



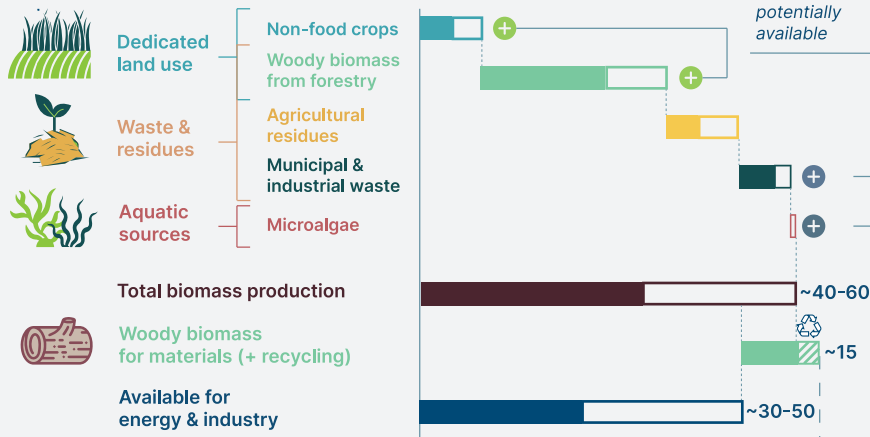
How much biomass can we use?

NOT ALL BIOMASS IS 'GOOD' BIOMASS; WHAT IS SUSTAINABLE BIOMASS?

<p>No competition with other critical uses of land</p>	<p>No deforestation or peatland conversion</p>	<p>Target degraded land, with little plant growth</p>	<p>Respect growth periods which will delay supply</p>	<p>Close-to-zero emissions collection, transportation and processing</p>	<p>No environmental or social harm</p>
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WHAT WE CAN RELY ON: A CONSTRAINED SUSTAINABLE SUPPLY

Global sustainable biomass supply in 2050 – *Prudent estimate*
EJ primary energy per year – *Illustrative scenario*



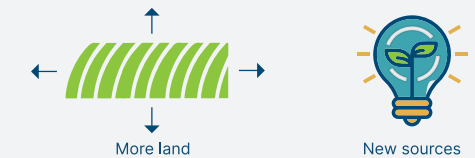
EXTRA BIORESOURCES IF RADICAL CHANGE HAPPENS

More available land
(Accelerated by biotechnologies)

- Dietary shift away from meat (+ + + + + + + +)
- More productive plants (traditional crops, algae) (+ +)
- Less food waste (+ +)

New sources available

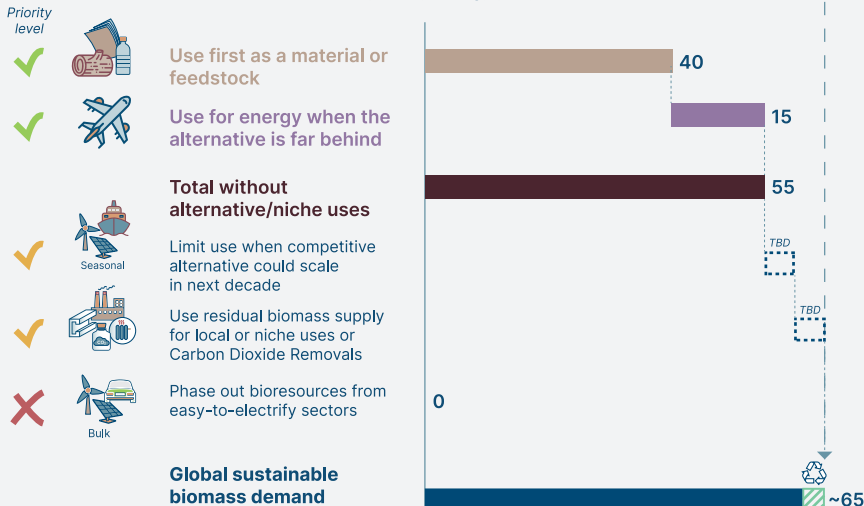
- Increase collection of organic waste (+ +)
- Development of macroalgae (seaweed) for energy (+ + +)



Where should bioresources be used?

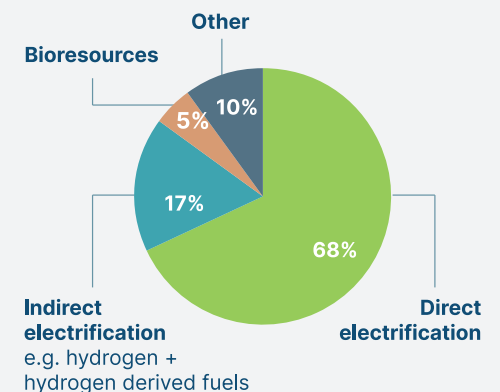
HOW TO PRIORITISE USES OF BIORESOURCES?

