



# Post-harvest Loss and Sustainable Development

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**ADM Institute for the  
Prevention of Postharvest Loss**



UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



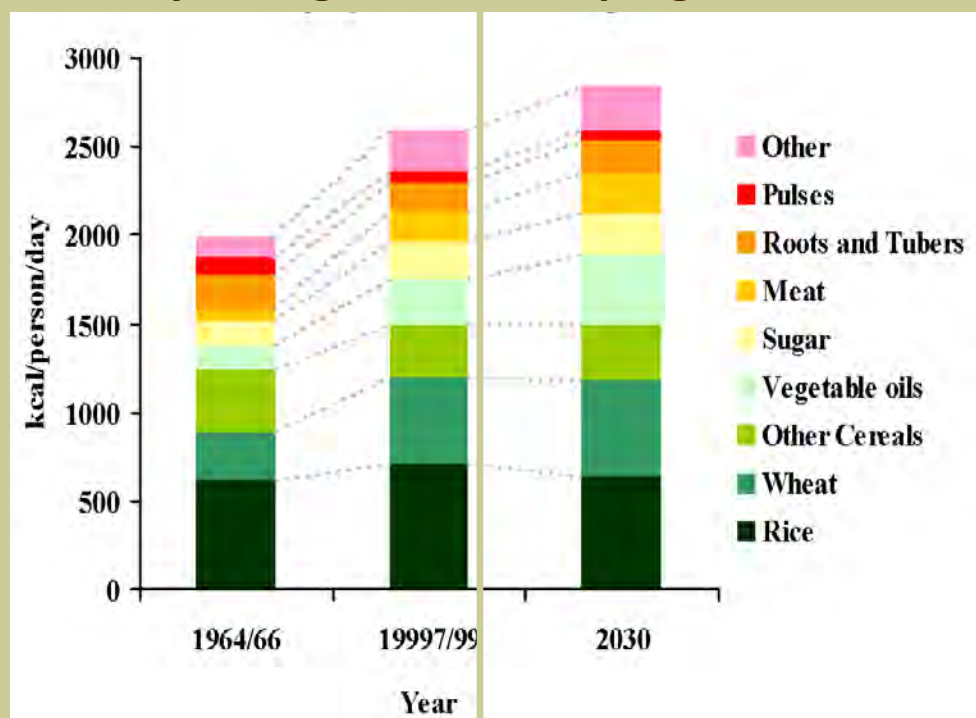
# AGENDA

- Food security/sustainable development challenges 
- The "complexities" of post-harvest loss (PHL)
- PHL, agribusiness and development



