

DAS 2°C ZIEL - WO STEHEN WIR?

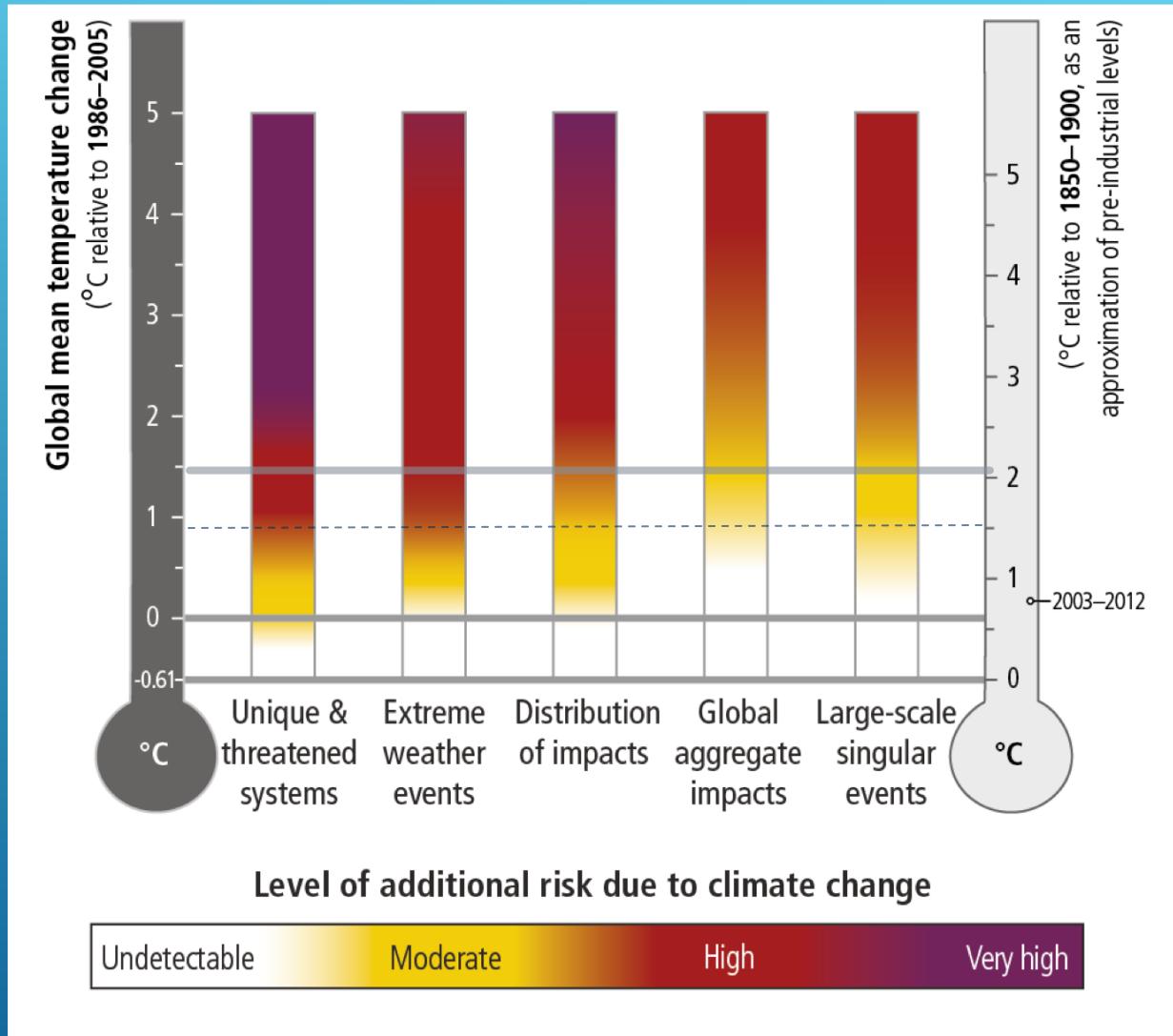
Dr. Renate Christ
15. Symposium Energieinnovation
TU Graz, 14. Februar 2018



