

**REDD in Latin America:**  
**A Critical Climate Change**  
**Challenge ~ and a**  
**Key Area of Opportunity**

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**Nico van Aelstyn**

**[NvanAelstyn@bdlaw.com](mailto:NvanAelstyn@bdlaw.com)**

**(415) 262-4008**

# DEFORESTATION: What's the big deal?



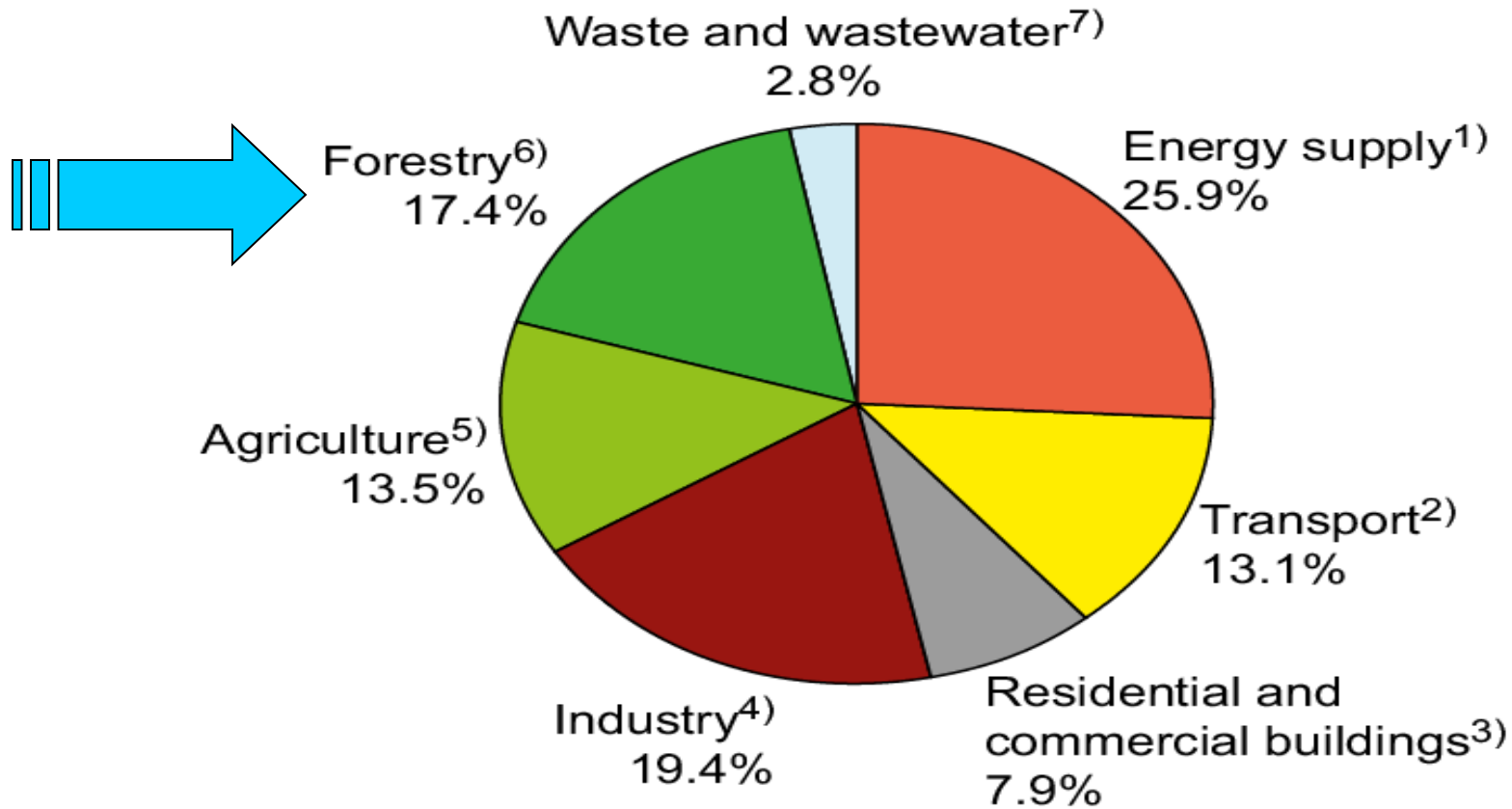
# CLIMATE CHANGE & DEFORESTATION

Worldwide, deforestation is the third highest source of greenhouse gas (GHG) emissions:

