

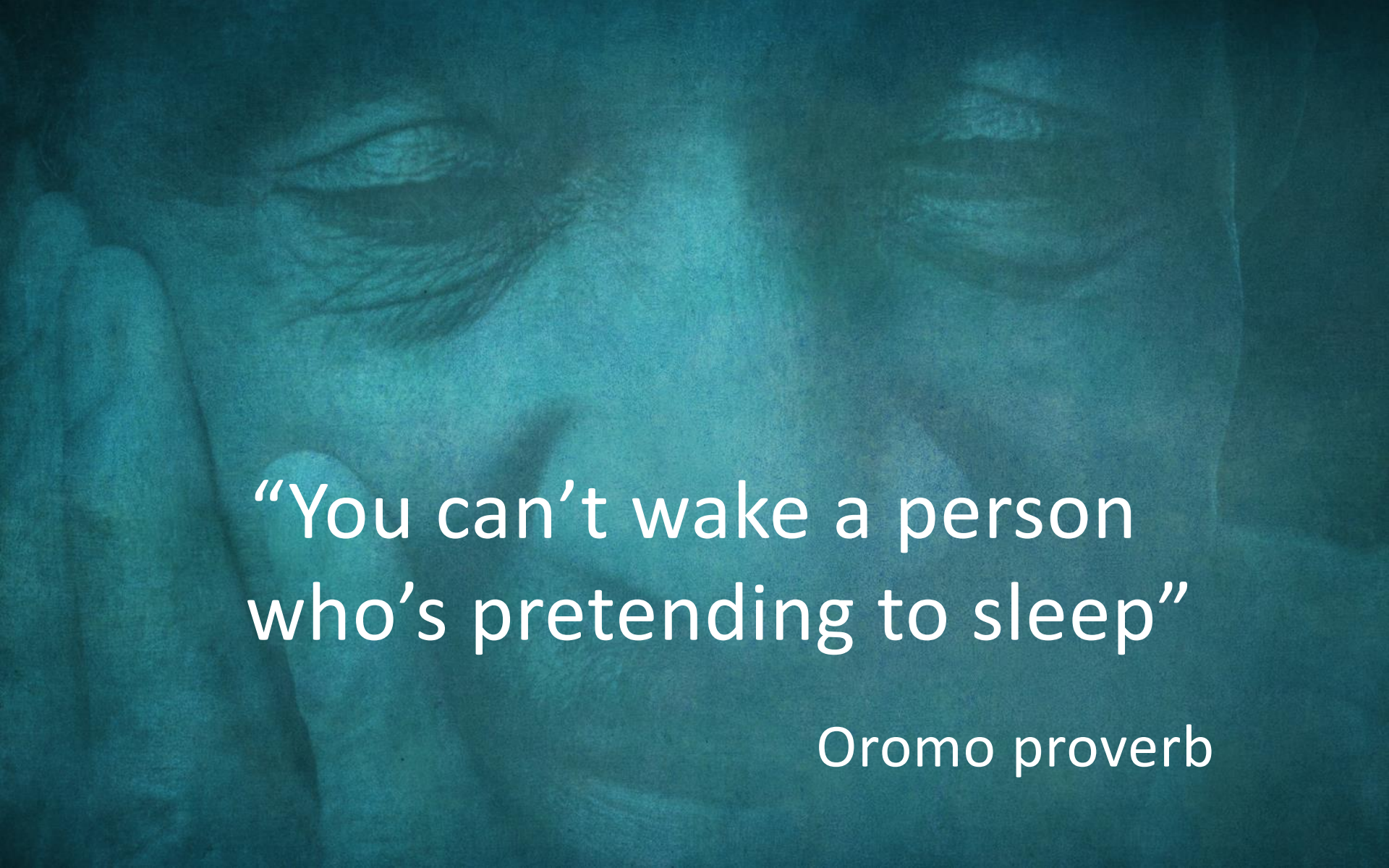


Food & Planet

problems & partners



Jason Clay
SVP Markets
WWF-US



“You can’t wake a person
who’s pretending to sleep”

Oromo proverb

A hand holding a small globe over soil. The background is a close-up of soil with a hand holding a small globe. The text is overlaid on the image.

global food

**40 years =
8,000 years**



half of farm families
can't feed themselves



population x consumption \neq



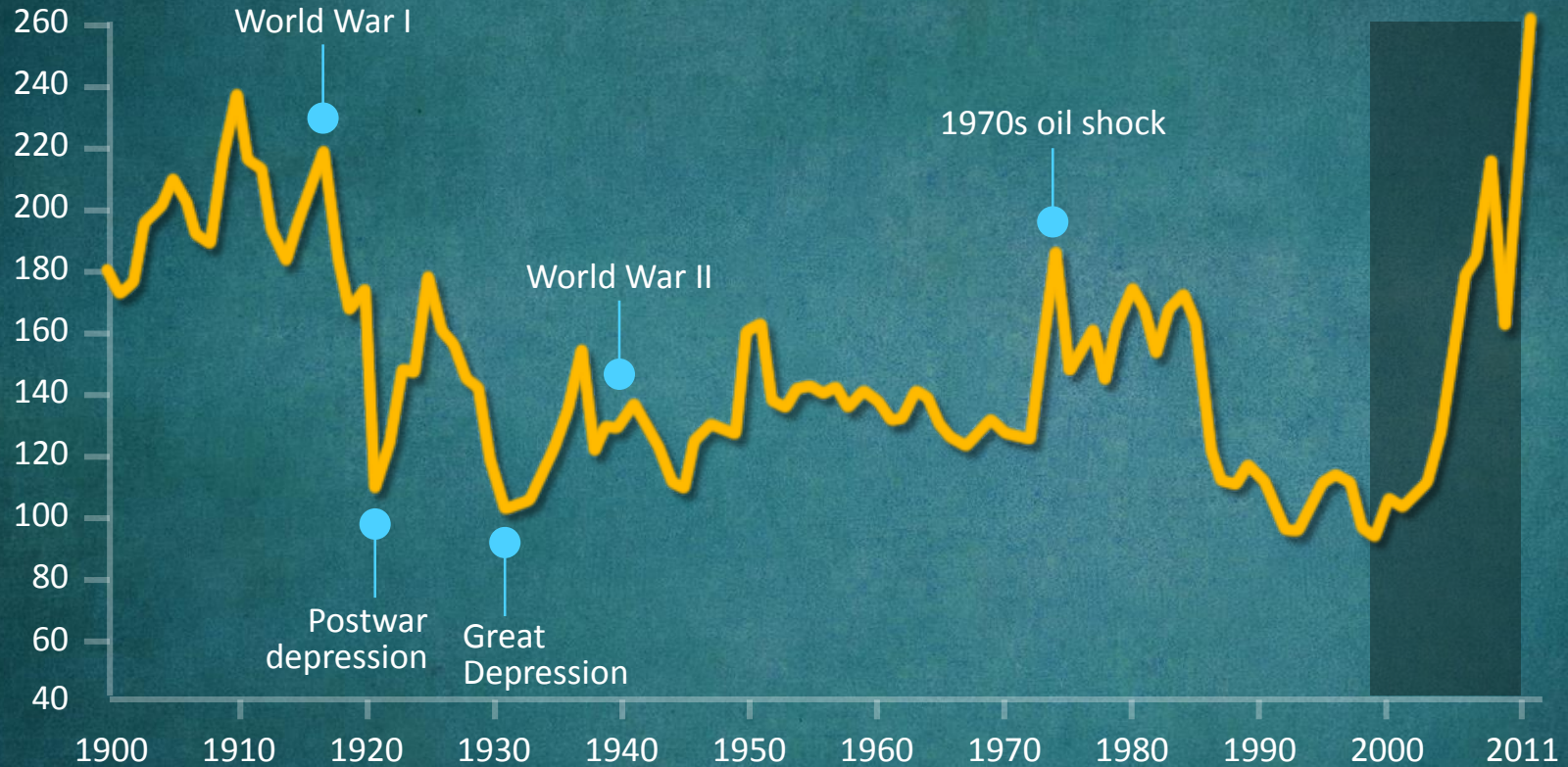
The China phenomenon

	Population at start of growth period	Years to double GDP per capita ¹
Britain (1700-1855)	9M	155
US (1820-1873)	10M	53
China (1983-1995)	1,023M	12
India (1989-2006)	822M	17

China doubling of GDP was **12x** the speed of Britain during the Industrial Revolution at **100x** the scale

