

Promoting Sustainable Food Systems

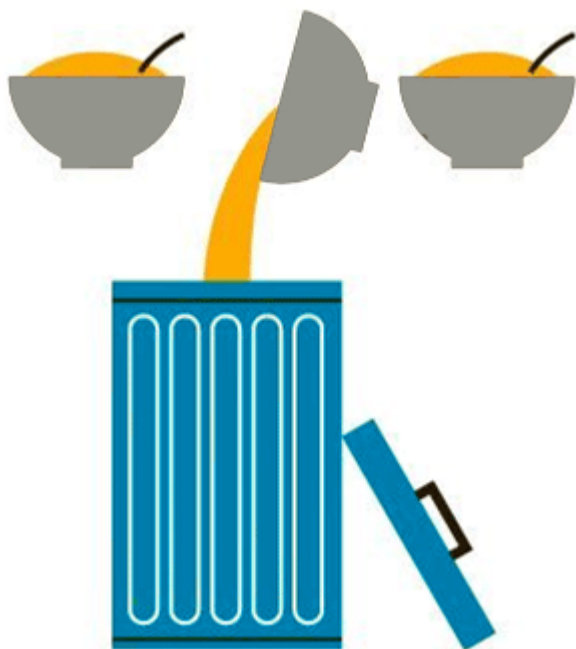
Food Loss and Food Waste International Workshop

November 7-9, 2016





FLW means less food to feed more hungry people



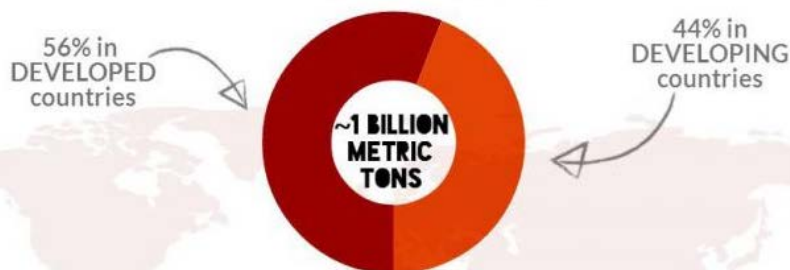
- Of the nearly **4 billion Mt** of food produced annually, **1/3 is lost or wasted**.
- Worth nearly **US\$1 trillion**.
- ~ **1 billion people** go undernourished
- ~ **800 million** go hungry.





Vast majority of whom live in lower income countries

HERE'S THE BREAKDOWN:



THOSE LOST CALORIES COULD FILL HUNGER GAPS IN THE DEVELOPING WORLD



- **North America and Oceania** lose/waste nearly **1/2** of what they produce.
- Nearly **2/3** of wasted food is deliberately **trashed** by consumers
- **Asia and Africa** account for ~ **67%** of all food lost and wasted globally.
- Where, ~ **9/10** of wastage and losses occur in **pre/post-harvest**.
- **South Asia and SSA** lose as many as **400 to 500 kilocalories** per person, every day.



How does FLW contribute to global hunger?

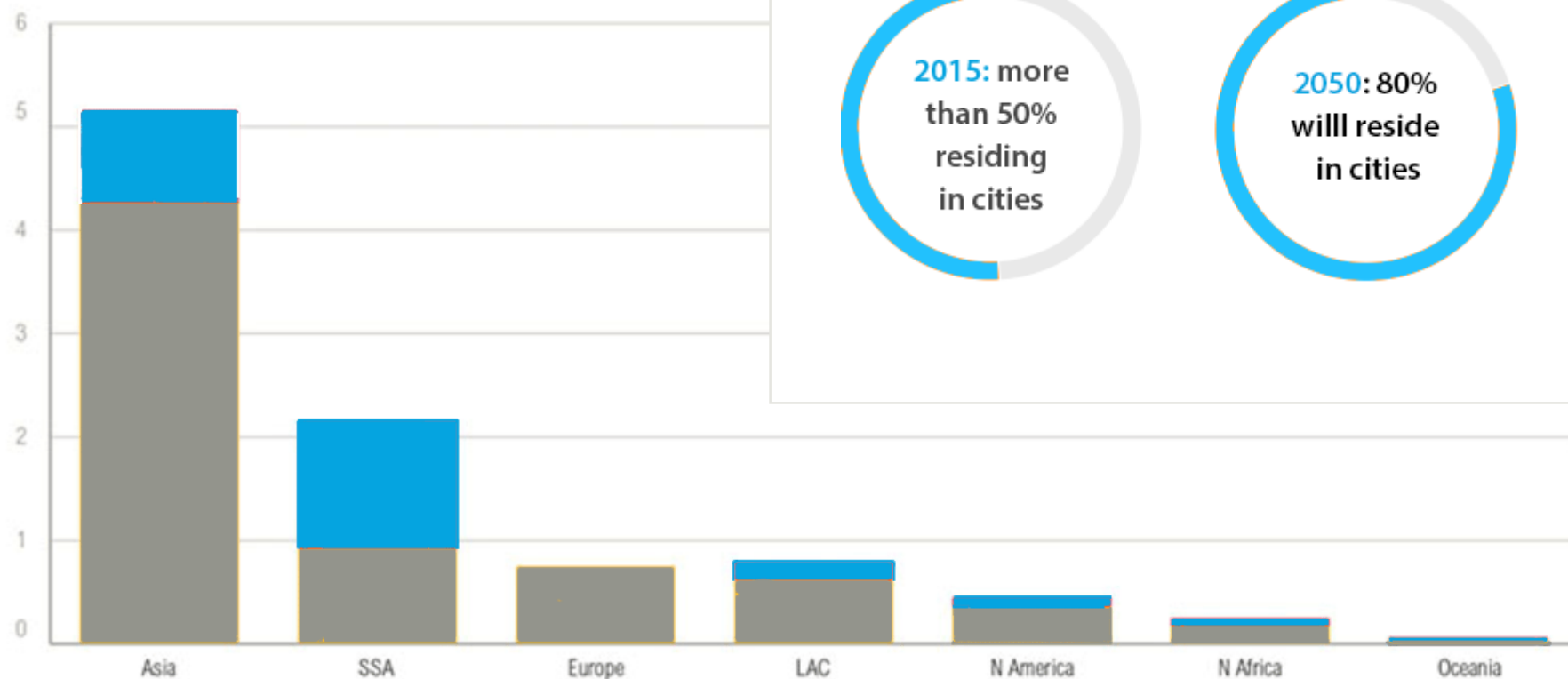
- The food currently lost or wasted in Latin America could feed **300 million** people.
- The food currently wasted in Europe could feed **200 million** people.
- The food currently lost in Africa could feed **300 million** people.
- If just **one-fourth of the food wastage** could be saved, it would be enough to feed the **870 million hungry** people in the world.



