



European  
Commission



# TIME'S UP FOR FOOD WASTE!

**SETTING THE  
EU ACTION AGENDA  
TOWARDS 2030**

**CONFERENCE**  
BRUSSELS | 12.12.2019

EU2019 FI

Health and  
Food Safety

# FOOD LOSS AND WASTE: THE BUSINESS CASE FOR PEOPLE, BUSINESS AND THE PLANET

Dr Liz Goodwin, OBE, Senior Fellow and Director of Food Loss  
and Waste, WRI



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI



# FOOD LOSS & WASTE: SCALE OF THE CHALLENGE



**1/3** of all food is lost or wasted each year.



Food loss and waste costs the global economy  
**\$940 BILLION** each year.



**8%** of annual global greenhouse emissions  
are due to food loss and waste.

Source: FAO (2011 and 2015)



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

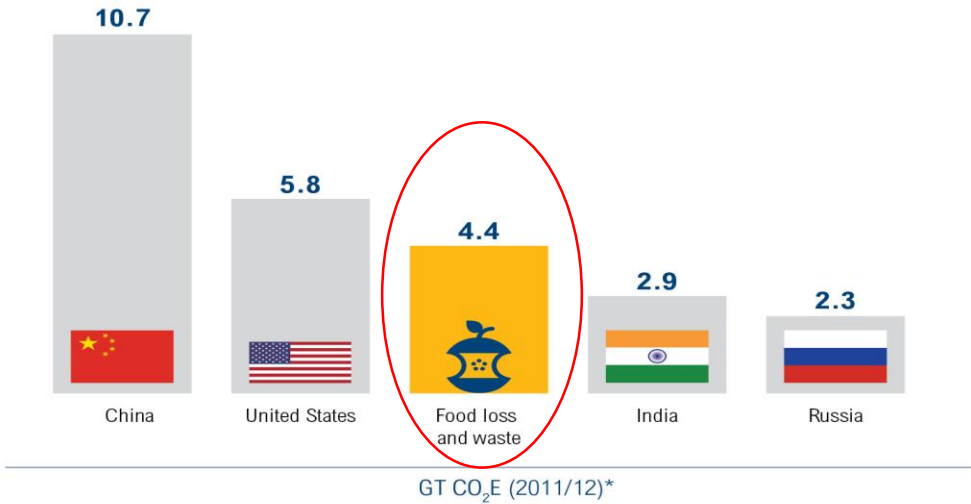
EU2019FI



European  
Commission

# FOOD LOSS & WASTE AND CLIMATE CHANGE

If Food Loss and Waste Were its own Country,  
it Would Be the Third-Largest Greenhouse Gas Emitter



\* Figures reflect all six anthropogenic greenhouse gas emissions, including those from land use, land-use change, and forestry (LULUCF). Country data is for 2012 while the food loss and waste data is for 2011 (the most recent data available). To avoid double counting, the food loss and waste emissions figure should not be added to the country figures.

Source: CAIT. 2015; FAO. 2015. *Food wastage footprint & climate change*. Rome: FAO.

 WORLD RESOURCES INSTITUTE



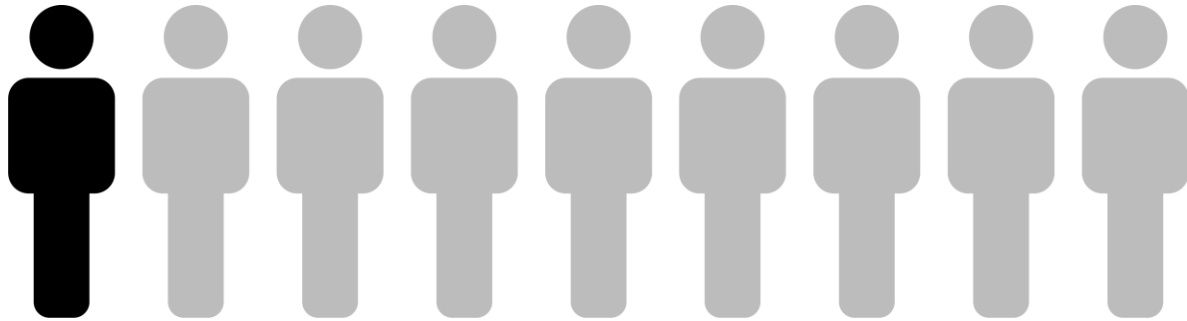
**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12-12-2019

