

THE AGE OF SUSTAINABLE DEVELOPMENT

SOLUTIONS FOR CHANGE:
FORGING MULTI-STAKEHOLDER PARTNERSHIPS TOWARDS
2030

PROFESSOR JEFFREY D. SACHS
DIRECTOR OF THE UN
SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK

ISAP 2015
YOKOHAMA, TOKYO
JULY 28, 2015

SUSTAINABLE DEVELOPMENT IS:

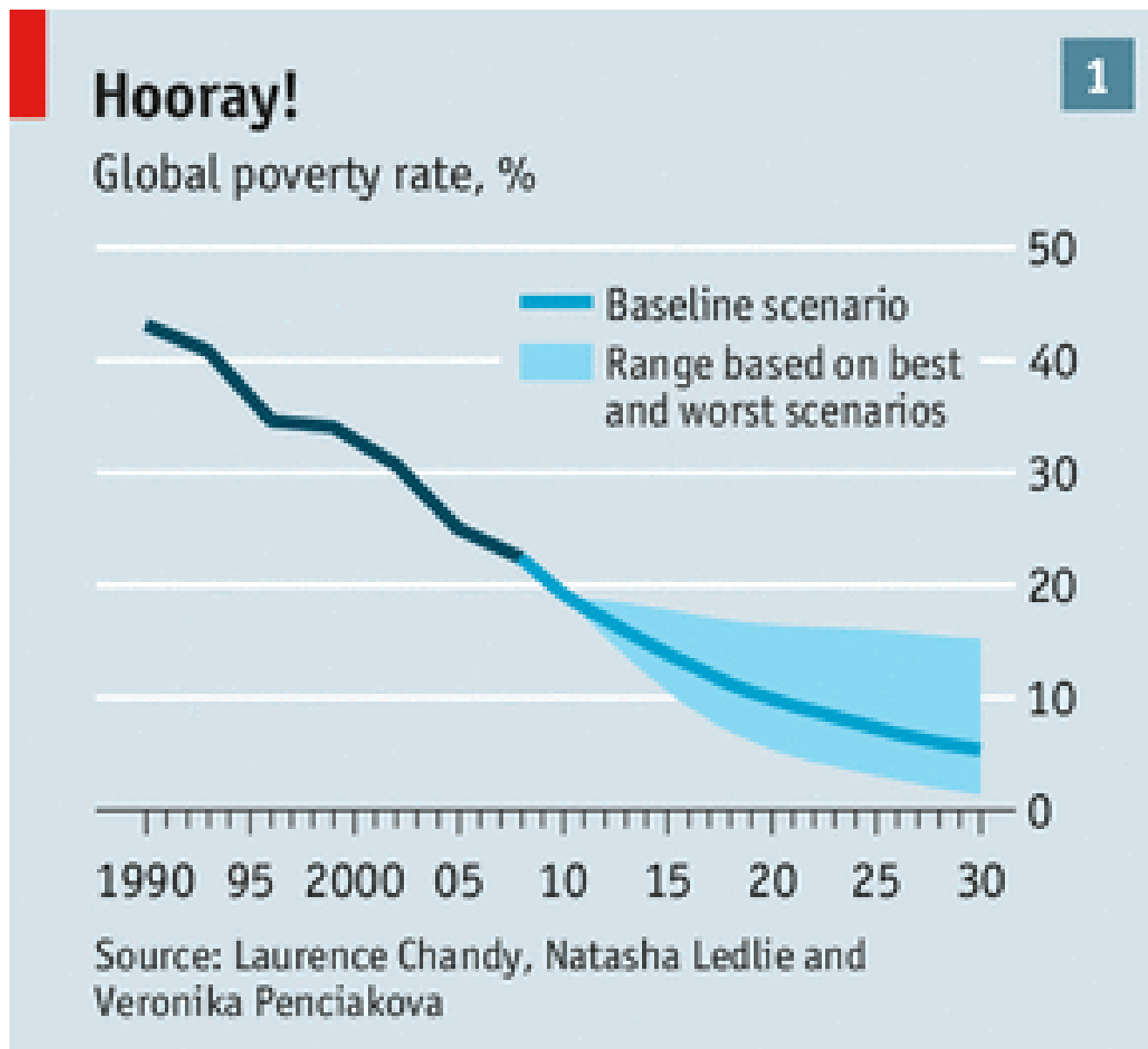
ECONOMIC DEVELOPMENT THAT IS

SOCIALLY INCLUSIVE, AND

ENVIRONMENTALLY SUSTAINABLE

**WE ARE ENTERING THE AGE OF
SUSTAINABLE DEVELOPMENT WITH
THE SDGS THIS YEAR**

PROGRESS DURING THE MILLENNIUM DEVELOPMENT GOAL ERA



YET TODAY'S GLOBAL ECONOMIC GROWTH IS **NOT** SUSTAINABLE DEVELOPMENT:

- THERE IS GROWING INCOME INEQUALITY, SOCIAL EXCLUSION, AND JOBLESSNESS FOR MANY YOUTH
- EXTREME POVERTY CONTINUES IN MUCH OF AFRICA AND PARTS OF ASIA AND LATIN AMERICA
- THE WORLD FACES PROFOUNDLY THREATENING ENVIRONMENTAL TRENDS AND CRISES



