

International Day for Biological Diversity Conservation

May 22 , 2018

Abebayehu A.



Introduction of the day

Why we celebrate International
Day for Biodiversity on 22 May?

- 1) To aware people of the world about the aims and achievements of conservation
- 2) To get peoples support on conserving the Earth's biodiversity.

BASIC CONCEPTS OF BIODIVERSITY

What is Biodiversity?

Biodiversity = biological diversity

➔ In short biodiversity is variety of animal & plants (starting from microorganism to very big animals and plants) living on earth (in water body, land etc.)

>>> both domesticated & wild plant/animals

➔ 3 kinds of biodiversity:

Cont....

- *genetic diversity*: diversity of individuals within a species
- *species diversity*: diversity of species within an ecosystem or habitat
- *habitat diversity*: diversity of ecosystems and habitats



<https://www.youtube.com/watch?v=aqtdaIkxnQo>

Cont....

- about 9 million unique living organisms that inhabit the earth & only 1.7 million are named

Importance of biodiversity?

- At least 40 % of the world's economy and 80% of the needs of poor are derived from biological resources
- Biodiversity is the basis of our existence "Our life support system" because it provide us:
 - ✓ clean air & water,
 - ✓ food- animal or plant source
 - ✓ medicine - that protect and cure
 - ✓ textiles – cotton
 - ✓ wood- construction pole, shelter



Cont....

- When we have rich biodiversity, there is greater opportunity for medical discoveries, economic development, and adaptive responses to such new challenges as climate change
- The Living Planet Index (LPI) shows a decline of 52 % between 1970 and 2010.

Who is this



Whatever Happened To HIM??

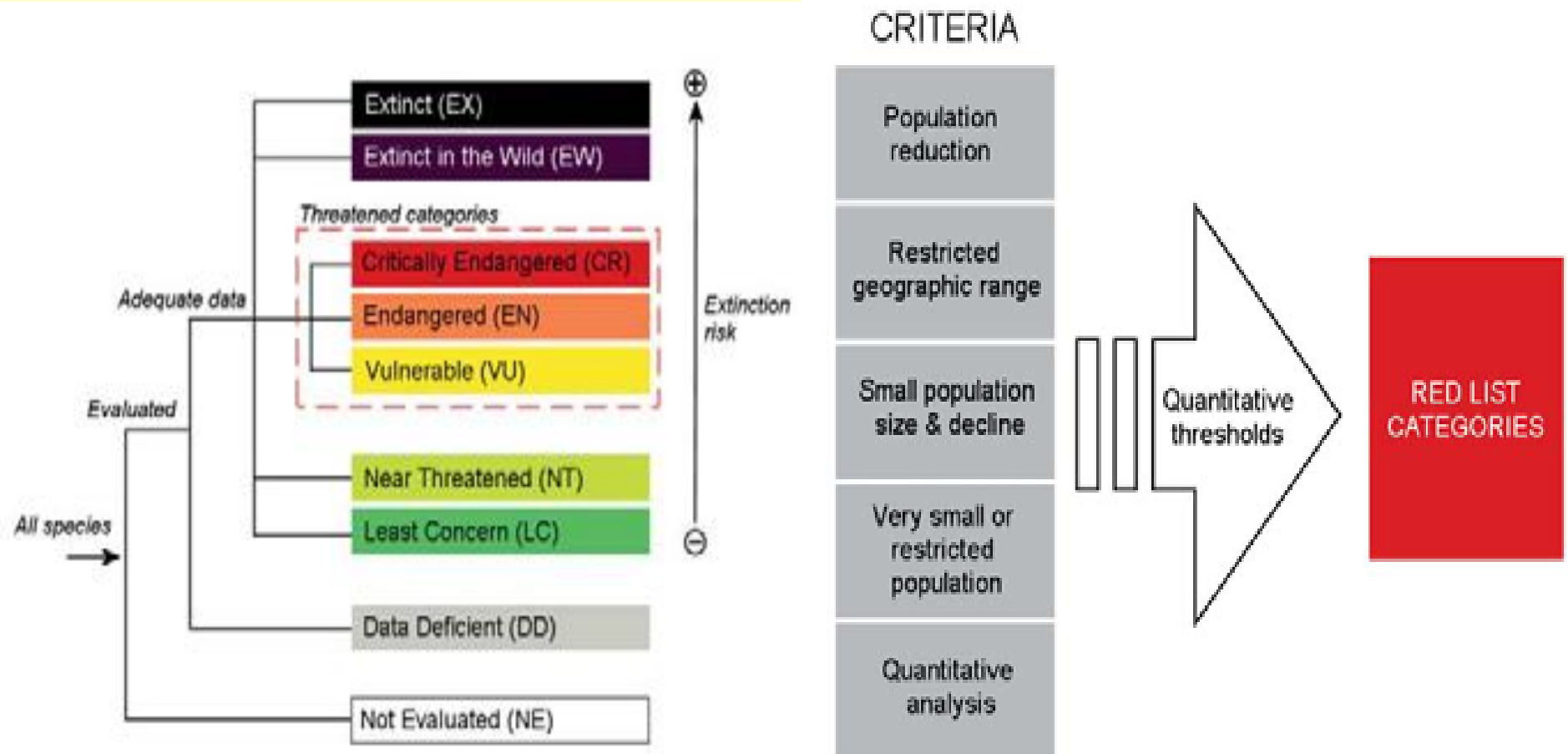
Cont...