EU2019FI



**1 in 9** people worldwide is undernourished



*Source: FAO et al. 2018*



**TIME'S UP  
FOR FOOD  
WASTE!**

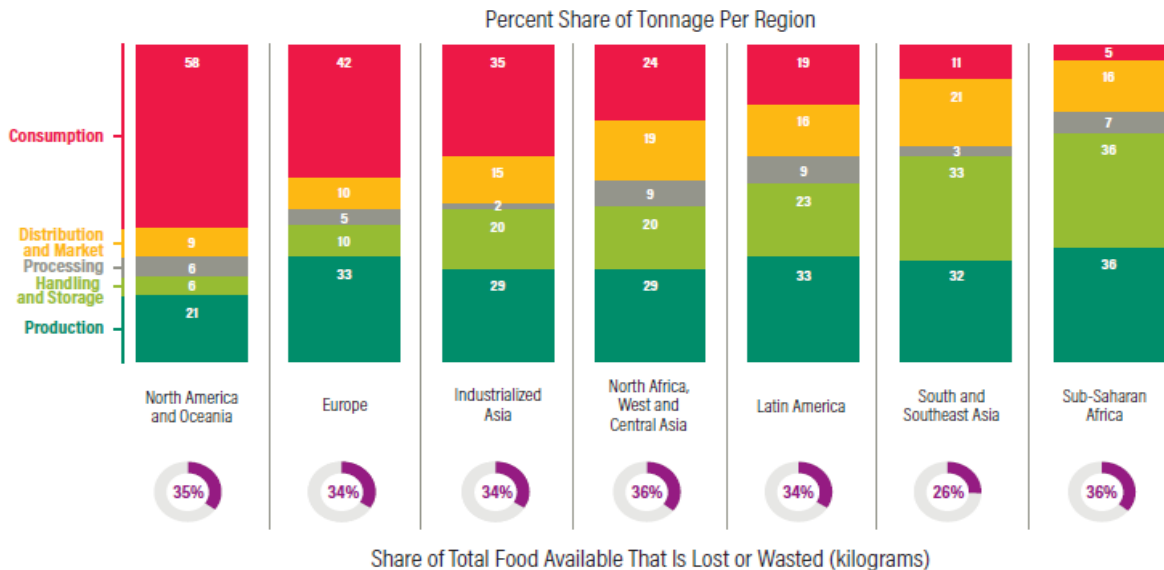
**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI



# DISTRIBUTION OF FOOD LOSS & WASTE BY REGION AND STAGE IN THE FOOD SUPPLY CHAIN (2007)

Figure 1.8 | Distribution of Food Loss and Waste by Region and Stage in the Food Supply Chain, 2007



Notes: Values displayed are of food loss and waste as a percent of food supply, defined here as the sum of the "Food" and "Processing" columns of the FAO Food Balance Sheet. Numbers may not sum to 100 due to rounding.  
Source: WRI analysis based on FAO (2011).



**TIME'S UP FOR FOOD WASTE!**

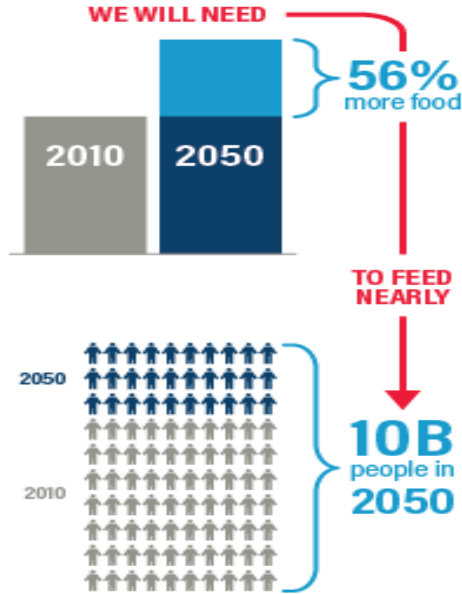
**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI

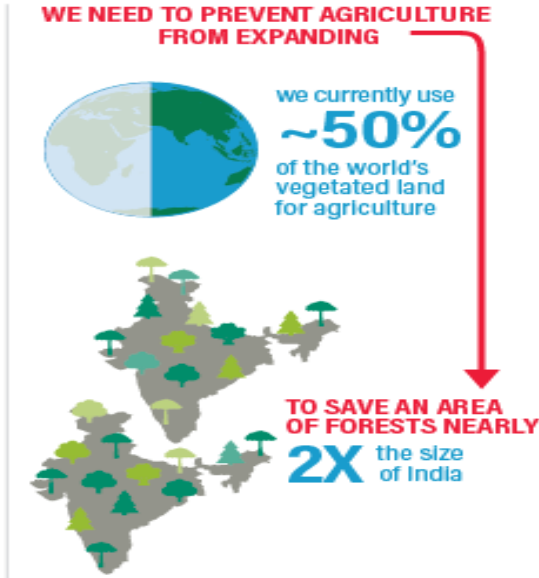


# CREATING A SUSTAINABLE FOOD FUTURE BY 2050

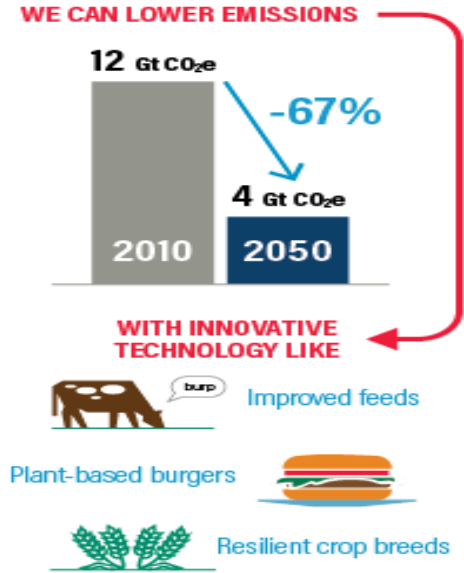
How do we feed  
10 billion people...