Tunis, January 2011



Cairo, January 2011



Athens July 2011



Tel Aviv, August 2011



Chile, August 2011



New York City, November 2011



Madrid, September 2012

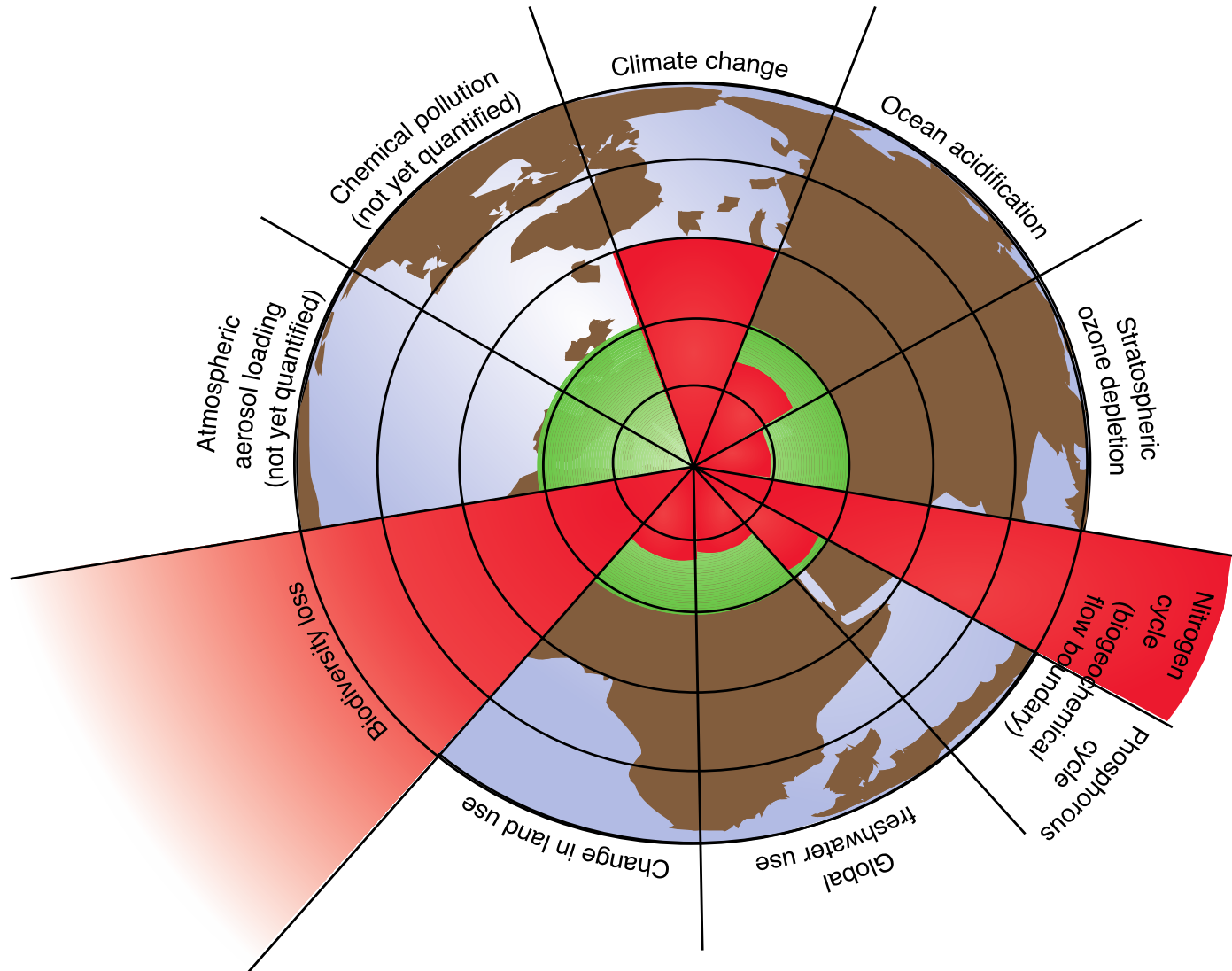


Istanbul, June 2013



Rio de Janeiro, June 2013

“PLANETARY BOUNDARIES”

