks to measure progress, to establish standards, and the legal relationship.



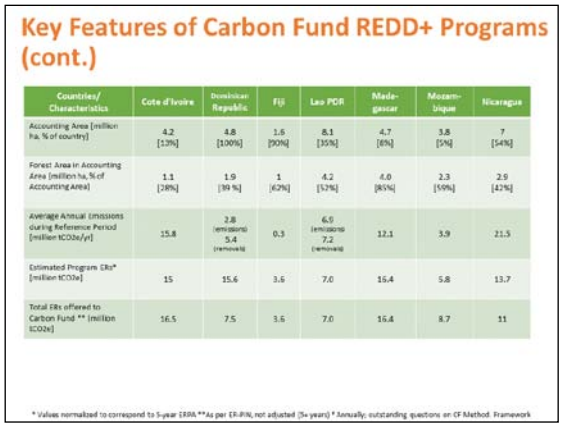
Key Features of Carbon Fund REDD+ Programs

	Costa Rica	Mexico	Ghana	DRC	Nepal	Chile	Rep. of Congo	Vietnam	Guate-mala	Peru	Indo-nesia
Accounting Area (million ha, % of country)	4.1 (80%)	17.7 (9%)	5.9 (25%)	12.3 (5%)	2.3 (15%)	16.5 (22%)	12.4 (36%)	5.1 (16%)	10.9 (100%)	15.6 (12%)	12.5 (9%)
Forest Area in Accounting Area (million ha, % of Accounting Area)	n/a	17.7 (100%)	4.6 (77%)	9.8 (80%)	1.2 (52%)	8.4 (51%)	12 (97%)	2.3 (45%)	3.7 (34%)	13.1 (84%)	4.2 (34%)
Average Annual Emissions during Reference Period (million tCO_2e/yr)	-4.7[1] (10.6-15.3)	6.2	28.5	23.9	4.4	9.4	6.2	?[2] (18-23.3)	11.5	17.6	60.7
HFLD Adjustment (million tCO_2e/yr)	n/a	n/a	n/a	6.0	n/a	n/a	5.1	n/a	n/a	3.1	n/a
Estimated Program ER 2016-2020 (5-years) (million tCO_2e)	14.7[3,4]	8.7	18.5	34.2[3]	14.0	7.5	11.7[3]	20.0[3]	21	20.7[3,4]	53.4[4]

1 Emissions minus Removals
2 ERs from reduced emissions plus enhanced removals
3 Includes adjustment for High Forest Low Deforestation (per Methodological Framework)
4 Adjusted from ER-PIN to align with 5 year program period

[7] http://www.un-redd.org/

[8] https://www.forestcarbonpartnership.org/sites/fcp/files/2014/MArch/March/FCPF%20Carbon%20Fund%20Methodological%20Framework%20Final%20Dec%2020%202013.pdf



Key Features of Carbon Fund REDD+ Programs (cont.)

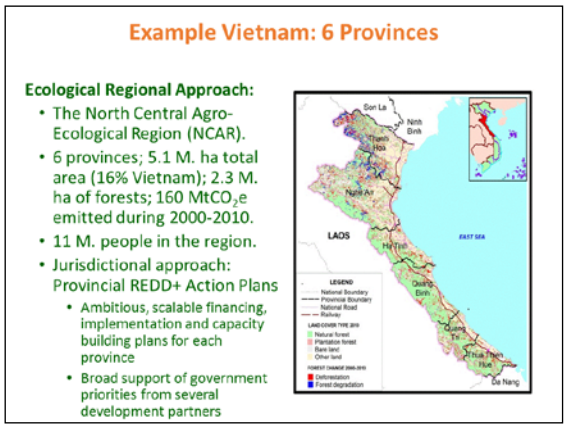
Countries/ Characteristics	Cote d'Ivoire	Dominican Republic	Fiji	Lao PDR	Mada-gascar	Mozam-bique	Nicaragua
Accounting Area [million ha, % of country]	4.2 [13%]	4.8 [100%]	1.6 [90%]	8.1 [35%]	4.7 [8%]	3.8 [5%]	7 [54%]
Forest Area in Accounting Area [million ha, % of Accounting Area]	1.1 [28%]	1.9 [39 %]	1 [62%]	4.2 [52%]	4.0 [85%]	2.3 [59%]	2.9 [42%]
Average Annual Emissions during Reference Period [million tCO2e/yr]	15.8	2.8 (emissions) 5.4 (removals)	0.3	6.9 (emissions) 7.2 (removals)	12.1	3.9	21.5
Estimated Program ERs* [million tCO2e]	15	15.6	3.6	7.0	16.4	5.8	13.7
Total ERs offered to Carbon Fund ** [million tCO2e]	16.5	7.5	3.6	7.0	16.4	8.7	11