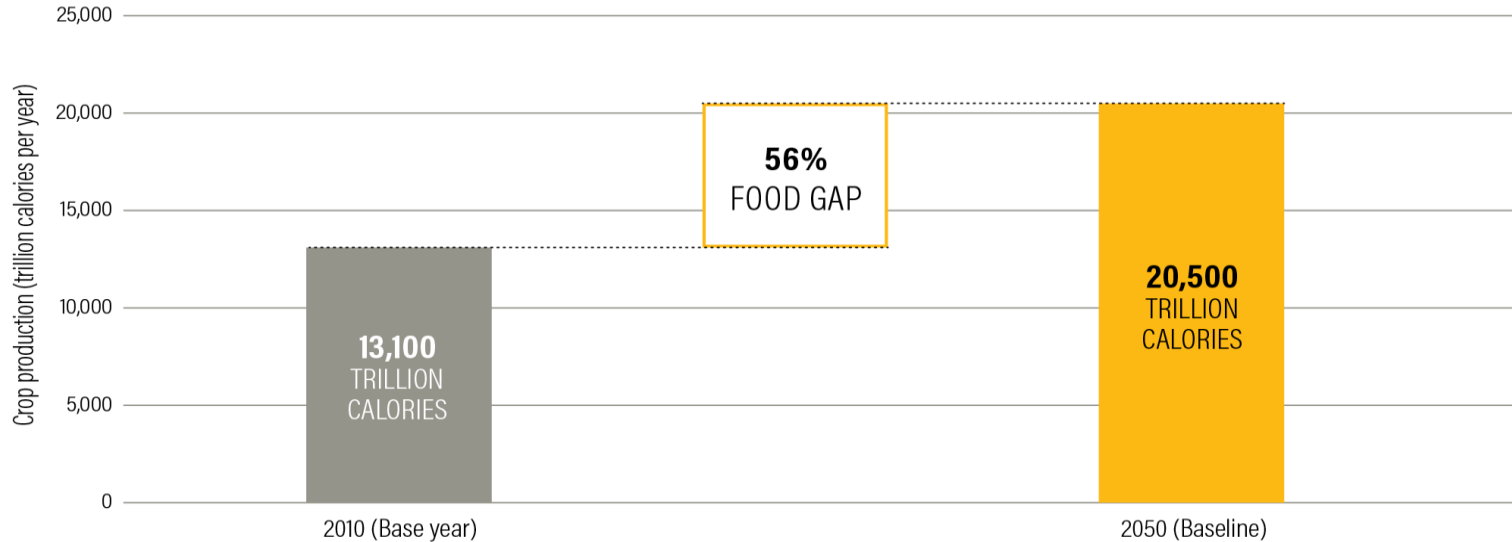
...without using  
more land...



...while lowering  
emissions?



# WORLD NEEDS TO CLOSE A FOOD GAP OF 56 PERCENT BY 2050

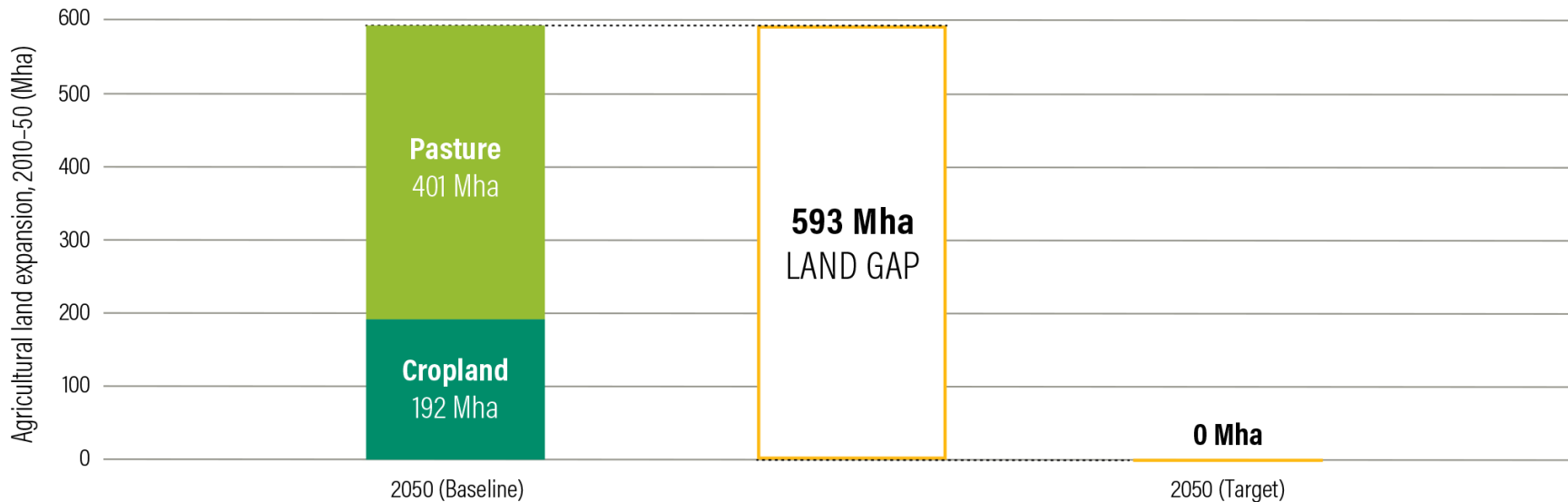


*Note:* Includes all crops intended for direct human consumption, animal feed, industrial uses, seeds, and biofuels.

*Source:* WRI analysis based on FAO (2017a); UNDESA (2017); and Alexandratos and Bruinsma (2012).



# WORLD NEEDS TO CLOSE A LAND GAP OF 593 MILLION HECTARES TO AVOID FURTHER AGRICULTURAL EXPANSION



Note: "Cropland" increase includes aquaculture ponds.

