

# Global forest conservation issues

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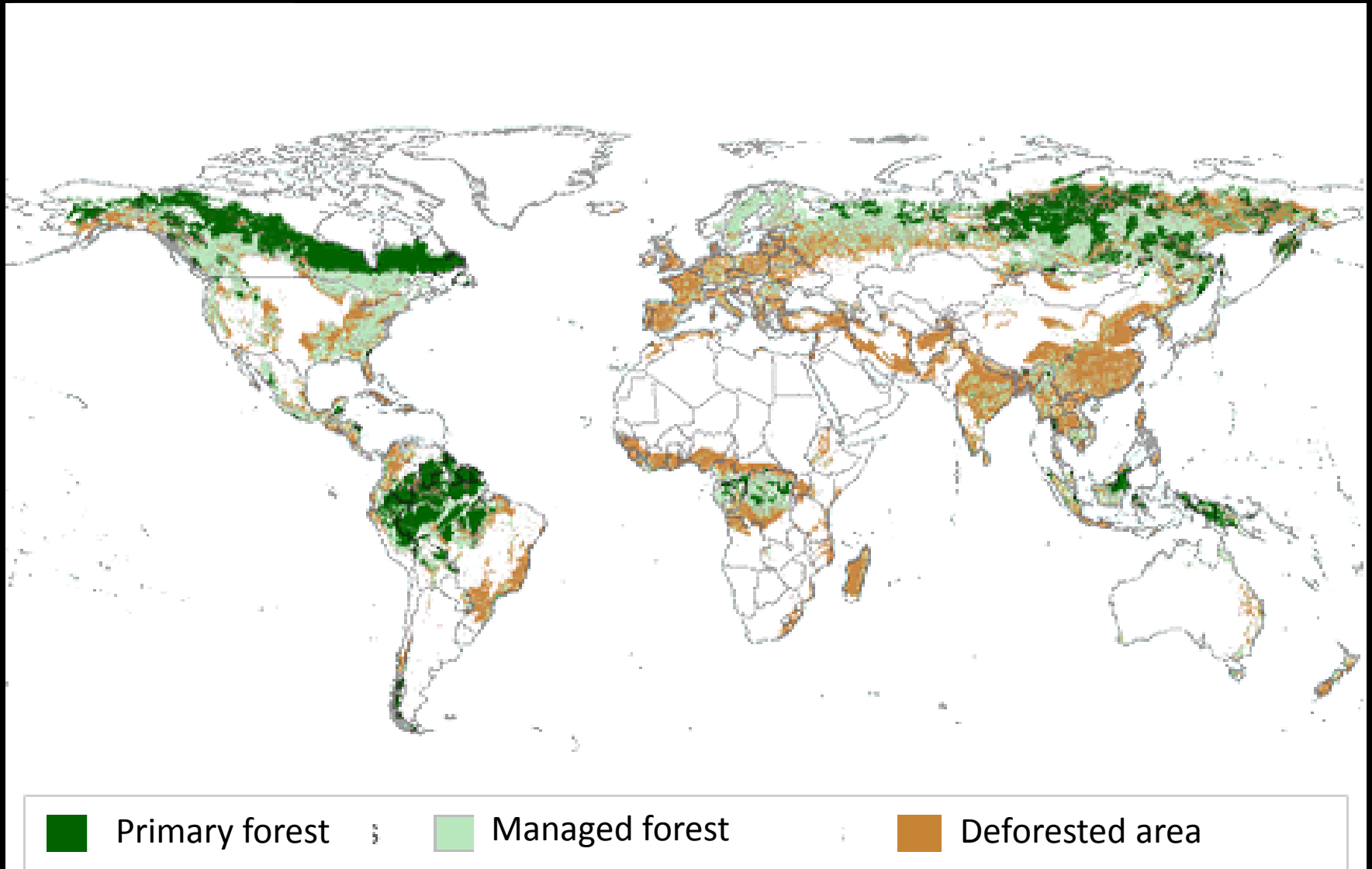
Siem Reap, Cambodia, March 23-25, 2016



## Global forests and conservation issues

- Remaining global forest estate is about 4 billion ha
- Primary forest loss: 67 million ha from 1990 to 2015 in the tropics
- Net global loss 3.3 M ha/yr over last 5 yrs vs. >7 Mha from 1990-2010 – large effort at planting forests
- Carbon loss from forests = 15 to 20% of global emissions
- Main issues: deforestation and forest degradation
- Multiple causes related to: land use change, road access, poor governance, poverty, poor forest management, and international trade

