

# How to describe land use & land cover in the context of REDD+



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TRANSFORMING LIVES AND LANDSCAPES  
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Atiek Widayati, Valentina Robiglio, Doug White  
& Glen Hyman

# How to describe land use & land cover in the context of REDD+

What terms?

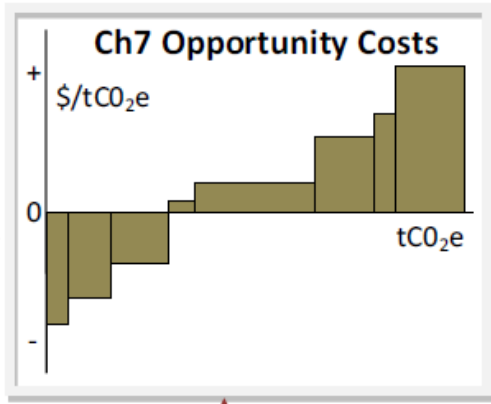
For the vertical axis:

**Ch4**  
Classify land uses  
Forest  
...  
Ag

**Ch5**  
Carbon stocks (tC/ha)

**Ch6**  
Profits (\$/ha)

OppCost matrix (\$/tCO<sub>2</sub>e)




For the horizontal axis:

**Ch4**  
Estimate land use change (matrix of histories or trajectories)

Emission matrix (tCO<sub>2</sub>e)

Figure 2.1. Analytical steps for developing an opportunity cost curve



Some deceptively simple questions...

What is a forest?

What is not a forest?

What might still be called a forest?

What might in future become a forest?

What has been a forest?

What has not been a forest?

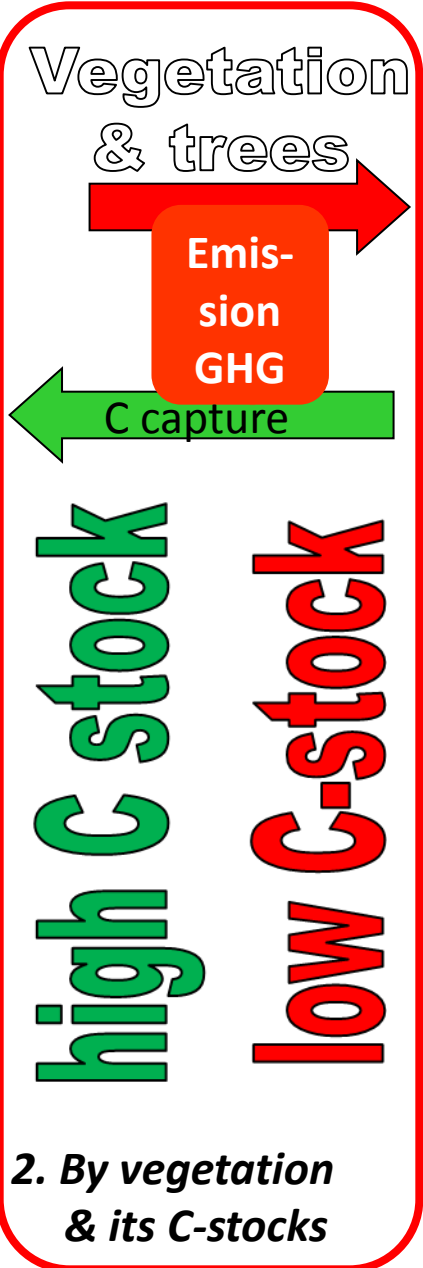
that may influence REDD+\$\$s...