400 million
lifted out of poverty

Commodity prices

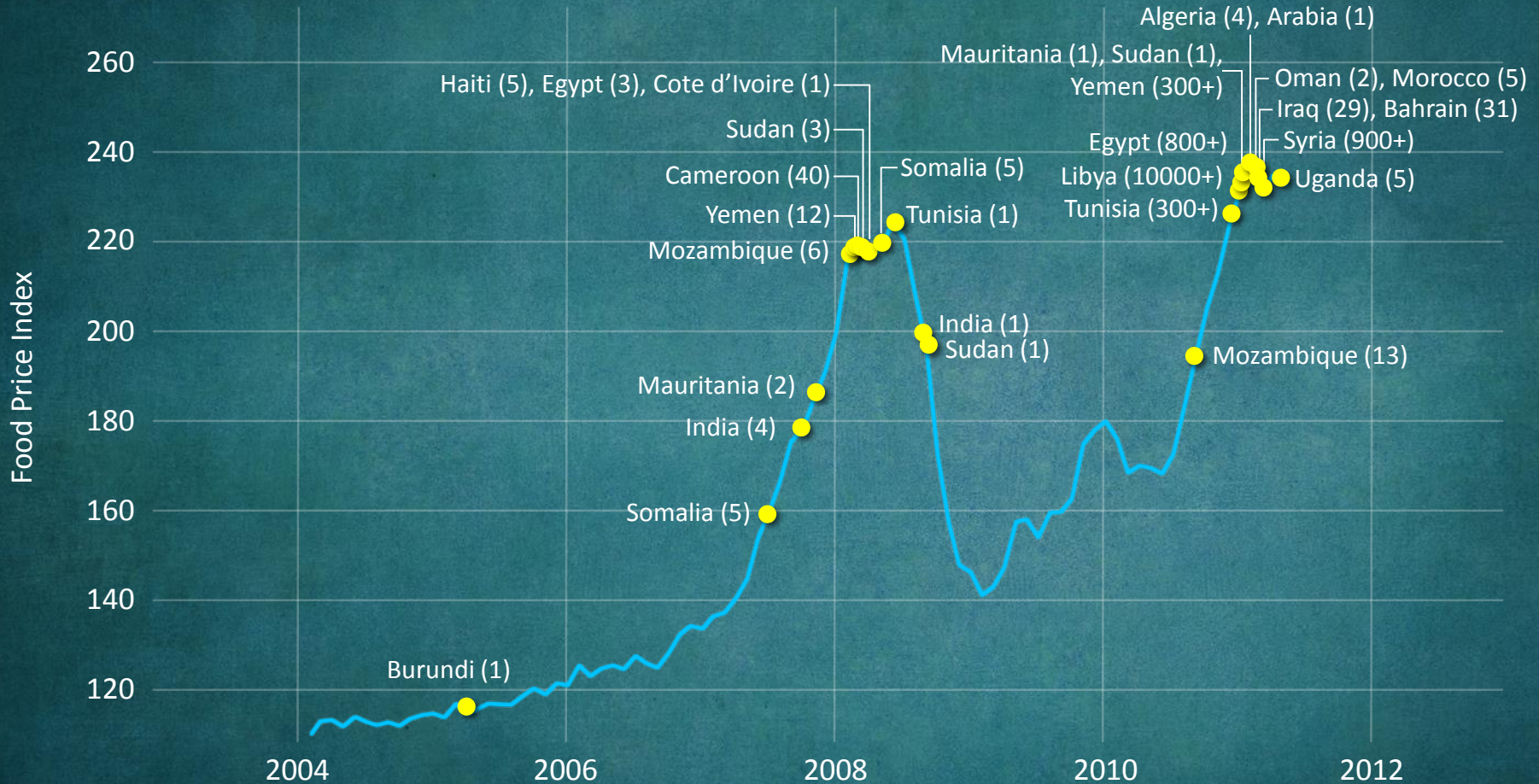


Source: Grilli and Yang; Stephan Pfaffenzeller; World Bank; International Monetary Fund (IMF); Organization for Economic Co-operation and Development (OECD); UN Food and Agriculture Organization (FAO); UN Comtrade; McKinsey analysis

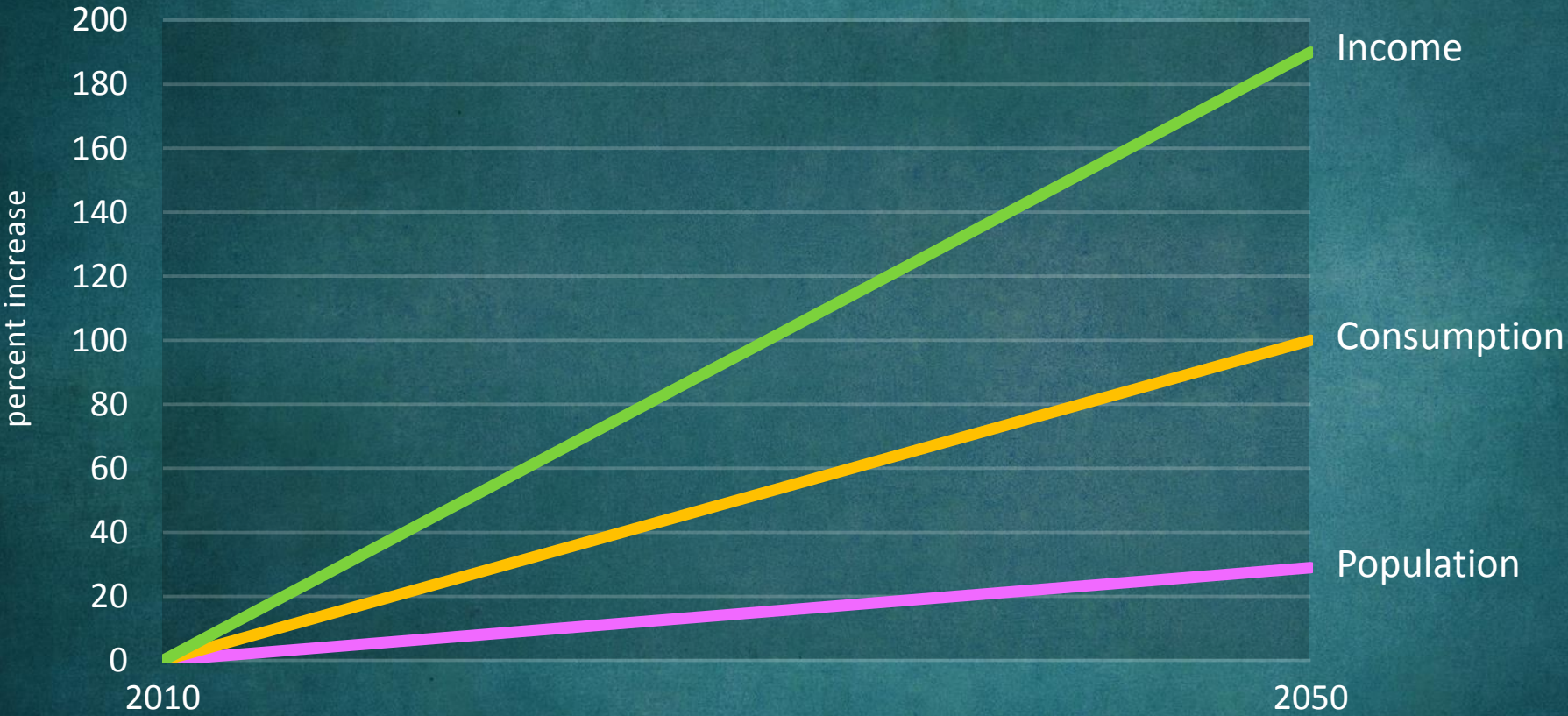


Source: UN Comm Trade

Food prices and social unrest – 2004-2012



Global trends by 2050



Source: United Nations



$$\times 1 = 7$$



$$\times 2 = 18$$



we need **more** from less

A woman stands in a lush green field, watering plants with a bright green watering can. She is wearing a futuristic, metallic, wavy-patterned dress that resembles a liquid or wave texture. The background shows a dense forest under a blue sky with scattered clouds. The overall scene is vibrant and futuristic.

we must make
production more
efficient

intensification is key

food production

is the biggest threat













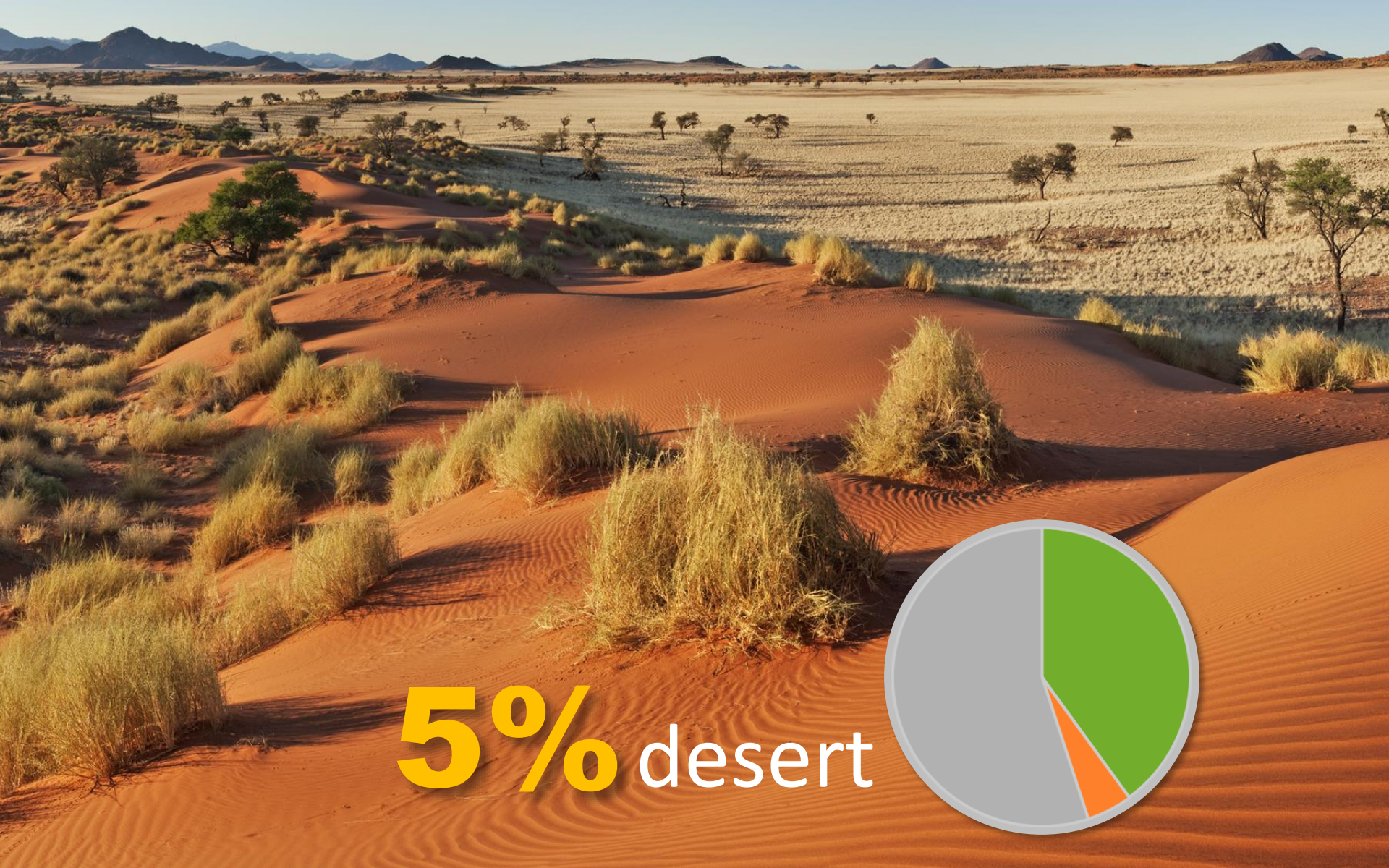


cropland
pasture

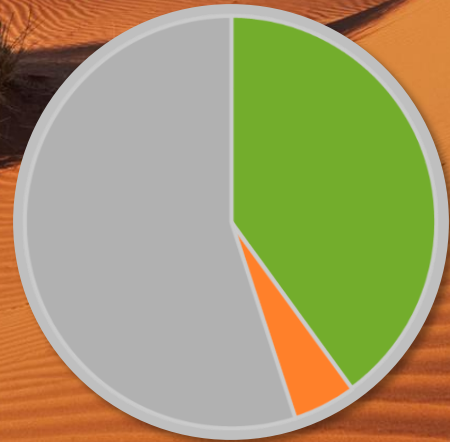
40% for food



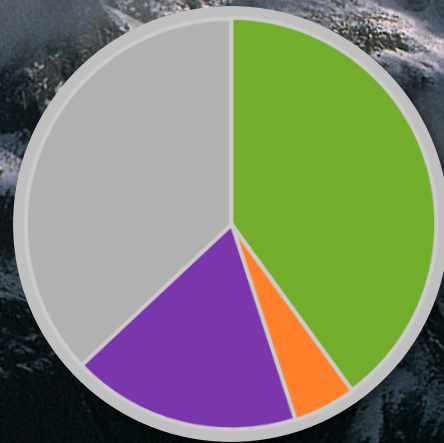
Source: UMN Global Landscapes Initiative