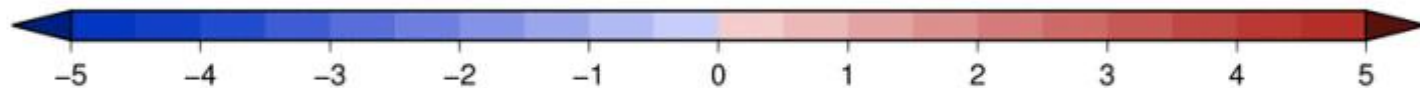
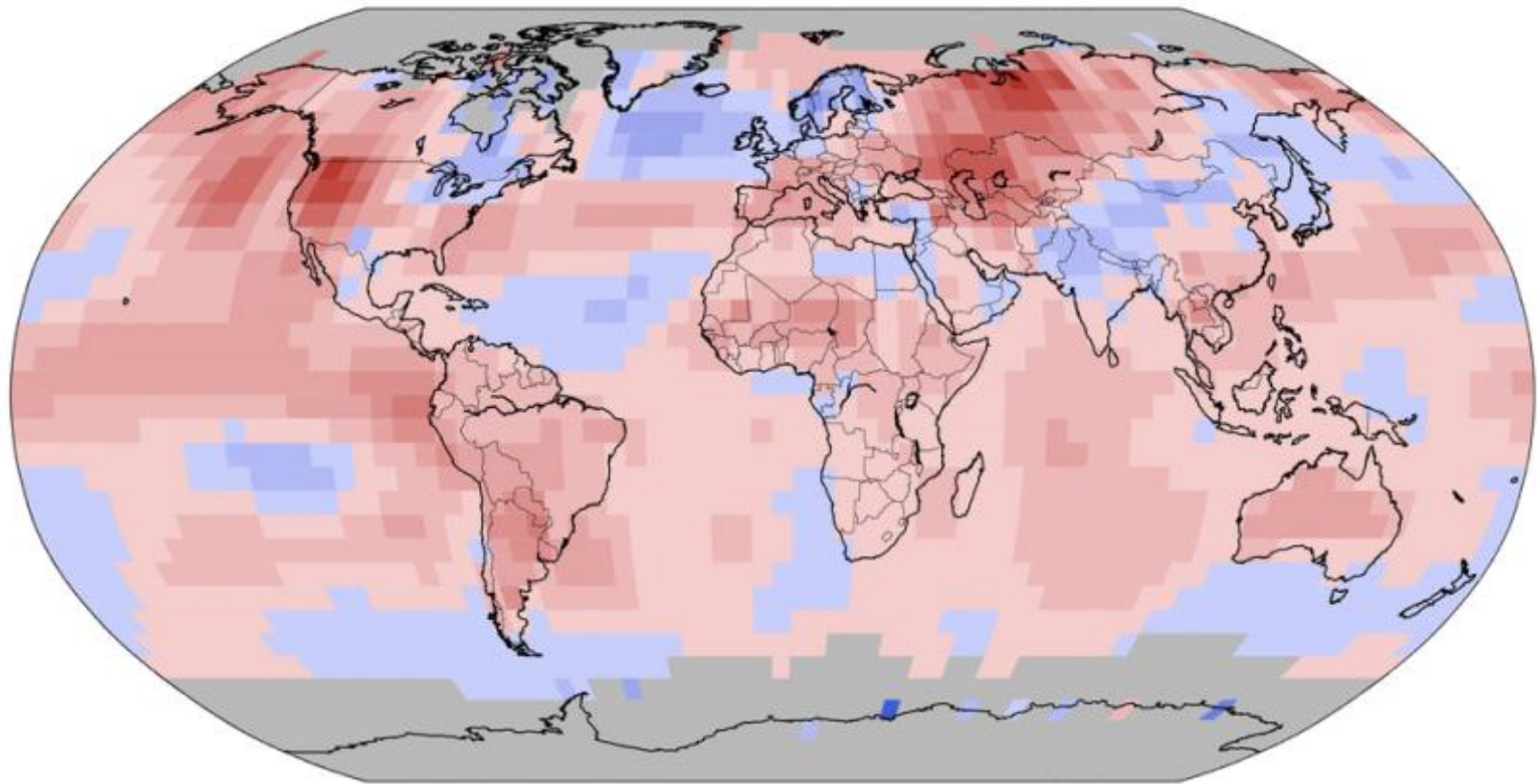


Source: Rockström et al 2009a)

JUNE 2015 WARMEST IN 136-YEAR RECORD

Land & Ocean Temperature Departure from Average Jun 2015
(with respect to a 1981–2010 base period)

