

Increasing the resilience of Food Systems in Islamic Countries in the face of future crises



14TH MEETING OF THE COMCEC AGRICULTURE WORKING GROUP

MAIN CHALLENGES FOR SUSTAINABLE FOOD SYSTEMS

October 10th, 2019

Presented by:

DinarStandard



Agenda

1. Overview of challenges

2. Success factors

Challenges

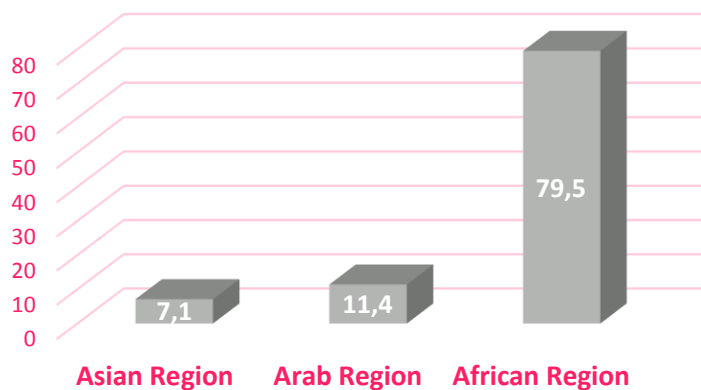
OIC food crises






Several OIC countries are facing acute food crises

98 million people are food insecure in the OIC

OIC countries are among the worst affected by Food Crises

Number of Severely Food Insecure People (million) (3-year average) 2015 – 2017



Country	2018 (Million)	Main Causes/Drivers
Yemen 	15.9	Insecurity, and related displacement;
Afghanistan 	10.6	Insecurity; Climate shocks – dry spells, and related displacement
Syrian Arab Republic 	6.5	Insecurity, and related displacement; Climate shocks - dry spells, and related production shortfalls
Sudan 	6.2	Economic shocks - downturn; insecurity, and related displacement
Nigeria 	5.3	Insecurity and related displacement; Climate shocks – floods

Challenges

Challenges

The OIC overall is inhibited by structural challenges, research and limited trade

<u>Area</u>	<u>Weakness</u>	<u>Strength</u>	<u>Data</u>
Natural endowments		▲	29% of arable land; 50%+ of key resources
Demographics		▲	54% below age 24
Institutional infrastructure	▼		Only GCC rank in top 50 food safety
Agriculture	▼		Sampled On-farm losses exceed 30%+
Food production	▼		No global OIC food leaders
Research-based capabilities	▼		1.7% of global patents
Intra-OIC trade	▼		Intra-OIC trade ~ 20% OIC imports

Challenges

Challenges

The OIC agri-food sector faces numerous challenges

Production and availability

Only seven OIC countries were in the EIU top 50 countries in food availability (a composite measure of the quality of production and sustainability of food imports). Saudi Arabia ranked highest at 35th globally, followed by Kuwait, Egypt, Malaysia, Qatar, Bahrain, and the UAE.

On farm losses

Based on a prior COMCEC study **observable losses on-farm were extensive, exceeding regional benchmarks and the 24% global benchmark.** Fruit and vegetables are particularly affected, while oilseeds and pulses saw the lowest levels of waste

Technology

Ireland, with a population of 4.5 million, has over 22 spray driers in its dairy industry. By contrast, **Pakistan has only 6 spray driers** for its population of over 200 million. Spray driers convert juices, milk, and other liquids into *high-shelf-life powders* that can be stored and transported

Challenges

Challenges

The OIC falls behind counterparts on important research metrics

Academic research

The OIC only has 661 researchers per million people on average. This is well behind the world average of 1,643 and even further behind the EU average of 5,101.

R&D

OIC R&D expenditure accounted for only 0.37% of OIC GDP, lower than the world average of 1.75% of GDP and the target of 1% set by the OIC Ten Year Program of Action (TYPOA).

