1. Forests are critical for human survival and well-being

- Natural forests provide a range of ecosystem services that are vital to human survival and well-being:
  - **Supporting services** – soil production and nutrient cycling;
  - **Provisioning services** – timber and non-timber products;
  - **Regulating services** – climate and hydrological regulation;
  - **Cultural services** – cultural, religious, recreational and scientific values.

![Image of forest ecosystem services](http://www.slideshare.net/CIFOR/the-un-forum-on-forests-facilitating-and-catalyzing-sfm-financing)
2. But, forests are being destroyed at an alarming rate

- Almost half of Earth's original forest cover gone, much of it destroyed within past three decades (WRI 1997)
- Globally, on average 13 million hectares of forest were converted to other uses – mostly agriculture – or lost through natural events each year from 2000 to 2010 (FRA 2010).

Ten countries with largest annual net loss of forest area 2000-2010 (FRA 2010)

<table>
<thead>
<tr>
<th>Country</th>
<th>Annual Change (1,000 ha/yr)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>-2,642</td>
<td>-0.49</td>
</tr>
<tr>
<td>Australia</td>
<td>-562</td>
<td>-0.37</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-498</td>
<td>-0.51</td>
</tr>
<tr>
<td>Nigeria</td>
<td>-410</td>
<td>-3.67</td>
</tr>
<tr>
<td>United Rep. of Tanzania</td>
<td>-403</td>
<td>-1.13</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>-327</td>
<td>-1.88</td>
</tr>
<tr>
<td>Dem. Rep. of the Congo</td>
<td>-311</td>
<td>-0.20</td>
</tr>
<tr>
<td>Myanmar</td>
<td>-310</td>
<td>-0.93</td>
</tr>
<tr>
<td>Bolivia</td>
<td>-280</td>
<td>-0.49</td>
</tr>
<tr>
<td>Venezuela</td>
<td>-288</td>
<td>-0.60</td>
</tr>
</tbody>
</table>

3. Why? (a) Direct causes

- To generate revenue and employment, governments make forest lands available for plantation and other agricultural development.
- Governments allow selective logging, which is supposed to be sustainable, to generate revenue and employment. But,
  - Bad logging practices can severely degrade the forest, making it more vulnerable to fire
  - Logging roads open up the forests for settlement and agriculture, and provide access to markets, leading to permanent land use change.
- Local people clear forests for both shifting and sedentary agriculture.
(b) Underlying drivers

**Economic drivers**
- Demand for forest and agricultural products
- Poverty
- Market failures: Most forest values not recognised by markets

**Governance drivers**
- Government organizations responsible for protecting forests have insufficient resources
- Powerful people persuade government officials to give them rights to forest land and resources
- Corruption and lack of accountability

**Demographic drivers**
- Population growth
- Migration (spontaneous and planned)

**Tenure-related drivers**
- In some countries people must keep land clear of forests, otherwise the government will take the lands back
- Local people are not given secure tenure to land and forests, so have no financial interest in long-term forest management

**Example 1: Large-scale conversion to agriculture by investors**
- Land clearance by company for Acacia mangium plantation, Sarawak, Malaysia
- Forest clearance for palm oil, Papua New Guinea
Example 2: Legal, selective logging

Logs for export, PNG

Selectively logged natural forest, Sarawak, Indonesia

Example 3: Illegal logging

Confiscated vehicles and equipment of illegal loggers, Seima Protection Forest, Cambodia
Example 4: Small-scale conversion by local people for shifting agriculture and cash cropping

PNG photos
Top left: Forest cleared to plant subsistence crops
Bottom left: Shifting agriculture puts food on the table
Right: Village cocoa production and processing

4. Tropical forests need to be better managed for climate change mitigation

- Forestry is the third largest source of greenhouse gas emissions—larger than the entire global transport sector (Eliasch 2008).
- Without tackling forest loss, it is highly unlikely that we could achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that avoids the worst effects of climate change (Eliasch 2008).
- About 96 per cent of deforestation emissions comes from developing countries in the tropics (Eliasch 2008).

Sources of GHG Emissions

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy supply</td>
<td>23.9</td>
</tr>
<tr>
<td>Residential and commercial buildings</td>
<td>7.9</td>
</tr>
<tr>
<td>Agriculture</td>
<td>13.5</td>
</tr>
<tr>
<td>Industry</td>
<td>19.4</td>
</tr>
<tr>
<td>Forestry</td>
<td>17.4</td>
</tr>
</tbody>
</table>

Source: IPCC, 2007
5. What is REDD+?

- Basic concept: Developed countries will pay developing countries for efforts to reduce emissions from deforestation and forest degradation, as well as efforts to increase carbon stocks in existing forests.
- REDD+ thus puts a value on forests for the services they provide as carbon sinks and stores.
- REDD+ aims to make standing forests financially more valuable than alternative forms of land use, or good forestry practices more financially valuable than bad forestry practices.

6. REDD+ in the voluntary markets

- REDD+ projects are already generating credits that are being sold through voluntary carbon markets. REDD accounted for 29% of carbon credit sales in 2010.
7. REDD+ under the UNFCCC

- Negotiators have agreed that REDD+ will be part of the future global framework to combat climate change. They have already agreed on some features of REDD+
  - Payments will be performance-based
  - Can be policies and measures, e.g. regulating best practices for timber harvesting, or projects in a specific geographic area
  - Should ultimately be implemented through a national framework, but can initially be implemented at sub-national levels
  - REDD+ has a set of social and environmental safeguards

8. REDD+ technical challenges

- **Baseline**: Make a reasonable projection of the level of emissions that would take place without REDD+ (can be difficult because drivers of deforestation can change over time)

- **Additionality**: Show that the REDD+ activities will result in emissions reductions that would not have occurred without REDD+ (e.g. show that without the REDD+ project, deforestation would occur).

- **Leakage**: Take effective measures to estimate, reduce and/or monitor leakage (Leakage means that reducing emissions in one place results in emissions from somewhere else. Stopping illegal logging in one forest could just result in the illegal loggers moving elsewhere.)

- **Permanence**: Take effective measures to increase the likelihood of permanence (permanence refers to whether carbon is removed permanently or not from the atmosphere). Forests can easily be destroyed by natural events such as fire, pest, or disease, etc. so ensuring permanence will be challenging.
10. REDD+ governance and social challenges

- Consistent with national forest programs, relevant international conventions/agreements
- Transparent & effective governance
- Respect knowledge & rights of indigenous peoples & local communities
- Full & effective participation
- Support conservation of natural forests & biological diversity
- Reduce reversals (non-permanence)
- Reduce emissions displacement (leakage)

11. IGES Research on REDD+

- Analyzing international negotiations
- Database on REDD+
- Survey of national REDD+ readiness - PNG, Indonesia, Cambodia, Vietnam, Laos
- Action research on community carbon accounting - PNG, Indonesia, Cambodia, Laos
- Quality-of-governance standard - Nepal
- Training manual on free prior informed consent

http://redd-database.iges.or.jp/redd/


Thank you for your attention

For more information:
Henry Scheyvens
Director, Natural Resources Management Group
Institute for Global Environmental Strategies
2108-11 Kamiyamaguchi, Hayama, Kanagawa, Japan 240-0115
Email: scheyvens@iges.or.jp
Web site: http://www.iges.or.jp