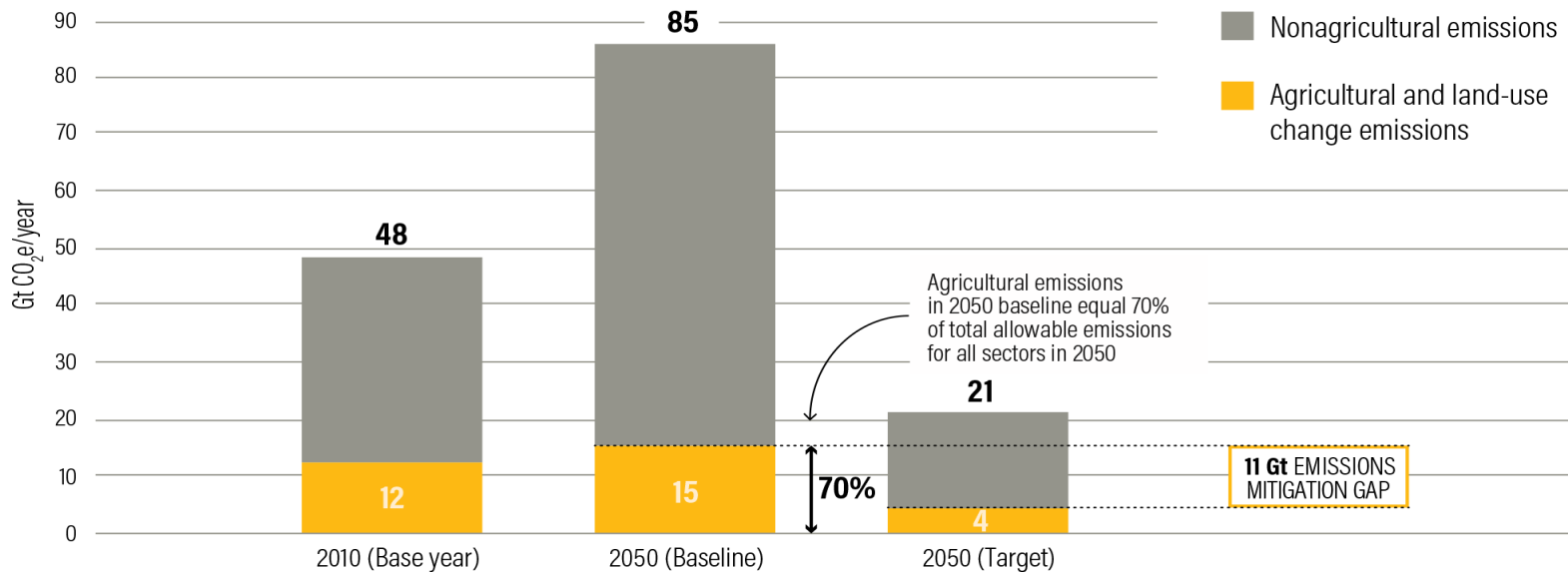
Source: GlobAgri-WRR model.



**TIME'S UP  
FOR FOOD  
WASTE!**



# AGRICULTURE EMISSIONS LIKELY TO BE 70 PERCENT OF TOTAL ALLOWABLE EMISSIONS FOR ALL SECTORS BY 2050



Sources: GlobAgri-WRR model, WRI analysis based on IEA (2012); EIA (2012); Houghton (2008); OECD (2012); and UNEP (2013).

# THE MENU FOR A SUSTAINABLE FOOD FUTURE

## Course 1: Reduce Growth in Demand

- Reduce food loss and waste
- Shift to healthier and more sustainable diets
- Avoid competition from bioenergy for food crops and land
- Achieve replacement-level fertility rates

## Course 2: Increase food production without expanding agricultural land

- Increase livestock and pasture productivity
- Improve crop breeding to boost yields
- Improve soil and water management
- Plant existing cropland more frequently
- Adapt to climate change

## Course 3: Protect and restore natural ecosystems

- Link productivity gains with protection of natural ecosystems
- Limit inevitable cropland expansion to lands with low environmental opportunity costs
- Reforest abandoned, unproductive, and liberated agricultural lands
- Conserve and restore peatlands

## Course 4: Increase fish supply

- Improve wild fisheries management
- Improve productivity and environmental performance of aquaculture

## Course 5: Reduce greenhouse gas emissions from agricultural production

- Reduce enteric fermentation through new technologies
- Improved manure management
- Reduce emissions from manure left on pasture
- Increase nitrogen use efficiency of fertilizers
- Adopt emissions-reducing rice management and varieties
- Increase agricultural energy efficiency and shift to nonfossil energy sources
- Focus on realistic options to sequester carbon in soils



**TIME'S UP  
FOR FOOD  
WASTE!**

wri.org/sustfoodfuture | World Resources Report: Creating a Sustainable Food Future

**SETTING THE EU ACTION AGENDA TOWARDS 2030**

CONFERENCE BRUSSELS 12-12-2019

EU2019FI



Figure I.1 | **A Menu of Solutions Would Close the Food Gap between 2010 and 2050 without Expanding Cultivated Area**



Note: Includes all crops intended for direct human consumption, animal feed, industrial uses, seeds, and biofuels.

Source: Searchinger et al. (2018).



