

# **“The role of Companies in the transition to green economy: trends worldwide”**



WORLD  
RESOURCES  
INSTITUTE



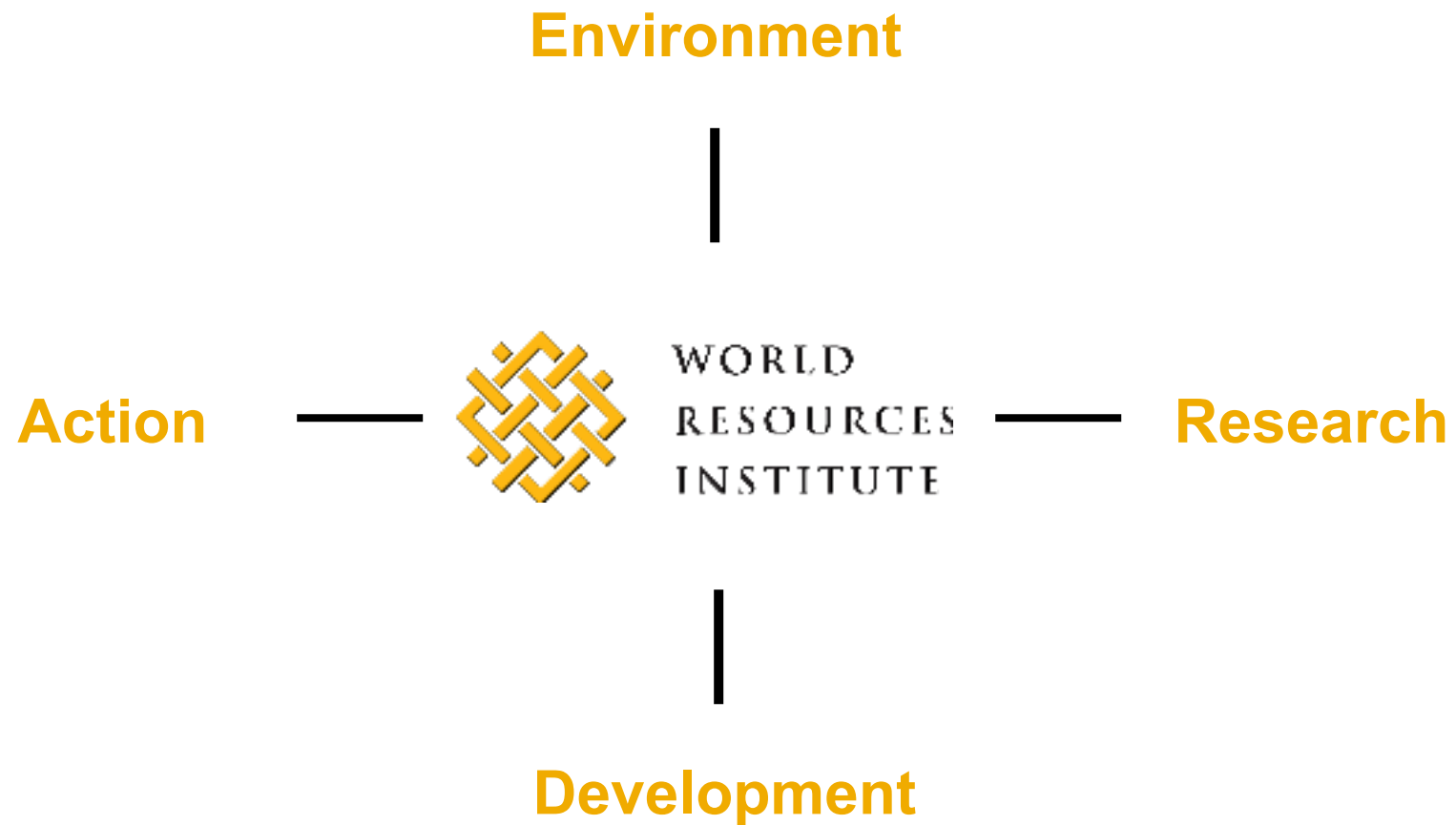
# WRI – A GLOBAL RESEARCH THINK TANK



WORLD RESOURCES INSTITUTE



# WRI: OUR MISSION



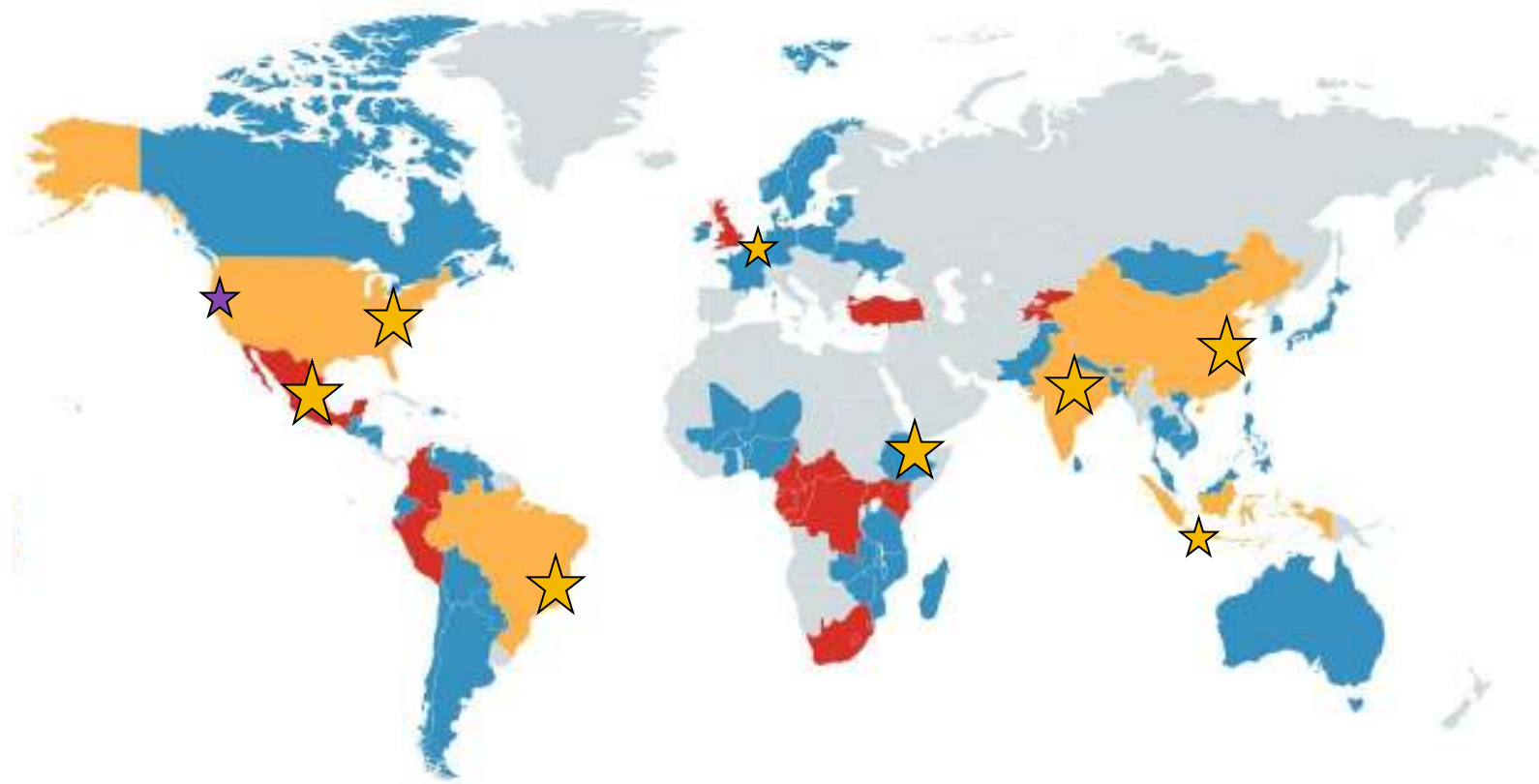


# SEVEN PROGRAMS, FOUR CENTERS





# Our Global Network



● Institutional

● Project staff on the ground and/  
or project office

● Active partnership

★ Offices

★ Data Lab



**Unprecedented global cooperation...**

## Nations Unies

# Conférence sur les Changements Climatiques 2015

COP21/CMP11

Paris France

- The Pope's encyclical
- Sustainable Development Goals (SDGs)
- The Paris Agreement