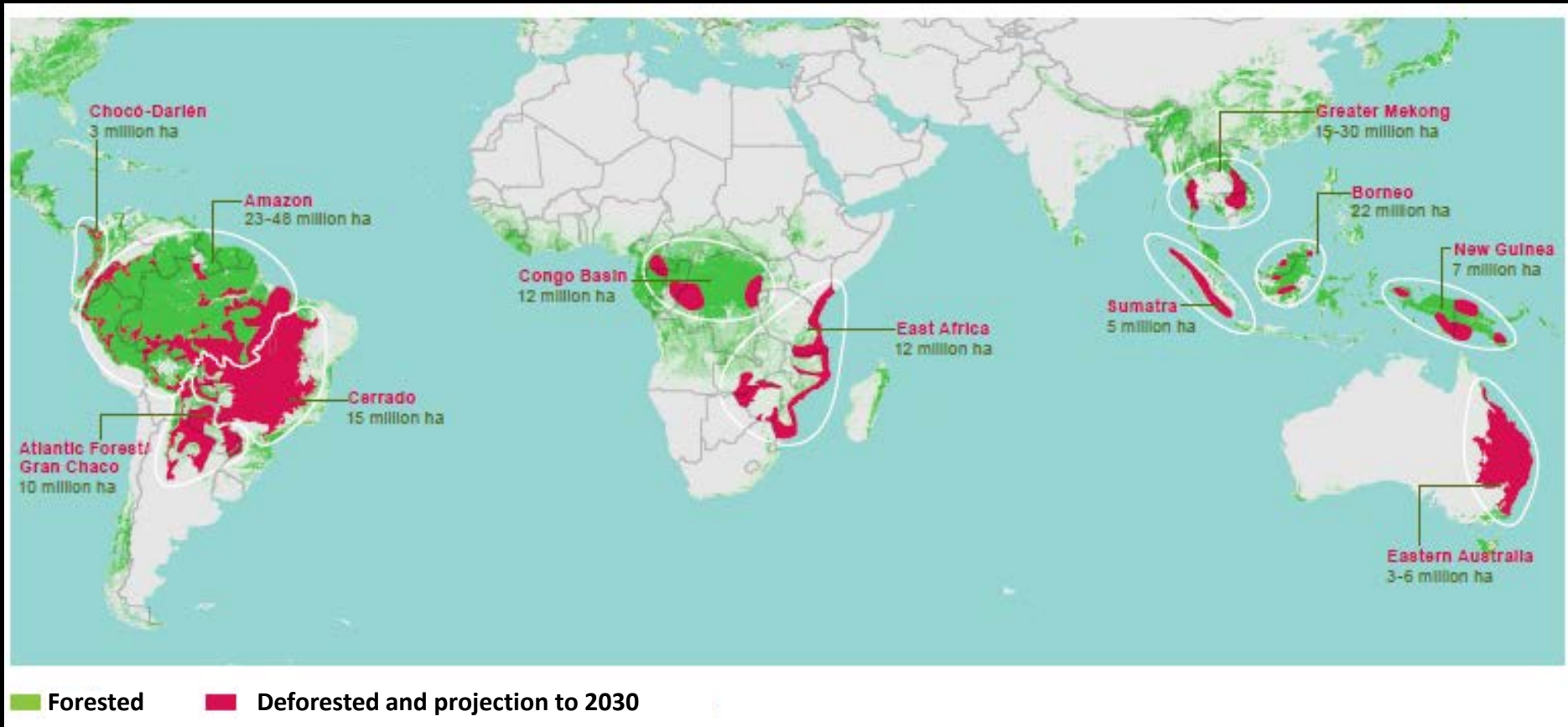
# Change in forest cover



Source: Global Forest Watch



# Deforestation remains a major issue – mainly in the tropics

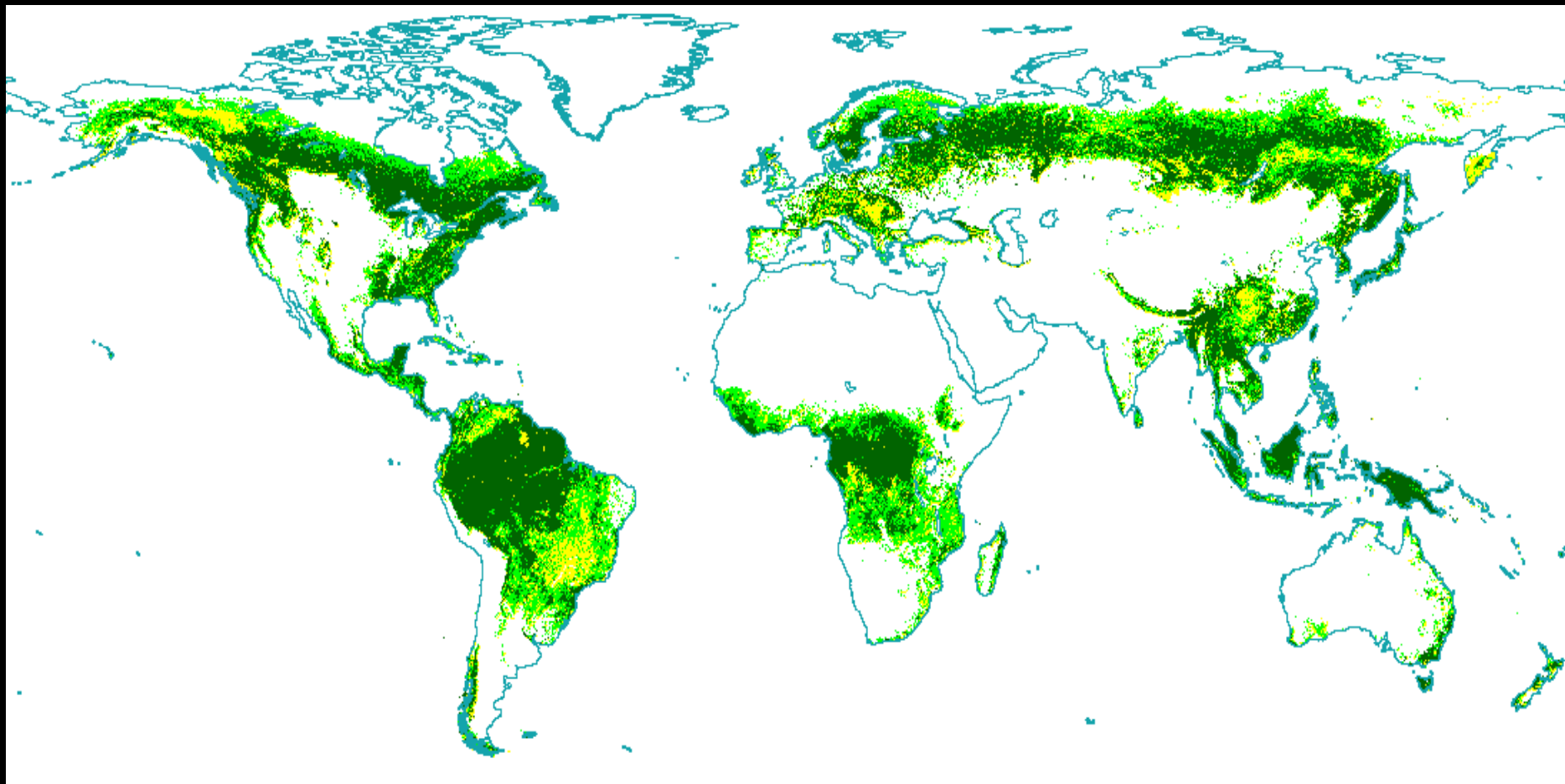


- Global timber demand is expected to increase by >50% by 2050

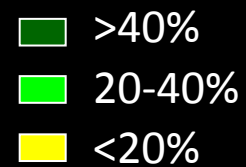
## Sources:

'Deforestation fronts' (WWF Living Forests Report Ch 4)  
289 M ha 2016-2050 (Busch and Engelmann 2015:  
[www.cgdev.org/blog/tropical-forests-equal-size-india-will-be-lost-2050-unless-we-act](http://www.cgdev.org/blog/tropical-forests-equal-size-india-will-be-lost-2050-unless-we-act))