**TIME'S UP FOR FOOD WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**

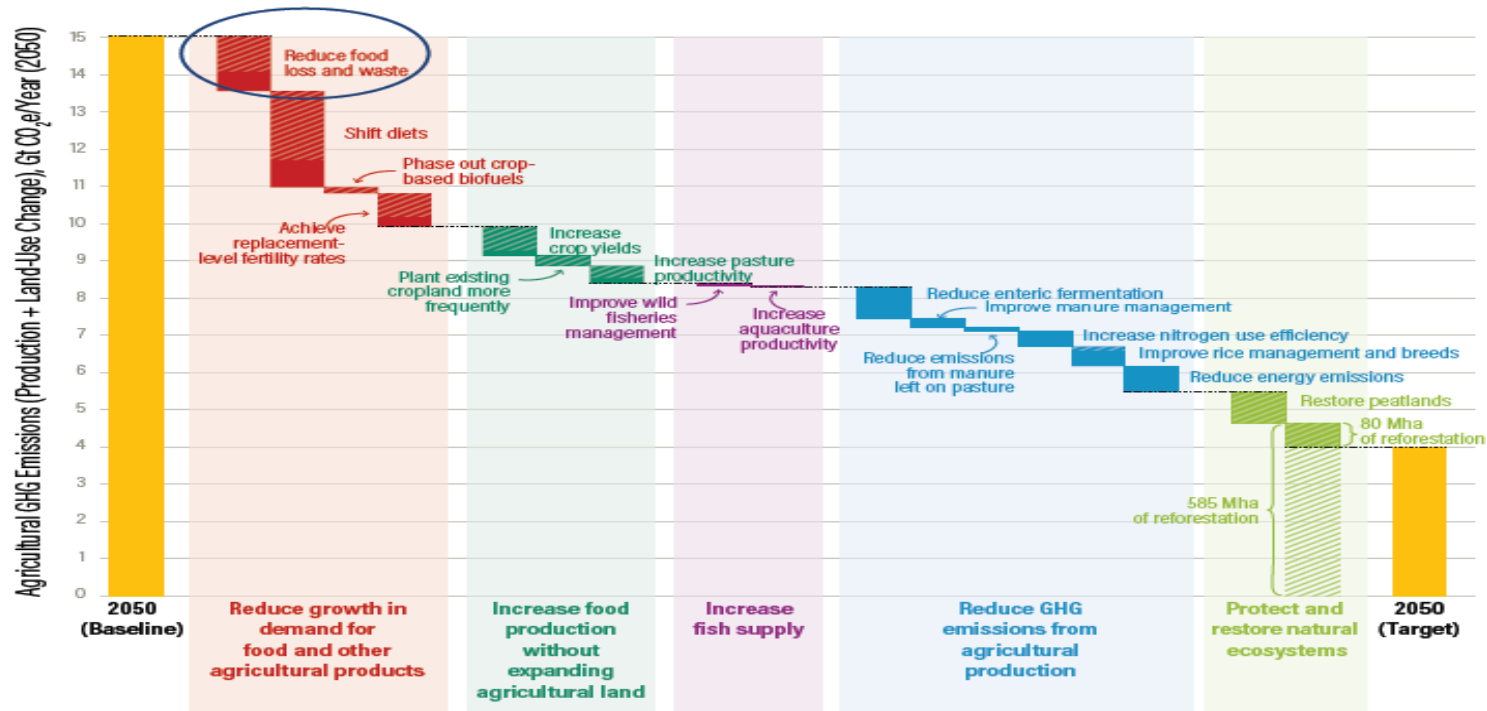
CONFERENCE BRUSSELS | 12-12-2019

EU2019FI



European Commission

**Figure I.2 | Reducing Food Loss and Waste Can Play an Important Role in Eliminating the Projected 15 Gt of Greenhouse Gas Emissions from Agriculture and Land-Use in 2050 (CO<sub>2</sub> equivalent)**



Note: Solid areas represent agricultural production emissions. Hatched areas represent emissions from land-use change.

Source: Searchinger et al. (2018).



**TIME'S UP FOR FOOD WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**

CONFERENCE BRUSSELS | 12-12-2019

EU2019FI



European Commission

## SDG TARGET 12.3

12 RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



By 2030

**halve** per capita global food waste at the retail and consumer levels

&

**reduce** food losses along production and supply chains (including post-harvest losses)



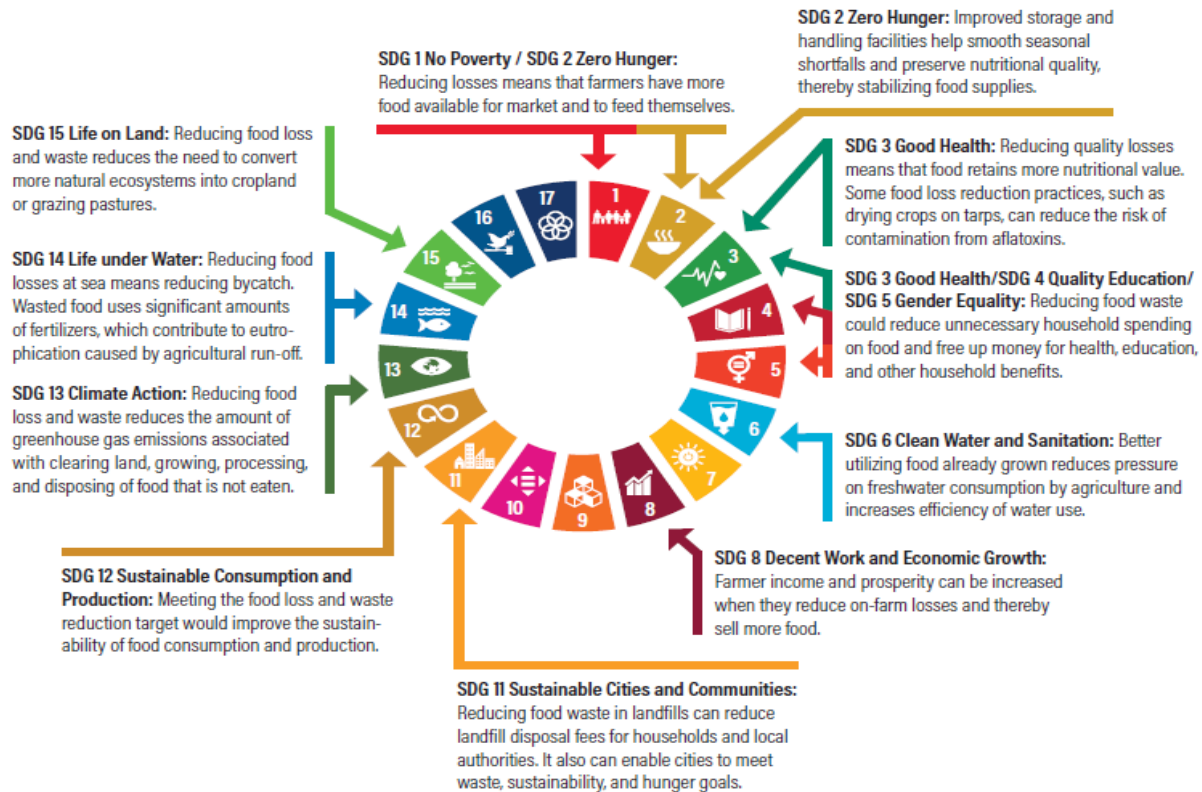
**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12-12-2019

