Climate change Mitigation and implication for biodiversity conservation in the Congo Basin

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THINKING beyond the canopy

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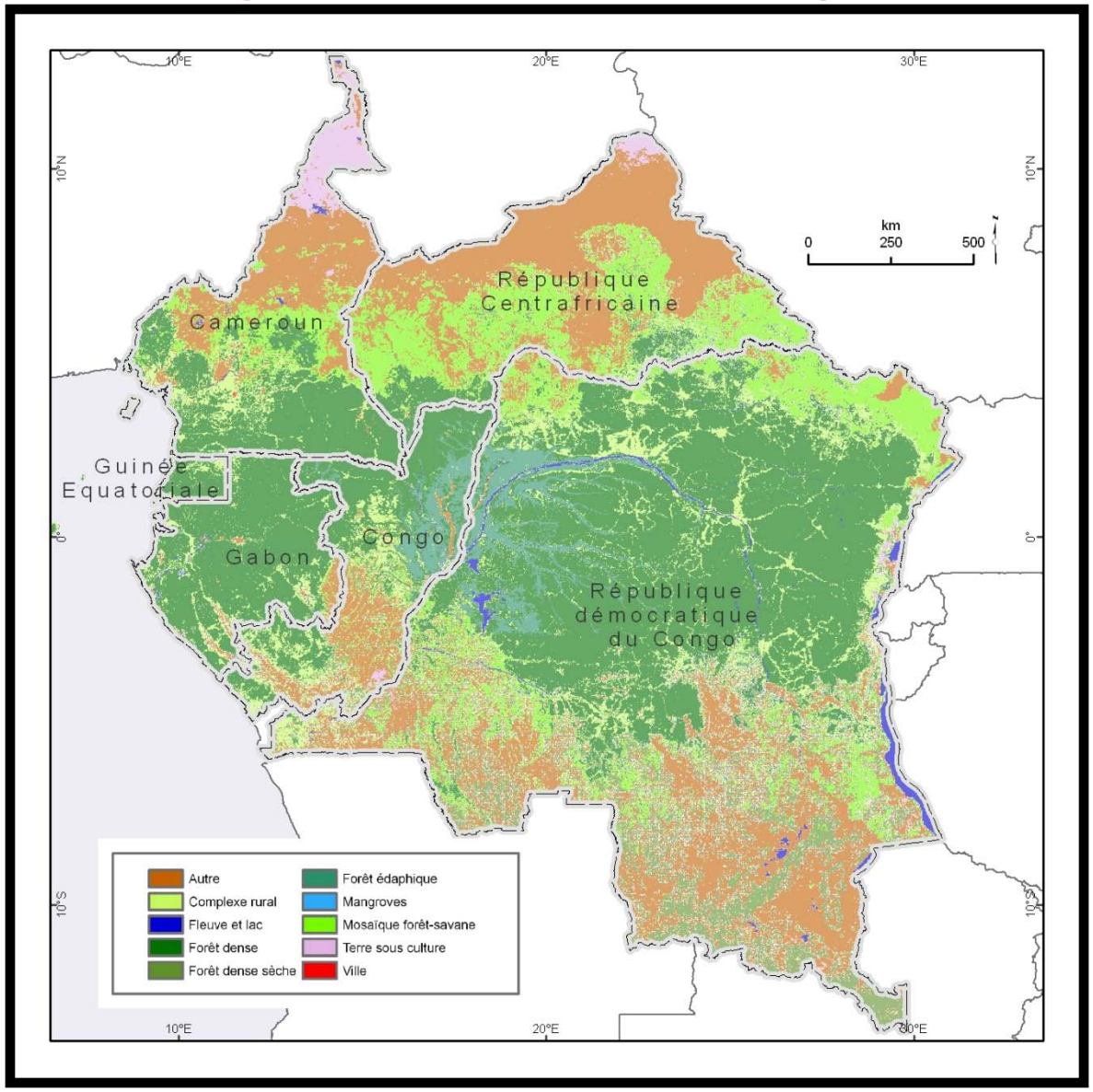
Outline

- Background: Geographical context & importance of forest
- Land use land cover change & REDD
- Some challenges & CIFOR research in Congo Basin
- Conclusions