- Circular Economy package
- 25% of EU budget proposed for climate





**What are the worldwide trends?**

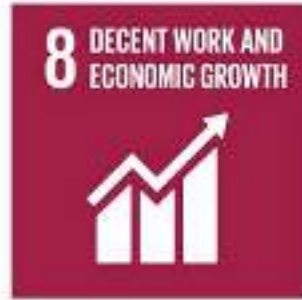
**What is the economic rationale?**

**Why should YOU act?**





## SDG'S: BALANCE BETWEEN ECONOMY, EQUITY, ECOLOGY





**3.3 million**

deaths per year from  
air pollution

**13 million**

hectares of forest lost per year

**6<sup>th</sup>**

Mass extinction  
of species

**↑ 3x**

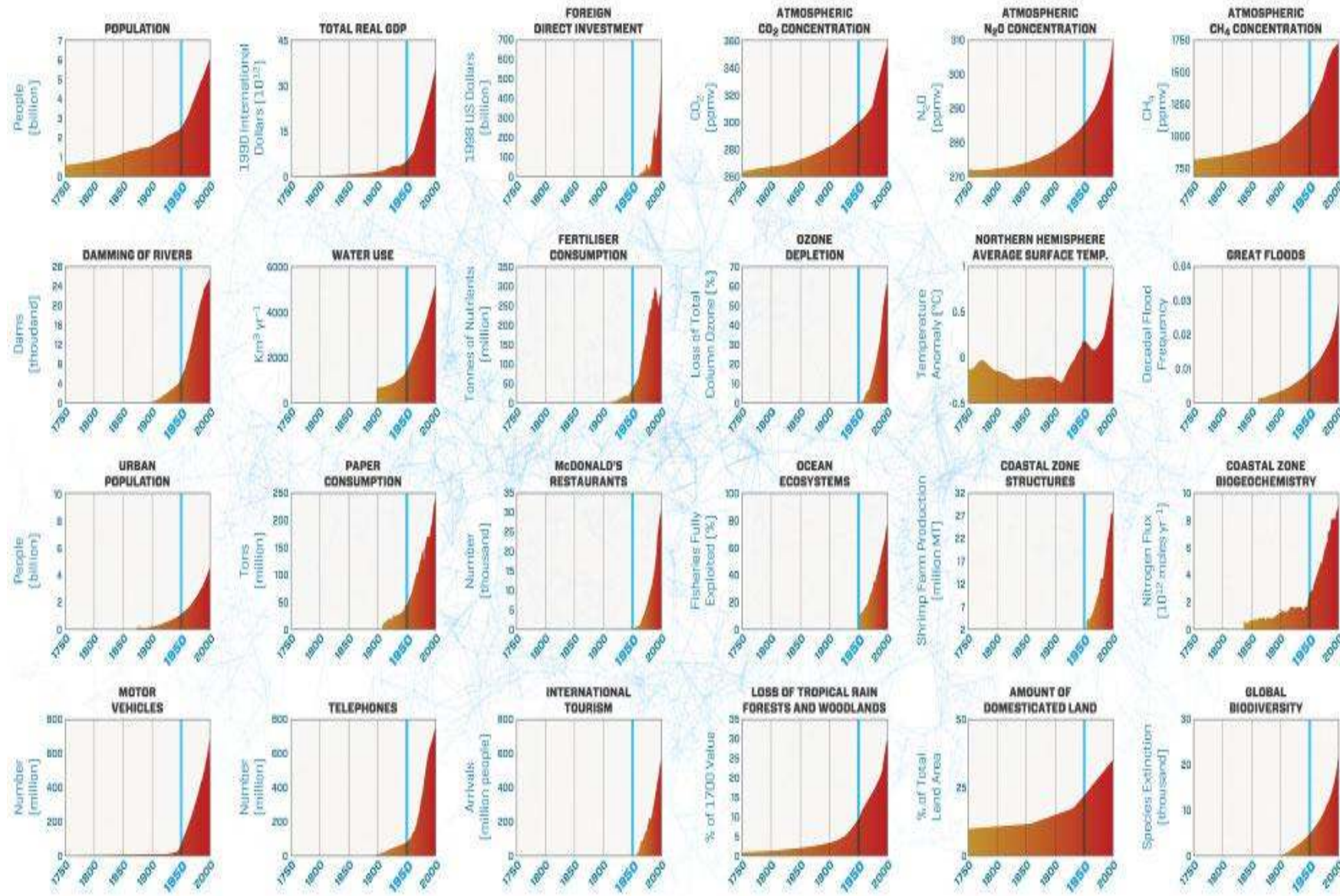
cement production

**↑ 50%**

CO<sub>2</sub> emissions



# We live in times of exponential change



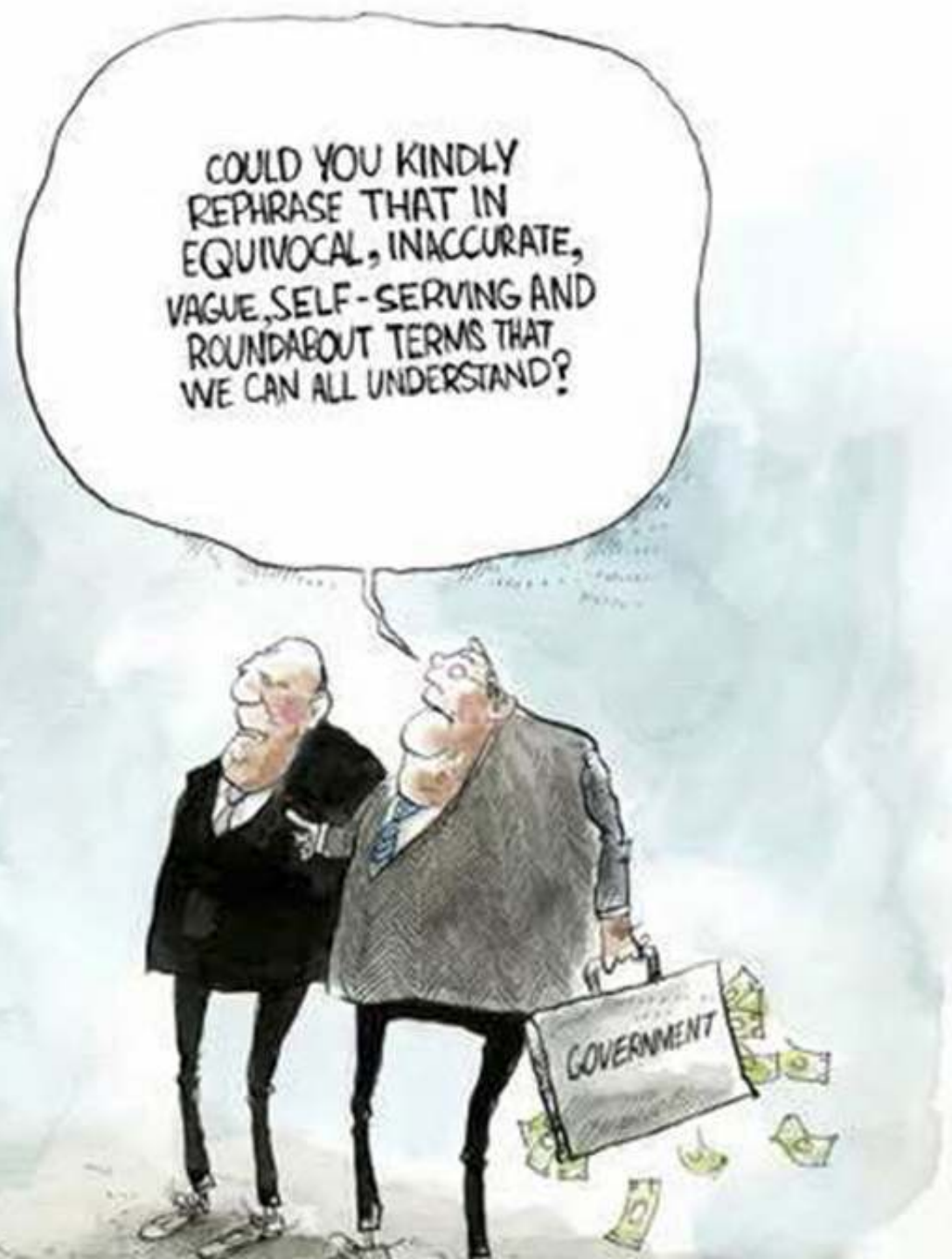


RESEARCH CONCLUDES:

**WE ARE  
DESTROYING  
EARTH.**

COULD YOU KINDLY  
REPHRASE THAT IN  
EQUIVOCAL, INACCURATE,  
VAGUE, SELF-SERVING AND  
