



AGRICULTURAL SUSTAINABILITY



Food and Agriculture Organization
of the United Nations

Prepared by Brandon Cantrell



WHY IS SUSTAINABLE FOOD AND AGRICULTURE IMPORTANT?

- Everyone should have access to nutritious food.
- Natural resources should be managed in a way that maintains ecosystem functions to support current, as well as future human needs.
- In 2015, the United Nations created **17 Sustainable Development Goals (SDGs)**
 - **End Hunger**
 - **Responsible Consumption and Production**
 - **Life on Land**
 - **Clean Water**



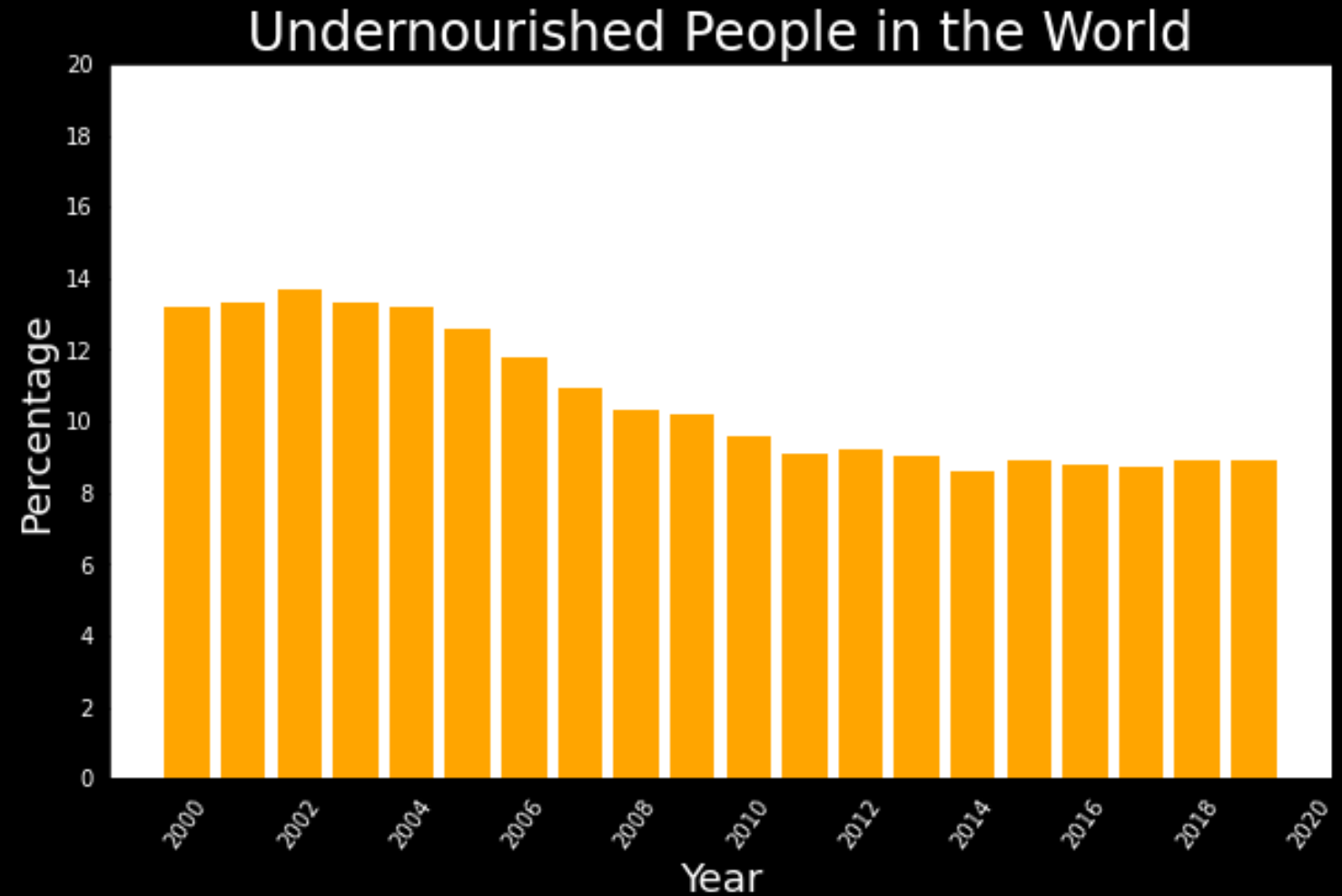
Food and Agriculture Organization
of the United Nations

**WHAT DOES
THE DATA
HAVE TO
SAY?**

CLEAN ME!

