

# IMPLEMENTATION OF REDD+ POLICY AND ITS EFFECT AT NATIONAL LEVEL: NEPAL AND BRAZIL

Smita Das( M.Sc TIF, Georg-August-Universität Göttingen & Lívia Menezes Pagotto( M.Sc  
Environmental Governance, Albert-Ludwigs-Universität Freiburg

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- Forest status & Deforestation in Brazil
- Brazil REDD+ strategy
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# Introduction

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- “REDD+’ is the acronym of an internationally debated mechanism that stands for “reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries” (FCCC/CP/2010/7/Add.1).
- According to IPCC, Deforestation and Forest Degradation contribute nearly 20% of global emissions of greenhouse gases, more than the transportation sector and second only to the energy sector.

# Evolution of forest approach

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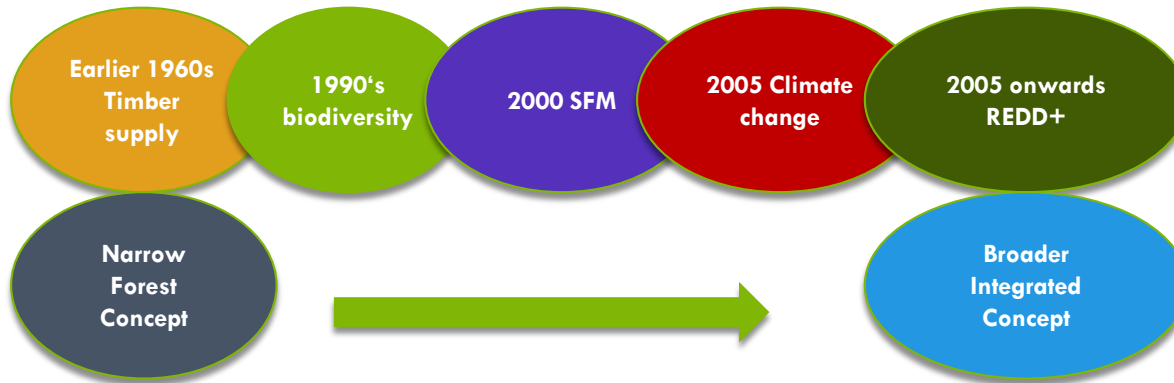
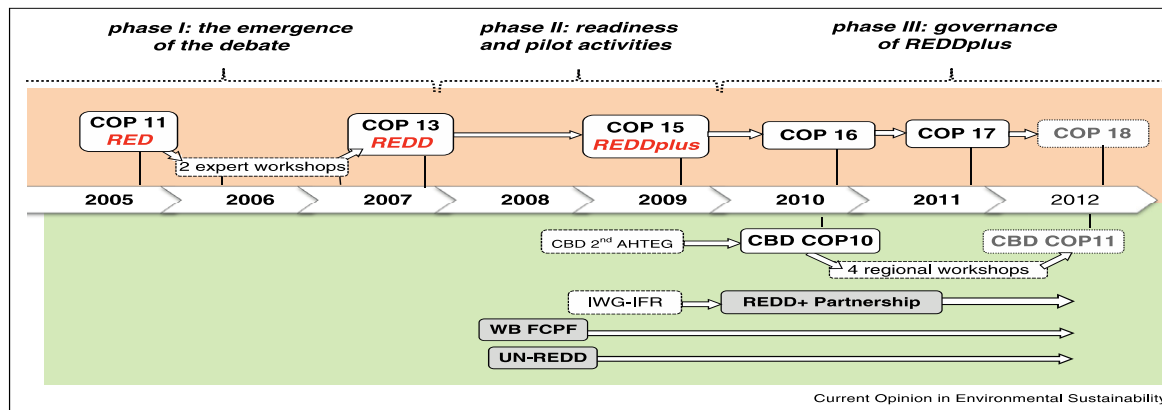


Fig: FRA,2010

Figure 1



Phases of the debate and milestones for the design and implementation of REDDplus.

# Objective of the Study

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- To analyze the different REDD+ strategies adopted by two very diverse countries – Brazil and Nepal.
- We want to highlight the specific and common challenges of Brazil and Nepal.
- It also focuses and reflects current REDD+ initiation and readiness done by both the countries.

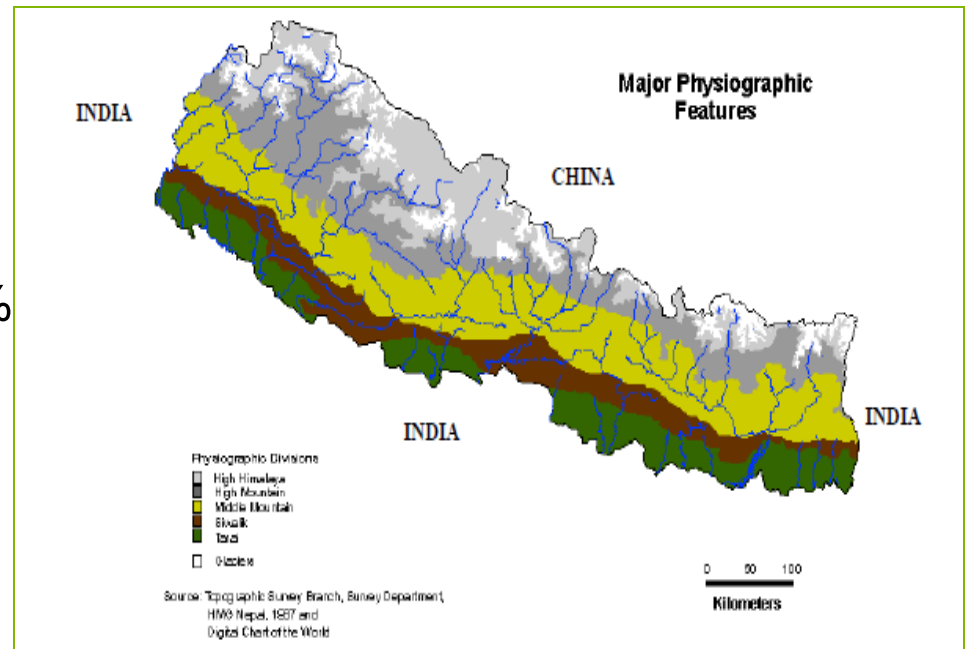
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# Forest status & Deforestation in Nepal

# Forest status (I)

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- **Nepal** is a land locked country located between China in north and India in south covering 1 47,180 km<sup>2</sup> (14.72 million ha) surface areas.
- The country is divided into five major physiographical regions- High Himal (23%), High Mountains(20%), Mid-hills( 30%), Siwalik( 13%) and Terai(14%) (GoN,2002).
- Altitude : 60 m in the lowlands to Mount Everest at 8,848m.
- Total forest area: 39.6 percent (5.8 million ha), 21% agricultural area, about 7% is public land. Rest is rocks and permanent snow cover areas.