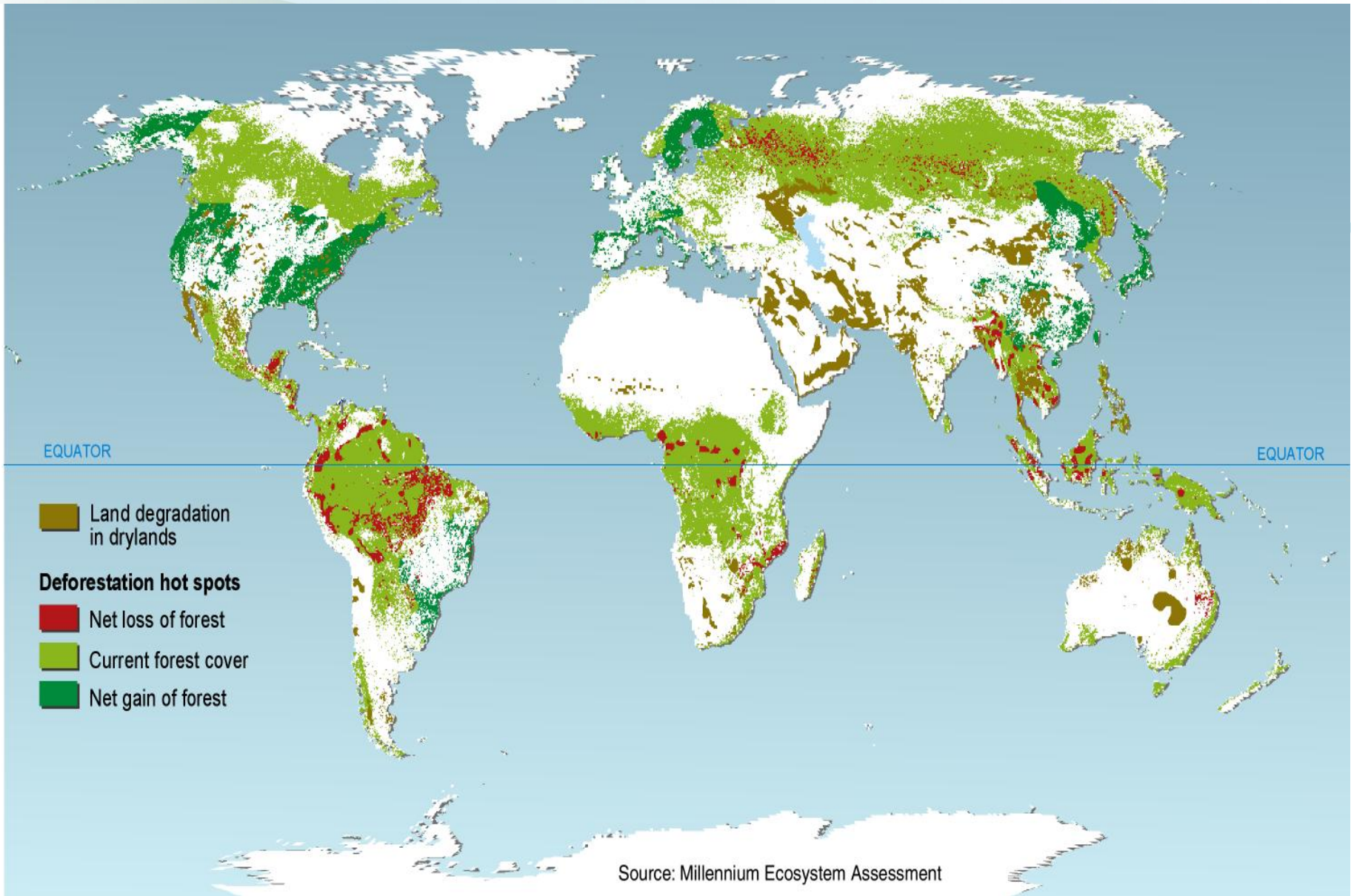
1. Energy (26%)
2. Industry (19%)
3. Forestry (17%)

Agriculture and transportation account for 14% and 13% of total emissions, respectively.

# CLIMATE CHANGE & DEFORESTATION



**Figure TS.2b:** GHG emissions by sector in 2004 [Figure 1.3b].



# INTERNATIONAL EFFORTS FOCUSED ON REDD

- UNFCCC and international community making progress.
- Several large public funds already established and funded, and additional funds pledged by Annex I countries. Most key developing countries are participating (with an eye toward their NAMAs).



# REDD: MARKET OPPORTUNITIES

**Public  
Initiatives**



**Private  
Projects**

# U.S. PARTICIPATION

- REDD included in some fashion in all of the leading climate bills in Congress, including ACES and the Kerry-Lieberman bill.
- REDD projects being developed for the voluntary offset market.
- But the most significant developments giving these opportunities teeth is that of California's cap-and-trade program under AB 32 and the work of the Governors Climate and Forests Task Force (GCF).



# OUTLINE OF PRESENTATION

- **Part I: Background**

- What: RED, REDD, REDD+
- Why: REDD is critical to address deforestation
- How: Existing and Emerging Market Opportunities

- **Part II: Where it stands now**

- Kyoto Protocol
- Copenhagen Accord: Highlights
- NAMAs – Nationally Appropriate Mitigation Actions
- Subnational Efforts: Most Notably, the Governors' Climate & Forests Task Force (GCF) and California

# OUTLINE OF PRESENTATION

- **Part III: U.S. Domestic Efforts: California's Cap-and-Trade Regulation under AB 32 to include sectoral based offsets, starting with RED**
  - Schedule
  - Requirements
  - Opportunities for Private Investment
- **Part IV: Next Steps**

# PART 1: WHAT IS REDD?

REDD = Reducing Emissions from Deforestation and Degradation

- Market based initiative to prevent deforestation by putting a market value on carbon stored in forests, making it more valuable than cleared land. Developed nations to pay to preserve tropical forests to reduce global GHG emissions and sequester carbon.
- Methodology to reduce GHG emissions from BAU levels and, by using forests as carbon sinks, abating future CO<sub>2</sub> emissions.

# THREE CATEGORIES OF REDD ACTIVITIES

- (1) Policy-based REDD activities would generate credits by reforming land use policies in a manner leading to reduced deforestation.
- (2) Sectoral REDD activities would generate based credits by reducing net deforestation rates over an entire country.
- (3) Project-based REDD activities generate market-based credits by maintaining carbon stocks in a specific, defined area.