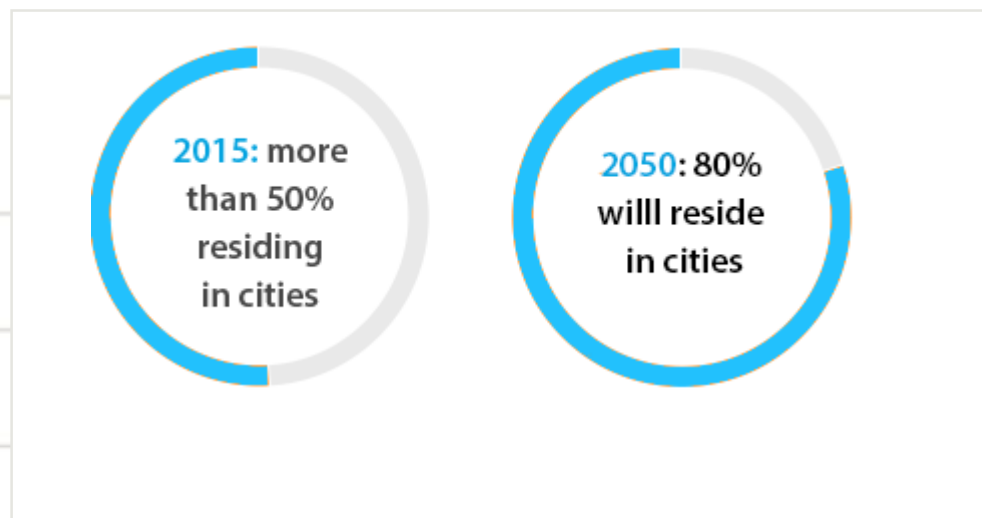


Growing global demand for food driven by shifting demographics

Rapid Population growth, 2010 vs. 2050



Rapid urbanization, 2015 vs. 2050

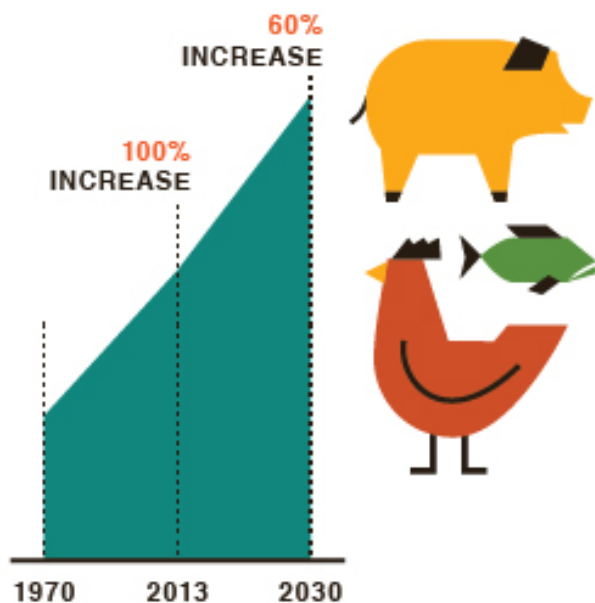


Source: WRI

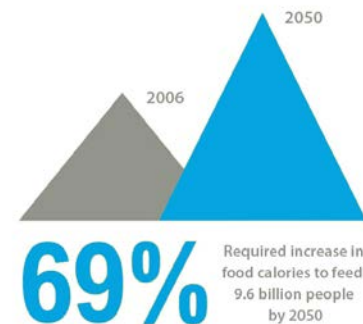
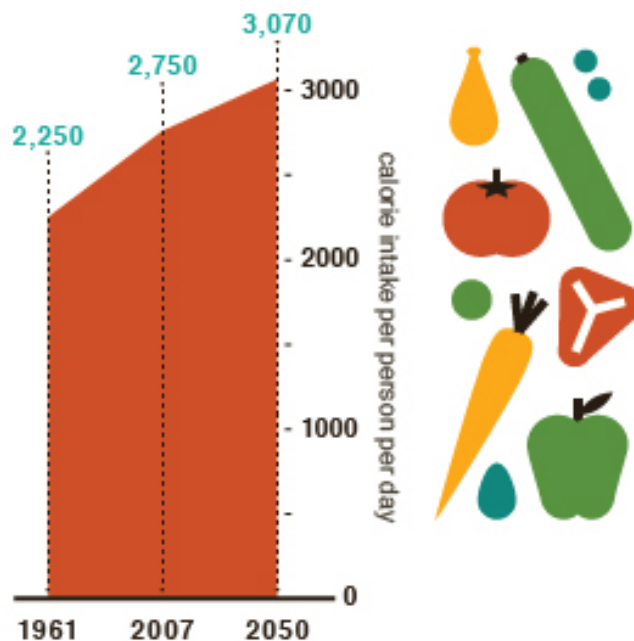


