

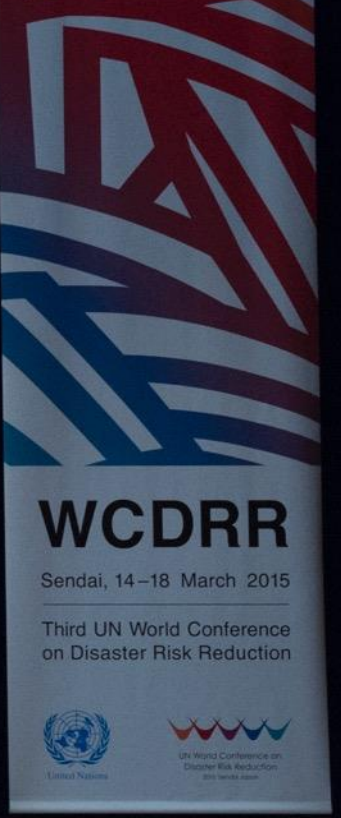
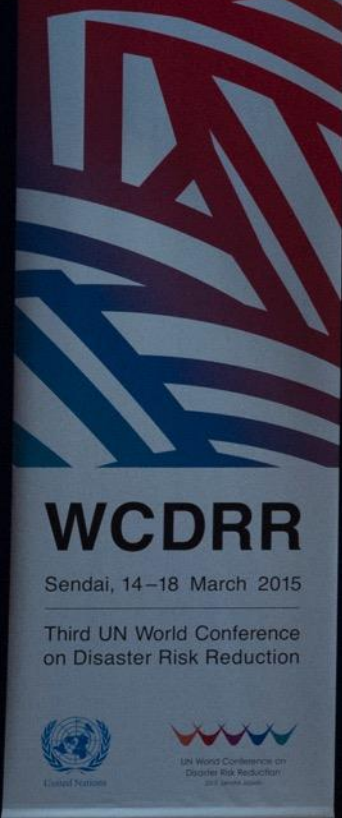
futureearth

The Paris Agreement and integrated services to aid decision making on climate change adaptation

