Food Sustainability Index:
An annual measure of 3 food production and consumption paradoxes

Overview & Key Findings
Presentation for
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Overview

The Food Sustainability Index (FSI) measures the sustainability of food systems in 34 countries.
- Addresses three key issues outlined in the 2015 Barilla Center for Food and Nutrition (BCFN)'s Milan Protocol and designed around the Sustainable Development Goals (SDGs).
- The Index contains 35 indicators, and over 55 sub-indicators.
- These KPIs address societal, environmental and economic themes.

**Milan Protocol: Three pillars**

- **Food loss and waste**
  - Almost one billion people suffer from hunger, but a third of food is lost or wasted. Food loss and waste are rapidly moving up the policy agenda.

- **Sustainable agriculture**
  - The world is running out of cultivatable land. More sustainable farming techniques are needed.

- **Nutritional challenges**
  - Developing countries are facing the double burden of hunger and “premature” obesity.

**What is sustainability?**

Sustainability is defined as the ability of a country’s food system to be maintained without depletion and exhaustion of natural resources or compromises to health and integrity, and without compromising future generations’ access to food.

The index and related materials can be found @ foodsustainability.eiu.com
Food Sustainability Index: indicator framework

- Food lost as % of total food
- Policy response to food loss
- Causes of distribution-level loss
- Solutions to distribution-level loss
- Food waste per capita per year
- Policy response to food waste

**Food loss & waste**

- Water footprint
- Ag water withdrawals
- Initiative to recycle water for ag
- Fish stocks
- Nitrogen Use Efficiency
- Land under organic ag
- Sustainable urban farming initiatives
- Laws to protect smallholders
- Quality of ag subsidies
- Biodiversity
- R&D expenditure
- Total factor productivity
- Undernourishment
- Stunting
- Iodine deficiency
- Health life expectancy
- Prevalence of overweight
- DALYs for nutrition deficiencies
- Physical activity
- Sugar in diets
- Meat consumption
- Salt consumption
- GINI coefficient
- Policy response to dietary patterns
- Nutrition education

**Sustainable agriculture**

- Women in farming
- GHG emissions from ag
- Ag techniques for climate change mitigation
- Fish stocks
- Nitrogen Use Efficiency
- Land under organic ag
- Sustainable urban farming initiatives
- Laws to protect smallholders
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- Women in farming
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**Nutritional challenges**

* Select indicators only.

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Geographic scope

The FSI represents over 85% of global GDP and two-thirds of the global population.
Key Finding: Policy impacts

Countries with robust policy environments have more sustainable food systems.

**Common policy strengths**

<table>
<thead>
<tr>
<th>Policies to address food loss</th>
<th>Quality of policies to address food waste</th>
<th>Animal welfare policies</th>
<th>Working conditions for agricultural workers</th>
<th>Quality of policy response to dietary patterns</th>
<th>Nutrition education</th>
</tr>
</thead>
</table>

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Key Finding: Food system gaps

Even high-performing countries have challenge areas that still need to be addressed to maximise long-term food sustainability.

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Spotlight: Food sustainability in the Mediterranean

While the northern Mediterranean countries perform well across the three index pillars, the southern and eastern countries have less sustainable food systems.

<table>
<thead>
<tr>
<th>FOOD LOSS &amp; WASTE</th>
<th>WATER</th>
<th>LAND</th>
<th>NUTRITIONAL CHALLENGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insufficient policies to address food waste plague the SEMCs</td>
<td>The water footprint of many SEMCs is lower than their northern counterparts</td>
<td>Most countries across the region have embraced organic agriculture</td>
<td>Malnourishment plagues the SEMCs</td>
</tr>
<tr>
<td>The northern Mediterranean countries have proactive government policies to limit food loss and waste</td>
<td>Water withdrawals in the Middle East are particularly unsustainable</td>
<td>SEMCs have fewer policies to protect smallholders and poor animal welfare regulations</td>
<td>Mediterranean countries suffer from higher obesity rates than Asian countries, but the SEMCs have the fewest DALYs from nutritional deficiencies globally</td>
</tr>
<tr>
<td>Poor road infrastructure and low investment in transport hurt the SEMCs</td>
<td>Many SEMCs are engaged in local initiatives to recycle water, but projects are small-scale</td>
<td>Educated farmers support the overall sustainability of food systems</td>
<td>SEMCs consume the recommended meat intake, unlike their northern neighbours</td>
</tr>
</tbody>
</table>

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The FSI helps stakeholders understand sustainability challenges and identify best practices that can improve food systems globally.

**Best practices**
- Showcases those countries that have made strides towards achieving sustainable food systems
- Highlights policies that can drive societal, environmental and economic outcomes

**Areas of weakness**
- Evaluates weaknesses in food systems that require policy interventions and business/consumer action
- Provides potential solutions through identifying those countries with best practices

**Tangible measures of progress**
- Highlights platforms for action around critical food sustainability-related issues
- Sparks dialogue among governments, multilaterals and the private sector
- Supports the Sustainable Development Goals

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## Mapping the SDGs to the FSI

<table>
<thead>
<tr>
<th>FSI theme</th>
<th>Corresponding SDGs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food loss and waste</strong></td>
<td></td>
</tr>
<tr>
<td>Food loss</td>
<td>12, 2, 15</td>
</tr>
<tr>
<td>End-user food waste</td>
<td>12, 2, 15</td>
</tr>
<tr>
<td><strong>Sustainable agriculture</strong></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>6, 12, 14</td>
</tr>
<tr>
<td>Land</td>
<td>3, 4, 8, 9, 10, 12, 13, 15</td>
</tr>
<tr>
<td>Air</td>
<td>13, 15, 11, 12, 7</td>
</tr>
<tr>
<td><strong>Nutritional challenges</strong></td>
<td></td>
</tr>
<tr>
<td>Life quality</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>3, 4</td>
</tr>
<tr>
<td>Dietary patterns</td>
<td>1, 3</td>
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