

# Sixth Assessment Report

WORKING GROUP III – MITIGATION OF CLIMATE CHANGE

**Nick Eyre** – Review Editor Chapters 5 – Demand, Services and Social Aspects of Mitigation

INTERGOVERNMENTAL PANEL ON climate change

ipcc



Climate Change 2022

# Mitigation of Climate Change

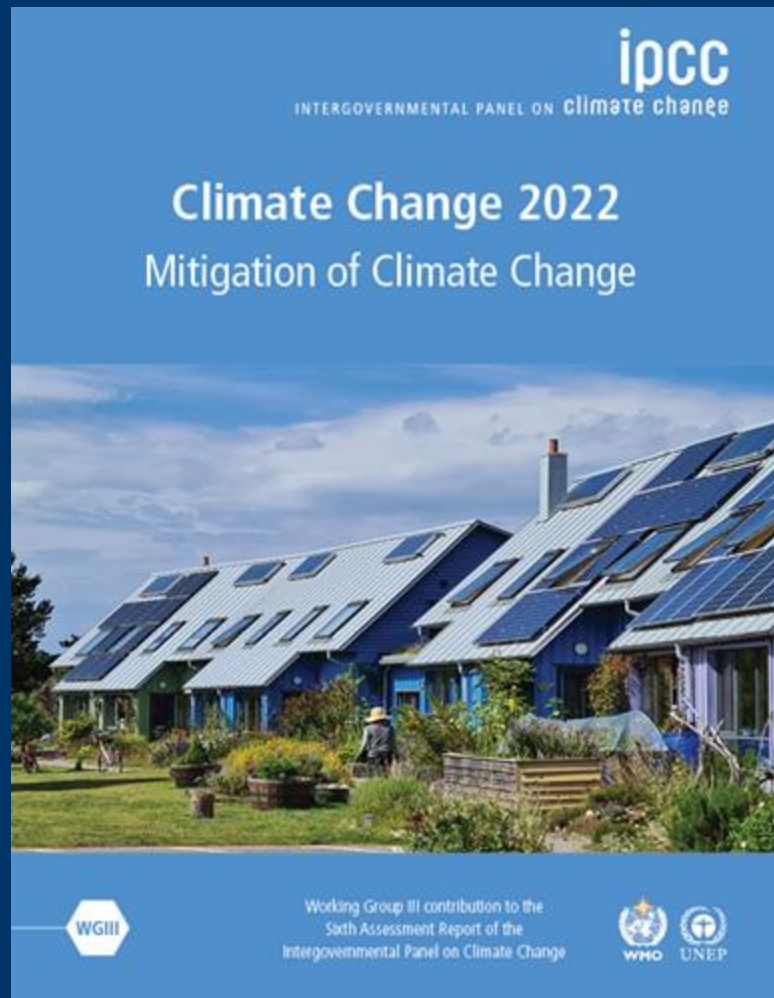


[Matt Bridgestock, Director and Architect at John Gilbert Architects]