5% desert

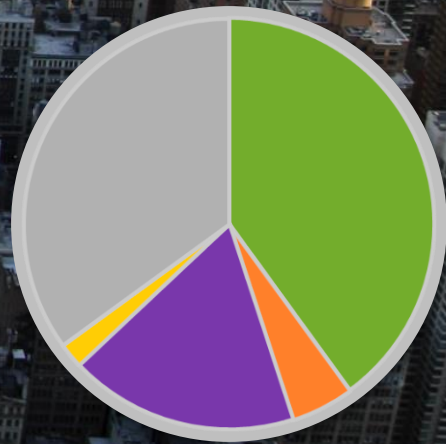


18% mountains,
lakes, rivers

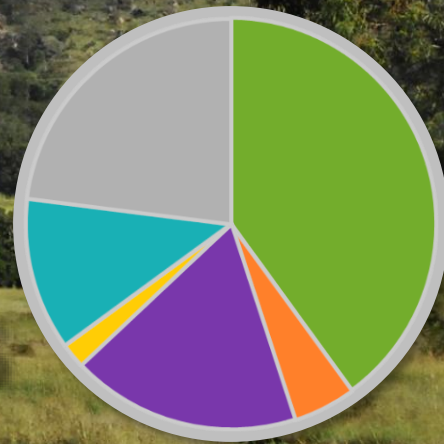




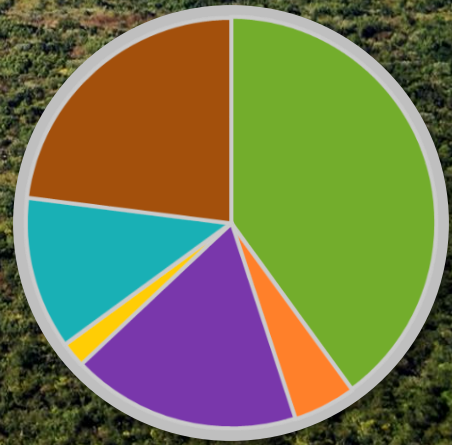
2% cities



12% parks



23% more for
food by 2050





■ Countries where parks have been downgraded or taken off the books entirely (1990-2013)

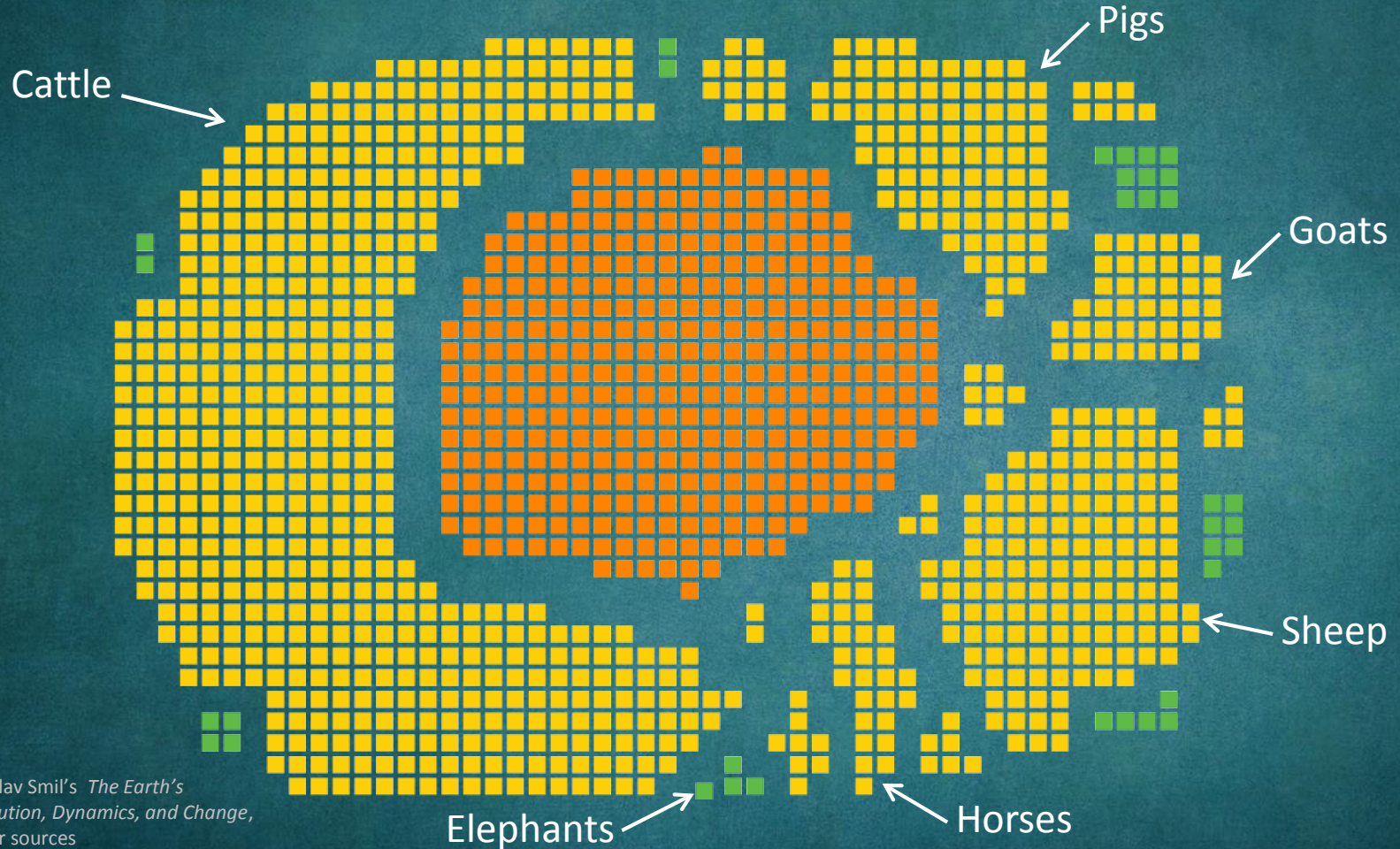
Earth's land mammals by weight

■ = 1,000,000 tons

■ Humans

■ Our pets and livestock

■ Wild animals



Data: From Vaclav Smil's *The Earth's Biosphere: Evolution, Dynamics, and Change*, plus a few other sources



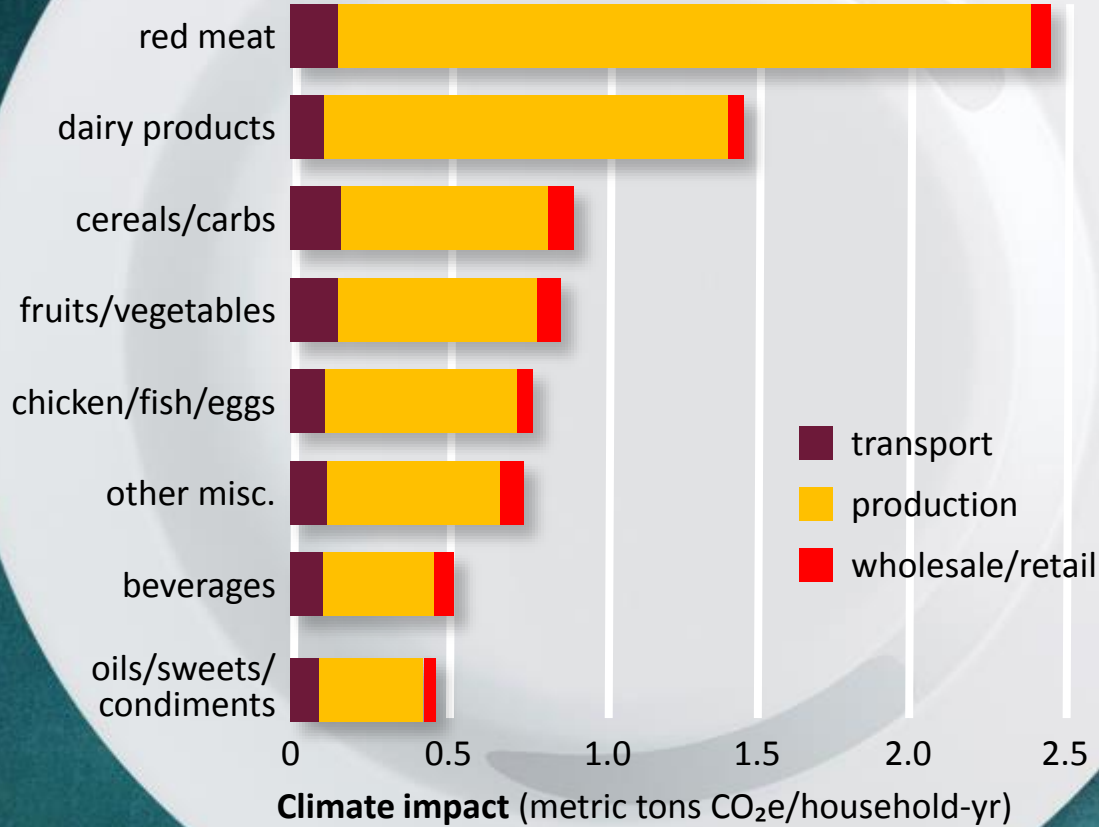
freeze

the footprint of food

the issue isn't
what to think

it's **how** to think

Total greenhouse gas emissions by supply chain tier associated with household food consumption in the U.S.



