

Integrated biodiversity and climate scenarios

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Partners:

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Fisheries Center, UBC
iDiv, Leipzig
UNEP/WCMC

New socio-economic scenarios “Rio+20”

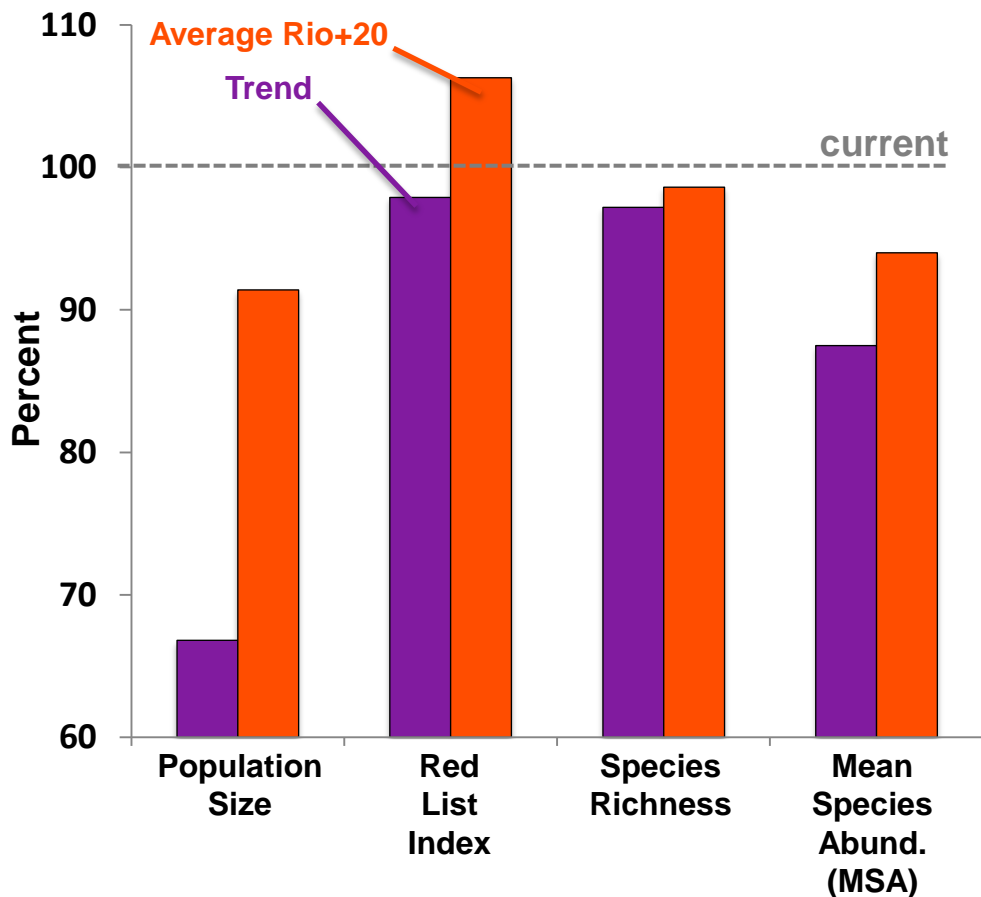
Assessment underway for the Global Biodiversity Outlook 4 (GBO-4)
of the Convention on Biological Diversity (CBD)

Key international objectives:

- Keep global warming $<2^{\circ}$ C
- Conserve biodiversity
- Meet human development goals

Meeting biodiversity protection objectives (CBD 2050 Vision)

