FREL/FRL on UNFCCC
–Overview and Analysis of Submitted FREL/FRL-

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Background –Discussion of REDD-plus in UNFCCC–

Year	COP	Key events and Decisions related to REDD-plus in UNFCCC
2005	COP11	Suggestion from Costa Rica and PNG — Reducing Emissions from Deforestation in Developing Countries
2007	COP13	Bali Action Plan
2010	COP16	Cancun Agreement
2013	COP19	Warsaw Framework for REDD-plus
2105	COP21	Paris Agreement

- Five activities of REDD-plus
  - Reducing emissions from deforestation
  - Reducing emissions from forest degradation
  - Conservation of forest carbon stocks
  - Sustainable management of forests
  - Enhancement of forest carbon stocks

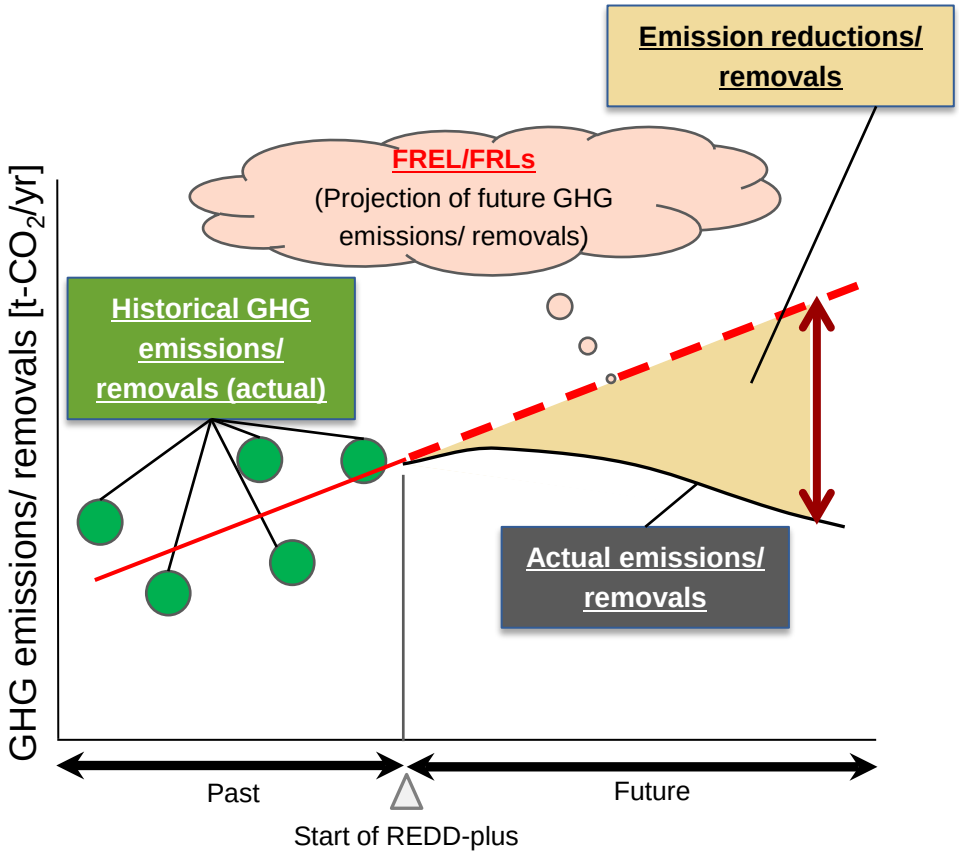
  (1/CP.16)

- Key elements for REDD-plus
  - National Strategy or Action Plan (1/CP.16, 15/CP.19)
  - National Forest Monitoring System (4/CP.15, 1/CP.16, 11/CP.19)
  - **Forest Reference Emission Levels and /or Forest Reference Levels（FREL/FRLs）** (4/CP.15, 1/CP.16, 12.CP.17, 13/CP.19)
  - Safeguards Information System (1/CP.16, 12/CP.17, 12/CP.19)

What is FREL/FRLs ?