# Global Food Demand Is Predicted to Increase 70% by 2050 (FAO; 2009)

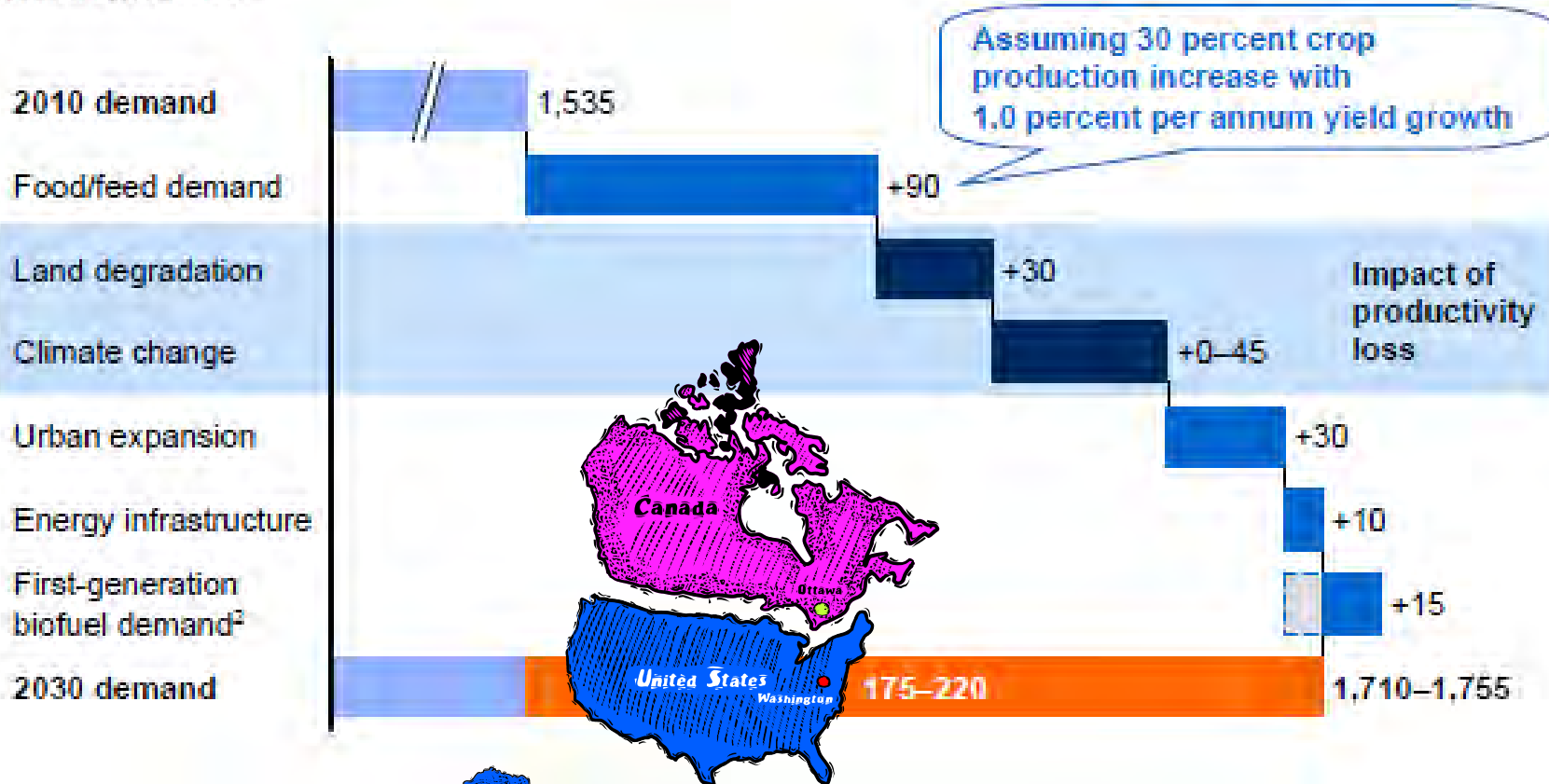
## Dietary changes in