

Sector-Based Crediting & Subnational Reducing Emissions from Deforestation and Degradation (REDD)

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California Air Resources Board

California Environmental Protection Agency 1

Sector-Based Crediting & Subnational Reducing Emissions from Deforestation and Degradation



**ARB Staff
Presentation**

Overview

Today's Presentation - Overview

- Sector-based offset crediting
- Discuss specific sector-based approach for Reducing Emissions from Deforestation and Degradation (REDD)
- Preliminary staff thinking on subnational REDD program elements
- Present key questions on REDD framework for stakeholder input
- Submit comments by 6 pm, August 20, to:
<http://www.arb.ca.gov/cc/capandtrade/comments.htm>

What is sector-based crediting

- Scope
 - International and specific to developing countries
- Geographical Area/Region
 - Subnational (state/province) jurisdictions in developing countries
- Crediting Pathway
 - Credits generated from projects in a sector-based program
- Unique Features
 - Reduction across a state's or province's entire sector (addressing additionality and leakage)

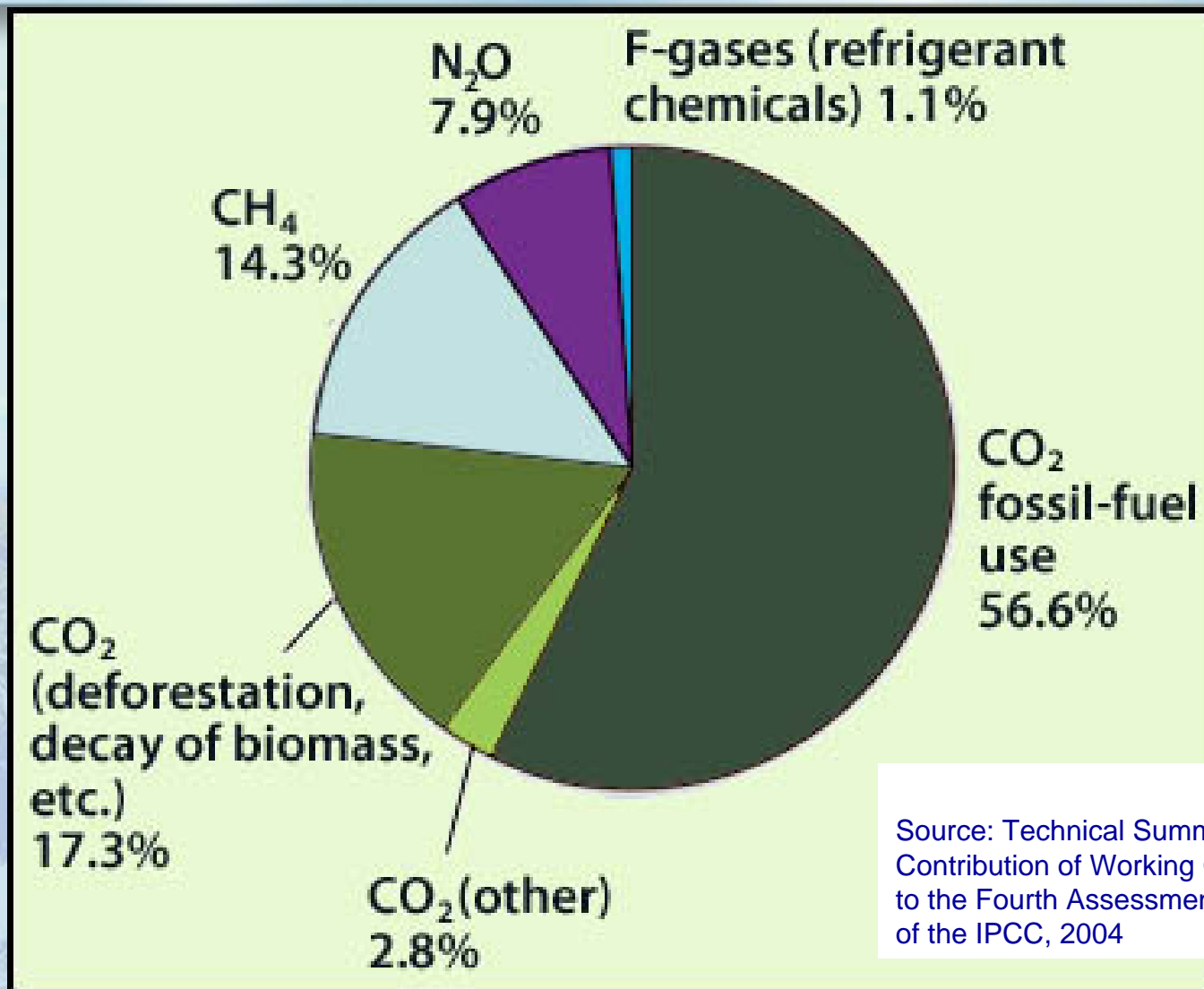
The GCF and Sector-Based Crediting

- Governor's Summit 2008
 - MOU to address deforestation and climate change
- Governors' Climate and Forest Task Force (GCF)
 - Collaboration between 14 states and provinces in the U.S., Brazil, Africa, Mexico, and Indonesia
 - Purpose to establish subnational REDD Program based on "Common But Differentiated Responsibilities" principle

ARB Rulemaking Process

- Cap and trade regulation this fall expected to include general framework for sector-based crediting
- California has played a leading role in GCF process
- ARB has been an active participant in GCF
 - Developing requirements that could allow credits from a subnational program that is taking action to reduce emissions through a Reducing Emissions from Deforestation program
 - Further work and additional Board action needed before credits from a REDD program could enter the market

Distribution of Global GHG Emissions 2004



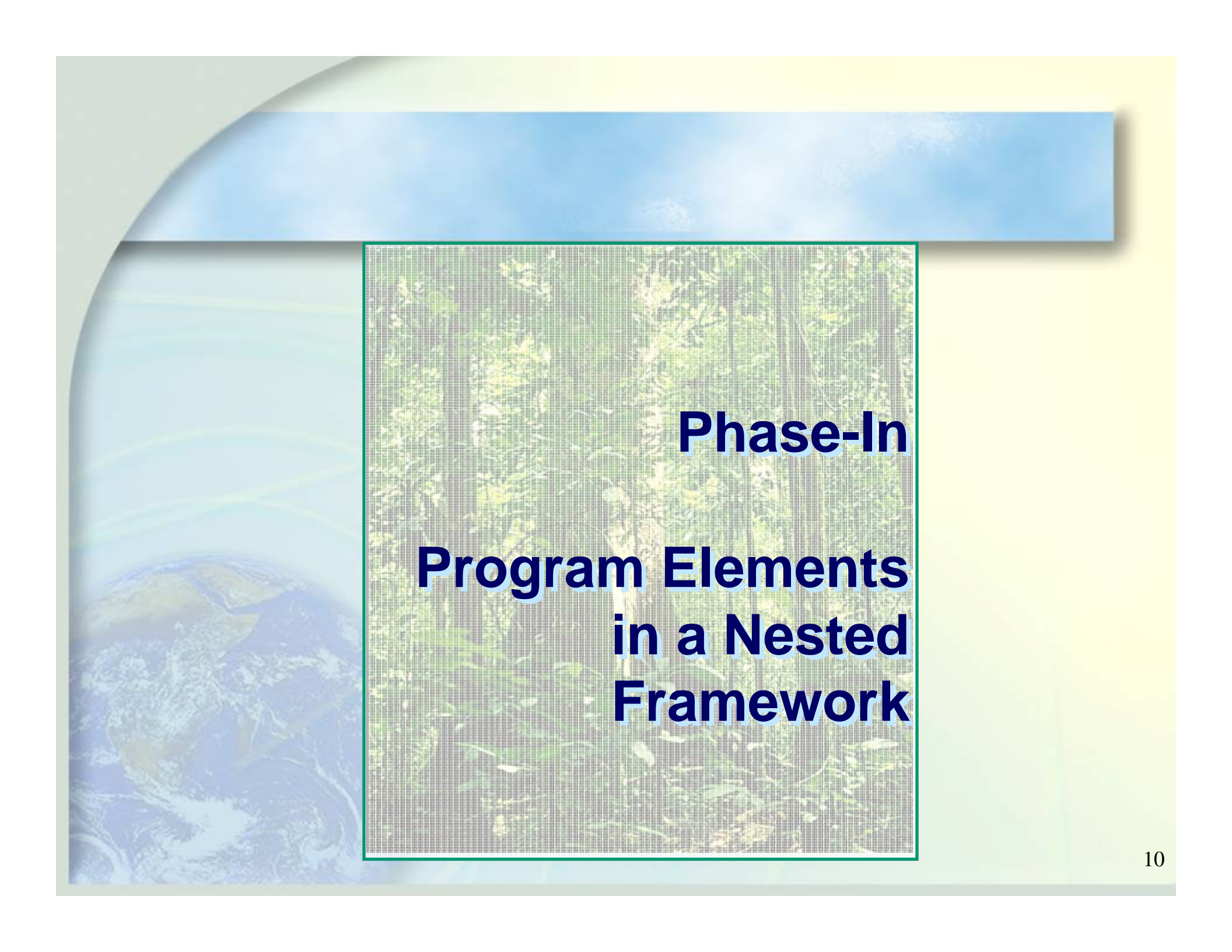
Source: Technical Summary,
Contribution of Working Group III
to the Fourth Assessment Report
of the IPCC, 2004