# Rights to define forest ~ 5 different ways of classifying forest:

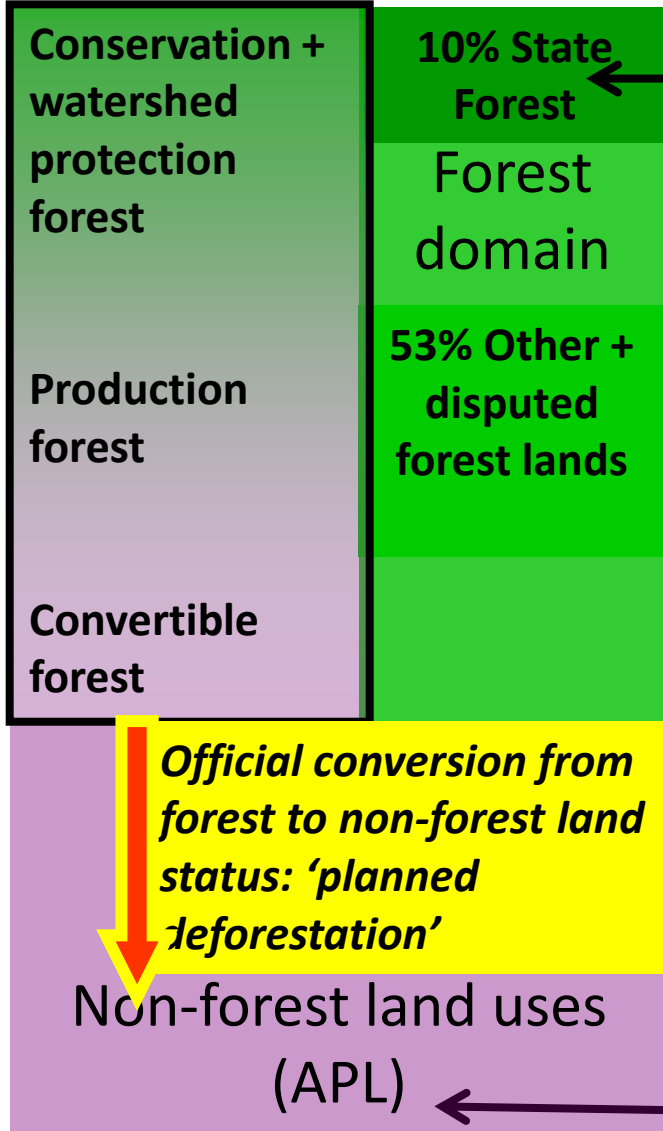
Human well-being

- Pro-viding
- Re-gula-ting-
- Spi-ri-tual
- Sup-por-ting

1. By ecosystem service



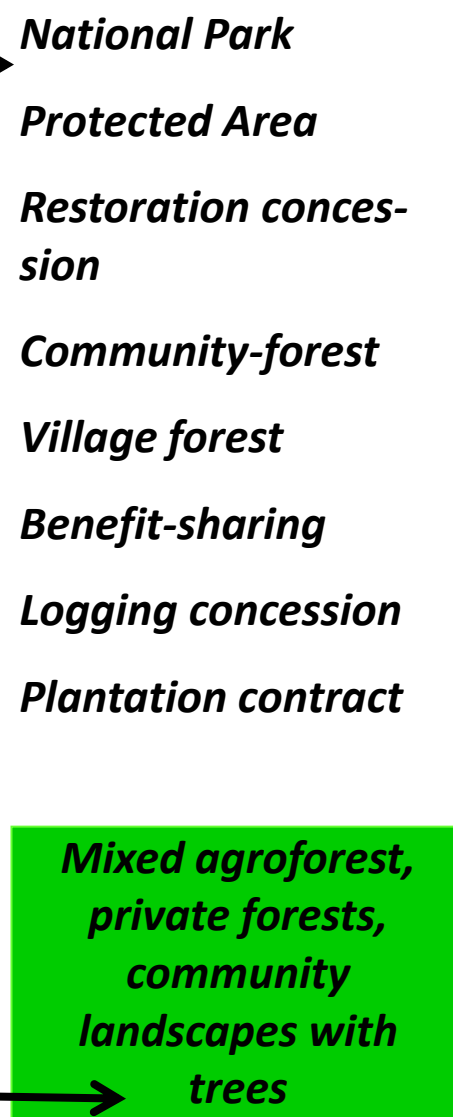
2. By vegetation & its C-stocks



3. By land use category



4. By 'owner'



5. By 'co-management regime'



English	Thai	Khmer	Lao	Vietnam	Bahasa Indonesia	
Forest						
Woodland						
Agroforest						
Secondary forest						
Old growth forest	<b>Exercise...</b>					
Plantation						
<b>Tree</b>						
Palm	<b>Please add...</b>					
Rubber						



Forest: C accounting



Forest institutions

Forest: tree cover

Two-by-two any part of the triangle makes sense...

