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Agriculture and Food Security in Asia: Future Scenarios

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Outline

- Drivers of agricultural growth and food security
- Baseline projections of supply, demand and food security
- Conclusions and policy implications



Drivers of Agricultural Growth and Food Security



Drivers of Agricultural Growth and Food Security

■ Demand drivers

- Population growth: 9 billion people in 2050
- Urbanization: Asia 2008 = 44% urban; 2050 = 64% urban
- Income growth
- Biofuels and bioenergy
- GHG mitigation and carbon sequestration
- Conservation and biodiversity



Drivers of Agricultural Growth and Food Security

■ Supply drivers

- Water and land scarcity
- Climate change
- Investment in agricultural research
- Science and technology policy
- Management and governance reform

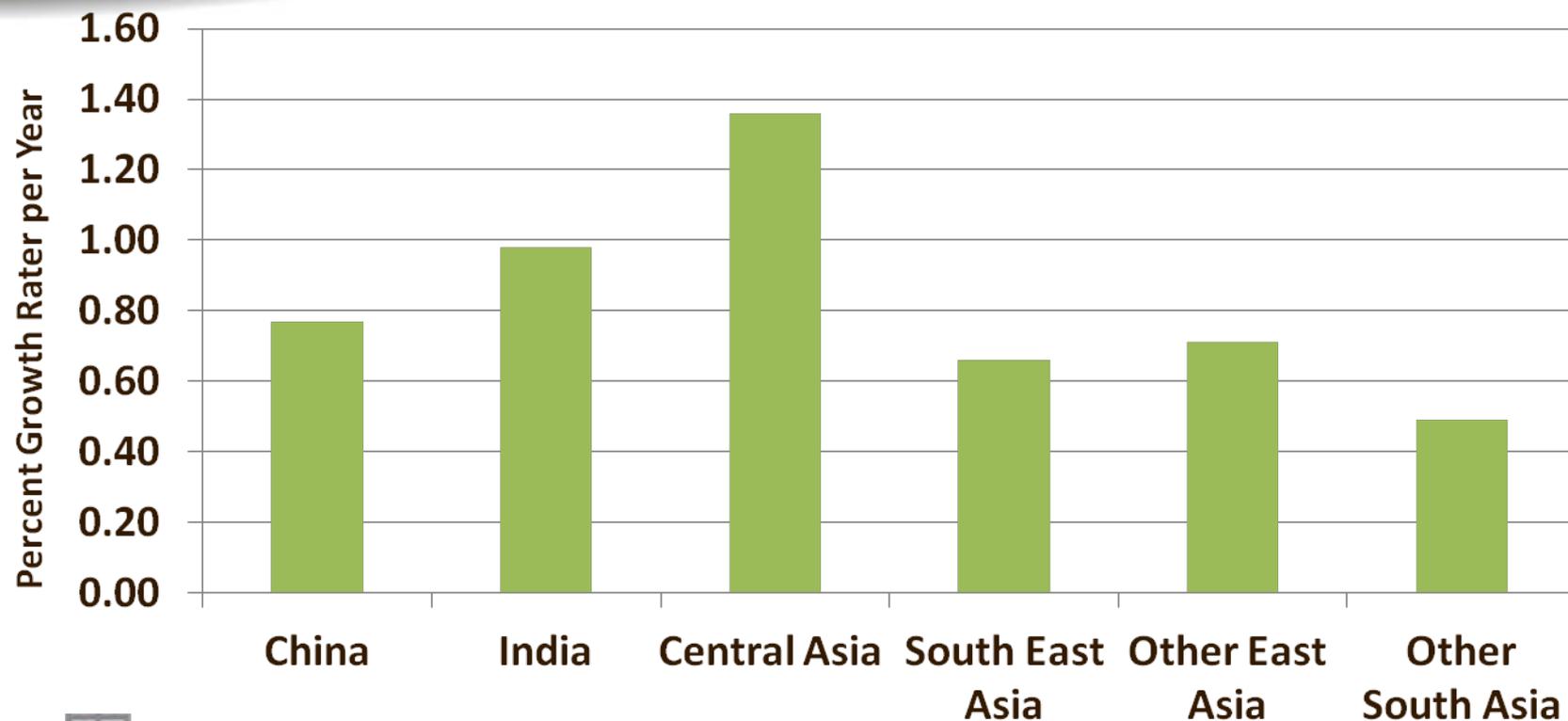


Baseline Projections of Supply, Demand and Food Security



Total Cereals Yields – Asia

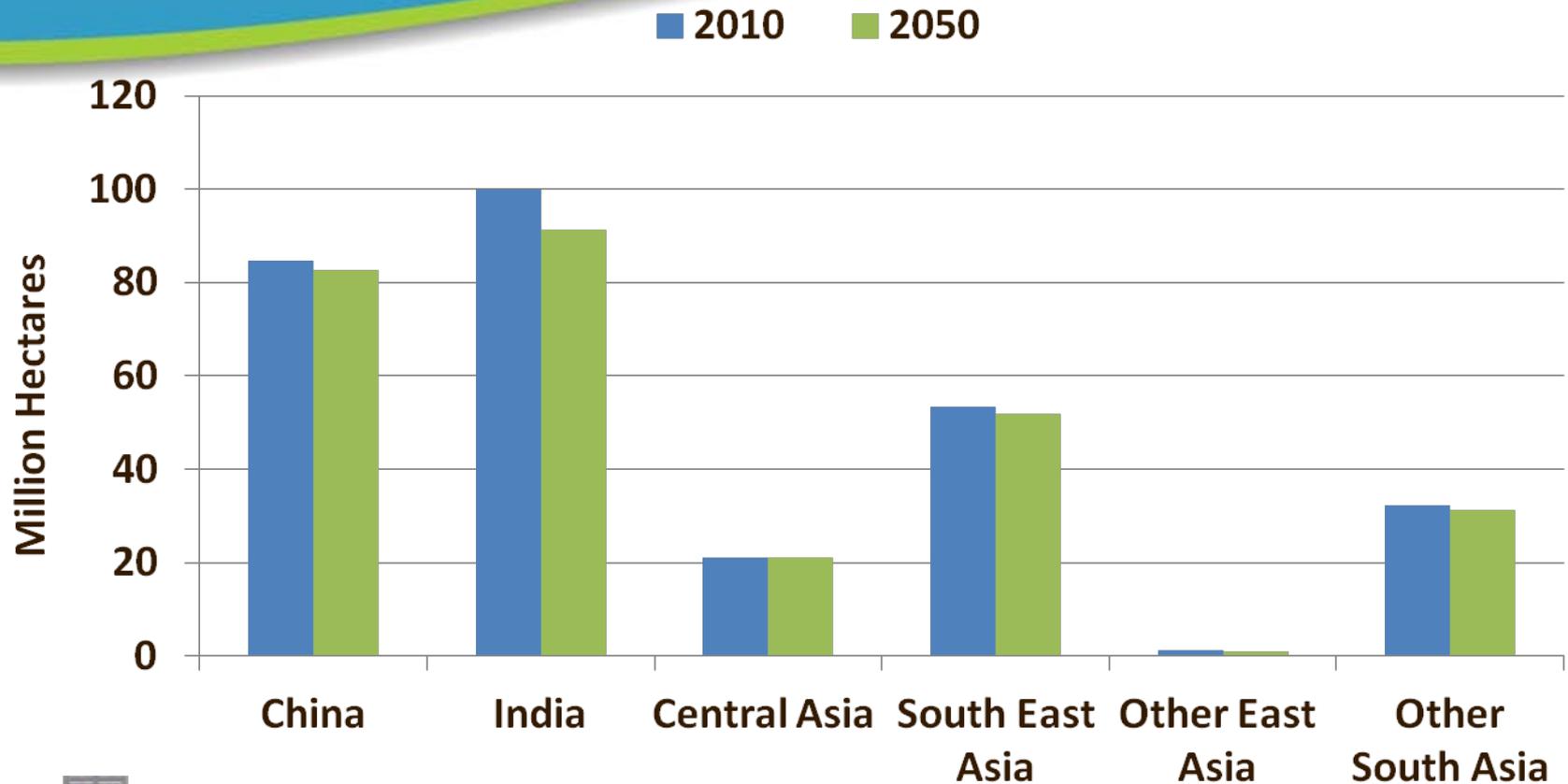
Annual Average Growth Rate



Source: IFPRI IMPACT Model, September 2011 simulations



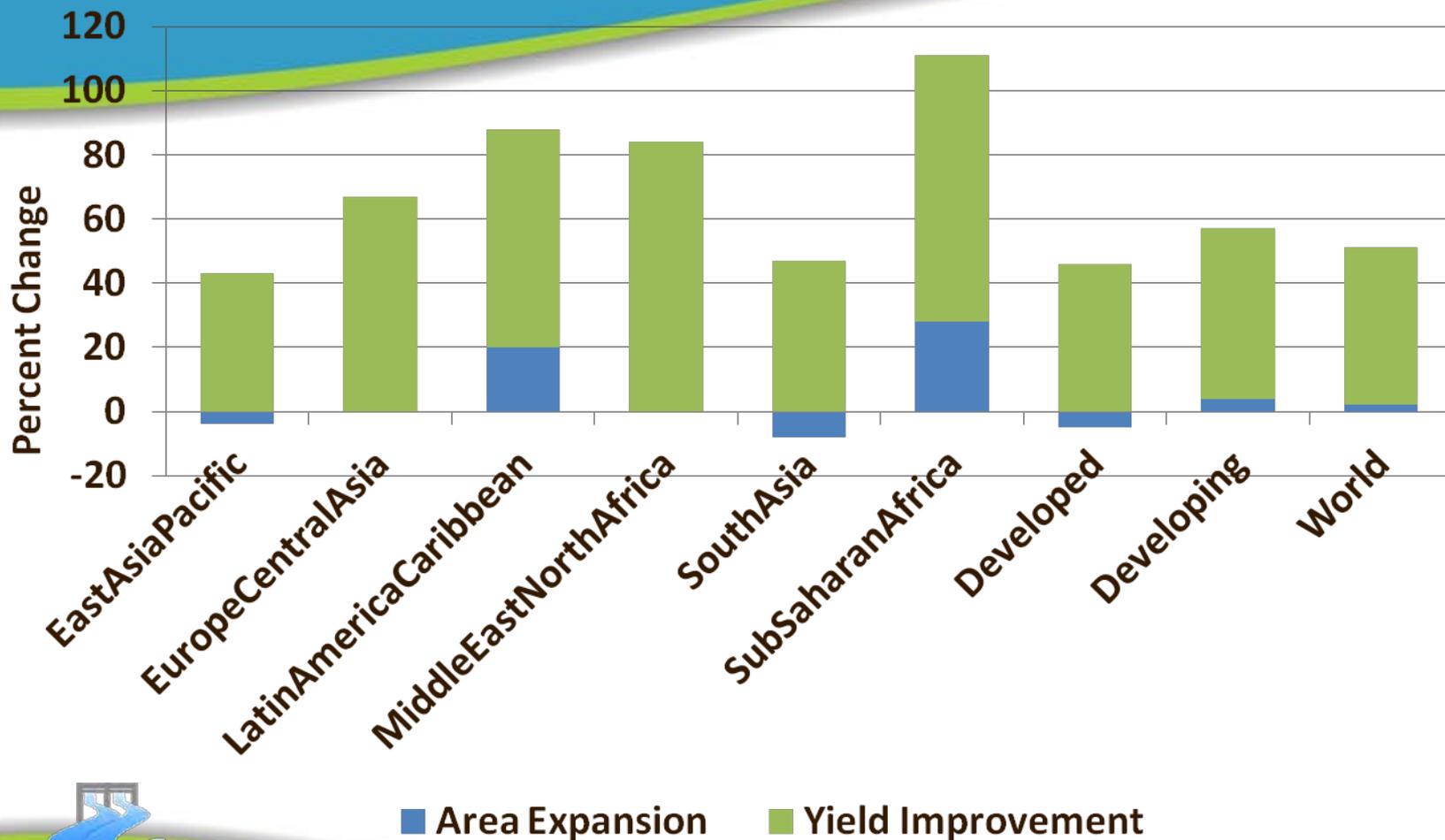
Asia Total Cereal Crop Area- Baseline Projections