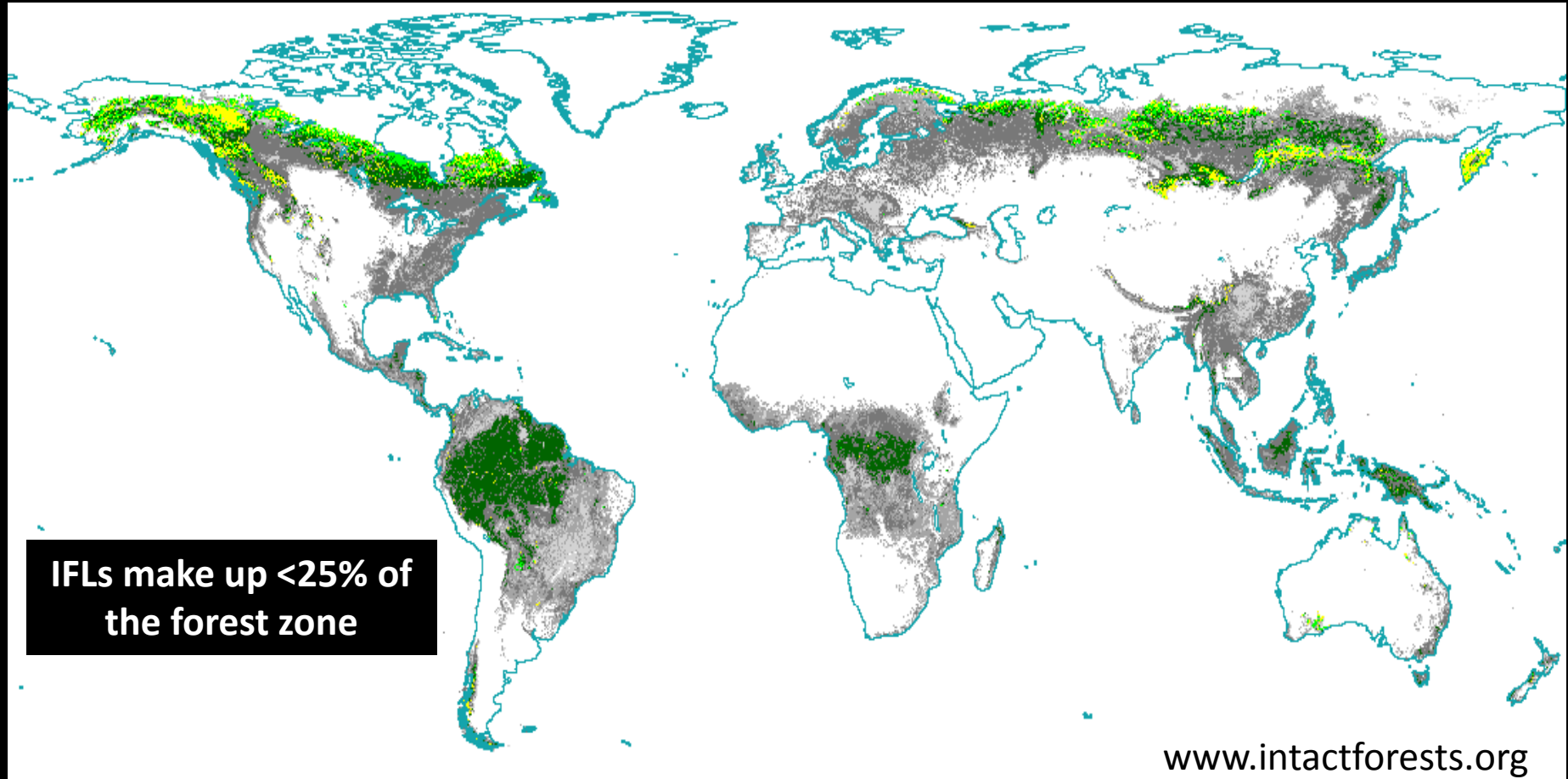
# Global forest zone






Tree canopy density



# Global Primary Forest and Intact Forest Landscapes (IFLs)



Tree canopy density within IFL:

-  >40%
-  20-40%
-  <20%

 Disturbed or fragmented areas

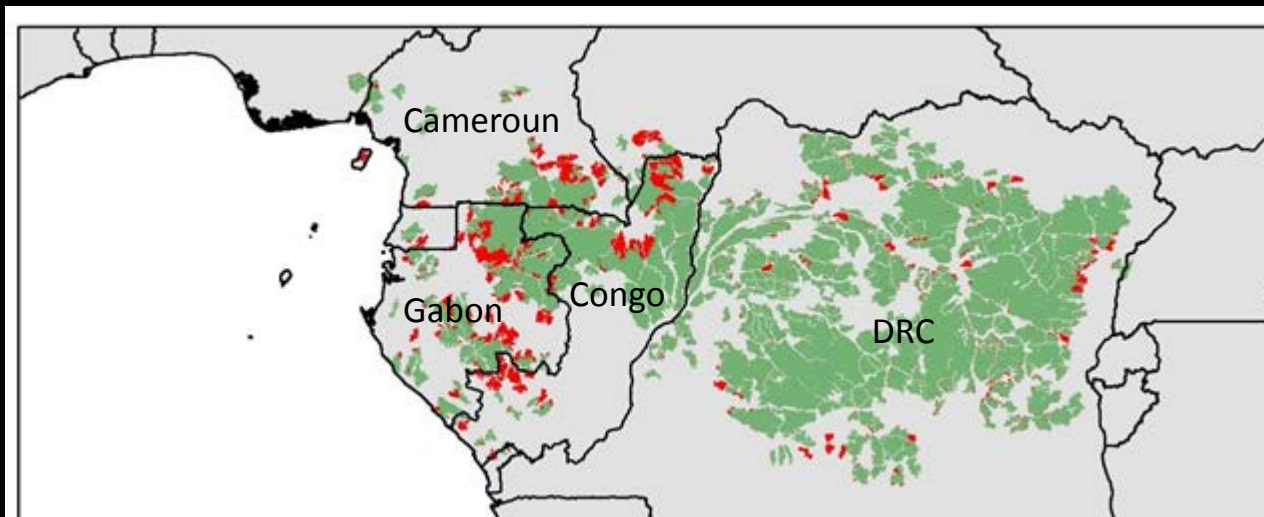
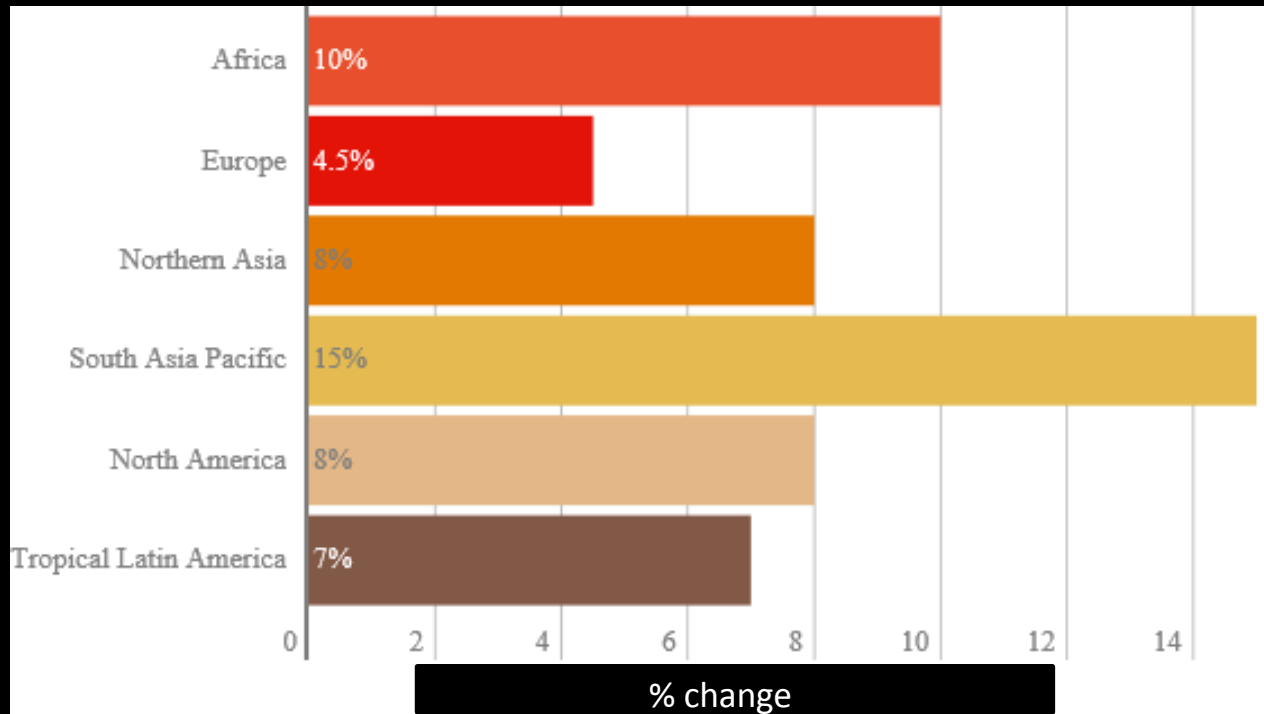