Multiple Global Biodiversity Indicators

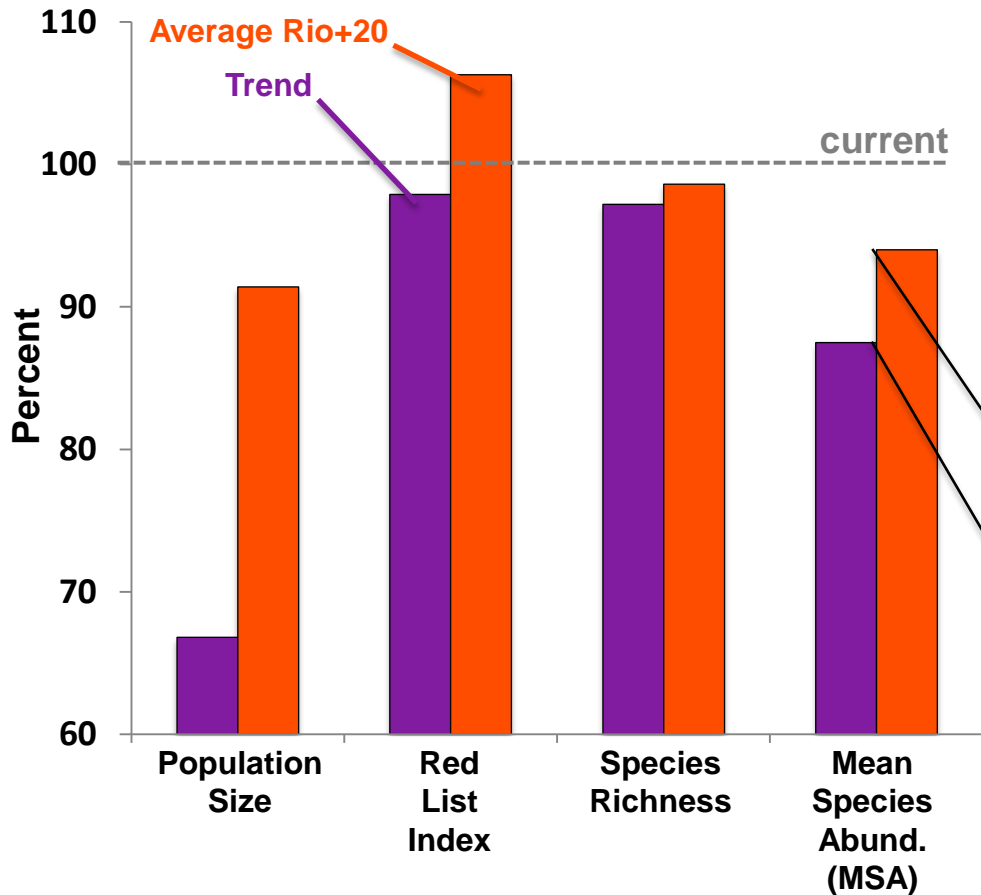


“Rio+20” scenario objectives - 2050

- Keep global warming <2° C
- Conserve biodiversity
- Meet human development goals

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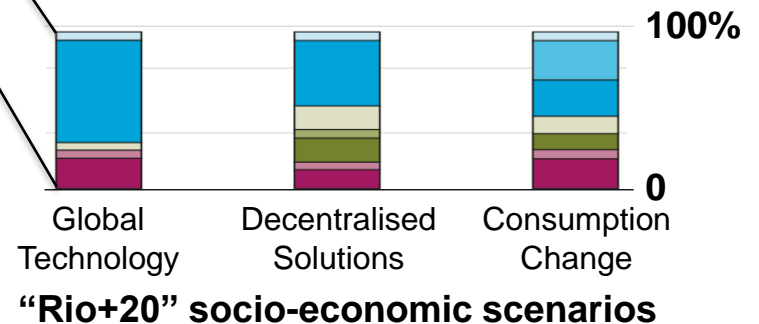
Multiple Global Biodiversity Indicators