developing countries





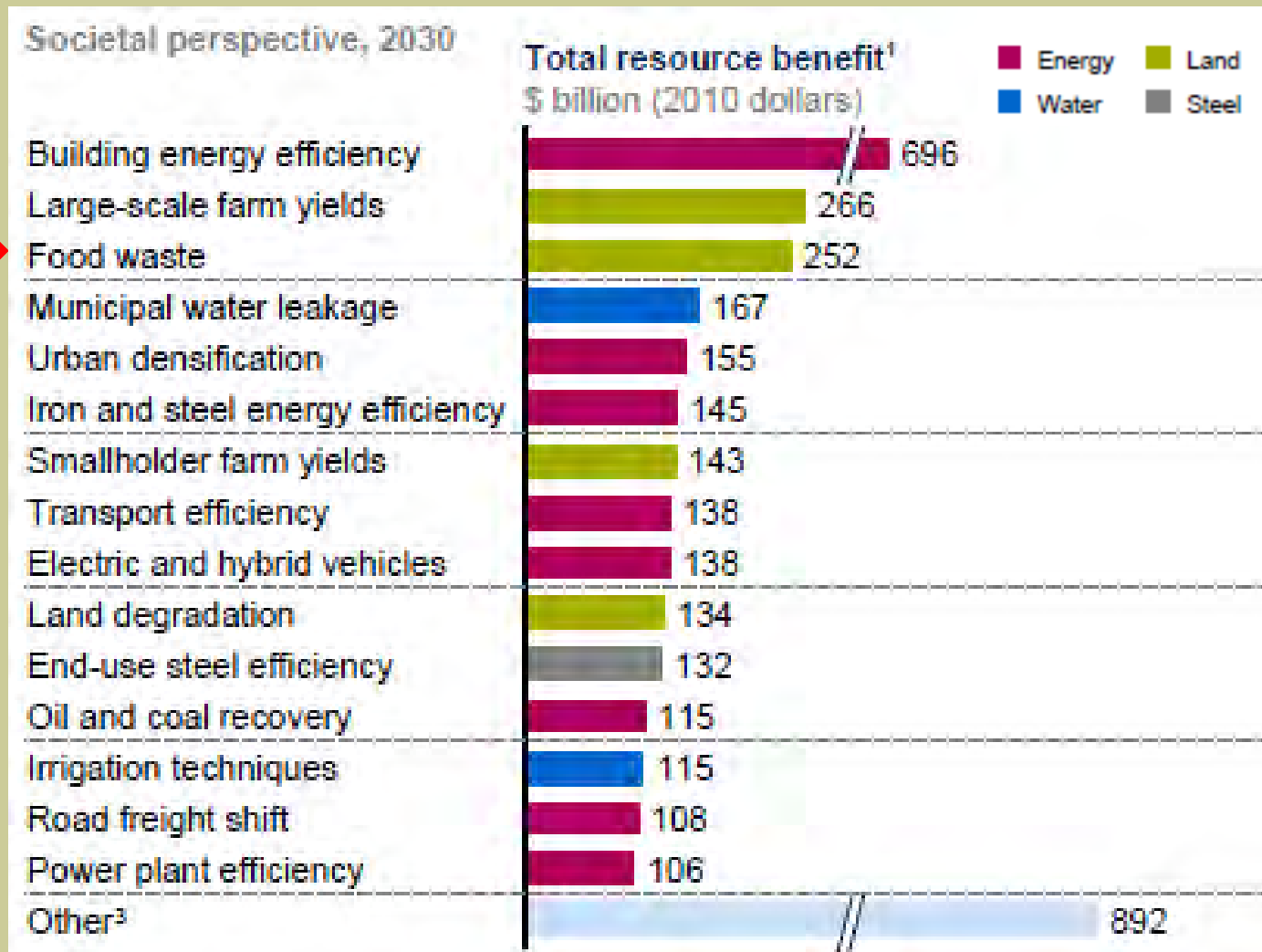
# 2030 Food Demands Require About 200 Million More Hectares (McKinsey; 2011)