Source: IFPRI IMPACT Model, September 2011 simulations

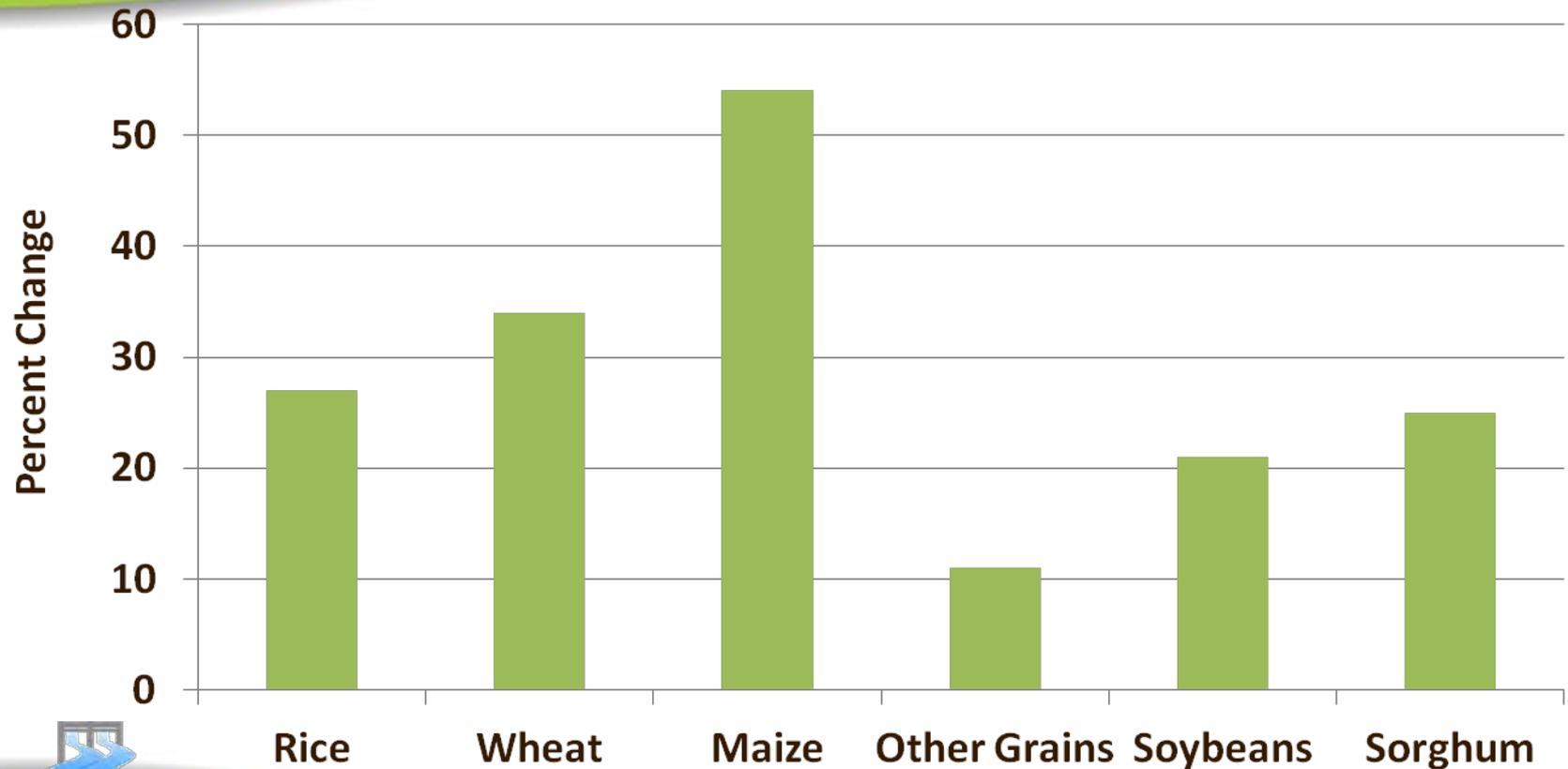


Source of Cereal Production Growth, 2010 - 2050



Source: IFPRI IMPACT Model, September 2011 simulations

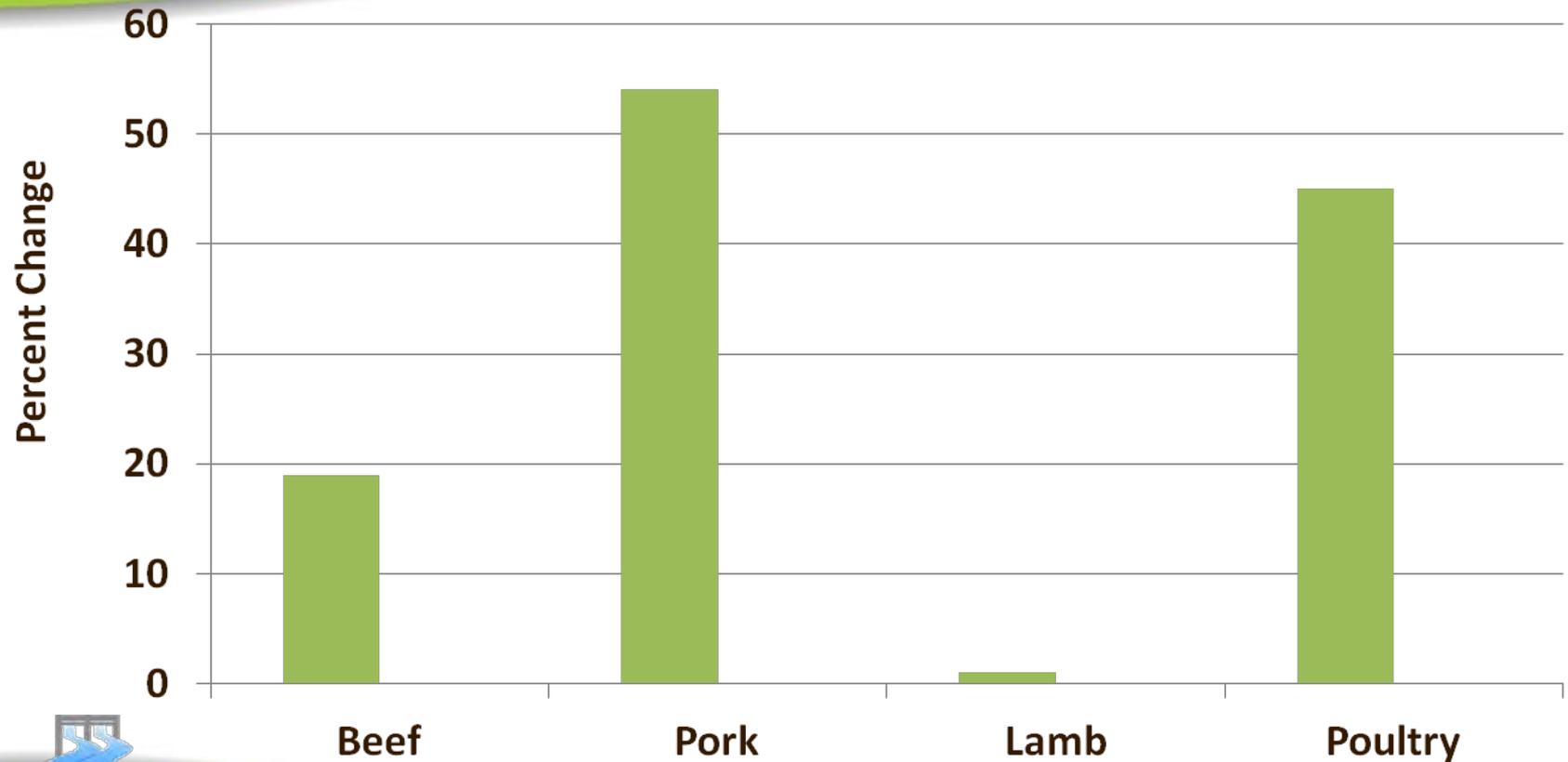