Drivers

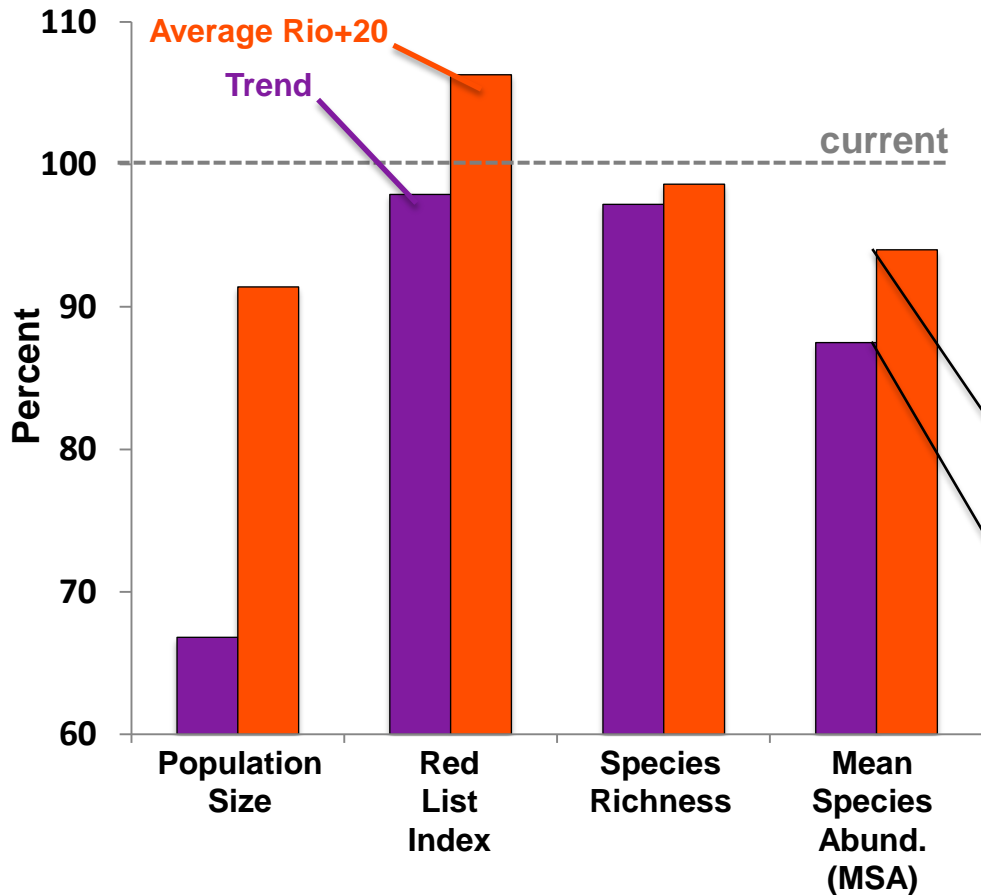
Contribution to MSA improvement in Rio+20 vs. Trend

- Restore abandoned agricultural lands
- Reduce consumption and waste
- Increase agricultural productivity
- Expand protected areas
- Reduce nature fragmentation
- Reduce infrastructure expansion
- Reduce nitrogen emissions
- Mitigate climate change



Meeting biodiversity protection objectives (CBD 2050 Vision)