# REDD+

- Expands the scope of REDD beyond avoided deforestation and degradation activities to include forest restoration, rehabilitation, sustainable management and/or af/reforestation

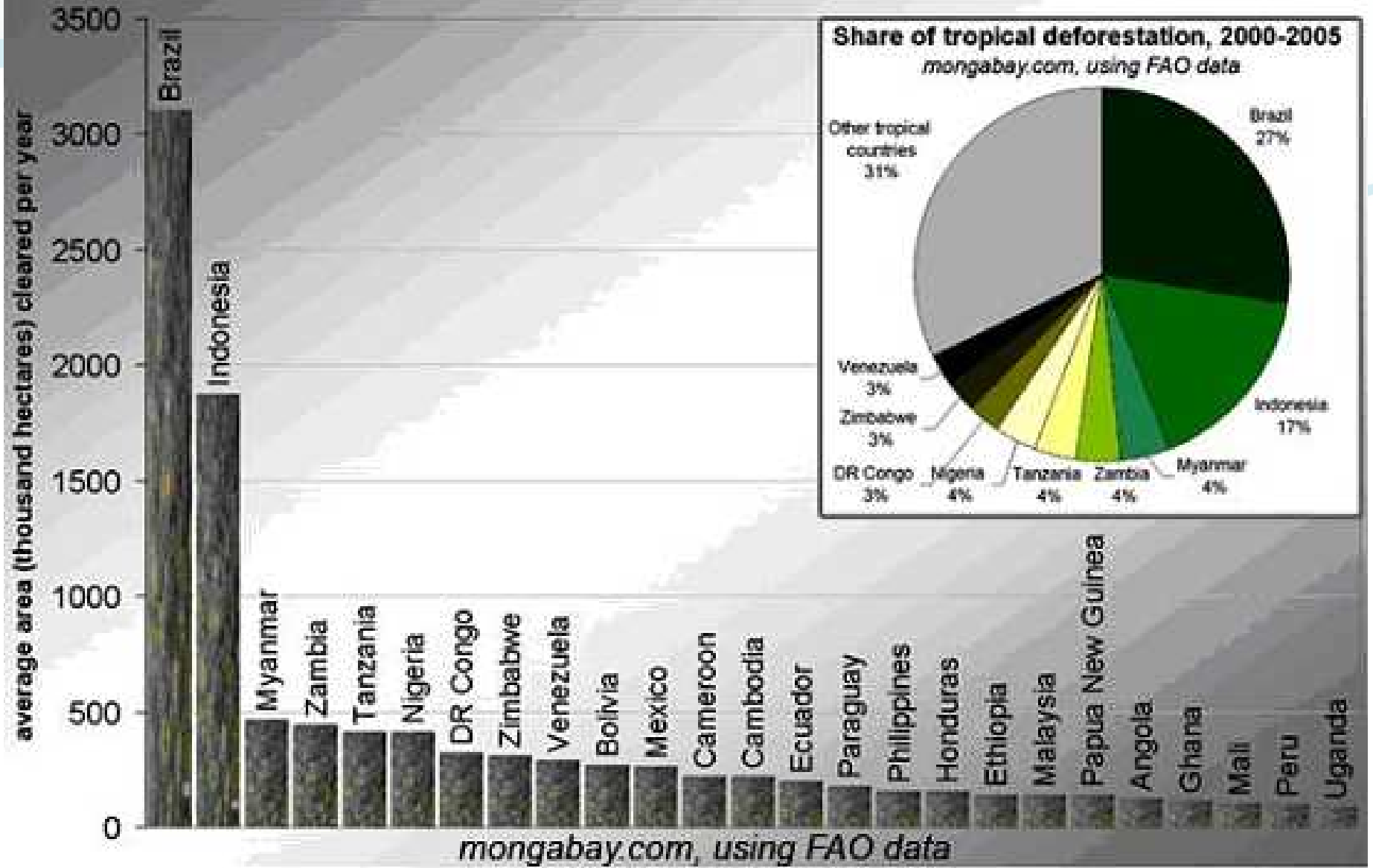


# WHY?

- Third highest source of GHG emissions worldwide
- About 13 million hectares (32 million acres) of forest are destroyed every year, mostly in the tropics.  
*(Food and Agriculture Organization of the United Nations)*
- Forests cover approximately 30% of the earth's surface, but each year deforestation results in the loss of forest cover equal to the size of Panama.  
*(National Geographic)*
- Approximately 50% of the Earth's forests have been cleared.



# Tropical deforestation rates, 2000-2005



# WHY?

## Drivers of Deforestation

- Deforestation in developing countries is frequently driven by agriculture, logging, and road expansion.
- Rising prices for soy, palm oil, and beef make it increasingly profitable for landowners in developing countries to clear forests and convert the land to agriculture. Often, burning is the cheapest and easiest way to clear the land.



