



DuPont, Nutrition & Health, Soy Protein

KENT HOLT
SR. MANAGER, EXTERNAL AFFAIRS
DUPONT, NUTRITION AND HEALTH

We apply our science to help solve some of the world's greatest challenges in:



FOOD



ENERGY



PROTECTION

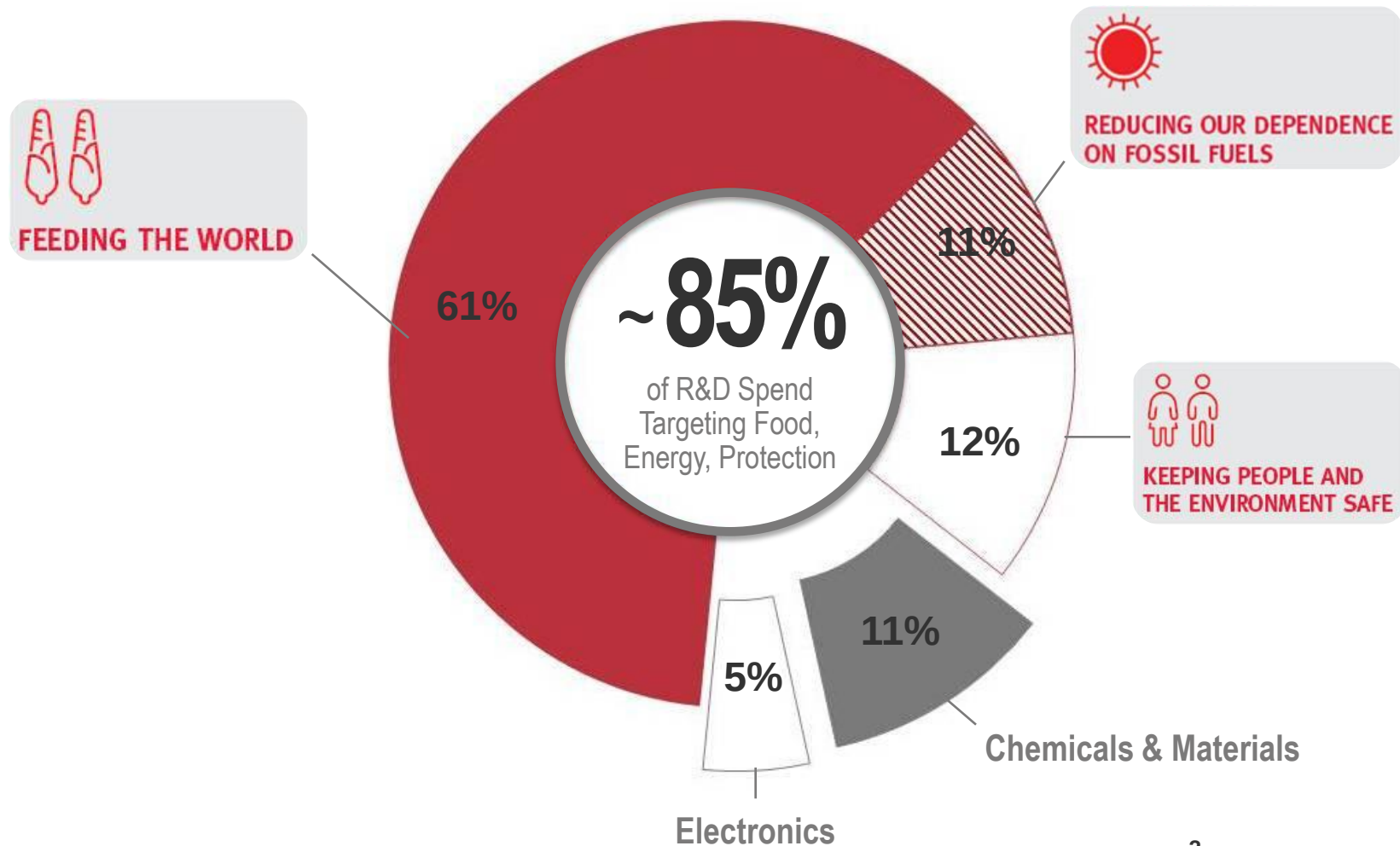
FEEDING THE WORLD

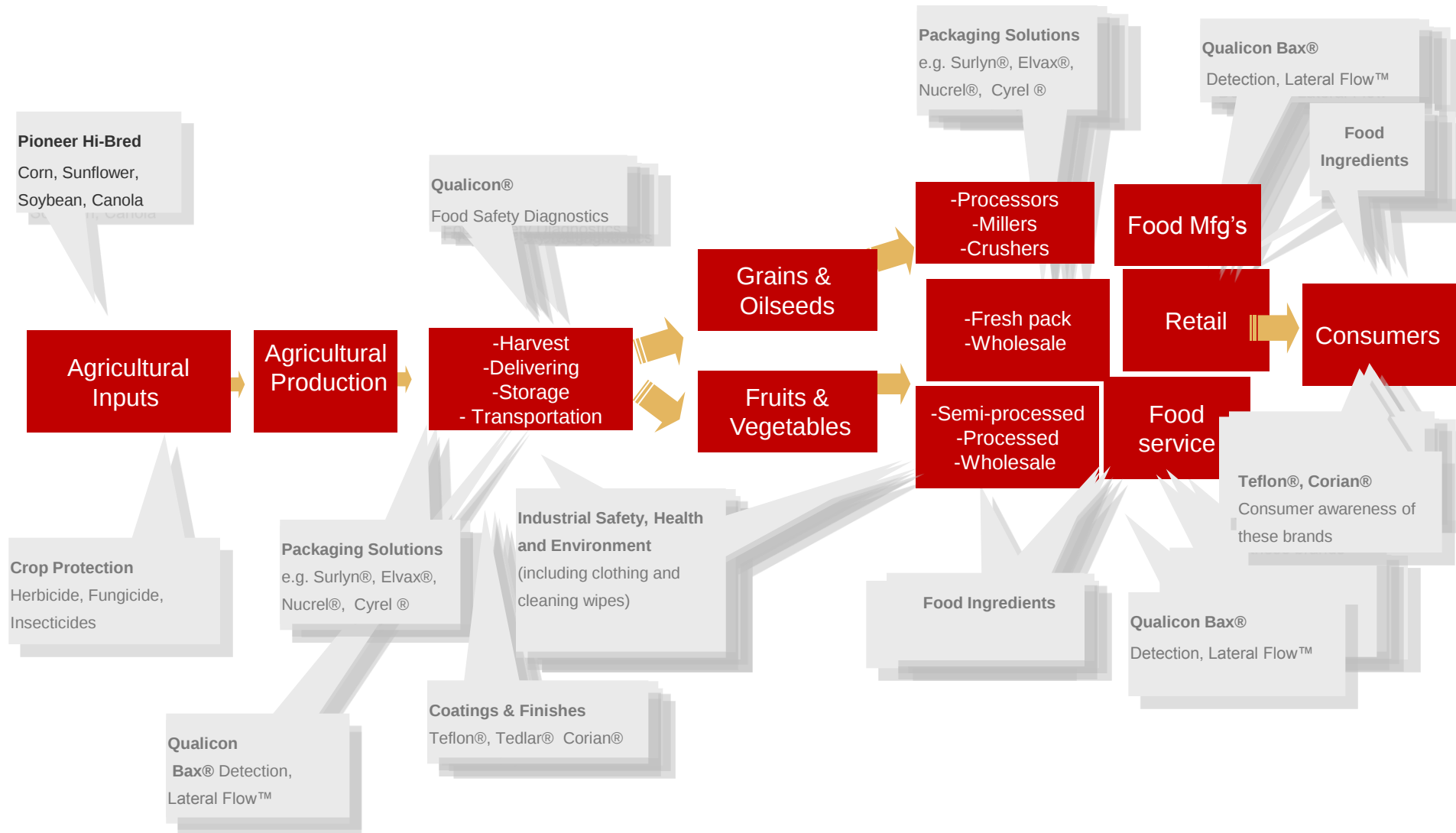
REDUCING OUR DEPENDENCE
ON FOSSIL FUELS

KEEPING PEOPLE AND
THE ENVIRONMENT SAFE

Aiming our R&D engine at these big challenges

\$1.7 billion DuPont Actual R&D Spend in 2010





DuPont Nutrition & Health



Food Science and Application

- State-of-the-art ingredient knowledge
- Industrial know-how on all food products
- Worldwide network of regional food innovation centres
- Pilot plant facilities for development of robust food solutions
- Analytical set-up for taste & texture

- Bakery
- Beverage
- Confectionery & bars
- Culinary
- Dairy
- Dietary supplements
- Frozen desserts
- Fruit
- Meat, poultry & seafood
- Oils & fats
- Special nutrition
- Physical food science
- Sensory analysis
- Analytical chemistry



Food Application Centres



USA
Kansas
St Louis

Mexico
Mexico City



Brazil
São Paulo
Esteio



Denmark
Brabrand/Aarhus

France
Dangé St. Romain



China
Shanghai

Singapore
Singapore

South Africa
Cape Town



Australia
Sydney

Cape Town, South Africa

Application areas



	Bakery
	Beverages
	Fruit
	Confectionery
	Culinary
	Dairy
	Food protection
	Meat
	Oils & fats
	Ice cream
	Culture creation