- "… benchmarks for assessing each country's performance in implementing REDD+ activities" (12/CP.17)
- No explanation of difference between FREL and FRL

- Reason why countries establish FREL/FRLs :
  - To access results-based payments
  - To assess progress on the outcomes of the policies and measures for mitigation in the forestry sector
  - To express the country's contribution internationally



Decision related to FREL/FRLs

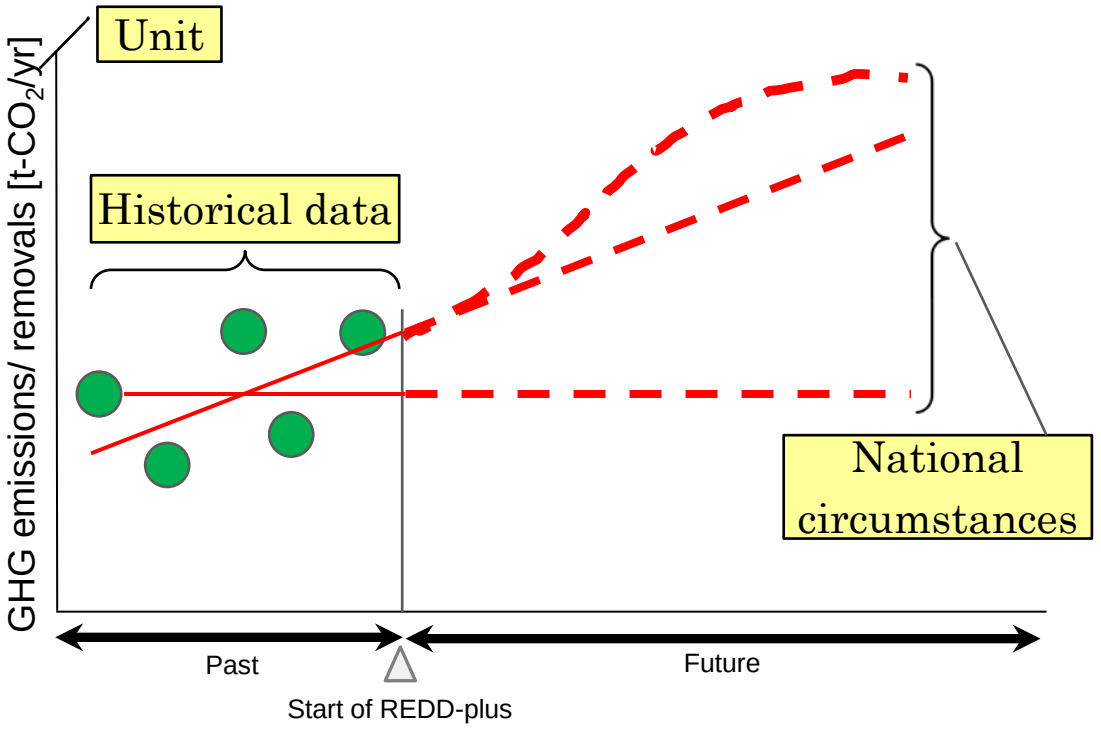
- **Modalities for FREL/FRLs** (12/CP.17)
  - Unit: t-CO_2/yr
  - To take into account historical data
  - To maintain consistency with national GHG inventories
  - To provide information and rationale of FREL/FRLs development, including information on national circumstances
  - To take step-wise approach in FREL/FRLs development
  - Sub-national FREL/FRLs as an interim measure

- Guidelines for submissions on information on reference levels (12/CP.17, Annex)

- Guidelines and procedures for the technical assessment of submissions from Parties on proposed FREL/FRLs (13/CP.19, Annex)

Characteristics of FREL/FRLs rules

- Minimum requirements, a lot of flexibility
  - Providing only key words
  - Free interpretation of these words
- Emphasizing incentives for each country
  - Promoting participation of many countries (for avoiding displacement of emissions)
- Not necessary to be consistent internationally, but necessary in the country



Submitted FREL/FRLs

【Process of REDD-plus in UNFCCC】

FREL/FRLs Submission by Countries to UNFCCC

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Technical Assessment of FREL/FRLs by experts

⇒ FREL/FRLs are fixed

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Submission of the result of REDD-plus implementation in Biennial Update Report

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Verification?