Cat Downy

European Space Agency – Future Earth

8th November 2016



UN Photo/Eskinder Debebe



UN Photo/Cia Pak

Nations Unies

Conférence sur les Changements Climatique

COP21/CMP11

Paris, France



PRESIDENCE
DE LA COP

SECRETAIRE EXECUTIVE
CCNUCC

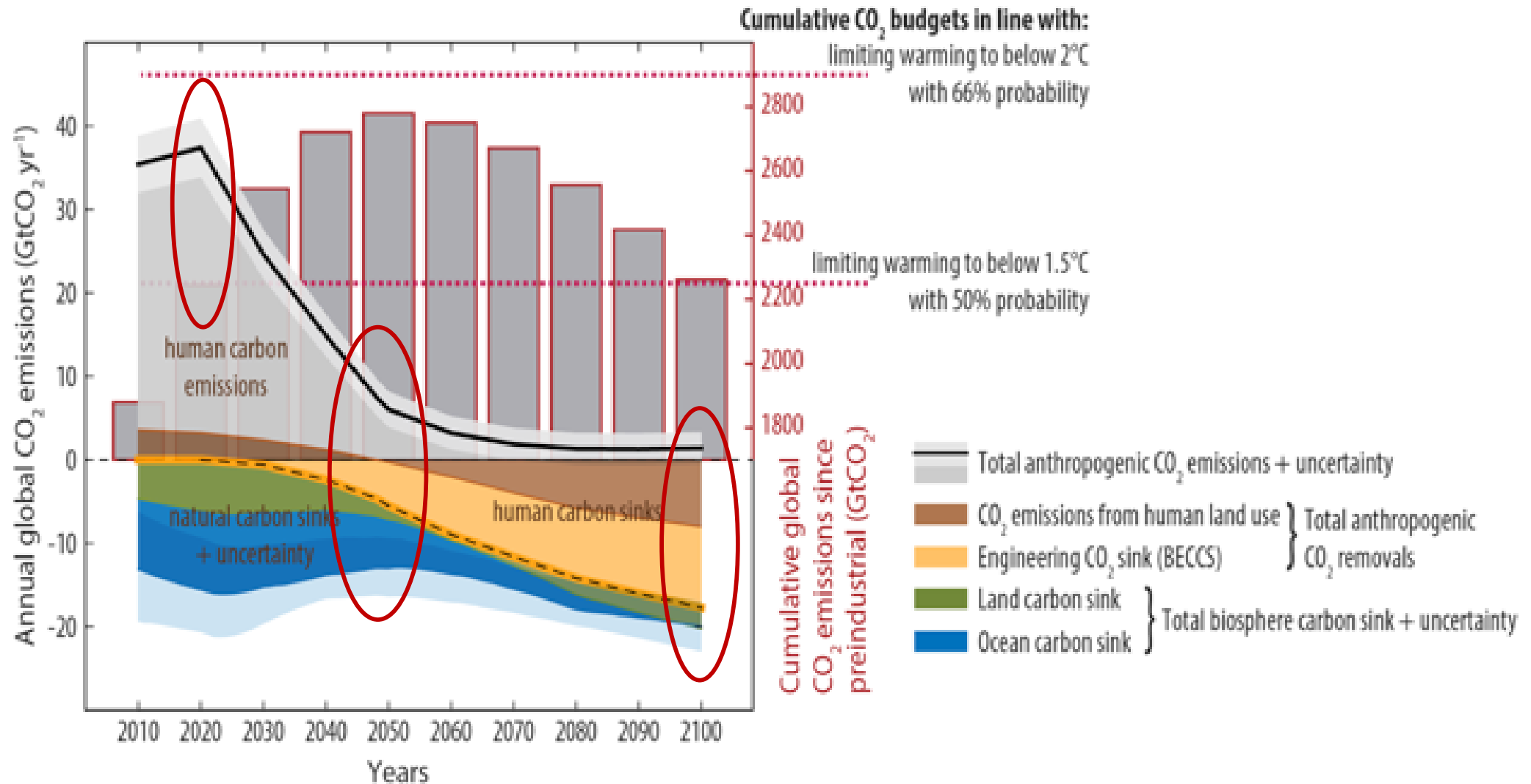
PRESIDENT

The Global Decarbonisation Challenge

- 4 years** to hit peak emissions
- 40 years** to reach net-zero emissions
- 80 years** to create a new carbon sink on the scale of the oceans

