



## Chapter 5: Sustainable development, poverty eradication and reducing inequalities

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- Linkages between limiting warming to 1.5°C and achieving sustainable development (SD) and Sustainable Development Goals (SDGs)
- 1.5°C vs 2°C impacts on poverty, SD and inequality
- Positive and negative impacts arising from mitigation and adaptation response options
- Climate-resilient development pathways (CRDPs)

# Sustainable Development Goals



## Summary for Policy Makers (SPM) on Sustainable Development

- Climate change impacts and responses are closely linked to sustainable development
- The avoided climate change impacts on sustainable development, eradication of poverty and reducing inequalities would be greater if global warming were limited to 1.5°C rather than 2°C, especially if mitigation and adaptation synergies are maximized while trade-offs are minimized (high confidence).



# SDG Impacts at at 1.5°C and 2°C

**Table 5.1:** Sustainable development implications of avoided impacts between 1.5°C and 2°C global warming

- 100m- 600m more poor people vulnerable (depending on socio-economic scenario) SDG1
- Economic losses 22% less at 1.5°C than 2°C or up to 2% of GDP in 2050 (SDG8)

Impacts	Chapter 3 section	1.5°C	2°C	Sustainable development goals (SDGs) more easily achieved when limiting warming to 1.5°C
Water scarcity	3.4.2.1	4% more people exposed to water stress	8% more people exposed to water stress with 184-270 million people more exposed	SDG 6 water availability for all
	Table 3.4	496 (range 103-1159) million people exposed and vulnerable to water stress	586 (range 115-1347) million people exposed and vulnerable to water stress	
Ecosystems	3.4.3 Table 3.4	Around 7% of land area experiences biome shifts	Around 13% (range 8-20%) of land area experiences biome shifts	SDG 15 to protect terrestrial ecosystems and halt biodiversity loss
	Box 3.5	70-90% of coral reefs at risk from bleaching	99% of coral reefs at risk from bleaching	
Coastal cities	3.4.5.2	Less cities and coasts exposed to sea level rise and extreme events	More people and cities exposed to flooding	SDG 11 to make cities and human settlements safe and resilient
	3.4.5.1	31-69 million people exposed to coastal flooding	32-79 million exposed to coastal flooding	
Food systems	3.4.6 and Box 3.1	Significant declines in crop yields avoided, some yields may increase	Average crop yields decline	SDG 2 to end hunger and achieve food security
	Table 3.4	32-36 million people exposed to lower yields	330-396 million people exposed to lower yields	
Health	3.4.7	Lower risk of temperature related morbidity and smaller mosquito range	Higher risks of temperature related morbidity and mortality and larger range of mosquitoes	SDG 3 to ensure healthy lives for all
	Table 3.4	3546-4508 million people exposed to heatwaves	5417-6710 million people exposed to heatwaves	

# Climate responses and sustainable development

## Mitigation synergies and tradeoffs

### **Synergies**

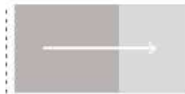
- Energy efficiency and renewables
  - *Benefits to sustainable development for health, clean water and energy access*

### **Tradeoffs**

- Bioenergy and forest plantations
  - *Negatives for food security and water*
- Increased energy prices
  - *Negatives for poverty*
- Shift away from fossil fuels
  - *Employment and economic impacts for fossil fuel dependent countries*

# SPM4 | Indicative linkages between mitigation and sustainable development using SDGs (the linkages do not show costs and benefit)