EU2019FI



Figure 2.2 | Reducing Food Loss and Waste Can Help Achieve Multiple SDGs (Not Exhaustive)



**TIME'S UP FOR FOOD WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12-12-2019

EU2019FI





**Dave Lewis**  
CEO  
Tesco

Chair, Champions 12.3



**Hans Hoogeveen**  
Netherlands Ambassador  
to UN Organisations for  
Food and Agriculture



**Yolanda Kakabadse**  
former President  
WWF International



**Andrew Steer**  
President and CEO  
World Resources Institute



**Laura Tuck**  
Vice President of Sustainable  
Development, World Bank



**Sunny Verghese**  
CEO and Co-  
Founder  
Olam International



**Josefa Leonel Correa Sacko**  
Commissioner for Rural  
Economy and Agriculture  
African Union



**Oyun Sanjaasuren**  
former Minister of  
Environment  
Mongolia



**Shenggen Fan**  
Director General  
IFPRI



**Vytenis Andriukaitis**  
Commissioner for  
Health and Food  
Safety  
European Commission



**Peter Freedman**  
Managing Director  
The Consumer  
Goods Forum



**Paul Bulcke**  
Chairman  
Nestlé S.A.



**Liz Goodwin**  
Senior Fellow and  
Director, Food Loss and  
Waste  
World Resources Institute



**Wiebe Draijer**  
Chairman of the  
Managing Board  
Rabobank



**Theo De Jager**  
President  
World Farmers'  
Organisation



**Feike Sijbesma**  
CEO  
Royal DSM



**Louise Fresco**  
President, Executive  
Board  
Wageningen University  
& Research



**Sam Kass**  
Former White House Chef,  
Founder, TROVE  
Venture Partner,  
Acire Venture Partners



**Denis Machuel**  
CEO  
Sodexo Group



**Peter Bakker**  
President  
World Business Council for  
Sustainable Development



**Tristram Stuart**  
Co-Founder  
Feedback



**Michael La Cour**  
Managing Director  
IKEA Food Services  
AB



**Alan Jope**  
CEO  
Unilever



**Kevin Fay**  
Executive Director  
Global  
Food Cold Chain Council



**Achim Steiner**  
Administrator  
UNDP



**Rajiv Shah**  
President  
Rockefeller Foundation



**Gilbert F. Houngbo**  
President  
International Fund for  
Agricultural Development



**Esben Lunde Larsen**  
Former Minister  
Ministry of Environment  
and Food, Denmark



**Marcus Gover**  
Chief Executive  
WRAP



**Selina Juul**  
Founder  
Stop Wasting Food



**Lindiwe Majele Sibanda**  
Co-Chair  
Global Alliance for  
Climate Smart  
Agriculture



**Steven Cahillane**  
CEO  
Kellogg Company



**Nguyen Xuan Cuong**  
Minister of Agriculture  
and  
Rural Development  
Vietnam



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12-12-2019

EU2019FI



European  
Commission



# Figure 4.1 A Strategy for Tackling Food Loss and Waste

SDG Target 12.3: *“By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses”*



TARGET

**Targets set ambition, ambition motivates action**



MEASURE

**“What gets measured, gets managed”**



ACT

**What ultimately matters is action**



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI



## COMPANIES



TARGET

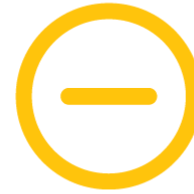
### 2019–2021 MILESTONE

**>95%** of the world's 50 largest food companies have set specific FLW reduction targets aligned with Target 12.3. Among those setting targets, all are working with their suppliers to set their own targets.

### 2019 HIGHLIGHTS

**66%** have set such targets

### PROGRESS AGAINST 2021 MILESTONE



### CALL TO ACTION

More companies need to encourage and support their suppliers in setting FLW reduction targets



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI



## PROGRESS ON TARGETS: COMPANIES



**34** of world's largest **50** food companies have set a target



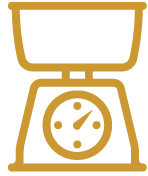
**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI



## COMPANIES



### MEASURE

#### 2019–2021 MILESTONE

**40%** of the world's 50 largest food companies have quantified base year FLW and have started measuring and reporting on FLW. Among those measuring and reporting, **50%** are engaged with their suppliers to quantify the latter's FLW.

#### 2019 HIGHLIGHTS

**44%** now measure  
and  
**30%** now report

#### PROGRESS AGAINST 2021 MILESTONE



#### CALL TO ACTION

Increase number of largest companies and their suppliers that publicly report their FLW inventories



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12-12-2019

EU2019FI



# PROGRESS ON MEASURE: COMPANIES (*not exhaustive*)



Tyson Foods, Inc.