Rockström et al., 2016, *Earth's Future*

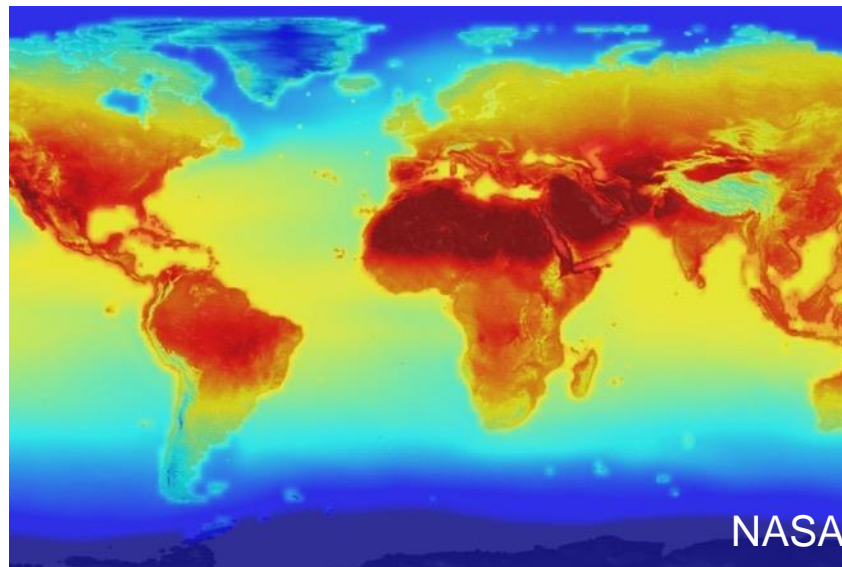
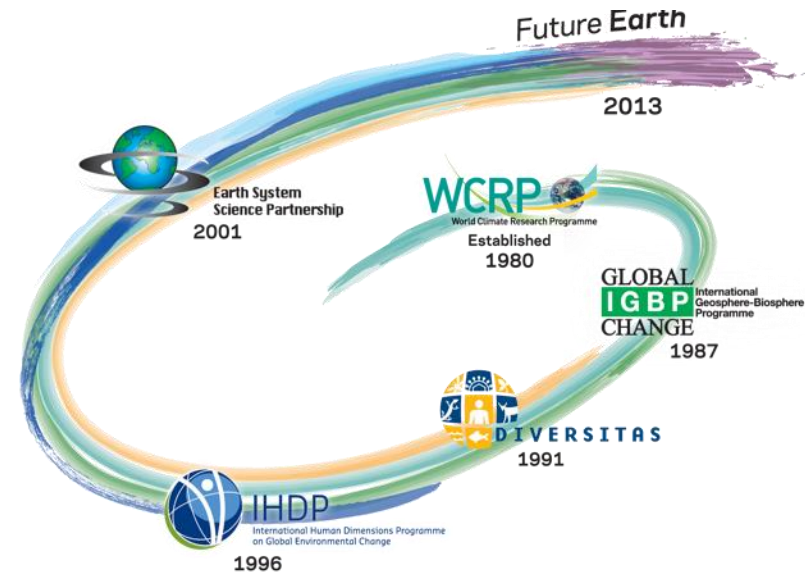
The Global Decarbonisation Challenge



This is a challenge that goes
further than the science.

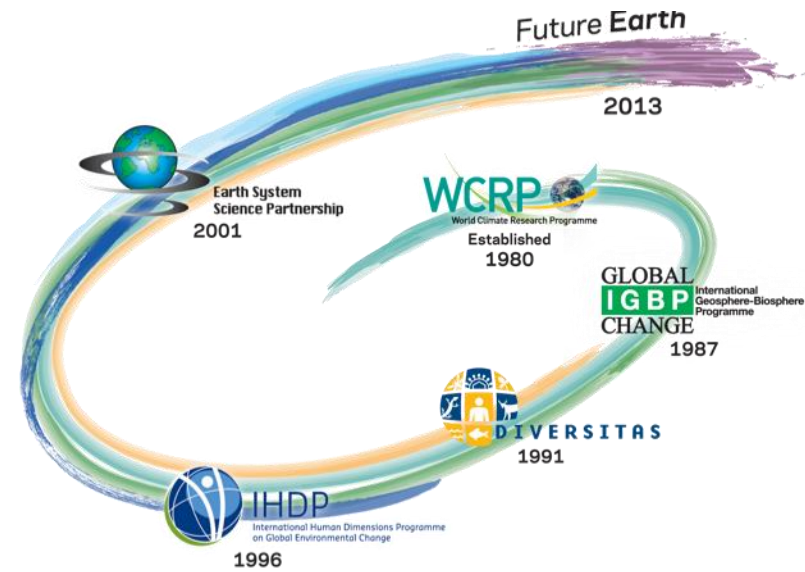


What is Future Earth?



What is Future Earth?