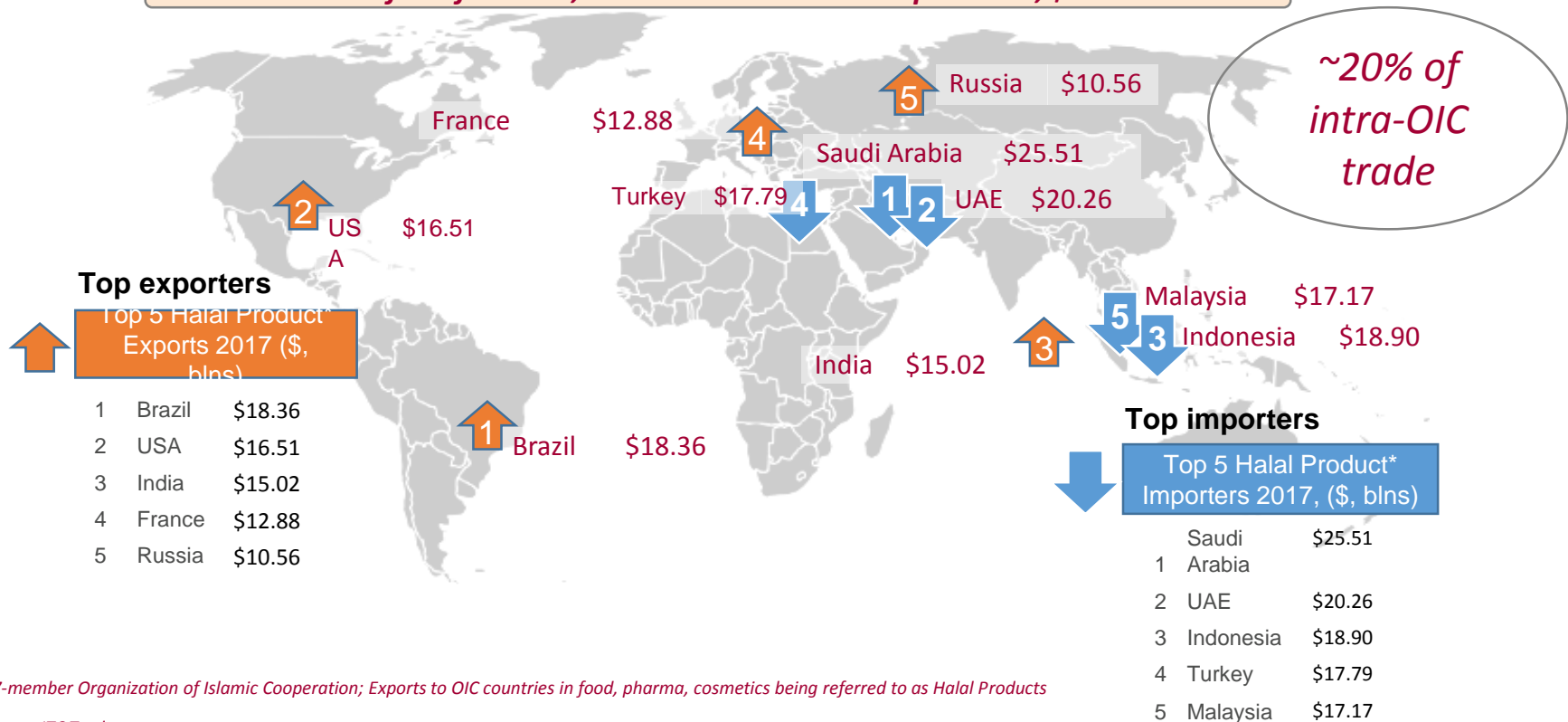
OIC represented only 1.7% of patents filed in 2016, far below other developing countries (accounting for 11%).

Challenges

Challenges

Intra-OIC trade is limited, inhibited by tariffs

2017 Trade flow for Food, Pharma and Cosmetics products, \$ in billions



**57-member Organization of Islamic Cooperation; Exports to OIC countries in food, pharma, cosmetics being referred to as Halal Products*

Source: ITC Trademap

Case study learnings: Resilience and cooperation

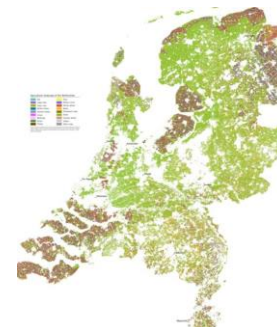
OIC cooperation

Despite robust progress, important gaps remain

Area of Cooperation	Bodies Involved	
Research and cooperation	 COMCEC	13 reports; 14 meetings
Agricultural Project Financing	 IsDB البنك الإسلامي للتنمية Islamic Development Bank	\$9.4 billion in agriculture projected funded
Training Programs and Initiatives	 SESRIC	5-year cotton action plan
Standardization Initiatives	 SMIC The Standards and Metrology Institute for the Islamic Countries	OIC-wide training
Trade	 COMCEC	OIC Trade Preferential System
Food Security	 Islamic Organization for Food Security l'Organisation Islamique pour la Sécurité Alimentaire المنظمة الإسلامية للأمن الغذائي	Dedicated body