# Publicly available images, as ranked by GOOGLE...

Forest

Search

SafeSearch moderate

About 115,000,000 results (0.25 seconds)

Advanced search

Related searches: [forest wallpaper](#) [dark forest](#) [forest with animals](#) [rain forest](#) [tropical forest](#)



# Publicly available images, as ranked by GOOGLE...

## DEFORESTATION

Search

SafeSearch moderate ▼

About 1,350,000 results (0.04 seconds)

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Related searches: [deforestation in the amazon](#) [rainforest deforestation](#) [deforestation in the philippines](#) [deforestation in india](#) [global warming](#)





# Publicly available images, as ranked by GOOGLE...

Tree

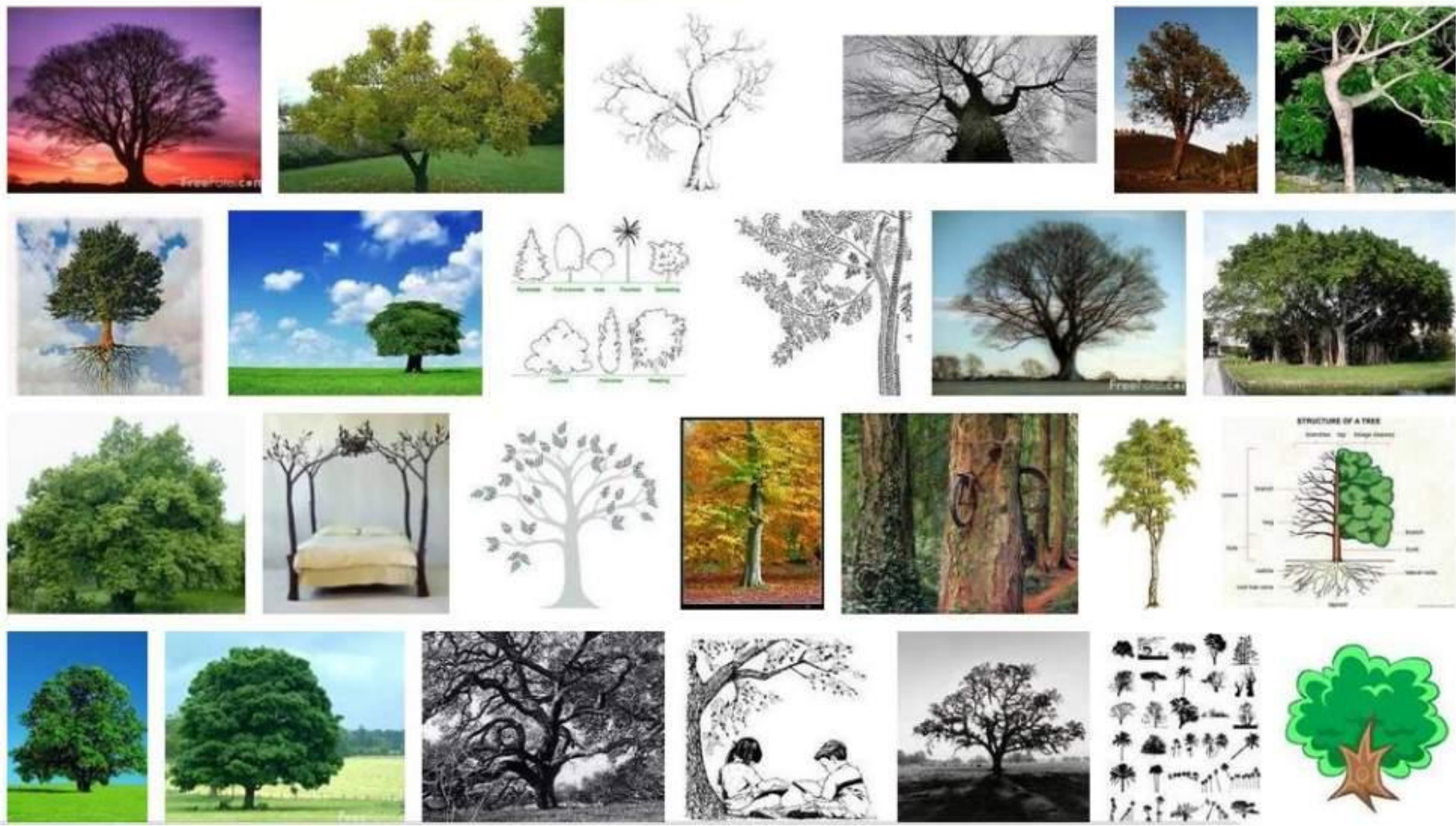
Search

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About 204,000,000 results (0.17 seconds)

Advanced search

Related searches: [family tree](#) [tree clipart](#) [tree silhouette](#) [tree wallpaper](#) [palm tree](#)



