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The Future of Tropical Rain Forests
IDS 2935

Forest Cover &
Deforestation – Part 1

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sad

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How much forest do we have left?

How much did we start with?

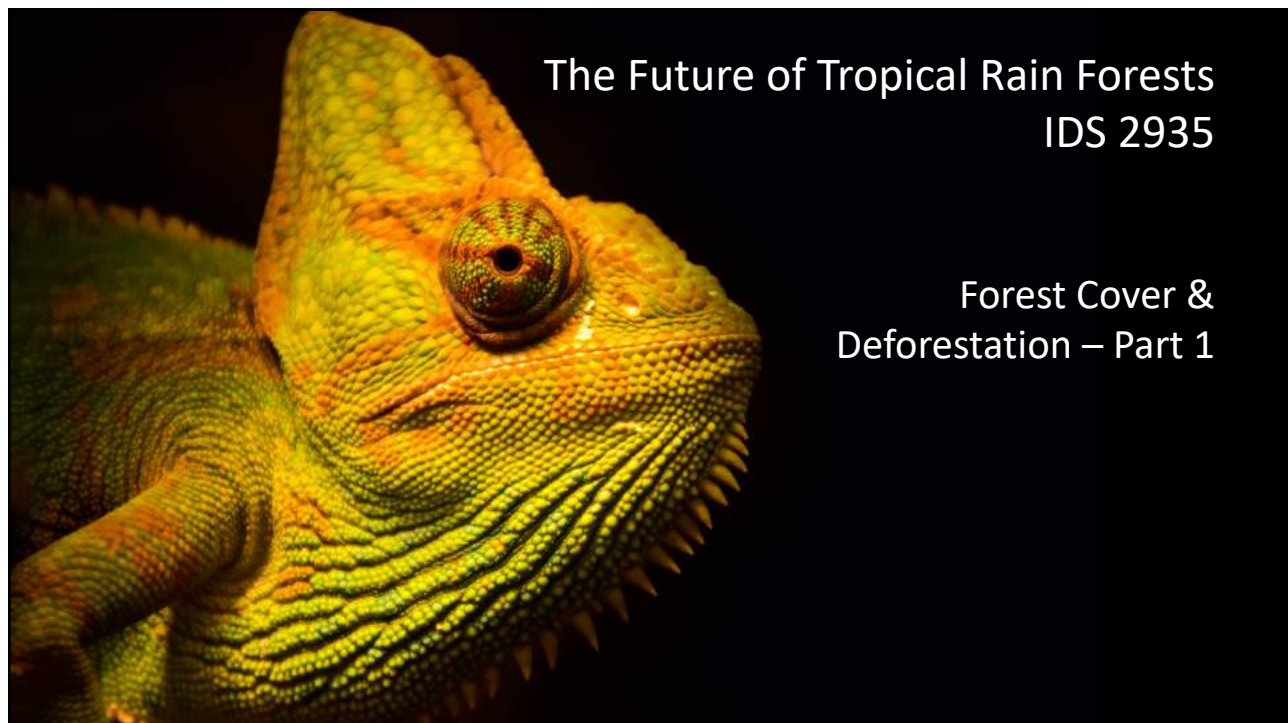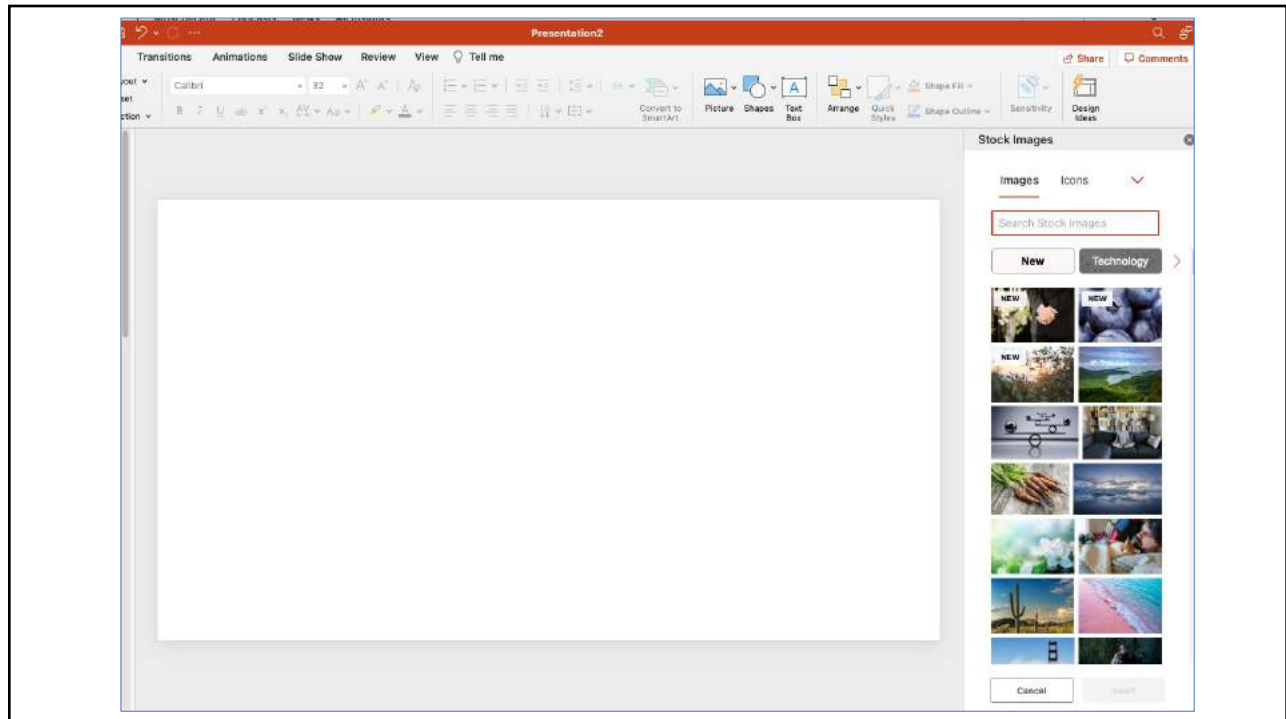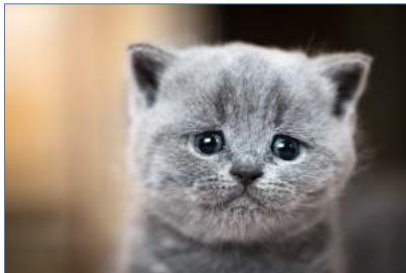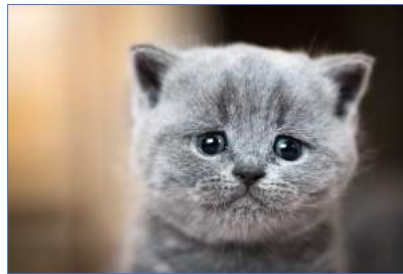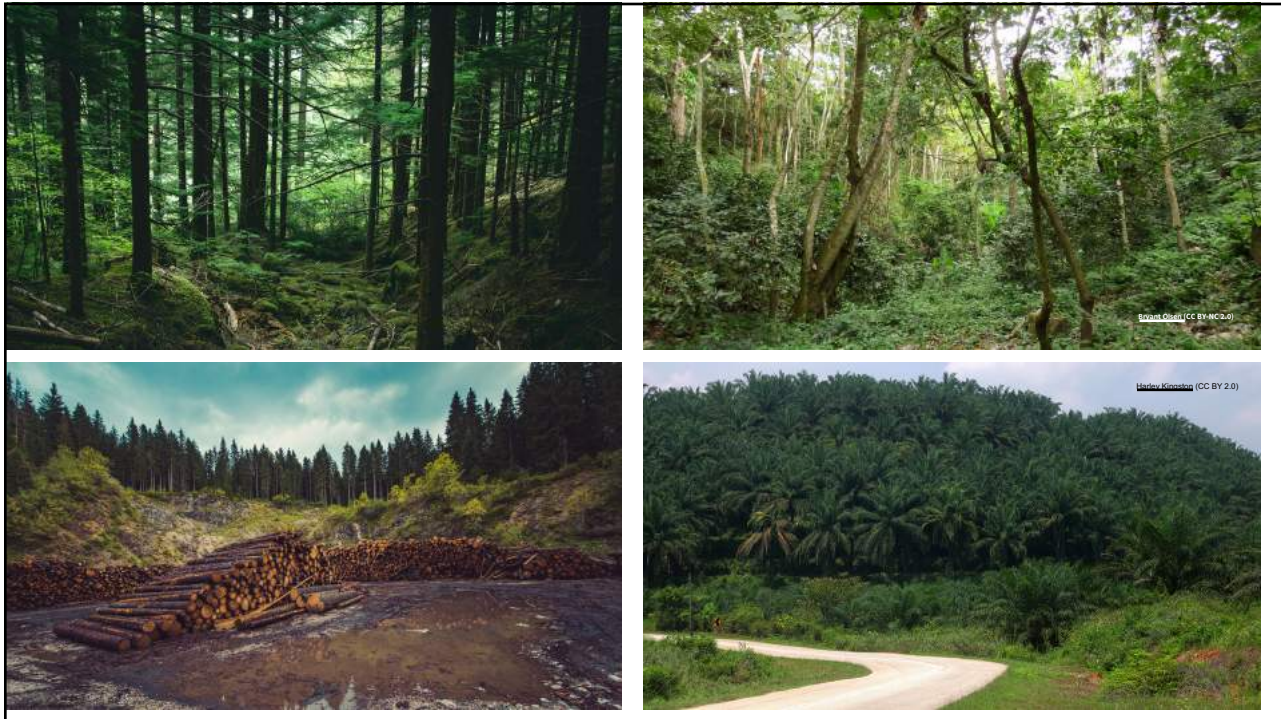### How much have we lost?