Protein Solutions (Solae): Soy Protein Process & Markets



MARKETS

Textured and Functional Concentrates



- Processed Meat
- Meat-free
- Animal Feed

Soy Isolates

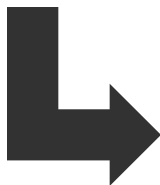


- Processed Meat
- Beverages & Bars
- Infant Formula
- Clinical Nutrition

Lecithins



- Food Emulsifiers
- Industrial Applications

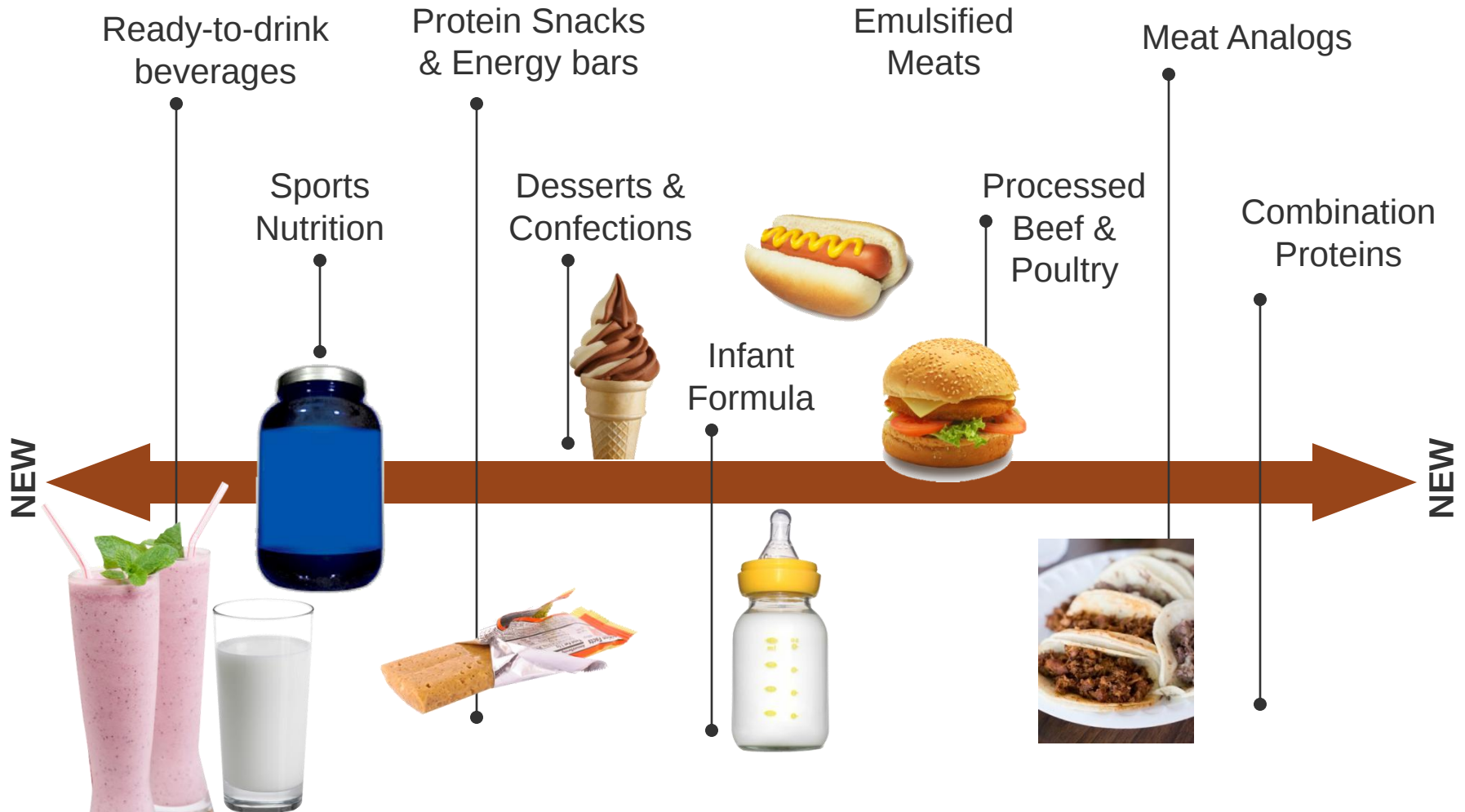


Oil Fraction



- Margarines
- Shortenings
- Cooking Oils

Our Heritage of Market-led Soy Protein Innovation



Unique Nutritional Value

More Affordable Protein

More Sustainable Protein

Global Food Security



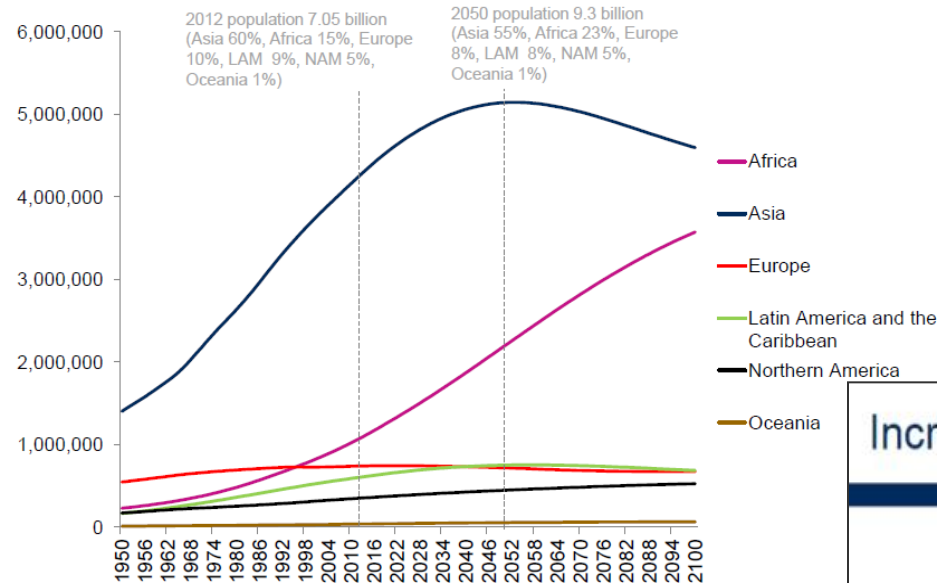
Soy an important tool in meeting future dietary needs of a growing population



Global population change

Leatherhead
Food Research

www.leatherheadfood.com



- The growth rates for Africa and Asia are significantly greater than other regions.