# Current State of Intact Forest Landscapes (2013)

- Global intact forest landscape = 1.1 billion ha (25%)
- About 32% of the world's IFL area has some form of protection
- But, only 2% is strictly protected, i.e. IUCN categories I or II
- Protected proportion is smallest in Asia and North America
- Only small area of IFL in SE Asia is under IUCN I-III protection
- Primary intact forests are a net carbon sink of 2.4 Gt/yr



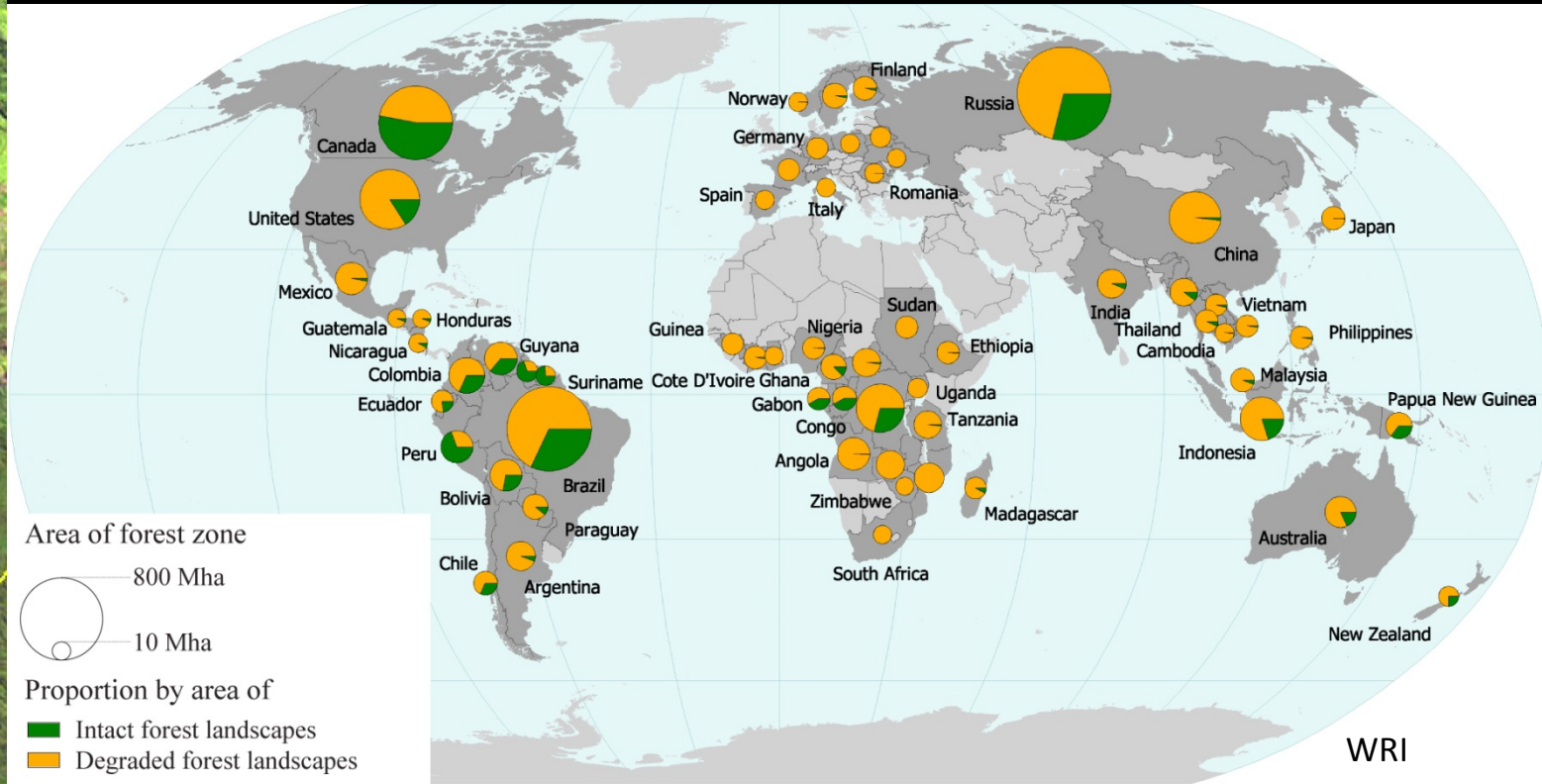
# Degradation of intact forest landscapes by continent