Percent Change in World Prices of Cereals 2010-2050, baseline



Source: IFPRI IMPACT Model, September 2011 simulations



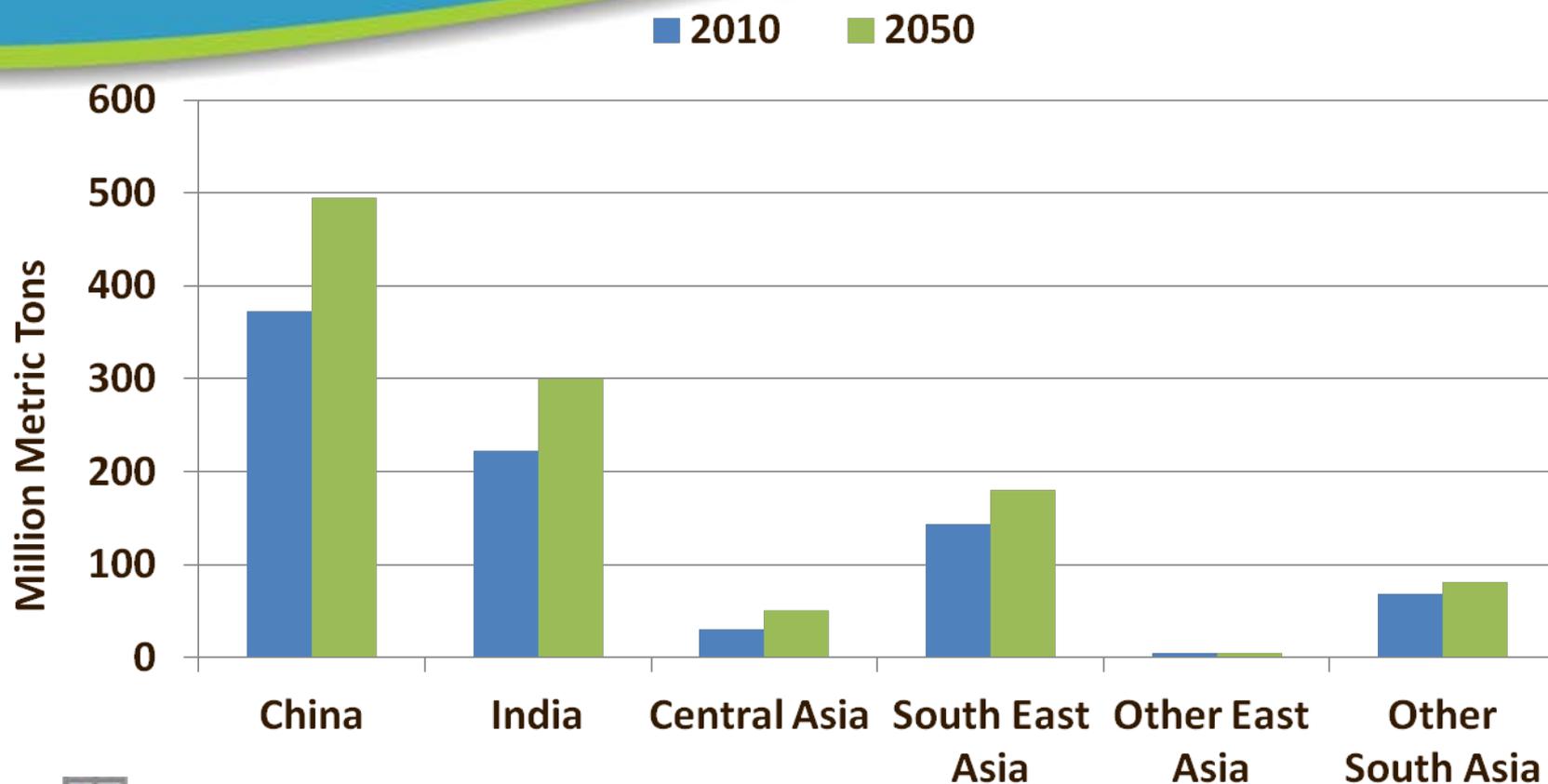
Percent Change in World Prices of Meat between 2010 and 2050