Role of sector-based offset credits in Cap-and-Trade Program

- ARB could recognize sector-based offset programs after:
 - Establishing a process to develop general rules for sector-based offset credits
 - Establishing rules for a particular sector
 - Conducting specific evaluation to determine whether REDD program meets key requirements

Recognition of sector-based offset credits

- ARB would only accept credits from a sector-based program following review and Board approval of the program
- Program would need to meet all criteria tailored to the specific sector (REDD, Cement, etc)
- Requirements for REDD would include:
 - Inventory and MRV (combination of remote sensing and ground-based forest carbon inventory & monitoring)
 - Reconciliation of accounting (projects with state-level inventory)
 - Verify carbon ownership and return of carbon value (benefit sharing)
 - Safeguards: protection & participation, dispute resolution, transparency



**Phase-In
Program Elements
in a Nested
Framework**

Possible Phase-In Approach

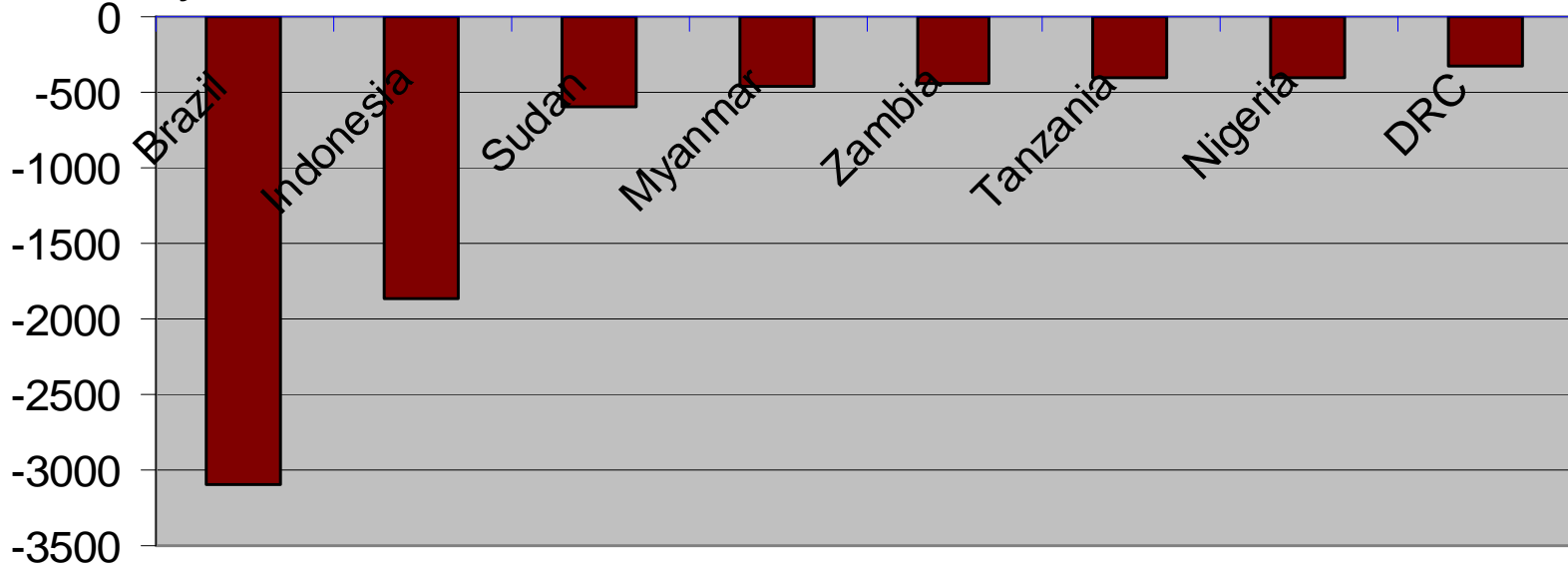
- **Start with Avoided Deforestation**
 - cover avoided deforestation only in first phase
 - does not include components addressing:
 - Degradation
 - Reforestation, Improved Forest Management (IFM) projects
 - Must meet requirements for “REDD Readiness”
- **Focus on High Deforestation States/Provinces**
 - Phasing-in high deforestation & frontier areas where deforestation is or potentially could be a major contributor to economy-wide emissions
- **Nested System**
 - Combines forest sector accounting at the state/province level to take advantage of existing infrastructure for project-based activities

Deforestation by region