Driving up demand for more grains, and more nutritious foods

Increase in global consumption of animal protein



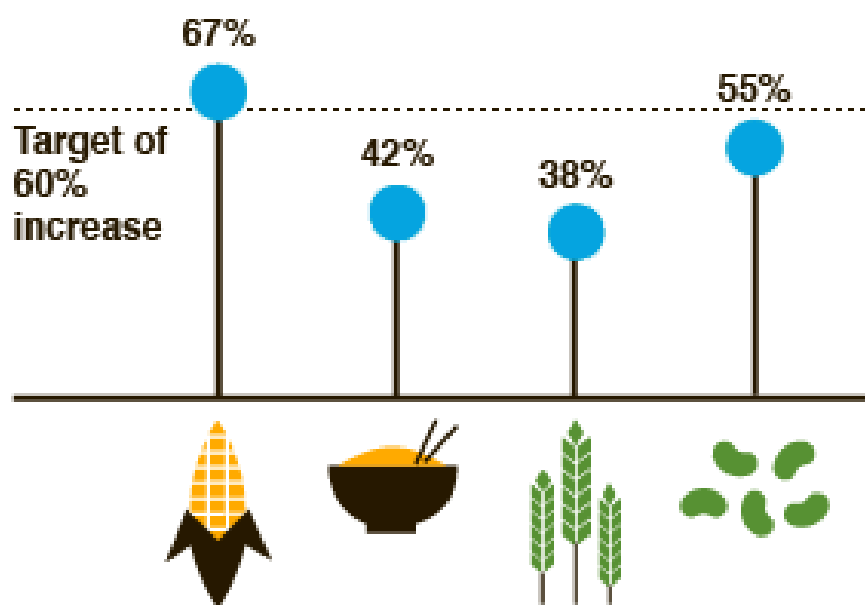
Global average calorie intake per person



Kastner et al. 2012; Alexandratos and Bruinsma 2012



But productivity gains remain elusive despite substantial investments in agricultural R&D



- **By 2050, yields of BIG 4 (i.e., maize, rice, wheat, soybeans) need to increase by 60%**
- Current yield gains are falling well short



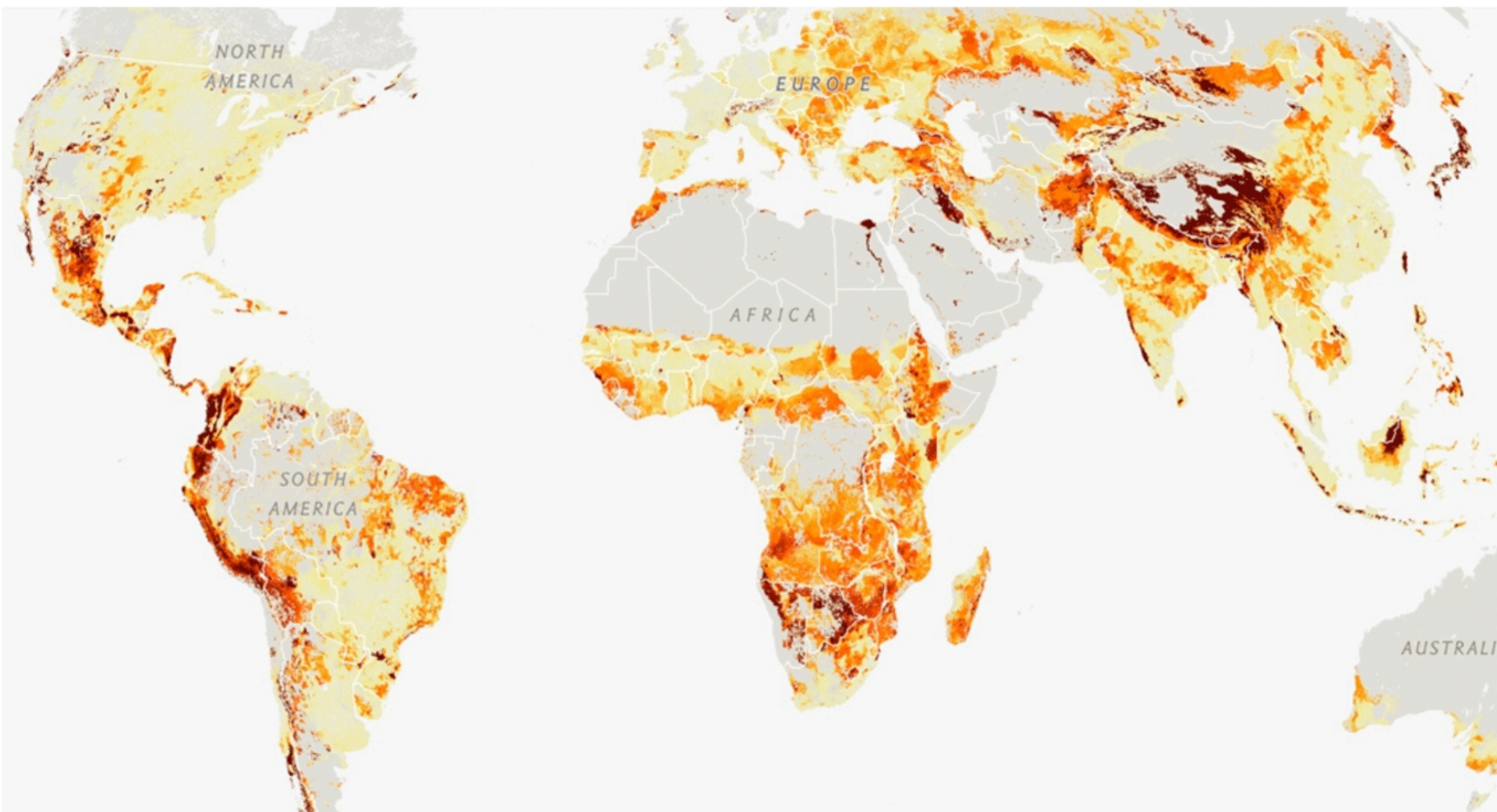
Overcoming existing yield gaps and increasing productivity of
in developing countries is key.