Unilever



Woolworths



MORRISONS

Sainsbury's



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**

CONFERENCE BRUSSELS | 12-12-2019

EU2019FI



## COMPANIES



ACT

### 2019–2021 MILESTONE

**20%** of world's 50 largest food companies have active FLW reduction programs. Among those taking action, **50%** are engaged with their suppliers to reduce the latter's FLW. The first global company halves FLW in its own operations and its supply chain.

### 2019 HIGHLIGHTS

**34%** have such programs. Of them, 6 of largest companies are working with supply chain

No evidence yet of one global company halving its own FLW

### PROGRESS AGAINST 2021 MILESTONE



### CALL TO ACTION

More companies need to engage their suppliers to reduce FLW at every stage of the supply chain



**TIME'S UP  
FOR FOOD  
WASTE!**

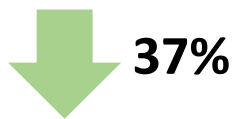
**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI





reduction in food waste  
across fleet from 2018-  
19



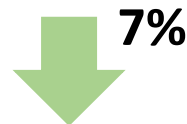
in total unrecovered  
food waste between  
2016-17



average waste  
reduction in stores  
participating in Food is  
Precious initiative



in total food waste since  
2015



reduction in in-store  
food waste **between**  
**2017-2018**



reduction in total food  
waste since 2016



reduction in milk losses  
during transportation  
from farms to factories  
from 2017-2018



reduction in food waste  
across Tesco Central  
Europe between  
2016/17-2018/19



reduction in  
manufacturing food  
waste between 2016  
and 2017



reduction in in-store  
food waste in Canada  
between 2015-2017



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**

CONFERENCE BRUSSELS | 12-12-2019

EU2019FI



# There is business benefit: 99% of sites had a positive return on their investment



Source: Hanson, C. and P. Mitchell. 2017. *The Business Case for Reducing Food Loss and Waste*. Washington, DC: Champions 12.3



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12-12-2019

EU2019FI





## GOVERNMENTS



TARGET

### 2019–2021 MILESTONE

Countries with >95% of the global population have set specific FLW reduction targets aligned with Target 12.3.

### 2019 HIGHLIGHTS

Countries representing more than **50%** have set such targets

### PROGRESS AGAINST 2021 MILESTONE



### CALL TO ACTION

Countries with large populations (e.g., India, Brazil) adopt domestic targets aligned with SDG 12.3



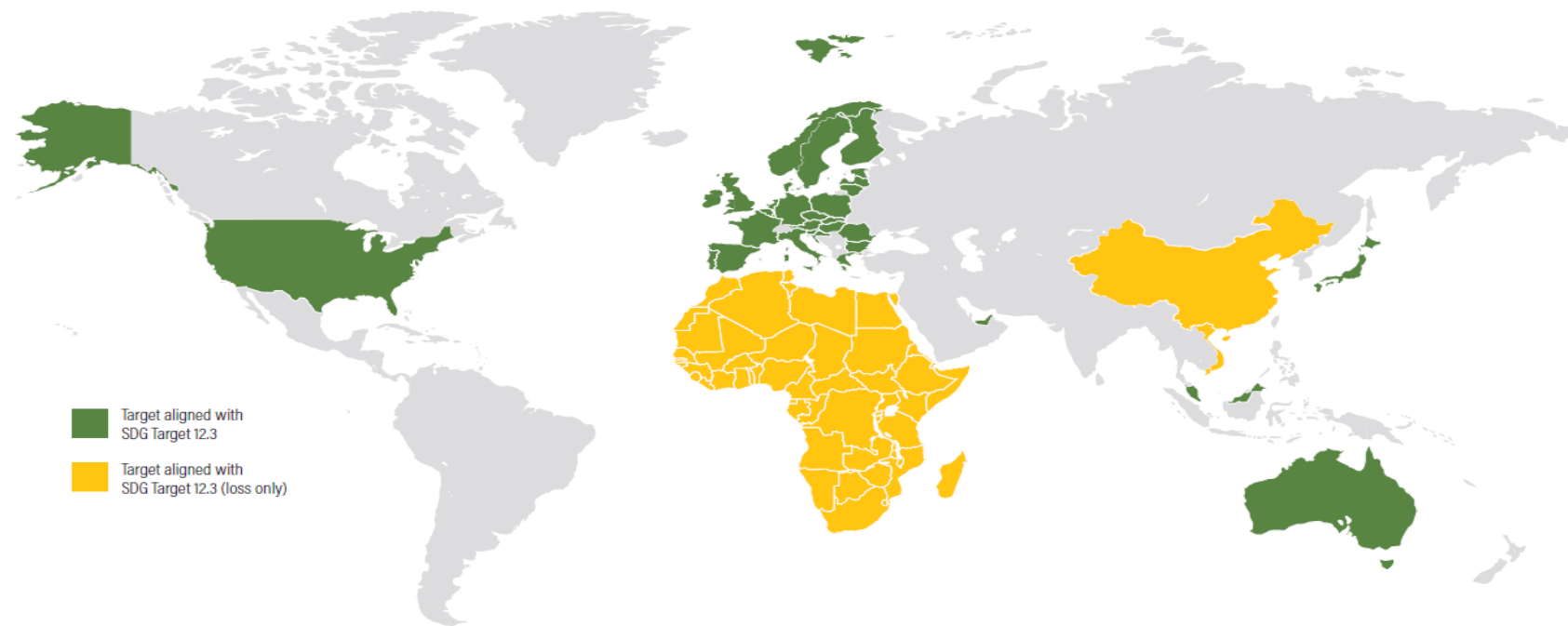
**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI



FIGURE 3. National and Regional Governments with Food Loss and/or Waste Reduction Targets Aligned with SDG Target 12.3 (as of September 2019)



Source: SDG Target 12.3 on Food Loss and Waste: 2019 Progress Report



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI



European  
Commission

## GOVERNMENTS



MEASURE

### 2019–2021 MILESTONE

Countries with **40%** of the global population have quantified base year FLW and have started reporting on FLW

### 2019 HIGHLIGHTS

Countries with **12%** of global population now do

### PROGRESS AGAINST 2021 MILESTONE



### CALL TO ACTION

Many more countries need to quantify their base-year FLW, monitor over time, and report

Release of Food Loss Index later in 2019 should help



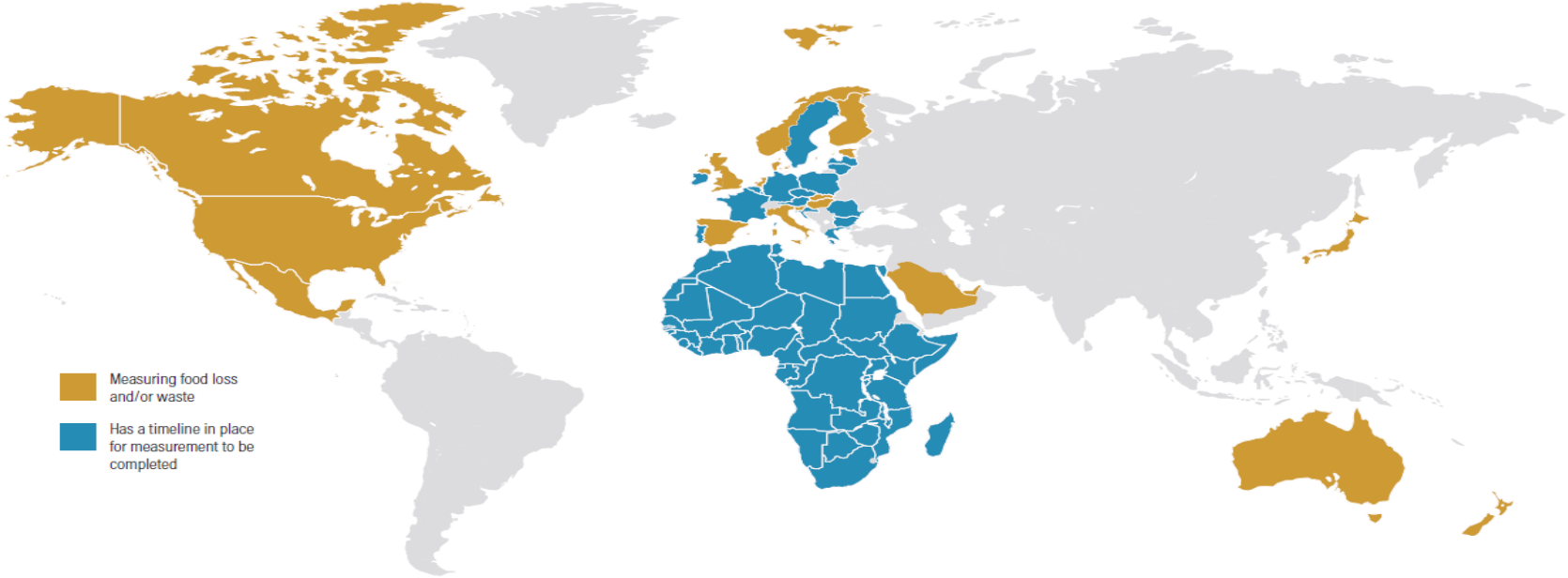
**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI



# PROGRESS ON MEASURE: COUNTRIES



Source: SDG Target 12.3 on Food Loss and Waste: 2019 Progress Report



**TIME'S UP FOR FOOD WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12-12-2019

EU2019FI



# GOVERNMENTS



## 2019–2021 MILESTONE

Countries with **40%** of the global population are actively working at scale to reduce FLW (e.g., PPPs, policies, programs)

First country halves its rate of FLW.

## 2019 HIGHLIGHTS

Countries with **15%** of the global population now do

## PROGRESS AGAINST 2021 MILESTONE



## CALL TO ACTION

More governments need to, for example:

- Develop national FLW reduction strategies
- Develop PPPs on FLW
- Ensure legislation supports efforts to reduce FLW
- Increase investment in post-harvest loss reduction
- Support social norm shifts



**TIME'S UP FOR FOOD WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI



# BUSINESS CASE FOR GOVERNMENTS AND CITIZENS

- Reducing food loss and waste in a country can yield a high return on investment
  - Reduced food costs
  - Reduced waste management and disposal costs
- For example, UK programme on food waste (2007-2012). For every £1 invested by government agencies in the program, more than £250 was saved by the government and its citizens
- We need more examples – Netherlands, Denmark etc.



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12-12-2019

EU2019FI



European  
Commission

# 10 SCALING INTERVENTIONS



1. Develop national strategies for reducing food loss and waste
2. Create national public-private partnerships



3. Launch a “10x20x30” supply chain initiative
4. Invigorate efforts to strengthen value chains and reduce smallholder losses
5. Launch a “decade of storage solutions”



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI



# 10 SCALING INTERVENTIONS



6. Shift consumer social norms
7. Go after greenhouse gas emissions reductions



8. Scale up financing
9. Overcome the data deficit
10. Advance the research agenda



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI





# Thank you



**TIME'S UP  
FOR FOOD  
WASTE!**

**SETTING THE EU ACTION AGENDA TOWARDS 2030**  
CONFERENCE BRUSSELS | 12·12·2019

EU2019FI