Countries with largest annual net forest loss 2000-2005

source: Global Forest Resources Assessment 2005, Food and Agriculture Organization of the United Nations

Annual change
1,000 ha/yr



Program elements in a nested framework


- Sector-level requirements
 - Baselines: Reference Levels, Crediting Baseline
 - Trajectory
 - Inventory and MRV
 - Safeguards (Benefit sharing)
 - Enforcement and consideration for reversals
- Project-level requirements
 - Additional, quantifiable, verifiable, real
 - Quantitative methodology
 - Inventory and Baseline
 - Verification (3rd party)
- Reconciliation
 - between project and sector-based inventory, accounting, and monitoring

REDD Program Criteria

- General Criteria
 - Reference Level
 - Crediting baseline (meet or exceed)
 - Transparent inventory and accounting to reconcile state/project level inventory
 - MRV and registry
 - Social Safeguards (FPIC, dispute resolution, transparency for financial flow of funds)
 - Benefit-sharing for local communities

Timeline

- 2010: Cap-and-Trade rule goes to Board; expected to include general approach to sector-based crediting
- 2011: Continued work with GCF to develop program criteria for a REDD program (or subset)
- 2012-13: Potential evaluation of specific REDD program(s)
- 2015: Potential to begin accepting credit from avoided deforestation program



**Current Staff
Thinking**

Program Elements

Current Staff Thinking: Program Elements

- ARB participated in recent GCF meetings discussing possible program elements
 - GCF Work Groups
 - Climate Summit (Sept 2009)
 - GCF meeting (Sept 2009)
 - Technical meeting (Feb 2010)
 - GCF partner meeting (May 2010)
- The following slides summarize current staff thinking based on those discussions