WRI/Greenpeace  
'Intact Forest Landscapes'  
Green - still 'intact' as of 2013  
Red - lost intactness 2000-2013



# Degraded Proportion of Forest Zone



- No globally agreed definition
- No global estimate – but probably at least as large an area as has been deforested

# Main drivers of forest loss/degradation in tropics

## Brazilian Amazon



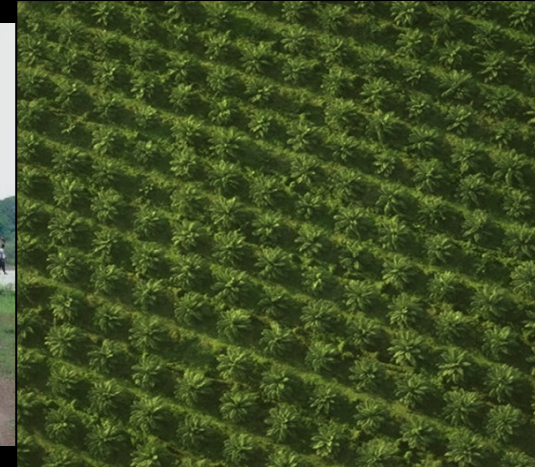
- Soy Industry
- Cattle Farming
- Illegal logging

## Congo Basin



- Unsustainable and illegal logging
- Commercial plantations
- Population growth

## Indonesia

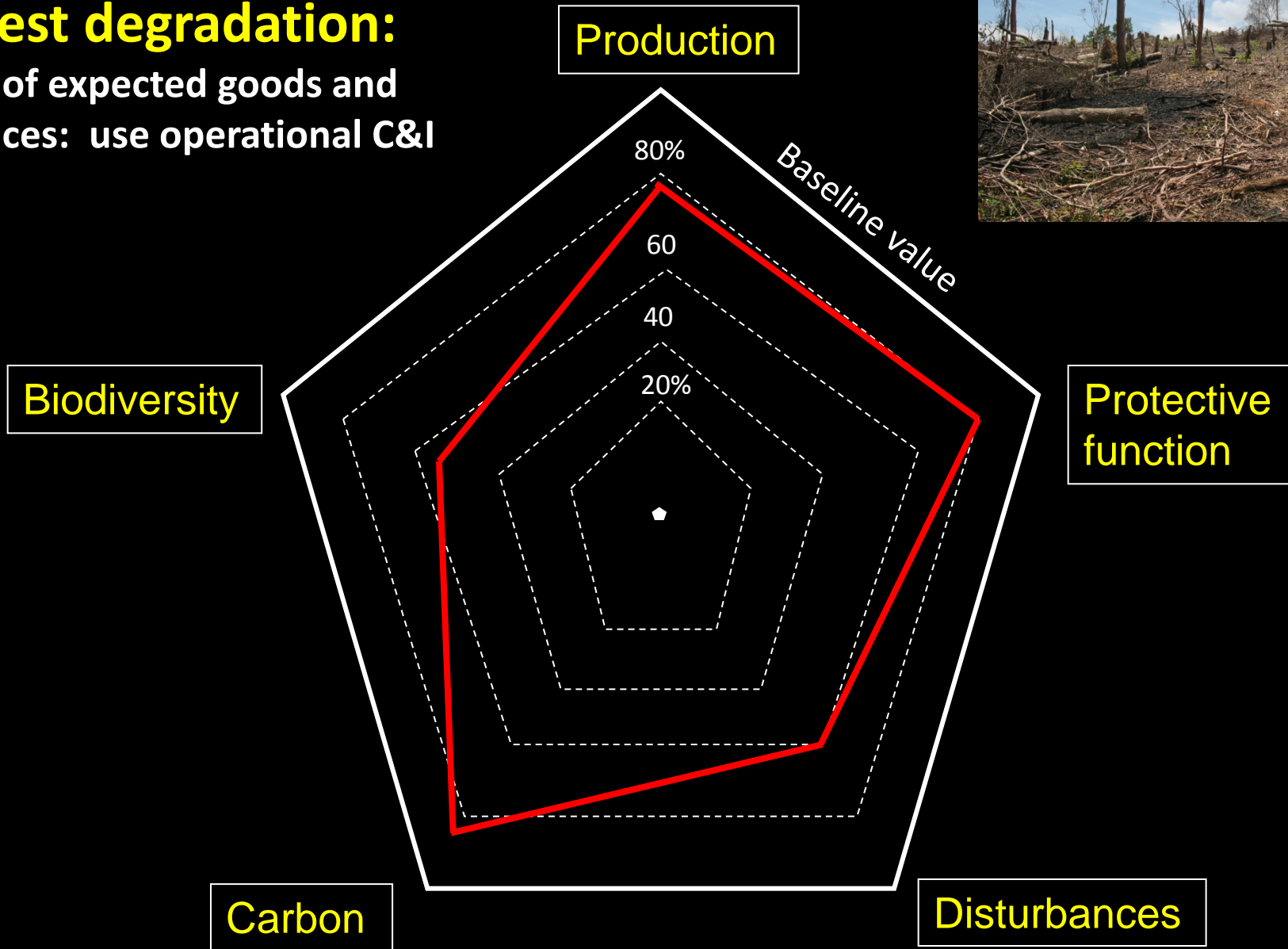


- Palm oil plantation
- Pulp & paper plantation

- **Poor Governance: transparency, lack of planning, illegal logging, corruption**
- **Weak forest policies, laws and/or law enforcement, insecure land ownership**
- **Export-oriented economic policies, not considering biodiversity or other forest values**