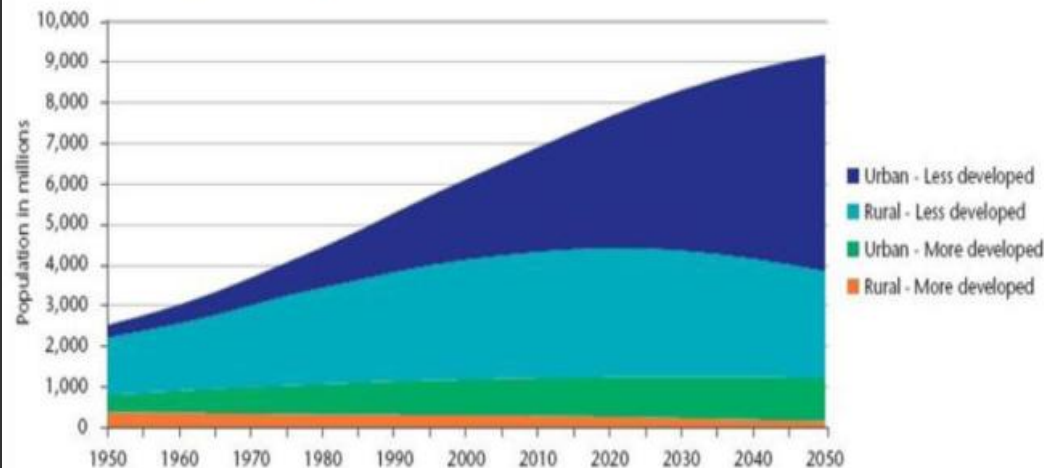
- Urban populations will dramatically expand
- While rural populations will decrease

Increased urbanisation

Leatherhead
Food Research

www.leatherheadfood.com

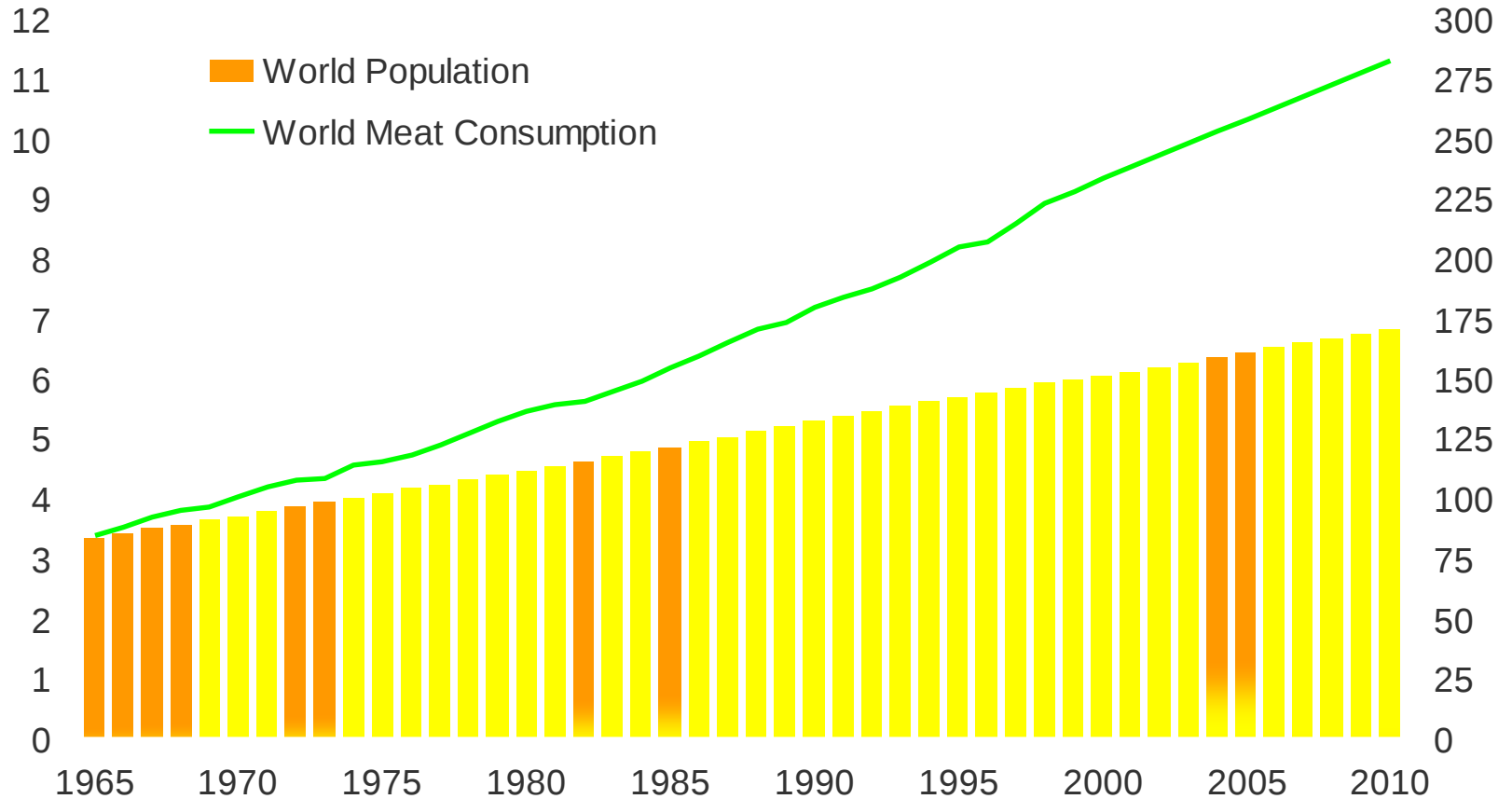
By 2050 less than 25% of the total world population will live in rural areas – down from 50% in 2000