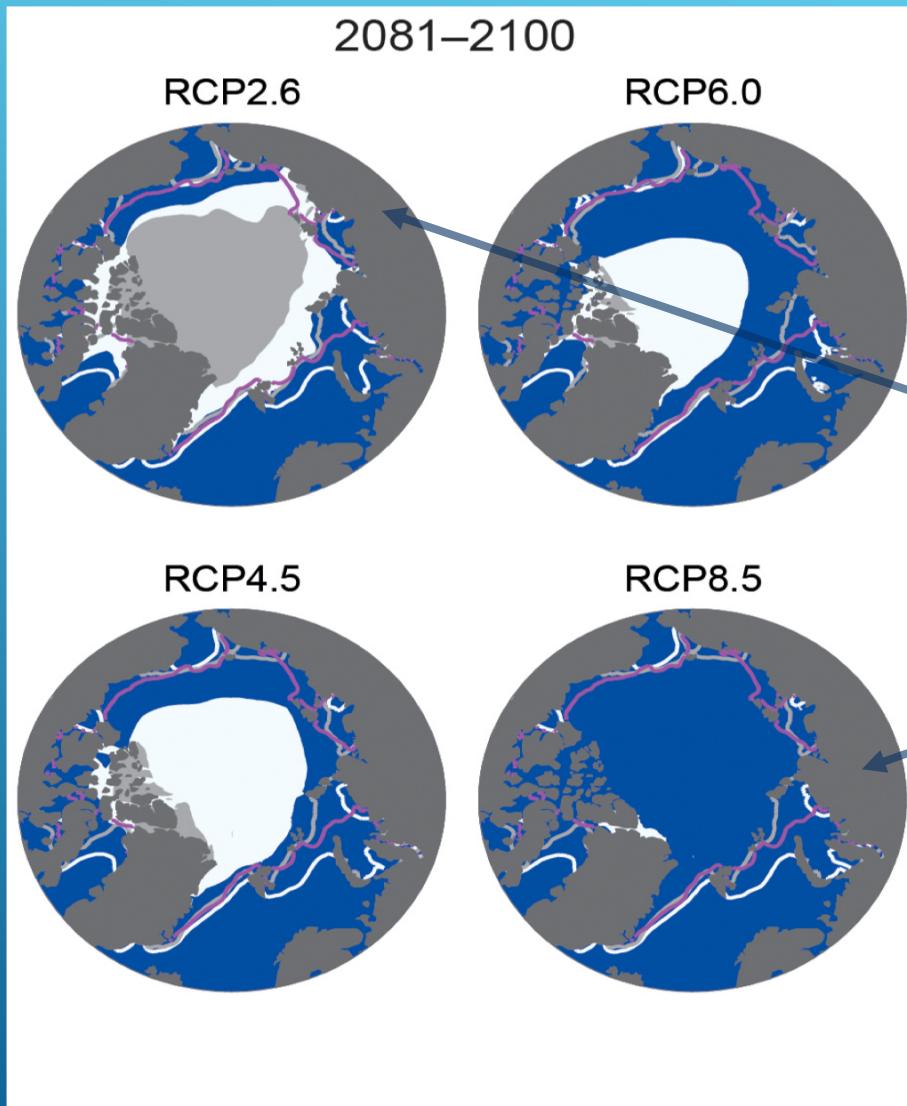
ABKOMMEN VON PARIS 2015

- Temperaturerhöhung unter 2°C, wenn möglich unter 1,5°C
- Globaler Höchststand der Emissionen so früh wie möglich
- Karbon Neutralität in der 2. Hälfte des Jahrhunderts
- NDCs sollen höchste Anstrengung repräsentieren und alle 5 Jahre evaluiert und verbessert werden
- Global Stocktake ab 2023,
 - Informell 2018 – Talanoa Dialog