* Values normalized to correspond to 5-year ERPA **As per ER-PIN, not adjusted (5+ years) * Annually; outstanding questions on CF Method. Framework

Moving on to a bit more specificity on the countries that we have in the pipeline, what you see here across the top are the number of the countries that are currently in the pipeline for the Carbon Fund. What I would like to point out is the first row, which shows the accounting areas in millions of hectares and the fraction of the land area of the respective countries. As you can see, many of the programs that have been proposed have proposed a very large area of the country's land area. You can see Costa Rico's program encompasses 80% of the country's land area, or Guatemala, the entire country.

On the second slide is the most recent addition to our pipeline. Those were decisions made just three months back by the Carbon Fund participants. Again, you see that the jurisdictions that have been proposed encompass a relatively larger share of those countries and land area, and therefore have the potential to make a significant impact on the mitigation objectives of these countries.

An Example from Vietnam



Example Vietnam: 6 Provinces

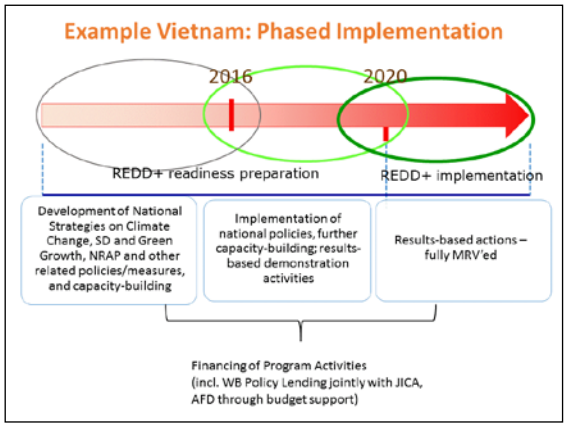
Ecological Regional Approach:

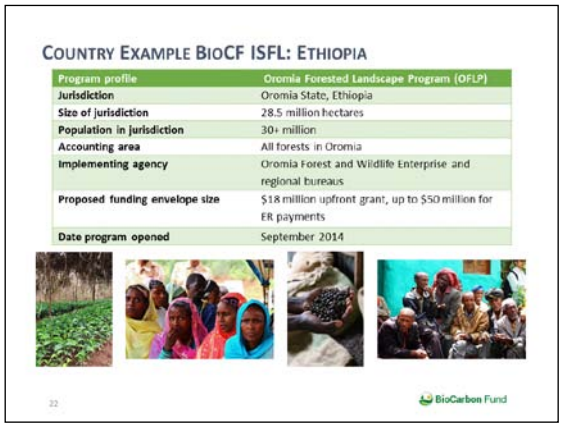
- The North Central Agro-Ecological Region (NCAR).
- 6 provinces; 5.1 M. ha total area (16% Vietnam); 2.3 M. ha of forests; 160 $MtCO_2e$ emitted during 2000-2010.
- 11 M. people in the region.
- Jurisdictional approach: Provincial REDD+ Action Plans
  - Ambitious, scalable financing, implementation and capacity building plans for each province
  - Broad support of government priorities from several development partners

Just to wrap up, I will provide a few examples from our portfolio. I take an example from the Asia region. One of the programs that is proposed and currently being prepared at the jurisdictional scale is one in Vietnam, which includes six provinces in the north central coast area that we see here on the map. Several of these areas have also been supported by Japan through technical assistance provided by JICA, as well as many other development partners. We are talking about five million

hectares of land area, 16% of Vietnam's land area, and 2.5 million hectares of forests in an area that is estimated to have a relatively high level of emissions historically.