Background: Geographical context



For the climate change convention in the region,

emphasis is mainly put on REDD+ with the perspective of promoting sustainable forest management in the Congo Basin

* EDF 2008

Background: Sustainable Management*

	Protected Area, IUCN Cat 1-6, (Ha)	Percentage of Protected area Vs National Territory (%)
Cameroon	10 437 336	22
CAR	17 330 015	28
Congo	3 513 438	10
Gabon	2 431 367	9
DRC	26 314 330	11
Equatorial Guinea	590 955	21

Other efforts toward sustainable management:

- SFM practices (e.g. Forest law & ITTO guidelines) and certification gradually implemented
- FLEGT/AFLEGT processes
- Harmonization of efforts at the regional level

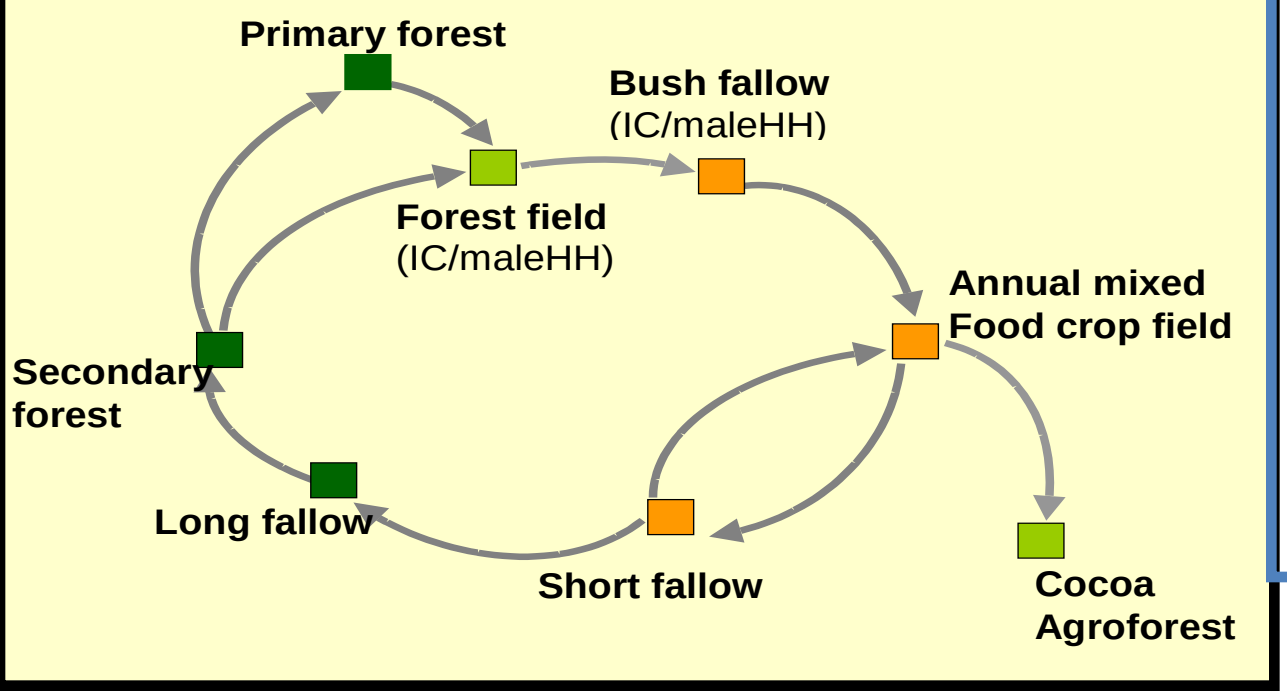
* EDF 2008

Background: Logging & livelihood

Logging*

- 41% of export revenues in CAR
- Second employer in CAR & Gabon
- 13 000 formal &150 000 Informal jobs in Cameroon