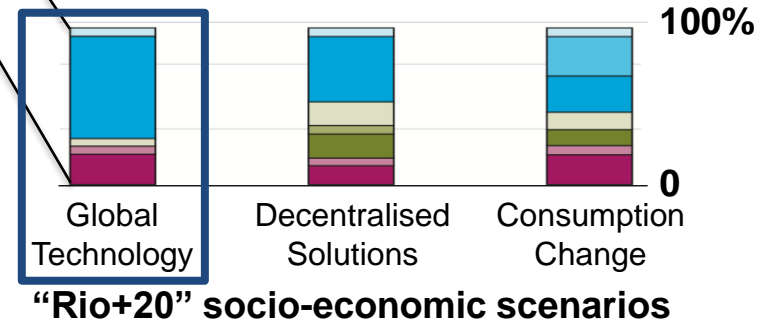
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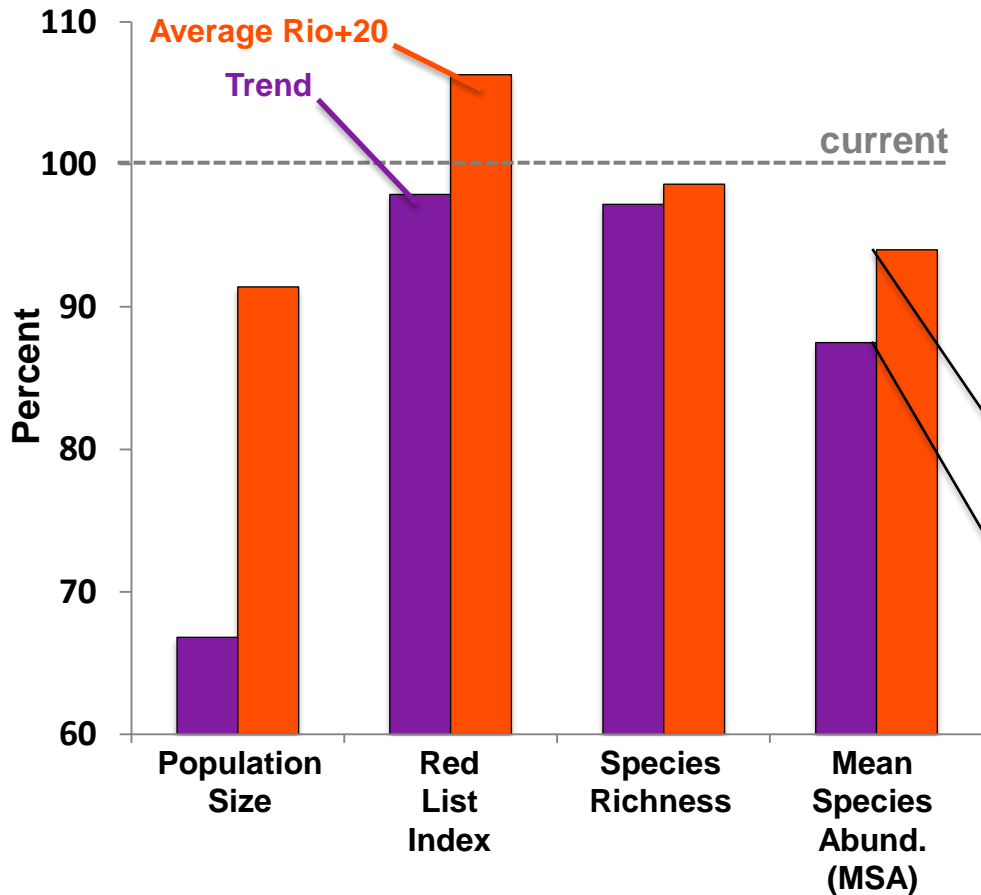
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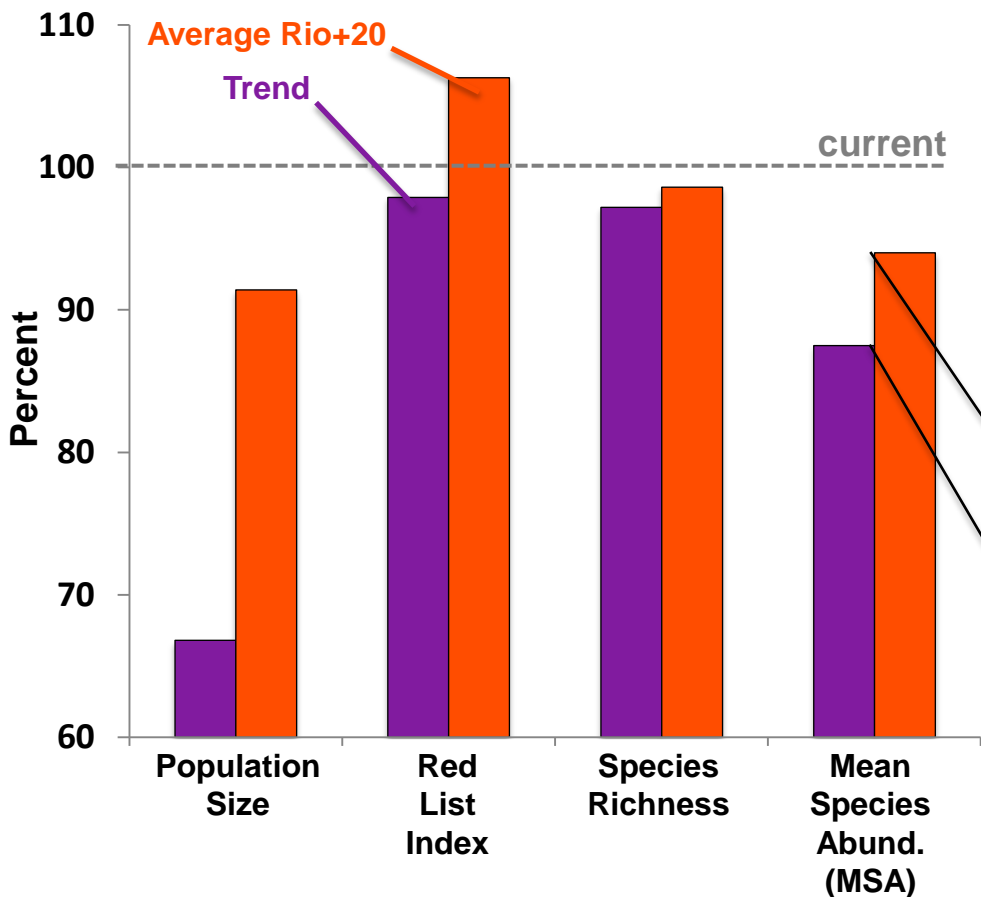
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“Rio+20” socio-economic scenarios