# Forest status (II)

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Nepal forest is divided into two categories (FRA,2005):

## 1. National forest

- Government managed forest
- Protected area (NP, WR, HR, CA)
- Community forest
- Leasehold forest
- Religious forest

## 2. Private forest

- About 17, 685 community Forest User Groups (CFUGs) managing around 1.65 million hectares of forest (28.3 % of total forest) in Nepal (DoF, 2011).



# Deforestation in Nepal

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- The overall deforestation rate of Nepal is 1.7%, which is well above the Asian average (1%) and the global average (1.3%) (MFSC 2008).
- Drivers responsible for deforestation and degradation in Nepal are:
  1. High dependency on forest and forest products (timber, fuel wood and other NTFPs),
  2. Illegal and Unsustainable harvest of forest products,
  3. Forest fire,
  4. Encroachment
  5. Overgrazing,
  6. Infrastructure development,
  7. Resettlement, and
  8. Expansion of invasive species.

Cover Type	Unit	Year	
		2000	2005
Forest	Area(00 0ha)	3900	3636
	%	26.5	24.7
Shrub	Area(00 0ha)	1753	1897
	%	11.9	12.9
Total	Area(00 0ha)	5653	5533
	%	38.4	37.6

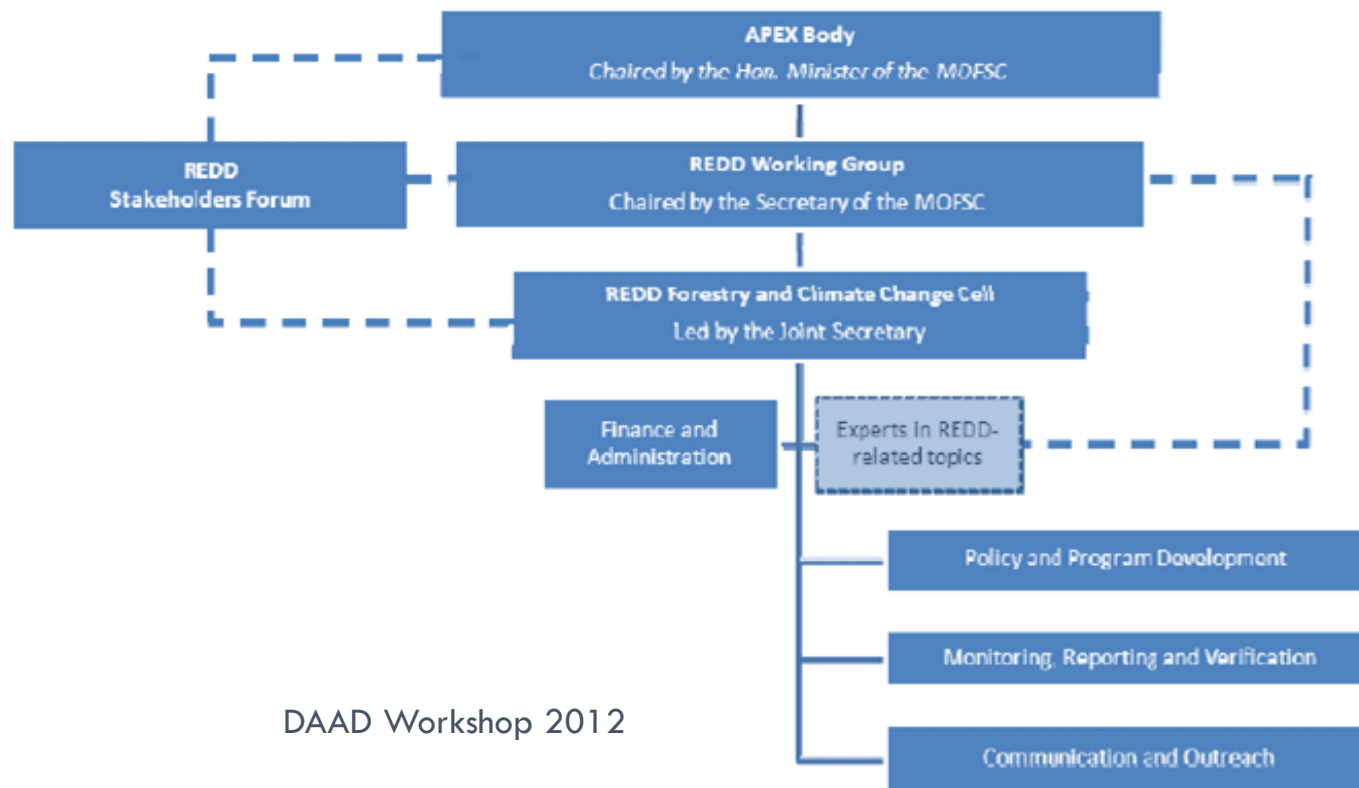
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# Nepal REDD+ Strategy

# Implementation of REDD+ in Nepal

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- As a signatory party to the UNFCCC, Nepal is committed to contribute in reducing global warming. Nepal contributes 0.025% to the global annual GHG emission (MOPE 2004).
- Ministry of Forest and Soil Conservation (MoFSC) Submitted Readiness Preparation Proposal (RPP) for REDD+ plus to the FCPF of the World Bank on 19 April 2010.



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Fig. Institutional Arrangement Layout (Source: Readiness Phase , REDD Cell, Nepal July 2010)

# Readiness Phase

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- **Stakeholders consultation and participation.**
- **Monitoring , Reporting and Verification System-** By the combination of remote sensing data and ground verification through permanent sample plots established by FRA(Forest Resource Assessment).
- **REDD+ projects-** REDD+ related projects funded from FCPF, SDC, DFID, NORAD, Finland, Japan, US. Focus areas are awareness raising, capacity building and methodologies development and to support for the development of the national REDD Strategy.