Production cyle at the forest fringe in Southern Cameroon**



Animal protein, NTFP, Fuelwood, Agriculture lands, etc

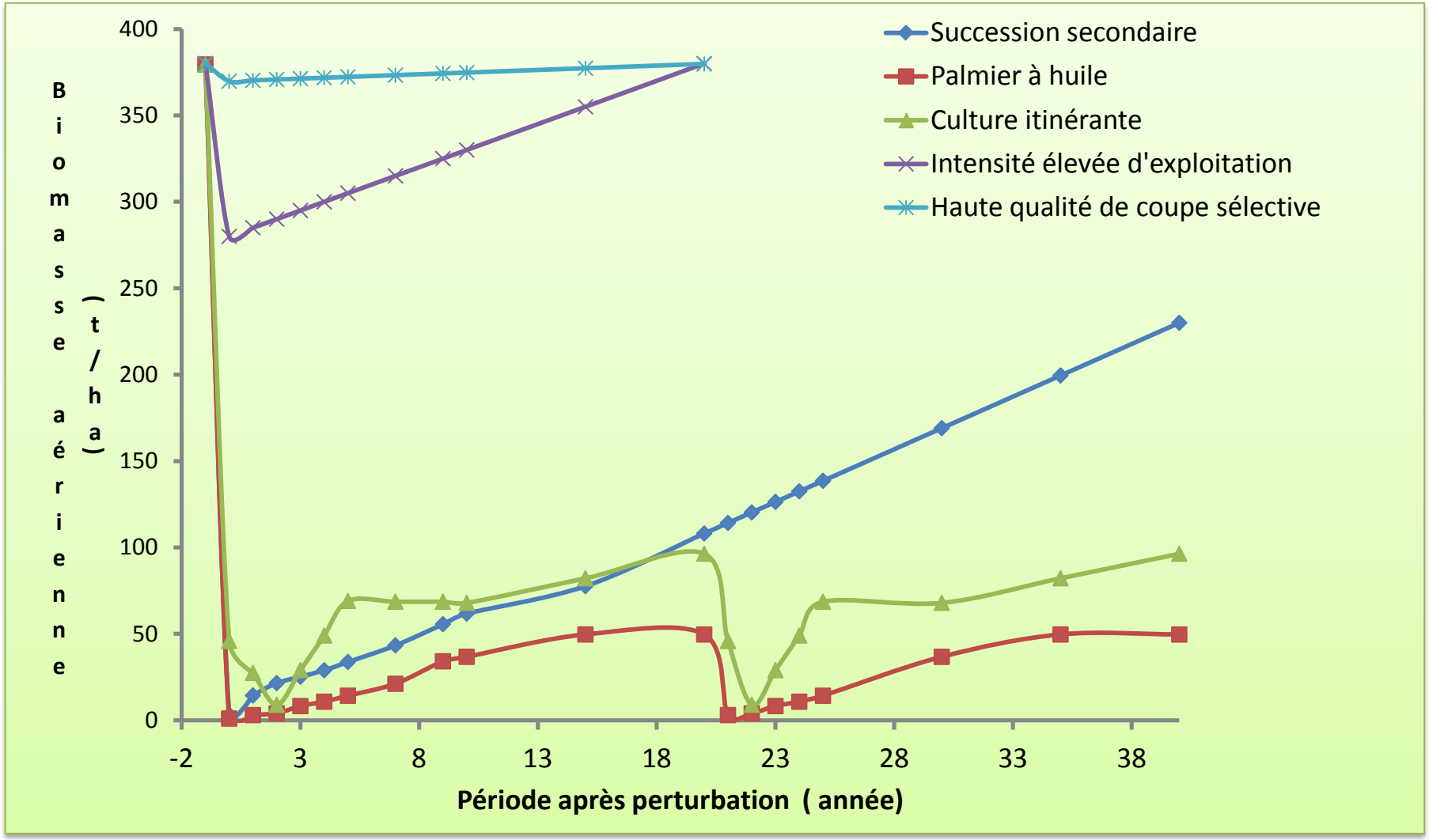
& related chain values

* Congo Basin State of Forest, 2008

* *ASB, Cameroon report, 2002

Land use land cover change & REDD

Dynamics of above ground biomass*



* EDF 2008

Land use land cover change & REDD

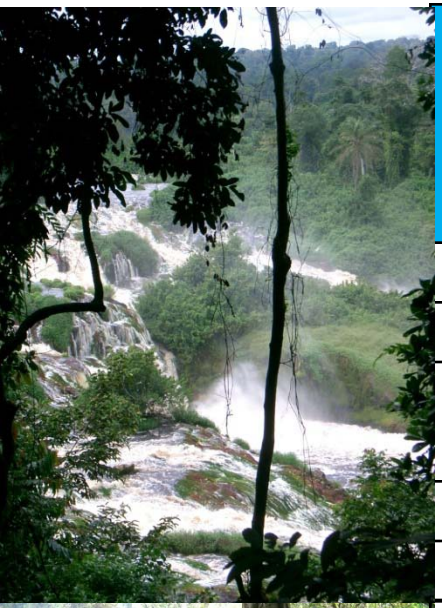
Main forest land cover classes estimation in Central Africa*