Million hectares





# Reducing PHL and Increasing Yields Have High Potential (McKinsey; 2011)





# **Why Reduce Post-harvest Loss: Some Hypotheses (or Hallucinations?)**

- **Estimates suggest 1/3 of agricultural production is “wasted” and doesn’t reach food consumer**
- **Investment required to reduce PHL could be modest**
- **Technology advances should make reduction more feasible and less expensive**
- **Arable land, water, energy is in limited supply – reducing PHL can lessen pressure on scarce resources**



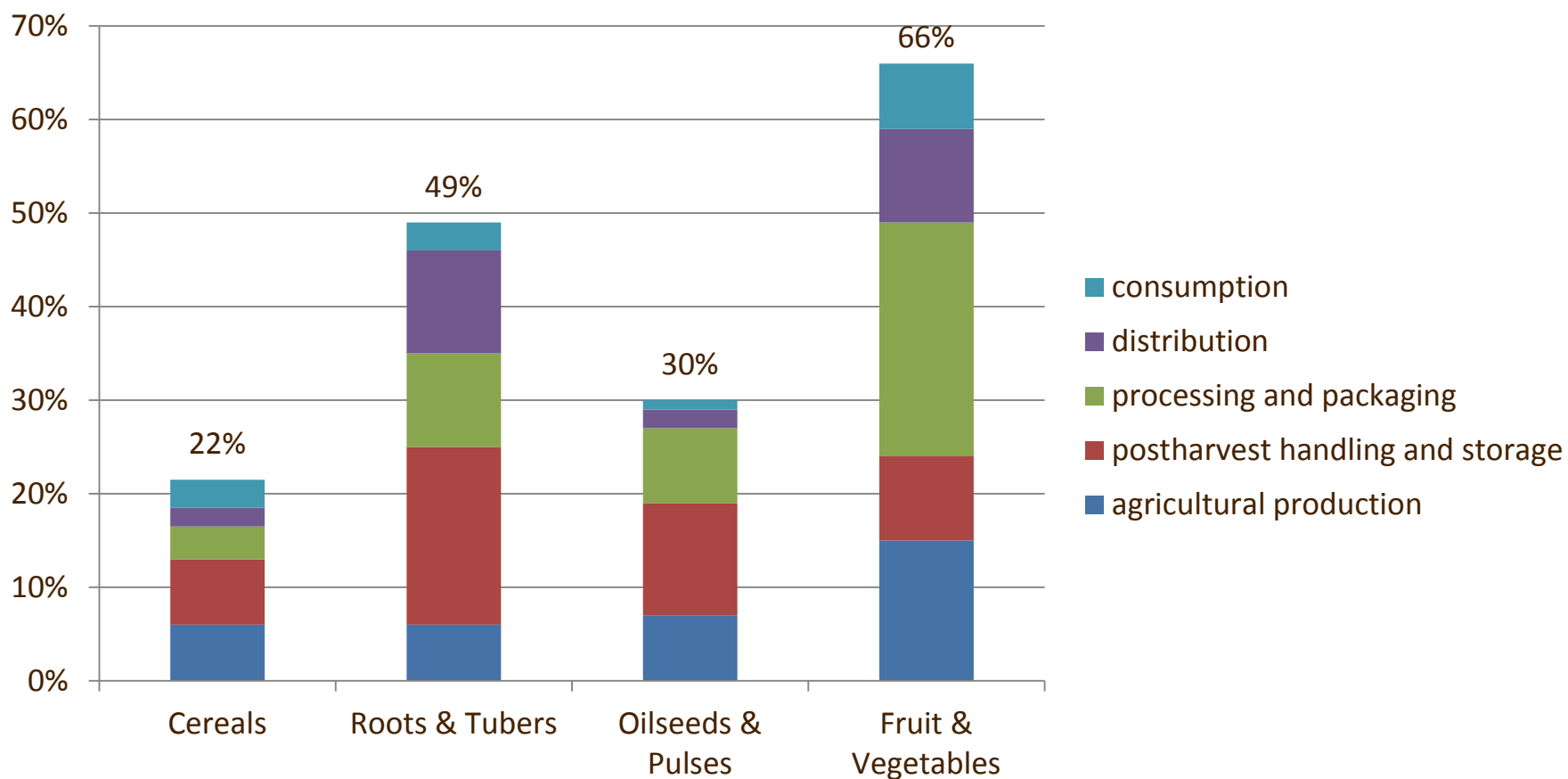
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# PHL Varies by Commodity (FAO; 2011)

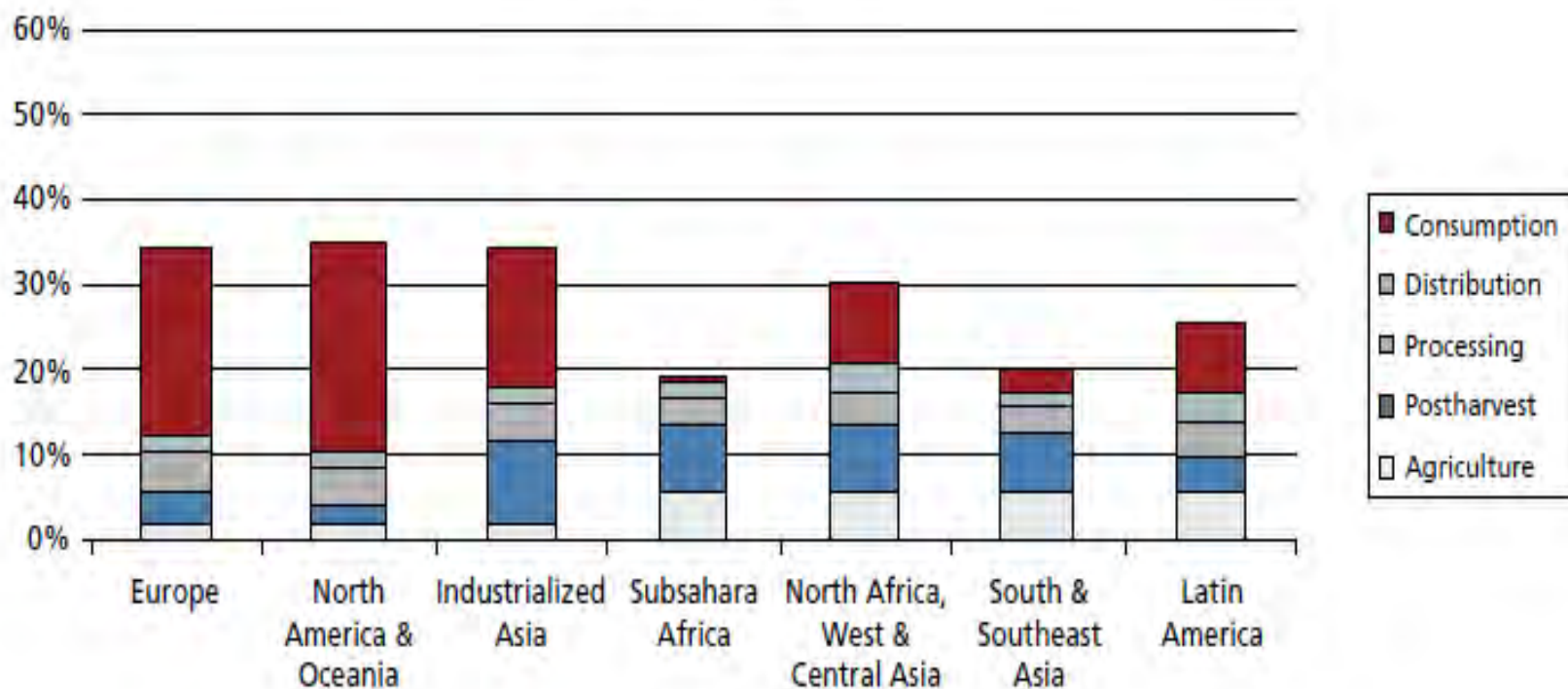
**Post-harvest loss estimates in South & Southeast Asia**