REASONS FOR CONCERN



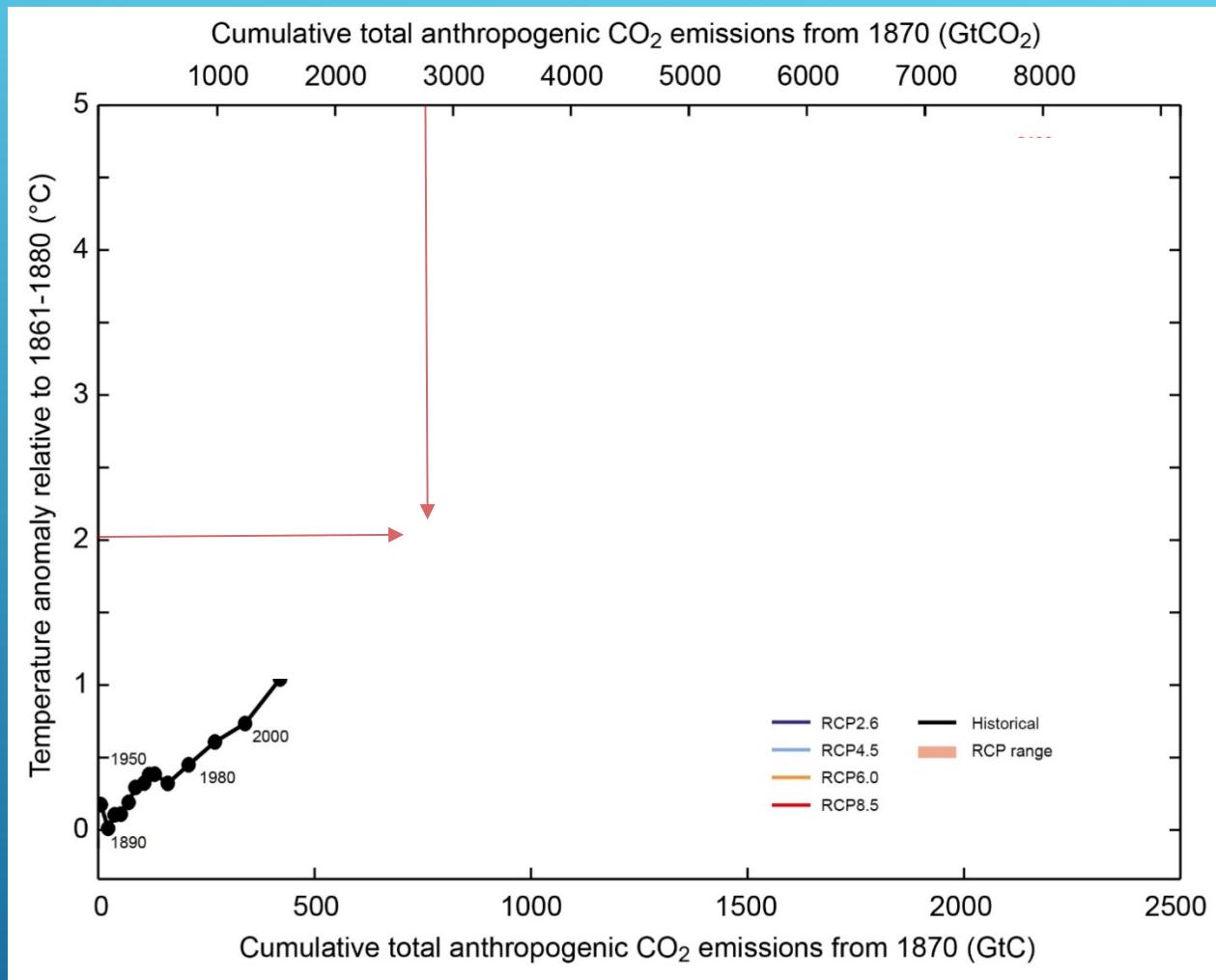
Quelle: IPCC Climate Change 2014 Synthesis Report, Box. 2.4