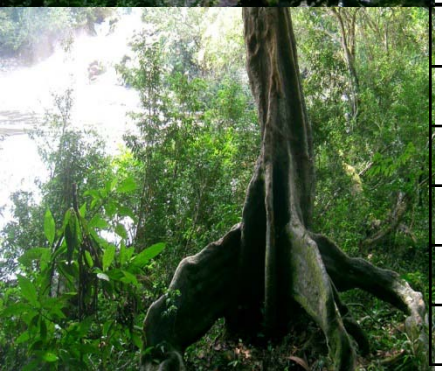
Land cover class	Area (km²)	% Sub Region
Closed evergreen lowland forest	1.421.834	35
Submontane forest (900-1500m)	63.100	2
Montane forest (> 1500 m)	9.754	0
Swamp forest	123.264	3
Mangrove	1.926	0
Total humid forest	**1.619.879**	**40**
Mosaic forest/croplands	370.123	9
Mosaic forest/Savannah	588.011	15
Closed deciduous forest	304.808	8
Deciduous woodland	630.890	16
Open deciduous shrub land, sparse trees	301.220	7
Others	233.540	6
TOTAL Sub region (Congo Basin)	**4.048.470**	**100**

* EDF 2008

Land use land cover change & REDD

Carbon stock estimation in the Congo Basin





Land uses cover(LC)	Total Carbon (millions tonnes)	% C Total
1. Closed evergreen lowland forests	27.299	59,3
2. Swamp forests	1.761	3,8
3. Sub-mountain forests (900-1500m)	770	1,7
4. Mountain forests (>1500m)	119	0,3
Humid dense Forest (1-4)	**29.949**	**65,1**
Closed deciduous forests	2.791	6,1
Mosaic forest/croplands	3.955	8,6
Mosaic forest/savannas	3.403	7,4
Deciduous woodland	4.149	9,0
Grassland, shrub land, sparse trees	1.770	3,8
Congo basin sub-region (TSR)	**46.016**	100,0

Challenge, How to learn from earlier REDD initiatives?

➔ GCS-REDD

Short project title: Learning from REDD: A global comparative study

Project general objective:… the Goal is to generate knowledge and practical tools to support efforts to reduce forest emissions in ways that are effective, efficient and equitable and that generate co-benefits such as poverty alleviation and biodiversity conservation.

➔Component 1: National REDD processes and policies
➔Component 2: REDD project sites
➔Component 3 : Monitoring and reference levels

Challenge, How to deal with logging?

➔ FORAFAMA

Short project title: Appui a la gestion durable des forets du bassin du Congo et du bassin amazonien Bresilien (FORAFAMA)

Project general objective: Mainstream sustainable forest management (SFM) practices into the REDD dynamics in Central Africa

Challenge, climate change / vulnerability

➔Utilisation de la RAP pour évaluer la vulnérabilité aux CC et mettre en œuvre l'adaptation au niveau local

Impacts on livelihood activities (Cameroon)