Result-based Payment ?

【Countries submitting FREL/FRLs】

	Country	Date of submission
○	Brazil	2014/06/06
○	Columbia	2014/12/08
○	Ecuador	2014/12/08
○	Guyana	2014/12/08
○	Malaysia	2014/12/08
○	Mexico	2014/12/08
	Indonesia	2015/12/09
	Peru	2015/12/29
	Costa Rica	2016/01/06
	Paraguay	2016/01/08
	Ethiopia	2016/01/15
	Viet Nam	2016/01/15
	Congo	2016/01/21

○: FREL/FRLs have been assessed

As of 25th January, 2016

Overviews of assessed FREL/FRLs

Country	Scale	Area [M ha]	Scope of Activity	Carbon pools	Period of FREL/FRLs	FREL/FRLs [M t-CO2/yr]	FREL/FRLs Construction Approach
Brazil	S	419.7	Def	AGB, BGB, Litter	2006-2010	1,106.0	Average of historical emissions
					2011-2016	908.0	
Columbia	S	45.9	Def	AGB, BGB	–	51.6	Average of historical emissions
Ecuador	N	24.9	Def	AGB, BGB, Dead wood, Litter	2000-2008	43.4	Average of historical emissions
Guyana	N	21.5	Def, Deg	AGB, BGB, Dead wood	–	46.3	Average of deforestation rate of Guyana and all over the world
Malaysia	N	33.0	SMF	AGB, BGB, Litter	2006-2010	−183.6	Average of historical emissions/ removals
					2011-2015	−197.8	
Mexico	N	197.3	Def	AGB, BGB	2000-2010	44.4	Average of historical emissions

[Scale] N: National, S: Sub-national,
[Scope of Activity] Def: Avoiding Deforestation, Deg: Avoiding Forest Degradation, SMF: Sustainable Management of Forest
[Carbon pools] AGB: Above-ground Biomass, BGB: Below-ground Biomass

Overviews of submitted FREL/FRLs

- Points of developing FREL/FRLs
  - Forest Definition
  - Data (Year, number of point)
  - Scope of FREL/FRLs (Selected Activities, Carbon pools, GHG sources)
  - FREL/FRLs Construction Approach
    - Average of historical emissions
    - Simple historical trend such as single regression analysis
    - More complicated analysis such using models, considering national circumstances (population growth, economic growth)　etc.

◆ **Value of FREL/FRLs may be changed depend on applied methodology, especially in those points above.**

◆ **FREL/FRLs are very important for quantifying the effort by each country; for accounting as the National Determined Contributions, acquiring result-based payment.**

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Scope

Construction Approach

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Analysis (Technical Issues)

- Scope
  - Important activities, carbon pools, and GHG sources may be omitted because of technical difficulty.

Case 1: Brazil

Emission from forest degradation, which is 59% of emission from deforestation, is omitted at present.