Length shows strength of connection

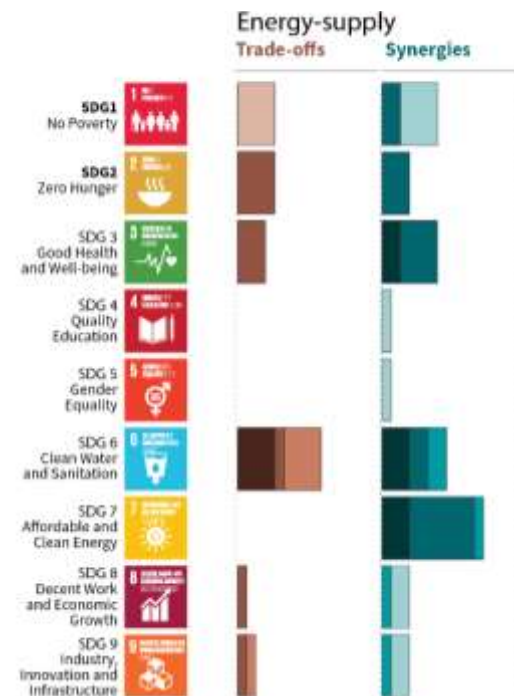


The overall size of the coloured bars depict the relative for synergies and trade-offs between the sectoral mitigation options and the SDGs.

Shades show level of confidence



The shades depict the level of confidence of the assessed potential for **Trade-offs/Synergies**.



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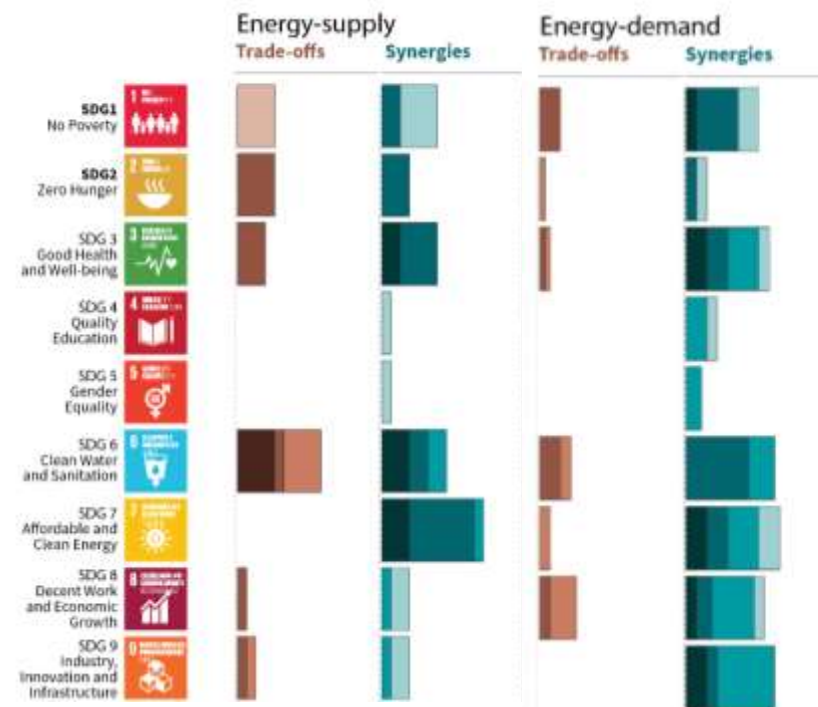