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What is a forest?

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UN FAO Forest Resources Assessment (FRA)

2. Definition, concepts, and classifications
2.a. Definition and concepts

Definition:
Forest area as a proportion of total land area

Concepts:
To provide a precise definition of the indicator, it is crucial to provide a definition of its two components: "Forest" and "Land Area".

According to the FAO, **Forest** is defined as: "land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use". More specifically:

- Forest is determined both by the presence of trees and the absence of other predominant land uses. The trees should be able to reach a minimum height of 5 meters.
- It includes areas with young trees that have not yet reached but which are expected to reach a canopy cover of at least 10 percent and tree height of 5 meters or more. It also includes areas that are temporarily unstocked due to clear-cutting as part of a forest management practice or natural disasters, and which are expected to be regenerated within 5 years. Local conditions may, in exceptional cases, justify that a longer time frame is used.
- It includes forest roads, firebreaks and other small open areas; forest in national parks, nature reserves and other protected areas such as those of specific environmental, scientific, historical, cultural or spiritual interest.
- It includes windbreaks, shelterbelts and corridors of trees with an area of more than 0.5 hectares and width of more than 20 meters.
- It includes abandoned shifting cultivation land with a regeneration of trees that have, or are expected to reach, a canopy cover of at least 10 percent and tree height of at least 5 meters.
- It includes areas with mangroves in tidal zones, regardless of whether this area is classified as land area or not.
- It includes rubberwood, cork oak and Christmas tree plantations.
- It includes areas with bamboo and palms provided that land use, height and canopy cover criteria are met.
- It excludes tree stands in agricultural production systems, such as fruit tree plantations, oil palm plantations, olive orchards and agroforestry systems when crops are grown under tree cover. Note: Some agroforestry systems such as the "Taungya" system where crops are grown only during the first years of the forest rotation should be classified as forest.

World Resources Institute Global Forest Watch (GFW)

GFW monitors tree cover change in near-real-time using satellites, which cannot discern intended land use. Thus, GFW's monitoring systems rely entirely on biophysical criteria (height, canopy cover and extent of trees). GFW does not adopt a specific definition of forest, but rather monitors all forms of tree cover including natural forests and tree plantations. Similarly, GFW detects and reports all instances of tree cover loss, regardless of whether the loss will be temporary (e.g. clear cut harvest followed by replanting) or permanent (e.g. clear cut harvest followed by agriculture). Using GFW's interactive online platform, users can filter these data based on their preferred definition of forest.