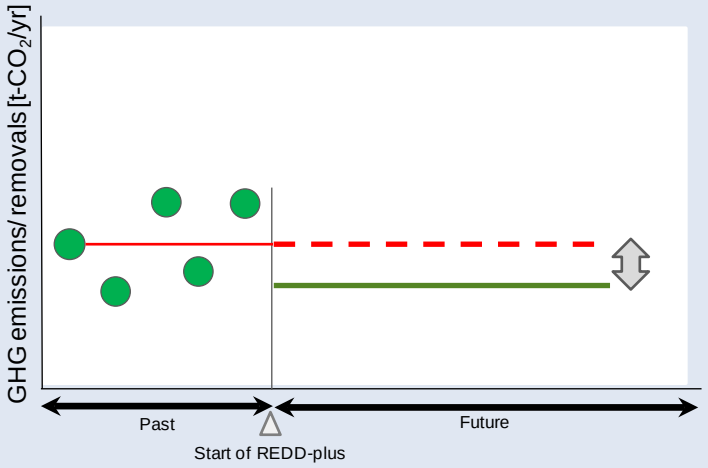
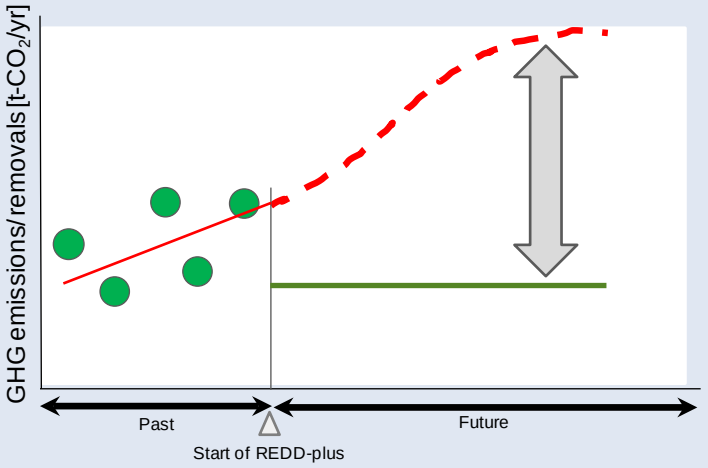
Case 2: Indonesia

CO_2 emission from peat decomposition is included, but CH_4 and N_2O emissions from biomass burning (e.g. forest fire) are not included, at present.

  - How emissions from REDD+ activity, such as agriculture as the alternative livelihood are estimated and accounted? How emissions from REDD+ activity and non-REDD+ activity are identified and separated?
  - If sub-national FREL/RELs have different scope, how they are integrated for national level?

Analysis (Technical Issues)

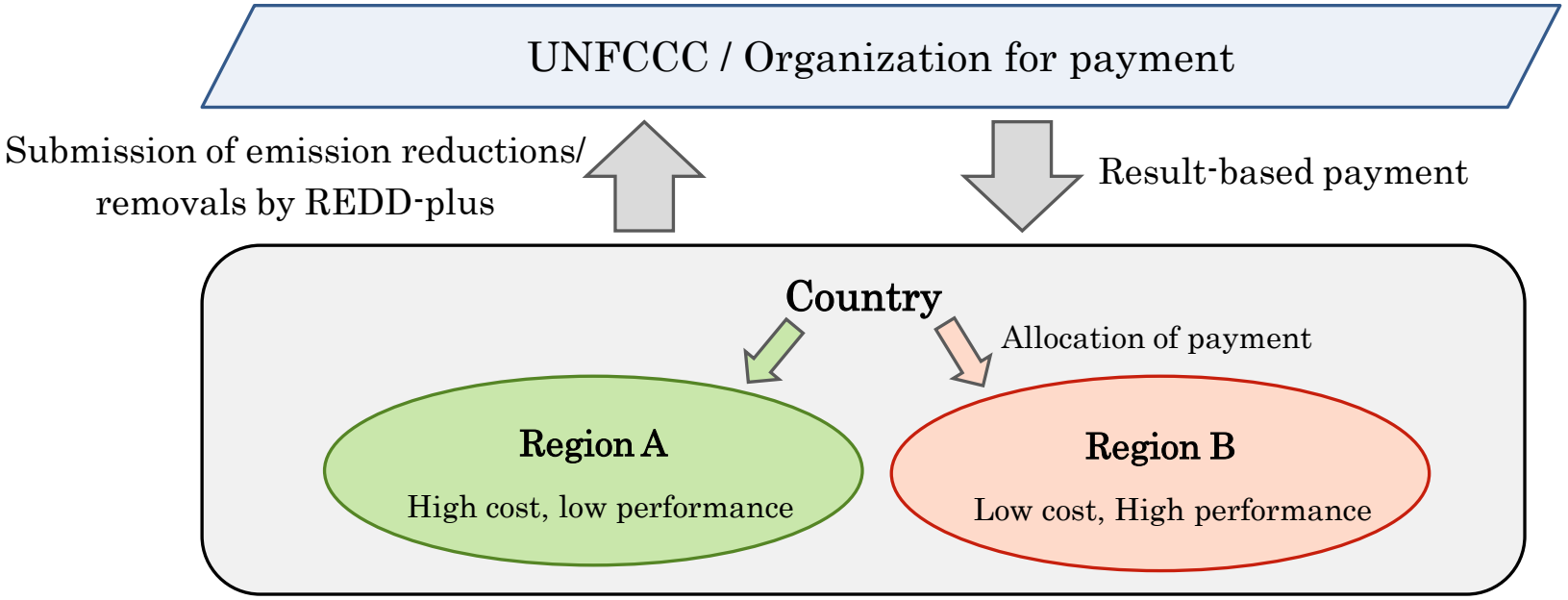
- FREL/FRLs Construction Approach
  - Many countries apply simple approach, such as average of historical emissions/ removals