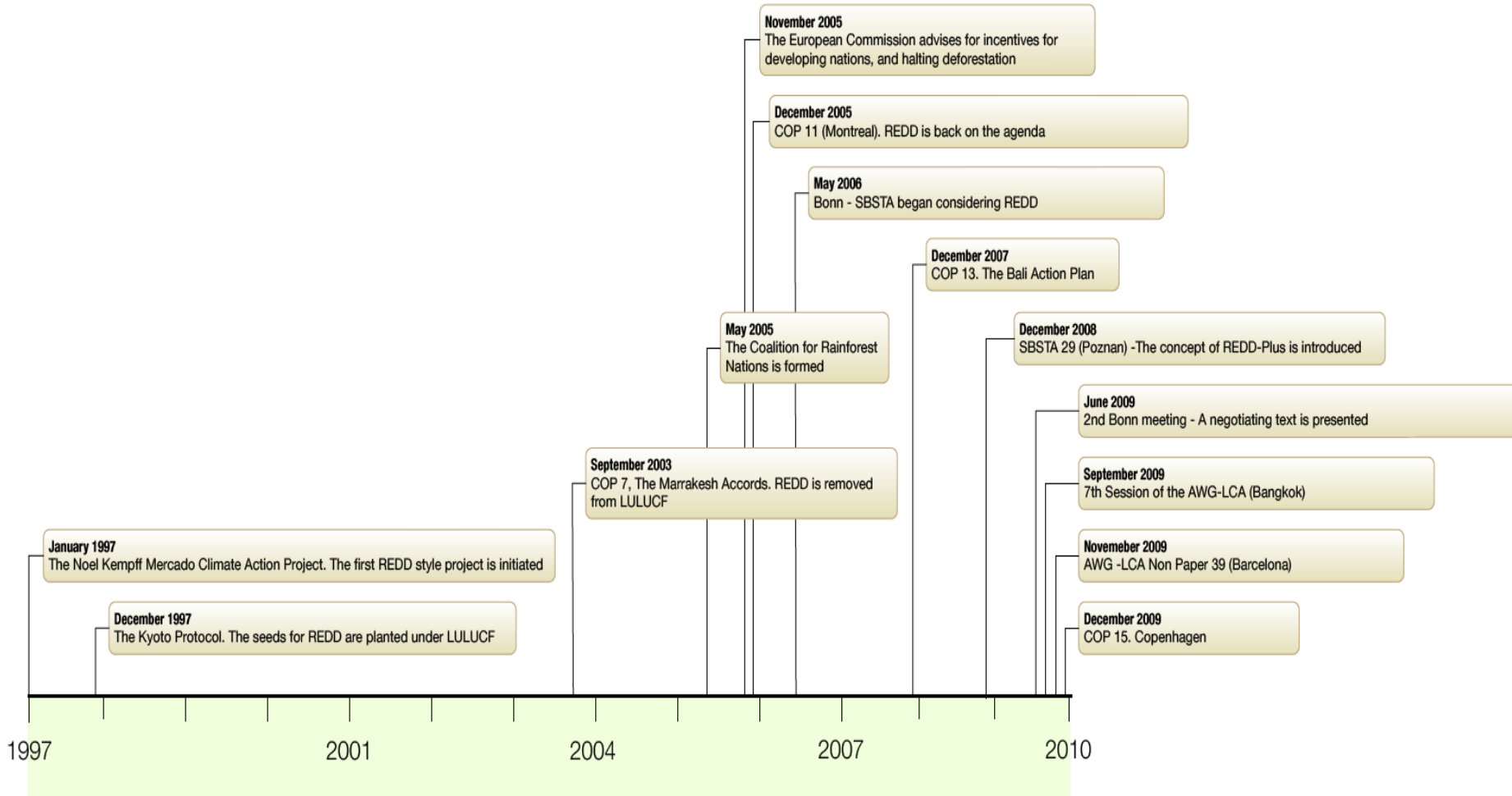
Illegal deforestation for soybean production in Novo progresso, State of Para -Brazil 2004  
(Courtesy of Greenpeace/Alberto Cesar)

# WHY?

## REDD as a Catalyst for Economic Opportunities & Development

- Under conservative calculations, the Intergovernmental Panel on Climate Change (IPCC) estimates that 25% of deforestation emissions can be abated at a cost of less than \$20 per metric ton of carbon dioxide (tCO<sub>2</sub>).
- By comparison, market price for carbon on the European Union Emissions Trading Scheme (EU ETS) was \$35/tCO<sub>2</sub> in the first quarter of 2008.
- The much lower price of carbon today (about €15/tCO<sub>2</sub>) demonstrates the market challenges to REDD projects as well.
- Significant collateral benefit to US agriculture due to reduced foreign competition

# PART 2: WHERE IT STANDS NOW: International REDD Negotiations



# PART 2: UNFCCC Negotiations

## Kyoto Protocol (1997)

- Parties excluded REDD from the offset mechanism due to uncertainties about the magnitude of deforestation emissions and the ability to monitor deforestation.
- But the Kyoto Protocol does recognize credits from reforestation and afforestation.

## Bali COP 13 (2007)

- The Bali Action Plan (BAP): Comprehensive process launched for full implementation “up to and beyond 2012.”
  - Roadmap to adopt decision 2009 COP 15 in Copenhagen
  - This becomes the **LCA** (Long-term **C**ooperative **A**ction) track

# WHERE IT STANDS NOW

## Highlights from the Copenhagen Accord

- Specifically supports REDD
- Recognizes the crucial role of REDD+
- Calls for immediate establishment of a mechanism to mobilize financial resources
- Calls for substantial REDD+ financing
- Developing countries to implement mitigation actions (NAMAs – Nationally Appropriate Mitigation Actions)
- NAMAs seeking support will be recorded in a registry
- Subject to international MRV (Monitoring, Reporting and Verification)



COP15  
COPENHAGEN  
UN CLIMATE CHANGE CONFERENCE 2009



# WHERE IT STANDS NOW

## Highlights from the Copenhagen Accord

- Though not adopted, Parties generally aligned on:
  - Scope of REDD+
  - Core elements that need to be developed if a Party wants to participate in REDD:
    - 1) Phased approach, and
    - 2) Addressing the drivers of deforestation and forest degradation, and other issues like land tenure and stakeholder participation



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# WHERE IT STANDS NOW

## Highlights from the Copenhagen Accord

- **Continued efforts by the UNFCCC:**
  - Recent meetings held at: Bonn, Germany, (May 25-26, 2010) and in Norway (May 27, 2010)
  - Future meetings scheduled for: 15th Conference of the Parties (COP 16) in Cancun, Mexico (Nov.- Dec. 2010)
- **Individual country commitments submitted to UNFCCC on existing and planned approaches to address REDD by: Australia, the DRC, Germany, Guyana, and Norway**



COP15  
COPENHAGEN  
UN CLIMATE CHANGE CONFERENCE 2009

# WHERE IT STANDS NOW

- Per the Copenhagen Accord, more than **\$4 billion** committed to date to a variety of vehicles dedicated to funding REDD and REDD+ programs (\$3.5 billion committed; remaining sum is a mix of funds allocated and pledged).
  - Monies committed by Australia, Denmark, the EC, Finland, France, Germany, Japan, Netherlands, Norway, Spain, Switzerland, the UK, and the US (non-inclusive list that does not include donor organizations).
- International funds aimed at developing sectoral REDD programs on a national basis.
- However, these emerging structures appear to be keen to ensure opportunities for private, nested projects.