ROUNDBOUT TERMS THAT  
WE CAN ALL UNDERSTAND?

GOVERNMENT







Consider this...

Population is growing, **30% growth by 2050**

**3 billion people joining middle class** in emerging economies

World GDP growth by  
**400%**

<https://www.un.org/development/desa/en/news/population/world-population-prospects-2017.html>



# CONSUMPTION DRIVEN ECONOMY IN DEVELOPED WORLD

Economic growth is still  
widely linked to  
increasing consumption





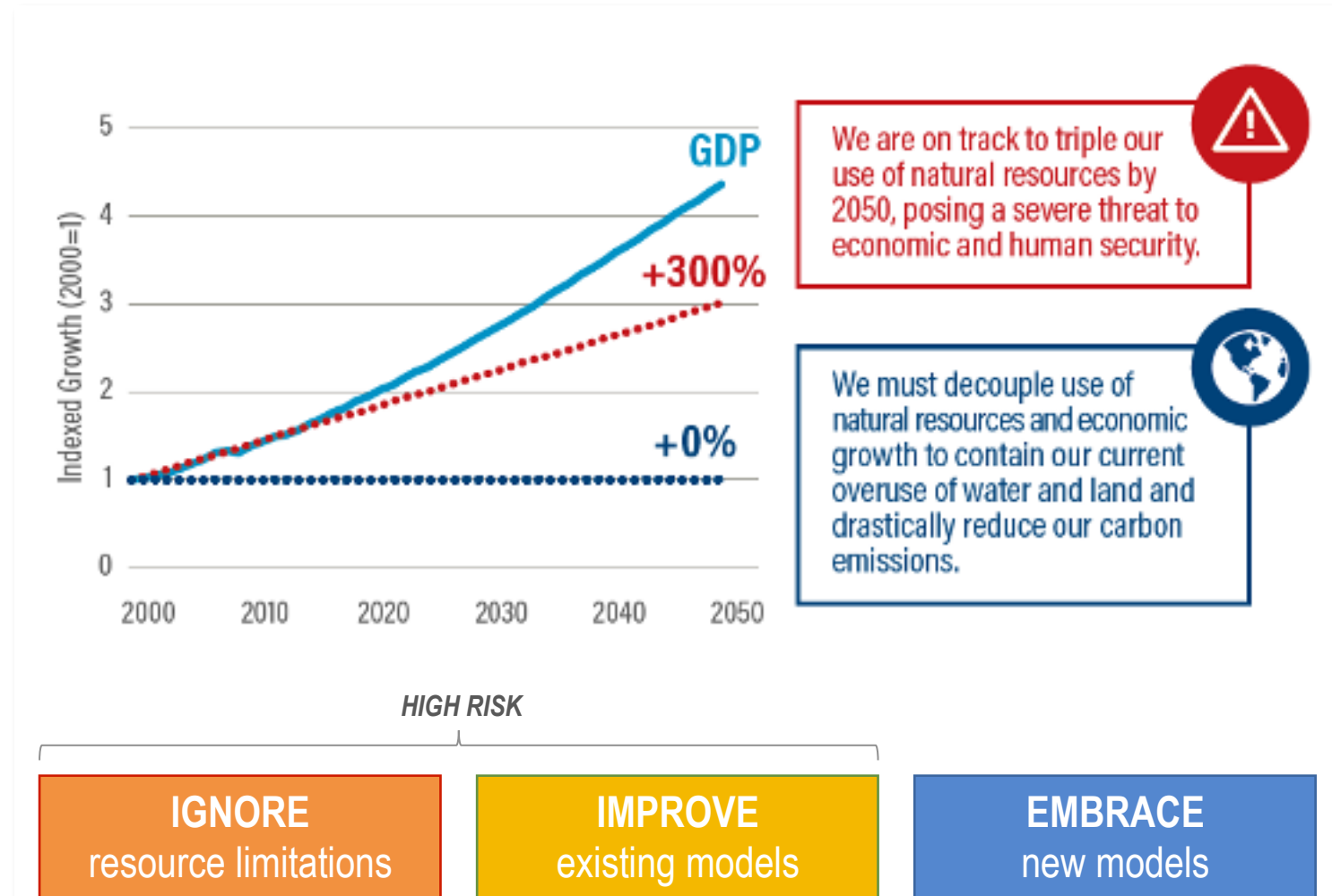
A large, dense pile of discarded metal cans and food containers, representing waste. The cans are of various sizes, colors, and brands, including Cadbury Roses, Foster's, and others. The pile is overflowing, with cans scattered in all directions, creating a chaotic and overwhelming visual of waste.