Data Source: GHCN–M version 3.3.0 & ERSST version 4.0.0



National Centers for Environmental Information
Mon Jul 13 06:35:21 EDT 2015

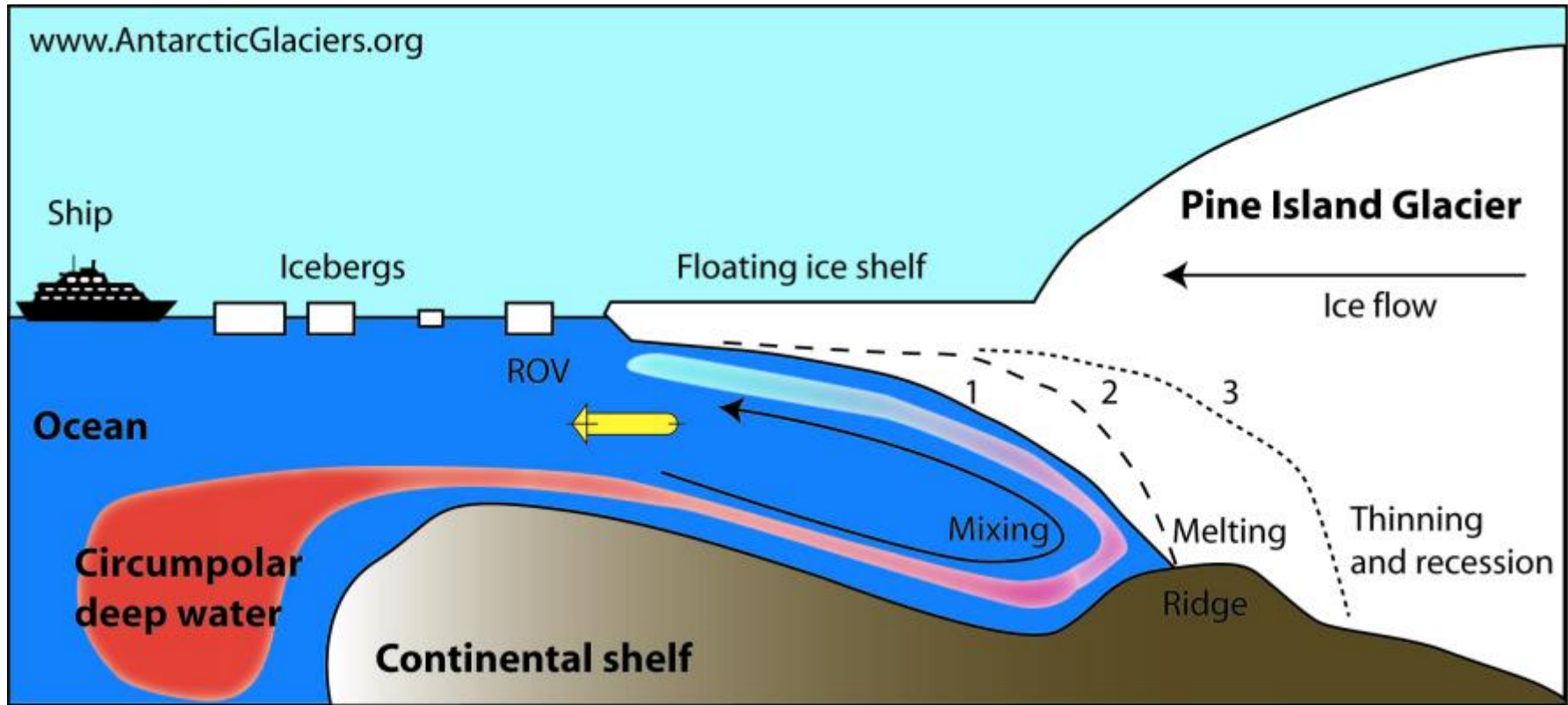
Degrees Celsius

Please Note: Gray areas represent missing data
Map Projection: Robinson

LOS ANGELES WATER RESERVOIR, APRIL 5, 2015

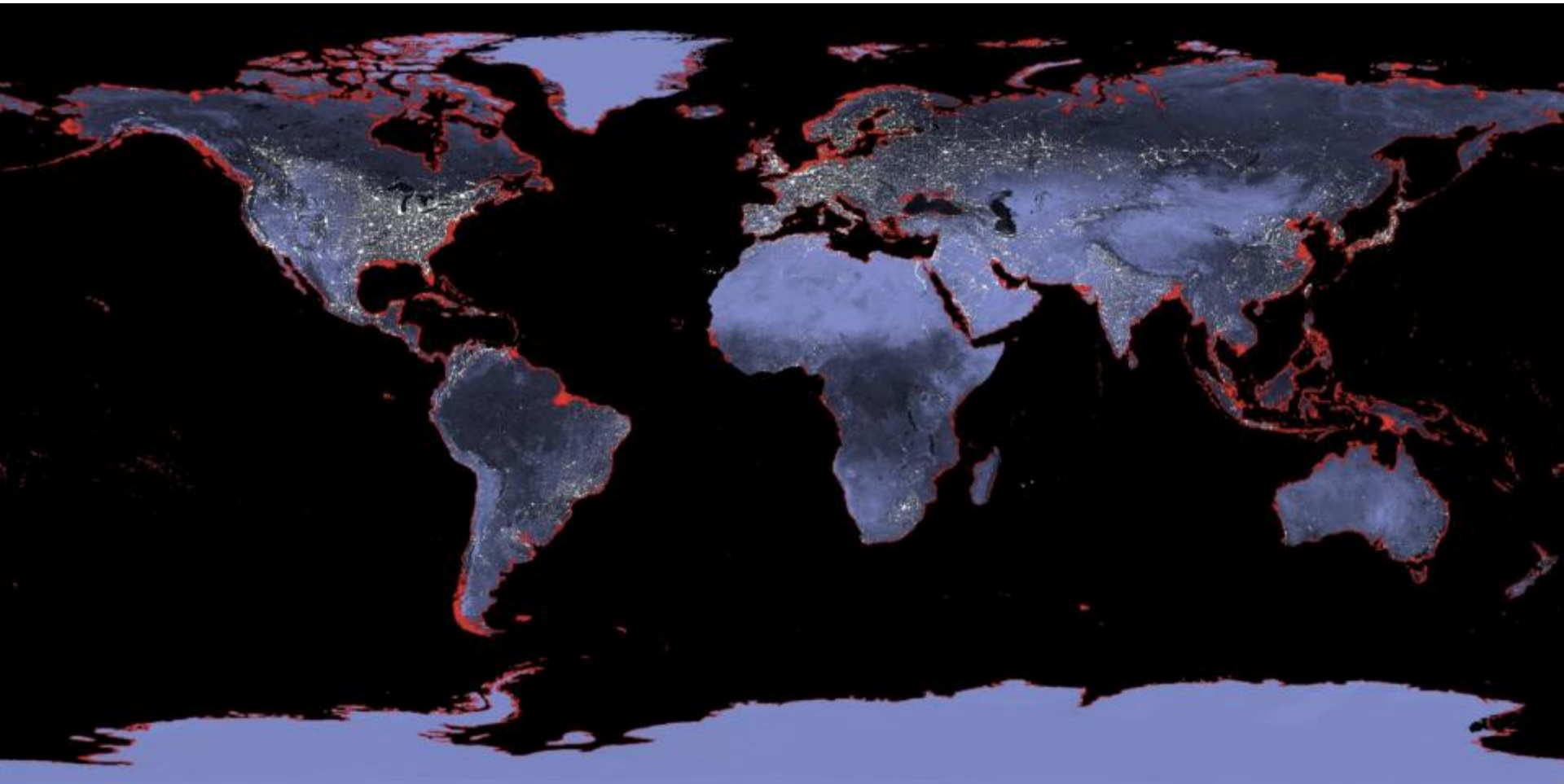


LOSS OF WEST ANTARCTICA ICE SHEET



1. Early 1970s. Pine Island Glacier is grounded at a bedrock ridge.
2. Warm, inflowing Circumpolar Deep Water melts the base of the glacier. The glacier steepens and accelerates.
3. Present day, observed by a remotely operated vehicle (ROV). Glacier is thinning and receding.