# WHERE IT STANDS NOW

## NAMAs – Nationally Appropriate Mitigation Actions

- NAMAs can consist of broad policy changes and/or programs that aggregate results of specific actions regionally or nationally.
- Examples of REDD+ related NAMAs:
  - **Brazil:** reduced deforestation, biological N fixation, no-till agriculture
  - **Indonesia:** sustainable peat land management, reduction in rate of deforestation and land degradation, development of C sequestration projects in forestry and agriculture
  - **Ghana:** Enhance rehabilitation of degraded forest land

# SUBNATIONAL EFFORTS: THE GOVERNORS' CLIMATE & FORESTS TASK FORCE (GCF)

## Background

- Spearheaded by California at 2008 first Governors' Global Climate Summit; MOUs signed
- Collaboration between 14 states and provinces in the U.S., Brazil, Africa, Mexico, and Indonesia. Substantial share (approx. 1/3) of the world's tropical forests in GCF member states/provinces (subnational jurisdictions).
- Purpose to establish subnational REDD Program based on "Common But Differentiated Responsibilities" principle.

# SUBNATIONAL EFFORTS: THE GOVERNORS' CLIMATE & FORESTS TASK FORCE (GCF)

## GCF Objectives

- Bring together key, early mover tropical forest states with U.S. states at the forefront of developing subnational GHG compliance systems (most notably California) to:
  - Exchange ideas and build capacity (legal, institutional, technical & scientific) to generate high quality offsets from REDD;
  - Develop recommendations for bringing REDD and other forest carbon activities into climate policy; and
  - Move into the “proof of concept” stage in the effort to bring REDD into existing and emerging GHG compliance systems and markets.



# SUBNATIONAL EFFORTS: THE GOVERNORS' CLIMATE & FORESTS TASK FORCE (GCF)

## Challenges/Uncertainties

- REDD as an Offset:
  - MRV concerns
  - Accountability
    - Additionality – paying for actual reductions from BAU
    - Leakage – stopping deforestation here, shifting it there
    - Permanence – delaying, rather than eliminating
  - Scope
    - Deforestation only (RED),
    - Plus Degradation (REDD),
    - Plus forest management and carbon stock enhancement (REDD+)

# SUBNATIONAL EFFORTS: THE GOVERNORS' CLIMATE & FORESTS TASK FORCE (GCF)

## Challenges/Uncertainties

- (cont.)
  - Technical issues
    - MRV methods dissemination
    - Additionality: Setting national/subnational baselines for forest emissions
    - Project accounting for nested projects within sectoral framework
    - Permanence: liability for carbon reversal
    - Leakage: shifting emissions to an ungoverned source
  - Institutional issues
    - Property rights
    - Governance
    - Transparency

# SUBNATIONAL EFFORTS: THE GOVERNORS' CLIMATE & FORESTS TASK FORCE (GCF)

## Challenges/Uncertainties

- REDD+ and Copenhagen:
  - Financing for REDD+ activities
  - Whether REDD+ will be part of NAMAs or a stand-alone framework/mechanism
  - Inclusion of subnational REDD+ programs
  - Role of private REDD projects within sectoral programs

# PART 3: U.S. DOMESTIC EFFORTS

## California's Cap-and-Trade Program: Schedule

- Cap-and-trade market mechanism regulation to be released late September/early October (to allow minimum of 45 days for public comment).
- Proposed to be adopted at the November Board meeting of CARB (Nov. 18-19) [could slip to the December meeting, scheduled for Dec. 9-10]. AB 32 requires that it be adopted by Jan. 1, 2011.
- Cap-and-trade program carbon market to be rolled-out January 1, 2012 in concert with the WCI's.
- RED credits currently proposed to be phased in during program's Second Phase, beginning in 2015, to provide time for partner jurisdictions to develop REDD Readiness.

# CALIFORNIA'S DRAFT CAP-&-TRADE REGULATION AB 32

## Phase-In Approach

- Start with Avoided Deforestation (RED)
  - Does not include components addressing:
    - Degradation
    - Reforestation, Improved Forest Management (IFM) projects
    - Must meet requirements for “REDD Readiness”

# CALIFORNIA'S DRAFT CAP-&-TRADE REGULATION AB 32

## Requirements for REDD Readiness

- Inventory registry and MRV (combination of remote sensing and ground-based forest carbon inventory & monitoring)
- Reconciliation of accounting (projects within sectoral-level inventory registry)
- Verify carbon ownership and return of carbon value (benefit sharing)
- Safeguards: protection & participation, dispute resolution, transparency