## THE 'GLOBAL SOUTH' IS FOLLOWING

Developing countries looking  
to emulate unsustainable  
Western models of growth



# Without change, resource limits will put the brakes on business growth







**A global problem**

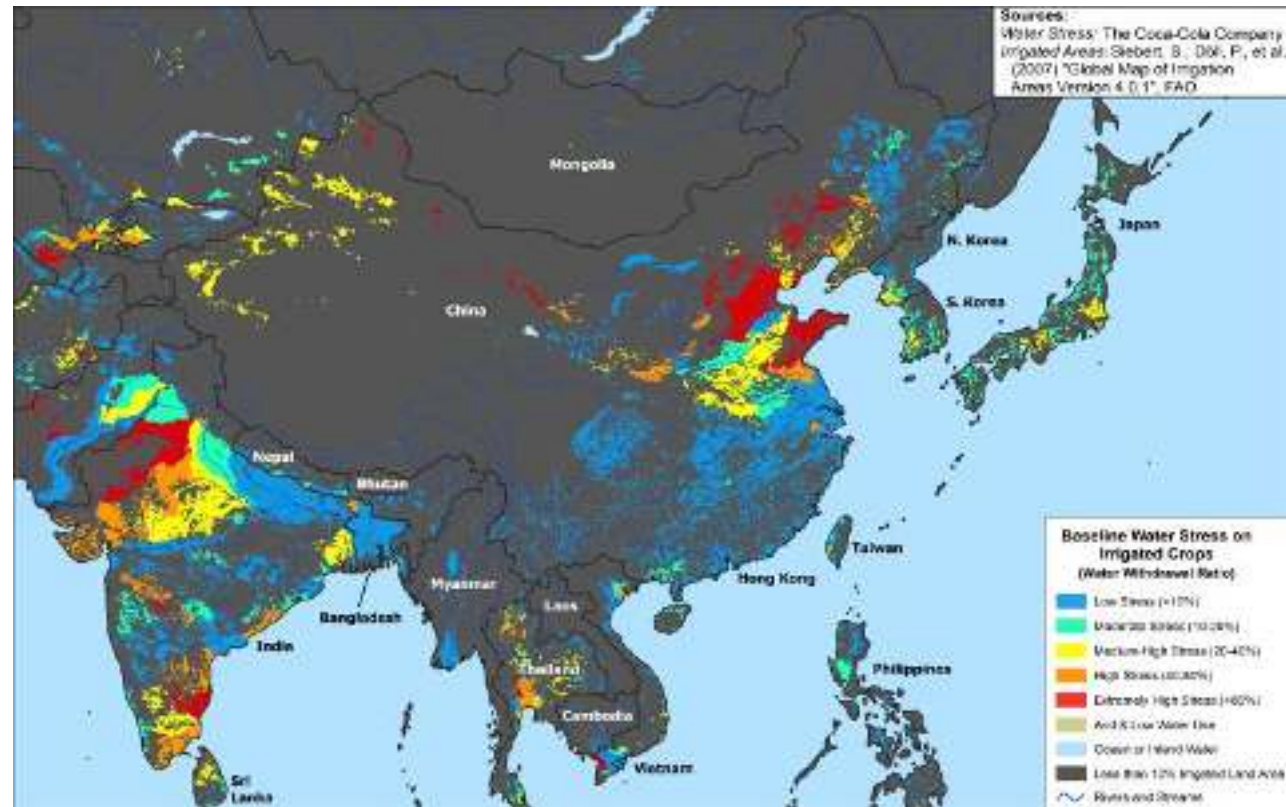
**1.2 B**

people facing  
water scarcity



39% of irrigated cropland in this region is located in areas of water stress concern

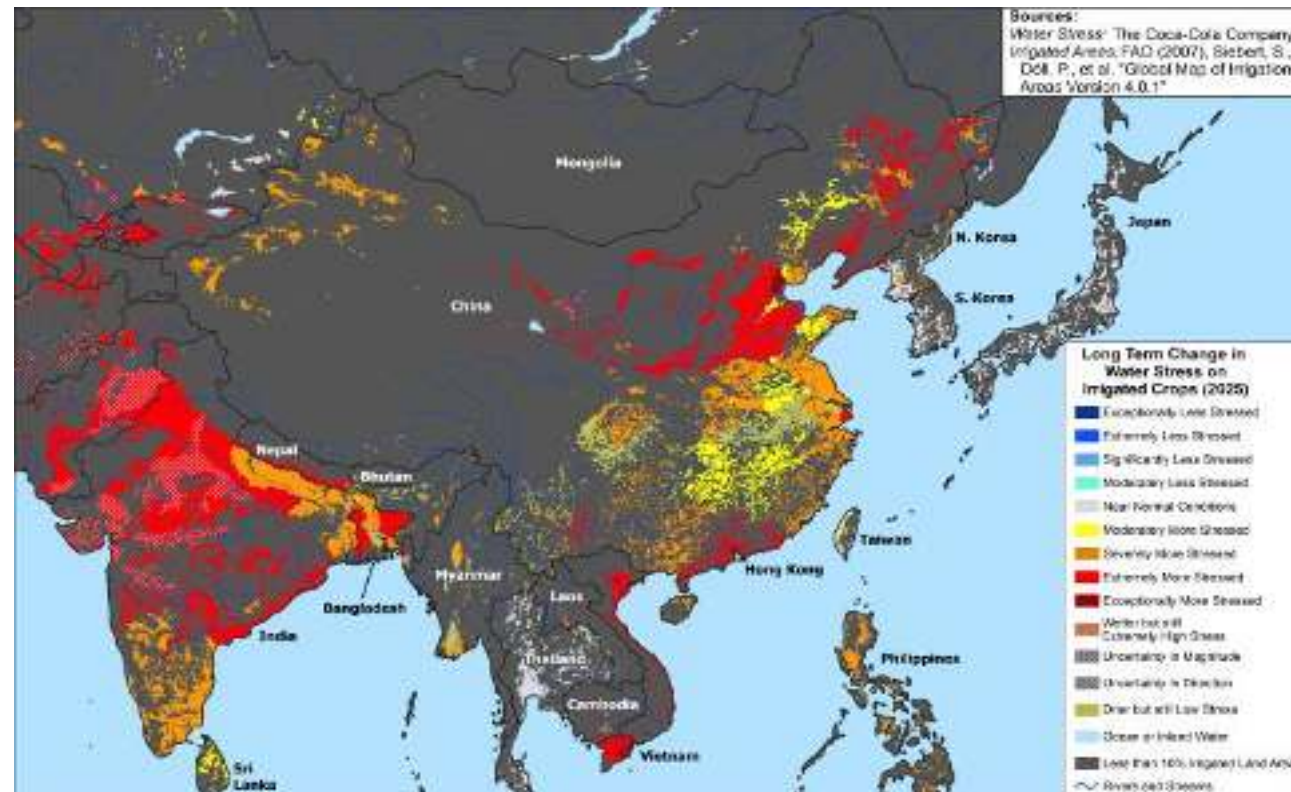
### Baseline Water Stress in areas with Irrigated Agriculture