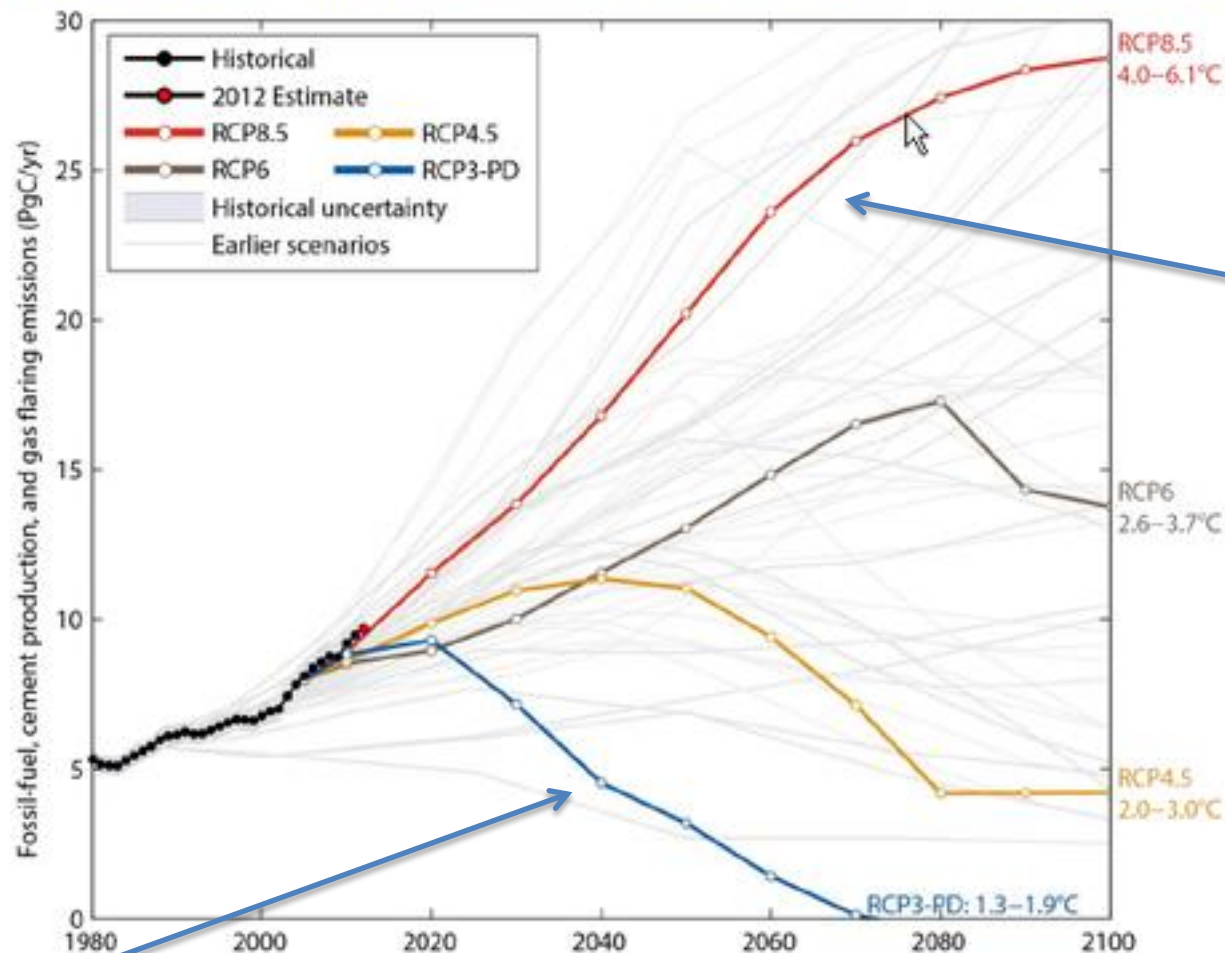
Land Lost to 6M Sea Level Rise, NASA



THE SUSTAINABLE DEVELOPMENT GOALS WILL BE ADOPTED ON SEPTEMBER 25



Emissions are heading to a 4.0-6.1°C “likely” increase in temperature
Large and sustained mitigation is required to keep below 2°C



Linear interpolation is used between individual datapoints

Source: [Peters et al. 2012a](#); [Global Carbon Project 2012](#);

2-degree C

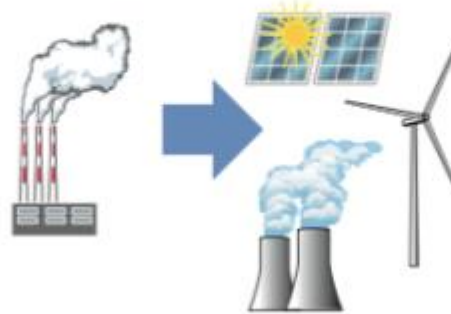
Main Decarbonization Strategies

Strategy

Energy Efficiency



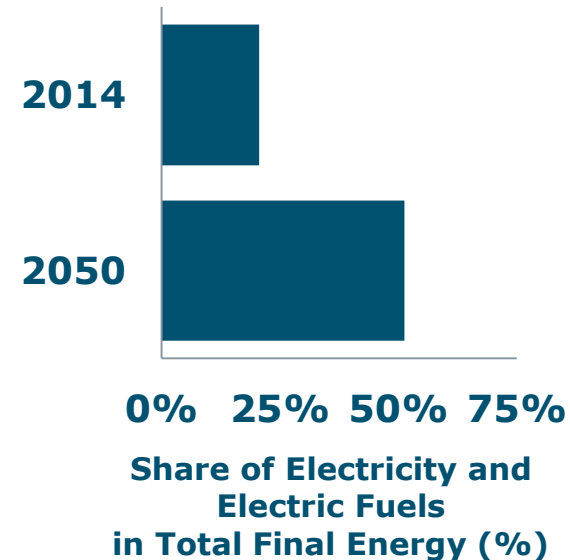
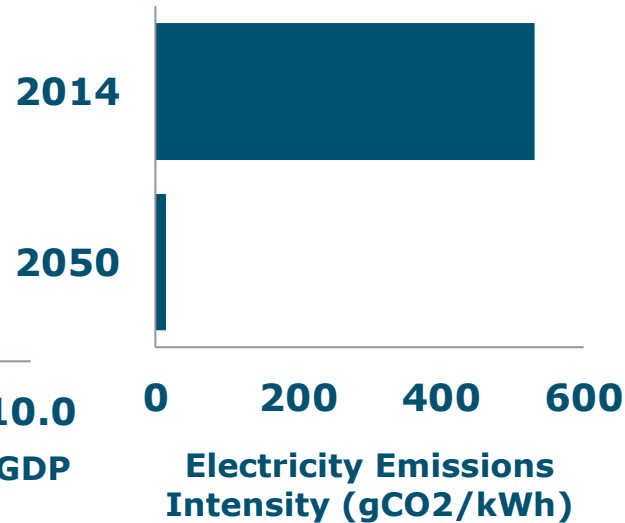
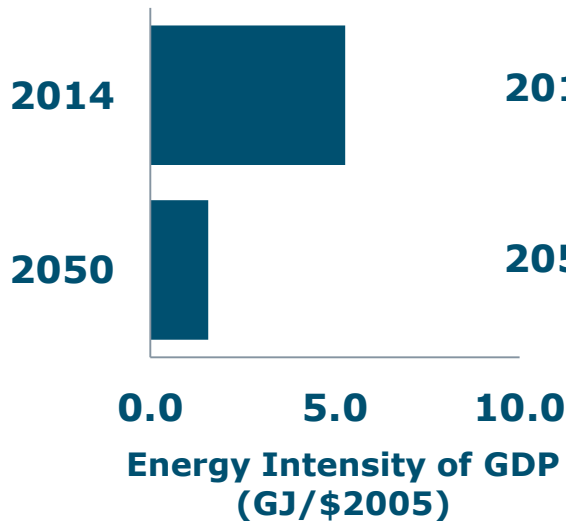
Decarbonization of Electricity