- Over the last 20 years, the percentage of people undernourished in the world has decreased.
- Even though the decline (13.7% in 2002 to 8.9% in 2019) is progress, this means ~680 million people were undernourished in 2019.

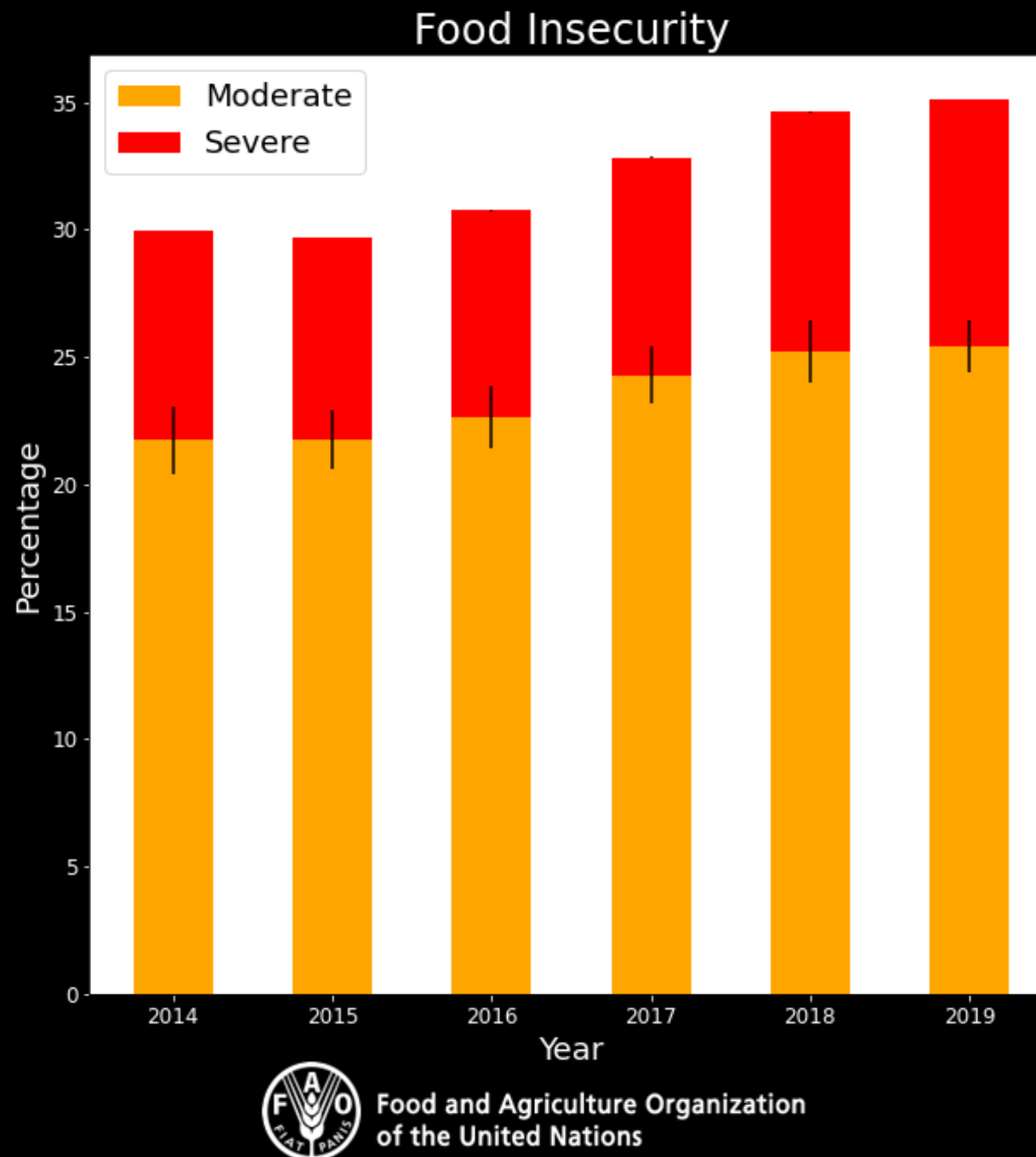
Prevalence of Undernourishment (2.1.1)