"The Problem of What to Eat" *Conservation*. Natasha Loder, Elizabeth Finkel, Craig Meisner, and Pamela Ronald. July-September 2008 9(3):31

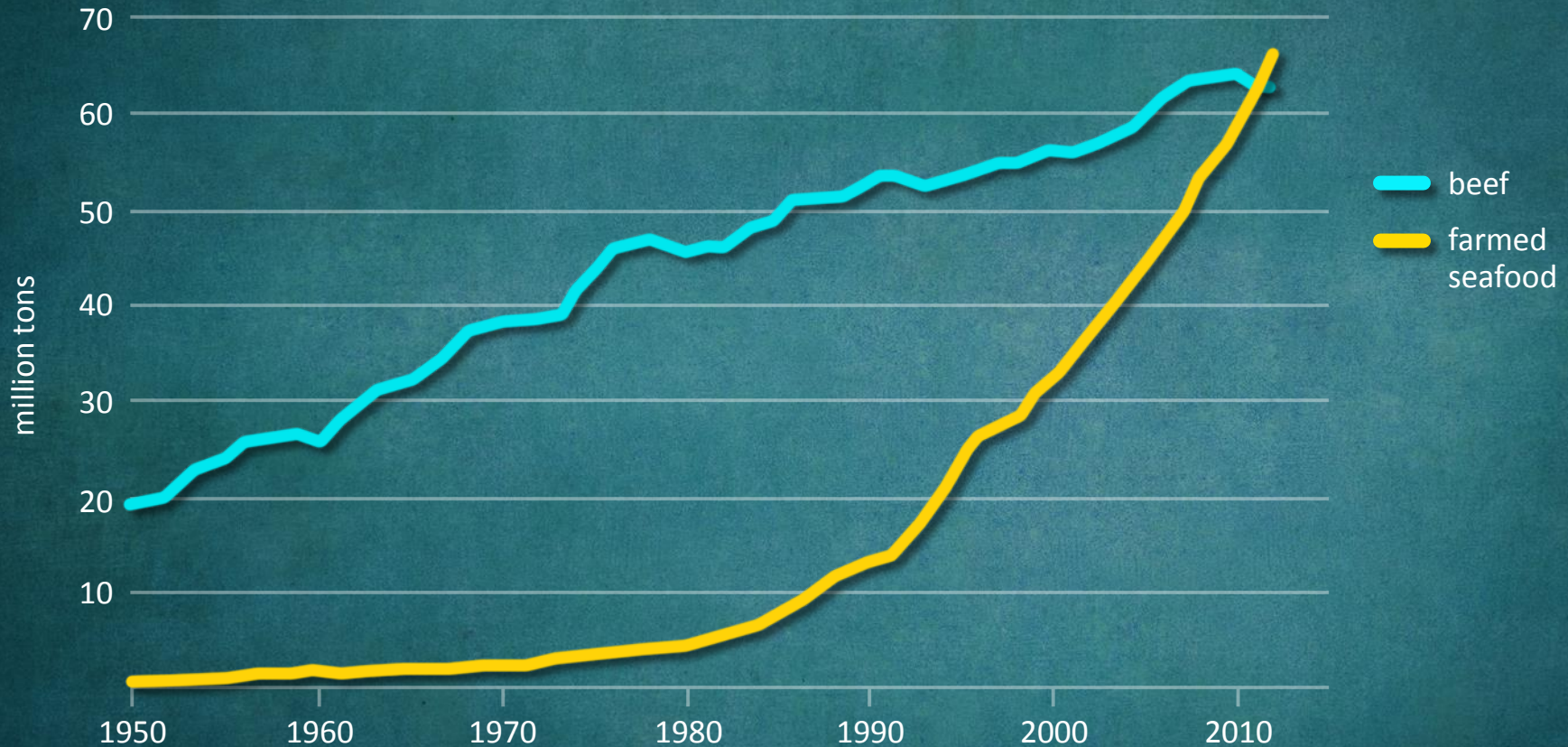
World daily caloric intake





beef takes **60%**
of land,
produces **1.3%**
of calories

World beef and farmed seafood production (by weight) 1950-2012

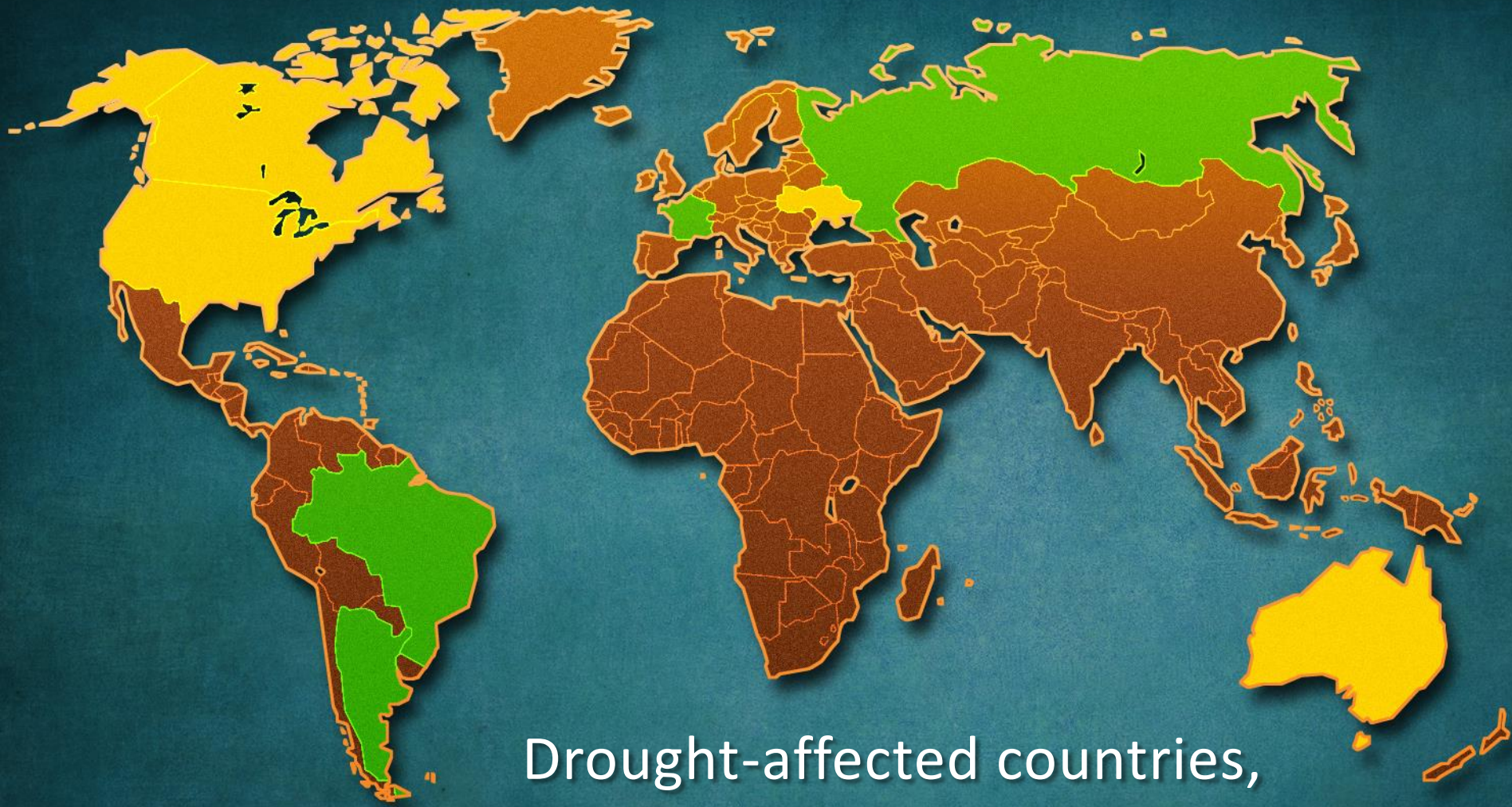


food
security is
national
security





Top food exporting countries,
2002-12 (oilseed & cereals)