# Sixth Assessment Report

WORKING GROUP III – MITIGATION OF CLIMATE CHANGE

“ The evidence is  
clear:  
The time for  
action is now

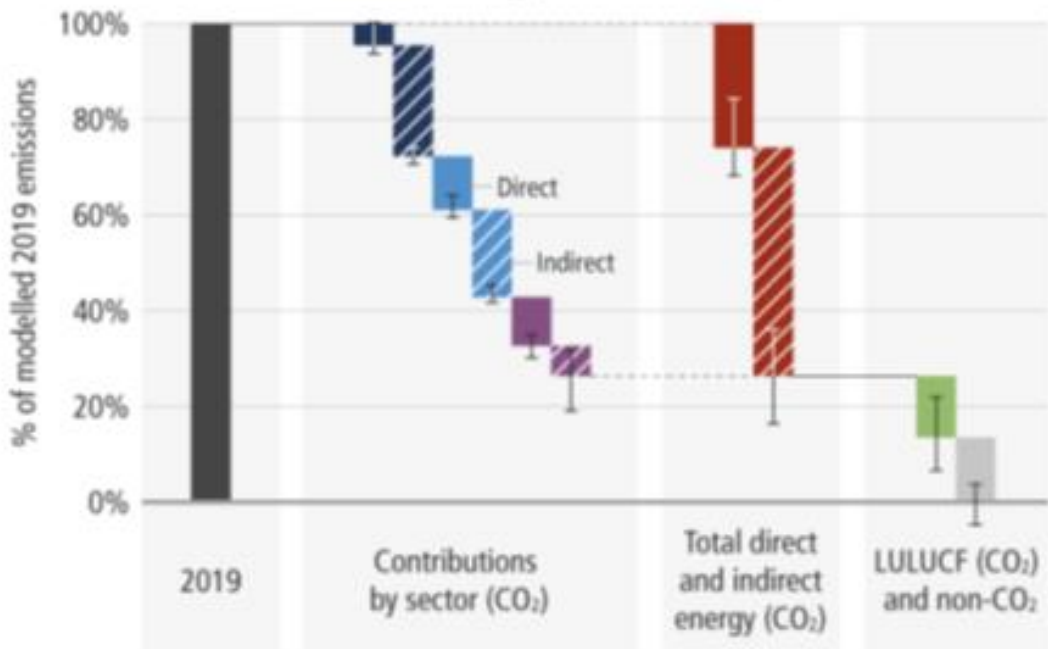


## Demand and services

- potential to **bring down global emissions** by **40-70%** by 2050
- **some** people require additional **housing, energy and resources** for human wellbeing
- By addressing inequity and status consumption, mitigation can be addressed

