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Shaping Demand and Supply Towards Improving Food Security

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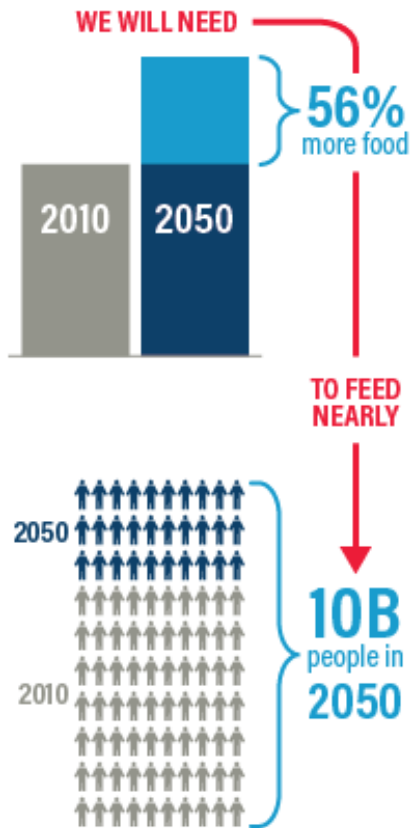
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The global food system needs attention..

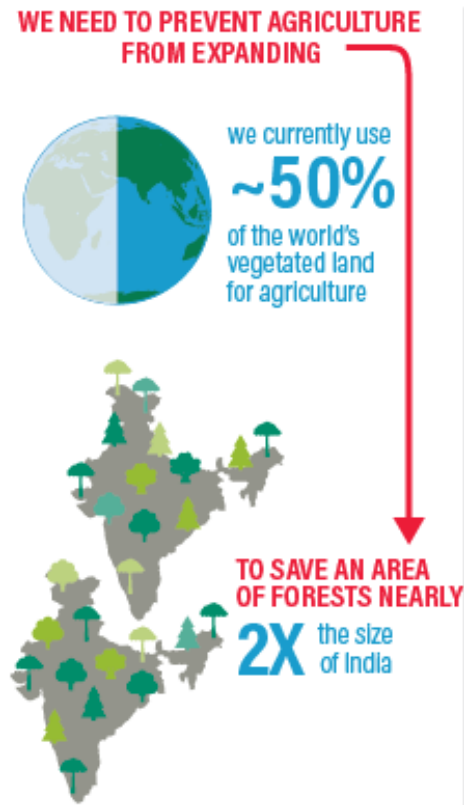
A food system that helps deliver by 2030	Vision/ interrelated targets	Currently off track
<p>Healthy economy (inclusive incomes, jobs & livelihoods)</p>	<ul style="list-style-type: none"> • Increase incomes of poor people that work in the food system • Support structural transformation 	<ul style="list-style-type: none"> • 2030 end poverty target unlikely to be met, significant lag in fragile, conflict affected countries
<p>Healthy people (secure and safe food and nutrition)</p>	<ul style="list-style-type: none"> • End hunger and acute food insecurity • Improve health outcomes [lower micronutrient deficiency and obesity, improved food safety, less zoonotic disease, and reduced AMR] 	<ul style="list-style-type: none"> • Increase in hunger since 2015 • 220 million acutely food insecure • 2 billion micro-nutrient deficient • 2 billion overweight or obese • Increase in zoonotic diseases • Anti-microbial resistance
<p>Healthy planet (environmentally sustainable practices)</p>	<ul style="list-style-type: none"> • Operate within safe planetary boundaries for sustainable resource use 	<ul style="list-style-type: none"> • Land degradation • Water scarcity • Pollution • 25% of global GHG emissions • Biodiversity loss • High loss and waste

...but long-term challenges are daunting

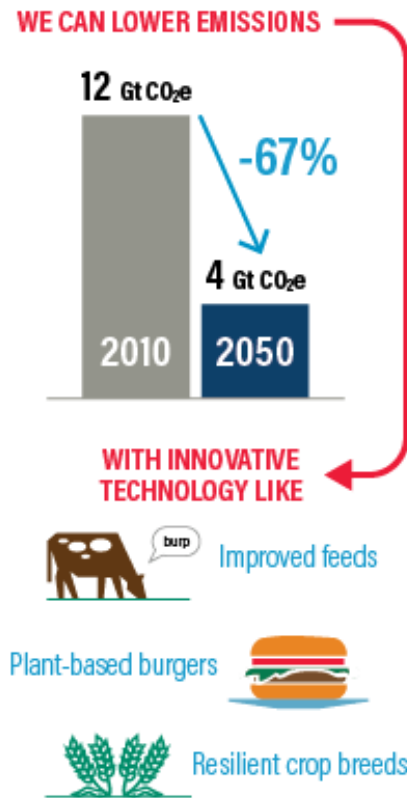
How do we feed 10 billion people...