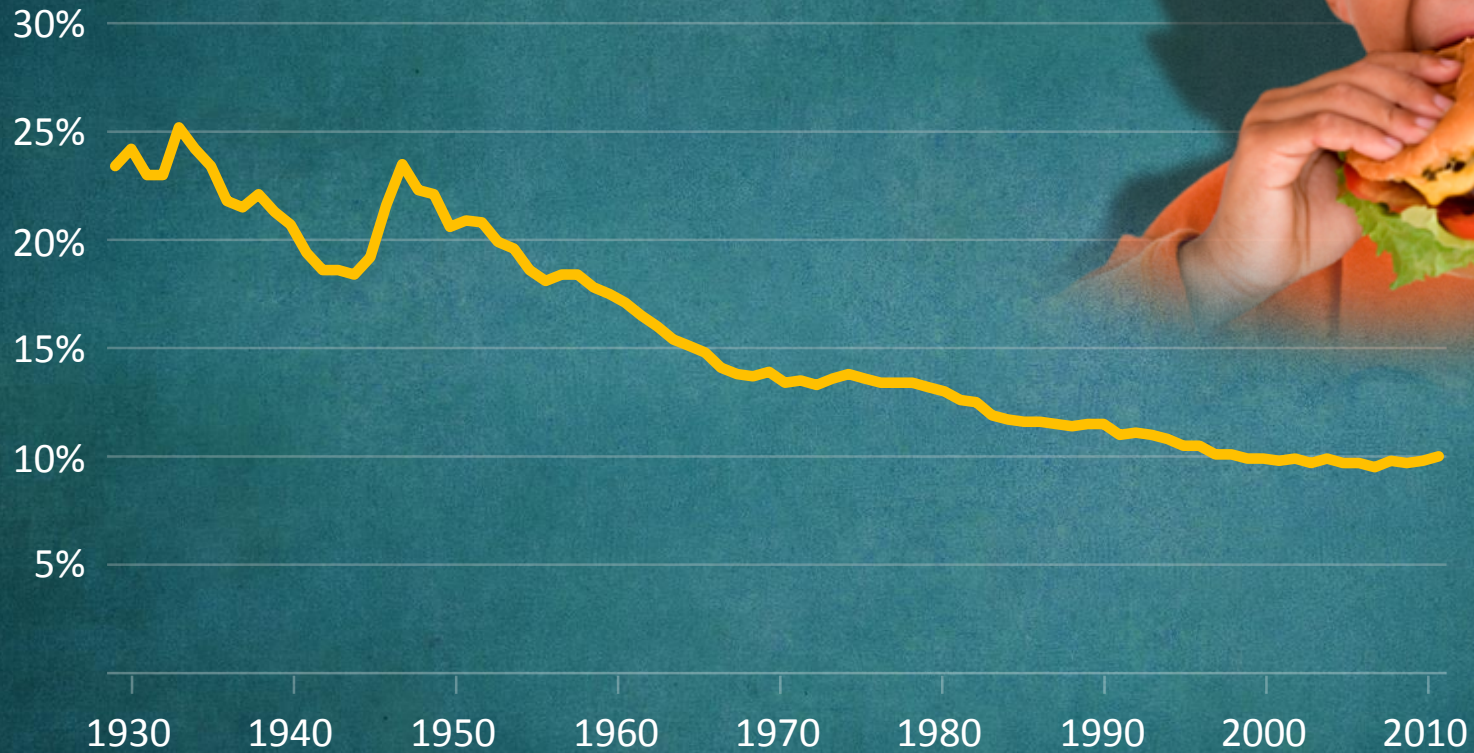


Drought-affected countries,
2012

A stack of several burlap sacks, each with a blue stripe near the top. The sacks are piled together, and the lighting is somewhat dim, giving the scene a somber or industrial feel. The text is overlaid on the right side of the image.


trade is **key**
trade barriers are too

Food as a % of U.S. disposable income



Source: USDA



A young girl with dark skin and braided hair is the central focus, holding a large, clear plastic bottle of yellow cooking oil. She has a serious expression. In the background, another child is visible, looking towards the camera. The scene is outdoors, possibly in a rural or developing area. The overall image has a blueish tint.

food is
cheap, but
1 billion
can't afford it

we are not paying the
true cost of food

Selected products, water use and farmer income

	Raw material input	Water to produce input	Farm gate price
1 cotton t-shirt	4 oz ginned	500 to 2,000 liters of water	US \$0.18 (US)
1 liter of soda	6 T sugar	175-250 liters of water	US \$0.04 (World)
1 oz slice of cheese	6 oz milk	40 liters of water	US \$0.07 (US)
1 double quarter-pounder	8 oz hamburger	3,000 to 15,000 liters of water	US \$0.92 (US)



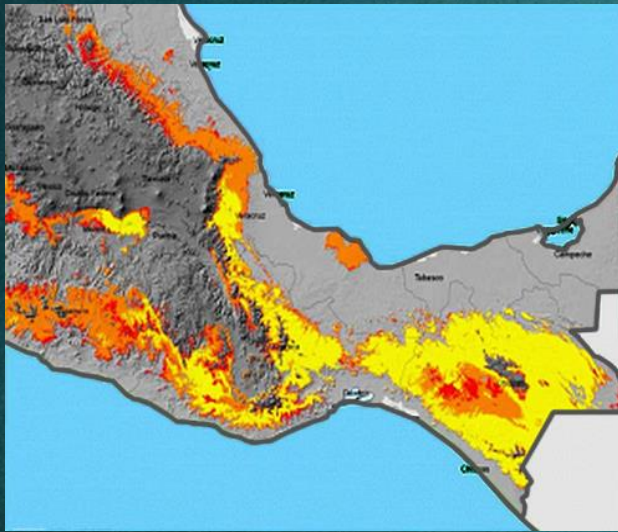
climate change and
**extreme
weather**

will affect
production

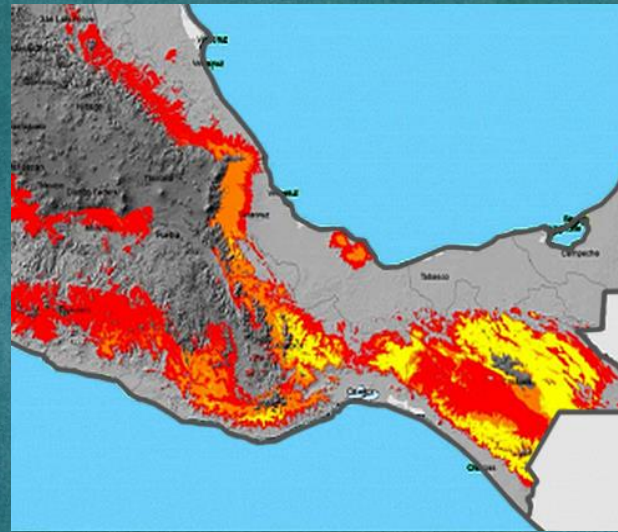
in the short term
climate smart agriculture =
efficient production

in the medium to long term,
producers **change crops**

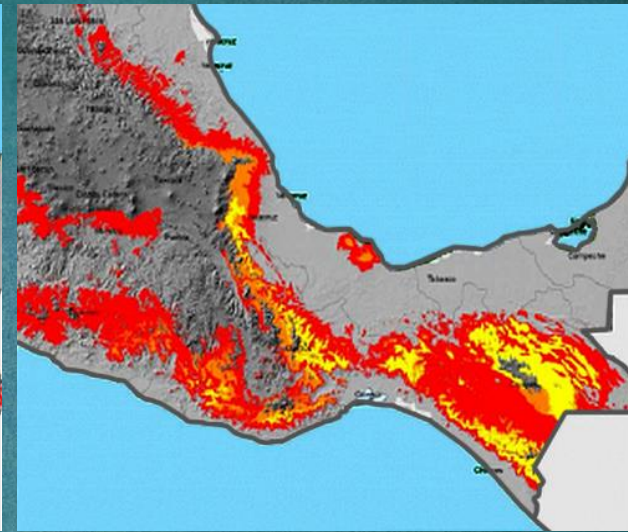
Land suitable for coffee cultivation - Mexico