75% of current irrigated cropland in this region would see water stress grow 2 to 8 times worse by 2025

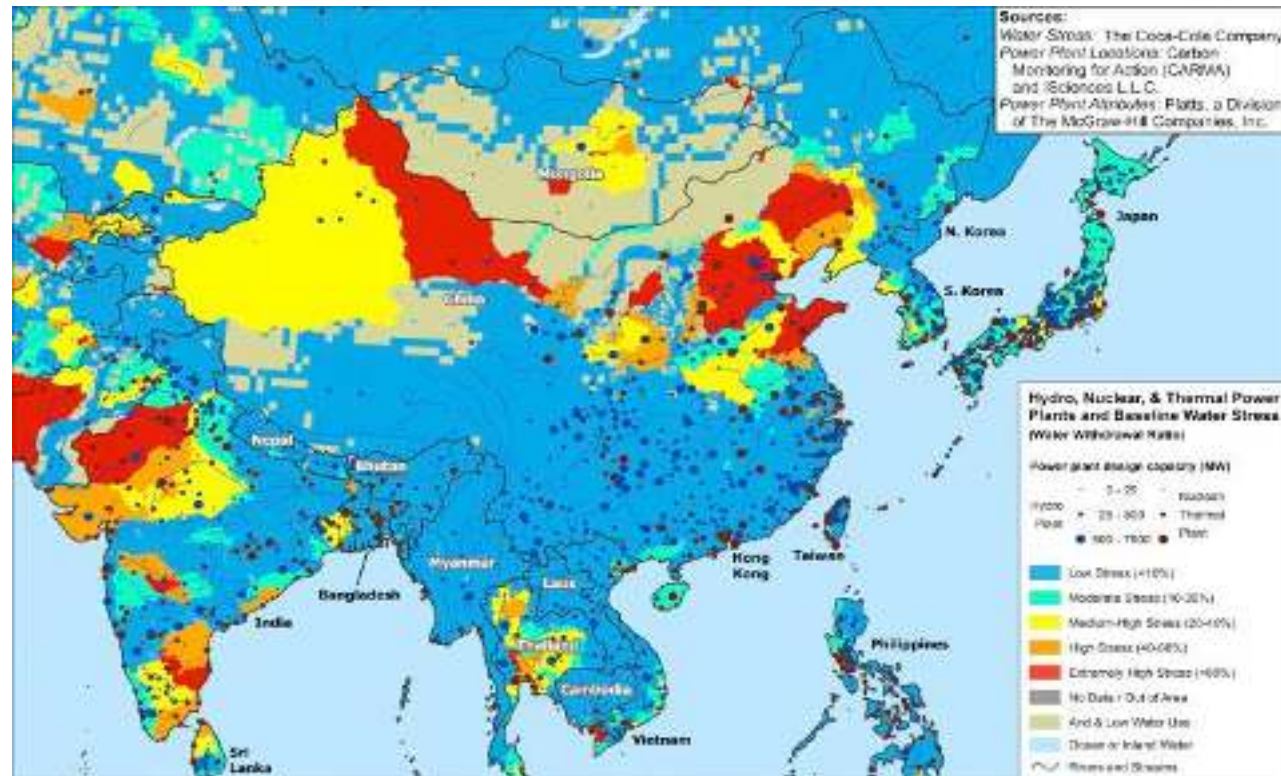
**Change in Water Stress by 2025 in areas with Irrigated Agriculture**  
(IPCC Scenario A1B)





19% of power plant design capacity in this region  
is located in areas of water stress concern

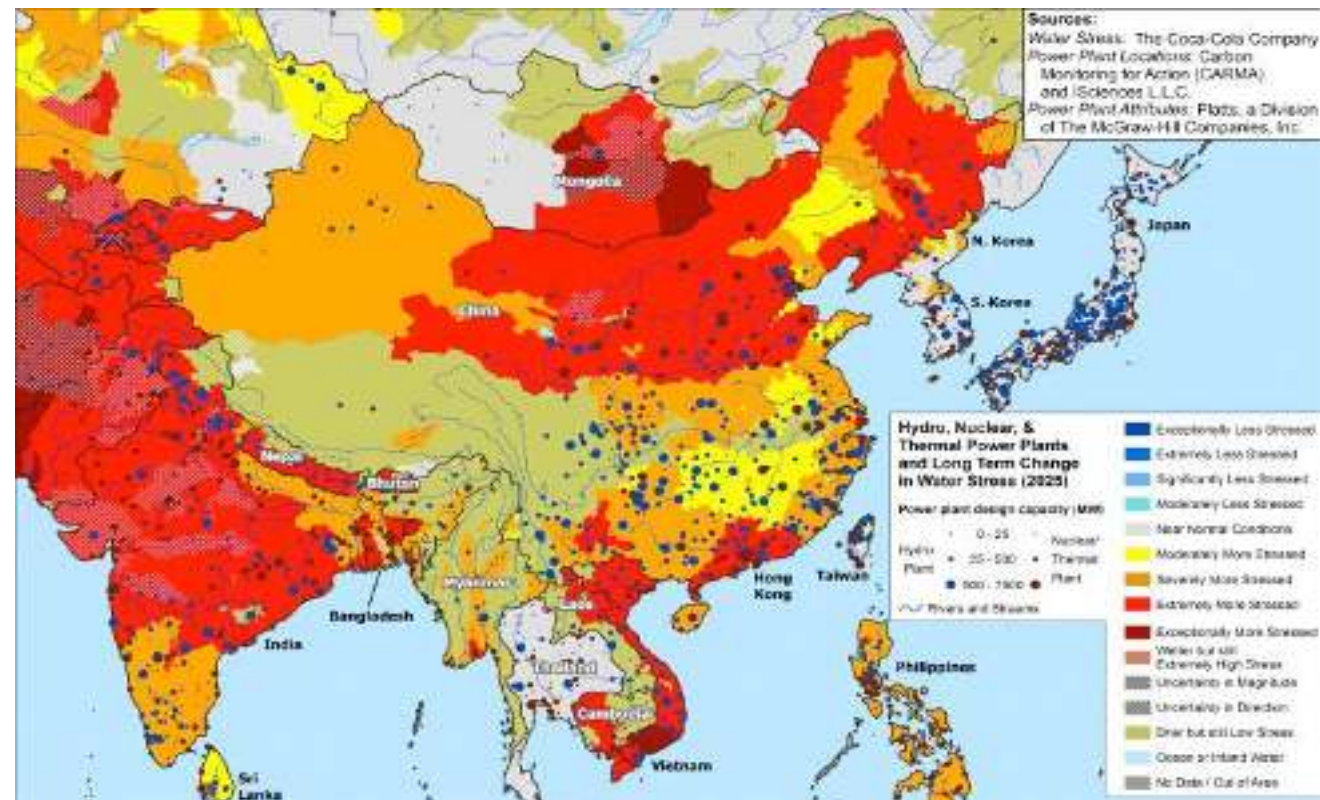
### Baseline Water Stress and Power Plants