Crop Yield

LOW

HIGH

ACTUAL YIELD RELATIVE TO POTENTIAL



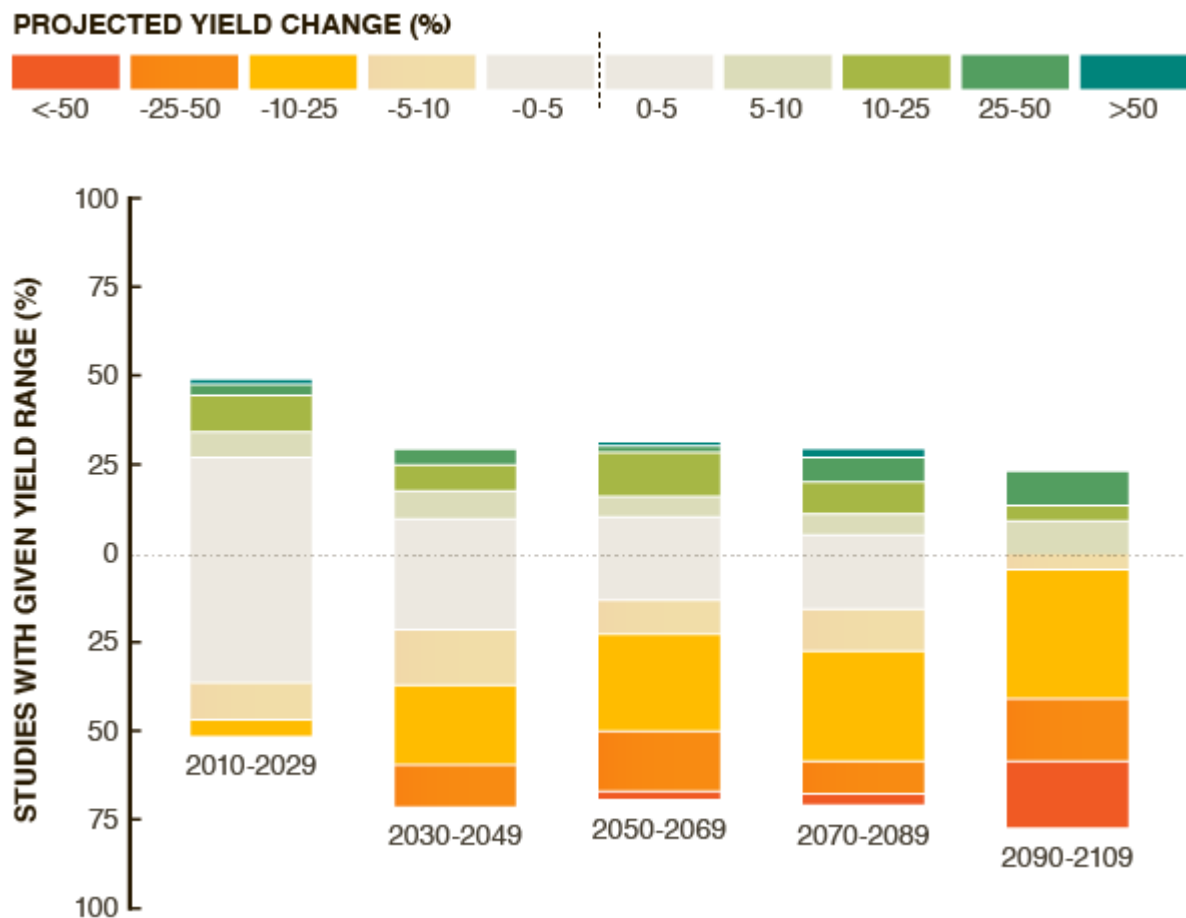
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Climate Change is already impinging on yields of major crops, and projections suggest more drops ahead

By 2050:

- rice productivity will **decline** by **14%** in South Asia, **10%** in East Asia and the Pacific and **15%** in sub-Saharan Africa
- potato yields will likely decrease **9%–32%**
- wheat yields are expected to change anywhere from **–34.3** and **+9.7%**



Source: Challionor et al., 2014



Reducing FLW is not just about closing the food gap and feeding the hungry



Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Any sustainable solution to global food security must prioritize meaningful and concerted action to reduce wastage



But, not just about ending hunger, as reducing FLW is aligned with priorities that cut across the SDGs



Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture





Why is curbing FLW so critical to achieving the SDGs?

① Key to ending poverty (SDG1) and hunger (SDG2)

- Reducing food loss and waste can help feed the **\$800 million people** that go hungry
- **470 million smallholder farmers** and **290 million others** lose upwards of **15 percent** of their income due to FLW.
- Also contributes to high food prices by removing part of market supply.
- Reducing losses translates to higher productivity, incomes, and **household resilience**.