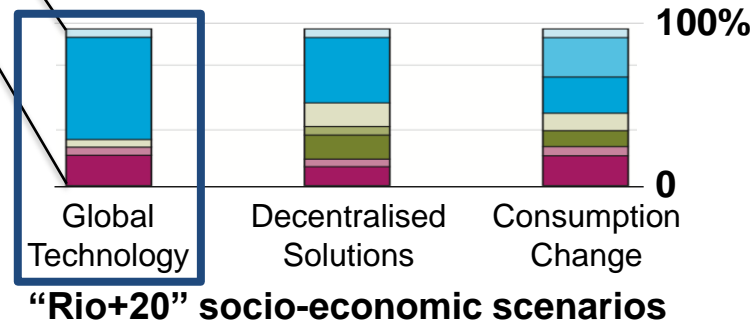
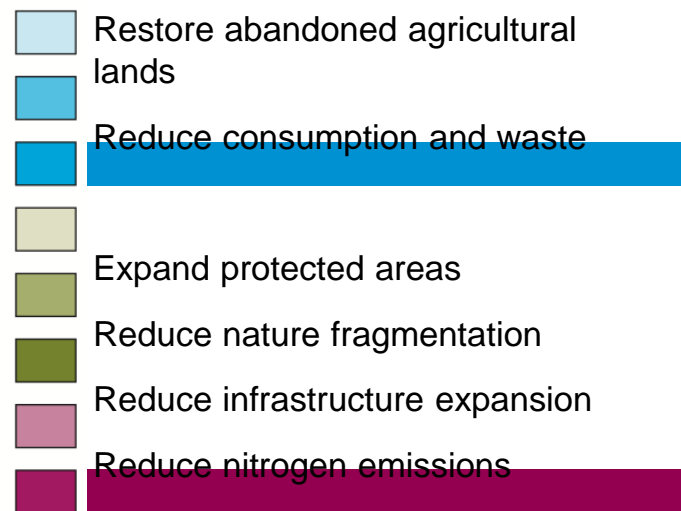
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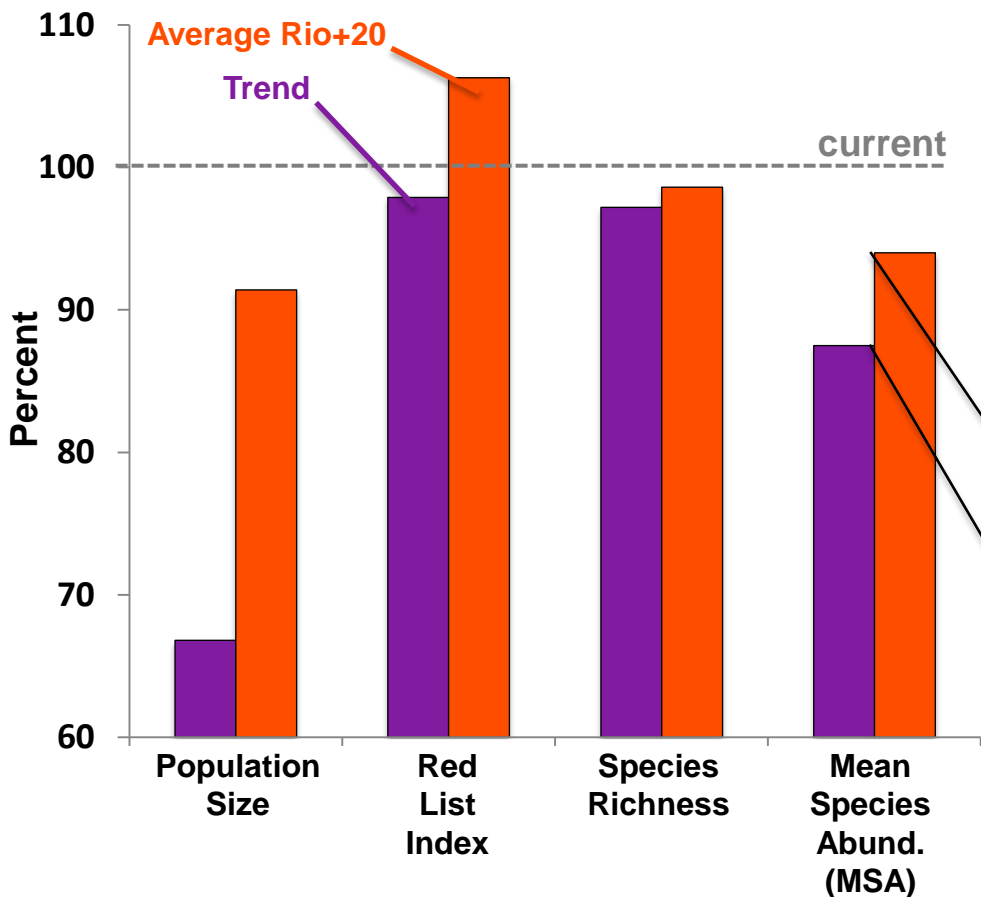
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