A demonstration project along the three watersheds funded by NORAD ,105 forest users groups received a total of 95,000 dollars in 2011(SHAHI 2011)

- **Investments outside the forest sector necessary to reduce the pressure on forests-**

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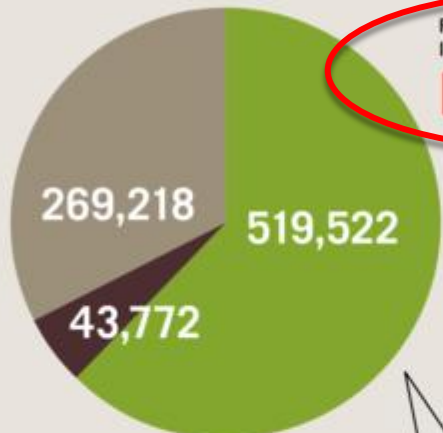
# Forest status & Deforestation in Brazil

# Forest status

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TOTAL COUNTRY LAND AREA  
in 2010 (1,000 HA)  
**832,512**

**TOTAL FOREST COVER**  
**TOTAL OTHER WOODED LAND**  
**TOTAL OTHER LAND**



PROMINENT FOREST TYPE

**HUMID**

FOREST COVER CATEGORY  
IN 2010

**HIGH (62%)**

PRIMARY FOREST  
in 2010

**92%**

OTHER NATURALLY REGENERATED  
FOREST in 2010

**7%**

PLANTATION  
in 2010

**1%**



Sources - FAO  
(2010) The  
Global Forest  
Resources  
Assessment 2010  
[Available from]  
<http://www.fao.org/forestry/ifa/ra2010/en/>

Natural forest estimated area in the Brazilian biomes (2009)

Biome	Area (hectare)
Amazônia	354.626.516
Caatinga	46.979.425
Cerrado	66.397.252
Pantanal	8.722.437
Mata Atlântica	29.876.735
Pampa	3.201.180
<b>Total</b>	<b>509.803.545</b>

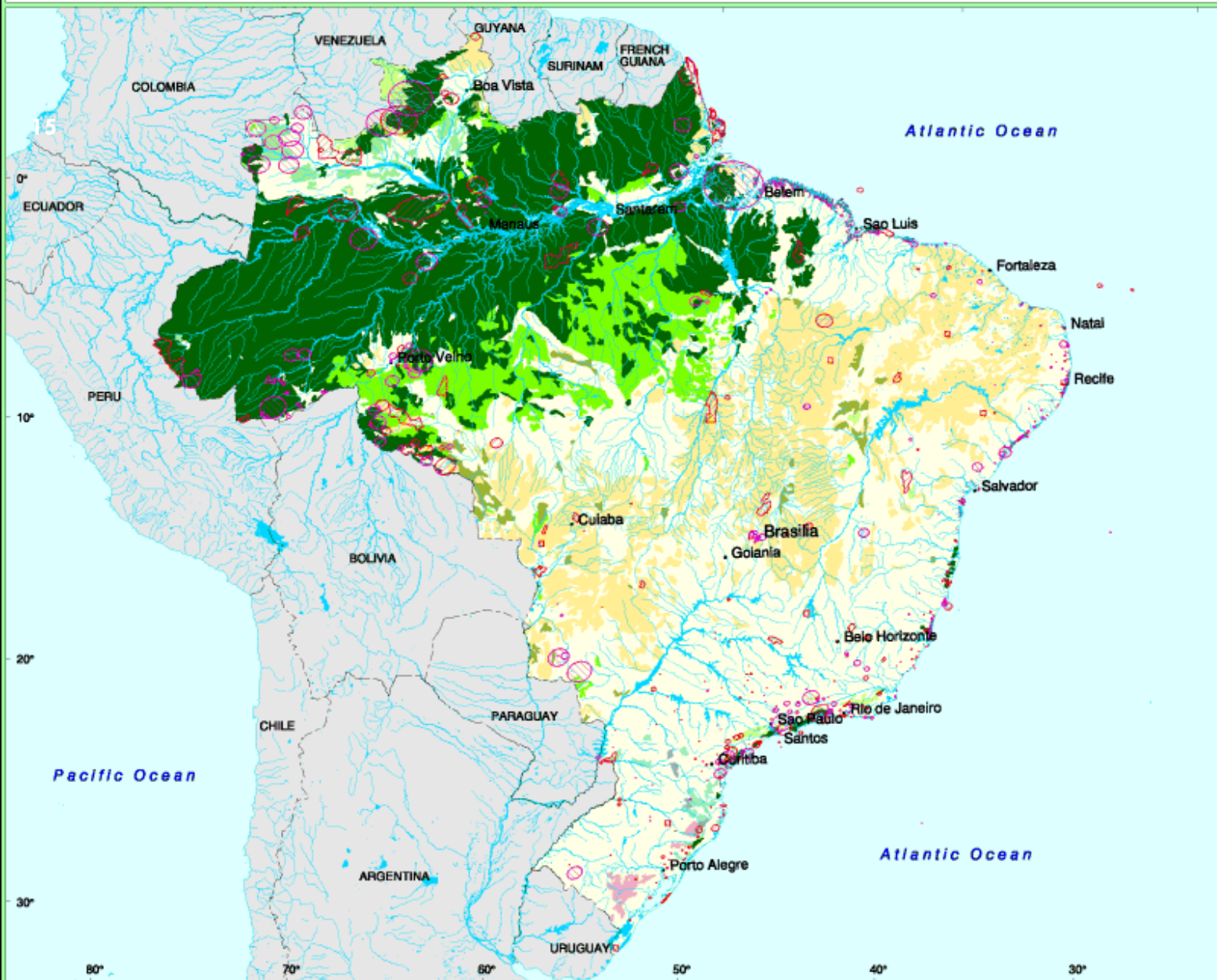
Forest area worldwide comparison (2010)

Country	Forest Area (1.000 hectare)
1 Rússia	809.090
2 Brasil	519.522
3 Canadá	310.134
4 Estados Unidos	304.022
5 China	206.861
6 Congo	154.135
7 Austrália	149.300
8 Indonésia	94.432
9 Sudão	69.949
10 Índia	68.434
11 Peru	67.992

