# From Science to Policy : Achieving the SDGs in a 1.5°C Warmer World

***The IPCC SR 1.5 : Linking 2030 Agenda and Paris Agreement***

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# The IPCC Special Report on Global Warming of 1.5°C

- *Response to an invitation from the UNFCCC to the IPCC*
  - *impacts of global warming of 1.5°C above pre-industrial levels*
  - *related global greenhouse gas emissions pathways*

- *Acceptance of the invitation by the IPCC : context of the report*
  - *strengthening the global response to the threat of climate change*
  - *sustainable development*
  - *efforts to eradicate poverty*

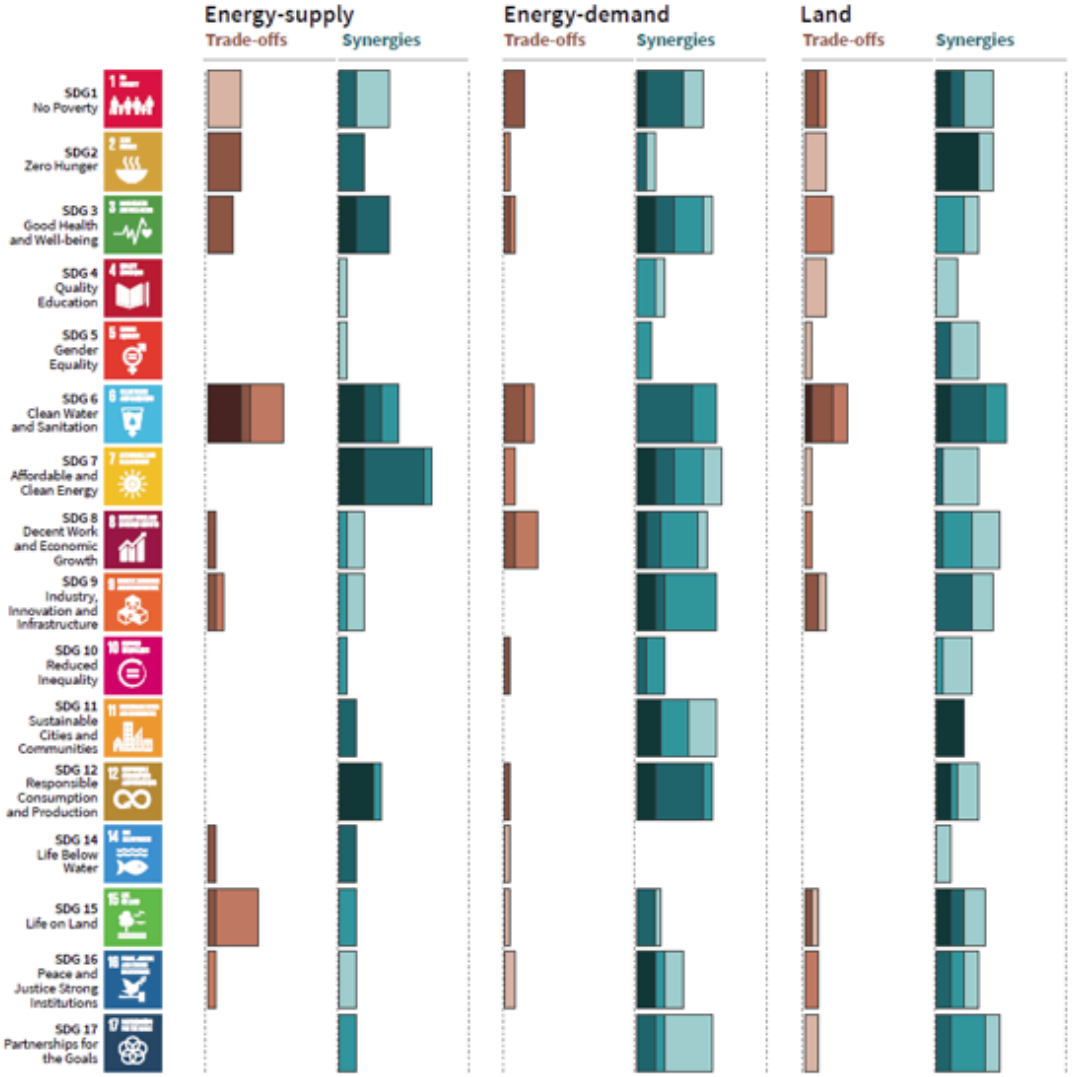
# The IPCC Special Report on Global Warming of 1.5°C

- *Structure of the report : five chapters, including one addressing Sustainable Development, Poverty Eradication, and Reducing Inequalities (Chapter 5)*
  - *linkages between Sustainable Development Goals (SDGs) and 1.5°C*
  - *SDGs provide an established framework for assessing the links between global warming of 1.5°C and 2°C and development goals*
  - *Climate change is expected to increase the likelihood of not achieving the SDG*
  - *Strategies limiting warming to 1.5°C expected to significantly lower this risk and provide synergies for climate adaptation and mitigation*