# CALIFORNIA'S DRAFT CAP-&-TRADE REGULATION AB 32

## Opportunities for Private Investment

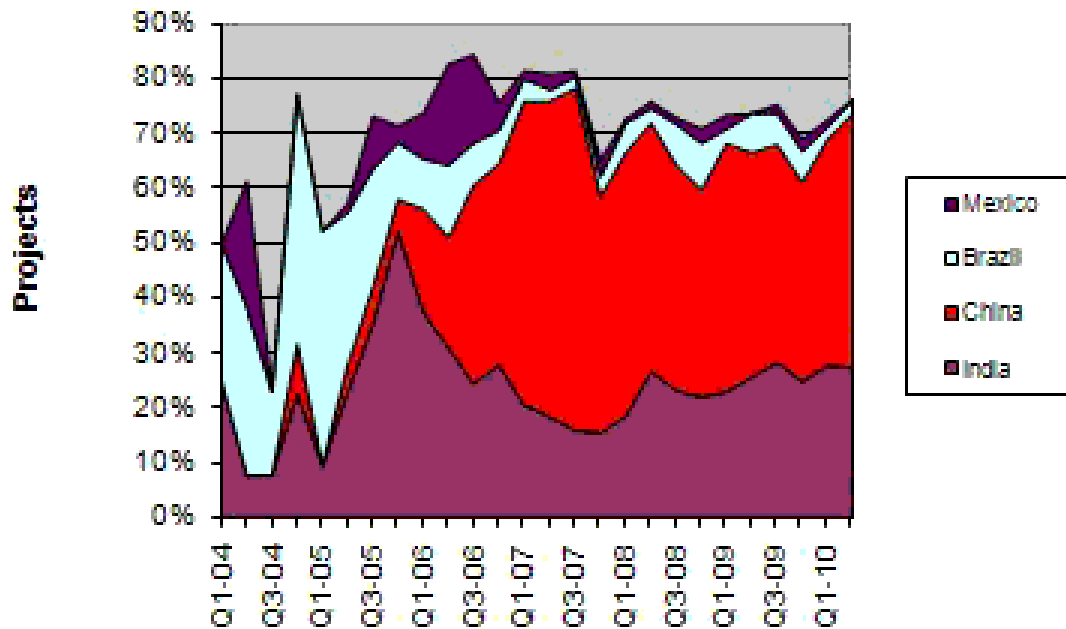
- California and the GCF both intent upon developing nested sectoral programs that provide a role for private projects developing REDD offsets to feed into the US compliance market.
  - Voluntary REDD offsets now some of the most popular of voluntary offsets for host of reasons.
- Offers an alternative to CDM projects under UNFCCC
  - CDM Board notoriously slow and bureaucratic
  - Standards-based approach much more efficient to implement than CDM's case-by-case approach
  - Potential for active, supportive involvement of host nations
- Potential for REDD projects in Latin America should be viewed in context of the existing market for CDM projects that generate CERs that feed into Europe's compliance market (the ETS).



# CALIFORNIA'S DRAFT CAP-&-TRADE REGULATION AB 32

## Opportunities for Private Investment

UNEP Risoe Center

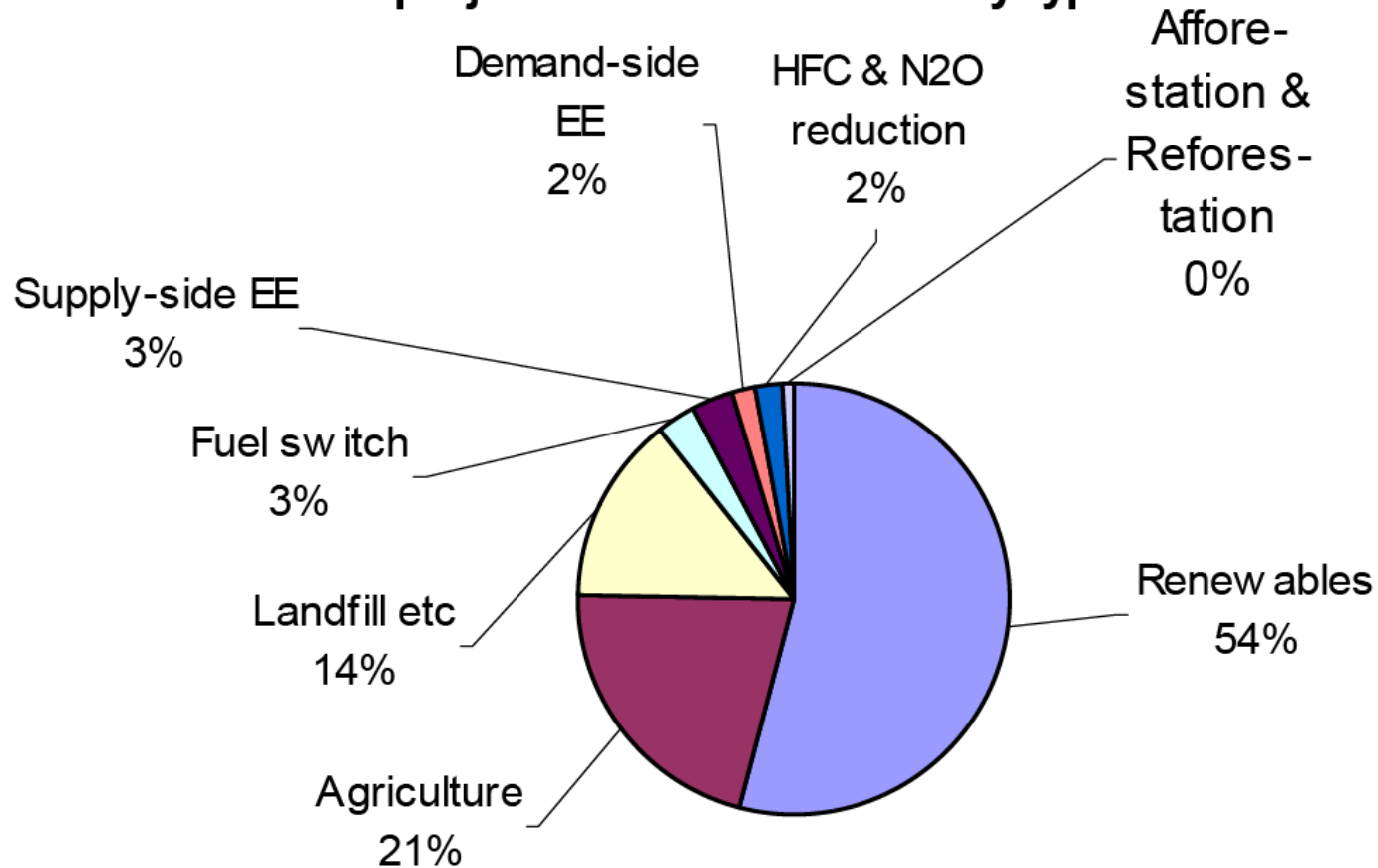


- Latin American countries account for less than 20% of total global CDM projects.
- Mexico and Brazil's presence are continuing to grow, though still behind India and China-- opportunity for growth in general and in REDD in particular.