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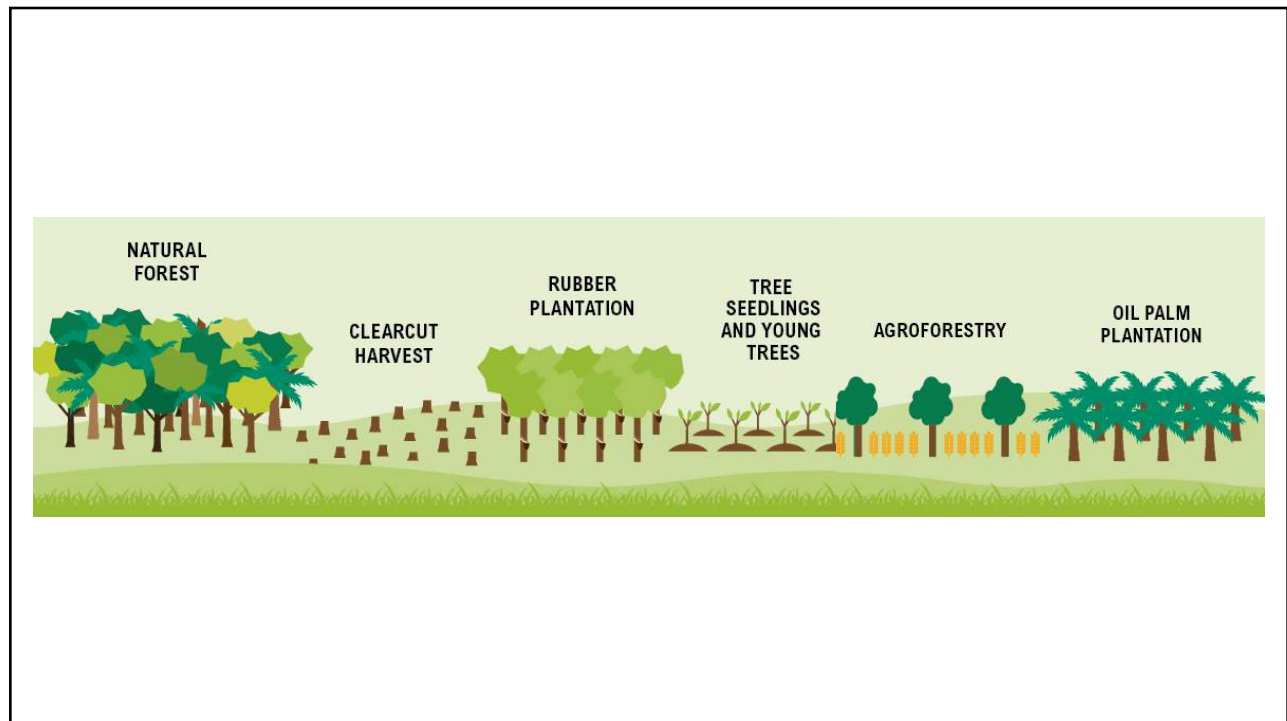
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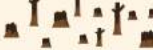FOREST RESOURCES ASSESSMENT (FRA) adopts a common definition of "forest" to monitor global forest area based on biophysical and land use criteria.

GLOBAL FOREST WATCH (GFW) monitors all forms of tree cover to detect loss and gain based on biophysical criteria, and uses the term "tree cover" instead of "forest".

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How is Forest Change Reported?

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How much forest do we have left?

How much did we start with?

How much have we lost?

GLOBAL FOREST WATCH

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Forests cover ~30% of world's land area (~4 billion ha)

Primary Forest = ~32%

Naturally Regenerated Forest = ~59%

Planted Forest = ~7%

Other Tree Cover = ~2%

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However, just over 55% of this land is found in only 5 countries:

1) Russian Federation (18%)

2) Brazil (12%)

3) Canada (10%)

4) USA (7%)

5) Democratic Rep. of the Congo (5%)

Countries 1-4 also have most of the "Frontier Forests"
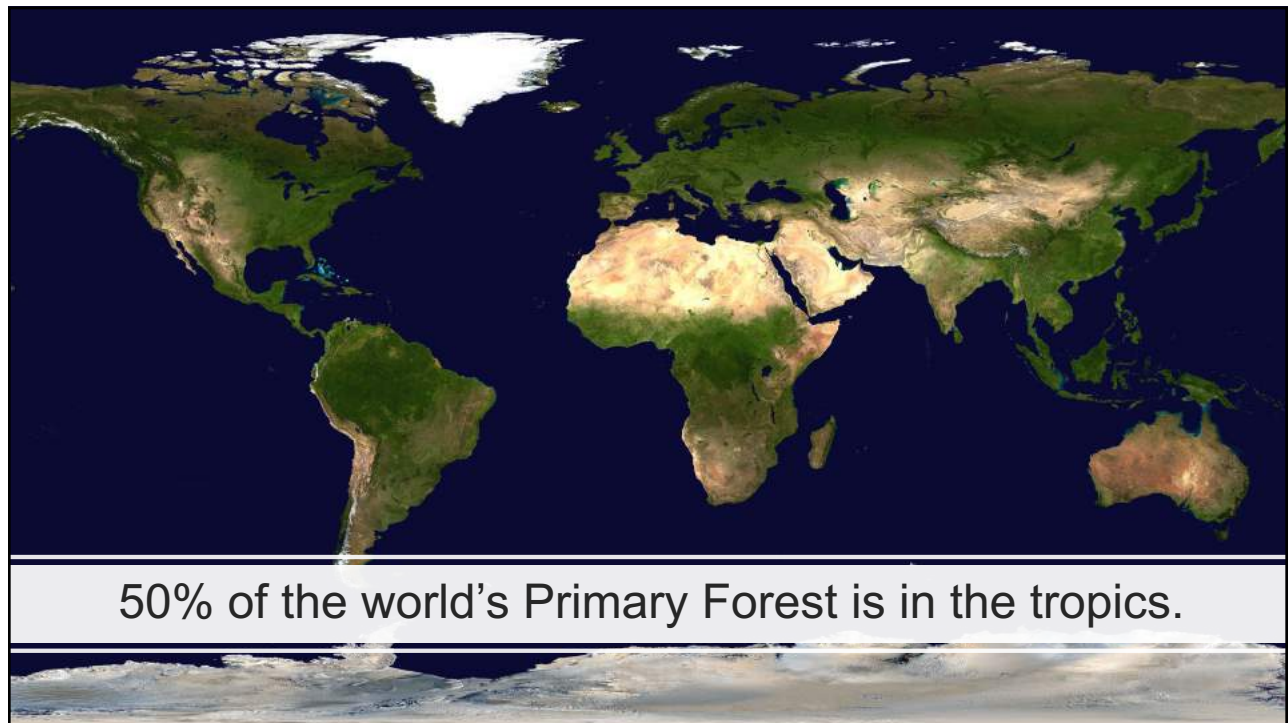
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50% of the world's Primary Forest is in the tropics.