End Use Fuel Switching to Electric Sources



Key Metric of Transformation



pathways to
deep decarbonization

interim 2014 report

THE DEEP
DECARBONIZATION
PATHWAYS
PROJECT

IDDRI
Institut de Développement
Durable et de Ressources



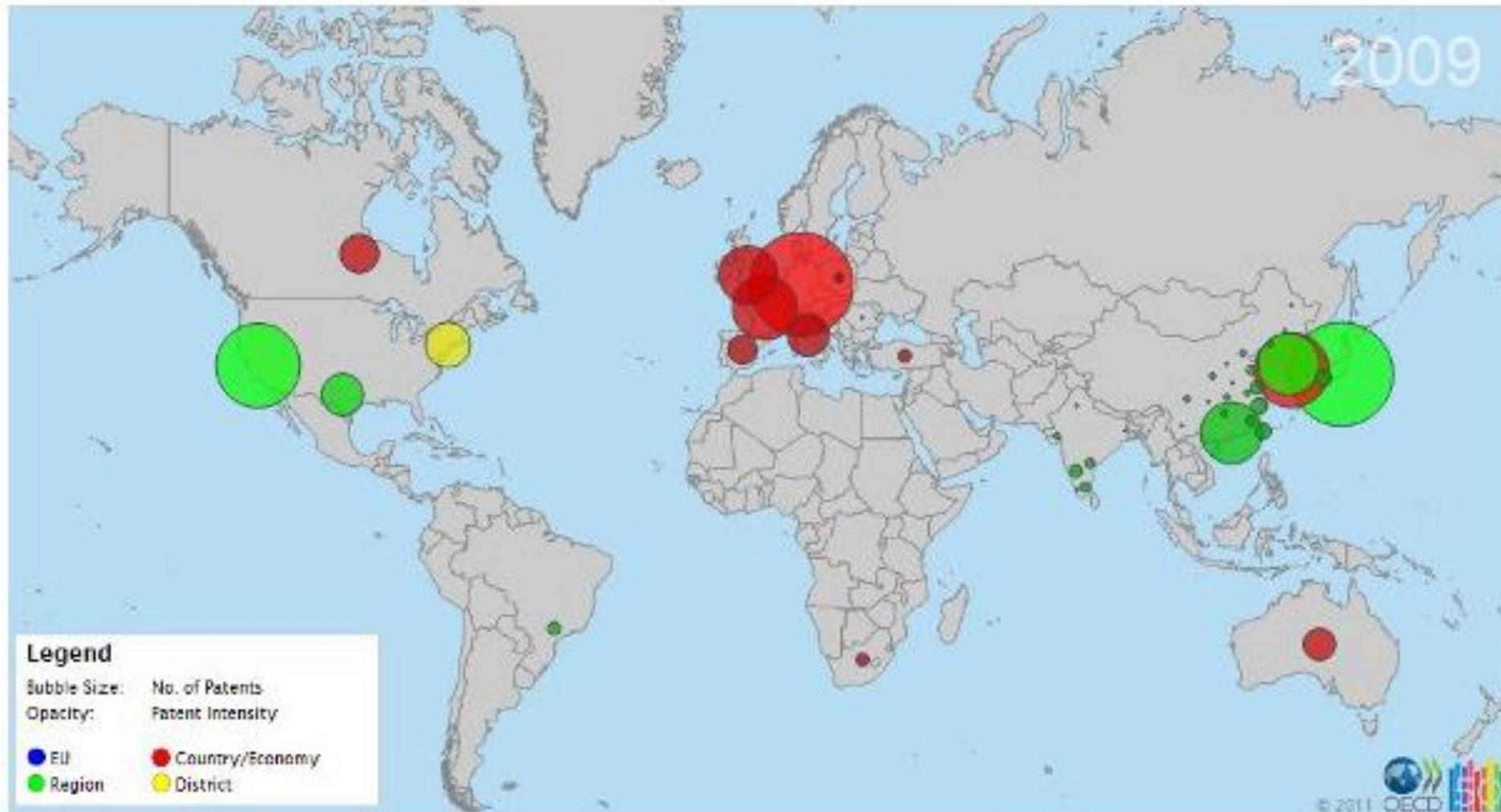
THE WORLD WILL NEED TO STRAND OIL, GAS, AND COAL RESERVES