# The IPCC Special Report on Global Warming of 1.5°C

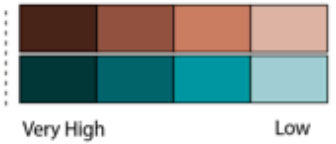
- *SDGs and climate interactions still an emergent field of research*
- *Key for selecting mitigation options that maximize synergies and minimize trade-offs towards the 1.5°C and sustainable development objectives.*
- *Synergies exceed trade-offs in AFOLU, energy supply and demand*
- *Net effect depends on:*
  - *pace and magnitude of changes*
  - *composition of the mitigation portfolio*
  - *management of the transition*

# Mitigation synergies and trade-offs with the SDGs




Length shows strength of connection

Shades show level of confidence



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- *1.5°C pathways have robust synergies with mitigation:*
  - *SDG 3 (health)*
  - *SDG 7 (clean energy)*
  - *SDG 11 (cities and communities)*
  - *SDG 12 (responsible consumption and production)*
  - *SDG 14 (oceans)*

- *Some 1.5°C pathways show potential trade-offs with mitigation:*
  - *SDG 1 (poverty)*
  - *SDG 2(hunger)*
  - *SDG 6 (water)*
  - *SDG 7 (energy access)*

***if not managed carefully***

# The IPCC Special Report on Global Warming of 1.5°C

- *1.5oC pathways with most pronounced synergies and lowest number of trade offs with SD and SDGs :*
  - *low energy demand*
  - *low material consumption*
  - *low GHG intensive food consumption*

- *Reduced dependence of Carbon Dioxide Removal measures*

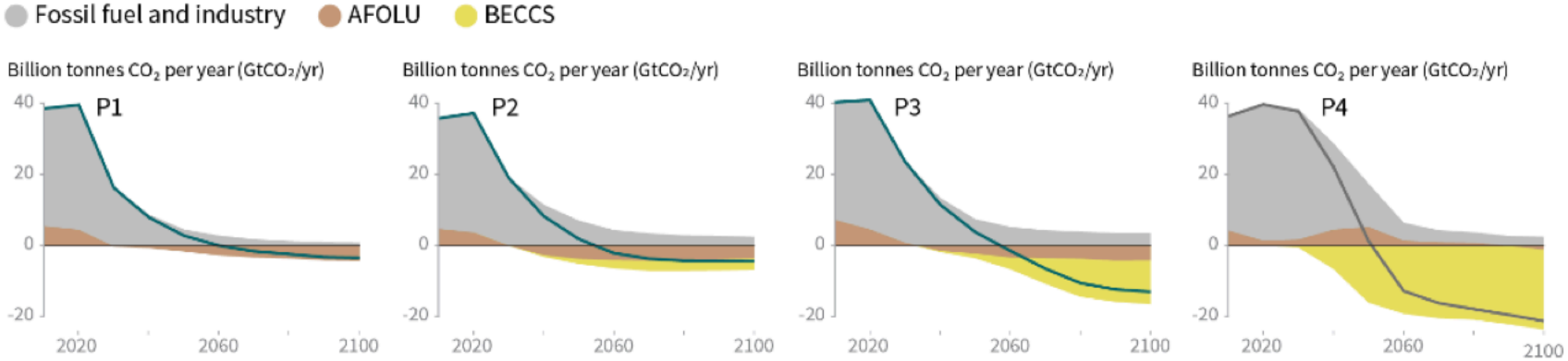
- *Impacts of CDR options on SDGs depend on :*
  - *type of options*
  - *scale of deployment*

- *If poorly implemented, CDR options such as bioenergy, BECCS and AFOLU would lead to trade-offs*

- *Appropriate design and implementation : consideration of people's needs, biodiversity and other sustainable development dimensions*

# SPM3b | Characteristics of four illustrative model pathways

## Breakdown of contributions to global net $CO_2$ emissions in four illustrative model pathways




**P1:** A scenario in which social, business and technological innovations result in lower energy demand up to 2050 while living standards rise, especially in the global South. A downsized energy system enables rapid decarbonization of energy supply. Afforestation is the only CDR option considered; neither fossil fuels with CCS nor BECCS are used.

**P2:** A scenario with a broad focus on sustainability including energy intensity, human development, economic convergence and international cooperation, as well as shifts towards sustainable and healthy consumption patterns, low-carbon technology innovation, and well-managed land systems with limited societal acceptability for BECCS.

**P3:** A middle-of-the-road scenario in which societal as well as technological development follows historical patterns. Emissions reductions are mainly achieved by changing the way in which energy and products are produced, and to a lesser degree by reductions in demand.

**P4:** A resource- and energy-intensive scenario in which economic growth and globalization lead to widespread adoption of greenhouse-gas-intensive lifestyles, including high demand for transportation fuels and livestock products. Emissions reductions are mainly achieved through technological means, making strong use of CDR through the deployment of BECCS.

# The IPCC Special Report on Global Warming of 1.5°C

- *Impacts avoided with the lower temperature limit :*
  - *reduce the number of people exposed to climate risks and vulnerable to poverty by 62 to 457 million*
  - *lessen the risks of poor people to experience food and water insecurity, adverse health impacts, and economic losses*
  - *easier to achieve certain SDGs :*
    - *poverty (SDG 1)*
    - *hunger (SDG 2)*
    - *health (SDG 3)*
    - *water and sanitation (SDG 6)*
    - *cities (SDG 11)*
    - *oceans (SDG 14)*
    - *life on land - ecosystems (SDG 15)*