② Key to protecting the Environment and Natural Resources (SDG6, SDG16)

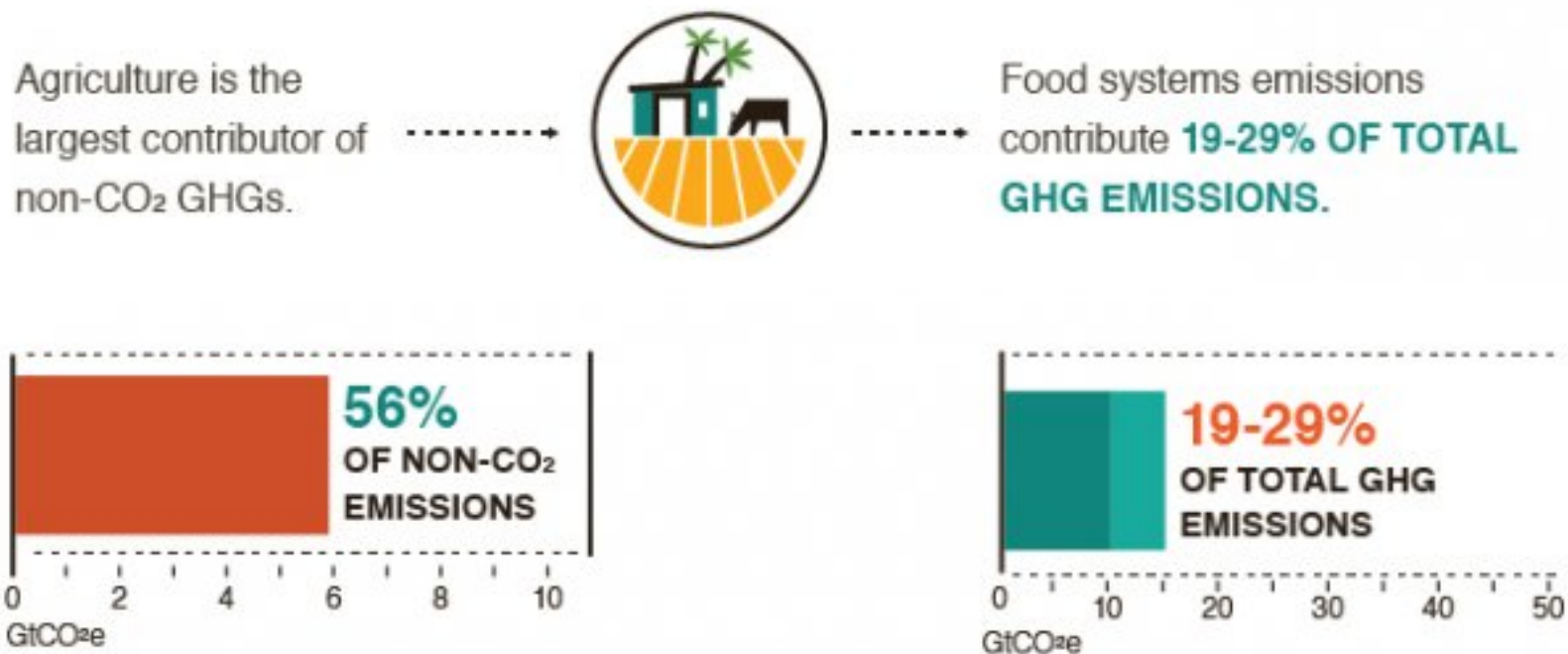
- 198 million hectares (~ size of Mexico) is used to produce food that we don't eat.
- **¼ of global freshwater consumption** is used to grow food that is never eaten.
- Globally, **irrigation water** used to produce food that is wasted would **meet the domestic needs of 9 billion people**.

③ Fighting Climate Change (SDG13)

- **Rotting food** filling landfills is a **major creator of methane**, one of the most harmful GhGs.