# Cereal Losses Across the World (FAO, 2011)





# Rice in SE Asia (IRRI; 2011)

**In SE Asia, physical losses range from 15-25%.**



**Quality losses range from 10-30%  
(loss in value)**





# PHL in China (some scattered observations)

- PHL in grains is 18% (2% - 5% in storage) (1992)
- PHL in storage in villages is 8% to 10% (farmer storage is primarily through traditional methods) (2006)
- PHL higher in fruits & vegetables (2003)
  - Fruits; 20% to 25%
  - Vegetables: 30%
- PHL of rice in total exceeds 14%



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# Reducing PHL is a LOCAL Activity



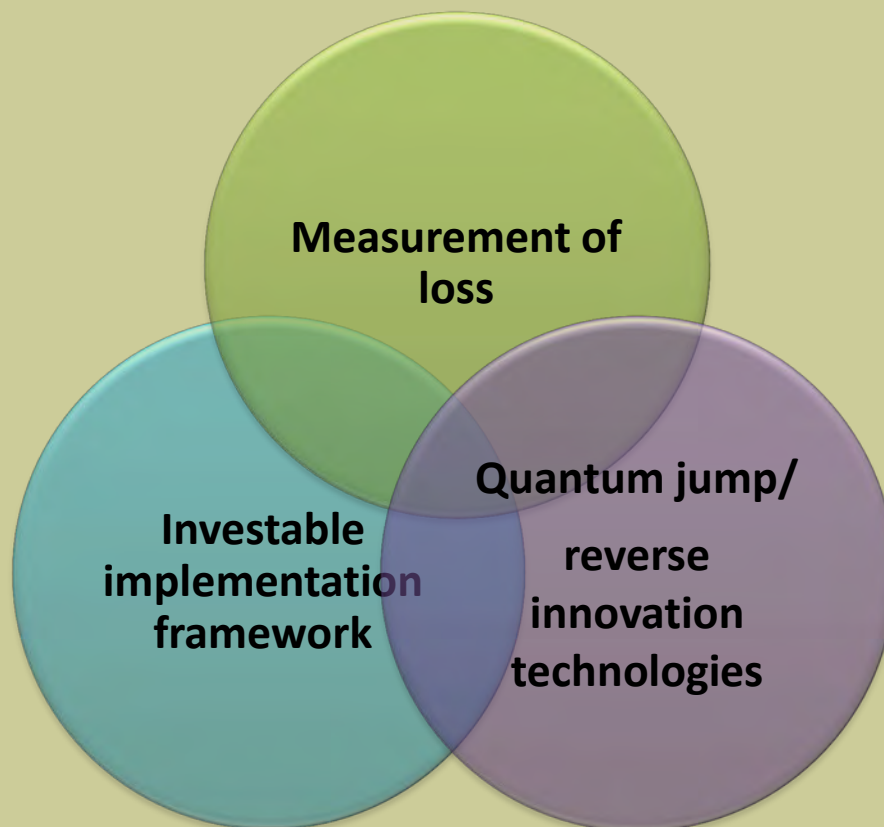


# “Organizational” Learning is Required for Broader Progress to Occur





# Priority Needs





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