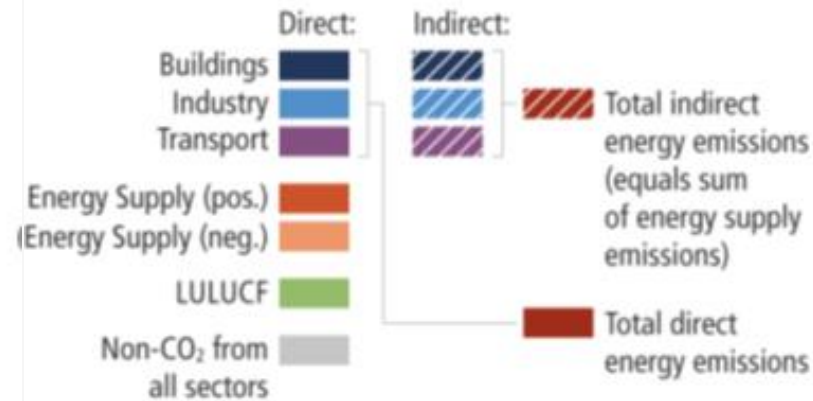


**f. Contributions to reaching net zero GHG emissions  
(for all scenarios reaching net-zero GHGs)**

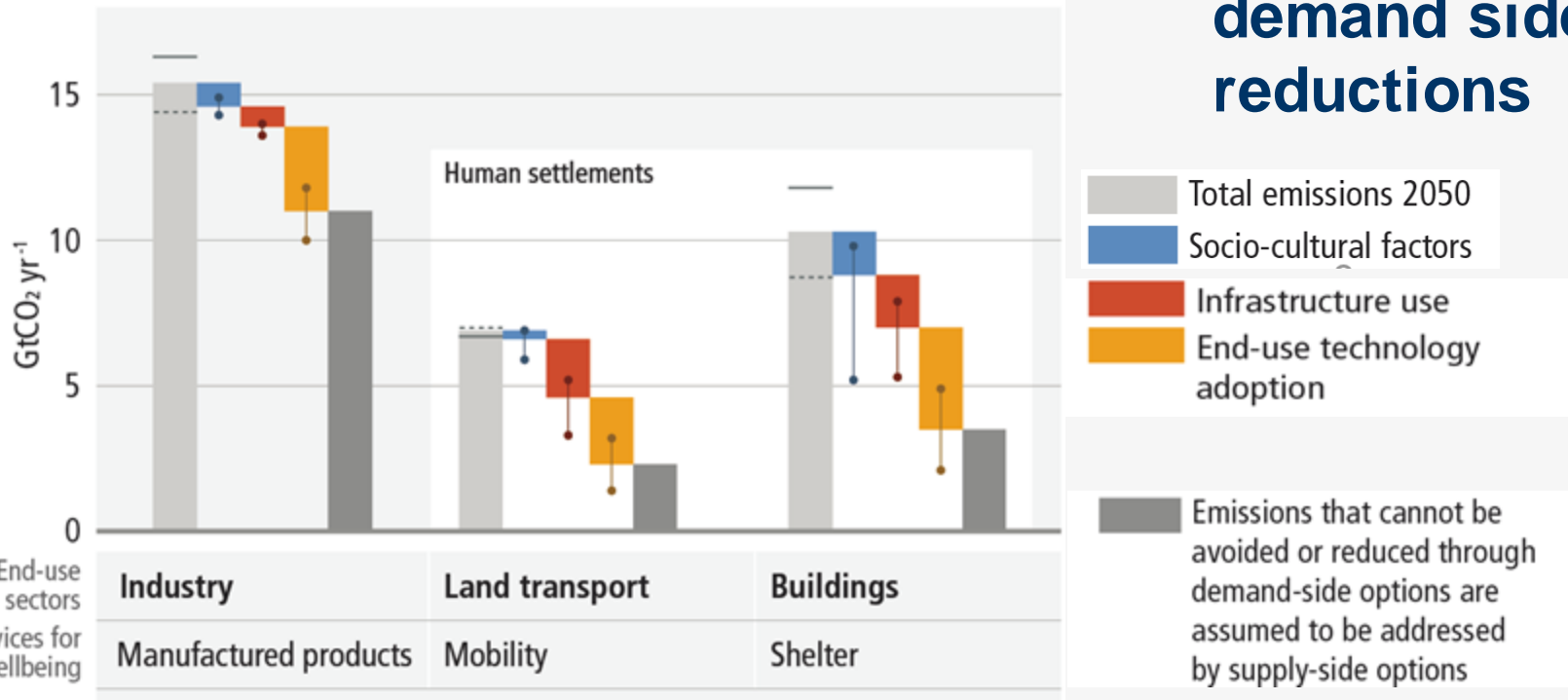


## The role of demand side sectors

averaged over scenarios that achieve net zero



## b. Manufactured products, mobility, shelter



## Energy related demand side reductions

## Demand side options improve wellbeing

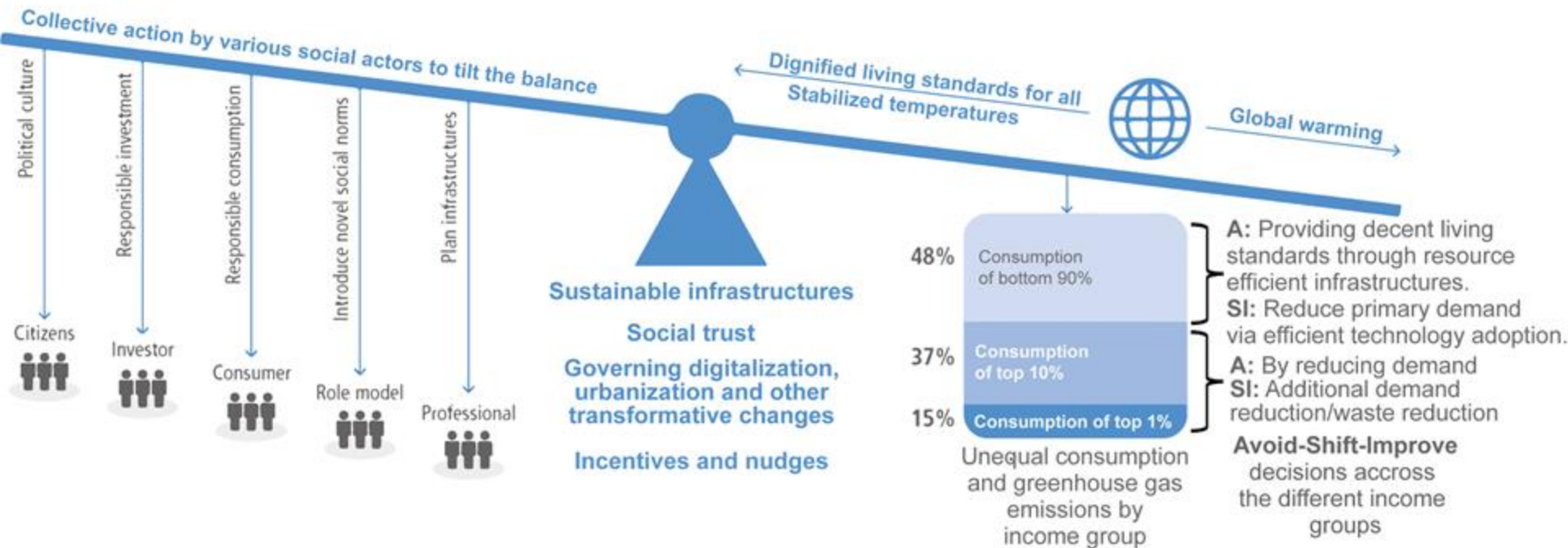
SDGs		2	6	7,11	3	6	7	11	11	4		1,2,8,10	5,10,16	5,16	10,16	11,16	8	9,12		8,12	
Mitigation strategies / Wellbeing dimensions		Food	Water	Air	Health	Sanitation	Energy	Shelter	Mobility	Education	Communication	Social protection	Participation	Personal Security	Social cohesion	Political stability	Economic stability	Material provision		Supply side / incumbents	
Legend																					
<ul style="list-style-type: none"> <li><span style="color: blue;">■</span> High positive impact [+3]</li> <li><span style="color: lightblue;">■</span> Medium positive impact [+2]</li> <li><span style="color: yellow;">■</span> Low positive impact [+1]</li> <li><span style="color: white;">■</span> Overall Neutral</li> <li><span style="color: white;">■</span> No impact</li> <li><span style="color: orange;">■</span> Low negative impact [-1]</li> <li><span style="color: red;">■</span> Medium negative impact [-2]</li> <li>★ Confidence level</li> </ul>																					
Building	Sufficiency	[+1] ★★	[+2] ★★	[+2] ★★	[+3] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+1] ★★	[+1] ★★		[+2] ★★		[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★
	Efficiency	[+2] ★★	[+2] ★★	[+3] ★★	[+3] ★★	[+1] ★★	[+1] ★★	[+2] ★★		[+1] ★★	[+1] ★★		[+1] ★★	[+1] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★
	Lower carbon and renewable energy	[+2/+1] ★★	[+2/+1] ★★	[+3] ★★	[+3] ★★		[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+2] ★★		[+1] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★
Food	Food waste	[+1] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+1] ★★	[+1] ★★				[+1] ★★	[+1/+1] ★★	[+1] ★★			[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	
	Over-consumption	[+1] ★★	[+1/+1] ★★	[+1/+1] ★★	[+1] ★★		[+1/+1] ★★						[+2] ★★			[+1] ★★				[+1] ★★	
	Animal free protein	[+2] ★★	[+2] ★★	[+2] ★★	[+1] ★★						[+1] ★★	[+1] ★★	[+1] ★★		[+1] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★	
Transport	Teleworking and online education system	[+1] ★★		[+1] ★★	[+2] ★★		[+2] ★★	[+1] ★★	[+2] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+1/+1] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★	[+2] ★★	