Current Staff Thinking: Sector-Based Credits and Offset Limit

- All offset credits subject to overall quantitative limit
- Sector-based offset credits would be limited to a portion of overall offset limit

Current Staff Thinking: Program Elements – Reference Level (1)

- **Setting the Reference Level - Options**
 - **Historic**
 - **Modeled/Projected**
 - **Historic and projected**

Current Staff Thinking: Program Elements – Reference Level (2)

- Historic annual deforestation rate
- Averaged over 10 years
- Adjusts every 10 years
- Data from spatially-explicit activity (remote sensing) & ground-level measurements
- Use of carbon emission factors for forest classes (IPCC Good Practice Guidance)
- Consideration for adjustment to include low-deforestation states with near-term threat

Current Staff Thinking: Program Elements – Crediting Baseline

- **Crediting Baseline**
 - Establish at a lower level of GHG emissions than would occur under a BAU (RL) scenario
 - Take into account relevant historic trends and policies or incentives to reduce GHG emissions
 - Additionality and performance of the sector is based on its crediting baseline

Current Staff Thinking: Program Design Elements

- **Crediting Baseline**

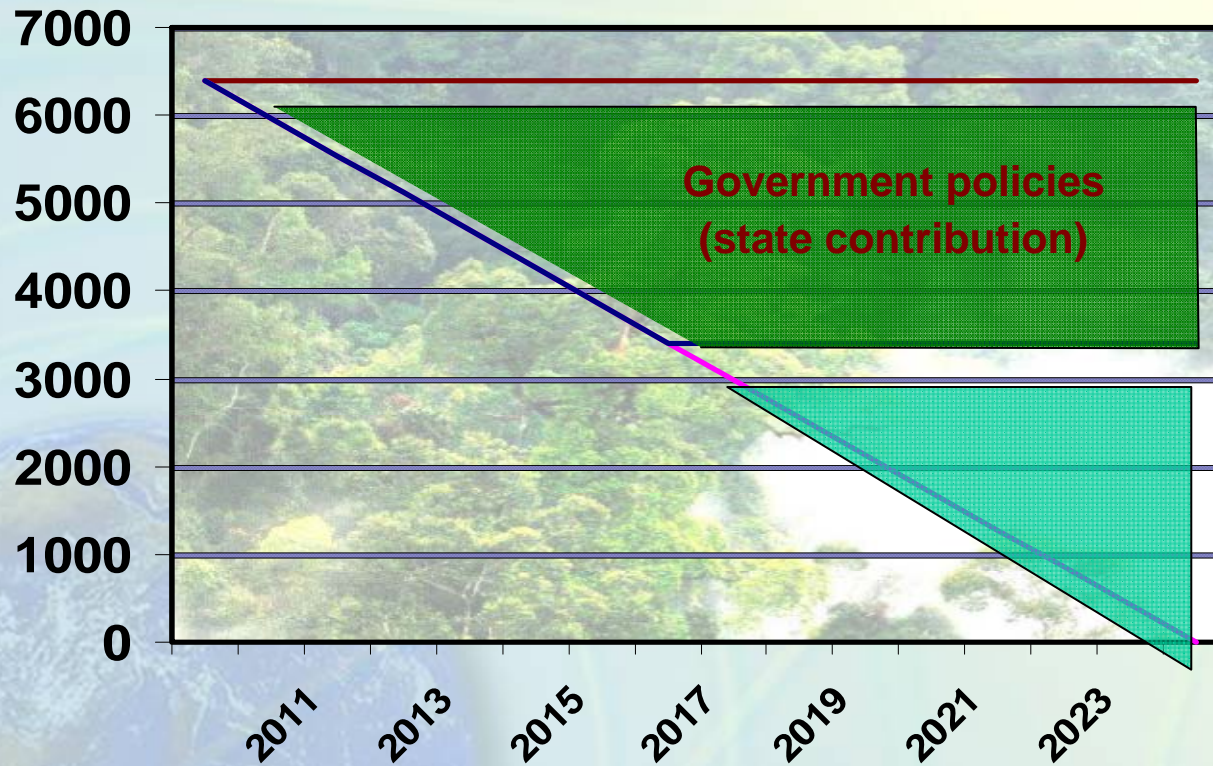
- Establishing benchmarks by which REDD partners must reduce emissions from avoided deforestation prior to credits being issued
- Considering two benchmarks:
 - ❑ Crediting baseline at 25% below RL for portion of credits to become eligible for compliance.
 - ❑ Crediting baseline at 50% reduction below RL for all remaining credits to be eligible for compliance.