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Source: Brasil, 2010

# FORESTS AND PROTECTED AREAS OF BRAZIL



## LEGEND

- Coastline
  - International boundaries
  - Cities
  - Water bodies
  - Rivers
- TROPICAL FORESTS**
- Mangrove
  - Freshwater swamp forest
  - Upper montane forest
  - Lowland evergreen broadleaf rain forest
  - Semi-evergreen moist broadleaf forest
  - Needleleaf forest
  - Deciduous/semi-deciduous broadleaf forest
  - Sparse trees/parkland
- TEMPERATE AND BOREAL**
- Evergreen needleleaf forest
  - Sparse trees/parkland
  - Broadleaf evergreen forest
- Non-forest land cover
- PROTECTED AREAS**  
(unknown boundaries are shown as proportional circles)
- IUCN Categories I-II
  - IUCN Categories III-VI

## Location Map



Compiled by: C. Ravillious  
 Projection: Lambert Azimuthal  
 For Source information:  
 contact UNEP-WCMC.

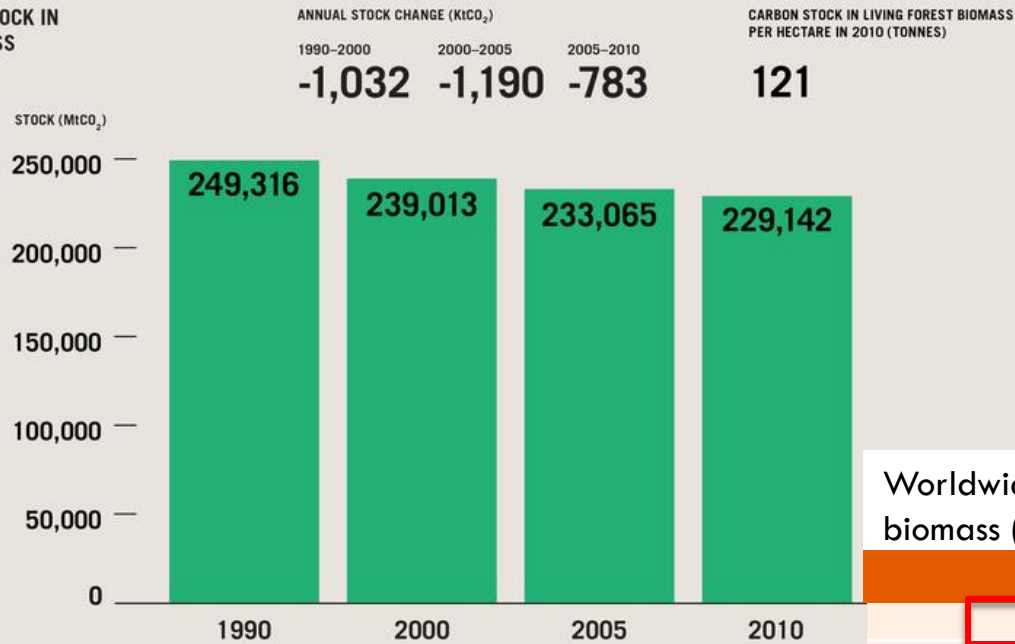


Date Printed: 28 June 2000 @UNEP-WCMC

# Forest status - Carbon stock

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## TRENDS IN CARBON STOCK IN LIVING FOREST BIOMASS



Sources - FAO (2010) The Global Forest Resources Assessment 2010 [Available from] <http://www.fao.org/forestry/frs/1/ra2010/en/>

## Worldwide comparison of carbon stock in forest biomass (2010)

Country	Carbon stock (million tons)
1 Brasil	62.607
2 Rússia	32.500
3 República Democrática do Congo	19.639
4 Estados Unidos	19.308
5 Canadá	13.908
6 Indonésia	13.017
7 Peru	8.560
8 Colômbia	6.805
9 China	6.203
10 Bolívia	4.442
11 Angola	4.385

Source: Brasil, 2010



<http://earthobservatory.nasa.gov/IOTD/view.php?id=38782>



<http://www.greenpeace.org/brasil/pt/Blog/rastra-sujo-do-desmatamento/blog/42359/>



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GREENPEACE

40 km



<http://revistaepoca.globo.com/Revista/Epoca/0,,EMI109831-15224,00-A+PECUARIA+E+A+GRANDE+VILA+DO+EFEITO+ESTUFA>



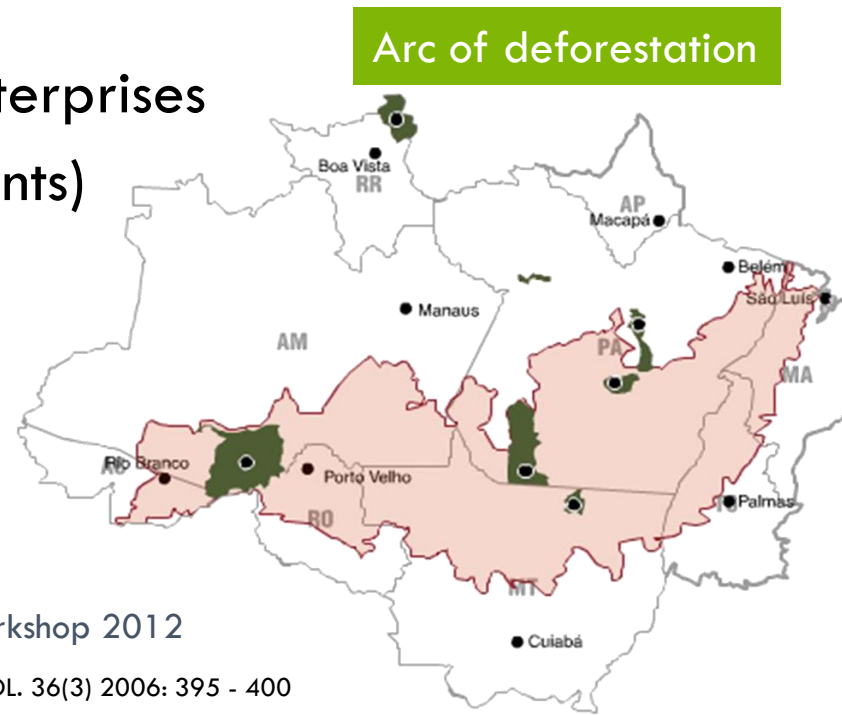
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<http://www.guardian.co.uk/environment/2008/sep/30/forests.brazil>