# CALIFORNIA'S DRAFT CAP-&-TRADE REGULATION AB 32

## Opportunities for Private Investment

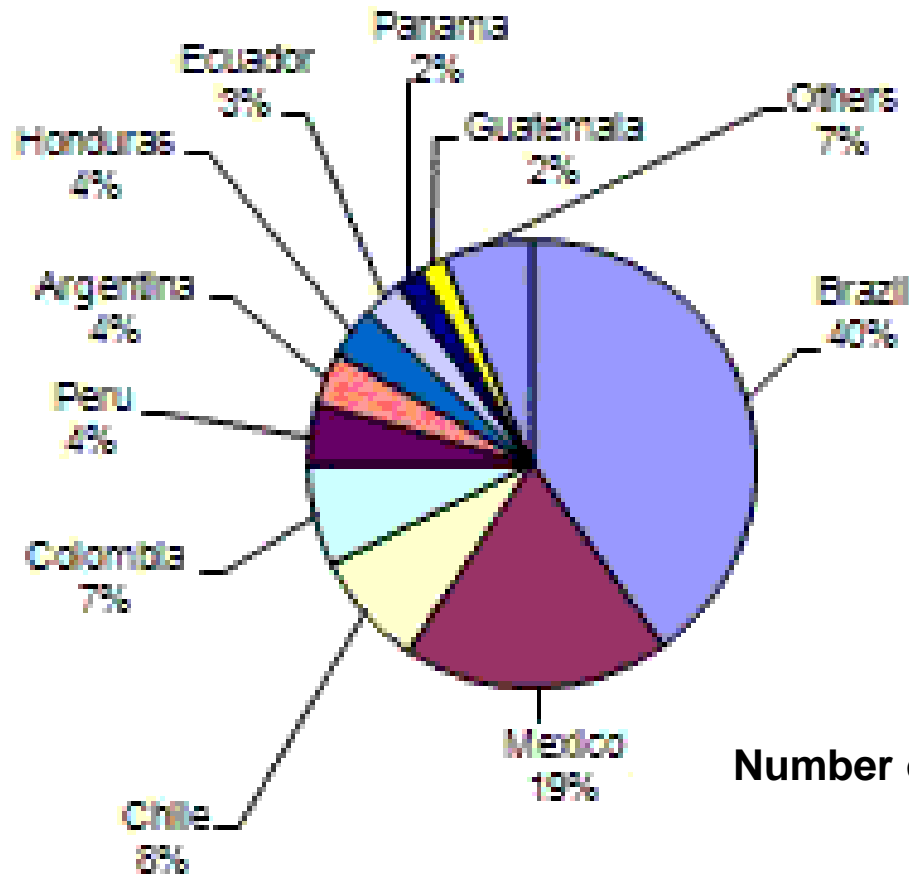
CDM projects in Latin America by type



Data from 2008 version of  
UNEP Risoe CDM Pipeline

# CALIFORNIA'S DRAFT CAP-&-TRADE REGULATION AB 32

## Opportunities for Private Investment

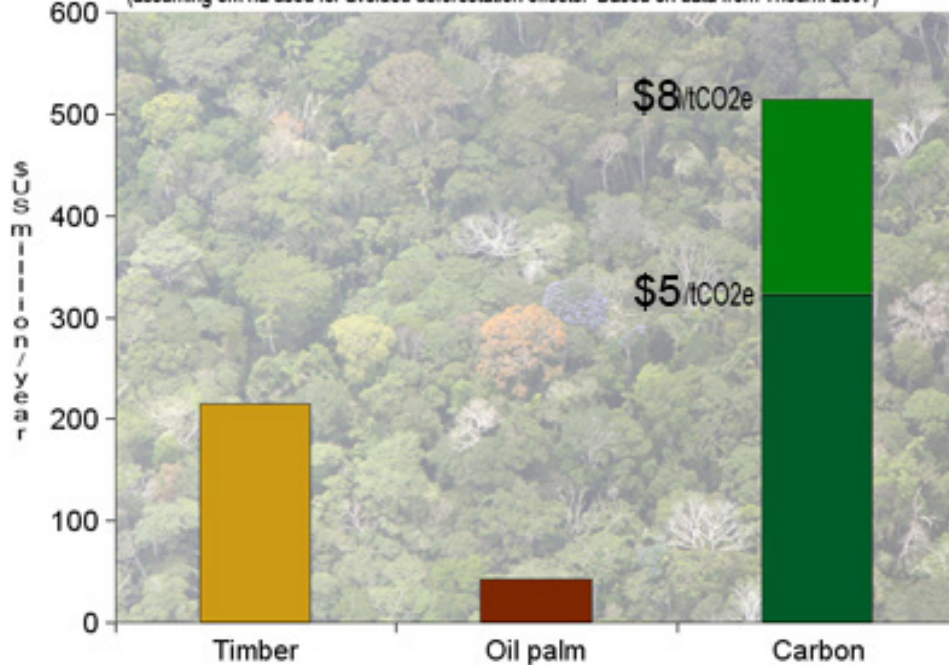


Number of CDM projects in Latin America by country

UNEP Risoe Center

## Opportunities for Private Investment

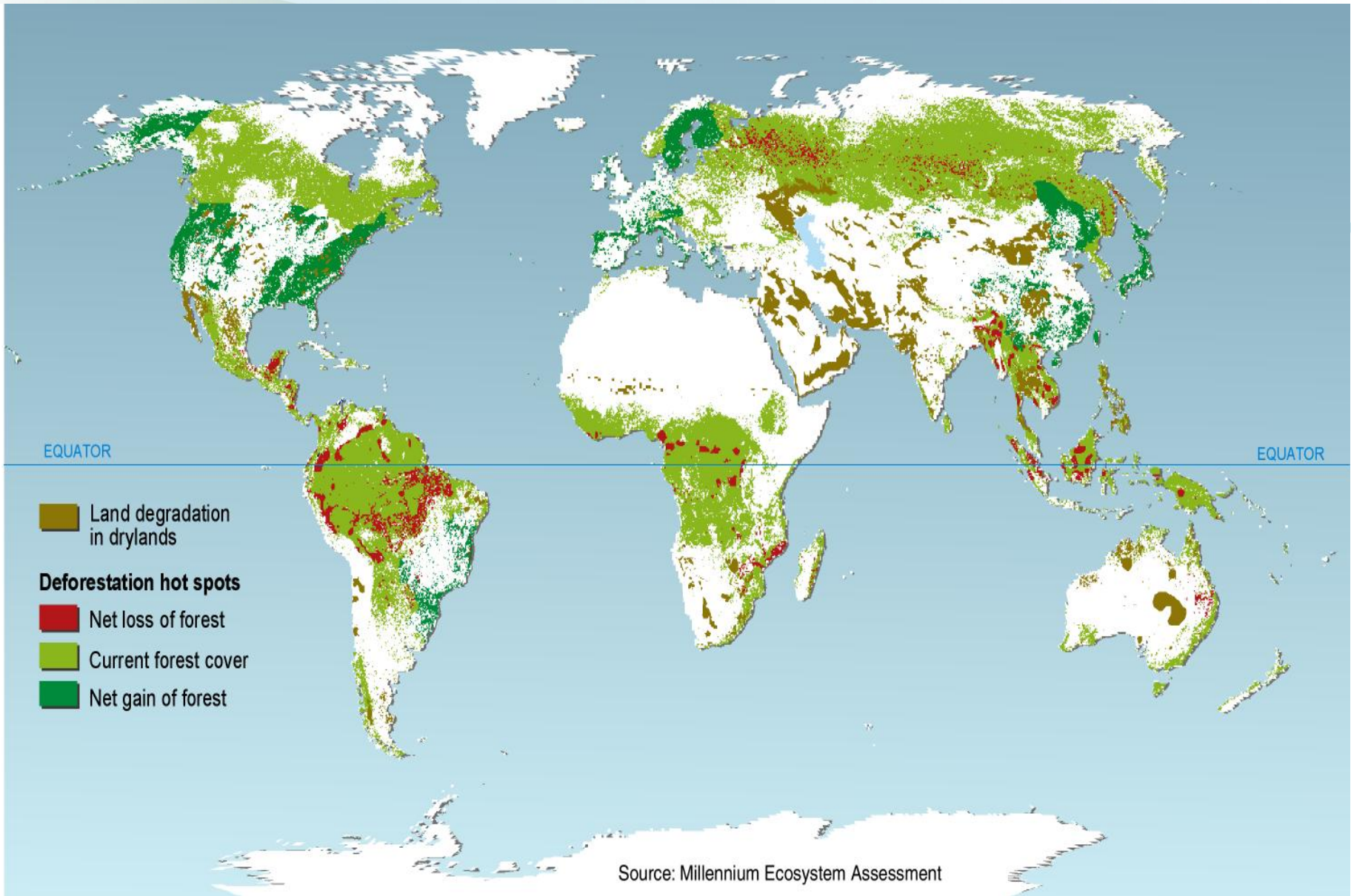
Comparing potential tax revenue for Indonesia from timber, palm oil, and carbon offsets  
(assuming 3M ha used for avoided deforestation offsets. Based on data from Thoumi 2007)



Potential annual value of avoided deforestation assuming a 20% reduction in deforestation rate and a moderate carbon market (in \$ millions)

Brazil	4328.6
Indonesia	1868.4
Congo, DR	761.3
Bolivia	362.7
Peru	169.0
Mexico	126.3
Papua NG	59.2
Sudan	51.9
Thailand	22.8
Gabon	10.1

source: Ebeling 2006





# PART 4: NEXT STEPS

## US federal cap-and-trade climate initiatives stalled

- Legislation dead in Congress for time being
- Little likelihood that EPA will develop a cap-and-trade program under the Clean Air Act
  - CAA better-suited to command-and-control regulation
  - The Tailoring Rule and other recent EPA climate initiatives all reflect this)

## Initiative again with the states.

- States continuing to press ahead on own
- *And* via regional initiatives

