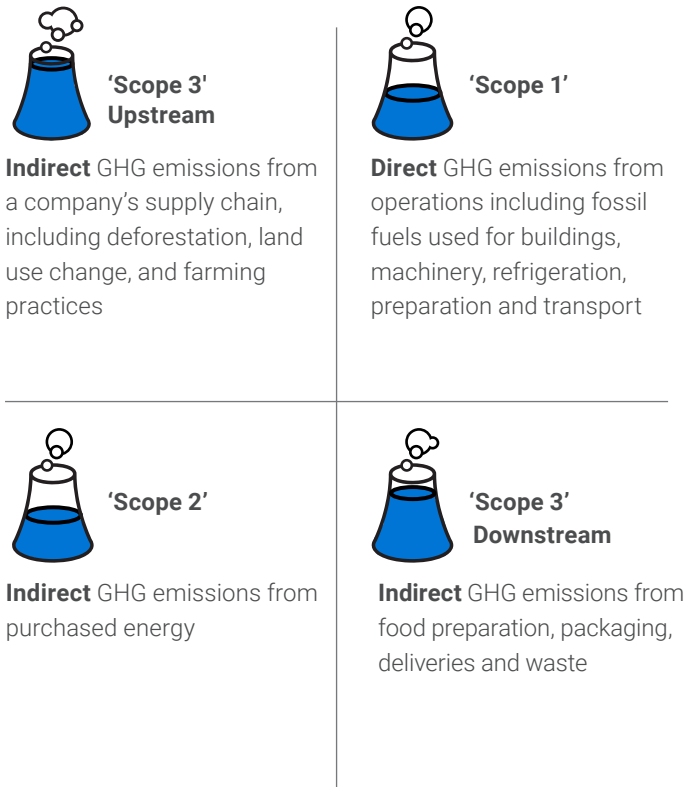



# Net zero: food

To prevent dangerous climate change, greenhouse gas emissions must reach net zero. What does the **food sector** need to do?

**25%** of human-caused GHG emissions come from agriculture, forestry and other land use

## Sources of emissions



 Source: IPCC (2018)



### Challenges

- Increasing production without additional land
- Crop yield slowdown and soil loss
- Lack of supply chain transparency
- Behavioural change
- Food waste and food loss



### Opportunities

- Growing market for alternative proteins and healthy food options
- Cost savings from low-carbon equipment
- Reducing public health risks
- Improved productivity

## Companies

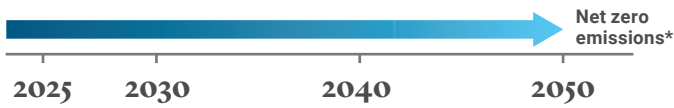
## Governments

Key levers	Key policies
Reducing animal protein consumption to reduce land, water and emissions footprint	Farming standards
Supply chain monitoring and traceability	Subsidy reform
Waste management (animal waste, water, packaging)	Mandatory supply chain certification and traceability
Regenerative agriculture	Waste reduction
Lower emission farming practices	Taxation (including carbon pricing)
	Consumer education
	Soil restoration
	No agricultural land expansion
	Local supply chains



Other environmental considerations	Social impacts and the 'just transition'	Physical risk impacts
Pesticides and food toxicity	Farming is important source of livelihoods	Reductions in arable land, soil fertility, water availability and crop yields from extreme weather
Largest driver of biodiversity loss, pollution from intensive farming	Food and nutrition insecurity remains pressing issue	
Massive user of global freshwater	Tax impact on food affordability	

## Decarbonisation effort



### Easier to achieve

- Regenerative / EU taxonomy-compliant farming
- Improving productivity on existing lands
- Investment in protein alternatives
- Natural refrigerants

### Possible with effort

- Supply chain monitoring to end deforestation
- Dietary shifts
- Reduced packaging, food waste and food loss
- Reducing methane emissions from rice
- Reducing fertiliser use

\*To be followed by reducing emissions of other GHGs such as methane to net zero

## What is needed?



### Company leadership

Investments in new products and tackling emissions across supply chain, with clear commitments to net zero



### Research and innovation

Protein alternatives  
Packaging and waste  
Regenerative agricultural practices



### Consumer behaviour

Consumers adopting plant-based alternatives

**LGIM will vote and implement investment sanctions against companies falling short of our climate expectations.**

## How are we assessing companies' net zero pathways?

<b>Net-zero commitment</b>	<ul style="list-style-type: none"> <li>Does the company have comprehensive target for net zero by 2050 or earlier, including emissions from value chain?</li> <li>Has the company disclosed a net-zero transition plan, including interim targets?</li> </ul>
<b>Strategy</b>	<ul style="list-style-type: none"> <li>What percentage of revenue/R&amp;D derives from or is allocated to lower-impact products and innovations?</li> <li>Level of traceability of 'forest risk commodities' across supply chain</li> <li>Percentage of commodities purchased under no deforestation principles</li> </ul>
<b>Resilience</b>	<ul style="list-style-type: none"> <li>Exposure to physical risk?</li> <li>Product portfolio: how much revenue is derived from animal proteins, particularly beef?</li> </ul>
<b>Targets</b>	<ul style="list-style-type: none"> <li>Revenue targets for lower-impact products?</li> <li>Targets to expand sourcing from regenerative agriculture?</li> </ul>
<b>Collaboration</b>	<ul style="list-style-type: none"> <li>Evidence of the company working collaboratively across its value chain to reduce emissions?</li> <li>Evidence of the company advocating for meaningful policy action on emissions?</li> </ul>
<b>Red lines</b>	<ul style="list-style-type: none"> <li>Does the company have comprehensive zero-deforestation and regenerative agriculture policies?</li> </ul>

## For more information...

Please see: [https://www.lgim.com/landg-assets/lgim/\\_document-library/responsible-investing/climate-impact-pledge-brochure-uk-eu-2021.pdf](https://www.lgim.com/landg-assets/lgim/_document-library/responsible-investing/climate-impact-pledge-brochure-uk-eu-2021.pdf)

### Important information

**Source: LGIM as at September 2021. The value of an investment and any income taken from it is not guaranteed and can go down as well as up, you may not get back the amount you originally invested. The above information does not constitute a recommendation to buy or sell any security**

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