# Main causes of deforestation and forest degradation

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- Cattle pasture
- Large-scale commercial agriculture (soybean)
- Biofuels production (ethanol)
- Logging activities
- Infrastructure and urbanization
- Implementation of large-scale enterprises (mining and hydroelectric power plants)
- Colonization and small-scale subsistence agriculture
- Fires

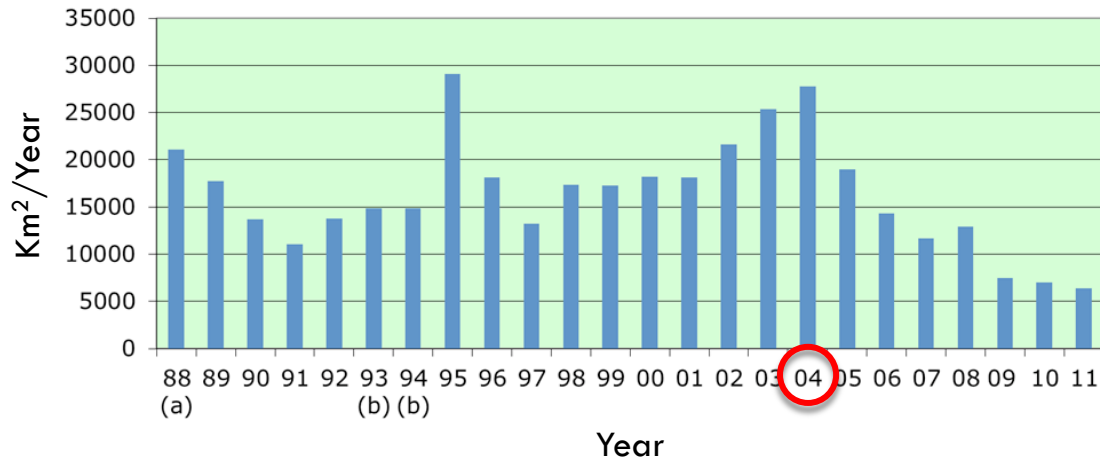


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# Deforestation rates

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Annual deforestation rate in Legal Amazon



Deforestation rate: reduction of 8% in comparison to 2010

PRODES 2010: 7.000 km<sup>2</sup>  
PRODES 2011: 6.418 km<sup>2</sup>

Source: [http://www.inpe.br/noticias/noticia.php?Cod\\_Noticia=2938](http://www.inpe.br/noticias/noticia.php?Cod_Noticia=2938)

- 2004: Plan for Prevention and Control of Deforestation in the Legal Amazon (PPCDAm).
- 2008: Sustainable Amazon Plan (Plano Amazônia Sustentável – PAS)

(a) Average between 1977 and 1988 e (b) Average between 1993 and 1994

Source: INPE, [http://www.obt.inpe.br/prodes/prodes\\_1988\\_2011.htm](http://www.obt.inpe.br/prodes/prodes_1988_2011.htm).

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# The Brazilian REDD+ strategy

# GHG emissions and land use change and forest

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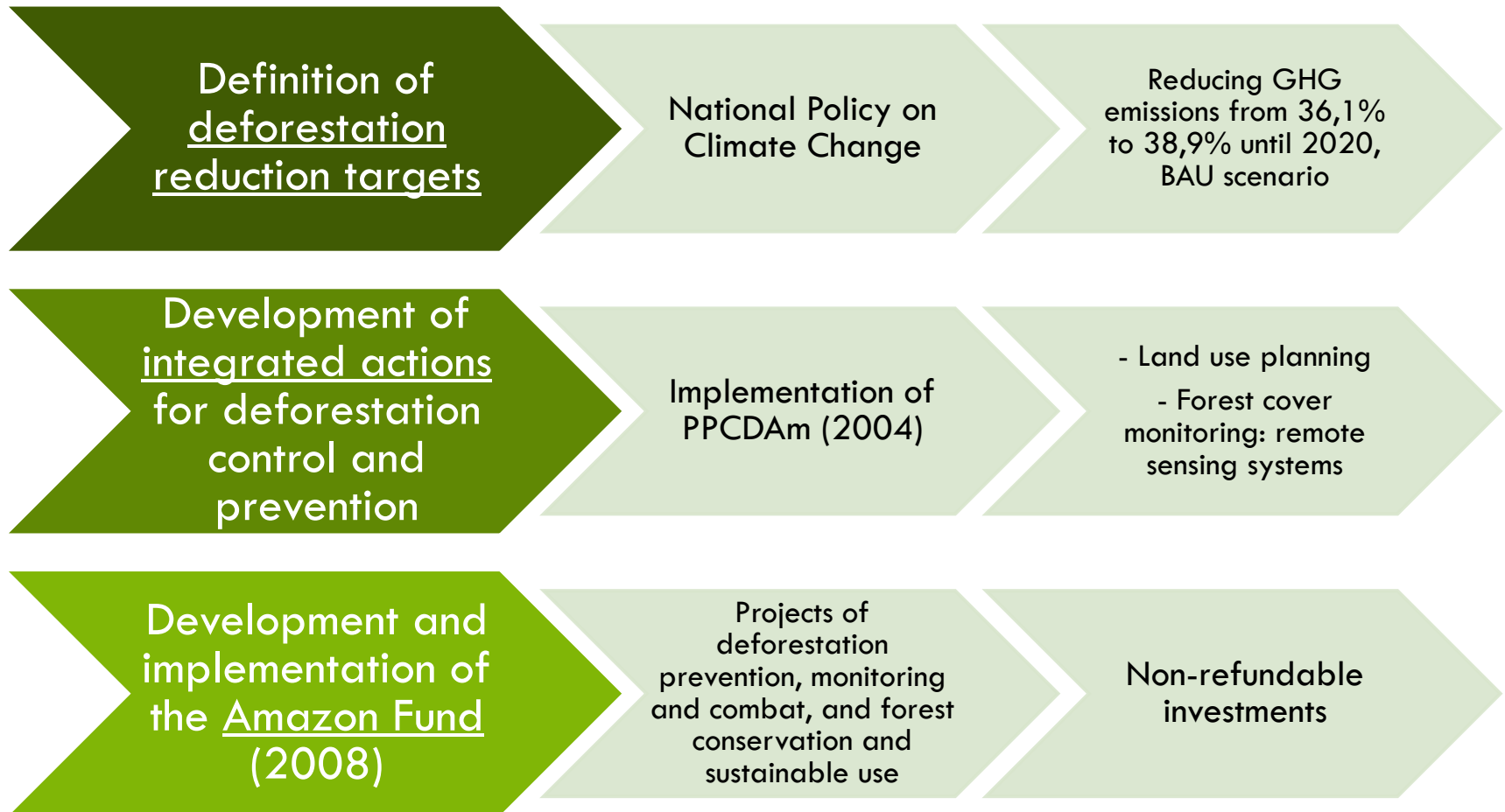
## GHG anthropic emissions and removals:

