



Re-imagining the Future of Energy and Climate

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Climate Council

EIANZ Sydney 2018

Hope, action and ingenuity saw us develop large cities and big tracts of land, and hope, action and ingenuity gave rise to wealth for those in the present.

But hope by itself means we stick to the same old ways and hold fast to the same old laws as long as the results are good in the present.

Hope is what we have when we don't like the look of the clouds on the horizon – we hope the forecast is wrong – we hope there is a silver lining.

Hope is what makes us strive for opportunity but hope is also our excuse for inaction.

This is not a time for simply hoping. This is a time for action.

US National Intelligence Council – 2035



GLOBAL TRENDS
PARADOX OF
PROGRESS

A publication of the National Intelligence Council

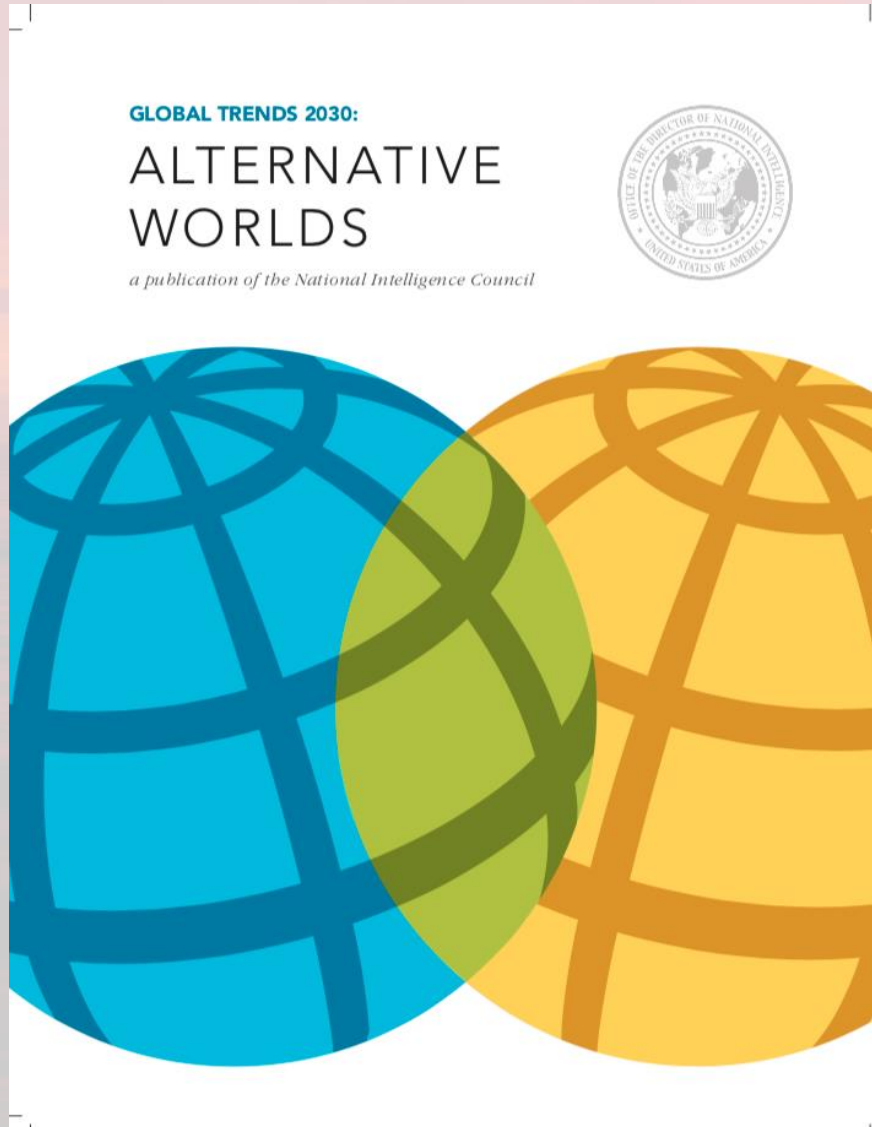
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1. The rich are aging, the poor are not.
2. The global economy is shifting.
3. Technology is accelerating progress - but causing discontinuities.
4. Ideas and Identities are driving a wave of exclusion.
5. Governing is getting harder.
6. The nature of conflict is changing.
7. **Climate change, environment, and health issues will demand attention.**

US National Intelligence Council – 2030



We are at a critical juncture in human history, which could lead to widely contrasting futures.^[SEP]

It is our contention that **the future is not set in stone**, but is malleable, the result of an interplay among megatrends, game-changers and, above all, **human agency**.