55% of current power plant design capacity would see water stress grow 2 to 8 times worse by 2025

**Change in Water Stress by 2025 and Power Plants**  
(IPCC Scenario A1B)







**In times of scarcity,  
the poor get squeezed**



# WEF: ECONOMIC RISKS ARE BECOMING 'GREENER'

Top 5 Global Risks in Terms of Likelihood

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1st	Asset price collapse	Asset price collapse	Asset price collapse	Storms and cyclones	Severe income disparity	Severe income disparity	Income disparity	Intensified conflict with regional consequences	Large-scale involuntary migration	Extreme weather events	Extreme weather events
2nd	Global food insecurity	Slowing Chinese economy (<5%)	Slowing Chinese economy (<5%)	Flooding	Chronic fiscal imbalances	Chronic fiscal imbalances	Extreme weather events	Extreme weather events	Extreme weather events	Large-scale involuntary migration	Natural disasters
3rd	Failed and failing states	Chronic disease	Chronic disease	Corruption	Rising greenhouse gas emissions	Rising greenhouse gas emissions	Unemployment and underemployment	Failure of national governments	Failure of climate-change mitigation and adaptation	Major natural disasters	Cyberattacks
4th	Oil and gas price spike	Global governance gaps	Fiscal crisis	Biodiversity loss	Cyberattacks	Water supply crises	Climate change	State collapse or crisis	Intensified conflict with regional consequences	Large-scale terrorist attacks	Data fraud or theft
5th	Chronic disease, developed world	Reversal from globalization (emerging)	Global governance gaps	Climate change	Water supply crises	Mismanagement of population ageing	Cyberattacks	High structural unemployment or underemployment	Major natural catastrophes	Major incident of data loss or theft	Failure of climate-change mitigation and adaptation

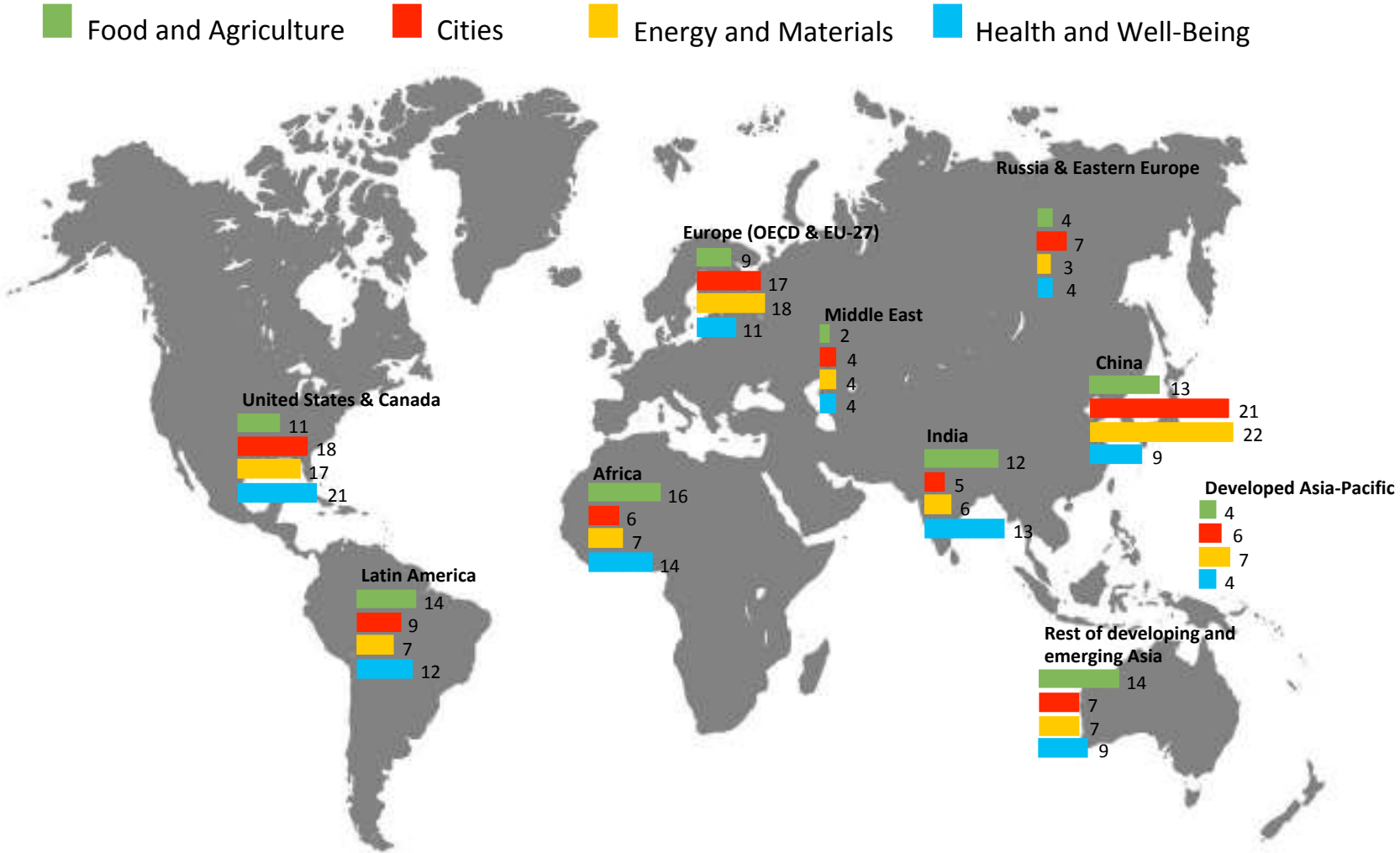
Top 5 Global Risks in Terms of Impact

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1st	Asset price collapse	Asset price collapse	Asset price collapse	Fiscal crisis	Major systemic financial failure	Major systemic financial failure	Fiscal crisis	Water crises	Failure of climate-change mitigation and adaptation	Weapons of mass destruction	Weapons of mass destruction
2nd	Reversal from globalization (developed)	Reversal from globalization (developed)	Reversal from globalization (developed)	Climate change	Water supply crises	Water supply crises	Climate change	Rapid and massive spread of infectious diseases	Weapons of mass destruction	Extreme weather events	Extreme weather events
3rd	Slowing Chinese economy (<5%)	Oil and gas price spike	Oil price spike	Geopolitical conflict	Food shortage crises	Chronic fiscal imbalances	Water crises	Weapons of mass destruction	Water crises	Water crises	Natural disasters
4th	Oil and gas price spike	Chronic disease	Chronic disease	Asset price collapse	Chronic fiscal imbalances	Diffusion of weapons of mass destruction	Unemployment and underemployment	Intensified conflict with regional consequences	Large-scale involuntary migration	Major natural disasters	Failure of climate-change mitigation and adaptation
5th	Pandemics	Fiscal crisis	Fiscal crisis	Extreme energy price volatility	Extreme volatility in energy and agriculture prices	Failure of climate-change mitigation and adaptation	Global information infrastructure breakdown	Failure of climate-change mitigation and adaptation	Severe energy price shocks	Failure of climate-change mitigation and adaptation	Water crises