Sector	1990	1994	2000	2005	Variation 1990/ 2005	Part. 1990	Part. 2005
	(Gg CO <sub>2</sub> e)				%		
Energy	214.922	256.389	328.089	362.032	68	15,8	16,4
Industrial processes	26.686	28.776	34.657	37.097	39	2,0	1,7
Agriculture	346.668	378.409	401.428	487.399	41	25,4	22,1
Land use change and Forests	746.429	789.534	1.246.968	1.267.889	70	54,8	57,5
Waste treatment	27.661	31.804	40.720	48.945	77	2,0	2,2
<b>TOTAL</b>	1.362.366	1.484.913	2.051.861	2.203.362	62	100,0	100,0

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# Three-pronged Brazilian REDD Strategy (2009)

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➤ 2010: 3 initiatives of stakeholders engagement

# Amazon Fund

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- Until November 2012:
  - 30 contracted projects: total support of US\$ 154,9 million
  - Plus 4 approved projects with a total support of US\$ 39,9 million.

TOTAL OF DONATIONS RECEIVED BY THE AMAZON FUND - Historical values			
DONOR	R\$	US\$	DATE (month/day/year)
Norway's Government	36.448.350,22	20.960.578,70	10.09.2009
Norway's Government	49.600.536,48	28.283.364,59	08.09.2010
Norway's Government	82.144.231,20	45.149.077,28	03.23.2012
Norway's Government	36.109.415,20	17.817.731,77	10.02.2012
Federal Republic of Germany - KfW	6.644.100,00	3.952.500,00	12.29.2010
Petróleo Brasileiro S.A. Petrobras	1.765.983,70	1.016.335,00	10.14.2011
Petróleo Brasileiro S.A. Petrobras	4.114.671,55	2.368.020,00	10.14.2011
Petróleo Brasileiro S.A. Petrobras	1.435.257,60	826.000,00	10.14.2011
Petróleo Brasileiro S.A. Petrobras	156.626,00	88.750,00	01.23.2012
Petróleo Brasileiro S.A. Petrobras	282.584,58	150.255,00	04.26.2012
Petróleo Brasileiro S.A. Petrobras	174.320,80	85.155,00	07.13.2012
<b>TOTAL</b>	<b>218.876.077,33</b>	<b>120.697.767,34</b>	

Source:

[http://www.amazonfund.gov.br/FundoAmazonia/fam/site\\_en/Esquerdo/doacoes/](http://www.amazonfund.gov.br/FundoAmazonia/fam/site_en/Esquerdo/doacoes/)

# Voluntary projects (I)

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## Peugeot/ONF

- » PSA Peugeot Citroen Group
- » L'Office National des Forêts
- <http://www.reflorestamentoecarbono.com.br/novo/portal/>

## Instituto Ouro Verde

- » Aprovado pelo Fundo da Amazônia
- <http://www.ouroverde.org.br/>

## Reflorestamento na região do Xingu

- » Aliança da Terra
- » IPAM
- <http://www.aliancadaterra.org.br/>

## Apui Mais Verde

- » Idesam
- <http://www.idesam.org.br/projetos/apui.php>

## Amazon Reserve rainforest protection, Brasil

- » Willow Rivers
- <http://www.willowrivers.com/sustainableforestry-management-rainforest-protectionamazon.shtml>

## SuruiPaite

- » Forest Trends
- » Ambiental PV
- » Rede Povos da Floresta
- » AmazonConservation Team
- » Instituto Kaninde
- [http://www.overbrook.org/newsletter/03\\_09/pdfs/env/Katoomba\\_Group.pdf](http://www.overbrook.org/newsletter/03_09/pdfs/env/Katoomba_Group.pdf)

## Cinta Larga

- » Viridor
- <http://viridor.net/project-brazil>

## Sul do Amazonas

- » Idesam
- <http://www.idesam.org.br/projetos/sulam.php>

## Programa Bolsa Floresta

- » FAS
- [http://unfccc.int/files/methods\\_science/REDD+/application/pdf/pdd\\_juma\\_reserve\\_red\\_project\\_v5.0.pdf](http://unfccc.int/files/methods_science/REDD+/application/pdf/pdd_juma_reserve_red_project_v5.0.pdf)