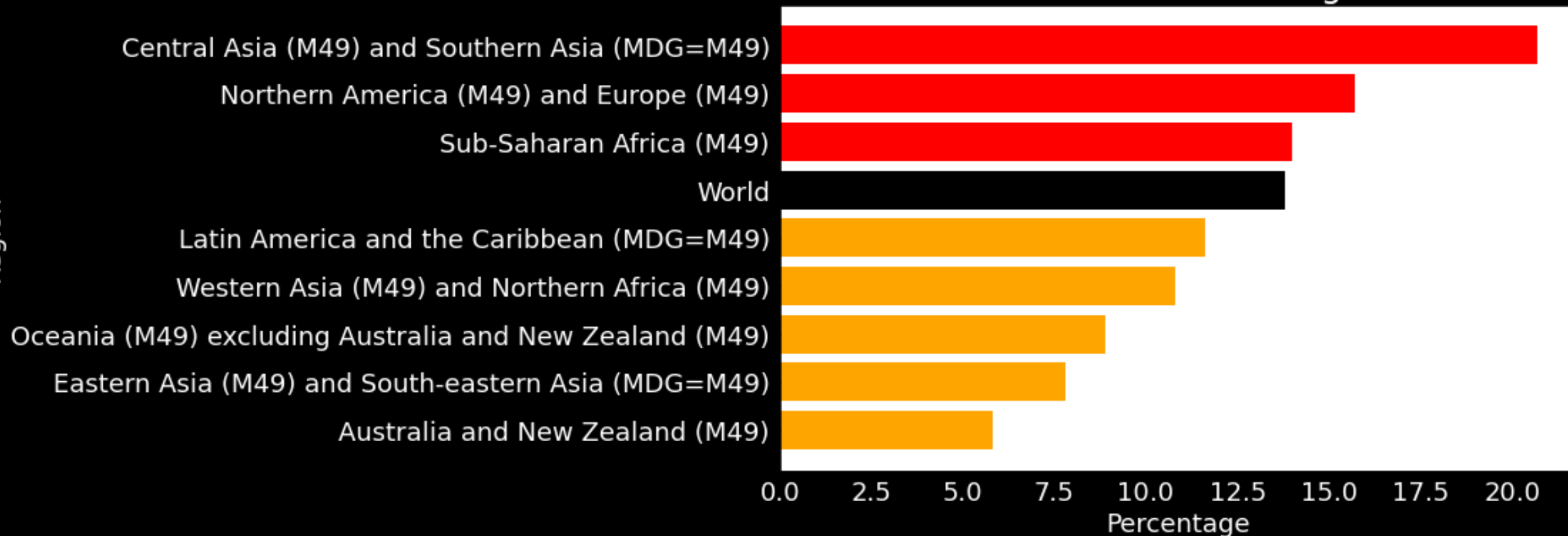
Food and Agriculture Organization
of the United Nations

- Complimentary to the last chart, this shows 9.7%(~740 Million) of people in the world were exposed to severe levels of food insecurity in 2019.
- Combined with moderate level* of 25%(~2 billion) of the world's population did not have regular access to nutritious and sufficient food.

Prevalence of moderate or severe food insecurity in the population, based on the Food Insecurity Experience Scale (FIES)
(2.1.2)