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40% of the Forest in the Tropics is "Regenerating Forest"

Time

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Drivers of deforestation: Amazonia & other South American Forests

~68%

~12%

2%

10%

8%

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Photo: © Julio Pantoja / World Bank (CC BY-NC-ND 2.0)
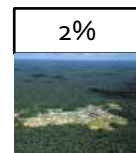
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Drivers of deforestation: Africa & Asia

Subsistence & Subsistence Ag (40-65%)

Photo: UN Women/Ryan Brown (CC BY-NC-ND 2.0)

Industrialized Ag (10-15%)

Harley Kingston (CC BY 2.0)

Logging 3-20%

Photo: jbdodane (CC BY-NC-ND 2.0)

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...or a single region.

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How does deforestation differ between
countries and over time?

What is the difference between total
deforestation and deforestation rate?

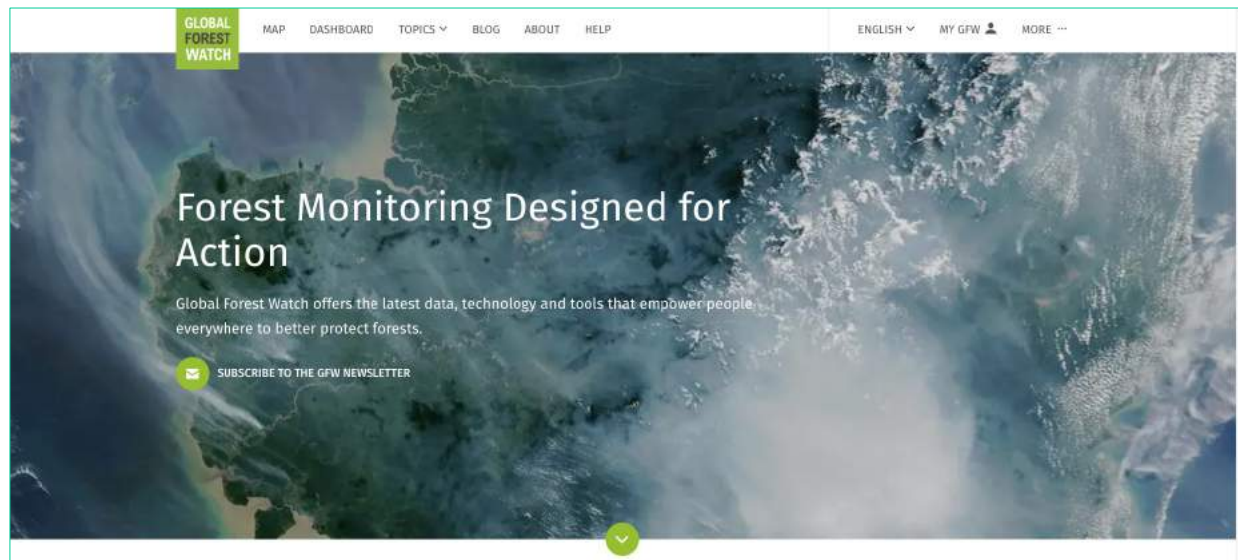What happens *after* forest is cleared?

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https://www.globalforestwatch.org/

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