Our effort is to encourage decision-makers - whether in government or outside - **to think and plan for the long term so that negative futures do not occur**, and **positive ones have a better chance of unfolding**.

Societal Risk Perception

AN EXISTENTIAL APPROACH TO RISK PERCEPTION

By

Ian H. Langford

Perceptions of Climate Change

Denial

There is no problem, it doesn't concern me

Disinterest

There is a problem, but it isn't my problem, I'm not concerned at present

Doubt

Environmentalists predicted catastrophe in the 1970s and 1980s – it didn't happen – why should we believe them now?

Engagement

Willing: There is a problem, I would like to do something but..

Keen: There is a problem, I am doing what I can

Societal Risk Perception

By and large, we live our lives for the here and now, and we have been doing so for millennia.

In the past only a very few have had the fortune and/or foresight to look into the future and what it might bring; and then act as stewards in the present for those who followed.

The here and now are more relevant to most than the when and if!

Imag_ne



Sculpture by the Sea by Emma Anna 2010

Beware False Hope

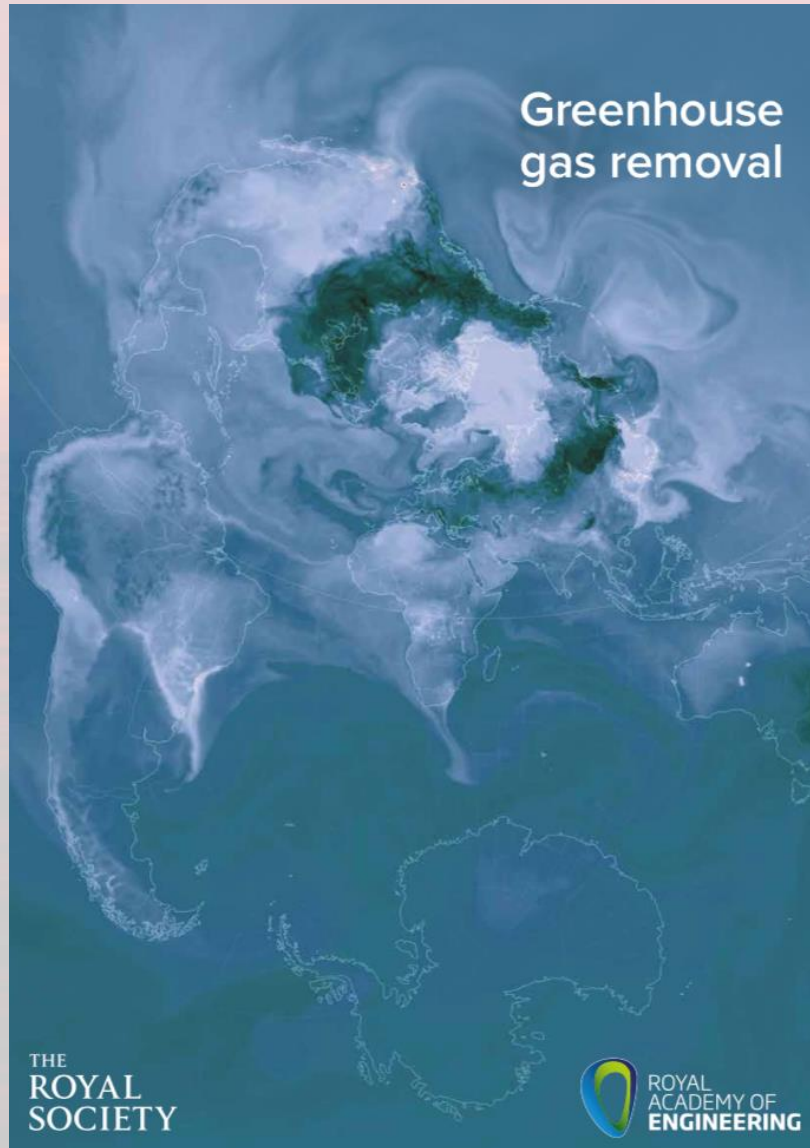
2002 Carbon Capture and Storage

2006 Nuclear Power

2007 Geothermal

**Hope is what makes us strive for opportunity but hope is also our
excuse for inaction.**

Greenhouse gas removal(GGR) methods



Forestation

Habitat restoration

Soil carbon sequestration

Biochar

**Bioenergy with carbon capture and storage
(BECCS)**

Ocean fertilisation

Building with biomass

Enhanced terrestrial weathering.