Global biomass demand (2050) – EJ primary energy per year – *Illustrative scenario*

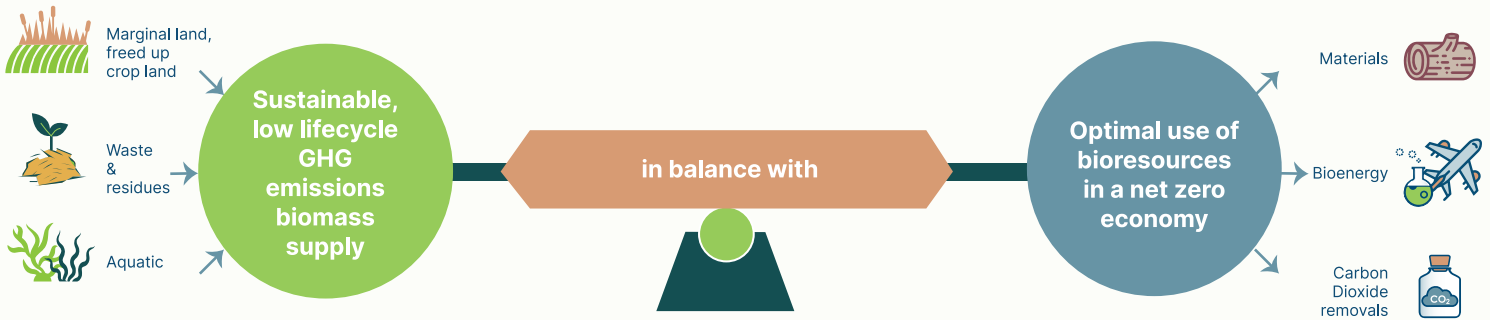


CLEAN ELECTRICITY: THE CORE OF A NET-ZERO ECONOMY

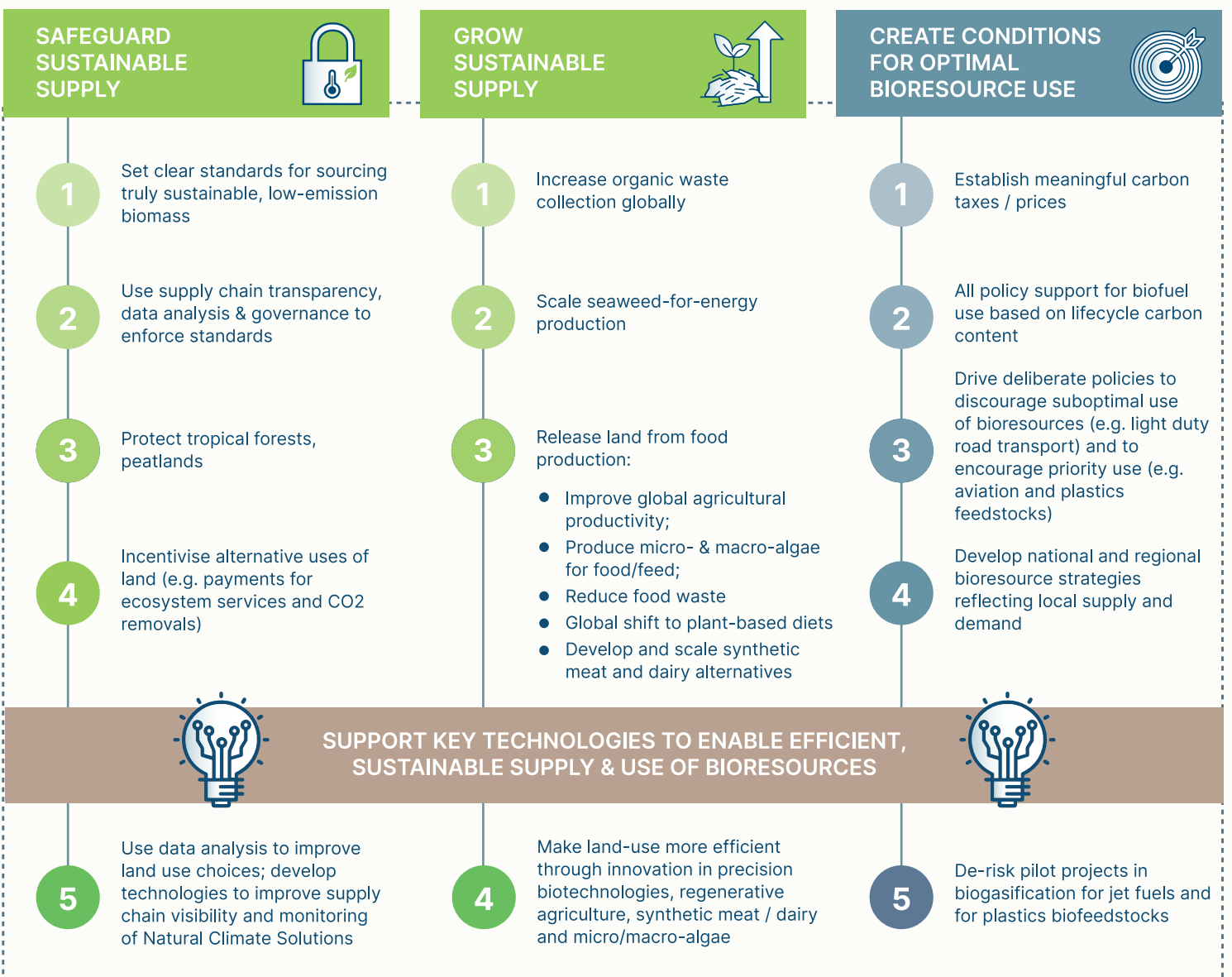
Final energy demand in 2050
EJ primary energy per year – *Illustrative scenario*



ENSURING A SUSTAINABLE APPROACH TO BIORESOURCES



TOP INDUSTRY AND POLICY ACTIONS ACROSS THE VALUE CHAIN



SCALE NON-BIO-BASED DECARBONISATION OPTIONS WHICH ARE LESS SUBJECT TO SUPPLY CONSTRAINTS

 Clean energy	 Clean hydrogen	 Fossil fuels + CCS/U
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