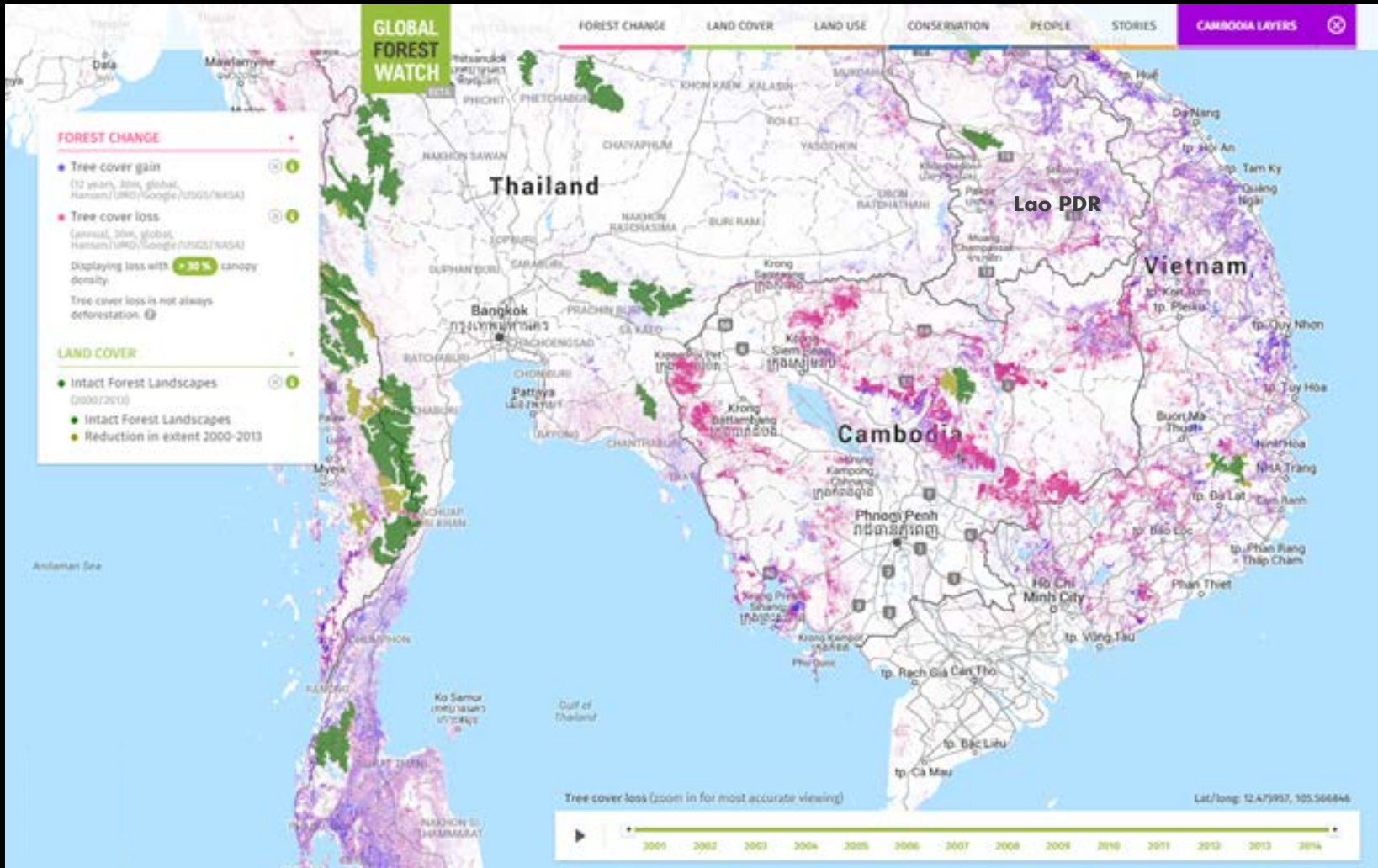
# Forest degradation:

Loss of expected goods and services: use operational C&I





## Forest loss and degradation 2000-2013 (Global Forest Watch)



# Is sustainable forest management in tropical forests possible?

- SFM = environmental, social, and economic sustainability
- SFM = no degradation, no species loss, and landscape planning
- We know that <10% of tropical forests are sustainably managed (ITTO: Blaser et al. 2012)
- Focus is on production of wood products, not conservation
- Some tree species do not regenerate well (e.g., mahoganies)
- Complex co-evolved processes – e.g., seed dispersal by elephants
- Some evidence that SFM can be done - but difficult so far





## Empty forests – bushmeat crisis

- Many species are hunted for markets as a source of income
- Many other species are hunted by international organisations for animal parts – ivory, bones, etc.
- Loss of species affects forest processes like pollination, seed dispersal, herbivory, nutrient transfer
- Species impoverishment = forest impoverishment