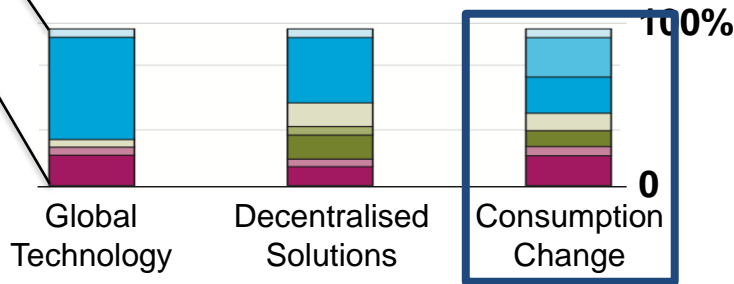
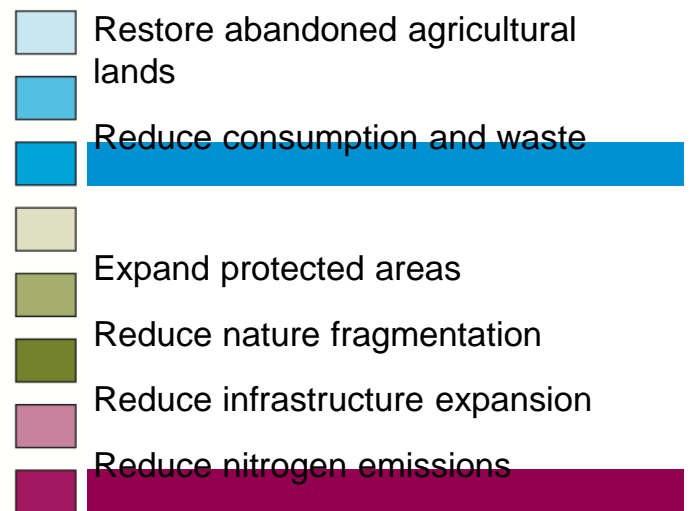
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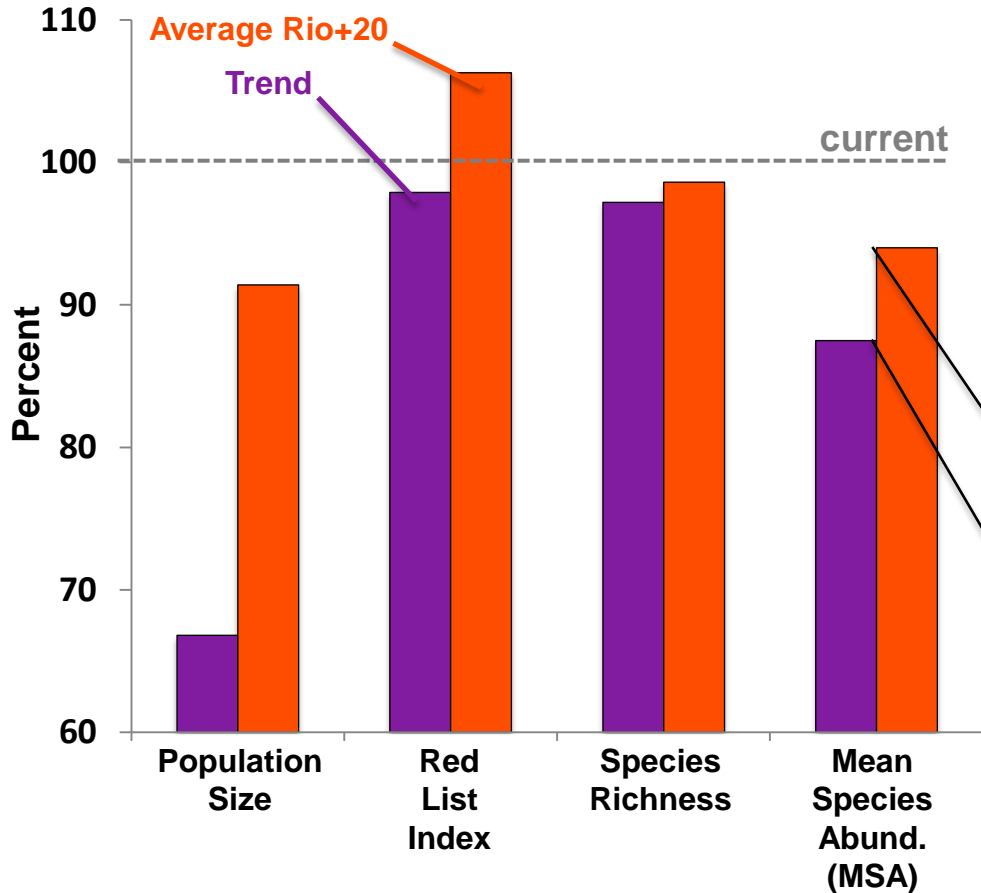