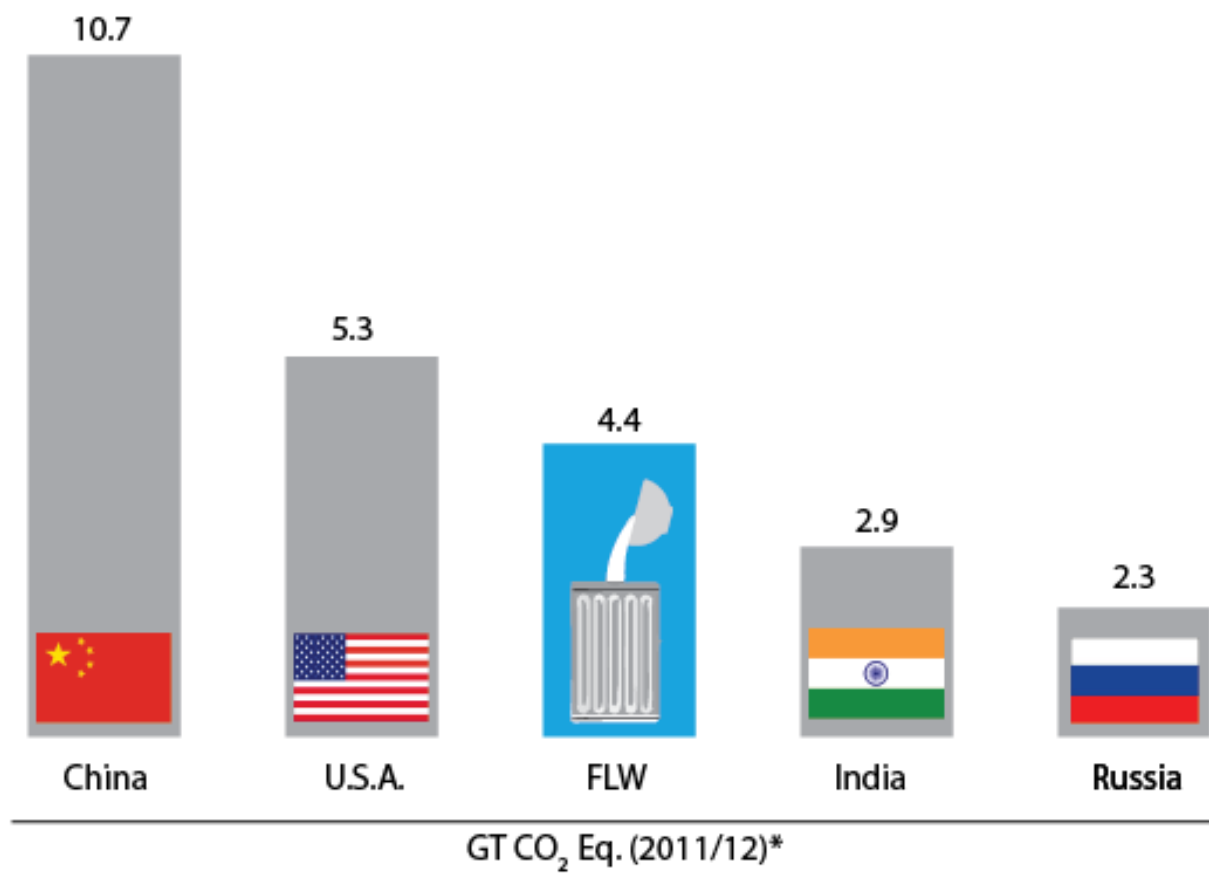
Agriculture is part of the problem, AND part of the solution



- Agriculture and land use change cause ~1/4 of GhG emissions.
- This could rise to 70% by 2050, if we don't change how we produce, market and consume our food



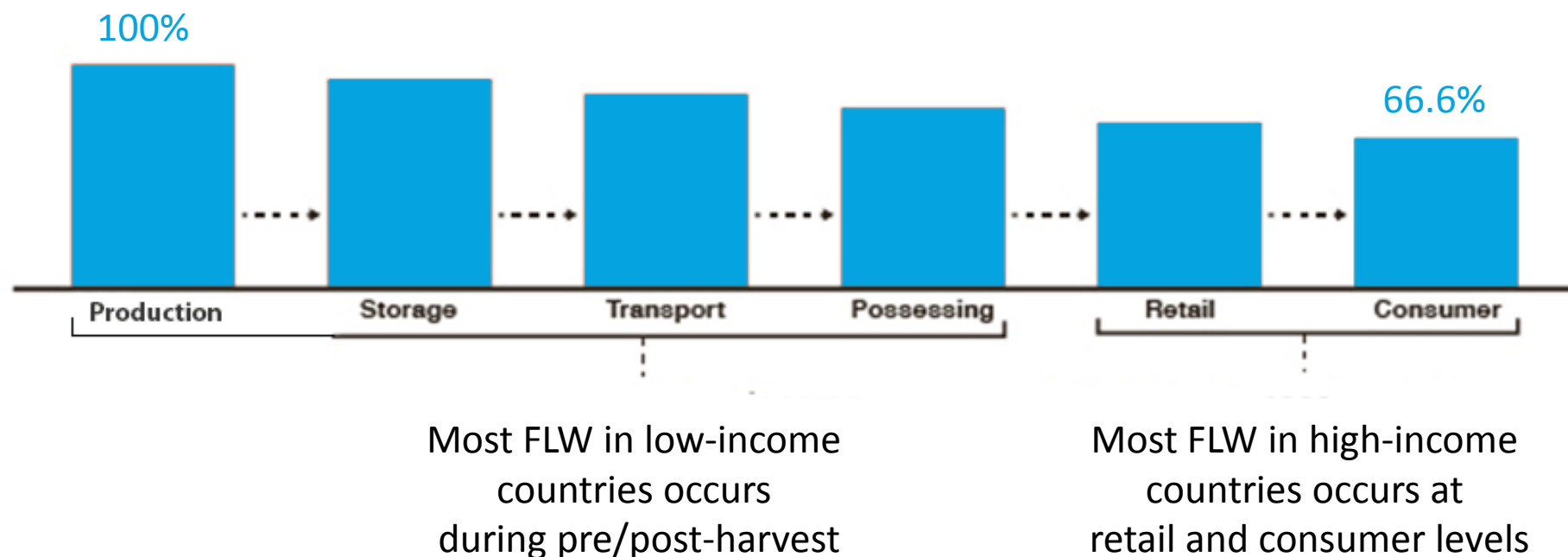
Carbon footprint of food wastage is ~ 4.4 GT of CO₂



- If FLW were a country, it would be the **3rd largest emitter**
- Contributes **8 percent** of all GhG emissions
- Nearly equal to global transport emissions