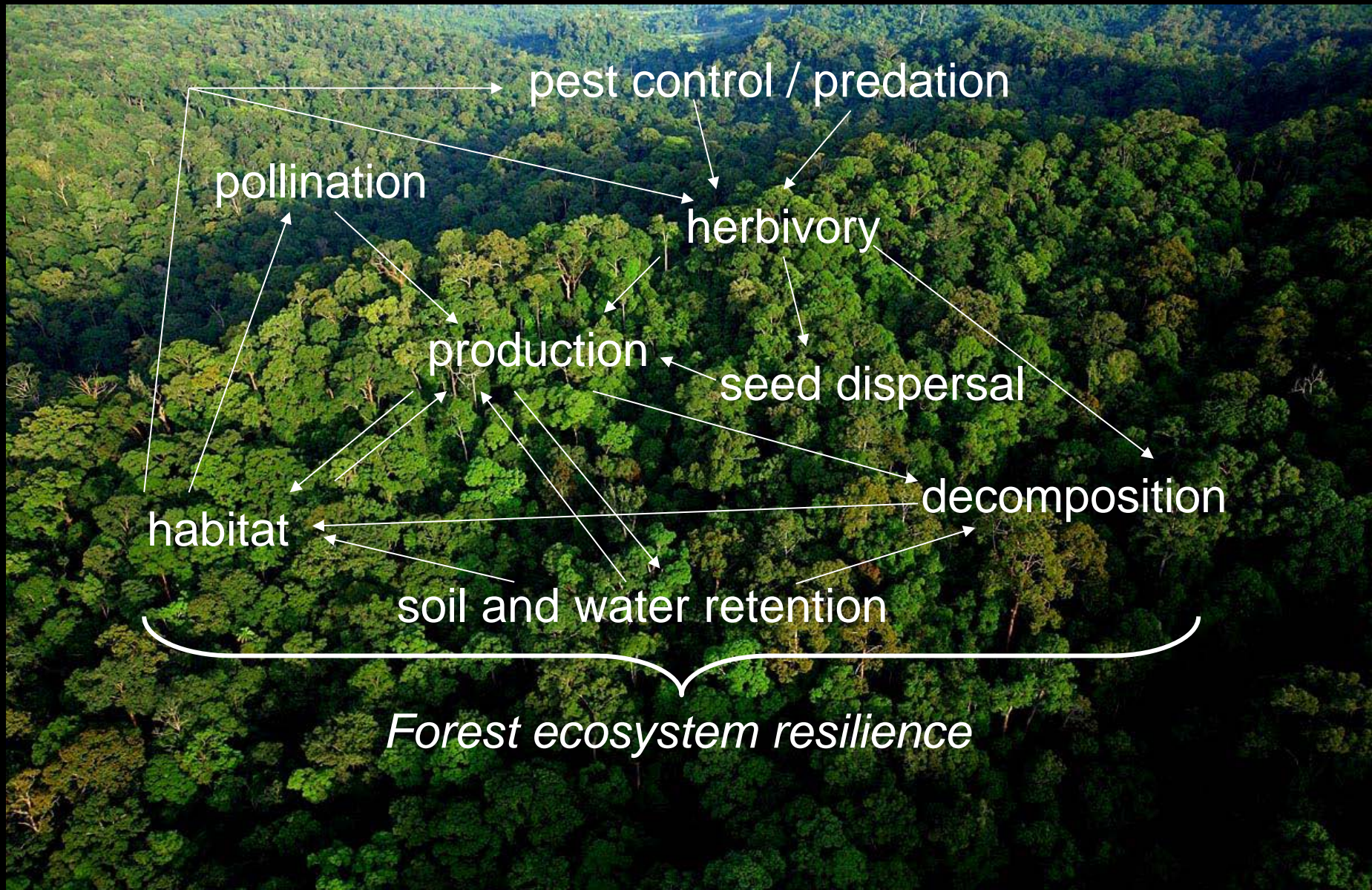


# Biodiversity is related to key ecosystem services

Concern: loss of forests = loss of biodiversity = loss of ecosystem services

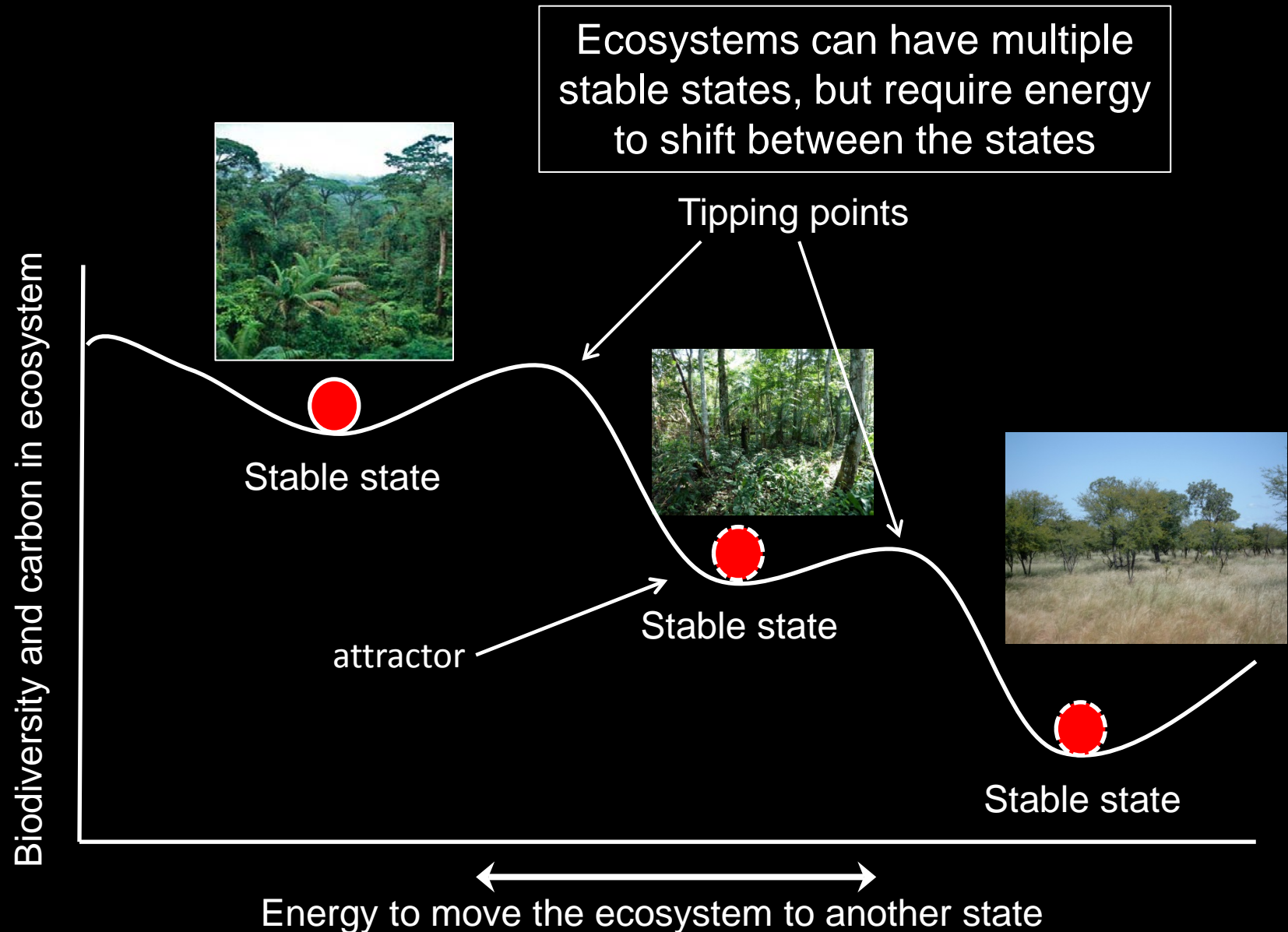
Ecosystem service	Strength of linkage to biodiversity	Quality of evidence
Pollination	High	High
Decomposition	High	High
Carbon sequestration	High	High
Carbon storage (AGB)	Mixed	High
Disease control	High	High
Pest control	High	High
Erosion control	Low	High
Seed dispersal	High (except wind)	High
Water quality	Low	Poor
Water quantity	Medium to high	Some
Soil nutrient cycling	High	Varies