2012



2020



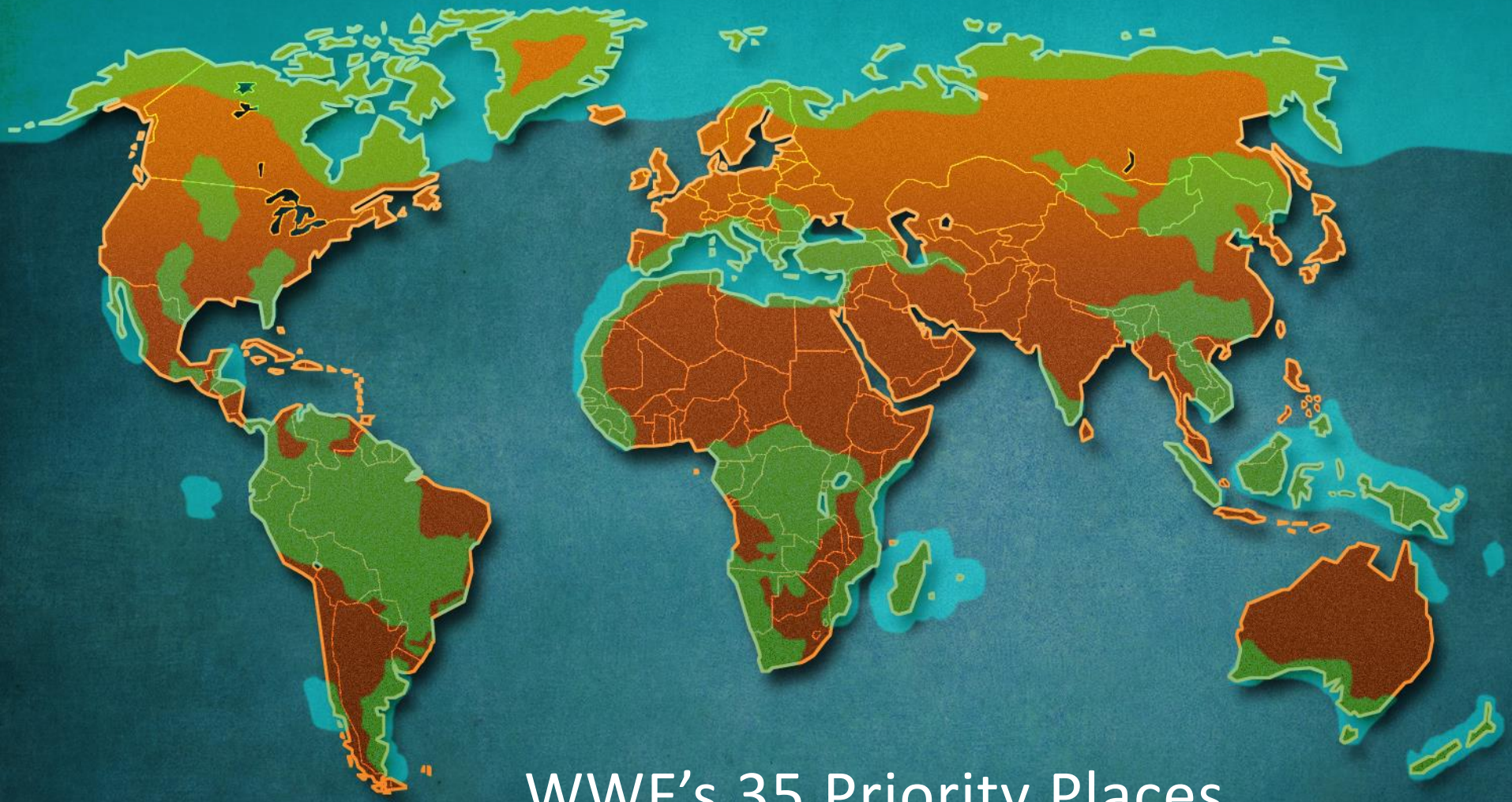
2050

Very poor Poor Average Good Very Good



freeze

the footprint of food



WWF's 35 Priority Places



palm oil



cotton



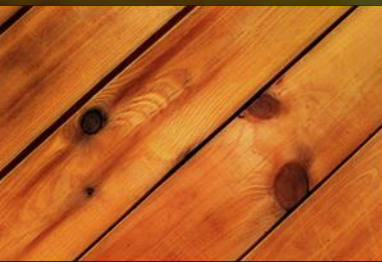
biofuels



sugarcane



pulp & paper



sawn wood



dairy



beef



soy



low trophic level species



farmed salmon



farmed shrimp



tropical shrimp



tuna

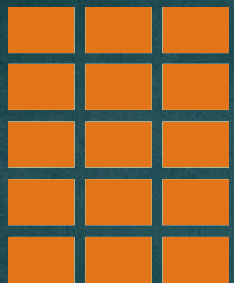


whitefish

Priority commodities



7 BILLION
consumers



300-500
COMPANIES control 70%
trade of each
commodity



1.5 BILLION
producers

beef



pulp & paper



palm oil



sugar



soy



cotton



tuna



shrimp



whitefish





100 companies can move

40-50%

of global production



Priority commodity Trade

1 China

1 India



by 2050
double net food availability

productivity & efficiency

and

waste & consumption

waste

1 out of 3 calories

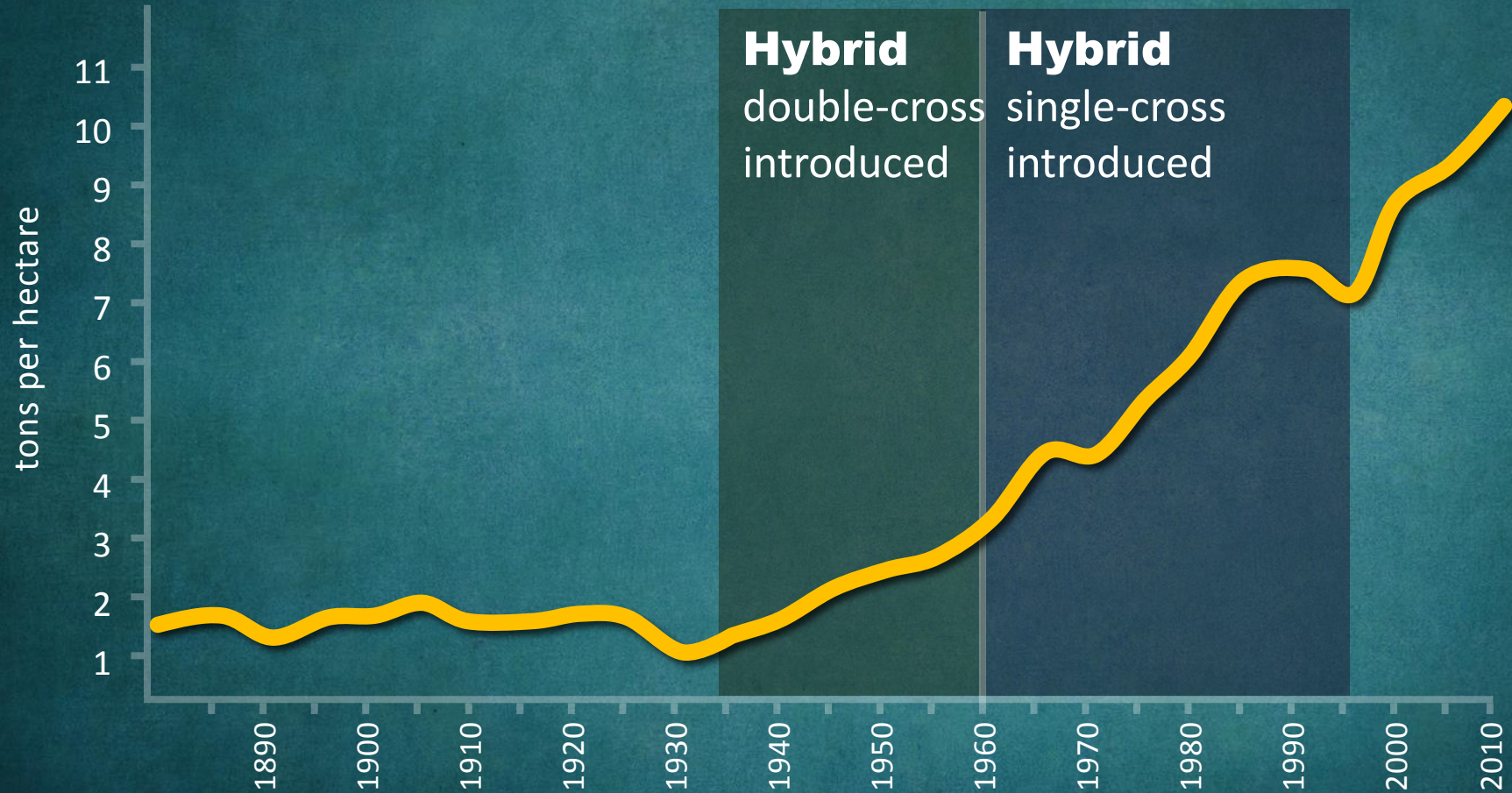




genetics

“dance with the one
that brung you”