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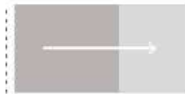
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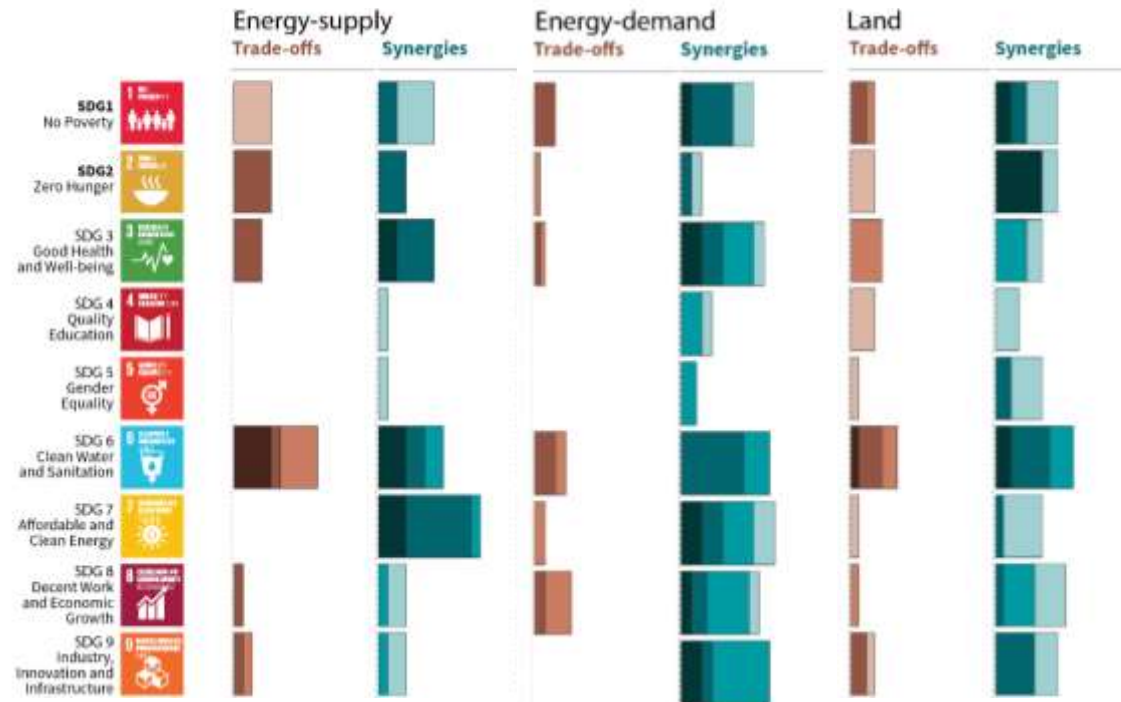
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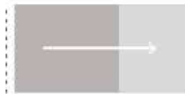
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Very High                      Low



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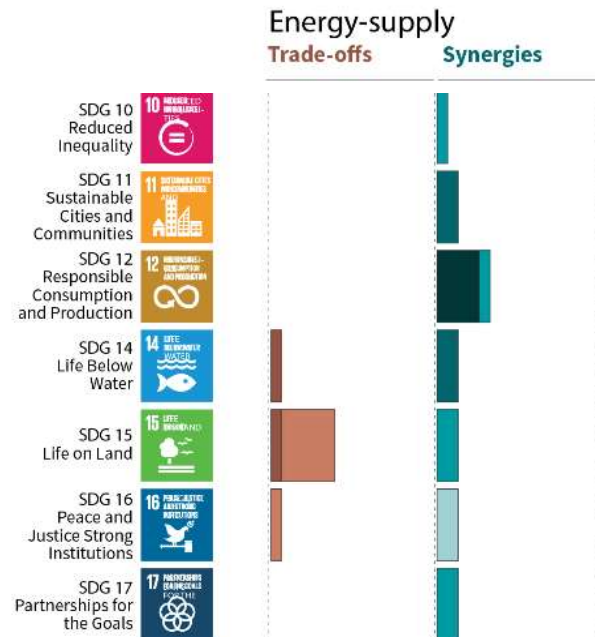
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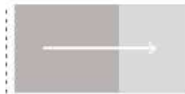
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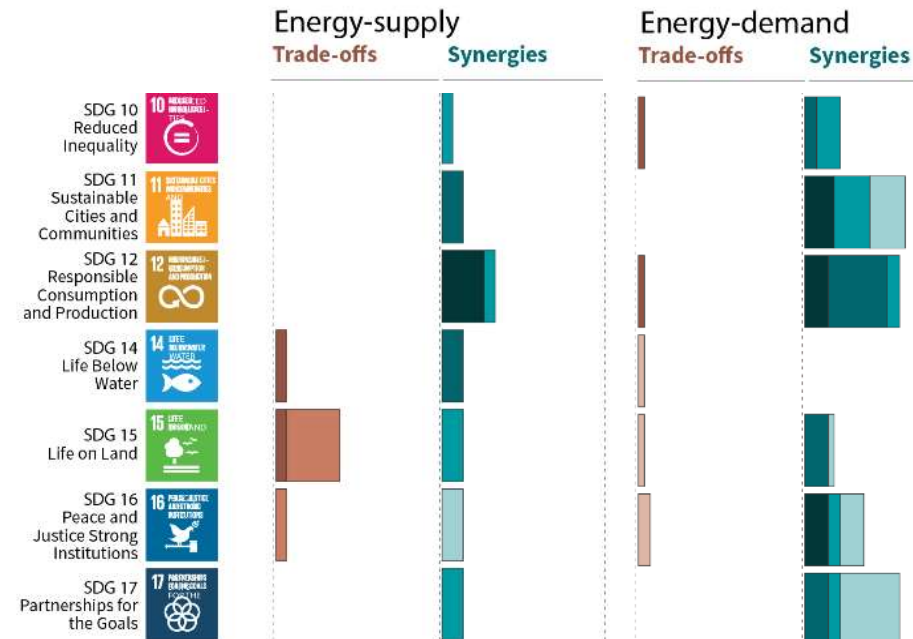