- Extinct – global level
 - means vanished/ disappeared globally
- Extinction can be also local- if one species is disappeared local

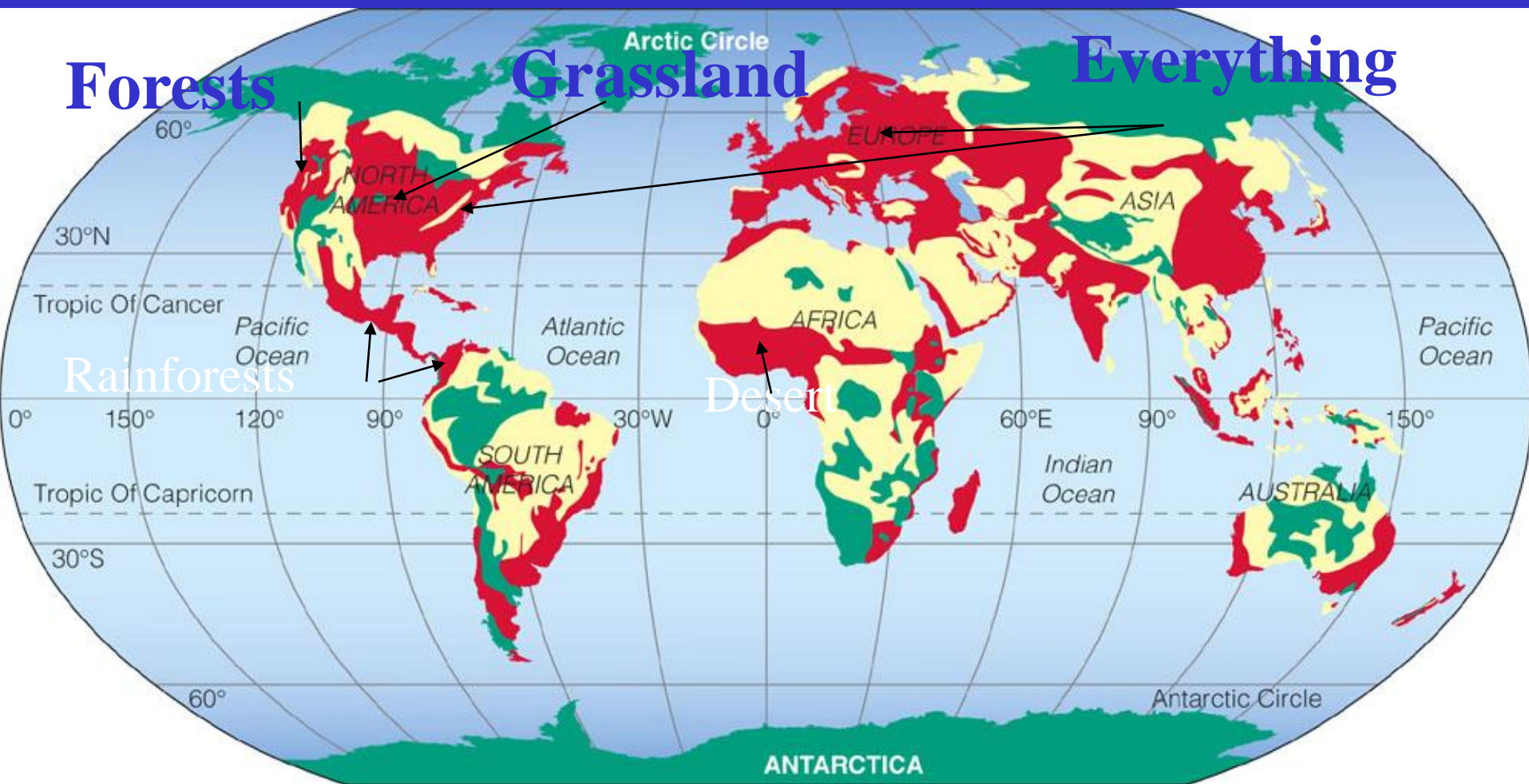
e.g., An species disappeared from Ethiopia & found in other contries

Cont...