# Publicly available images, as ranked by GOOGLE...

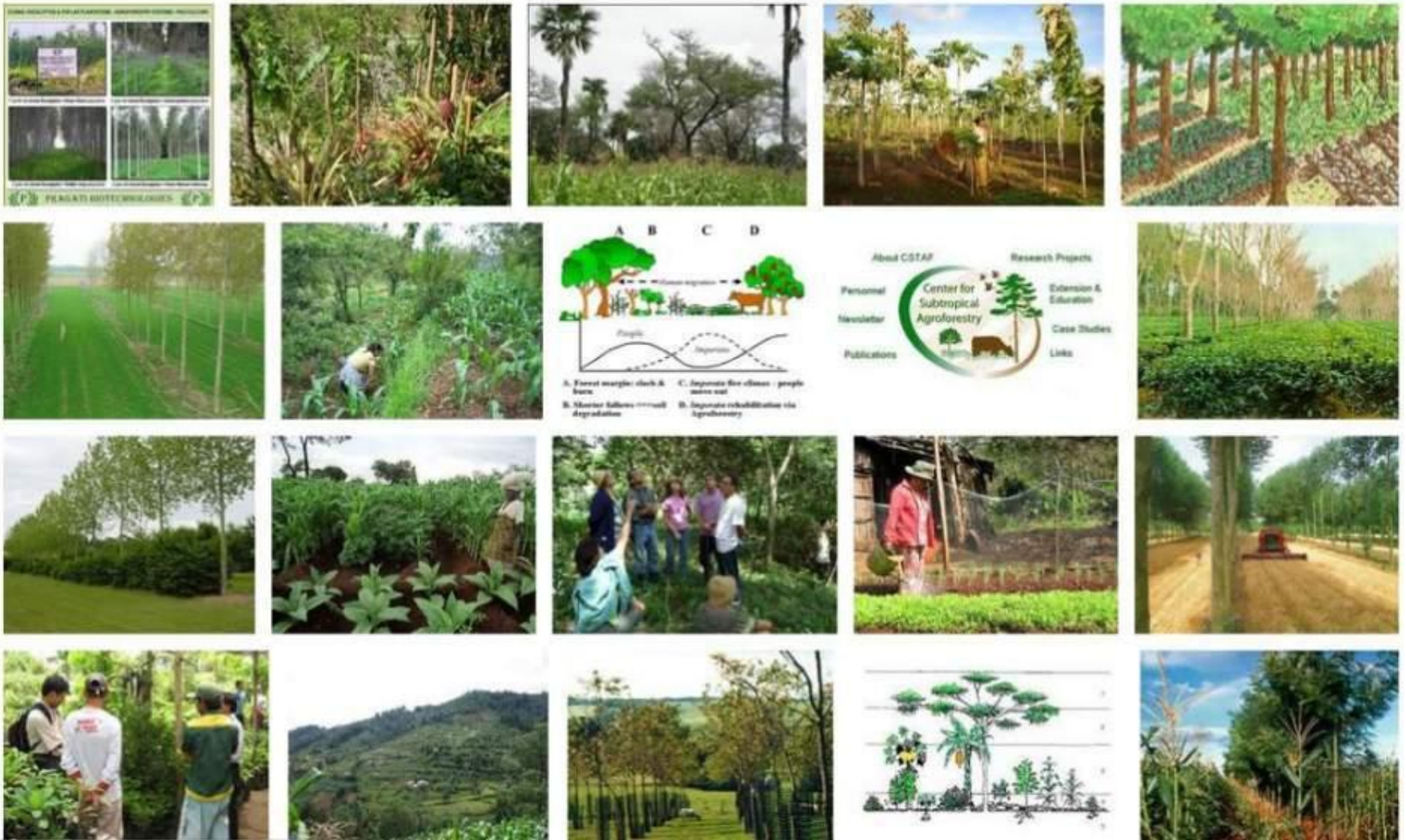
agroforestry

Search

SafeSearch moderate

About 67,200 results (0.20 seconds)

Advanced search



# Publicly available images, as ranked by GOOGLE...

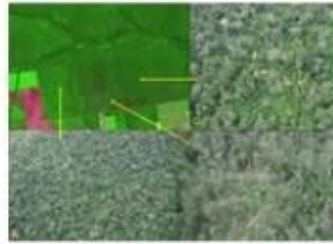
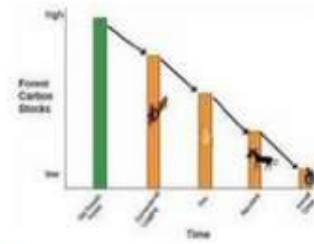
forest degradation

Search

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About 320,000 results (0.05 seconds)