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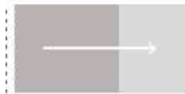


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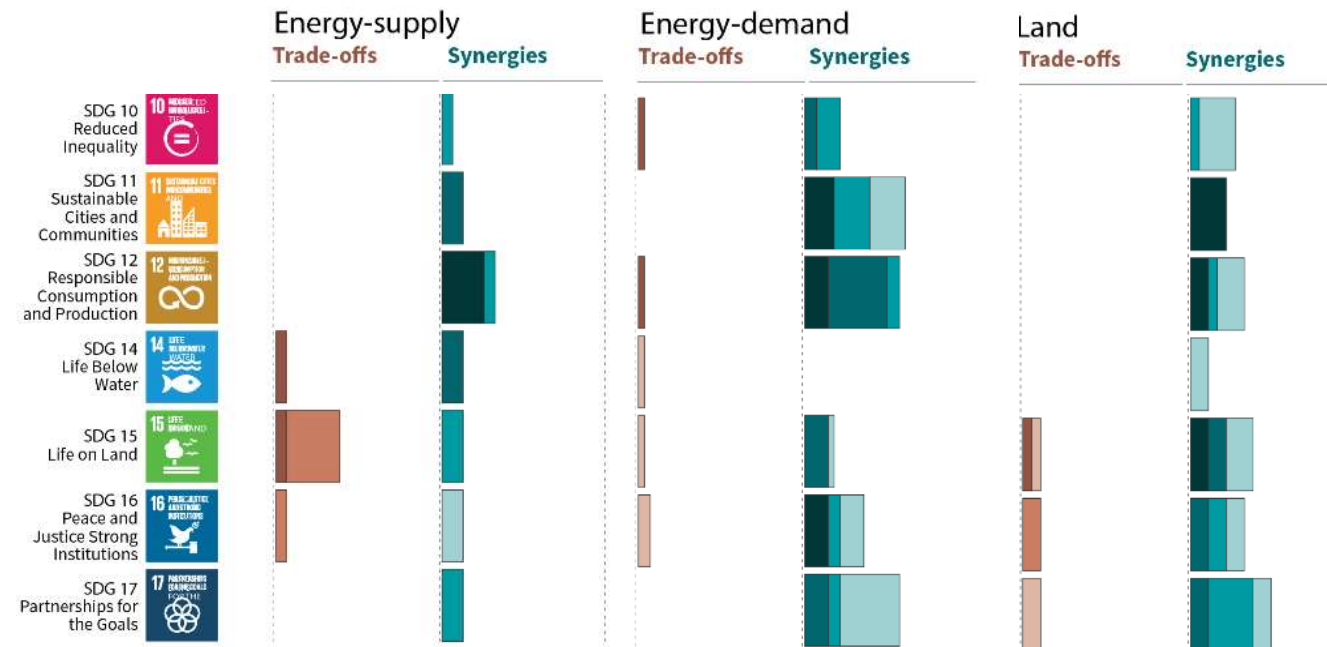