Source: IFPRI IMPACT Model, September 2011 simulations



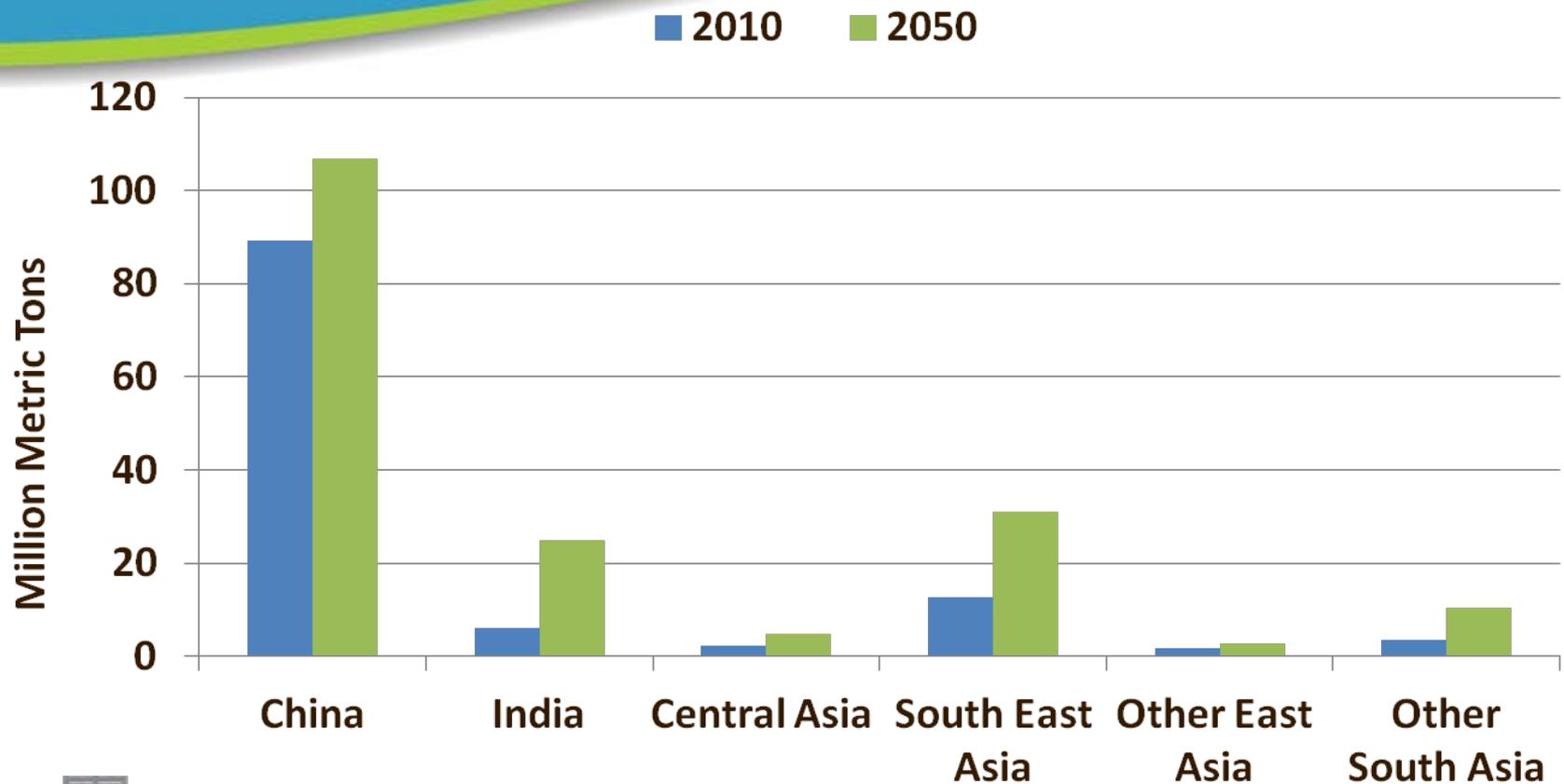
Asia Cereal Production- Baseline Projections



Source: IFPRI IMPACT Model, September 2011 simulations



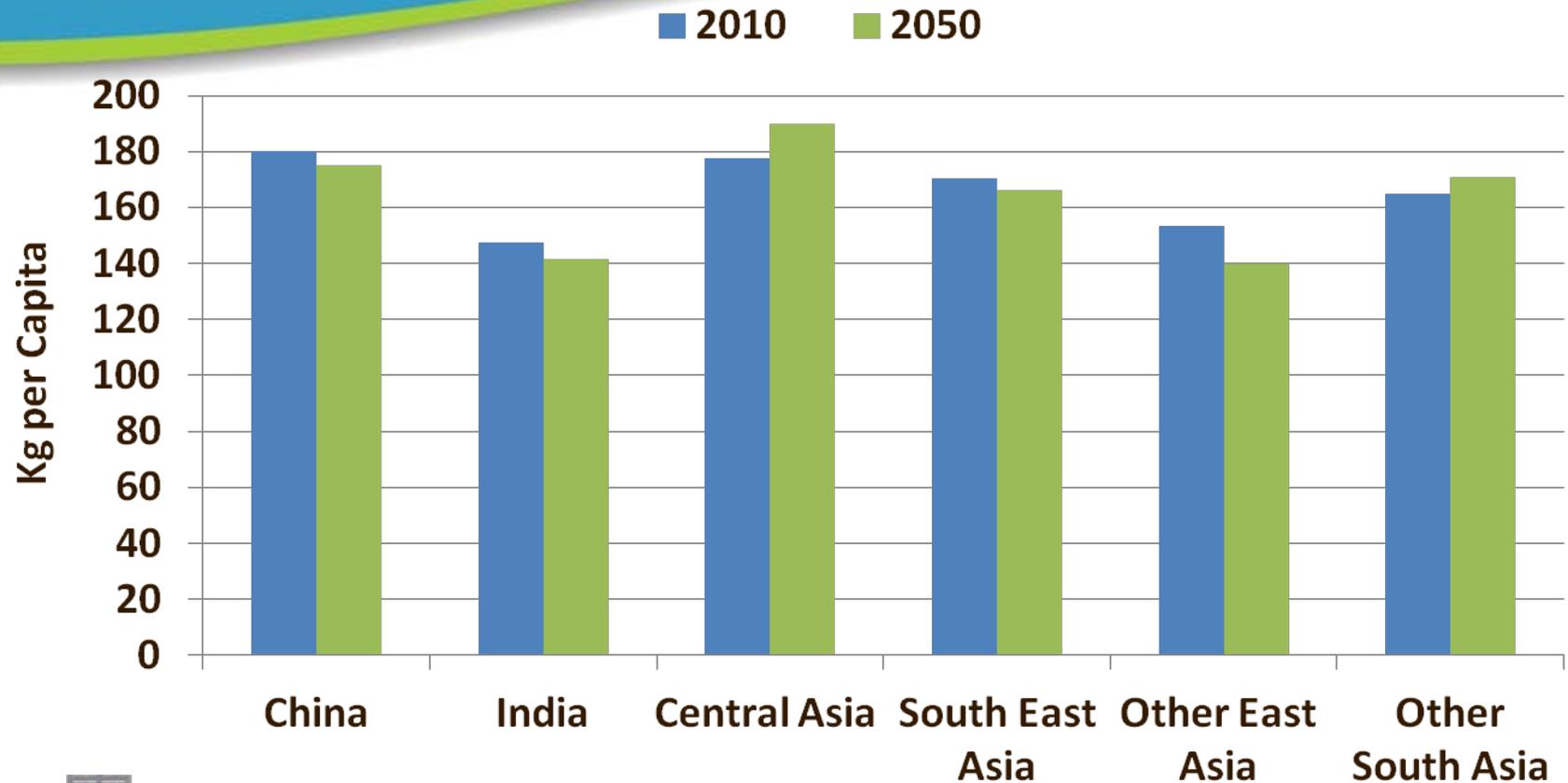
Asia Meat Production- Baseline Projections