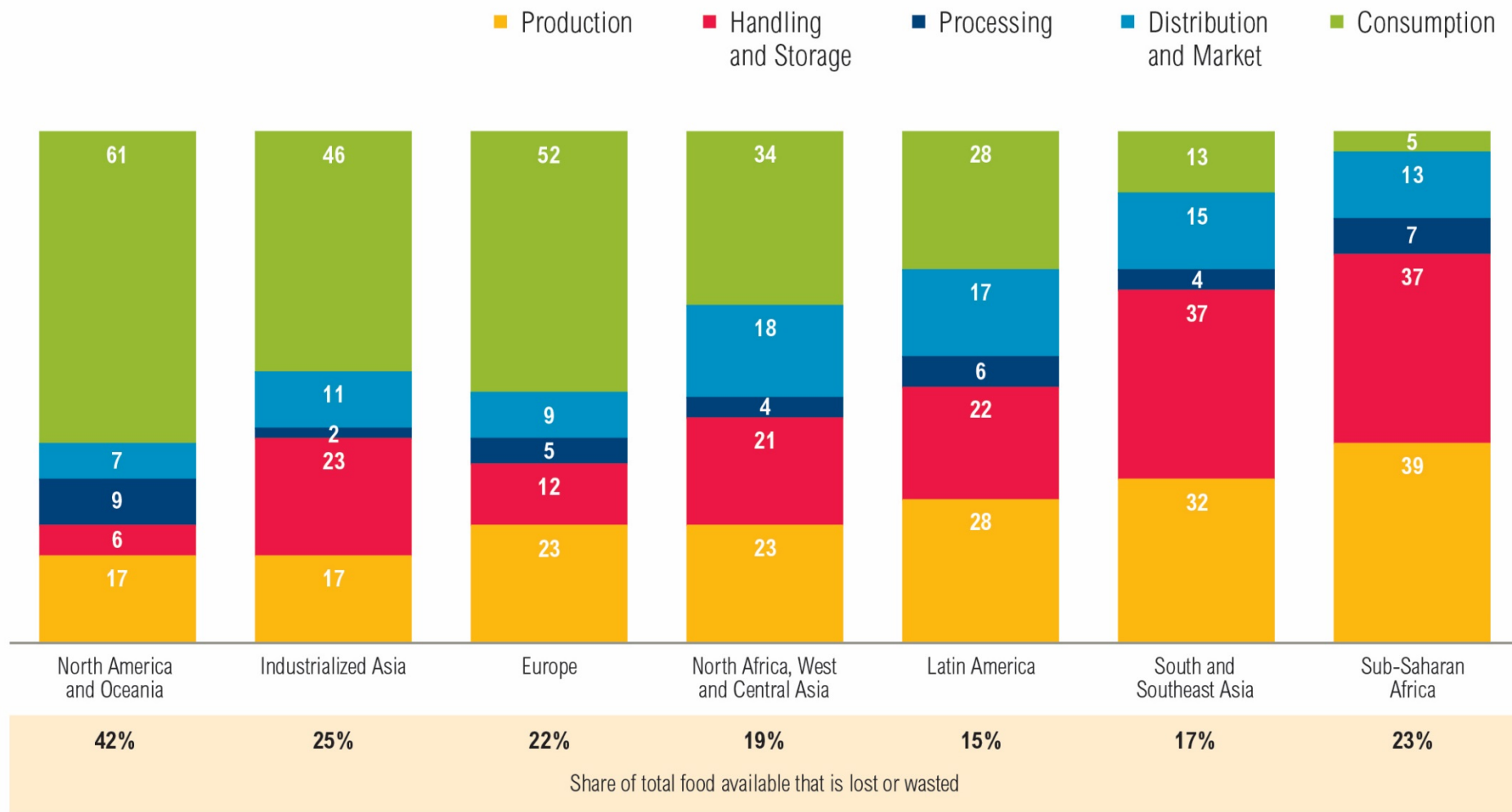


Causes of FLW vary from one region, one country to the next





So... solutions to curbing FLW not one-size fit





What is the World Bank doing?



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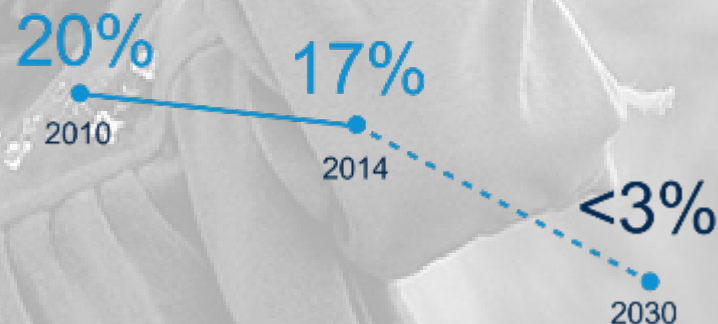


Twin Goals - Ending extreme poverty

GOAL #1:

Lower the % of people
living on less than
US\$1.25/day

Down to <3% in 2030



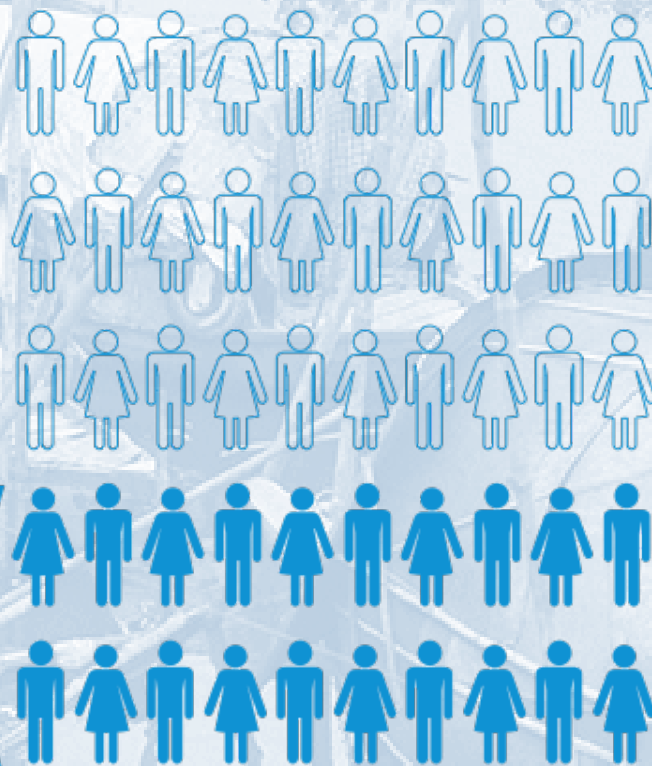


Twin Goals – Promoting shared prosperity

GOAL #2:

Foster well-being and
income growth of
bottom 40%

INCOME GROWTH
OF THE BOTTOM 40%





So what about the Global Food and Agriculture Practice?