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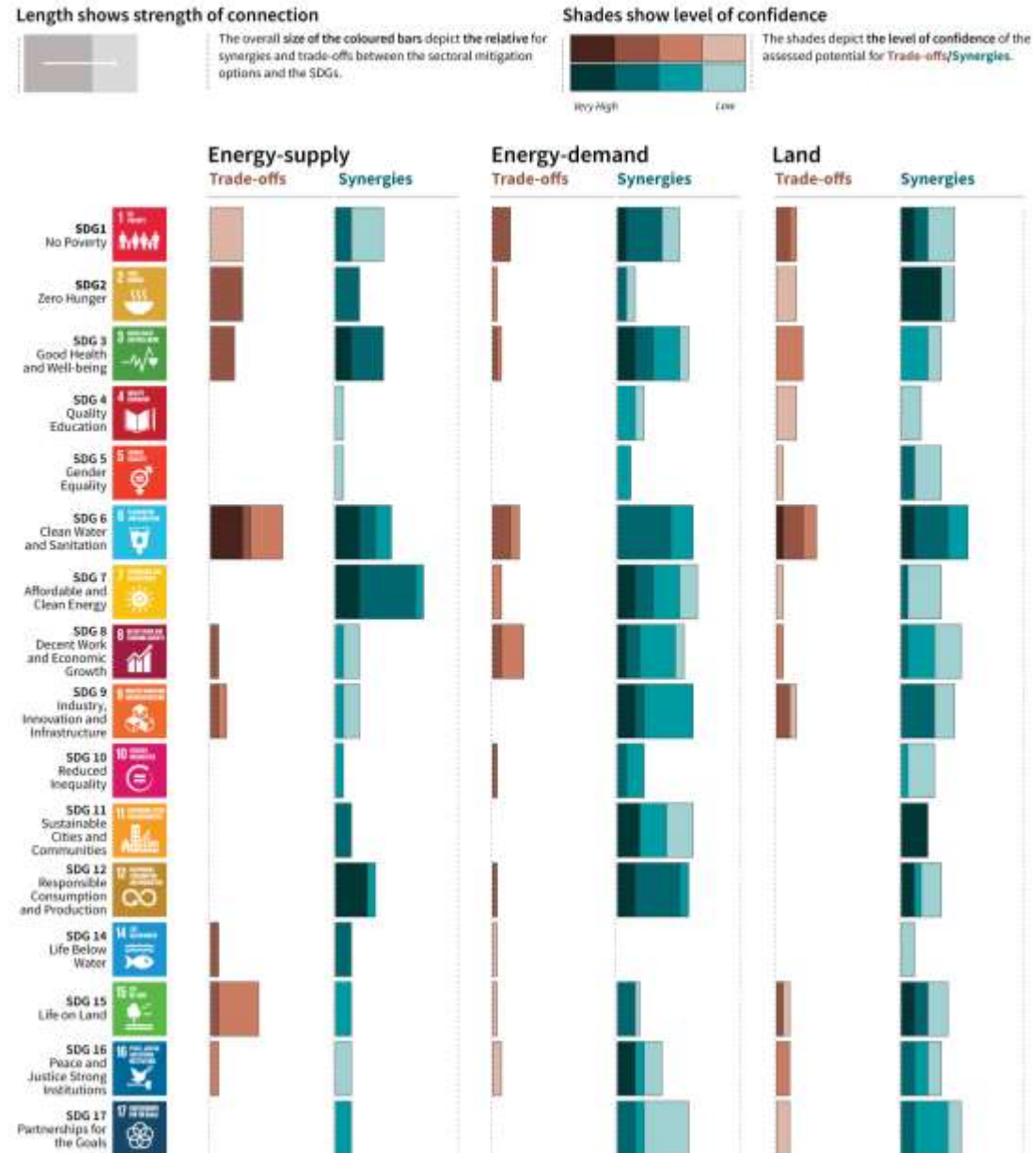
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# Figure SPM 4

Indicative linkages between mitigation options and sustainable development using SDGs (the linkages do not show costs and benefits)





# Climate responses and sustainable development

## Adaptation synergies and tradeoffs

### **Synergies**

- Many benefits for sustainable development especially poverty, hunger, health, ecosystems

### **Tradeoffs**

- Adaptation, if not well planned can increase inequality, degrade ecosystems, exclude partners