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REDD+

# Publicly available images, as ranked by GOOGLE...

Governance

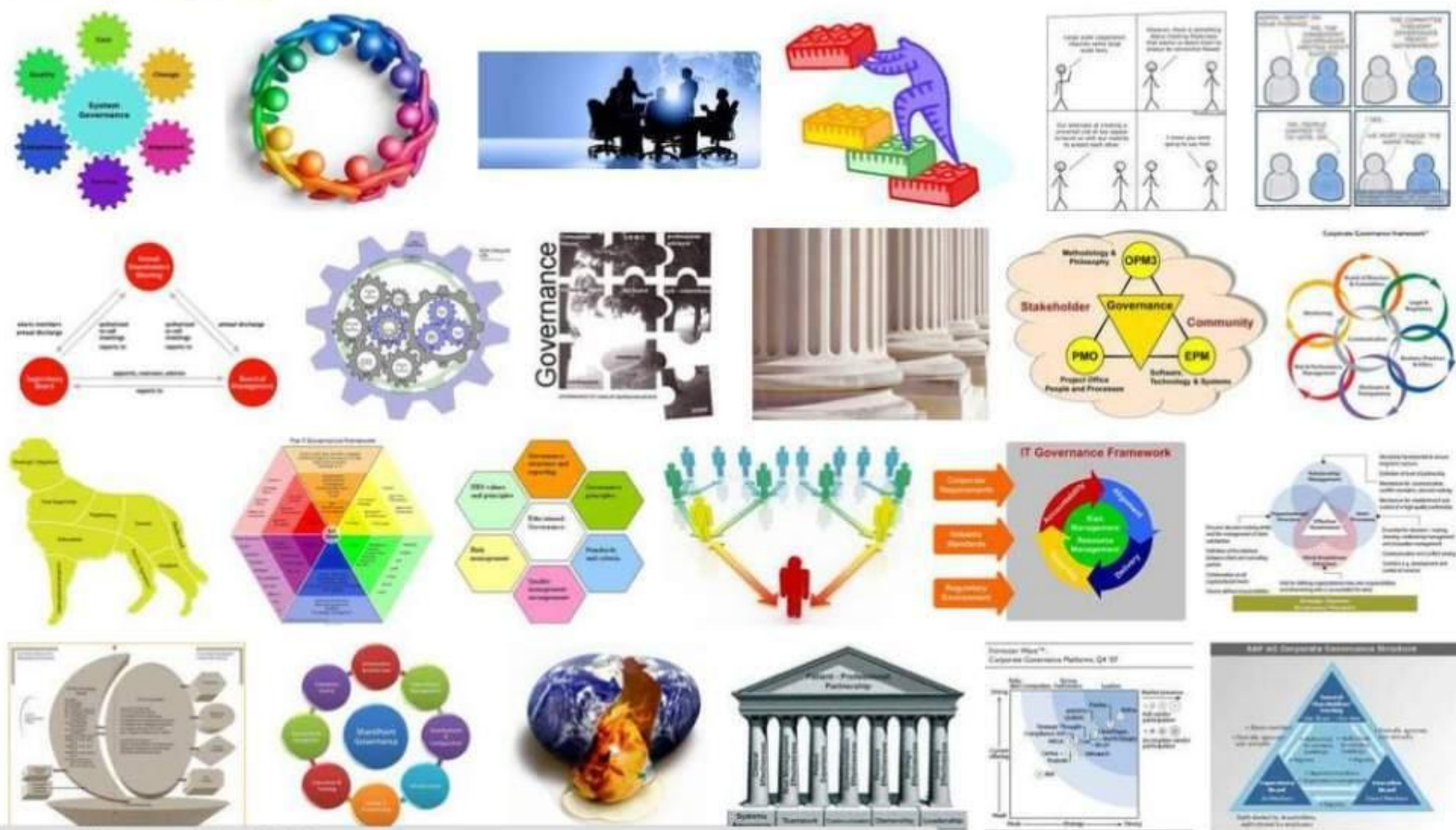
Search

SafeSearch moderate ▼

About 71,700,000 results (0.17 seconds)

Advanced search

Related searches: [corporate governance](#)



governance&hl=en&newwindow=1&rlz=1...