■ Economic ■ Environmental ■ Geopolitical ■ Societal ■ Technological

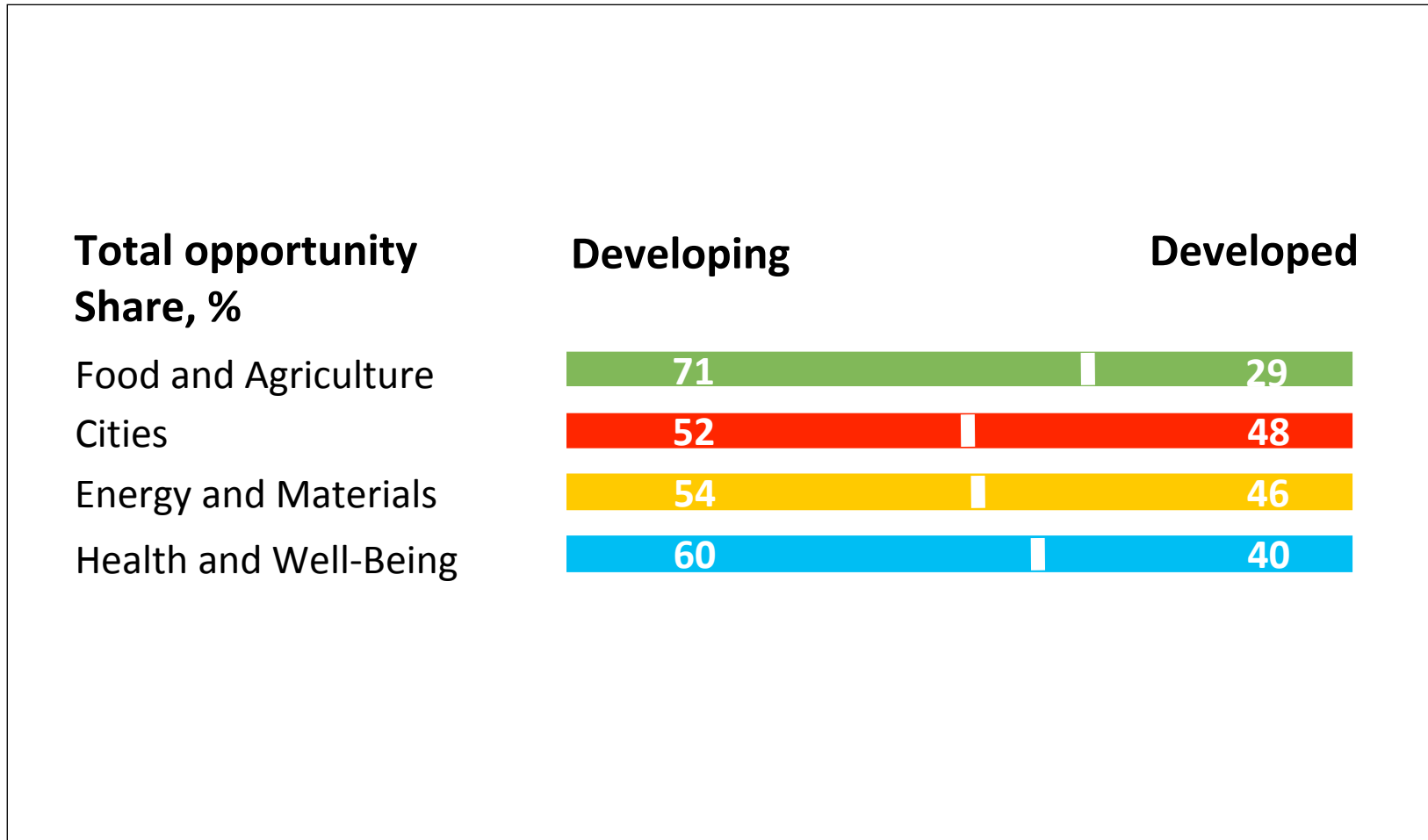


# SDG Business opportunities ARE GLOBAL





## ... BUT MOSTLY IN DEVELOPING COUNTRIES





# WHAT DO TOMORROW'S MARKETS LOOK LIKE?



Picture <http://www.callisonrtkl.com/you-are-here/good-to-great-collective-experiences-bring-shopping-and-entertainment-districts-in-the-future/>





# WE NEED TO BUILD FOR PEOPLE

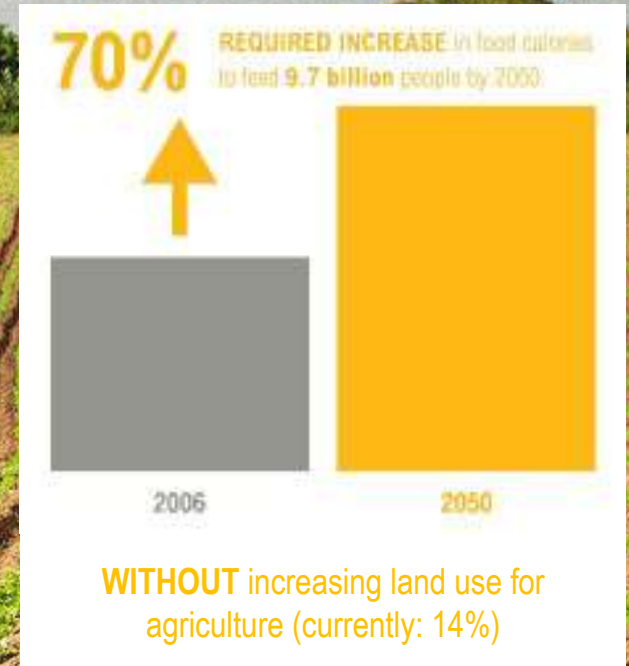
## Biggest opportunity: sustainable infrastructure

The infrastructure investment needed over the next 15 years – about US\$90 trillion - is **more than the entire current stock**.

The **global South will account for roughly 2/3** of global infrastructure investment, and have an opportunity to “leapfrog” polluting and inefficient models.



# WE NEED TO FEED PEOPLE



Picture: <https://www.fastcompany.com/3050905/ideoorg-is-bringing-low-cost-precision-agriculture-to-developing-countries>

Source: WRI



# OPPORTUNITY

A large pile of garbage, including plastic bags, food waste, and other debris, is shown in the foreground. In the background, a large metal dumpster is tipped over, spilling its contents onto the pile. The sky is clear and blue.