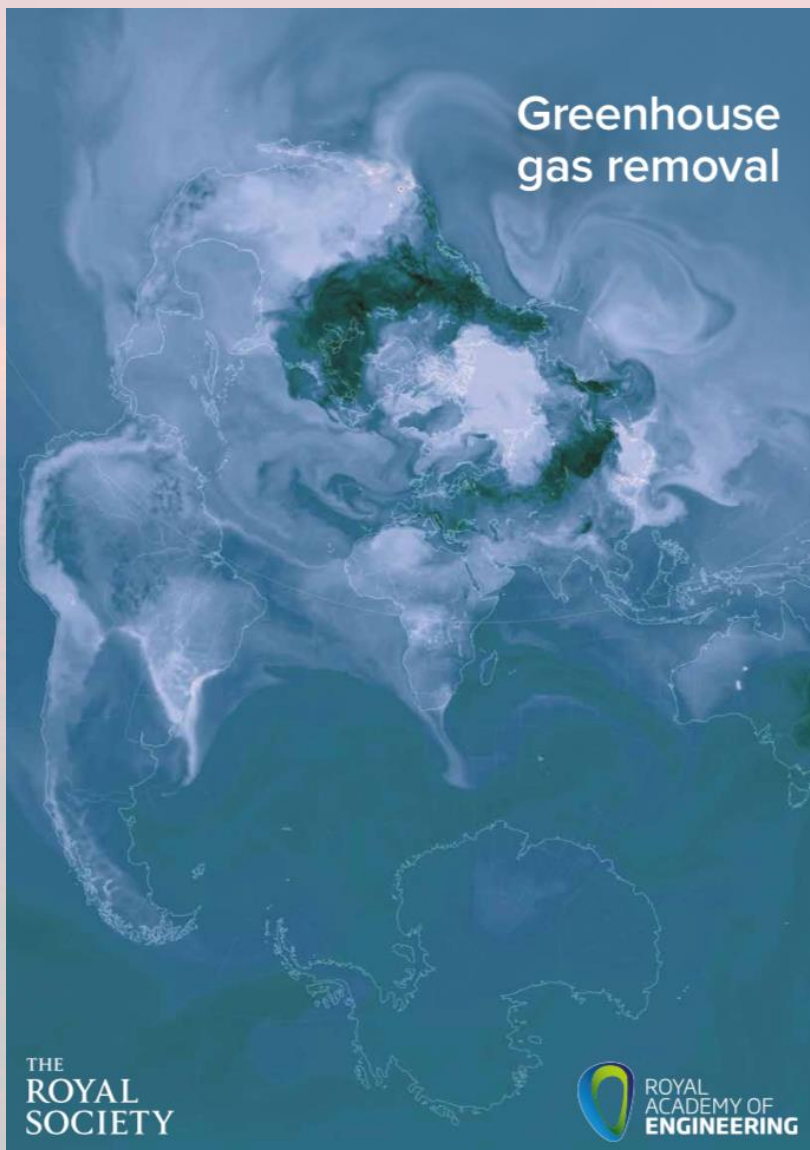
Mineral carbonation

Ocean alkalinity

**Direct air capture and carbon storage
(DACCS)**

Low-carbon concrete

Greenhouse gas removal(GGR) methods



The challenge ahead is not insurmountable, but it requires the full weight of the world's research community.

Scientists and engineers of all types will need to pull together with social scientists, economists, the public and policymakers to develop, deploy and manage methods that range from planting trees to engineering the direct removal of CO₂ from the air.

This remains a developing field and much will change over the coming decades, but as this report shows, action must begin now.



Tread lightly on the earth.

Build resilience in nature.

***Start a sustainability
revolution.***