



CLIMATE ACTION NETWORK International

Deep Decarbonisation & Geoengineering

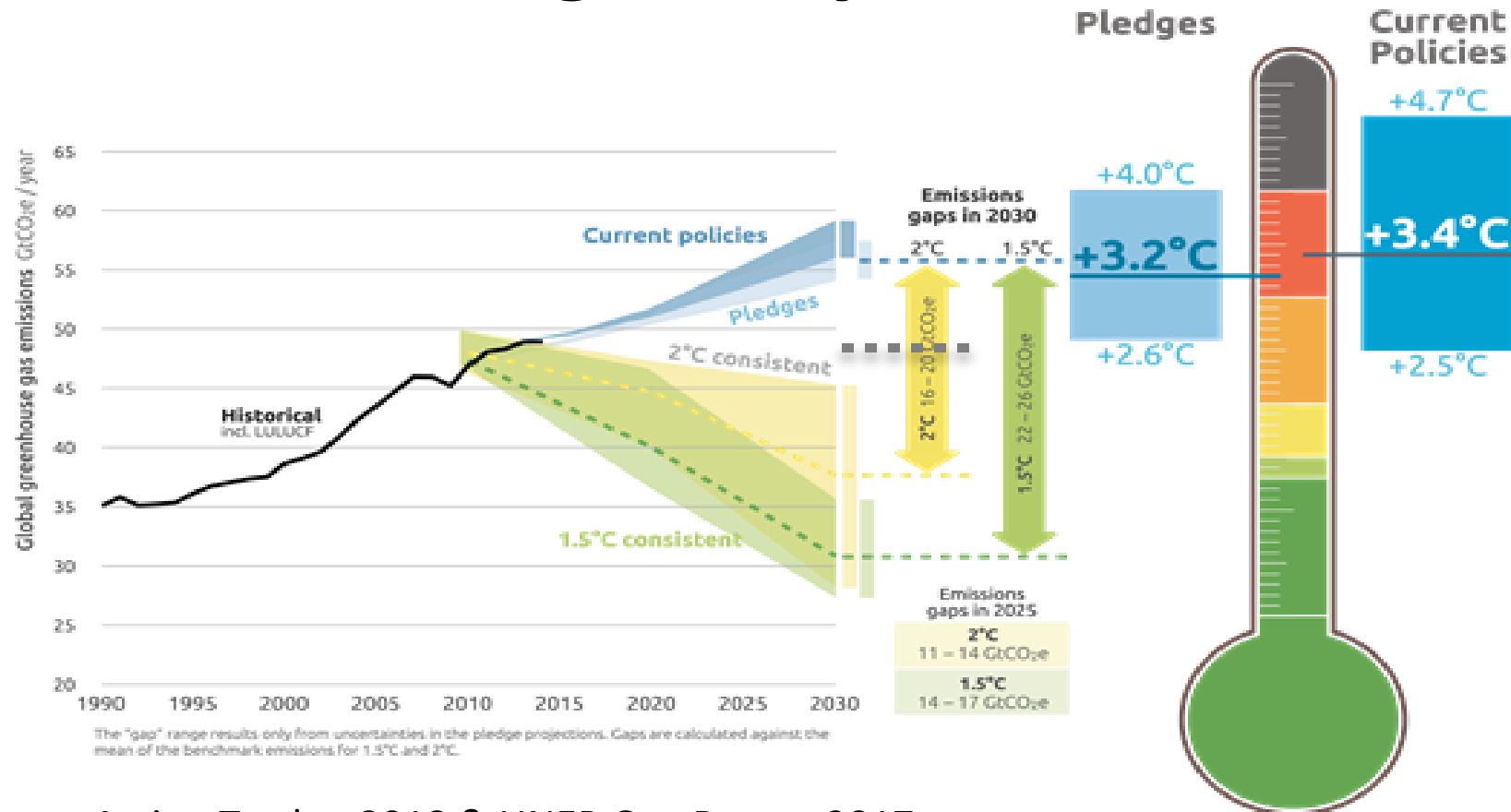
Dr Stephan Singer CAN International

23/5/2018

Nairobi



Where are we globally?