Table 1 | Regional distribution of reserves unburnable before 2050 for the 2 °C

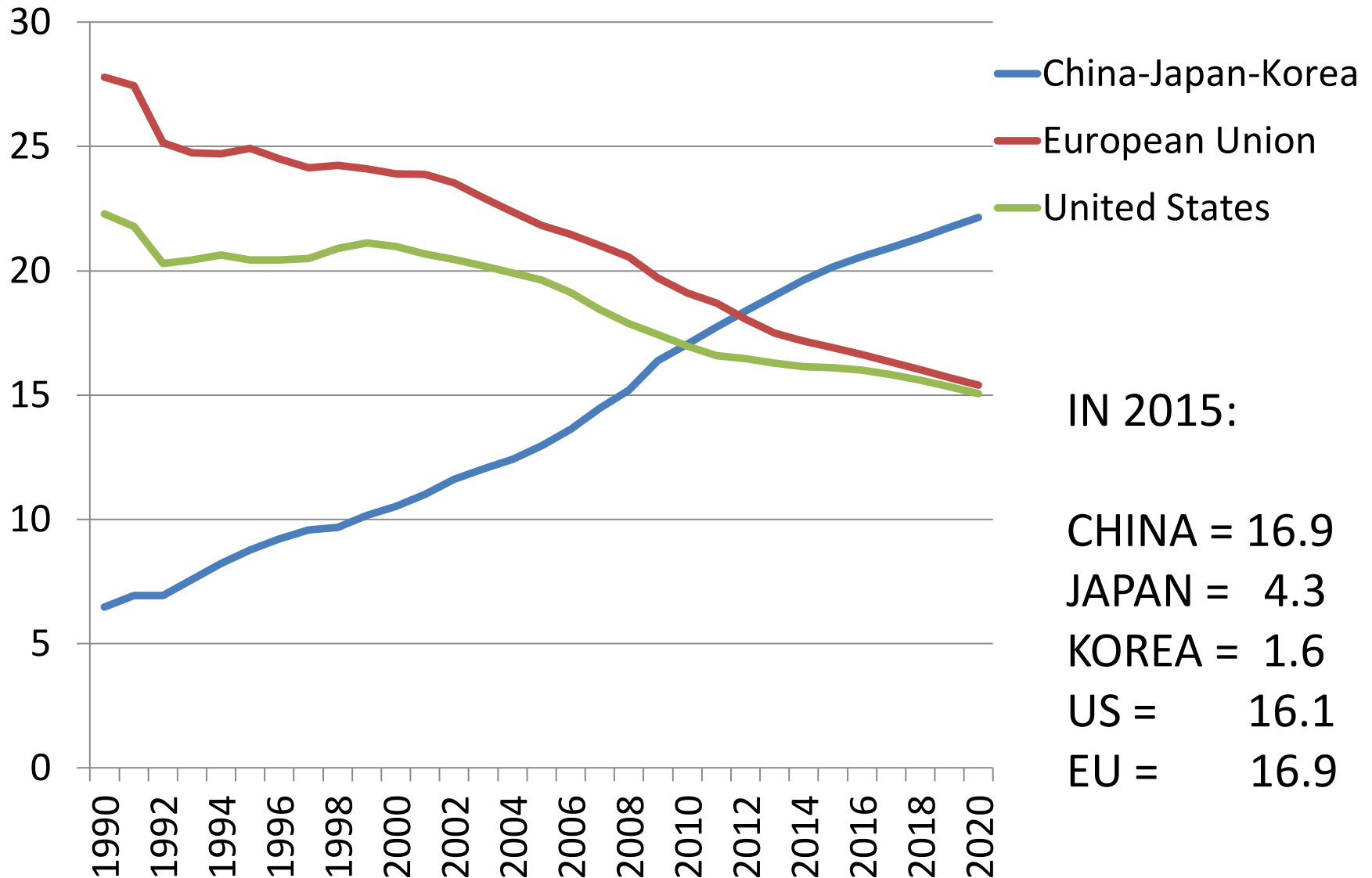
Country or region	2 °C with CCS					
	Oil		Gas		Coal	
	Billions of barrels	%	Trillions of cubic metres	%	Gt	%
Africa	23	21%	4.4	33%	28	85%
Canada	39	74%	0.3	24%	5.0	75%
China and India	9	25%	2.9	63%	180	66%
FSU	27	18%	31	50%	203	94%
CSA	58	39%	4.8	53%	8	51%
Europe	5.0	20%	0.6	11%	65	78%
Middle East	263	38%	46	61%	3.4	99%
OECD Pacific	2.1	37%	2.2	56%	83	93%
ODA	2.0	9%	2.2	24%	10	34%
United States of America	2.8	6%	0.3	4%	235	92%
Global	431	33%	95	49%	819	82%

FROM McGLADE AND EKINS, NATURE MAGAZINE, JANUARY 8, 2015

PATENT HOTSPOTS WORLDWIDE, OECD DATA, 2009



SHIFTING GEO-ECONOMICS: SHARES OF WORLD GDP



The **Sustainable Development Solutions Network** operates under the auspices of UN Secretary-General Ban Ki-moon, and engages scientists, engineers, business and civil society leaders, and development practitioners for evidence-based problem solving. Its member institutions, notably universities, research centers, and think tanks, work with government, business and civil society to promote innovations to support sustainable development (www.unsdsn.org)

MEMBERS OF THE SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK (SDSN)



Launch Date of SDSN SDG Urban Alliance:

September 24, 2015 near UN Headquarters on
the eve of the Global Adoption of the SDGs

Establish an SDSN Task Force to work with UN
Habitat and other Organizations to Support
Habitat III in Quito in 2016

LAUNCH TODAY OF THE JAPAN-SDSN CHAPTER LED BY IGES AND UN UNIVERSITY

FOCUS ON:

DEEP DECARBONIZATION PATHWAY (DDPP)
HIGH-TECH SOLUTIONS FOR ENERGY EFFICIENCY
AND LOW-CARBON ENERGY
ROBOTICS AND INFORMATION TECHNOLOGY
URBAN DESIGN (SDSN SDG URBAN ALLIANCE)
NANOTECHNOLOGY AND BIOTECHNOLOGY
(GREEN CHEMISTRY)
CHALLENGES OF AGING AND WELLBEING