Food Loss Percentage



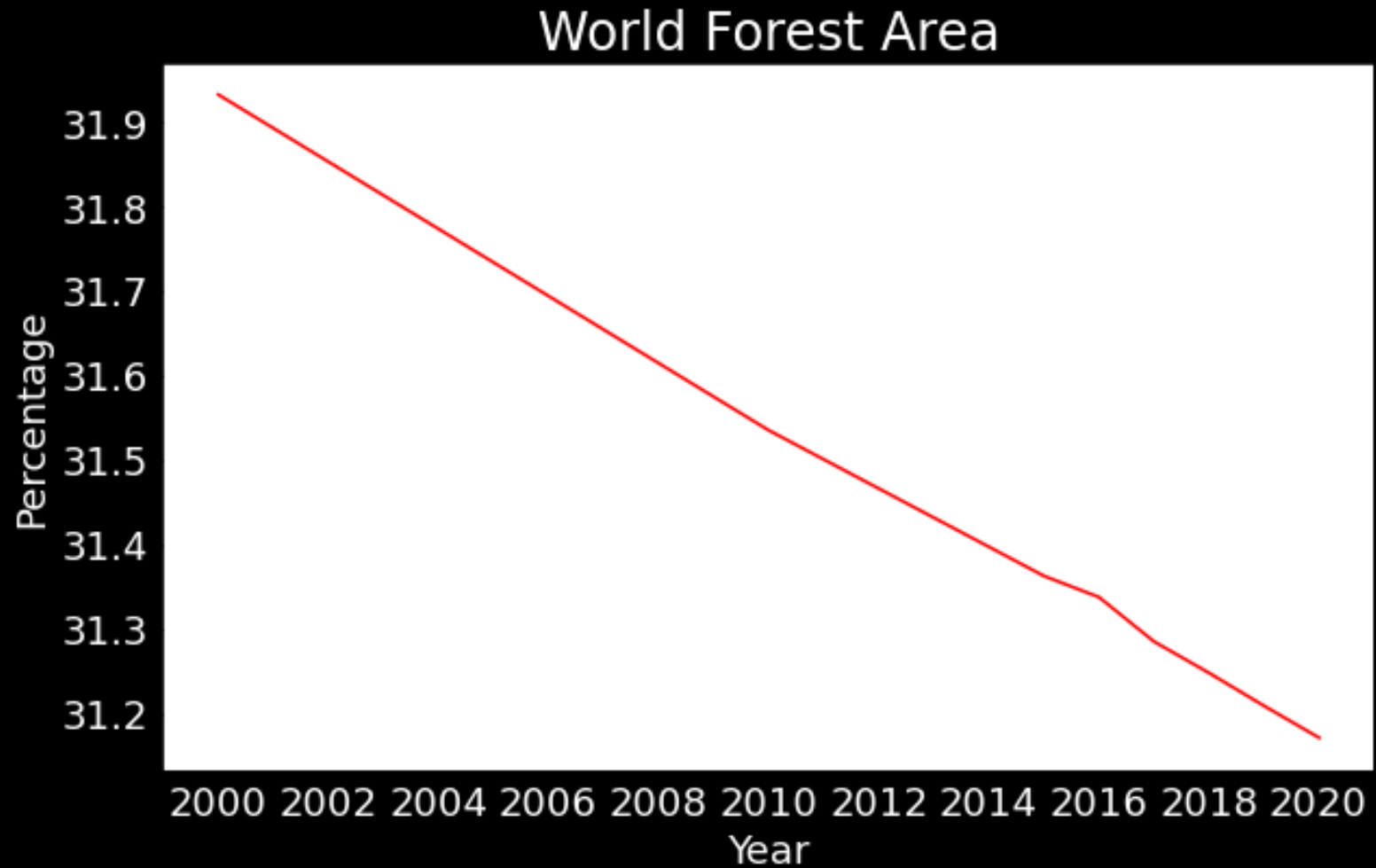
Global Food Loss Index (12.3.1)



- 13.8% in global food loss amounts to over 400 billion USD a year.

- Forest area losses amounted to almost 100 million hectares
- Stopping deforestation contributes to reducing of impacts of climate change as forests absorb carbon dioxide from the atmosphere and store it as biomass.