US corn yields



Sugar

Bananas

Corn



Orphan crops



palm oil



millet



peanut



cowpeas



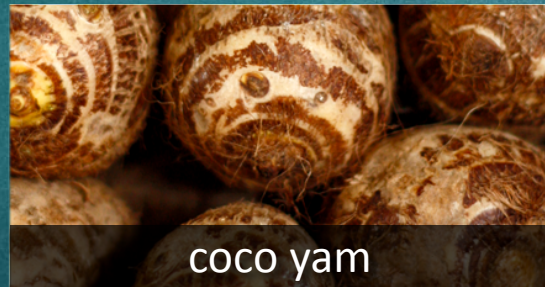
cassava



sugarcane



plantain



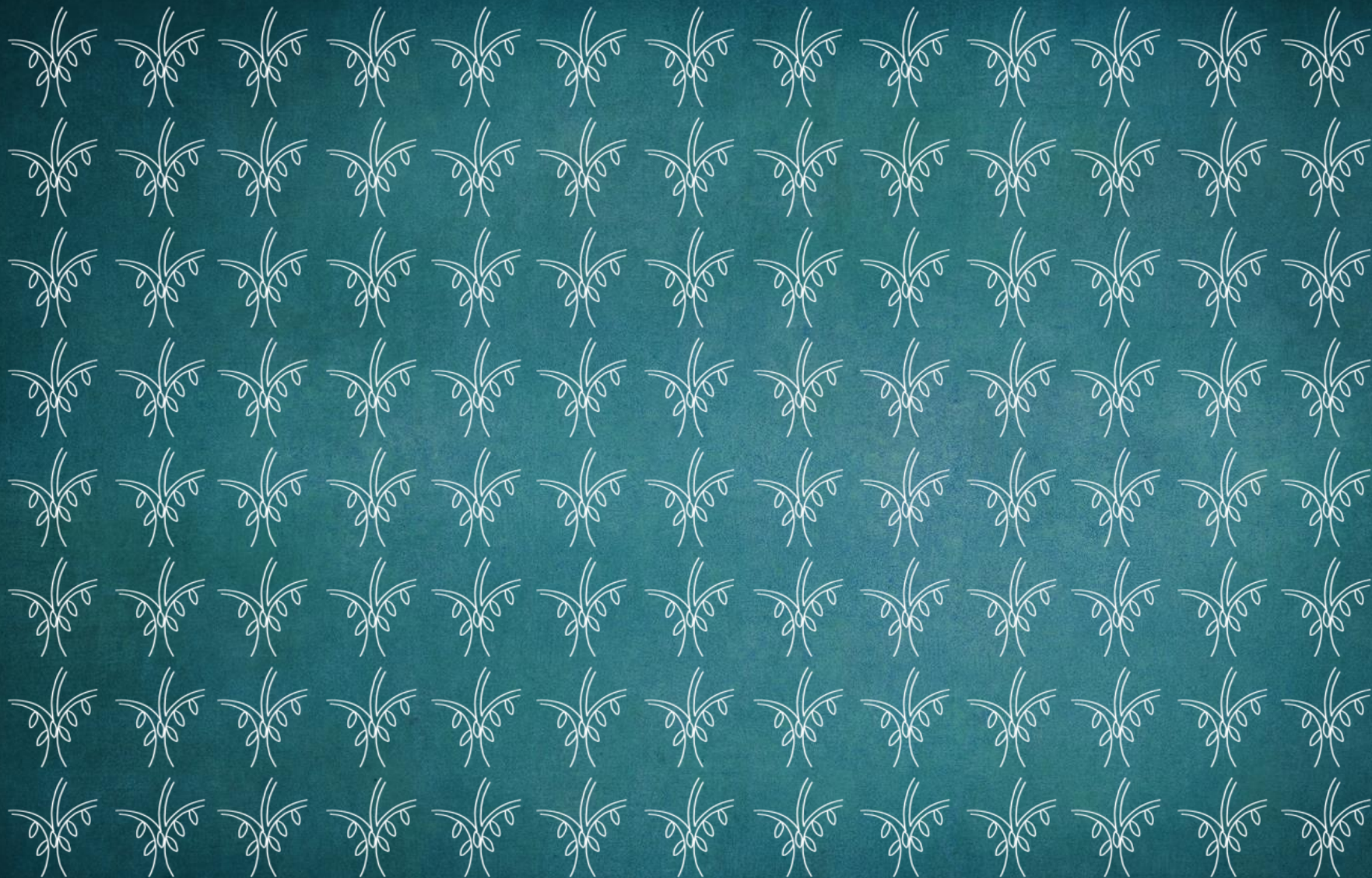
coco yam



sorghum

MARS











MARS

won't buy
certified
poverty

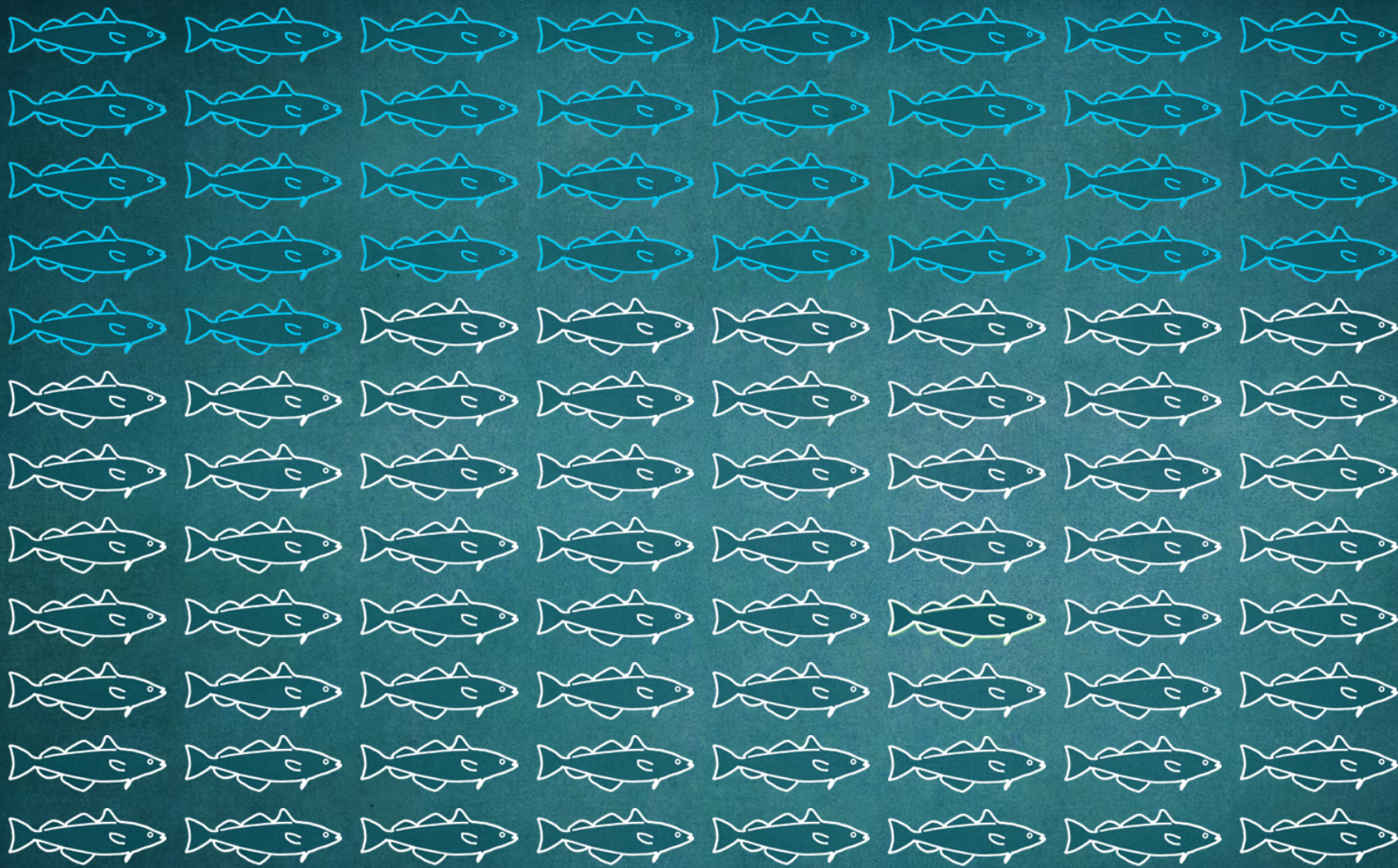


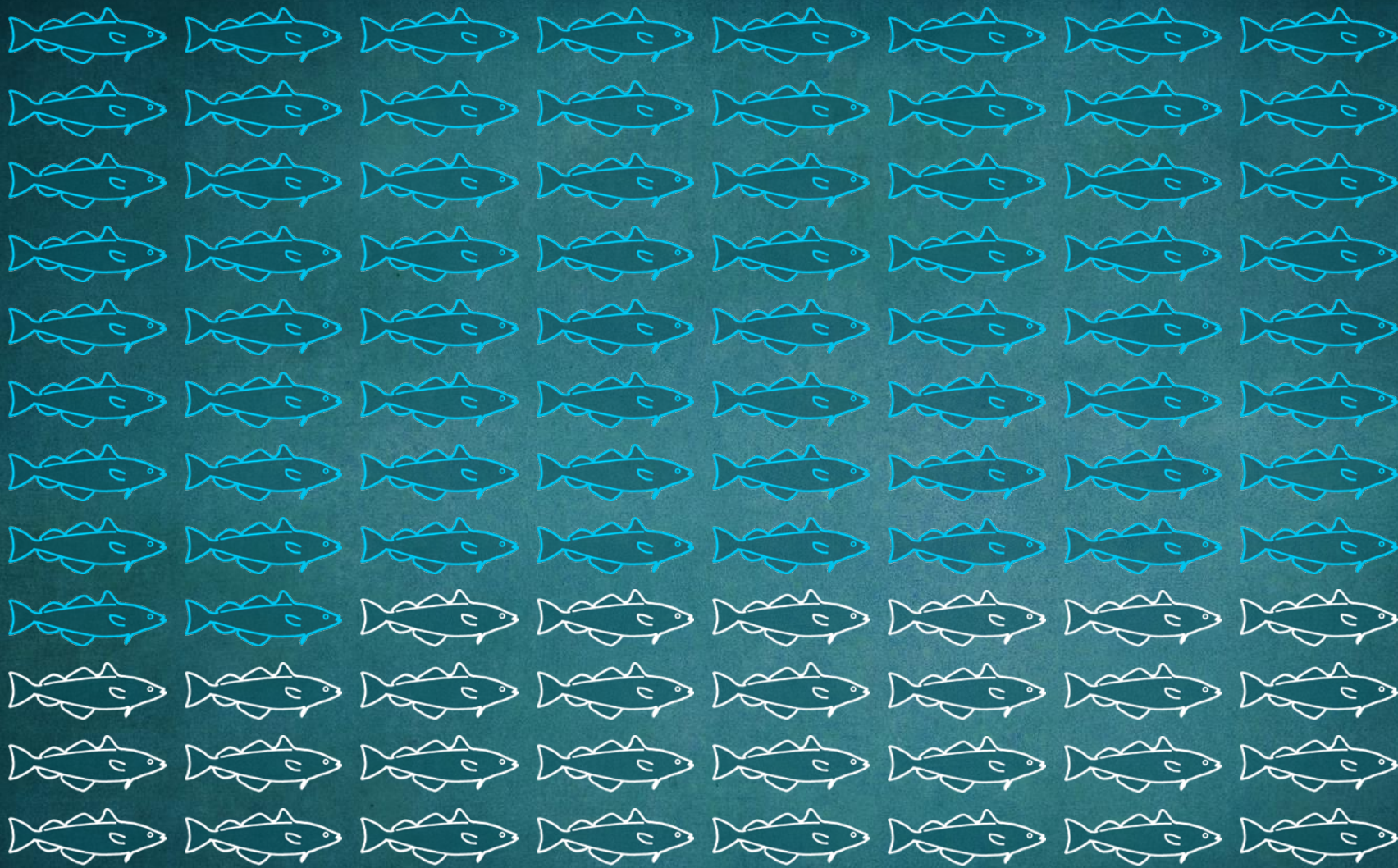
technology

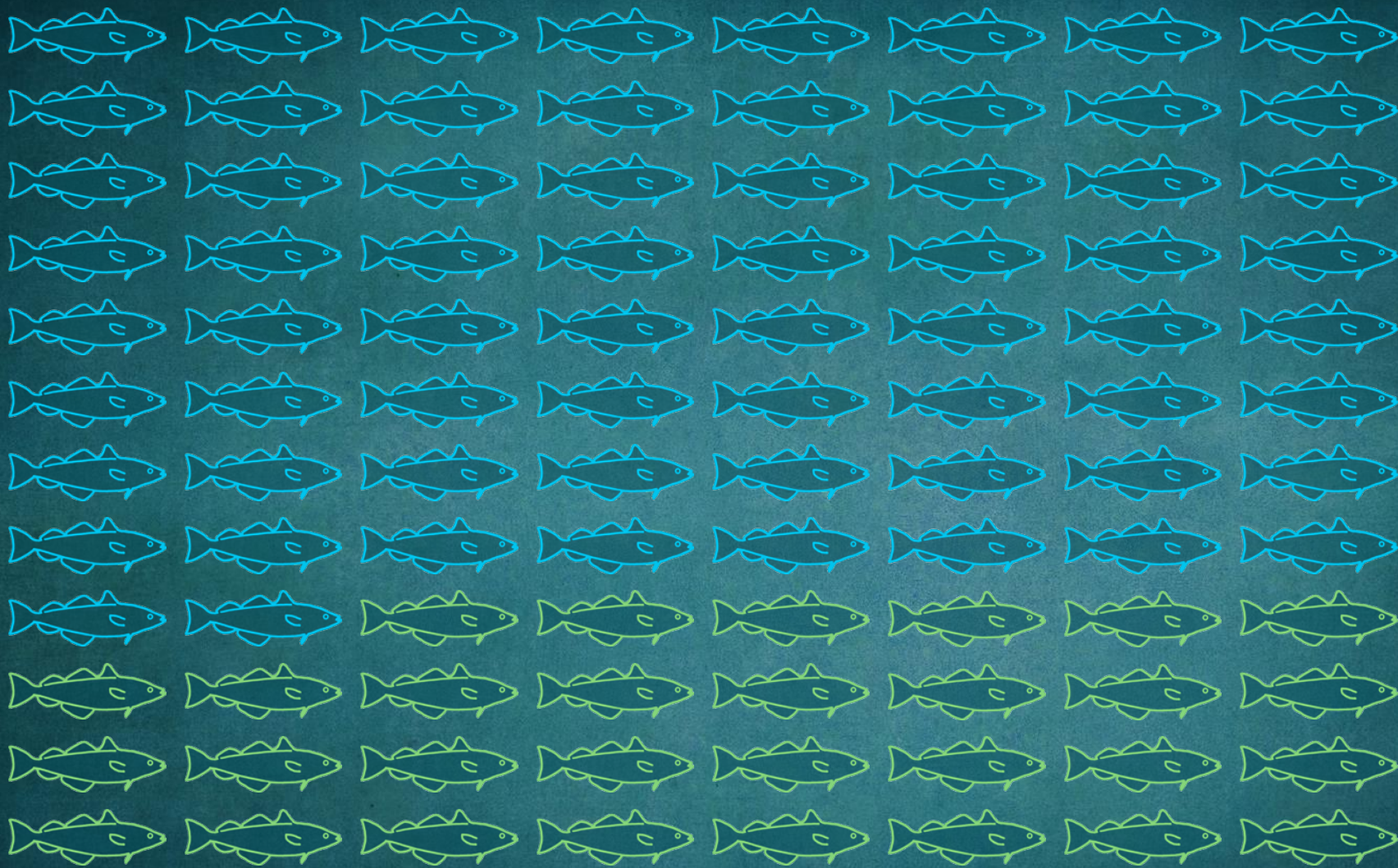


agriculture takes **70%**
of all water used by people

1 liter of water = **1** calorie







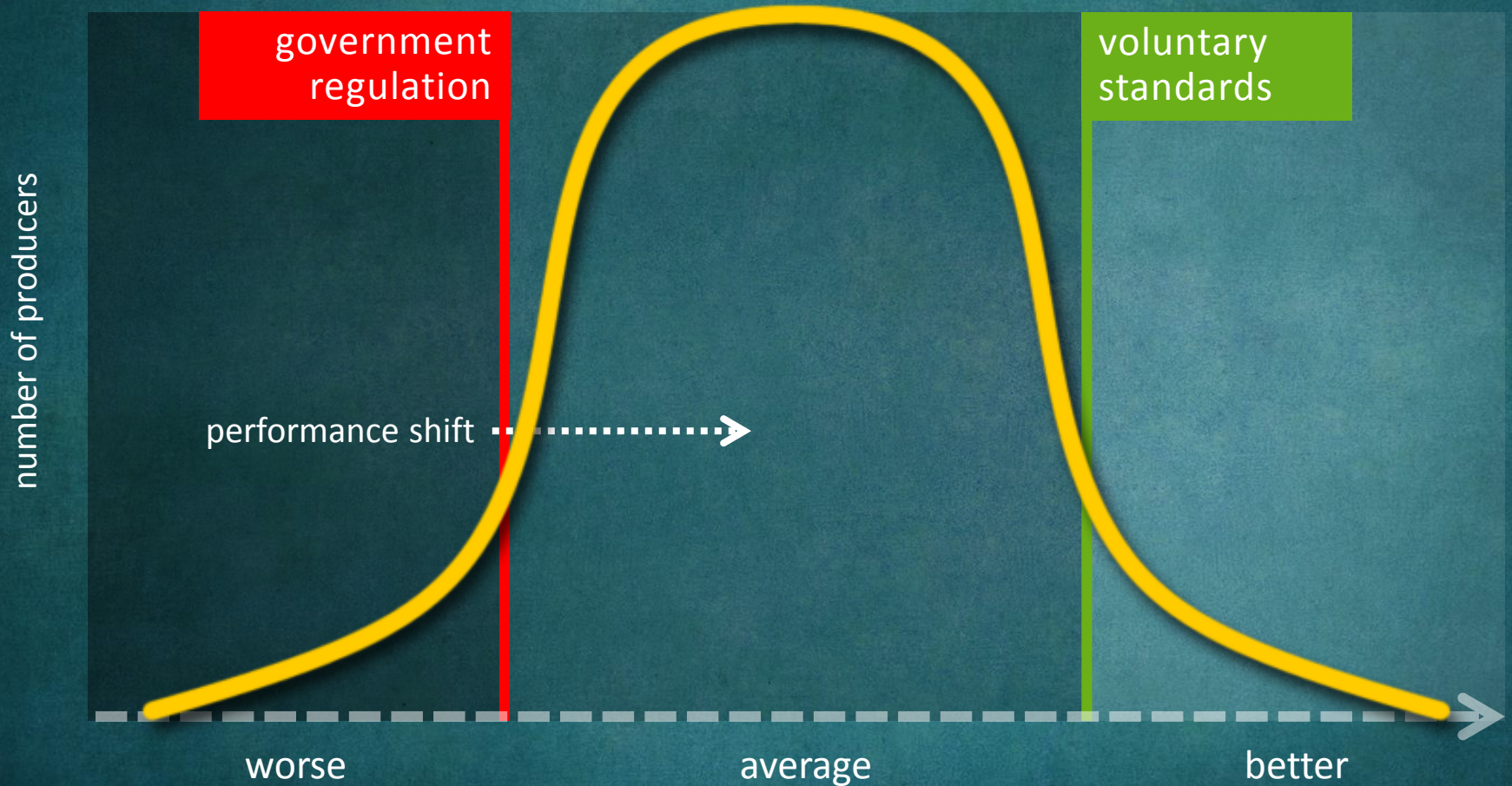
better practices

100 times better

which gives us more food?

recognizing the best
or
moving the rest?

Reward the best, or move the rest?



An aerial photograph of a rural landscape. The foreground and middle ground are dominated by a patchwork of green agricultural fields, some of which appear to be planted with corn. There are several small, simple buildings scattered throughout the fields. The background shows a dense forest of tall trees, possibly a forest reserve or a natural woodland. The overall scene is vibrant and green, suggesting a healthy and productive agricultural environment.

rebuild soils

250 M hectares
by 2030



Goal: rehabilitate degraded and underperforming land

- 250 M hectares by 2030
- 3-5 Gt of CO₂ emissions sequestered or avoided
- 10% of global calories
- \$10 B in funding
- \$25 B per year in long-term contracts

on a finite planet,
should consumers
have a **choice**
about sustainable
products?