- **Trajectory and Target**

- Crediting baseline trajectory based on a 'net zero'; with 15 or 20 years under consideration as the target date for net 0 emissions.

Current Staff Thinking: Reference Level & Crediting Baseline example

Deforestation (km²/yr)



Reference Level

Crediting Baseline

REDD projects

carbon market
(private investment)

Current Staff Thinking: Preliminary Program Design Elements

- **Infrastructure needed to implement nesting framework**
 - Ongoing, transparent reconciliation of inventory and monitoring between state and projects
 - Tracking system as repository for issuance, ownership, retirement
 - Public access, dispute process, FPIC, stakeholder participation, transparency
 - Assignment of serial numbers
 - Links to national registries (if relevant)
 - Third-party verification

Future Issues

Overall Infrastructure

- Analysis on reference level and crediting baseline
- Accounting for nested system

Permanence

- Risk and reversals at project and sector level
- Liability

Measureable

- Monitoring, Reporting, Verification
- Accounting for nested system

Verifiable

- Social and Environmental Safeguards: Community-level benefit-sharing, Tenure validity/ assurance, Free prior informed consent, dispute resolution, public participation

Contact and Comment Information

Submit comments by 6 pm, August 20, to:
<http://www.arb.ca.gov/cc/capandtrade/comments.htm>

For more information:

California's Climate Change Website:

<http://climatechange.ca.gov>

Contact (Office of Climate Change):

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Questions for discussion

Sector-based credits

1. Should credits coming from a sector-based crediting program be limited within the offset portfolio?

REDD program

2. What is the best method to establish sector-wide reference levels for host states?
3. Where should the crediting baseline be set relative to the reference level baseline?
4. How much should the host states be expected to reduce emissions before CA entities can use credits from compliance?
5. How to establish safeguard criteria that can be tracked and verified?



Terms and Definitions

REDD

Terms and Definitions: REDD (1)

- **Sector-based Crediting Program**
 - Jurisdictional level sector-wide GHG reduction program established in a state or province in a developing country
 - Emission reductions shared by both state-level action in developing country and use of credits in a compliance market
- **REDD**
 - Reducing Emissions from Deforestation and Degradation in developing country
 - REDD+ adds the role of conservation, sustainable management of forests and enhancement of forest carbon stocks (Bali Action Plan)
- **Deforestation**
 - Direct human-induced conversion of forested land to non-forested land (Marrakech Accords)

Terms and Definitions: REDD (2)

- REDD Readiness
 - Efforts by a jurisdiction to build capacity and become ready for operating a REDD program
 - Readiness may include inventory, REDD policy and planning, public consultation, monitoring, reporting and verification (MRV) procedures , testing and evaluation of REDD strategies, and registry development. These activities occur prior to start-up for full scale-up REDD program implementation
- Nested Approach
 - Allows project-level activity to be nested in a state-run REDD sector-based program
 - Projects would be subject to specific requirements and criteria to be considered for compliance use
 - State must meet its sector target prior to generating offset credits

Terms and Definitions: REDD (3)

- Reference Level
 - Deforestation rate for entire state or province over a predefined period of time (also referred to as business-as-usual)
 - Reference levels can be established by historical trends, projections of future trends, or historic combined with adjustment factors
- Crediting Baseline
 - Establishes a performance level of avoided deforestation below the reference level
 - Establishes the point at which nested projects can begin to be credited