What is currently happening, again with the support by JICA and other development partners including the US as well as the FCPF, is the development of so-called Provincial REDD Action Plans which are meant to be ambitious, scalable and financially sound schemes. We implemented a series of actions that would achieve the results that would be compensated for or paid for by the Carbon Fund later on. Again this relies on broad support from a number of development partners, and only through this collaborative financing technical assistance and programmatic approach like the one you see here, it is becoming possible.





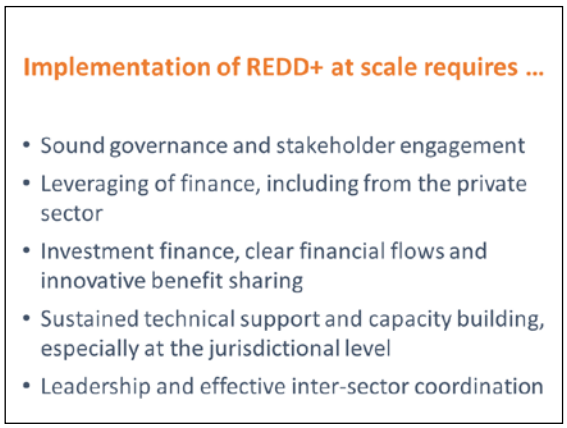
The way this is going to be rolled out is, from the perspective of Vietnam, in the same three phases that I described earlier, so we already have experience of several years of capacity building at the national level as well as piloting various elements of REDD+ at the sub-national level. What is currently being prepared is a program at the level of the six provinces that would result in sustained stream of results-based finance starting later in this decade and going to the next decade.

Another important area is the necessary financing of program activities, so the kind of investments that are needed to generate the emission reductions, so that needs investments in forest sector development, planning, land use planning, energy programs, and etcetera, these are currently they are being developed and require financing. One of the areas of constructive collaboration,

including with Japan through JICA and through World Bank policy lending, which is currently prepared, that would provide investment and finance through budgetary supports to make these actions financially viable.

One last example is the Humbo landscape. What has resulted from that experience is a much larger program in the Oromia Forested Landscape. A much larger program is now being developed encompassing almost 30 million hectares with a population of over 30 million people with the expectation that several tens of millions of US dollars could be generated in terms of emission reduction payments over the next couple of years. That is a program that is mostly financed through the ISFL of the BioCarbon Fund, but packaged and bundled nicely with upstream capacity building from the FCPF and other development partners. This is the kind of result that countries are now at the verge of being able to implement these types of programs at a much larger scale having benefitted from the experience of piloting such teams at a smaller scale previously.

Conclusion



I will now give a few concluding thoughts. Let me just emphasize the importance of sound governance and stakeholder engagement, an absolute prerequisite for scalability and in the long term. Equally important is the leveraging of financing, results-based finance. As a standalone financing vehicle, it is unlikely to achieve the goals that the countries have set themselves. Therefore, it requires

leveraging from other sources of financing from the private sector through development of financing and other investment financing. The leveraging of that is absolutely critical. Also critical is the associated benefit sharing, which has to be designed differently once operated at the scale of entire jurisdictions, and eventually countries, and where the attribution of specific results to different communities or individual stakeholders is very difficult to achieve. Of course, sustained technical support and capacity building are necessary going forward. We have been talking about the readiness phase that leads to an enabling environment, that in fact continuous capacity building, especially at the jurisdictional level, which is the level at which most countries are working now, is an important element going forward. Last but not least is the political leadership at all levels from the national level down to the jurisdiction, and the associated effective inter-sector coordination make these schemes viable and financially viable, as well as having environmental and climate integrity

I am looking forward to a round of questions and answers.