CLIMATE ACTION NETWORK International



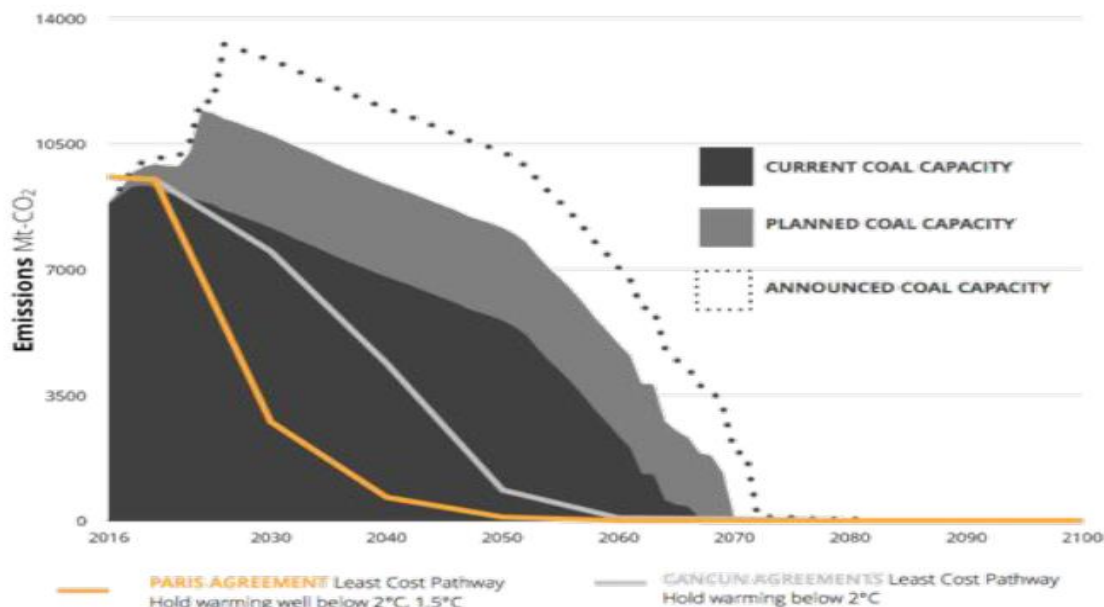
Current coal plants far exceed Paris compatible levels..

CLIMATE ANALYTICS

Implications of the Paris Agreement for Coal Use in the Power Sector

WORLD potential CO₂ emissions from existing and planned coal capacity against least-cost pathways.

CLIMATE ANALYTICS



- ✓ Coal phase-out by 2050
- ✓ OECD by 2030
- ✓ China by 2040

✓ **No new capacity can be installed and operated over its full economic lifetime anywhere**

✓ **Great risk of stranded assets**

Source: IASA/Joeri Rogelj, GCPT, own calculations

Rocha et al (2017)

See [Climate Analytics Publications](#)