# PART 4: NEXT STEPS

## Existing Regional Initiatives

- **Regional Greenhouse Gas Initiative (RGGI):** MD, DE, NJ, NY, CT, RI, MA, VT, NH, ME [PA an observer]
- **Western Climate Initiative (WCI):** 7 states - WA, OR, CA, AZ, NM, UT, MT - 4 provinces (BC, Manitoba, Ontario, Quebec – and many observers [AL, CO, ID, KS, NV, WY; Nova Scotia, Saskatchewan, Yukon; Baja California, Chihuahua, Coahuila, Nueva Leon, Sonora, Tamaulipas]
- **Midwest GHG Reduction Accord:** IA, IL, KS, MI, MN, WI, [observers = IN, OH, SD]

**Together include 23 U.S. States and 4 Canadian Provinces**



# PART 4: NEXT STEPS

## Regional Initiatives' Collaborative Efforts

- Cooperative effort to share experiences in the design and implementation of regional cap-and-trade programs, inform federal decision making on climate change policy, and explore potential for further collaboration among the three regional programs.
- On May 19, 2010, the three issued a joint white paper entitled “Ensuring Offset Quality: Design and Implementation Criteria for a High-Quality Offset Program.”
- Potential NACI - North American Climate Initiative for cap & trade
  - RGGI stakeholder meeting Sept. 13 in NYC rumored to include discussions of broadening RGGI to market-wide cap-and-trade, and possible linkage/integration with WCI and Midwest Accord
  - WCI stakeholder meeting Sept. 15 in Montreal may build on discussion
- **STAY TUNED!**

***Thanks!***  
**Questions?**

**Nico van Aelstyn**  
**+1 415 262 4008**

**[nvanaelstyn@bdlaw.com](mailto:nvanaelstyn@bdlaw.com)**  
**[www.bdlaw.com](http://www.bdlaw.com)**