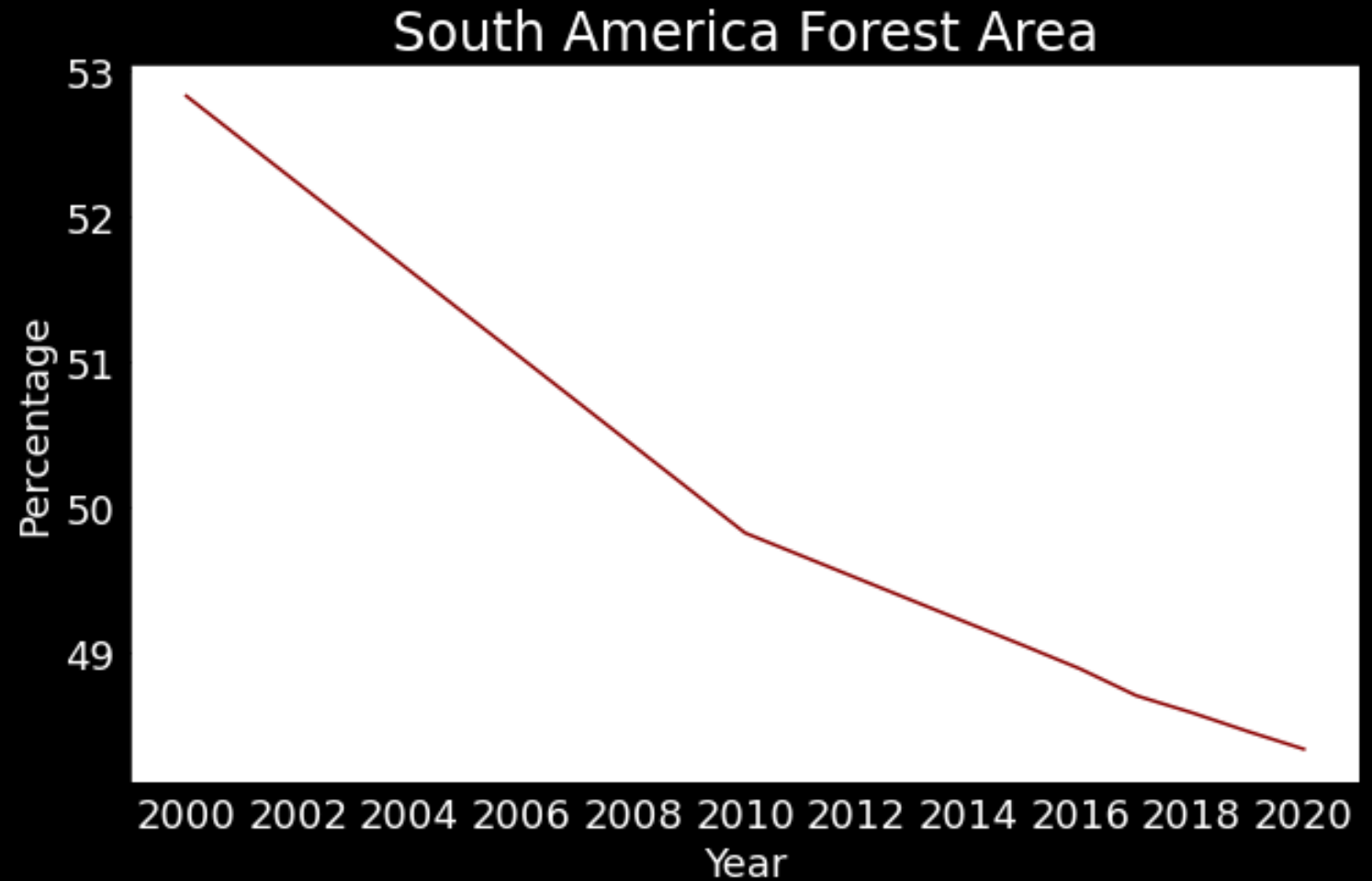
Forest Area as a percentage of total land area (15.1.1)



Food and Agriculture Organization
of the United Nations

- Some areas are being impacted greater than others, particularly South America, which has seen the largest drop in forest area.