Source: IFPRI IMPACT Model, September 2011 simulations

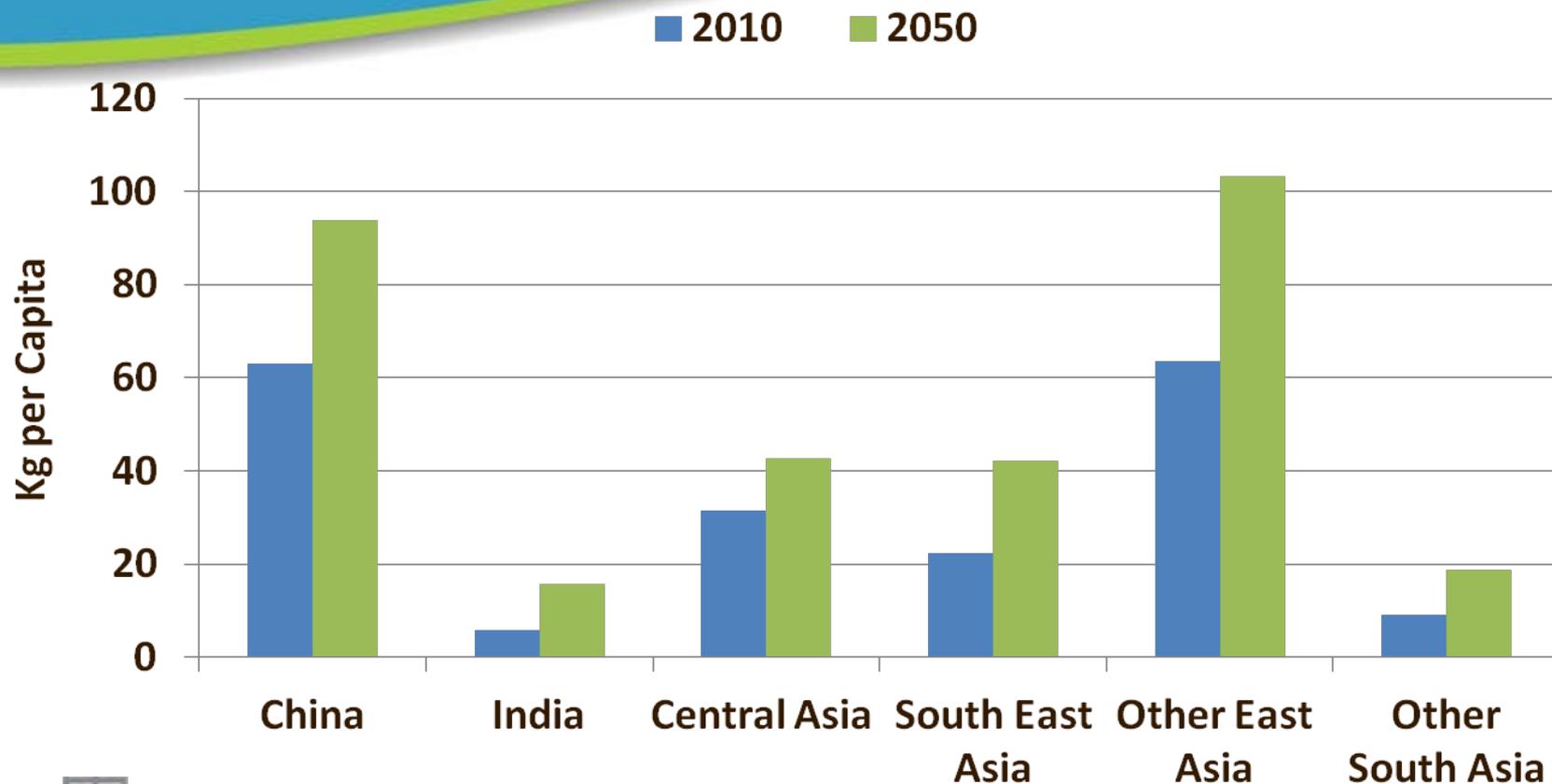


Asia Per Capita Cereal Food Demand- Baseline Projections



Source: IFPRI IMPACT Model, September 2011 simulations