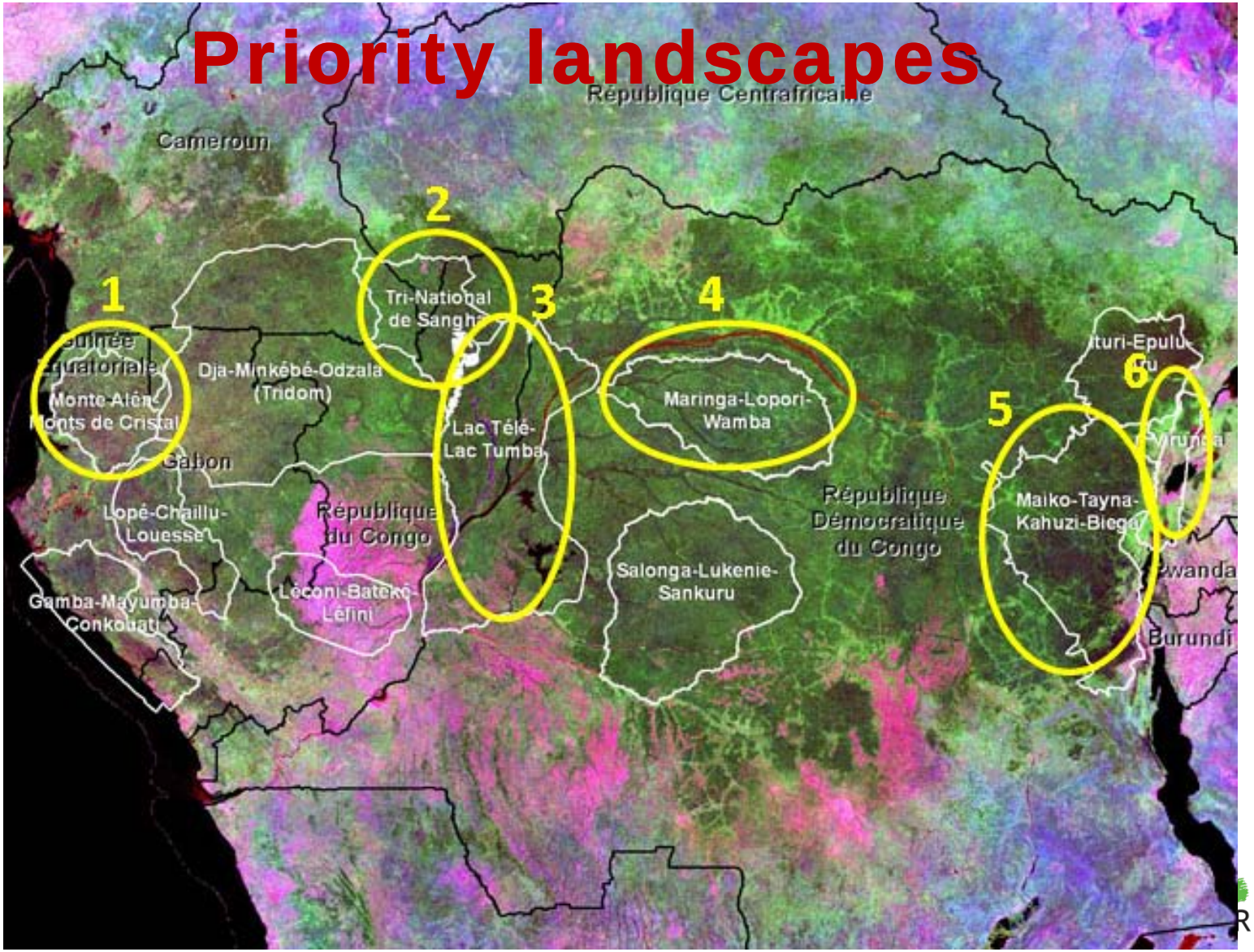
Livelihood activities / Climatic exposure	Agriculture		Livestock		NTFPs		Hunting		Fishing	
	Lekie	Yoka	Lekie	Yoka	Lekie	Yoka	Lekie	Yoka	Lekie	Yoka
Heavy rainfall	---	---	o	o	o	o	o	o	+	+
Punctual droughts during rainy season	---	-	--	-	-		o			o
Occasional rainfall during dry season	+ +	+	+				o			
Low rainfall during the year	+	+	-	-	o	o				-
Strong winds	--	-		o	-	-				o
Heat waves during dry season	-- -	-			o	o	-	-		o

--- High negative,
-- Med negative,
- Low negative,
o No,
+ Low positive,
+ + Med positive

Agriculture and livestock: Very sensitive to climate variability

Forest-related activities: Less sensitive (safety nets?)