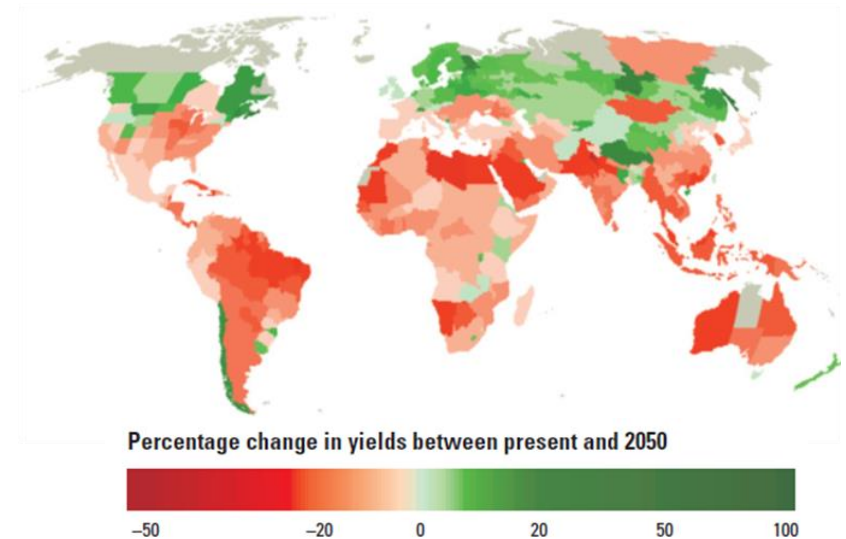
...without using more land...



...while lowering emissions?



...while improving climate resilience reducing water stress and biodiversity loss



...and lifting the extreme poor who work in the food system out of poverty

Mis-match of food supply and demand



- Addressing evolving food preferences – from staple food to a more diverse food (Malaysian households spend about 3 times more on fruits and vegetables and more than 2 times on bread and other cereals than on rice)
- 1/3 of Malaysian households can not afford a nutritious diet

Low farm income in smallholder sector



- Overuse of fertilizers has not sustained productivity gains in staple food (average staple food yield only 4.2 tons/ha compared to 5.8 ton/ha in Vietnam and 6.8 tons/ha China)
- Rural areas have a larger share of the population among the bottom 40%.
- Aging farmer population (avg. 53 years) with small and fragmented land holdings

Increasing environmental footprint



- Climate change is estimated to negatively affect yields of major crops in Malaysia - rice yields could be reduced by up to 31% within decade

Modernization of agrifood systems required modernization of food security policies

Reconsider...

Consider...

Efficiency

Trade restrictions and price band policies: impede stabilizing role of trade and distort production and consumption decisions

Producer / input subsidies: do not directly increase productivity or resilience and crowd-out other expenditures

Support to producers decoupled from production: to enhance technical and allocative efficiency at farm level

Targeted, transfers to consumers
Repurpose budget: from input/ output subsidies for productivity growth

Sustainability

Distortive producer support: encourage over-use of land, water, fertilizer and other inputs, increase GHG emissions, and create bias towards low-nutrition crops

Support shift from inputs- to knowledge-intensive production: e.g., improved breeds/varieties, precision agriculture, lowered GHG emissions.
Improve storage and processing infrastructure: to minimize food losses

Reliability

Over-reliance on reactionary (ex-post) risk management actions: e.g. *ad hoc* post-shock farmer and consumer transfers, protective trade policies.

Resiliency to shocks: through ex-ante preparedness and improved ex-post management systems (well-resourced, reliable and flexible reserves and contingency funds)

Potential solutions for the modernization of Malaysia's agri-food systems

Enhancement of agrifood policies to facilitate sectoral transformation:

- Shift the strategic focus of public investments on enhancing productivity, farm income, nutrition outcomes, environmental sustainability, consistent with the government's priorities.
- Support diversification to include new agro-based marketing and industrial activities that can broaden the income sources of rural households.
- Address structural constraints for changing farm scale and service delivery (ie mechanization)

Mainstreaming of Digital Agriculture Technologies as driver for transformation:

- Focus on innovation: institutional and technological, including digital agriculture technologies
- Focus on capacity constraints:
 - Individual: human capital development, especially to reduce digital divide;
 - Institutional: innovation systems, learning mechanisms/tools

Promote climate resilience and green agriculture as an opportunity for transformation:

- Low emission agriculture – lower input cost without compromising yields, reduced natural resource use, increased farm incomes and lower GHG emissions
- Support development of green agriculture value chains, and establishment of related infrastructure and regulatory standards
- Emergence of carbon standards in high income countries will drive the shift towards lower-emissions product categories; lower-emissions producers; and lower-emissions techniques (oil palm?)