CLIMATE ACTION NETWORK **International**

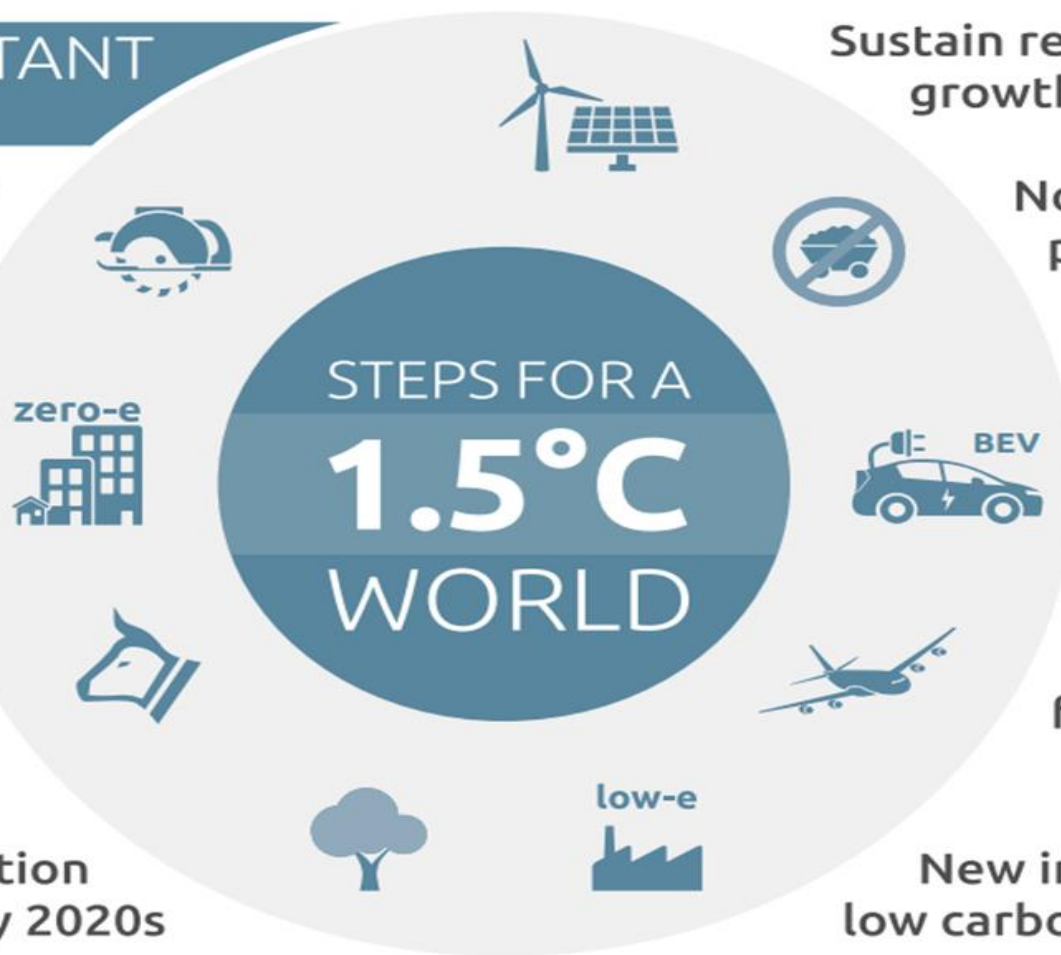
MOST IMPORTANT SHORT TERM

Renovate 3–5% of buildings per year

New buildings zero emissions from 2020

Best practice in agriculture

Zero deforestation by 2020s



Sustain renewables growth

No new coal power plants

Last fossil fuel car sold before 2035

Develop 1.5°C vision for aviation & shipping

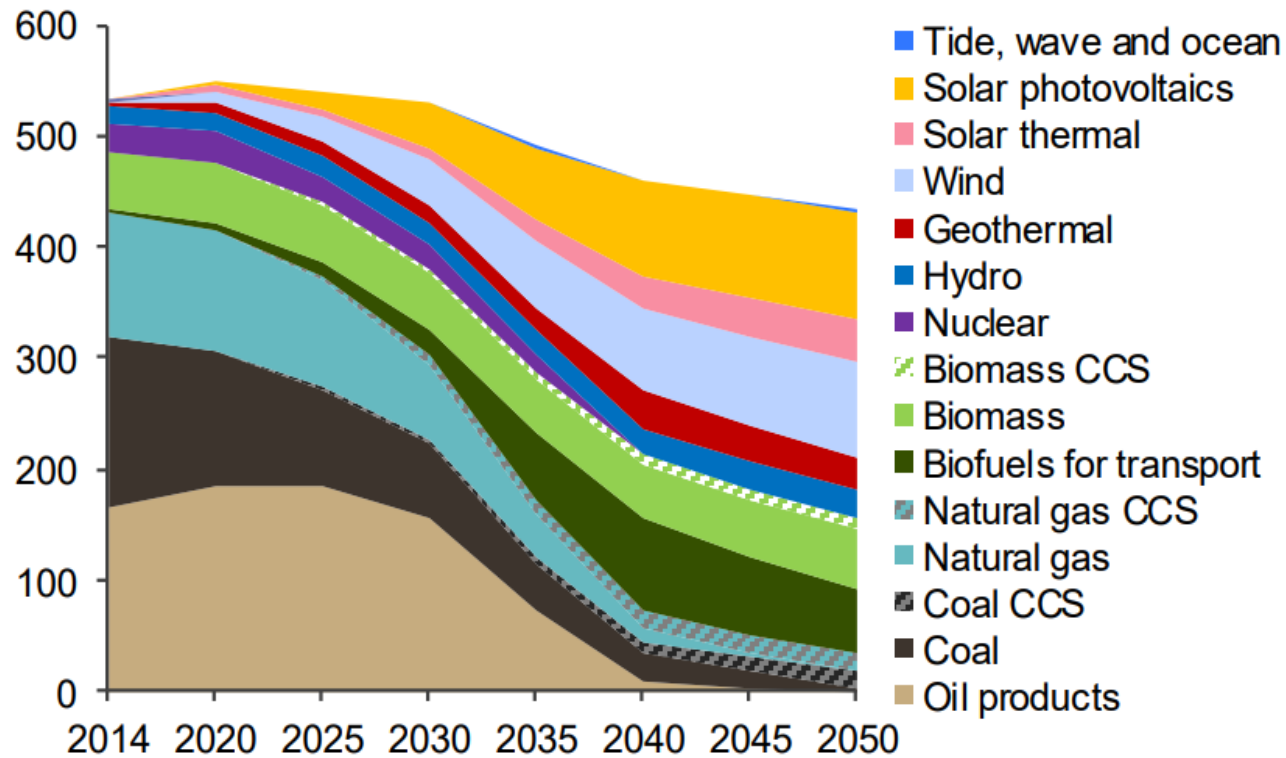
New industrial installations low carbon after 2020