Built on 30+ years of global environmental change research programmes



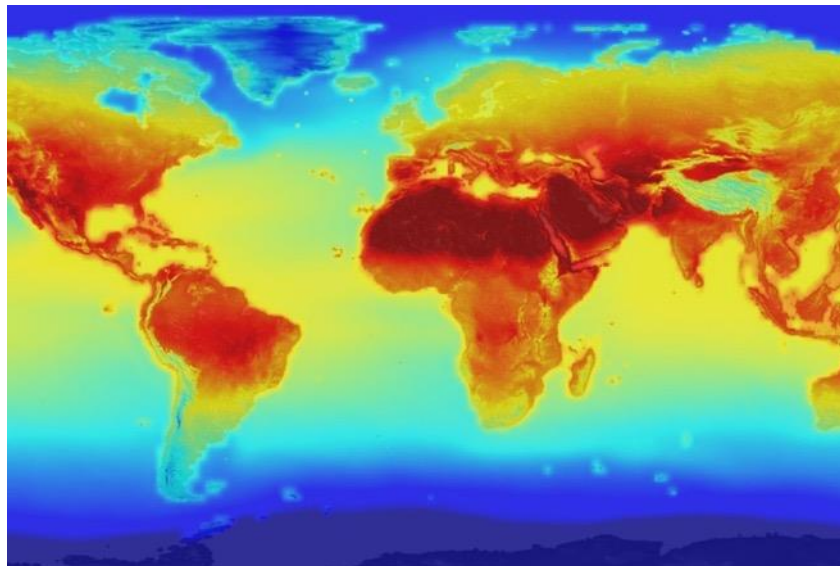
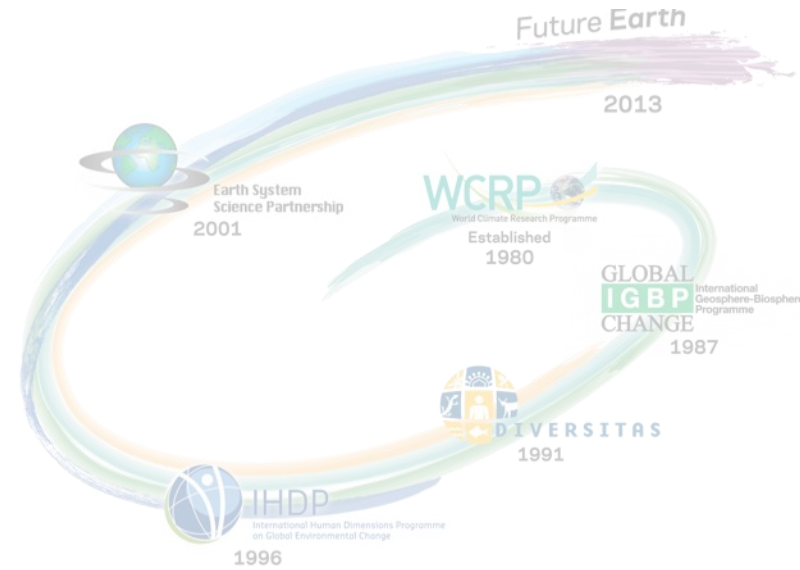
What is Future Earth?



A global community
committed to
solution-oriented
sustainability
research

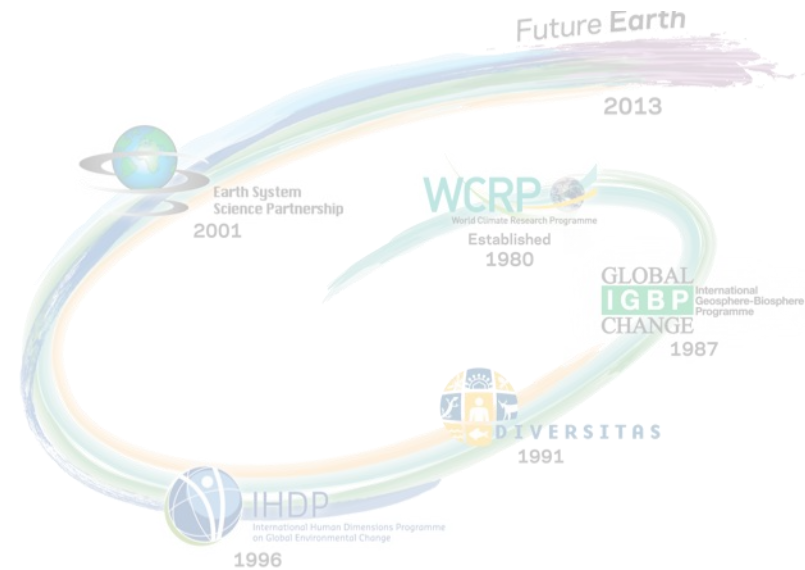


What is Future Earth?