**32%** of all  
food is wasted  
from farm to fork

Loss of  
**\$940 billion**  
per year

Source: WRI, <https://www.wri.org/blog/2017/06/another-step-towards-global-food-loss-and-waste-movement>



# FOOD WASTE IN ITALY

85kg Per family per year

5.5 million tonnes Total food waste per year



# WE NEED TO CLOTHE PEOPLE

By 2030, apparel companies will have to be **TWICE AS PRODUCTIVE** with available resources.

Water  
use and  
GHG  
emission  
s



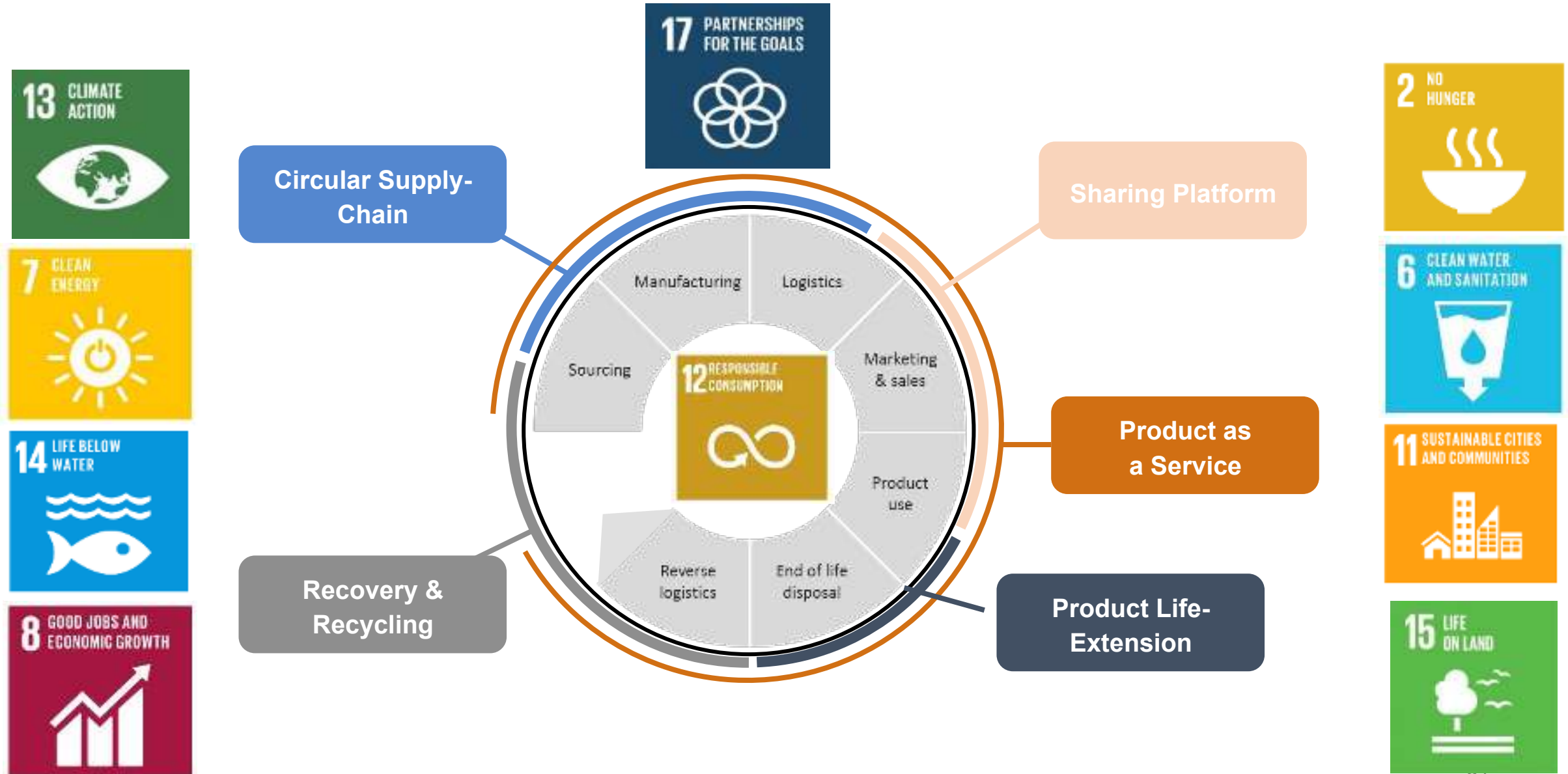
2016



2030



# Accelerating Circular Economy





# Momentum for ambitious corporate sustainability action



340+ Companies Commit to  
Science Based Targets



Consumer Goods Forum  
Resolves to Halve Food Waste  
by 2025 (400 Companies)



145+ Companies Joined the UN  
Global Compact CEO Water  
Mandate



447 Companies Commit to Zero  
Deforestation in Supply Chain



# SUSTAINABLE LIVING BRANDS UNILEVER

**18 SUSTAINABLE  
LIVING BRANDS  
IN TOP 40  
UNILEVER BRANDS**

**DELIVERED  
OVER 60% OF  
THE GROWTH  
IN 2016**

**GREW  
50% FASTER  
THAN THE  
REST OF THE  
BUSINESS**





# THINKING OF NEW BUSINESS MODELS: PHILIPS' EXAMPLE: SELLING LIGHT AS A SERVICE

**Innovative ways to use less  
resources and becoming  
more circular**



# DSM-Niaga 100% RECYCLABLE CARPETS

95% less energy  
No water use

Source: DSM 2016, <https://www.dsm.com/corporate/media/informationcenter-news/2016/11/2016-11-16-dsm-niaga-ready-for-commercial-scale-production-of-100-percent-recyclable-carpets.html>



# Platform for Accelerating the Circular Economy (PACE)



Drive **PROJECTS**



Leverage global **LEADERSHIP** to drive  
**action**



Capture and Disseminate **LEARNINGS**  
for Scaling



# Platform for Accelerating the Circular Economy (PACE)



## ELECTRONICS

- **\$55 billion of total value** in recoverable materials from e-waste is not captured
- **44.7 million metric tonnes of e-waste** is generated globally each year



## PLASTICS

- **95% of global packaging material value** is lost after first use
- By 2050 there will be **more plastics than fish** in the ocean



## FOOD & BIO-ECONOMY

- The bio-economy represent **17% of our world's total GDP**
- Globally around **1/3rd of food produced is lost or wasted** while food demand surges



## MARKETS & MODELS

- There is a **\$4.5 trillion business opportunity** for moving towards a circular economy
- **Business model** transformation, **procurement** and **supply chain** optimization can help obtain this





# CALL TO ACTION FOR BUSINESSES

## Three recommendations for business leaders:



**Do the math.** Can your business meet demand in 2050 without consuming more resources than it uses today? If not, what needs to change?



**Take a leadership role** and change the conversation with customers, investors, policymakers and peers.



**Transform your business** to one that will thrive in a resource constrained future. Look at circular economy, sharing economy and other innovations.

## PREPARE FOR THE FUTURE