EISBEDECKUNG IN DER ARKTIS IM SEPTEMBER

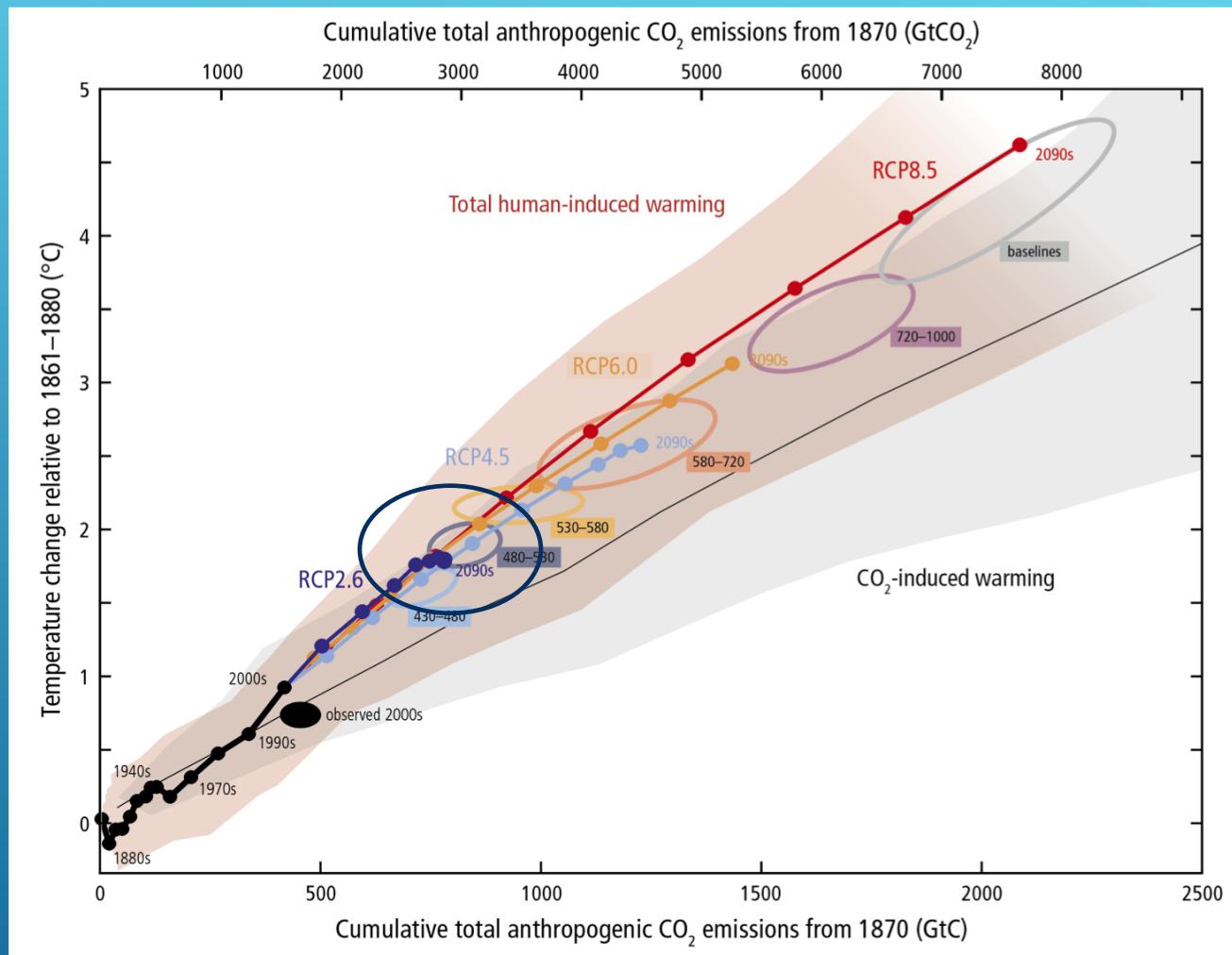
2°C Ziel wahrscheinlich
-43% Eisbedeckung