REDD+

Search

SafeSearch moderate

About 22,800 results (0.07

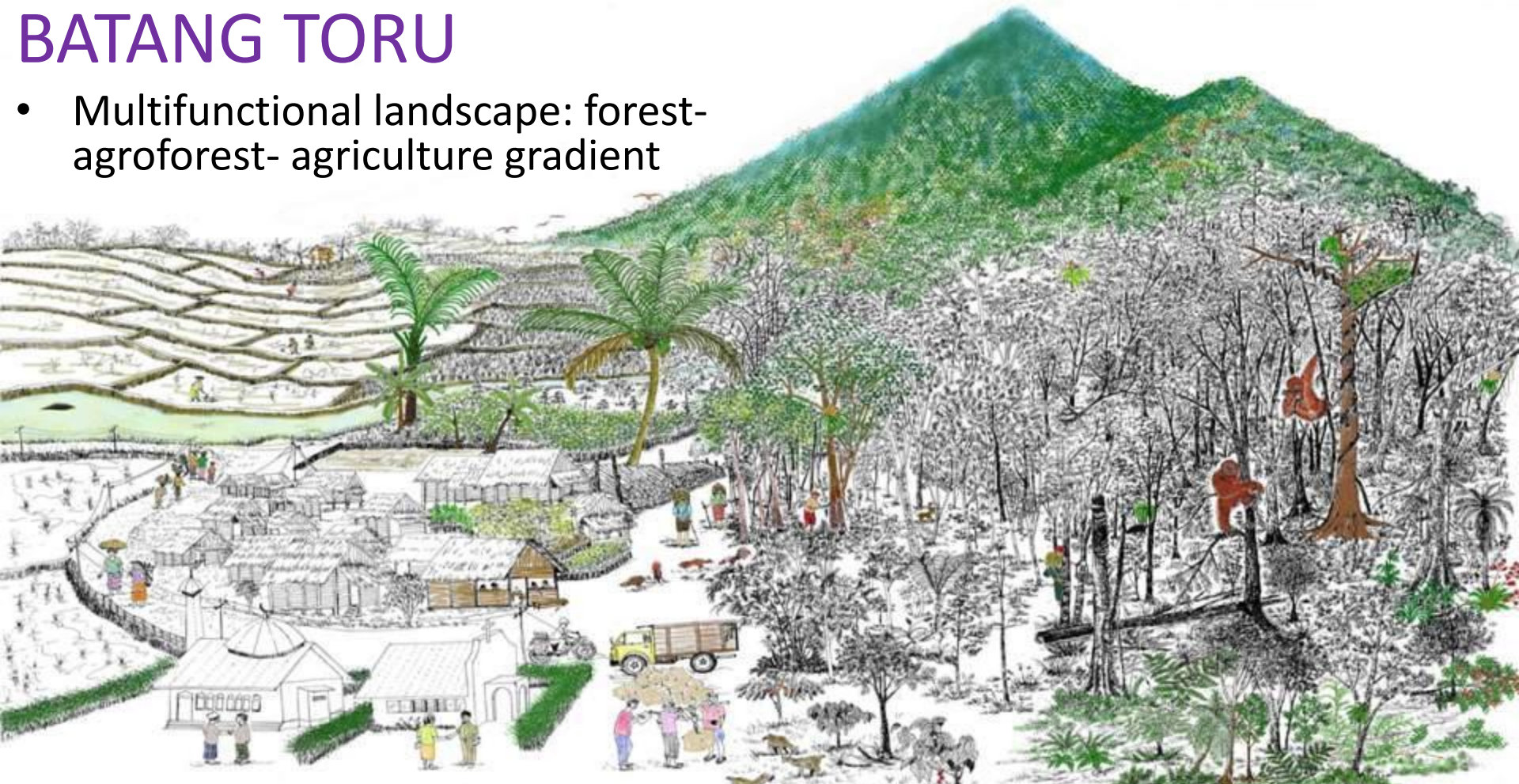
# REDD+

REDD+ helps to mitigate climate change through forests, and provides social and environmental benefits. It includes these essential components: creating incentives for not clearing standing forests, maintaining and expanding forest cover, sustainably managing forest and recovering degraded lands.



# BATANG TORU

- Multifunctional landscape: forest-agroforest- agriculture gradient



Forest definition based on X% canopy cover