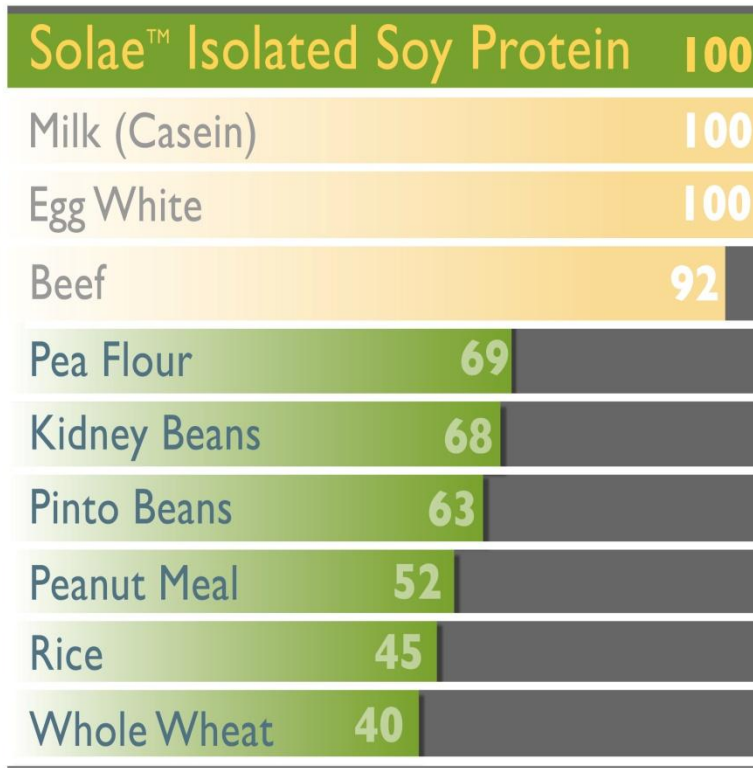


Meat Consumption Growth

Billion People

Million Tonnes





- High quality protein – w/level of all essential amino acids needed for normal development
- Low in fat and saturated fat
- Zero cholesterol
- No lactose
- Ideal for vegetarian alternatives
- The only protein with an approved US FDA Health Claim

Long-term Projections based on Commodity Price Index



Source: OECD-FAO Agricultural Outlook (2009-2011 100 = Index) Published July 2012

- Increasing demand for traditional protein sources – meat, milk and egg – will strain supply, leading to significantly higher prices by 2021.
- With less than 5% of total soy production today being used in human food
 - Projections indicate
 - continued stable pricing
 - Ample supply for soy protein to provide a stable, economic alternative.

As the population in a country grows and the country develops the food value chain becomes more complex.



Mature Value Chain supplying consumers across a range of consumer markets in urban and rural areas

