

**The Rutgers EcoComplex
Rutgers Energy Institute**

New Jersey Institute for Food, Nutrition and Health

***FOOD WASTE-TO-LOW CARBON ENERGY
CONFERENCE
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Food Loss and Waste Reduction to Mitigate GHG Emissions: A Win-Win Opportunity



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Overview of presentation

- Introduction
- Objectives
- Food loss and waste and GHG emissions
- Research work
- Final remarks

Introduction: Global population

As of 2016: roughly 7 billion people (World Bank, 2015)

As of 2050: roughly 9 billion people (UNPD, 2013)



Global Food loss and waste

1,3 billion tons of food (FAO, 2013)

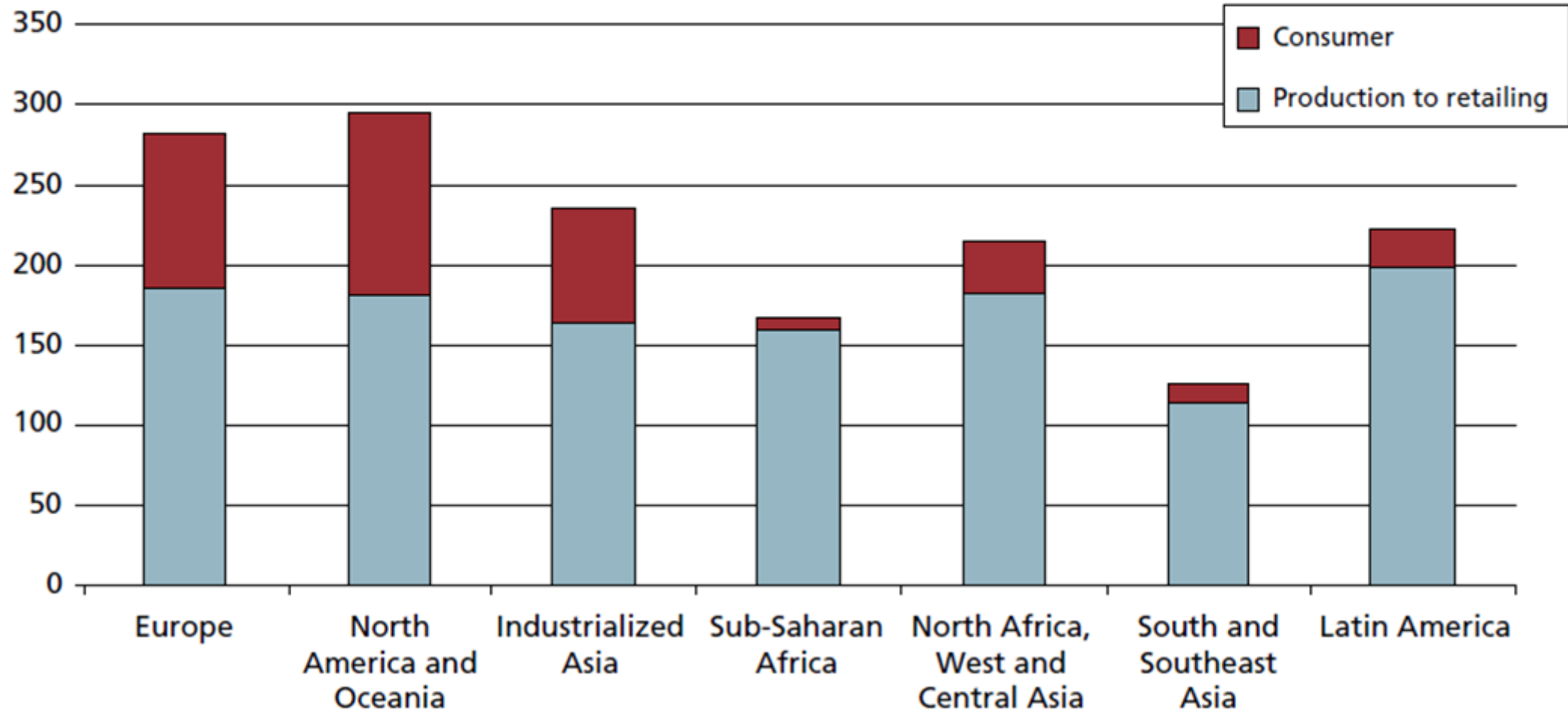
Roughly 30% of food is either lost or wasted

Projected increased food demand of 50-70%



Per capita food losses and waste, at consumption and pre-consumptions stages, in different regions

Per capita food losses and waste (kg/year)



Global Food loss and waste – economic losses

Roughly US\$940 billion is lost or wasted each year (FAO, 2014)

Roughly US\$32 billion worth of food is thrown away in China (World Bank, 2015)