Deforestation?

Forest definition based on institutions & intent

Non-forest without trees

Trees outside forest

Forest with trees

Forest without trees

Total land area

Including e.g. agroforests, oil palm plantation

Clearfelling/ re-plant is accepted as forest; no time-limit on 'replant'



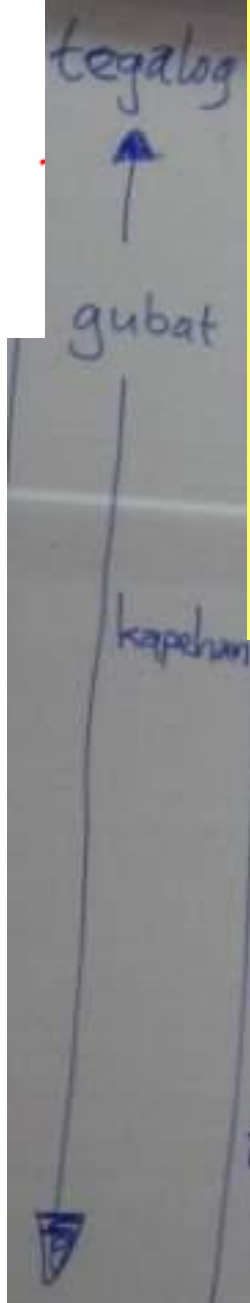
English	Thai	Khmer	Lao	Vietnam	Bahasa Indonesia
Forest					
Woodland					
Agroforest					
Secondary forest					
Old growth forest					
Plantation					
<b>Tree</b>					
Palm					
Rubber					