Focused on making
science more
accessible &
relevant to society

What is Future Earth?



Working together
with partners in
policy, business, civil
society & more



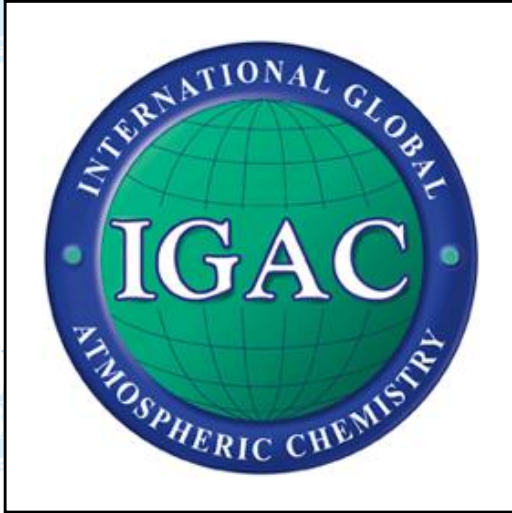
GLOBAL CARBON project

+
100
researchers
this

>20
National networks
established, and many
more in progress

8
Knowledge-Action Networks

>20



- Global Hub
- Regional centre
- Regional office
- Project office
- Project
- Country with national committee or national network

5
Global Hubs

PAOGES
PAST GLOBAL CHANGES



Integrating science across the IPCC on climate risk and sustainable solutions:

Lessons learnt from AR5 to inform AR6

Hoesung Lee,
must expose



#IPCCStockholm

m



BY SARAH J. DOHERTY, STEPHAN BOJINSKI, ANN HENDERSON-SELLERS, KEVIN NOONE, DAVID GOODRICH, NATHANIEL L. BINDOFF, JOHN A. CHURCH, KATHY A. HIBBARD, THOMAS R. KARL, LUCKA KAJFEZ-BOGATAJ, AMANDA H. LYNCH, DAVID E. PARKER, I. COLIN PRENTICE, VENKATACHALAM RAMASWAMY, ROGER W. SAUNDERS, MARK STAFFORD SMITH, KONRAD STEFFEN, THOMAS F. STOCKER, PETER W. THORNE, KEVIN E. TRENBERTH, MICHEL M. VERSTRAETE, AND FRANCIS W. ZWIERS

This view-from-above of Sydney, Australia exemplifies the close interaction between man and his environment and reminds us of the local scales over which climate change will affect human, natural, and economic systems. These relationships and how they should drive future research were discussed during a workshop held in Sydney in October, 2007. (Image courtesy of NASA/GSFC/METI/ERSDAC/JAROS, and U.S.-Japan ASTER Science Team)

The periodic assessments of the Intergovernmental Panel on Climate Change (IPCC) of the causes, impacts, and possible response strategies to climate change are the most comprehensive and up-to-date reports available on the subject and form the standard reference for all concerned with climate change in academia, government, and industry worldwide. Hundreds of international experts contributed to the IPCC's Fourth Assessment Report (AR4), which has received unprecedented attention and acclaim by policy makers, scientists, industry, and the general public.