Hohe THG Emissionen
-94% Eisbedeckung



Quelle: IPCC Climate Change 2013 WGI Fig. SPM.10

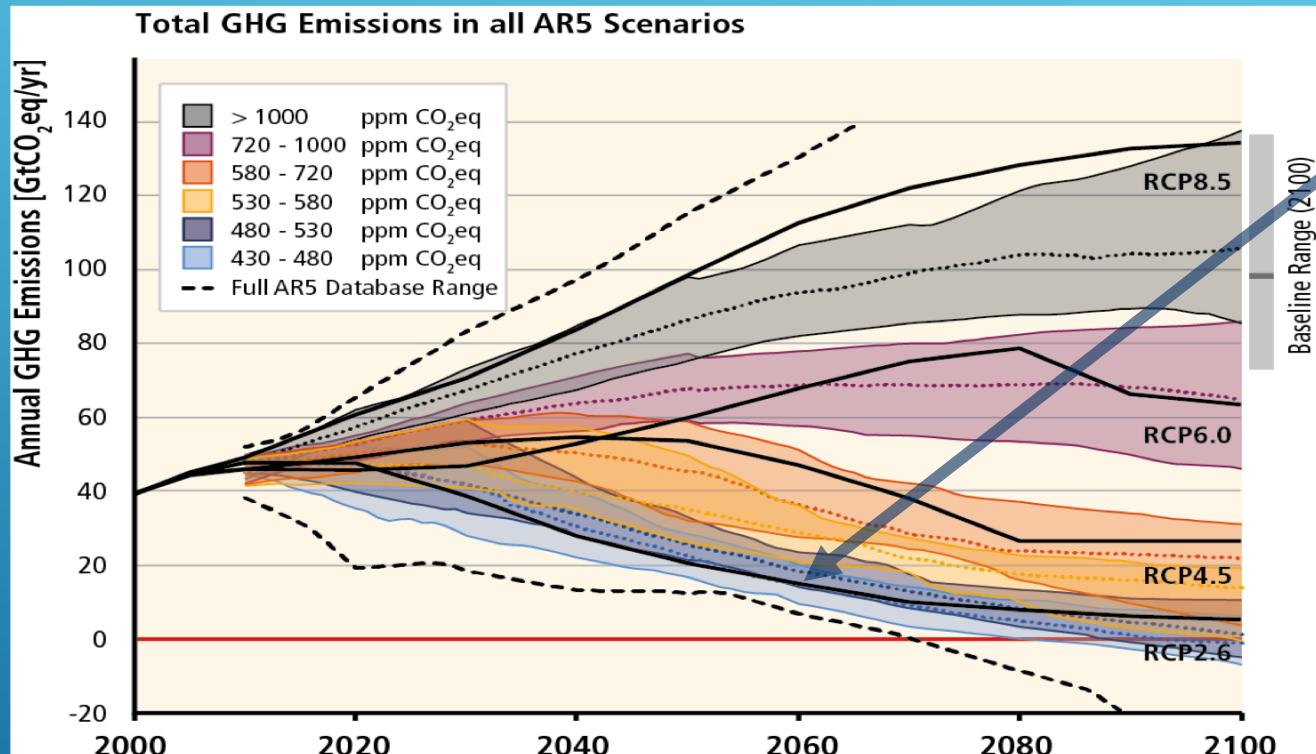
TEMPERATURANSTIEG UND KUMULATIVE EMISSIONEN



Quelle: IPCC Climate Change 2014 Synthesis Report, Fig. 2.3

WIR HABEN EIN BEGRENZTES EMISSIONSBUDGET

EMISSIONSPFADE RICHTUNG 2°C ZIEL



3 bis 4-facher Anstieg von zero- und low-carbon Energie
CCS/BECCS und großräumige Landnutzungsänderung