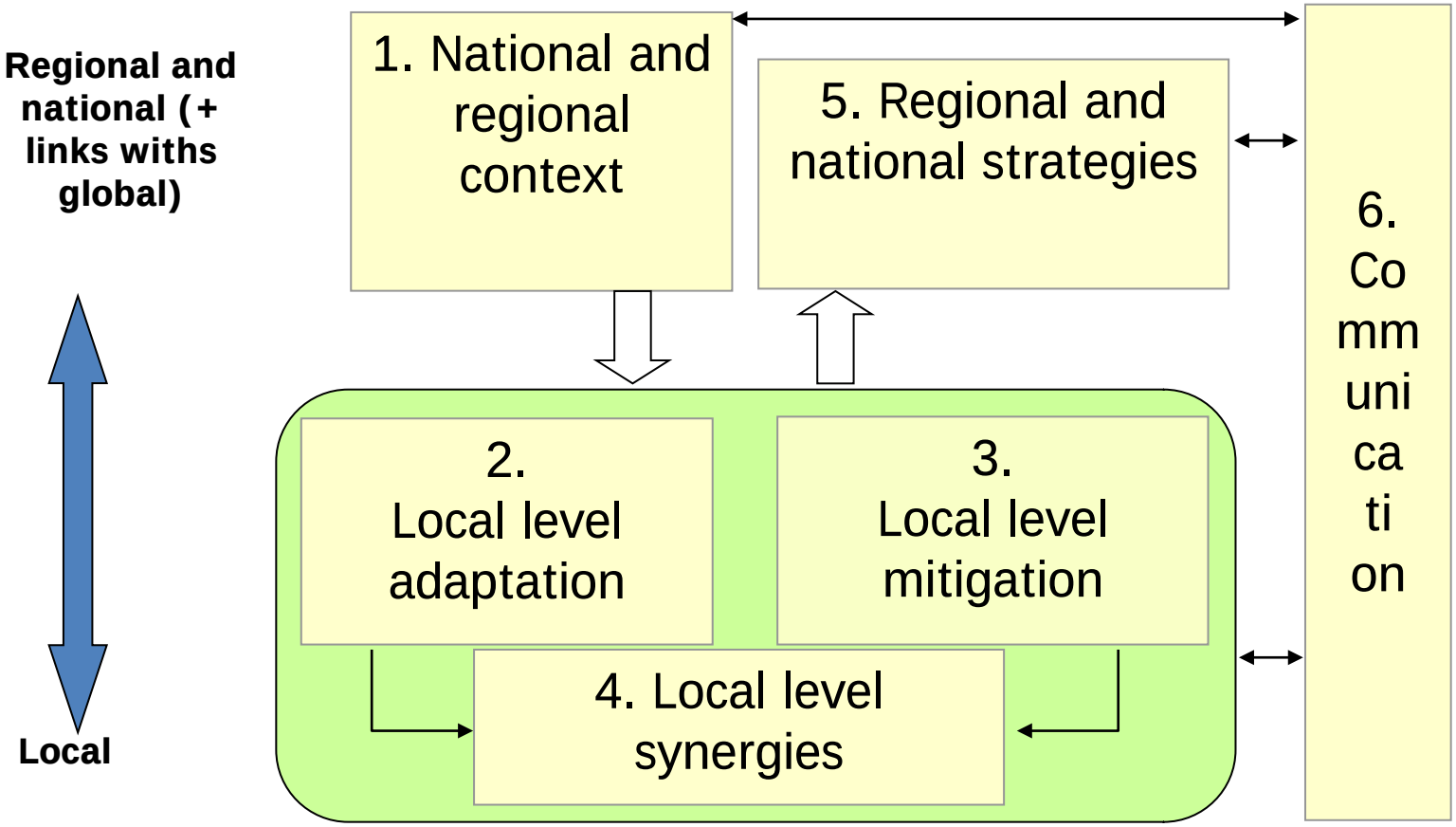
Challenge, How to merge adaptation & mitigation?



Challenge, How to merge adaptation & mitigation?

PACEBCO Initiative

COBAM Component



Conclusion & way forward

for REDD & Biodiversity in Congo Basin

- The is a need to take in consideration the main land uses
  - Logging (concessions); 595.380 km²;
  - Conservation (Protected area): 444.970 km²
  - Slash and Burn Agriculture: 438.801 km²
- Necessary that REDD+ and biodiversity conservation are seeing as part of a rural transformational process.
- Without addressing livelihood vulnerability related to several stress, such as climate change/variability, it will be difficult to protect carbon pool and biodiversity in the Congo Basin.

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