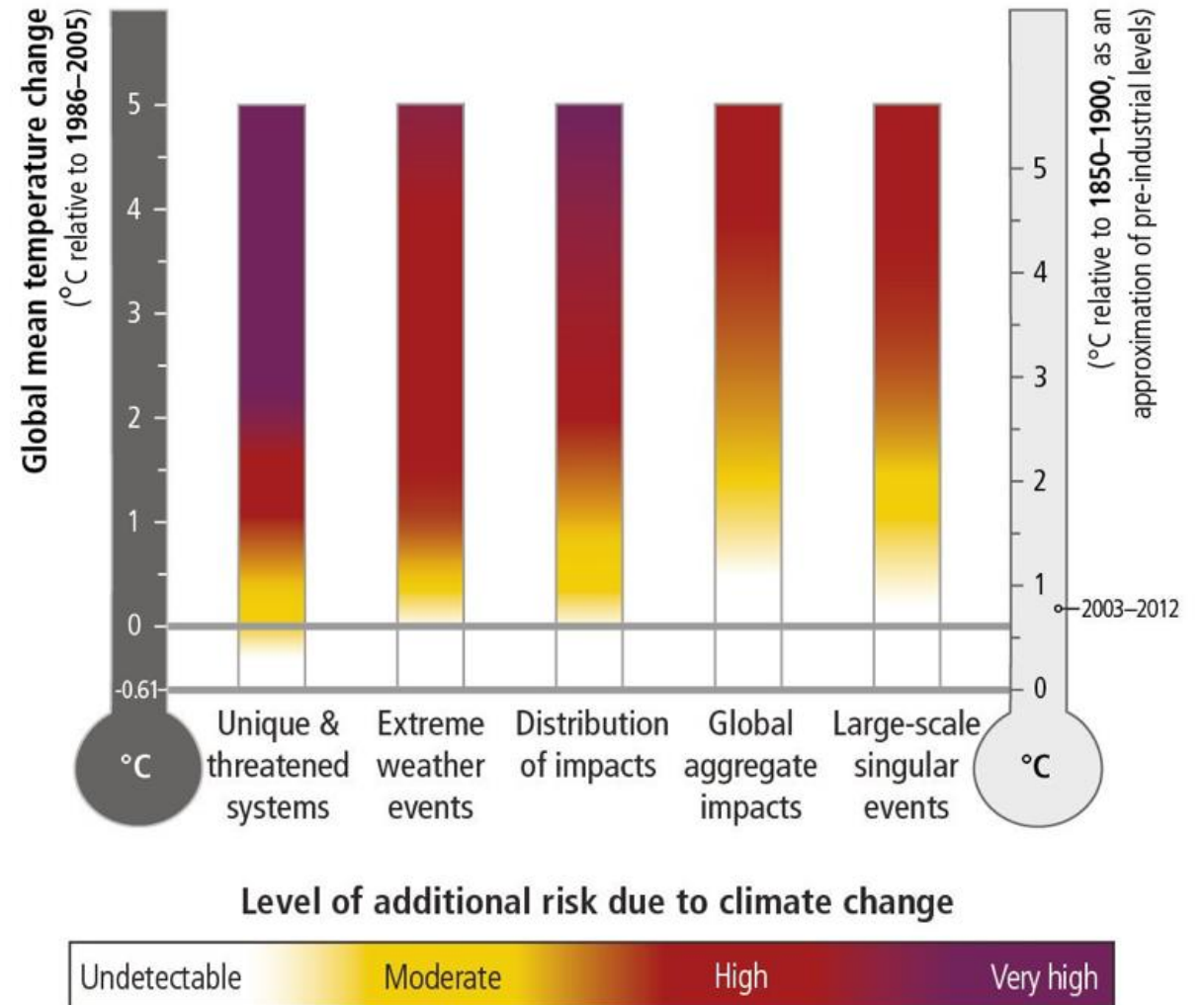


APRIL 2009



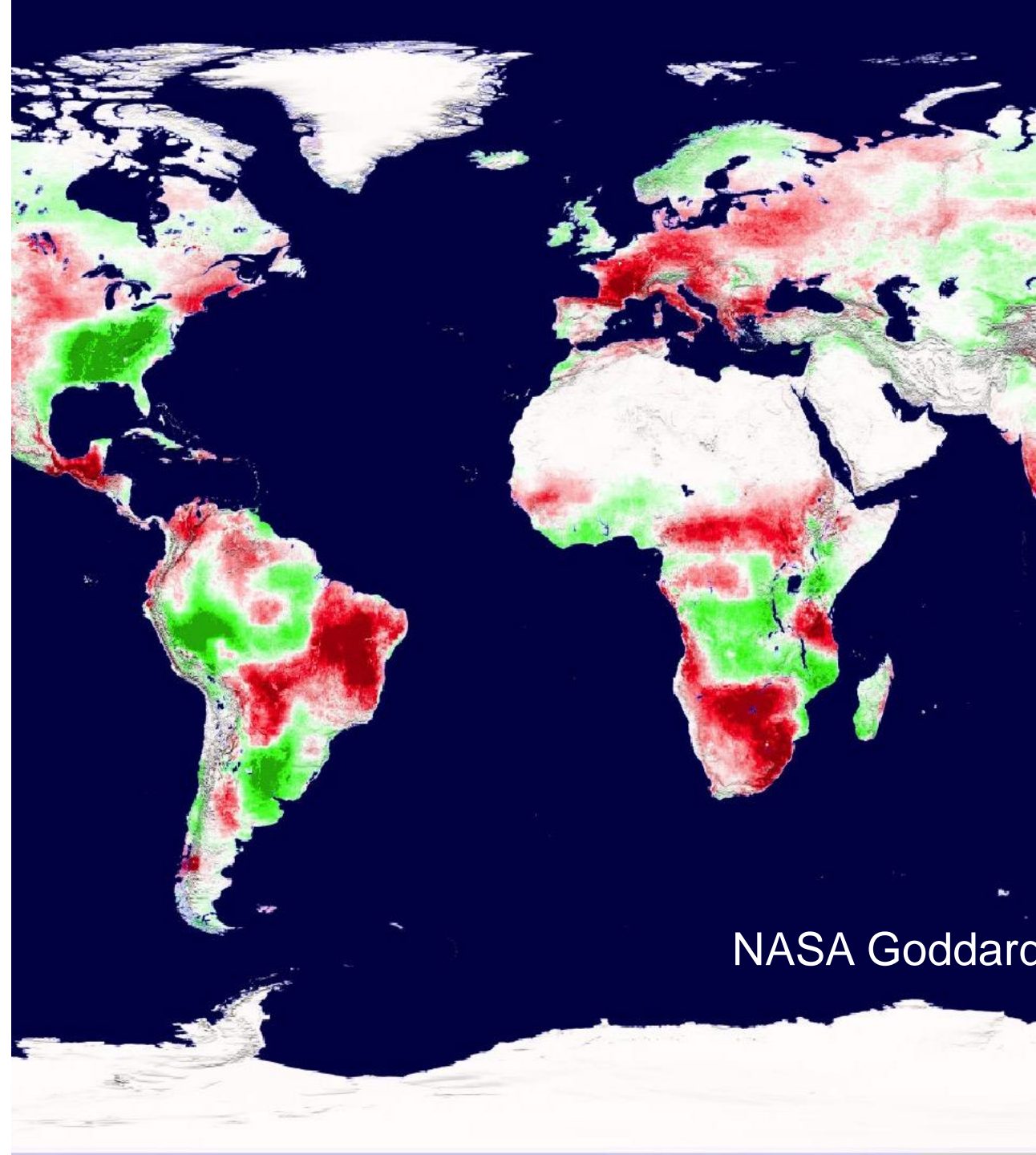
Next generation risk framework for climate research and assessment

- Research to address knowledge gaps relating to integrative risk and sustainability solutions to the climate change challenge
- Consistent regional approaches to addressing risk and uncertainty
- Scenario development
- Consistent and effective characterisation and visualisation of risk across



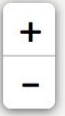
Partnership for Resilience Preparedness (PREP)

- A new public-private partnership to “harness the data revolution” for climate resilience and adaptation
- Making existing climate data more open and accessible
- Creating new “dashboards” to empower decision-making
- Future Earth leading the



NASA Goddard

Projected increases in Climatic Water Deficit (in/year)



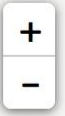
**Sonoma
County
California**

1951-1980 1981-2010 2011-2039 2040-2069 2070-2099

Legend
■ ≥ 28 inches ■ ≥ 32 inches

Projected increases in Climatic Water Deficit (in/year)

Sonoma County California



Projected increases in Climatic Water Deficit (in/year)