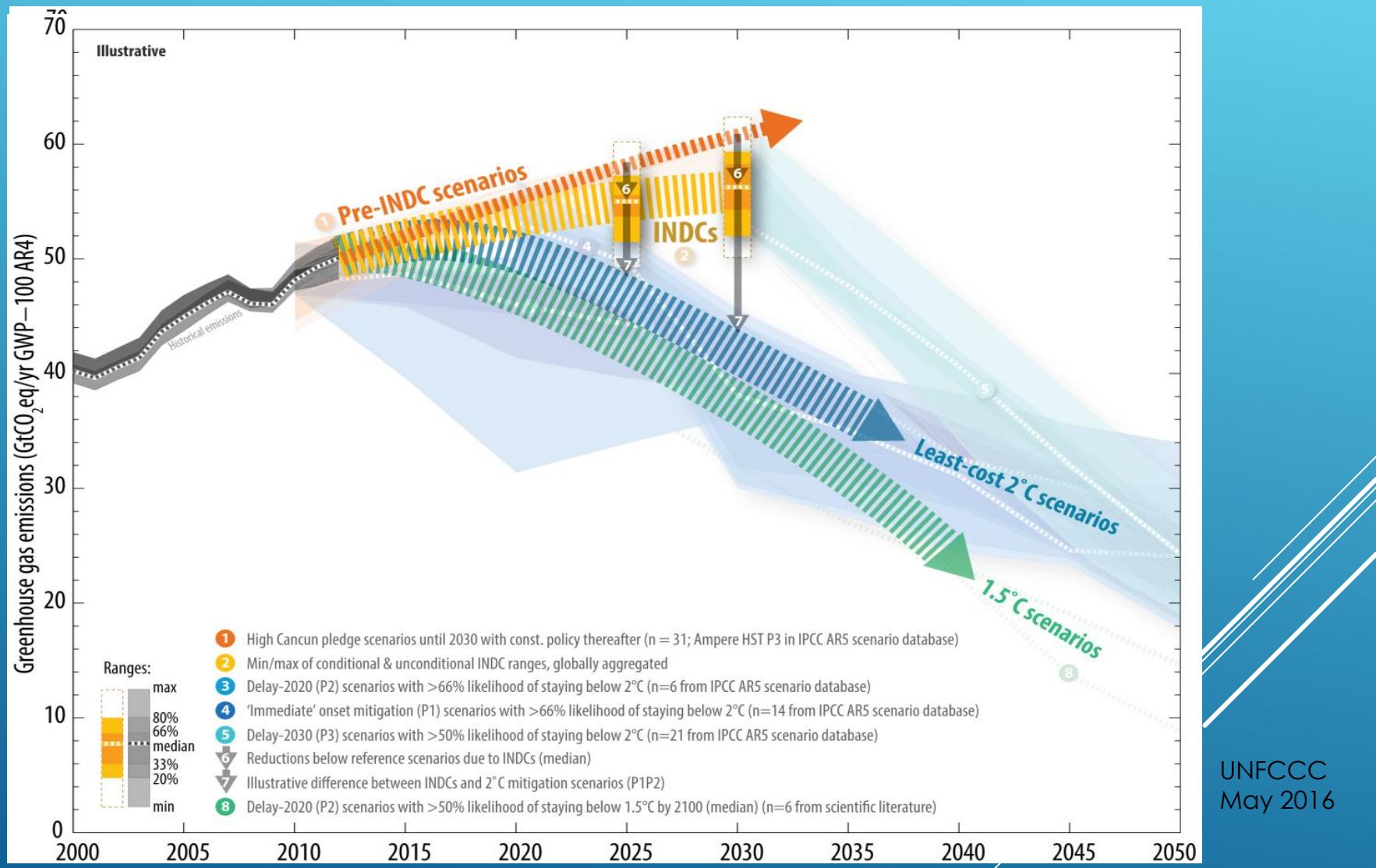
430-480 ppm
CO₂ eq in 2100

2°C Ziel
wahrscheinlich

40-70% globale
Reduktion in
2050 bezogen
auf 2010

Zero-Emissionen
oder darunter in
2100

NDCs und kosteneffiziente 2°C und 1,5°C Szenarien

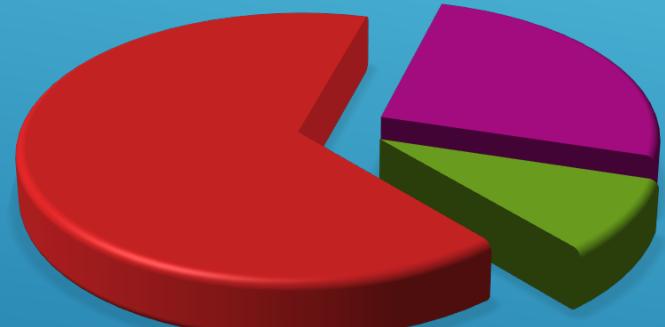


NDCs und das 2°C EMISSIONSBUDGET