- Ongoing N&H Business supplying Processors in the Local Market



Population grows, becomes more urban, food value chain becomes more complex

- Food Value Chain Capacity Development



Rural economy, small holder farmers

- Production Ag Training, Rural Market support

Collaborating Partners to Engage Local Processors

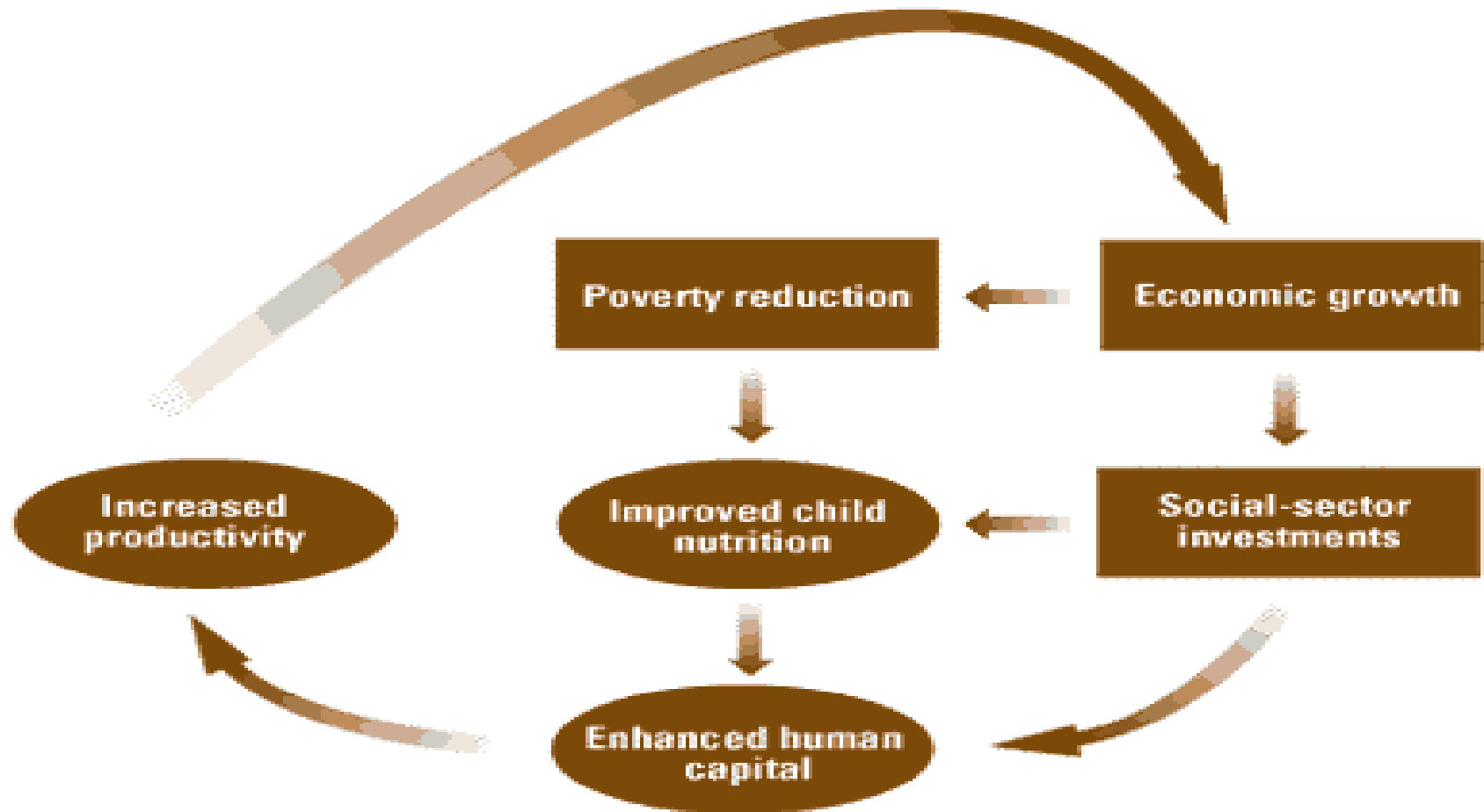
Current Customers

Universities

**Government Organizations
US/AID, etc.**

NGO/PVO

From Good Nutrition to Greater Productivity and Beyond.....



Source: (<http://www.unicef.org/sowc98/silent.htm>)

The Food Value Chain

Crop
Production



Harvest,
Storage and
Transport



Food
Processing
and
Preservation



Food Product
Distribution



On-site
Storage,
Preparation,
Consumption



Collaboration





Global Food Security

Corporate Goals
Global Food Security Index

Together, We can feed the world!

DuPont Food Security Goals

- **By the end of 2020, DuPont will help the world meet the challenge of global food security by:**
- **Innovating to Feed the World.** We will commit \$10 billion to R&D and 4,000 new products will be introduced. The work will center on producing more food, enhancing nutrition, food and agriculture sustainability and safety, boosting availability and shelf life, and reducing waste.
- **Engaging and Educating Youth.** We will facilitate 2 million engagements of young people around the world in educational opportunities.
- **Improving Rural Communities.** We will work to improve the livelihoods of at least 3 million farmers and their rural communities through targeted collaborations and investments that strengthen agricultural systems and make food more available, nutritious and culturally appropriate. This is in addition to the work already being done to enhance the lives of hundreds of millions of farmers through DuPont's normal business practices.

Food Security Index

The Economist Intelligence Unit was commissioned by DuPont to research and produce the innovative Global Food Security Index.

Defining food security

- Food security exists when people at all times have physical, social and economic access to sufficient and nutritious food that meets their dietary needs for a healthy and active life.

The Global Food Security Index:

- ranks 105 countries
- according to their relative levels of food security
- using 25 indicators divided into three categories: Affordability and Financial Access; Availability; Quality and Safety.



The EIU Global Food Security Index is a unique tool for promoting collaboration, generating insights and stimulating action to feed a growing population

Who should use the index:

-  Academics
-  Policy Makers
-  Business & Industry
-  NGOs

What will it help us do:

-  Conduct timely research and planning
-  Make informed decisions
-  Set realistic goals
-  Effectively address the causes of food insecurity
-  Catalyze action on pressing issues
-  Unlock potential for collaborative, localized solutions

What are we measuring?

This index is the first to examine food security comprehensively across the three internationally established dimensions of food security:

- **Availability,**
 - **Affordability, and**
 - **Utilisation – called “Quality and Safety” in the index**
- It looks beyond hunger to the underlying factors that influence the ability of consumers to access sufficient amounts of safe, high-quality and affordable food.
 - It employs a quarterly adjustment factor for food price fluctuations to examine the risks countries face throughout the year.
 - It includes several unique qualitative indicators, developed and scored by Economist Intelligence Unit analysts to capture drivers of food security not currently measured in any international dataset.
 - It displays the results on an interactive website that allows deeper dives into country conditions and the relationships between food security drivers.