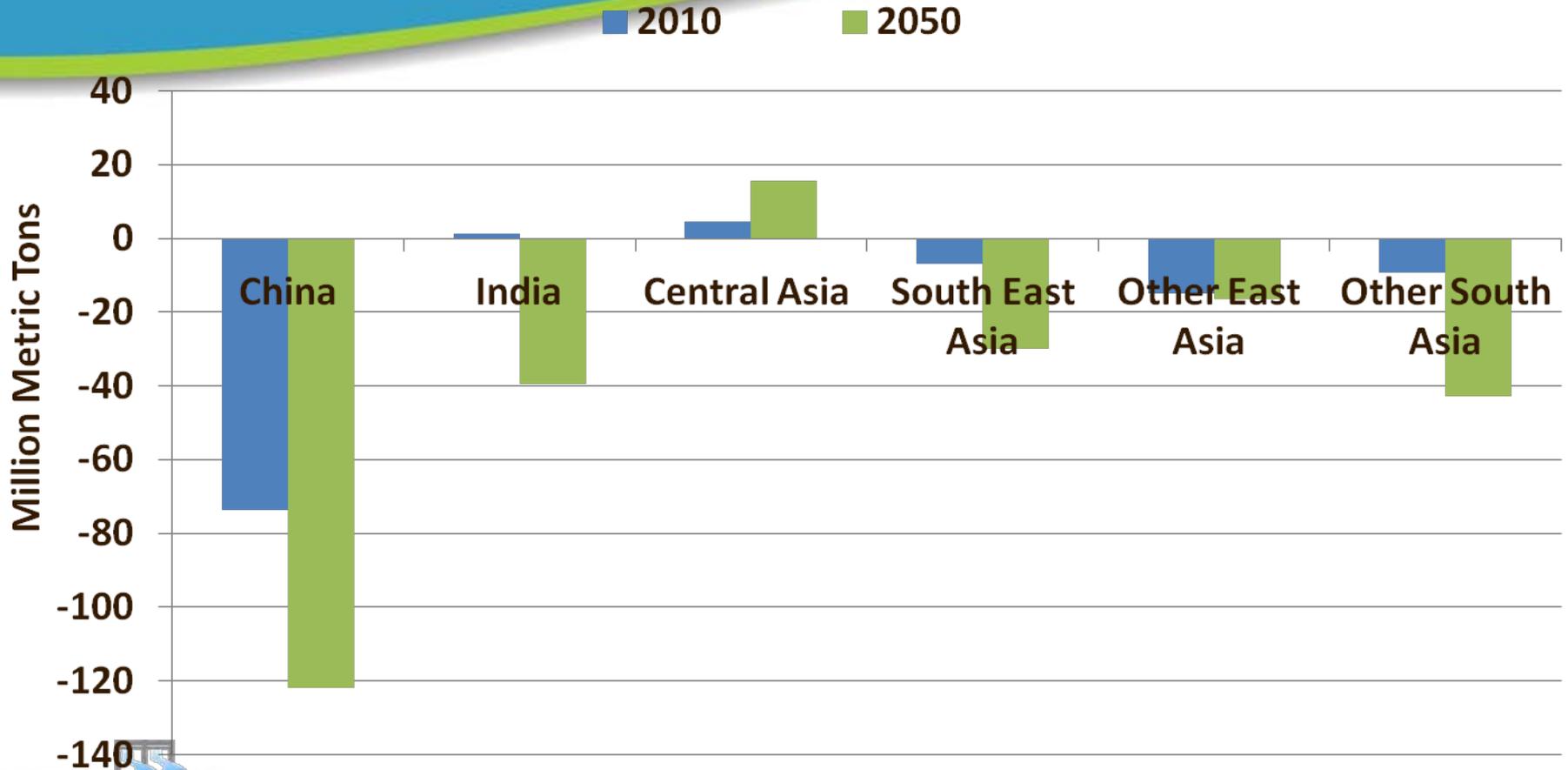
Asia Per Capita Meat Demand- Baseline Projections



Source: IFPRI IMPACT Model, September 2011 simulations



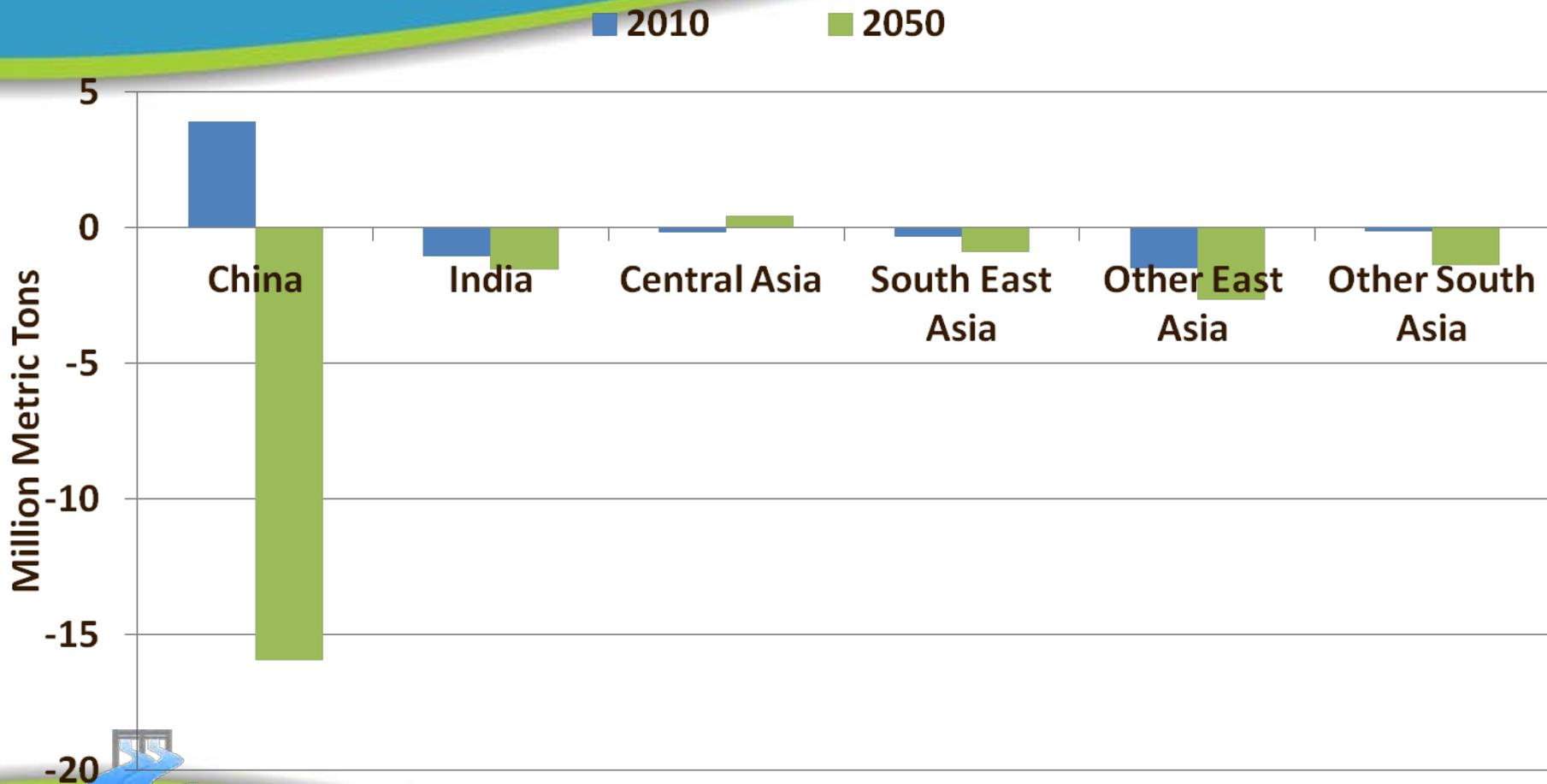
Asia Net Trade Cereals- Baseline Projections