2012-**2025**



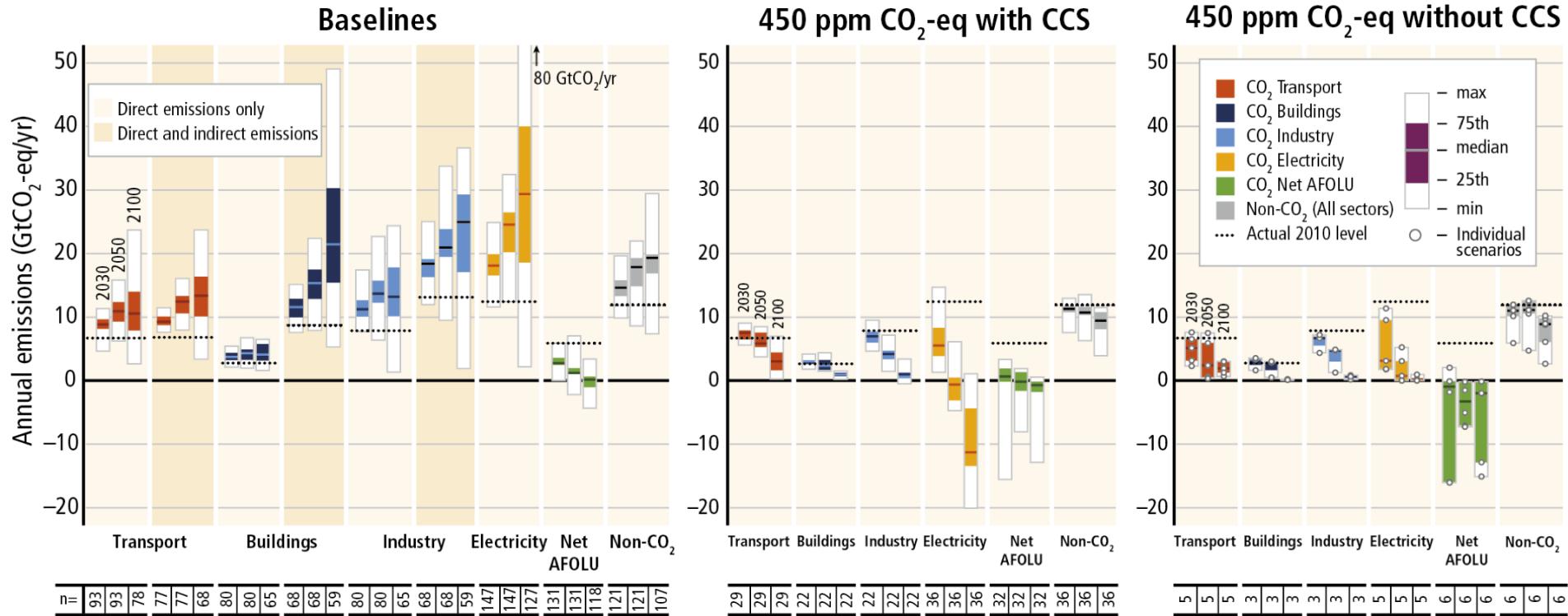
2012-**2030**



Gesamtemissionsbudget für 2°C – 2900 GtCO₂
2/3 davon waren im Jahr 2011 verbraucht

Data UNFCCC May 2016

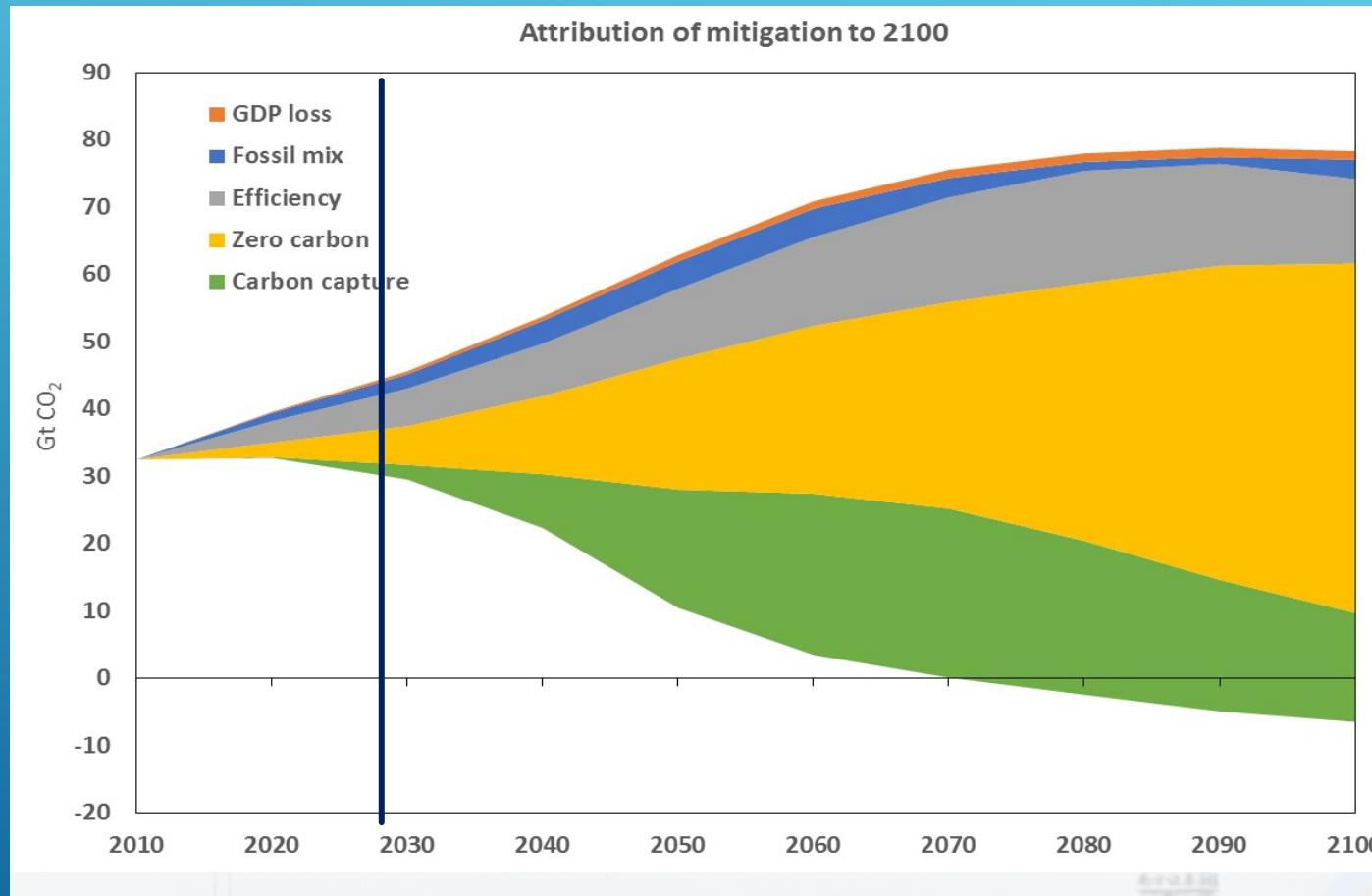
Sectoral CO₂ and non-CO₂ GHG emissions in baseline and mitigation scenarios with and without CCS