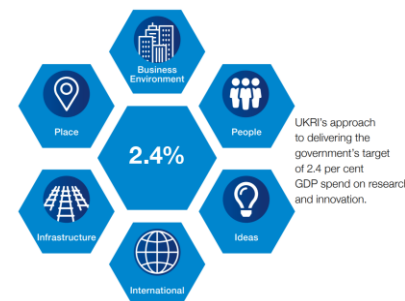
A common trade area remains an aspiration

Example:



A collaborative project management function would be transformational

Example: Innovate UK



Agenda

1. Overview of challenges
 - 2. Success factors**
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Success factors

Best practices

The U.S. and Ireland are particularly instructive pathways to food system stability



Examples (not exhaustive)			
Monitoring	Adaptation & mitigation	Resilience	Cooperation
<ul style="list-style-type: none"> Foodborne illness monitoring Household poverty surveys 	<ul style="list-style-type: none"> FDA food chain risk assessment 15 domestic food and nutrition programs 	<ul style="list-style-type: none"> US land grant system for agriculture colleges USDA research 	<ul style="list-style-type: none"> Free trade agreements Technical and financial aid
<ul style="list-style-type: none"> Agricultural total factor productivity Consistent poverty indicator 	<ul style="list-style-type: none"> National mitigation plan Agriculture Safety net loans 	<ul style="list-style-type: none"> National Food innovation hub Rural innovation and leader's program 	<ul style="list-style-type: none"> EU Common market membership Collaboration with UN FAO and World Bank

Success factors

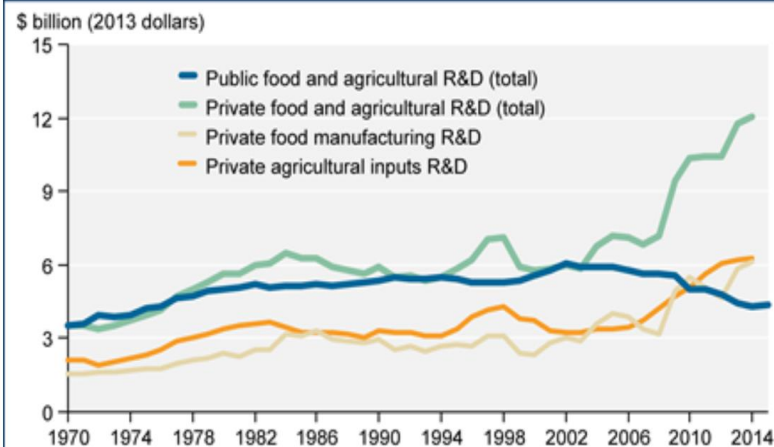
R&D and education

USDA serves as an example on how R&D underpins food security

\$10 billion spent on agricultural research

35,646 agricultural degrees awarded in 2016

Food and agricultural research and development (R&D) funding, real (inflation-adjusted) dollars, 1970-2015



Note: Private agricultural research funding data are through 2014; public agricultural research funding is available through 2015.

Source: USDA, Economic Research Service (ERS) using data from National Science Foundation, USDA's Current Research Information System, and various private sector data sources. Data are adjusted for inflation using an index for agricultural research spending developed by ERS. Data as of February 2019.

Texas A & M University-College Station	University of California-Davis	University of Nebraska-Lincoln
3.36%	1.63%	1.28%
Iowa State University	University of Florida	Virginia Polytechnic Institute and State University
2.45%	1.6%	1.28%
University of Illinois at Urbana-Champaign	Purdue University-Main Campus	Oregon State University
1.97%	1.54%	1.17%
Kansas State University	Michigan State University	University of Georgia
1.92%	1.52%	1.15%
California Polytechnic State University-San Luis Obispo	Ohio State University-Main Campus	Colorado State University-Fort Collins
1.69%	1.5%	1.1%
North Carolina State University at Raleigh	Oklahoma State University-Main Campus	South Dakota State University
1.64%	1.32%	1.09%
		University of Missouri-Columbia
		1.08%

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We look forward to hearing from you.

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