	Simple approach	Complicated approach
Figure		
Construction	Easy	Difficult
Emission reductions/ removals	Generally Small	Generally Large

Analysis (Political Issues in near future)

- Rule making for result-based payment (*will be discussed in future COP*)
  - Decision of the amount to be paid
  - Measures to avoid double counting

- Allocation of the acquired payment inside the country



Thank you for your attention

[Scale] N: National, S: Sub-national, [Scope] Def: Avoiding Deforestation, Deg: Avoiding Forest Degradation, SMF: Sustainable Management of Forest, Aff: Afforestation, Enh: Enhancement of Forest Carbon Stocks, Ref: Reforestation, * Peat: Peat decomposition, [Other] ○: assessed by technical experts

Appendix: Overviews of submitted FREL/FRLs

	Country	Scale	Area [M ha]	Scope of Activity	Period of FREL/FRLs	FREL/FRLs [M t-CO2/yr]	FREL/FRLs Construction Approach
○	Brazil	S	419.7	Def	2006-2010	1,106.0	Average of historical emissions
					2011-2016	908.0	
○	Columbia	S	45.9	Def	−	51.6	Average of historical emissions
	Congo	N	34.2	Def, Deg	2000-2012	39.1	Using calculation models based on national development plan
	Costa Rica	S	5.1	Def, Enh	1996-2009	14.3	Average of historical emissions
					2010-2025	4.0	
○	Ecuador	N	24.9	Def	2000-2008	43.4	Average of historical emissions
	Ethiopia	N	112.7	Def	2000-2013	19.8	Average of historical emissions
				Aff		−10.2	Average of historical removals
○	Guyana	N	21.5	Def, Deg	−	46.3	Average of deforestation rate of Guyana and all over the world
	Indonesia	S	113.2	Def, Peat*	2013-2020	568.9～593.3	Forest: Average of historical emissions Peat: Historical trend (increasing)
○	Malaysia	N	33.0	SMF	2006-2010	−183.6	Average of historical emissions/ removals
					2011-2015	−197.8	
○	Mexico	N	197.3	Def	2000-2010	44.4	Average of historical emissions
	Paraguay	N	40.7	Def		*Under construction*	−
	Peru	S	78.3	Def	2015-2020	77.6～93.7	Historical trend (increasing)
	Viet Nam	N		Def, Deg, Ref	−	FREL: 88.2	Average of historical emissions
						FRL: -70.9	Average of historical removals

References

- UN-REDD (2015) Technical Considerations for Forest Reference Emission Level and/or Forest Reference Level construction for REDD+ under the UNFCCC
- UNFCCC, REDD+ Web platform. http://redd.unfccc.int/fact-sheets/forest-reference-emission-levels.html
- Decisions of the COP http://unfccc.int/documentation/decisions/items/3597.php