Quelle: IPCC Climate Change 2014 Synthesis Report Fig. 5.PM.14

SEKTOREMISSIONEN – BASELINE UND 2°C PFAD

MAßNAHMENMIX NACH 2030



Präsentation von Jim Skea IPCC WGIII
UNFCCC 2016, Quelle AR5 Datenbank

CDR

- ▶ Aufforstung, Bodenbildung
- ▶ Ocean Fertilization
- ▶ Zugabe von Silikaten
- ▶ BECCS und DAC

Risiken

- ▶ Verfügbares Land
- ▶ Sichere geologische Lager
- ▶ Langsamer Effekt

SRM

- ▶ Spiegel
- ▶ Aerosolinjektionen
- ▶ Wolkenveränderung
- ▶ Albedobeeinflussung

Risiken

- ▶ Beeinflusst nur Einstrahlung
- ▶ Wasserhaushalt und reg. Klima
- ▶ Schnelle Wirkung aber “Termination” Effekt

GEO-ENGINEERING ?

Climate Change Won't Be Solved by Removing Excess CO2 from Atmosphere

NASA Confirms Methane Spike Is Tied to Oil and Gas

Onshore Wind Power Now as Affordable as Any Other Source, Solar to Halve by 2020

Global Car Industry Must Shift to Low Carbon to Survive

More Energy Efficient Air Conditioning Required for Climate Goals

IKEA and UNHCR launch the first refugee camp powered by the sun

Renewables Overtake Coal in Supplying European Electricity

European Electricity Industry Pledges to Deliver on Paris Agreement

UN Works with Global Hotel Industry to Reduce Emissions

Fashion Industry, UN Pursue Climate Action for Sustainable Development

UN Calls on Investors to Align Portfolios with Paris Agreement

500 Companies to Commit to Science-Based Climate Targets

Major Global Companies Spearheading Transition to Low Carbon

Green Bonds Issuance Set to Reach Record High in 2018 – Moody's

Paris Agreement Triggers Divestment from Coal

New York City to Divest Pension Funds of Fossil Fuels

Pakistan Explores Carbon Pricing

Czech Republic Publishes Long-Term Climate Change Strategy

Leaders Across the Americas Step up Carbon Pricing

China to Launch World's Largest Emissions Trading System

Caribbean Leaders Launch Plan to Create the World's First "Climate-Smart Zone"

UNFCCC NEWS JÄNNER 2018