CLIMATE ACTION NETWORK **International**

Total primary energy supply (EJ)



Annual CO₂ emissions (Gt CO₂)

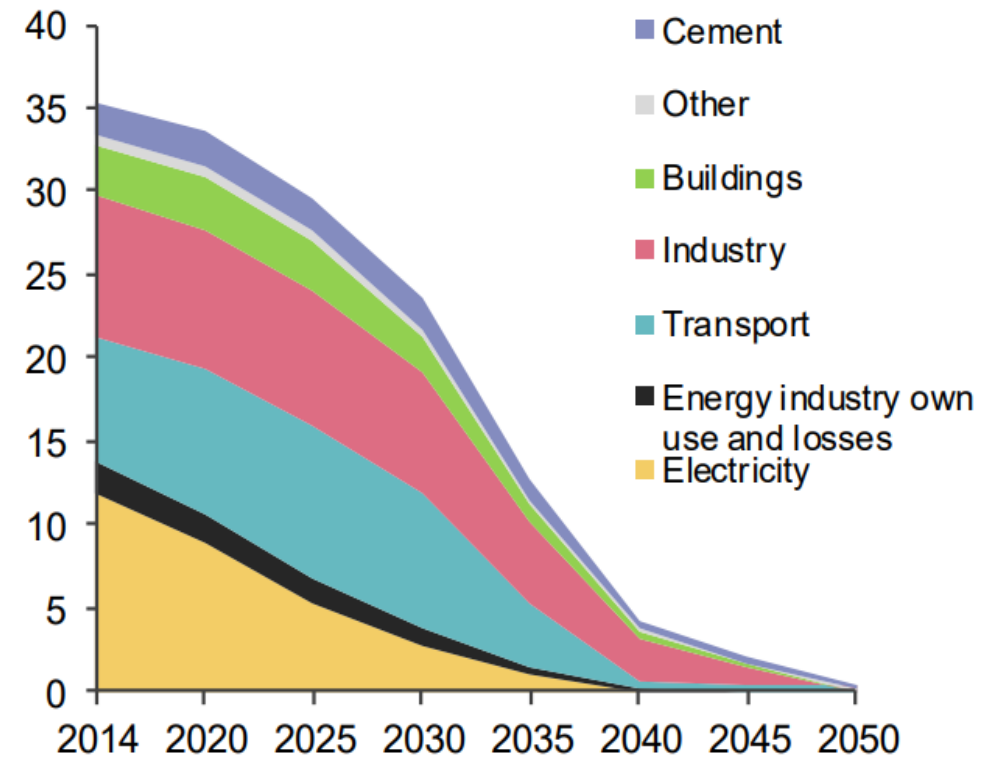
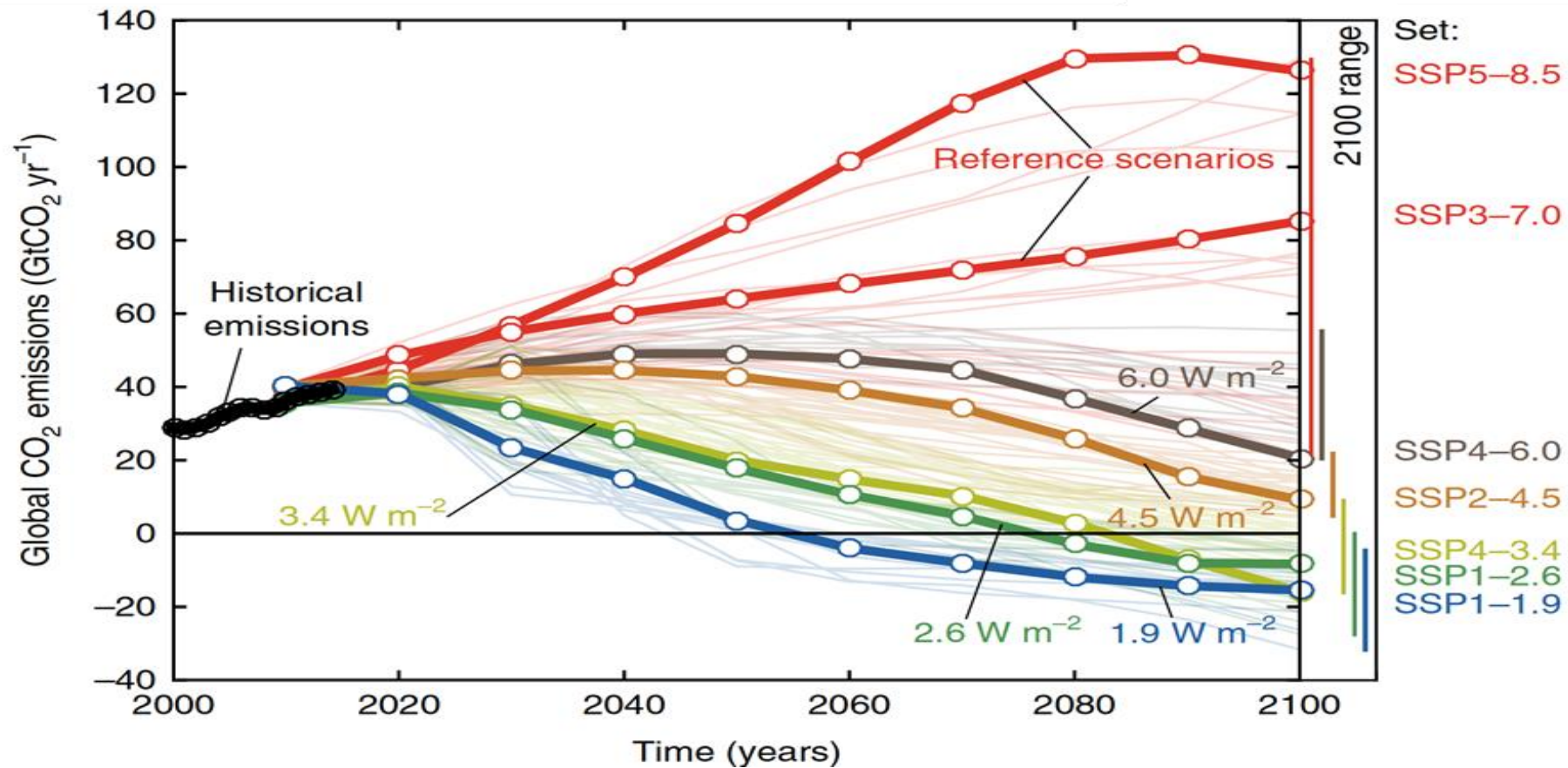


Figure 1. Global total primary energy supply and annual CO₂ emissions in our decarbonisation scenario



CLIMATE ACTION NETWORK International

But even then we need some Negative Emission.....



Source: Rogeli et. al; 2018



CLIMATE ACTION NETWORK **International**

Additional Carbon Dioxide Removal:

Makes only sense if focus of governments is on:

- Reforestation, restoration of degraded lands as key objectives
- Deep decarbonisation of energy sector (zero fossil fuels 2050)
- Strong liability and insurance scheme for projects
- No negative effects on food security and biodiversity
- Public participatory debate