Tools: Website

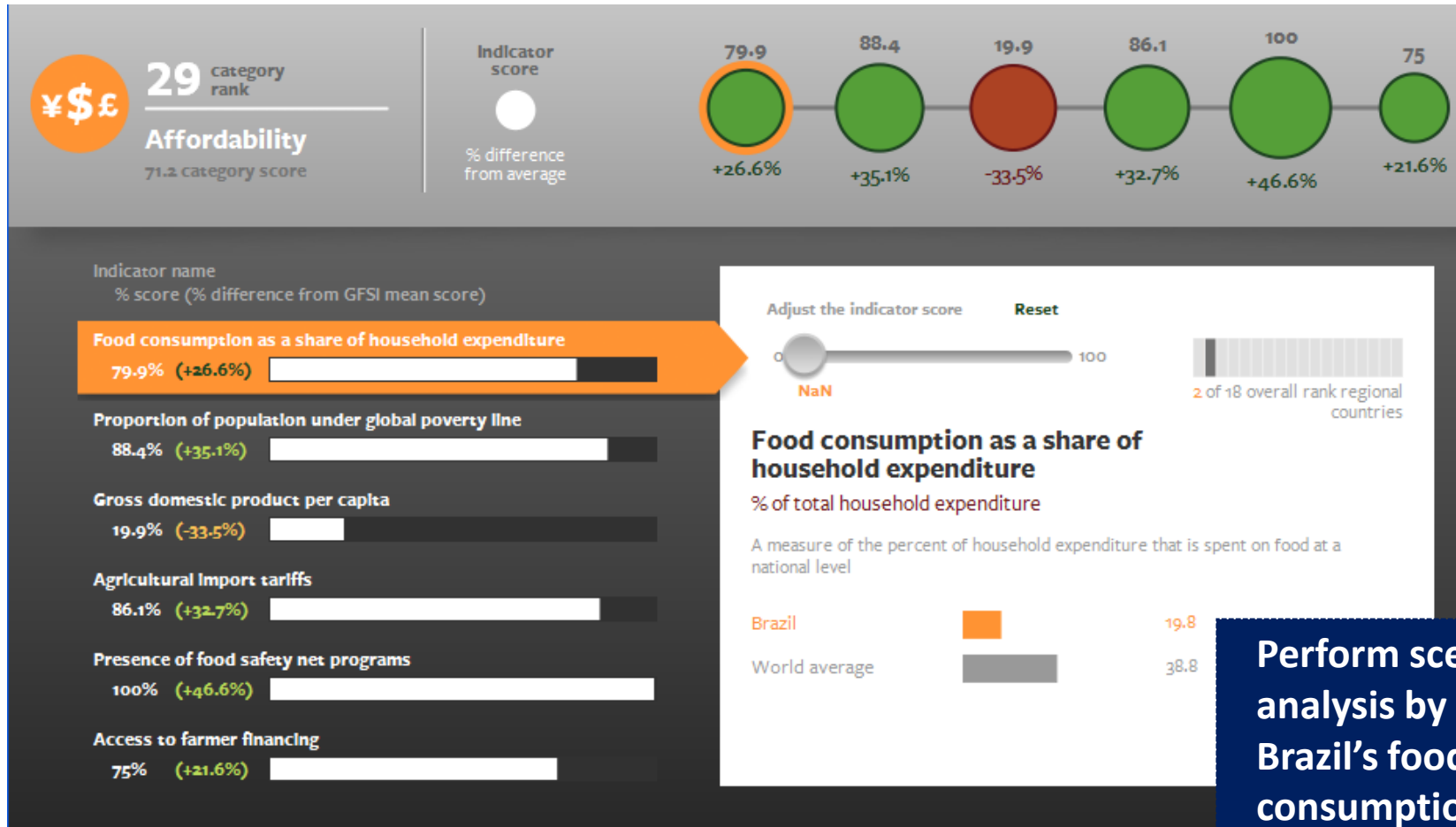
Visit www.foodsecurityindex.eiu.com



- ✓ Explore drivers of food security
- ✓ Compare country scores
- ✓ Find country profiles
- ✓ Perform scenario analysis
- ✓ Watch the peer panel video
- ✓ Download the Findings and Methodology paper and deep dive Excel model

Tools: Website

Visit www.foodsecurityindex.eiu.com



Perform scenario analysis by adjusting Brazil's food consumption score

INDICATOR RANKING

COUNTRY HIGHLIGHT

<none>

GROUP FILTER

All countries

GROUP HIGHLIGHT

<none>

SELECT INDICATOR

OVERALL SCORE

1) AFFORDABILITY

1.1) Food consumption as a share of household expenditure

1.2) Proportion of population under global poverty line

1.3) Gross domestic product per capita

1.4) Agricultural import tariffs

1.5) Presence of food safety net programs

1.6) Access to financing for farmers

2) AVAILABILITY

2.1) Sufficiency of supply

2.1.1) Average food supply

2.1.2) Dependency on chronic food aid

2.2) Public expenditure on agricultural R&D

2.3) Agricultural infrastructure

2.3.1) Existence of adequate crop storage facilities

2.3.2) Road infrastructure

2.3.3) Port infrastructure

2.4) Volatility of agricultural production

2.5) Political stability risk

3) QUALITY AND SAFETY

3.1) Diet diversification

View country rankings and scores by indicator

AFFORDABILITY

1.1) Food consumption as a share of household expenditure

% of total household expenditure

Rank	Score / 100	Data
1	Switzerland	100.0
2	New Zealand	92.0
3	United States	89.2
4	Belgium	87.0
5	Netherlands	86.2
6	Norway	84.5
7	Denmark	84.2
8	Israel	84.0
9	Sweden	83.7
10	Canada	83.5
11	South Africa	
12	Finland	
13	Germany	
14	Austria	
15	Australia	
16	Japan	
17	Brazil	
18	Spain	
19	France	
20	Italy	
21	Slovakia	
22	Chile	
23	United Kingdom	
24	South Korea	
25	Botswana	