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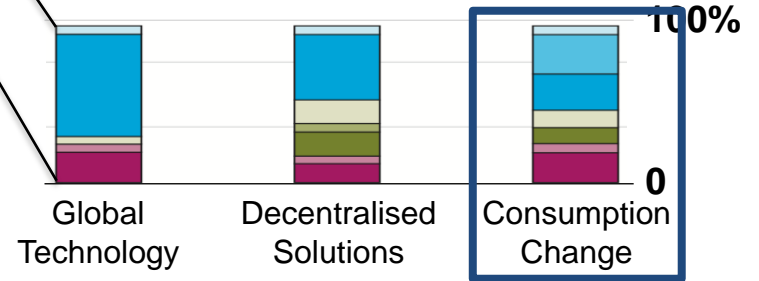
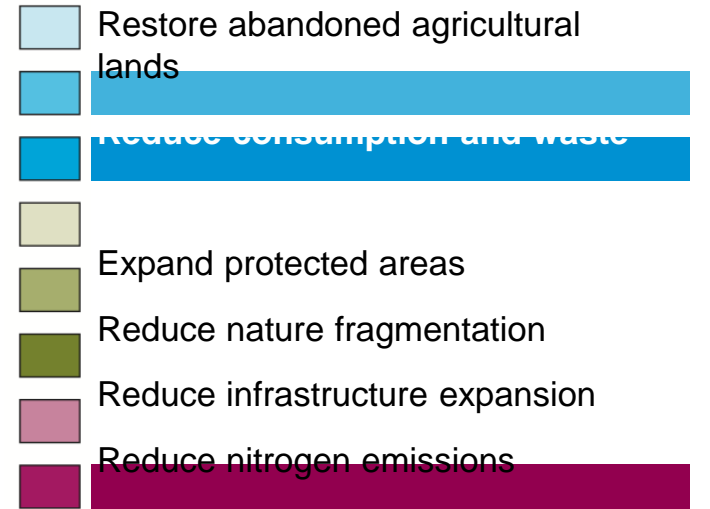
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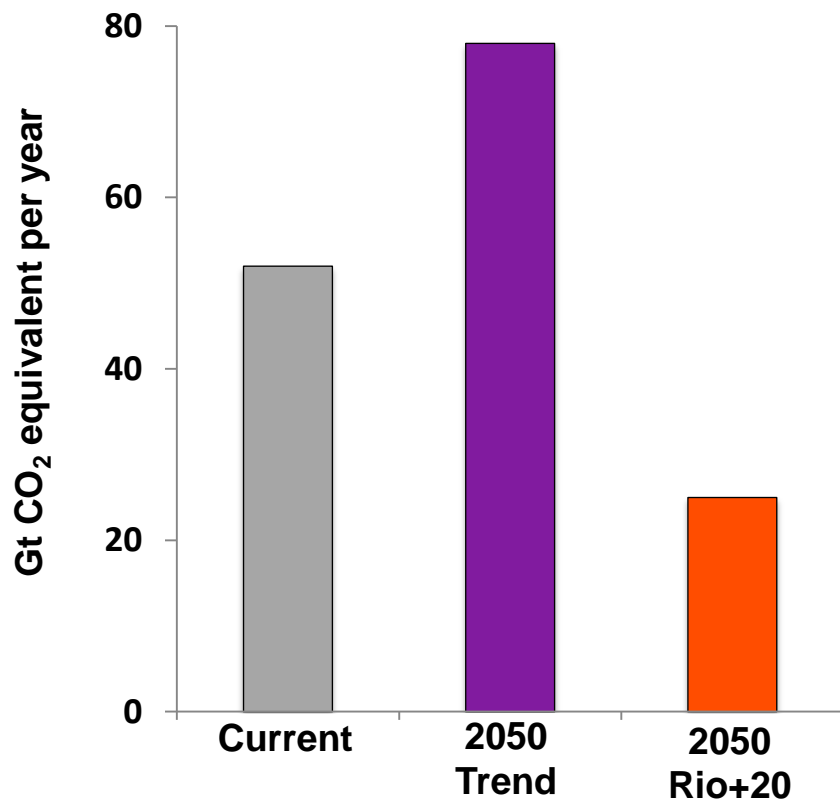