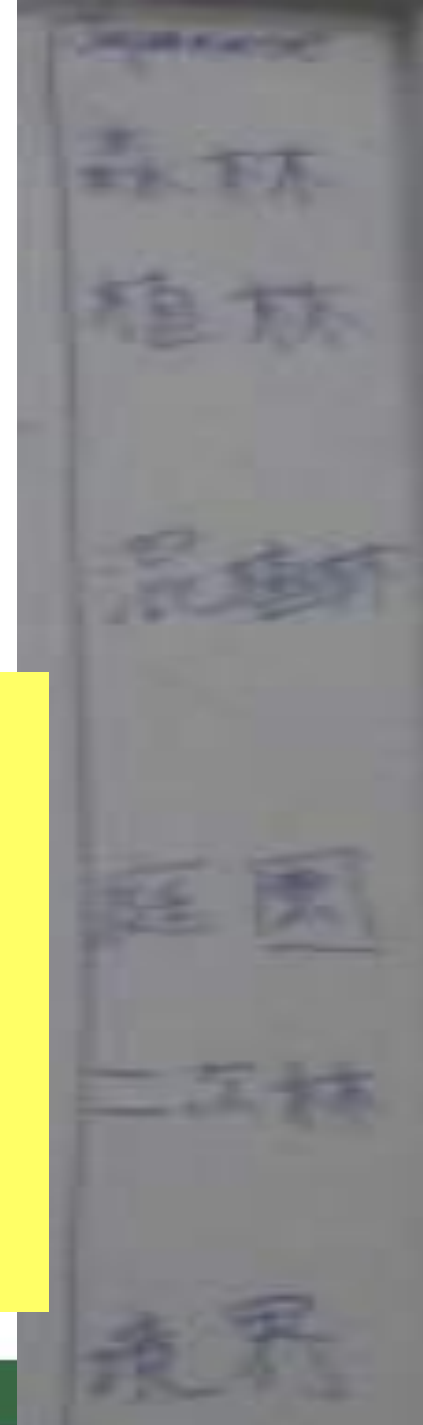
	tegalak	bahasa indonesia	khmer	NEPALESE	FITIAL
forest	↑	hutan	PREY	Ban (RE)	WIRANU WELIYU WIRU
Plantation	gubat	tanaman HTI perkebunan paw sawit	PREY DARN	<del>...</del> Berkembang	HELIVU TAI TETI UCHAI
Agroforest	kapelan	tersebang reparasi	KASEK ROKAKAM	- Krishiban	TETI VETRU PARKE
homegarden		taman	SUON	- Bagaicha	
fallow/2 <sup>nd</sup> ary forest		semak belukar	PREYDAMLENGVIL	- Post/Punaru Ban	
Trees along field boundaries		Tanaman pagar	PREYDANTANPLOV	- Krishiban	





In tegalog there is only one word (gubat) to describe all types of woody vegetation

In Japanese 'forest' implies 3+2 times the symbol of 'tree', others 3, 2 or 1 times...



# How do forest, plantation, agroforest and agroforestry terms translate across some of the languages in Asia?

English	Tegalog	Bahasa Indonesia	Khmer	Benghal	Nepalese	Fijian	Lao	Thai	Japanese
Forest - Old growth - Logged-over	Gubat	Hutan - Alam - Bekas tebangan	Prey	Ban	Ban (ān)	Veikau Veikau musu	Pamai		
Plantation - Timber - Pulp/paper - Rubber - Oil palm - Other		Tumpangsari Jati dll HTI Perkebunan karet Perkebunan sawit ...	Prey darm	Bagan	Brikcharopan	Veikau tei	Papook		
Agroforest - Jungle rubber - Multistrata coffee - Multistrata cacao - Mixed fruit	Kapehan	Kebun karet tua Repong, Tembawang	Kasek, rokakam	Krise ban	Krishiban	Teitei	Vannakaset		
Homegarden		Taman, kebun	Suon	Bani ban	Bagaicha	Veikaumamaco	Suanpa		
Fallows & secondary forest		Semak/belukar/hutan sekunder	Preydam lengvim	Pakit ban	Parti/Punarutthan Ban	Bai ni cagi	Lao		
Trees along field boundaries		Tanaman pagar	Preydam tamplov	Krisi ban	Krishiban		Laewmai		

Source: participants in WB/FCPF OpCost training RECOFTC, Bangkok, April 2011