- The IUCN founded in October 1948 categorize species in to 7 groups for conservation purpose/ priority
- EBC – local



Global Biodiversity Status



**Projected Status of Biodiversity
1998—2018**

■ Critical and endangered

■ Threatened

■ Stable or intact

Healthy biodiversity provides

1. Ecosystem services

- According to IUCN, the monetary value of goods and services provided by ecosystems is estimated US\$33 trillion per year.

E.g., in 2008 the USA GPA was US\$14.4 trillion & EU US\$14.94 trillion

- About 50,000-70,000 plant species are harvested for traditional and modern medicine worldwide annual
- Annual, huge amounts of fish & plants harvested for food

Cont....

- Protection of water resources
- Soils formation and protection
- Nutrient storage and recycling
- Pollution breakdown and absorption
- Contribution to climate stability
- Maintenance of ecosystems
- Recovery from unpredictable events

Cont...

2. Biological resources, such as

- Food
- Medicinal resources and pharmaceutical drugs
- Wood products
- Ornamental plants
- Breeding stocks, population reservoirs

Cont...

3. Social benefits, such as

- Research, education and monitoring
- Recreation and tourism
- Cultural values

Biodiversity has declined

Population growth



THREATS

Habitat loss and degradation



This refers to the modification of the environment where a species lives, by either complete removal, fragmentation or reduction in quality of key habitat characteristics. Common causes are unsustainable agriculture, logging, transportation, residential or commercial development, energy production and mining. For freshwater habitats, fragmentation of rivers and streams and abstraction of water are common threats.

Species overexploitation



There are both direct and indirect forms of overexploitation. Direct overexploitation refers to unsustainable hunting and poaching or harvesting, whether for subsistence or for trade. Indirect overexploitation occurs when non-target species are killed unintentionally, for example as bycatch in fisheries.

Pollution



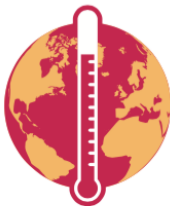
Pollution can directly affect a species by making the environment unsuitable for its survival (this is what happens, for example, in the case of an oil spill). It can also affect a species indirectly, by affecting food availability or reproductive performance, thus reducing population numbers over time.

Invasive species and disease



Invasive species can compete with native species for space, food and other resources, can turn out to be a predator for native species, or spread diseases that were not previously present in the environment. Humans also transport new diseases from one area of the globe to another.

Climate change



As temperatures change, some species will need to adapt by shifting their range to track suitable climate. The effects of climate change on species are often indirect. Changes in temperature can confound the signals that trigger seasonal events such as migration and reproduction, causing these events to happen at the wrong time (for example misaligning reproduction and the period of greater food availability in a specific habitat).



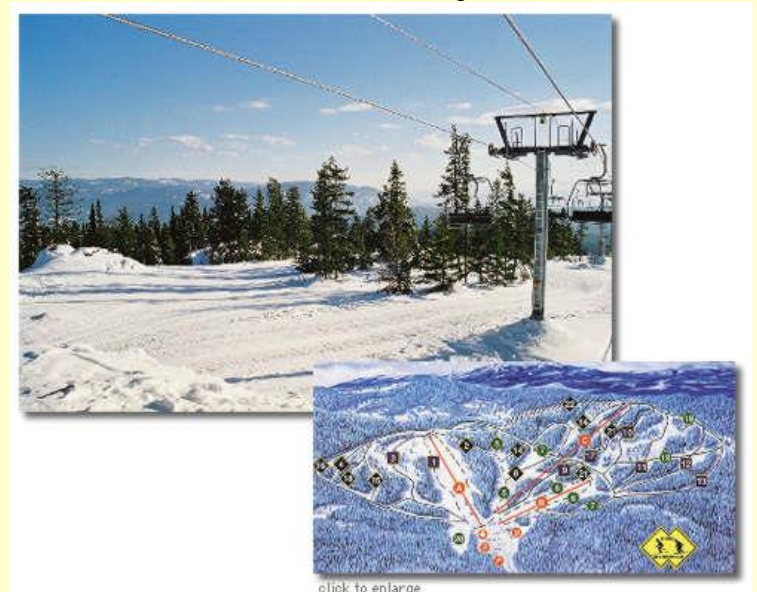
Agriculture



Industry



Economic production
and consumption



Recreation

Cont....

- ❑ **Overexploitation is the use, by humans, of a natural resource to an extent that it is not sustainable**



Climate change & biodiversity

- species and natural systems are now faced with the need to adapt to new regimes of temperature, precipitation and other climatic extremes



Development can threaten biodiversity by:

Destroying animal's habitats



Destroying some animals' food sources
(such as plants)

Bringing pollution to previously
clean areas





**International Day
for Biodiversity
Conservation
Nature Club**

**Biodiversity Conservation is
a Response for Survival !
May 22, 2018**

**Let us help every life on the earth to
survive!**