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	Shared mobility	[+1] ★★		[+1] ★★	[+2] ★★		[+1] ★★	[+2] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1/+1] ★★	[+1/+1] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+2] ★★	[+2] ★★	
	Evs	[+1] ★★		[+2] ★★	[+2] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+2] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+2] ★★	[+2] ★★	
Urban	Compact city	[+2/+1] ★★	[+1] ★★	[+2/+1] ★★	[+3] ★★	[+1] ★★	[+3] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1/+1] ★★	[+2] ★★	[+1] ★★	[+1] ★★	[+1/+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	
	Circular and shared economy	[+2] ★★	[+1] ★★	[+2] ★★	[+2] ★★		[+1] ★★	[+2/+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+2] ★★	[+2] ★★	
	Systems approach in urban policy and practice	[+1] ★★	[+2] ★★	[+1] ★★	[+3] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+1] ★★		[+1] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+1] ★★	[+1] ★★		[+1] ★★	[+1] ★★	[+1] ★★	
	Nature based solutions	[+2] ★★	[+1/+1] ★★	[+3] ★★	[+3] ★★	[+1] ★★	[+1] ★★	[+1/+1] ★★	[+1] ★★	[+2] ★★		[+2] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+2] ★★		[+1] ★★	[+1] ★★	[+1] ★★	
Industry	Using less material by design	[+2] ★★	[+2] ★★	[+1] ★★	[+2] ★★	[+2] ★★	[+1] ★★	[+2] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+2] ★★	[+2] ★★	
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	Circular economy	[+2] ★★	[+2] ★★	[+1] ★★	[+2] ★★	[+2] ★★	[+1] ★★	[+2] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+1] ★★	[+2] ★★	[+2] ★★	[+2] ★★	

## Closing investment gaps

- financial flows: **3-6x lower** than levels needed **by 2030** to limit warming to below 1.5°C or 2°C
- there is **sufficient global capital** and liquidity to close investment gaps
- challenge of closing gaps is widest for developing countries



## Tilting the balance towards less resource intensive service provisioning



Demand side mitigation is about more than behavioural change. Reconfiguring the way services are provided while simultaneously changing social norms and preferences will help reduce emissions and access. Transformation happens through societal, technological and institutional changes.



# Top level comparison

Study	CREDS PLEF	IIASA LED	IPCC Chapter 5
Type	4 scenarios	1 scenario	Literature review
Scope	UK	Global	Global
Metric	Final energy	Final energy	GHG emissions
Headline savings	31%-52%	37% (North 53%; South 22%)	40-70%
Baseline	2020 actual	2020 actual	IEA STEPS 2050
Savings from 2020 baseline	31%-52%	37%	20-60%