## Reserva de Desenvolvimento Sustentável do Juma

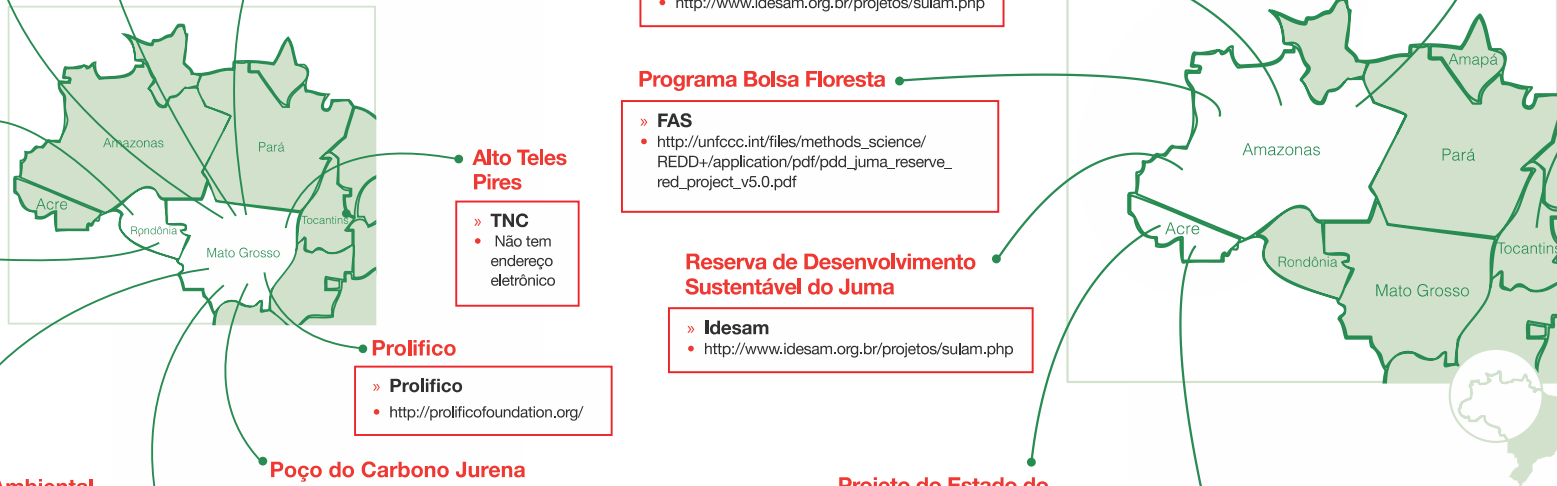
- » Idesam
- <http://www.idesam.org.br/projetos/sulam.php>

## Projeto do Estado do Acre para Incentivos aos Serviços Ambientais

- » Estado do Acre
- [http://www.ac.gov.br/index.php?option=com\\_docman&task=cat\\_view&gid=44&Itemid=165](http://www.ac.gov.br/index.php?option=com_docman&task=cat_view&gid=44&Itemid=165)

## Iniciativa WWF Forest Carbon Network

- » WWF
- » SKY
- <http://www.worldwildlife.org/what/howwedoit/conservationfinance/Approaches%20to%20Financing%20Conservation.html>; <http://rainforestrescue.sky.com/>



## Alto Teles Pires

- » TNC
- Não tem endereço eletrônico

## Prolífico

- » Prolífico
- <http://prolificofoundation.org/>

## Poço do Carbono Jurena

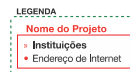
- » Prefeitura municipal de Jurena
- <http://www.carbonojuruena.org.br>

## Mato Grosso

- » TNC
- » ICV
- » Estado do Mato Grosso
- [http://www.nature.org/initiatives/climatechange/files/brazil\\_REDD+\\_fact\\_sheet\\_final.pdf](http://www.nature.org/initiatives/climatechange/files/brazil_REDD+_fact_sheet_final.pdf)

## Kayapó/Xingu Socio-Ambiental

- » CI
- » EDF
- » Wild Foundation
- » Associação Floresta Protegida (AFP)
- » Instituto Kabu (IK)
- » ICV
- » Instituto Socioambiental (ISA)
- » FUNAI
- » PAM
- » WHRC
- <http://icfcanada.org/kayapo.shtml>
- [http://www.conservation.org/Documents/CI\\_REDD+\\_Lessons\\_Learned.PDF](http://www.conservation.org/Documents/CI_REDD+_Lessons_Learned.PDF)





# Voluntary projects (II)

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## Mapuena

- » TNC
- » WinrockInternational
- [http://www.nature.org/initiatives/climatechange/files/brazil\\_REDD+\\_fact\\_sheet\\_final.pdf](http://www.nature.org/initiatives/climatechange/files/brazil_REDD+_fact_sheet_final.pdf)

## RainTrust REDD+

- » RainTrust Foundation
- » WinrockInternational
- <http://www.winrock.org/fact/facts.asp?CC=6106&bu=>

## Peabiru

- » Instituto Peabiru
- [http://www.peabiru.org.br/2008/floresta\\_alimentos.htm](http://www.peabiru.org.br/2008/floresta_alimentos.htm)

## Ecomapua

- » Ecomapua
- [www.ecomapua.com.br](http://www.ecomapua.com.br)

## Calha Norte

- » Estado do Pará (SEMA)
- » Imazon
- » CI
- » MPEG
- [http://www.pa.gov.br/portal/idesp/downloads/Anexo\\_1\\_Projeto\\_Piloto\\_REDD+\\_Calha\\_Norte.pdf](http://www.pa.gov.br/portal/idesp/downloads/Anexo_1_Projeto_Piloto_REDD+_Calha_Norte.pdf)

## Genesis

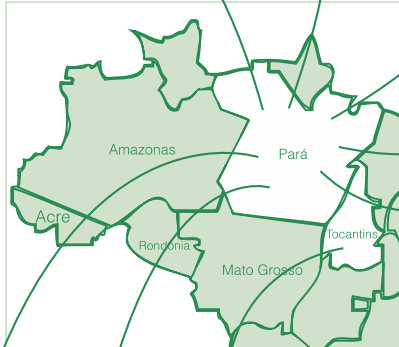
- » CarbonFund
- [http://www.climate-standards.org/projects/files/tocantins/ccba\\_pdd\\_tocantins\\_REDD+\\_v\\_1.pdf](http://www.climate-standards.org/projects/files/tocantins/ccba_pdd_tocantins_REDD+_v_1.pdf)

## Tranzamazônica

- » IPAM
- » Fundação Viver Produzir e Preservar
- » FUNBIO
- <http://www.forestcarbonportal.com/pipeline/avoided-deforestation-small-rural-properties-region-transamazon-highway>

## Rio Guamá

- » Terra Indígena Alto Rio Guamá
- » FUNAI
- » C Trade
- <http://c-tradeweb.com/wp/projetos/REDD+/>