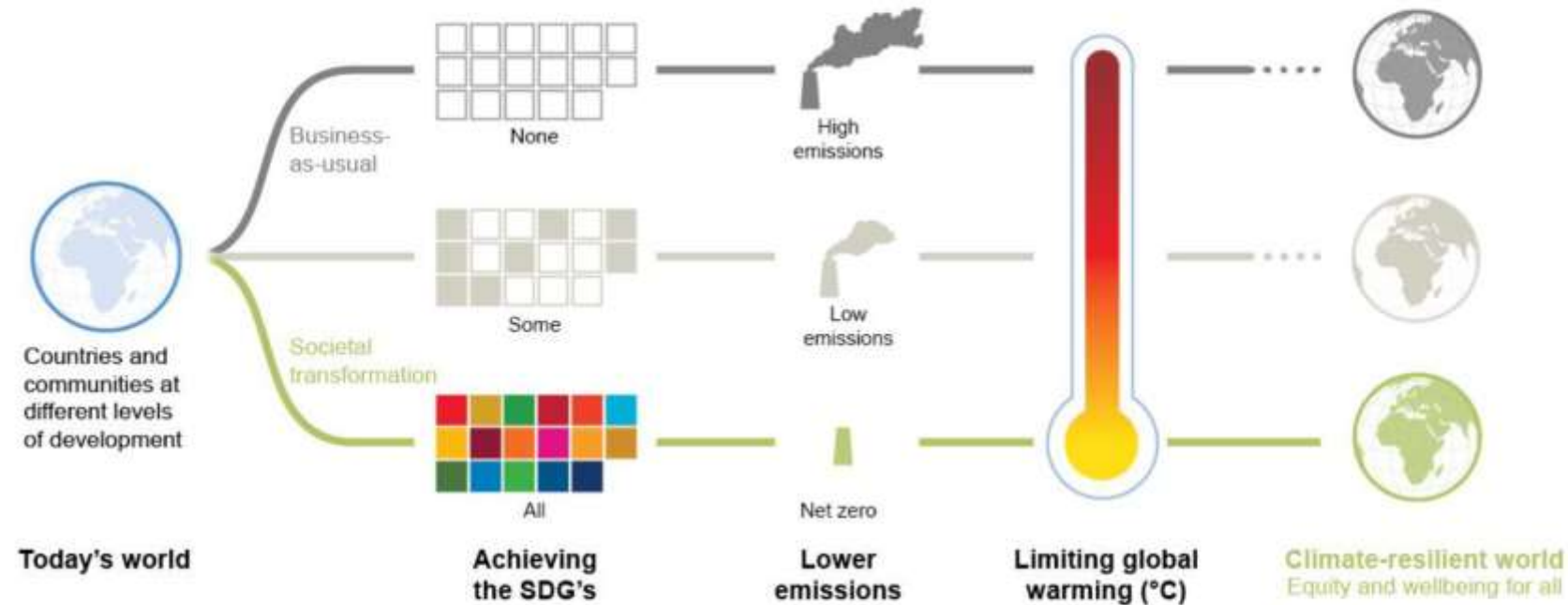


## Climate-Resilient Development Pathways (CRDPs)

Trajectories that strengthen sustainable development and efforts to eradicate poverty through equitable societal transformations across all scales and economies, while reducing the threat of climate change through ambitious mitigation, adaptation, and climate resilience


## FAQ5.2: Climate-resilient development pathways

Decision-making that achieves the United Nation Sustainable Development Goals (SDGs), lowers greenhouse gas emissions, limits global warming, and enhances adaptation, could help lead to a climate-resilient world



**FAQ 5.2, Figure 1:** Climate-resilient development pathways (CRDPs) describe trajectories that pursue the dual goal of limiting warming to 1.5°C while strengthening sustainable development. Decision-making that achieves the SDGs, lowers greenhouse gas emissions and limits global warming could help lead to a climate-resilient world, within the context of enhancing adaptation.



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- Sustainable development supports, and often enables, the fundamental societal and systems transitions and transformations that help limit global warming to 1.5°C.
  - Such changes facilitate the pursuit of climate-resilient development pathways that achieve ambitious mitigation and adaptation in conjunction with poverty eradication and efforts to reduce inequalities