Social, economic, and environmental impacts

- Food security
- Natural resources
- Climate change

OBJECTIVES

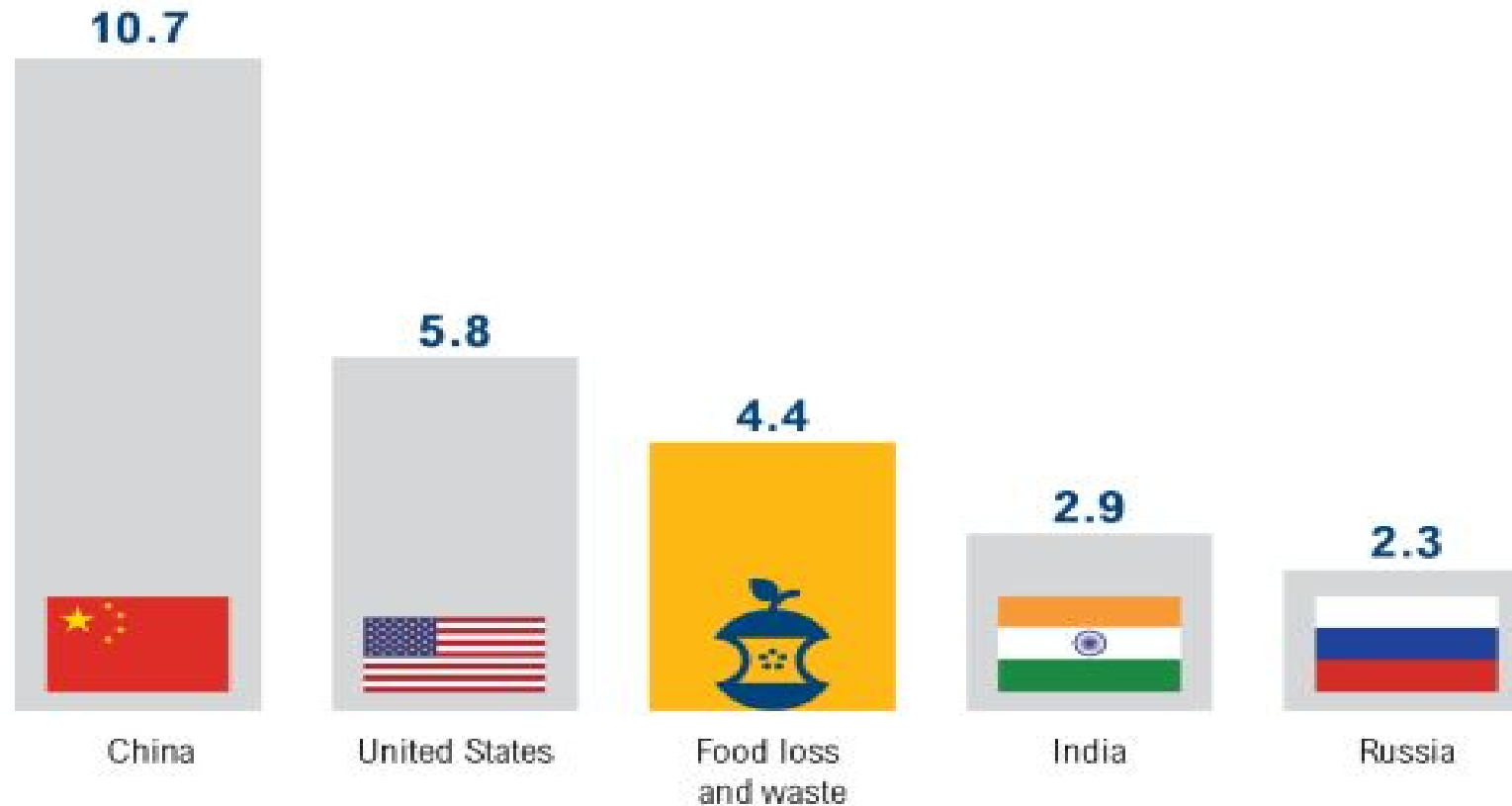
- Supporting countries to strengthen existing policies and implement more effective measures to induce food loss and waste reduction
- Supporting organizations measure, track and voluntarily report GHG emissions reductions from food waste management to encourage the reduction of organic waste
- Assessing best practices for mitigating GHG emissions from food waste

Global food loss and waste and the implications for GHG emissions

- On-farm agriculture emissions
- Digestive systems, manure from livestock and fertilizer
- Electricity and heat used to manufacture and process
- Energy used to transport, store and cook food
- Landfill emissions from decaying food
- Land use change and deforestation
- Management of food waste

- ✓ avoidable emissions
- ✓ wasted emissions
- ✓ emissions in vain (FAO, 2014)

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



GT CO₂E (2011/12)*

* 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.



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2030 Agenda for Sustainable Development

United Nations Post-2015 Development Agenda

Sustainable Development Goals (SDGs)

Target 12.3: Cutting in half per capita global food waste at the retail and consumer level, and reducing food losses along production and supply chains by 2030.

3 areas of work

1) Measuring food loss & waste

Quantifying the food loss & waste within their borders, operations, and supply chains and to create a base year data to monitor reduction progress over time.

2) Setting ambitious and consistent food loss & waste targets

US EPA: 50 percent reduction by 2030

Consumer Goods Forum: percent reduction by 2025 by its members

3) Taking the necessary action to reduce food loss & waste

Prioritizing actions to tackle where most food loss & waste occur during production and consumption

Final remarks

- One area needing more attention after the Paris Agreement is reducing FLW
- Food loss and waste accounts for about 4.4 Gt CO₂e per year
 - 1) Measuring food loss & waste
 - 2) Setting ambitious and consistent food loss & waste targets
 - 3) Taking the necessary action to reduce food loss & waste
- Reducing FLW is an example of one of those “win-win” strategies:
What’s good for climate being good for the economy

Thank you!

Obrigada!

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