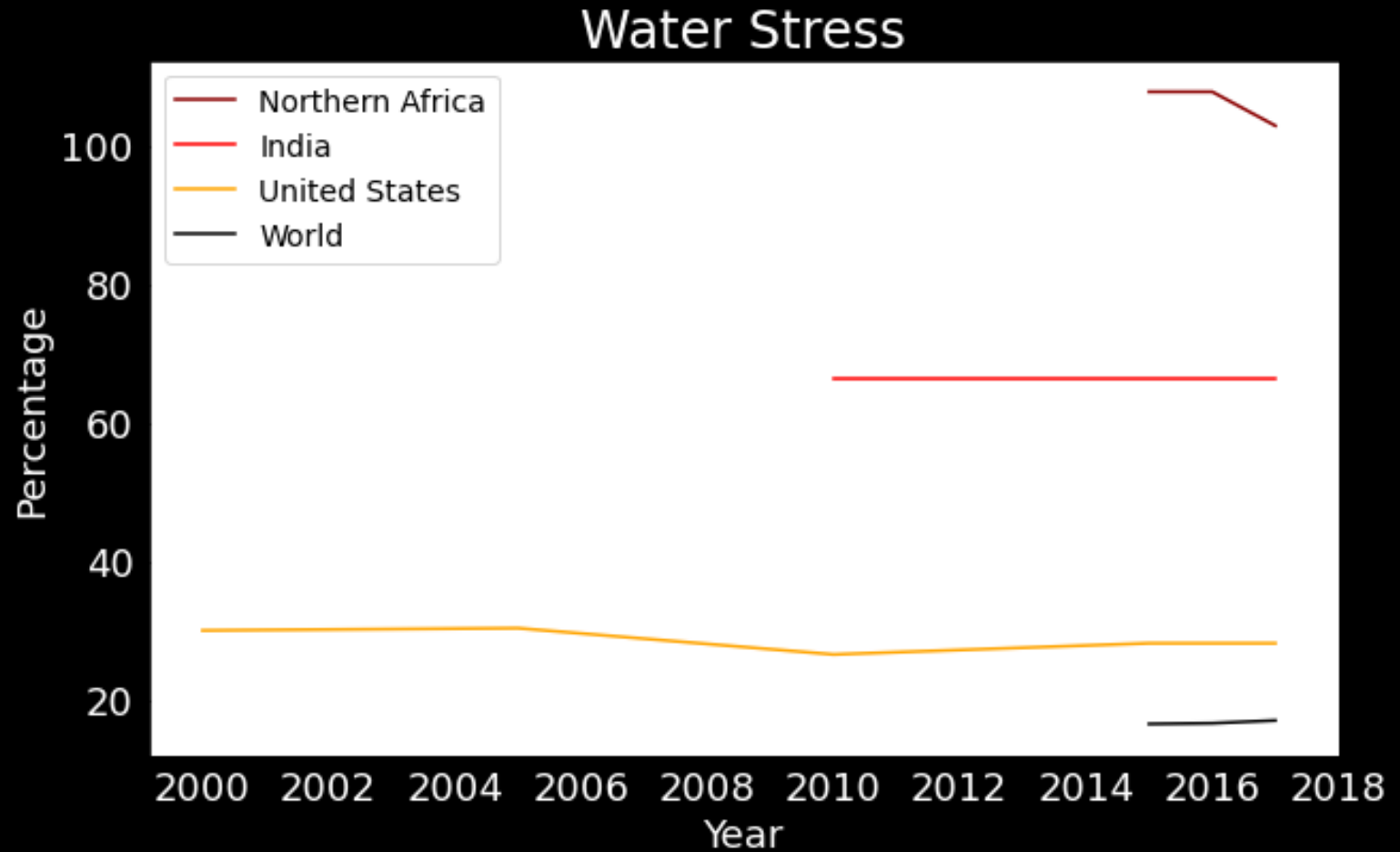
Forest Area as a percentage of total land area (15.1.1)



Food and Agriculture Organization
of the United Nations

- Globally, water stress remains at a safe 17 percent. However, the world average masks huge regional variations.

Level of water stress: freshwater withdrawal as a proportion of available freshwater sources (6.4.2)



Food and Agriculture Organization
of the United Nations



WHAT CAN WE DO?

- **Modifying current practices** to improve productivity of many food and agricultural production systems.
- Productivity will need to continue to increase in the future to ensure sufficient supply of food and other agricultural products. This must be done while limiting the expansion of agricultural land as well as safeguarding and enhancing the environment.
- This is the core of the transformation necessary for sustainability in food and agriculture systems.
- Efficiency in productivity has, in the past, been mostly expressed in terms of yield (kg per hectare of production) but future productivity increase should consider more dimensions.
- Water and energy-smart production systems will become increasingly important as water scarcity increases and as agriculture will need to seek ways to reduce emission of greenhouse gas. This will also influence the use of fertilizers and other agricultural inputs.



Food and Agriculture Organization
of the United Nations

ANY
QUESTIONS
?