Sonoma County California

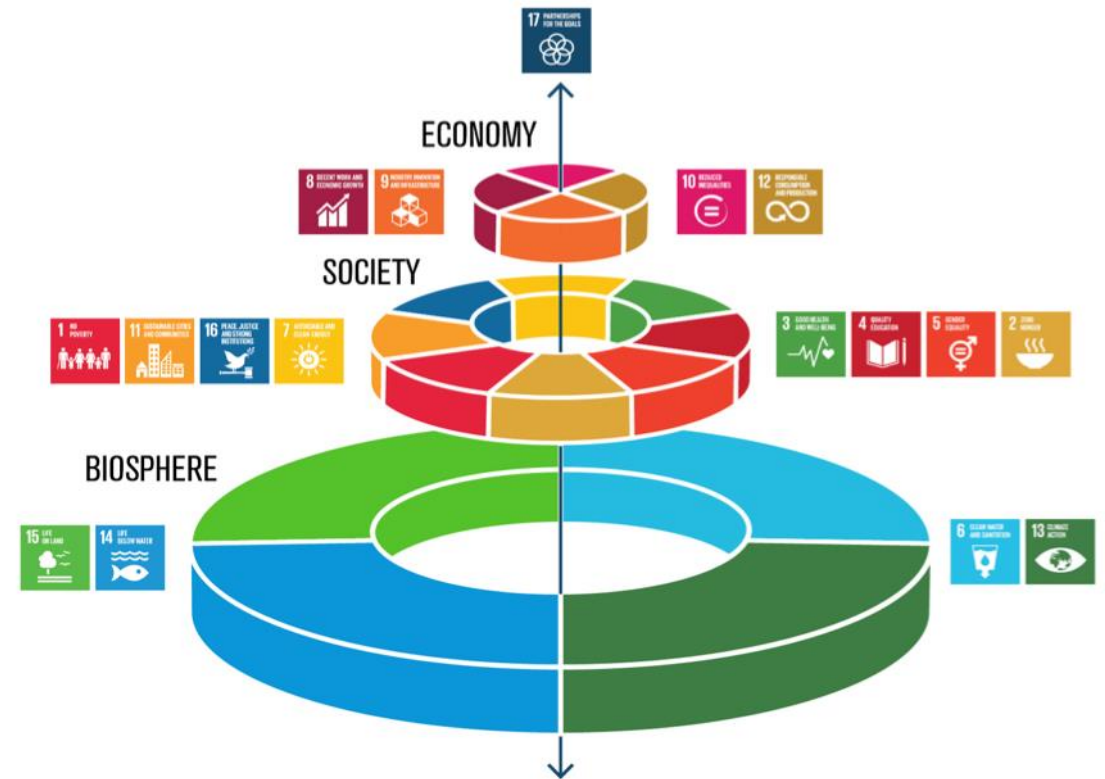
1951-1980 1981-2010 2011-2039 2040-2069 2070-2099

Legend

■ ≥ 28 inches ■ ≥ 32 inches

The World in 2050

- We have ambitious goals but no clear path to meet them.
- How do we achieve the Sustainable Development Goals simultaneously by 2050?
- How do we link them to climate targets?
- How do we understand the trade-offs and synergies among these goals?





Decarbonisation Knowledge-Action Network

- A global research collaboration among science and society emerging in 2017.
- Challenge: To address the critical knowledge gaps around how the world can rapidly and equitably reduce greenhouse gas emissions.
- Targets: Developing a workshop for March 2017 on deep decarbonisation through disruptive change.



Giannis
Arvanitakis

Future Earth and UNFCCC COP

A green spider is positioned on its intricate web, which is set against a soft, out-of-focus green background. The spider's body and legs are clearly visible, and the web's spiral pattern is prominent.

Start a dialogue: How can the international scientific community contribute to the Paris Agreement and subsequent climate negotiations?

What are the major knowledge gaps around how nations can meet these international targets?

How can we make scientific data more accessible to decision-makers across the world?

<http://network.futureearth.org>

contact@futureearth.org