Our Vision

To feed every person, every day, everywhere with a safe, nutritious, and affordable diet

Four Pillars

- Boosting Investment in Agriculture
- Ensuring climate-smart agriculture
- Improving nutritional outcomes
- Strengthening value chains and improving market access



Why the focus on Climate-Smart Agriculture?

WHAT IS THE CHALLENGE?

To build food systems that meet increasing demand while remaining profitable and sustainable in the face of Climate Change.

WHAT WILL IT TAKE?

1. *Increasing productivity sustainably*
2. *Enhancing the resilience of producers and supply chains*
3. *Reducing Emissions*

CAN IT BE DONE?

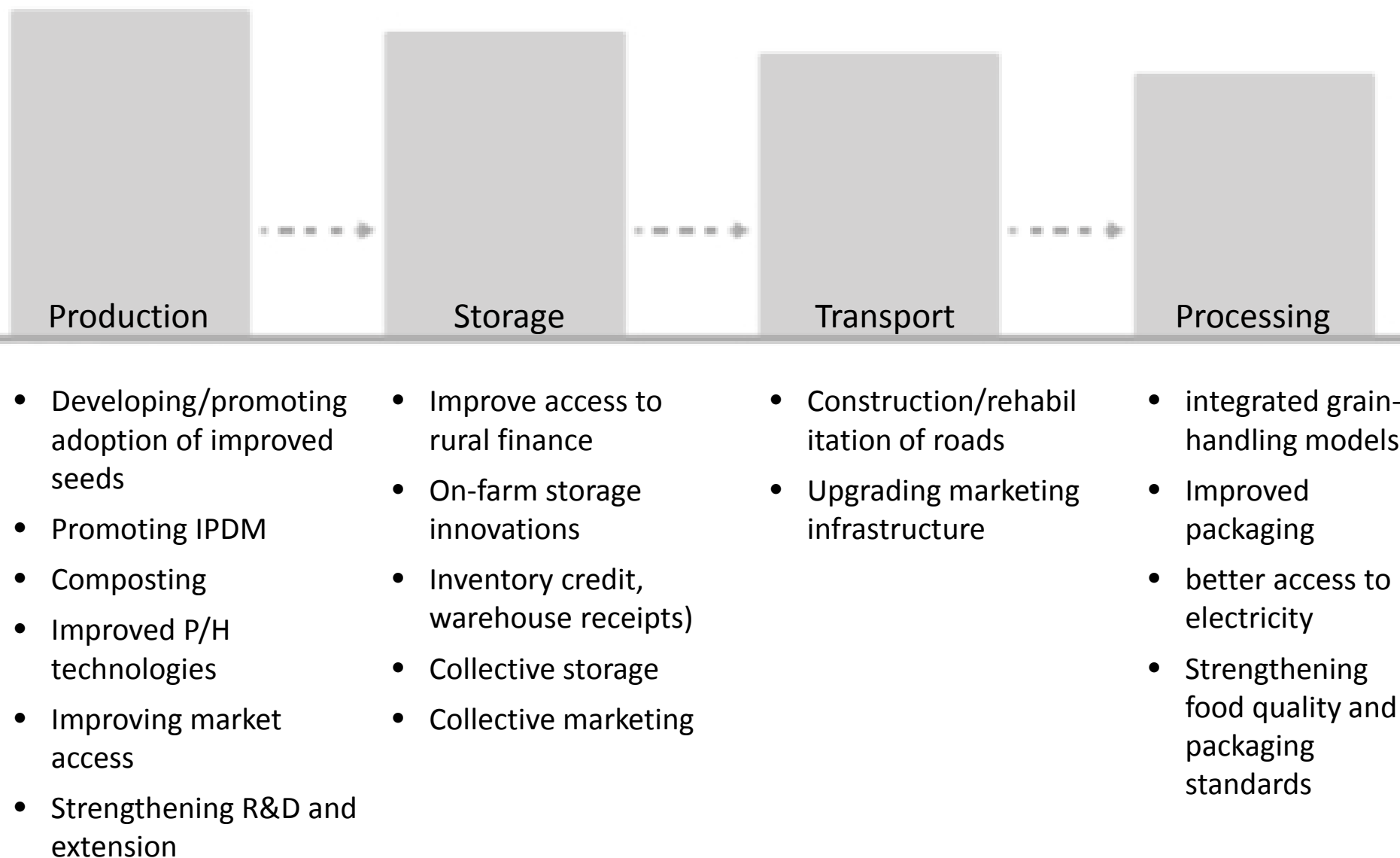
*Yes, but we need to connect Climate Change with the bottom line of **farmers** and **food businesses***


$$\text{CSA} = \text{SUSTAINABLE AGRICULTURE} + \text{RESILIENCE} - \text{EMISSIONS}$$





What is the World Bank doing to help curb FLW?





Thank you!