COUNTRY PROFILE

SELECT COUNTRY Brazil

BRAZIL

STRENGTH (Score 75 or more)

1.5) Presence of food safety net programs

100.0

3.2) Nutritional standard

100.0

3.5) Food safety

98.0

2.4) Volatility of agricultural production

96.7

1.2) Proportion of population under global poverty

93.4

1.4) Agricultural import tariffs

86.1

1.1) Food consumption as a share of household exp

79.9

3.1) Diet diversification

78.9

2.1) Sufficiency of supply

76.4

1.6) Access to financing for farmers

76.0

MODERATE (Score 25 to 75)

2.5) Political stability risk

72.2

3.4) Protein quality

69.1

2.2) Public expenditure on agricultural R&D

37.5

3.3) Micronutrient availability

36.9

WEAKNESS (Score 25 or less)

2.3) Agricultural infrastructure

63.4

1.3) Gross domestic product per capita

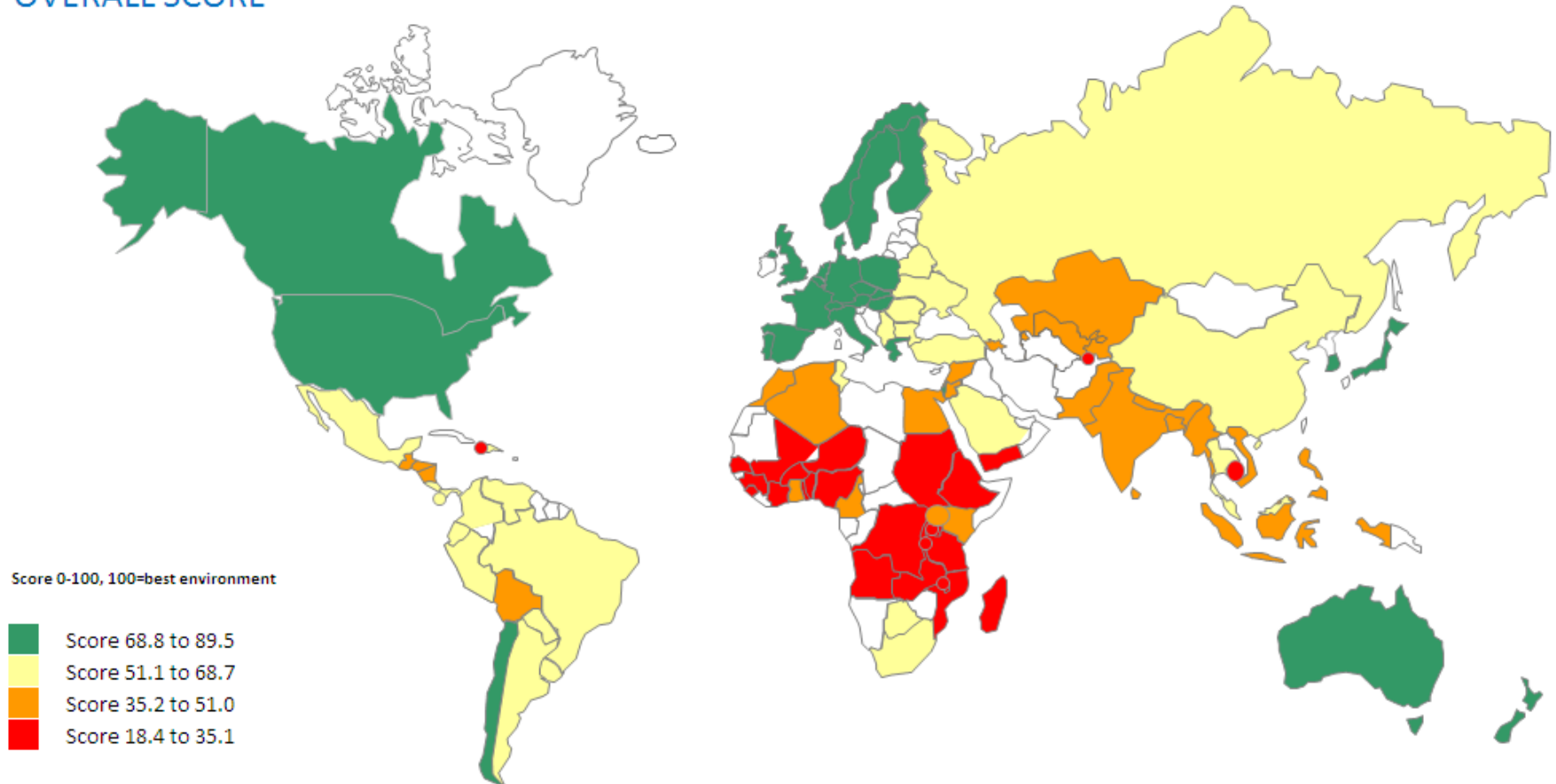
53.7

Filter results by income level, region, or landlocked/coastal countries

View country profiles for a deeper dive

Overall results

OVERALL SCORE



Together, We can change the world!!

Thank You