Source: IFPRI IMPACT Model, September 2011 simulations



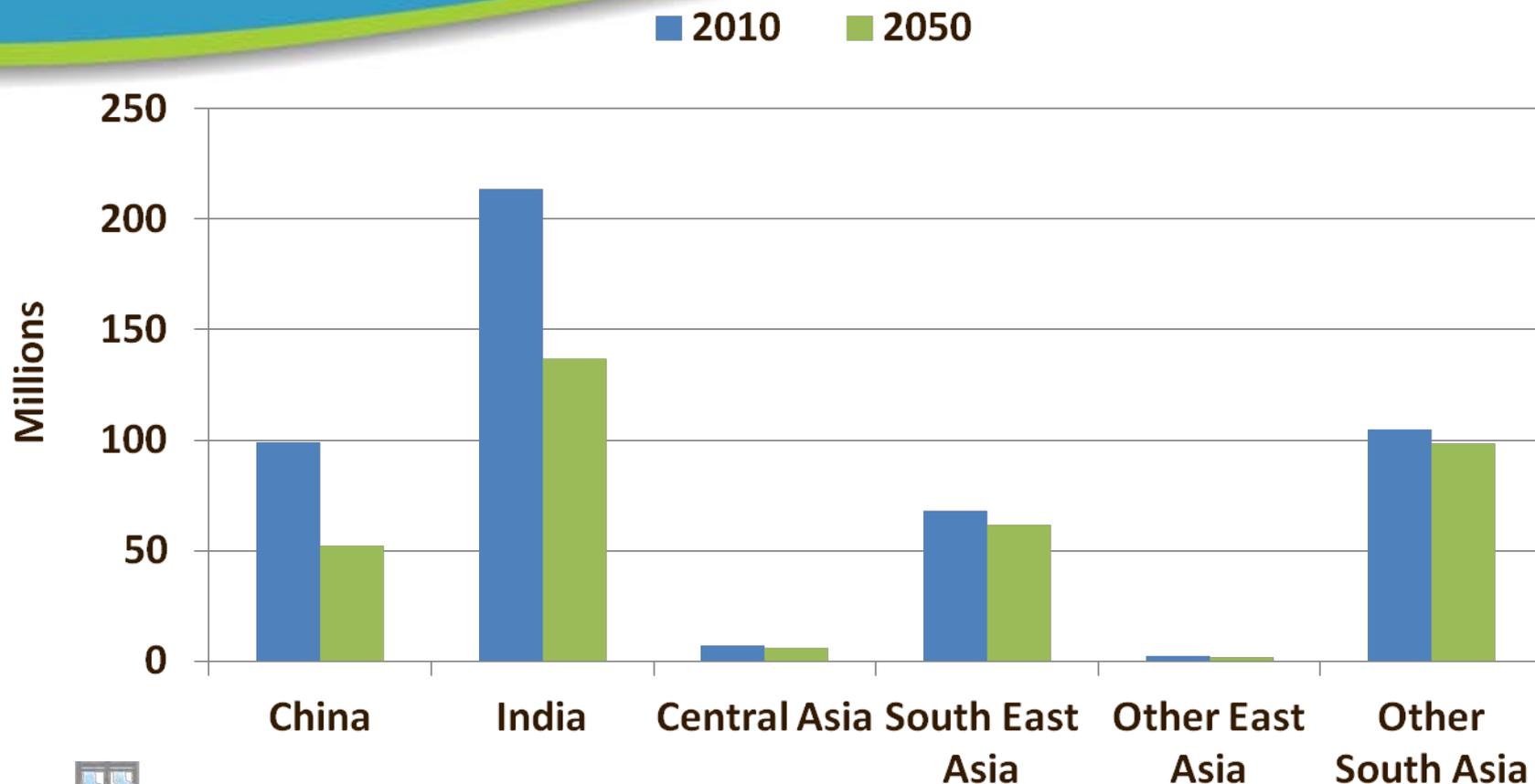
Asia Net Trade Meat- Baseline Projections



Source: IFPRI IMPACT Model, September 2011 simulations



Population at the Risk of Hunger - Asia



Source: IFPRI IMPACT Model, September 2011 simulations



Conclusions and Policy Implications



Agricultural Productivity

- Increasing crop productivity: agricultural research, on-farm management, and rural investment
 - Emphasis on crop and livestock breeding (including biotechnology) targeting abiotic and biotic stresses
 - Water harvesting, precision agriculture, minimum tillage, integrated soil fertility management, integrated pest management, reduce post harvest losses
 - Rural infrastructure investment to improve access to markets, information, credit, inputs, mobile phone towers