or should
all choices
be sustainable?



move sustainability from
niche to **norm**





IKEA and BCI Cotton, 2005-10

Total Cotton Use

- +/- 2% of global cotton
- +/- 400,000 producers

BCI Producer Impacts

- 60% fewer pesticides
- 40% less water
- 30% less fertilizer
- 15-20% more income

focus on **performance**
not practices



Unilever

Unilever's commitment:

100%

sustainable ingredients



The Consumer Goods FORUM



The Global Network Serving Shopper & Consumer Needs





Deforestation-free supply chains by 2020

- 57 companies
- 4 commodities (beef, soy, palm oil, pulp)
- 2 countries (Brazil and Indonesia)



salmon

aquaculture





Global Salmon Initiative

- CEOs of 15 producer companies
- 70% of global production
- 100% ASC certified by 2020
- Share performance data



Working
with nature

Bord Bia

Irish Food Board

Growing the success of Irish food & horticulture



Ireland's Commitment

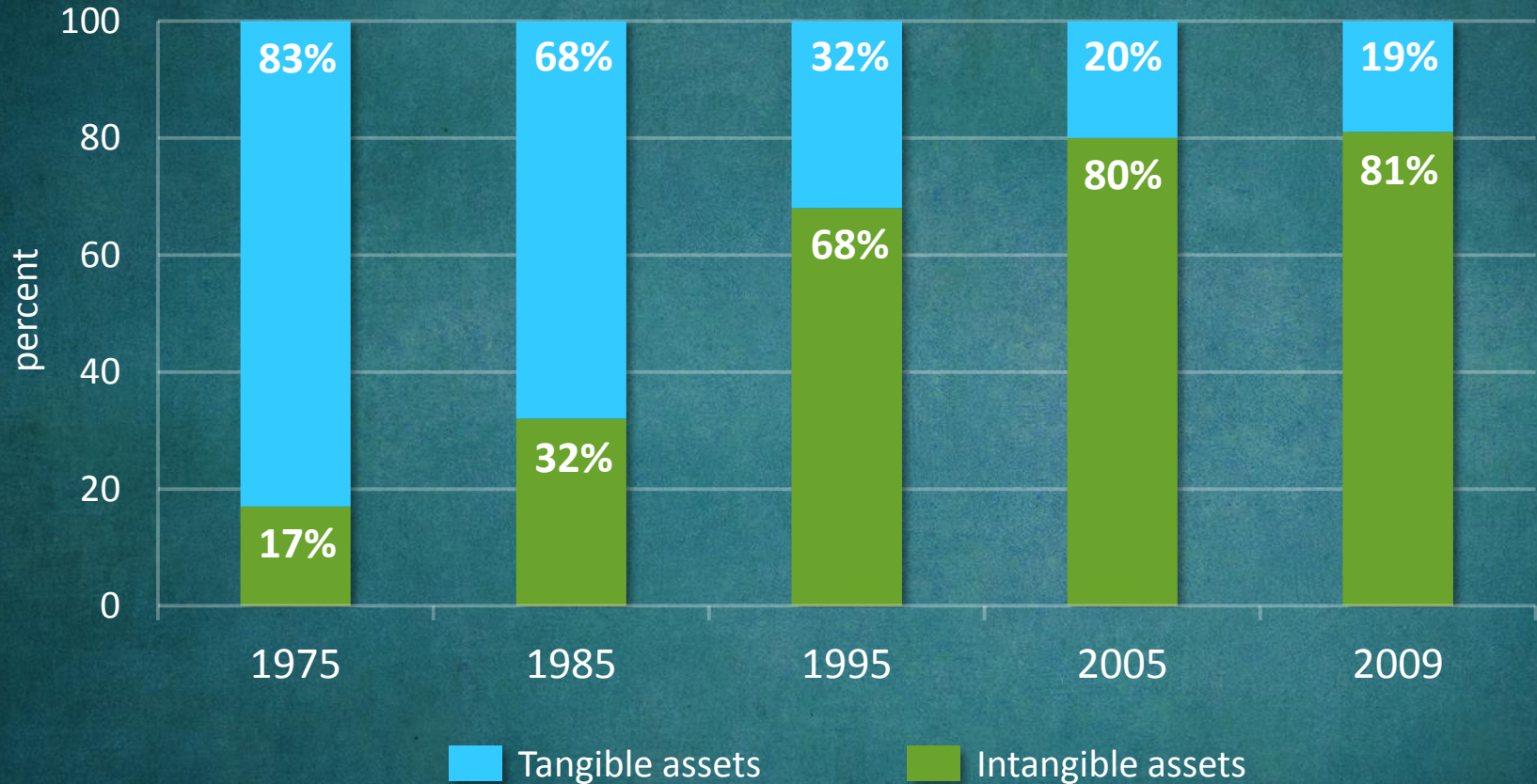
- All food exports
- 100% certified by 2016
- Reputation, not premiums
- Government, private sector and producers working together

the issue is

Risk

both availability and reputation

Components of S&P 500 Market Value



illegal

illegal

SPECIES



tigers



elephants



rhinos

MINERALS



gold



coltan



diamonds

FISH



bluefin tuna



demersal fishes



shrimp and prawns

FOREST



pulp



timber



mangroves

PLANTATION



palm oil



soy



beef

awareness

consensus

proof of concept

accelerate change



think about it