# Connections among forest processes enhance resilience and resistance





# A key objective for SFM is not to exceed a tipping point





## Global forest-related processes and initiatives

- Convention on Biological Diversity – Strategic Plan and Aichi Targets: SFM (7), PAs (11), degradation (5), and carbon (15)
- UNFCCC – REDD+ with safeguards
- Sustainable Development Goals (SDGs): sustainable land use, halt degradation, restore ecosystems
- Promotion of SFM - ITTO and FAO
- Intact Forest Landscapes Program (e.g., WCS, others)
- ITTO-CBD Program on Biodiversity Conservation
- Forest Ecosystem Restoration Initiative – Korea through the CBD and the Global Landscape Restoration Initiative (e.g., Bonn Challenge)

# Strategic Plan for Biodiversity 2011-2020 - Forest based Aichi Targets



# GB04 analysis on Target 5

## TARGET



## Habitat loss halved or reduced

*By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.*

### Why this target is important

The destruction and degradation of natural habitats represents the single most important driver of biodiversity loss.<sup>51</sup> Economic, demographic and social pressures are likely to lead to continued conversion of habitats, but reducing the rate of that loss is critical to implementing the Strategic Plan. Preventing further fragmentation of habitats is also essential to avoid species populations becoming isolated and to enable essential movements across landscapes and aquatic environments. This is especially important in the face of climate change.

### SUMMARY OF PROGRESS TOWARDS THE TARGET

TARGET ELEMENTS (BY 2020)	STATUS
The rate of loss of forests is at least halved and where feasible brought close to zero	
The loss of all habitats is at least halved and where feasible brought close to zero	
Degradation and fragmentation are significantly reduced	





# SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



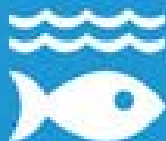
12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



14 LIFE BELOW WATER



15 LIFE ON LAND



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS



SUSTAINABLE DEVELOPMENT GOALS

# Biodiversity Links to the 2030 Agenda on Sustainable Development

- The Sustainable Development Agenda includes goals aimed at addressing the sustainable use of terrestrial ecosystems

## GOAL 15

PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS

**SUSTAINABLE DEVELOPMENT GOALS**

More at [sustainabledevelopment.un.org/sdgsproposal](https://sustainabledevelopment.un.org/sdgsproposal)

**15.1**→ by 2020 ensure conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements;

**15.2**→ by 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests, and increase afforestation and reforestation.

## Conclusions

1. Global forest area continues to decline and existing forests become more fragmented
2. Intact forest landscapes remain but are only 25% of the total forest estate and have little protection
3. Loss of forests has negative consequences for climate change, biodiversity, and ecosystem services
4. There are no good estimates of the area of degraded forest, in large part because there is no existing definition
5. Sustainable forest management in the tropics requires more research and is as yet not fully possible
6. NBSAPs and projects like the 'Emerald Triangle' assist in achieving global forest-related targets through national participation





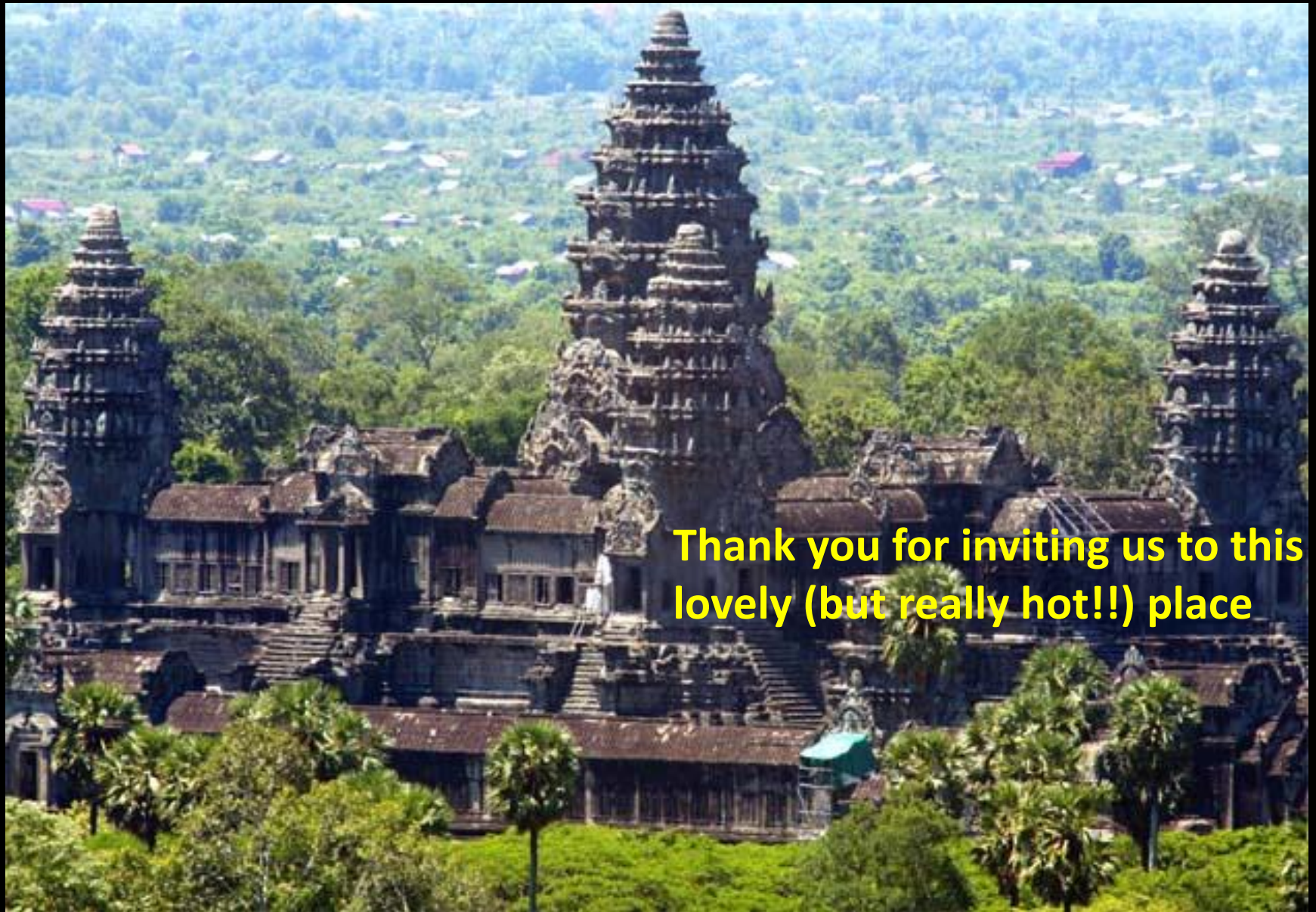
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**Thank you for inviting us to this lovely (but really hot!!) place**