## Projeto Piloto de REDD+ em São Félix do Xingu

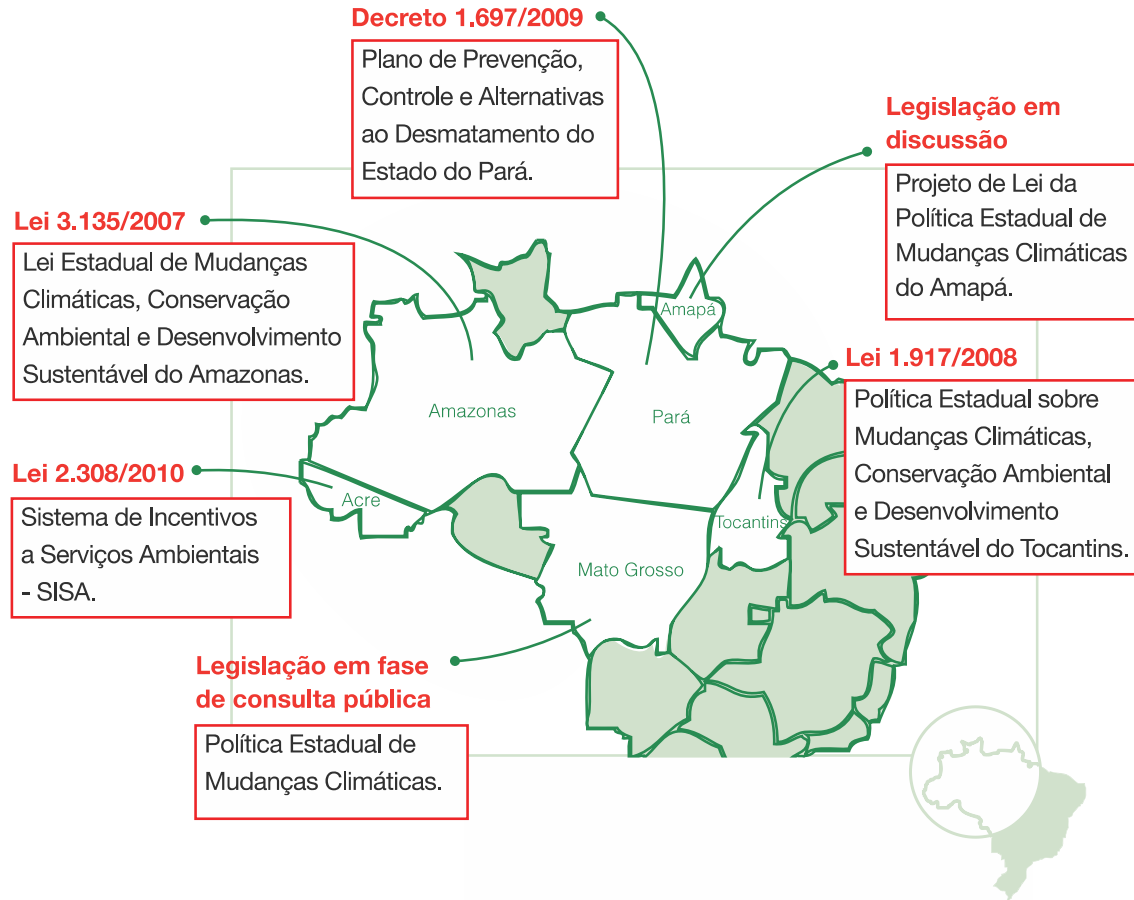
- » TNC
- » WinrockInternational
- [http://www.nature.org/initiatives/climatechange/files/brazil\\_REDD+\\_fact\\_sheet\\_final.pdf](http://www.nature.org/initiatives/climatechange/files/brazil_REDD+_fact_sheet_final.pdf)

## Additional projects:

- Guaraqueçaba Climate Action Projects in Brazil's Atlantic Forest
- 5 projects in initial stage

# REDD+ Subnational policies (under development)

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## Comparing Nepal and Brazil REDD+ Strategy

# Comparison

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<b>Reference level</b>	Use of 1978 LRMP data, FRA report 2012 and some intermediate points (satellite image interpretation)	<p><u>National Plan on Climate Change:</u> historical deforestation rate</p> <p><u>Project and state level:</u> based on both projected and historical rates of deforestation</p>
<b>Financing</b>	It comes under Low Forest and High Deforestation (LFHD) (Fonseca et.al) category countries. Funded by FCPF.	It comes under High Forest and High Deforestation (HFHD) category. Finance by Voluntary fund.
<b>Distribution</b>	Between Government and mainly Focused to CFUGs, the main implementer of REDD	Under formulation (different approaches are currently being used)
<b>MRV</b>	Remote Sensing Data, data from permanent sample plots developed by FRA and socio economic data from various sources.	INPE/PRODES: monitoring and producing annual data on deforestation rate (data also used by NGOs)

# Does it make sense to compare?

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- Share experiences and practices
  
- Highlight
  - Specificities of each country and, therefore, need of customizing REDD+ at national level, but also...
  - Common challenges:

# Challenges

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30		Nepal	Brazil
	Lacking availability of degradation data	√	√
	Advance remote sensing technology and technical capacity to operate is lacking	√	
	More synergies between national forest policies and REDD+ policies	√	√
	Forest governance (multi-stakeholder dialogue, enforcement of legislation, tenure rights definition, institutional coordination)	√	√
	Enforcement of limited forest use (imposed by REDD+) by communities	√	√
	Insufficient Financial resources to operate REDD+	√	
	Certification process (financial and human resources)	√	√
	Increase competitiveness in a global carbon market	√	
	Equitable benefit sharing (local traditional or indigenous communities)	√	√
	Capacity building for proponents of REDD+ projects	√	√

# Some recommendations

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- Consider the lessons learned in the Readiness Phase in the Implementation Phase (e.g. local communities and other stakeholders consultation processes).
- Concrete long-term framework for sustainable forest GHG emissions reduction (after REDD+ completion).
- Effective MRV system should be formulated.
- Carbon trading should be made clear, transparent and with defined period.
- Recognition that countries with low forest cover, high deforestation rates and high carbon stocks should be included in a future REDD+ mechanism.

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- BRASIL (2008). Decreto Nº 6.527, de 1º de Agosto de 2008. Dispõe sobre o estabelecimento do Fundo Amazônia pelo Banco Nacional de Desenvolvimento Econômico e Social - BNDES. DF, Senado. 2008.
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- FEARNSIDE, P. Deforestation in Amazonia: dynamics, impacts and control. *Acta Amazonica*. VOL. 36(3) 2006: 395 – 400.
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- Ministério do Meio Ambiente REDD + Relatório de painel técnico do MMA sobre financiamento, benefícios e cobenefícios / Ministério do Meio Ambiente. Brasília: MMA, 2012. 23 p. (e-book)
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