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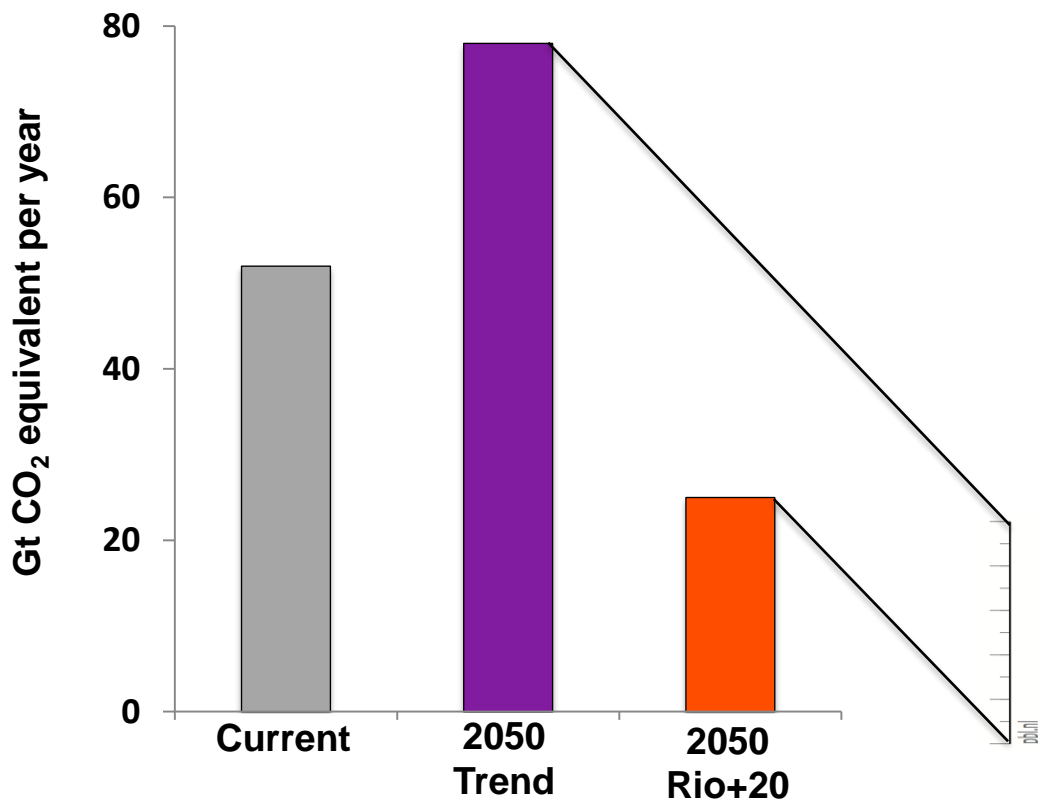
And at the same time meeting climate mitigation objectives

Greenhouse Gas Emissions



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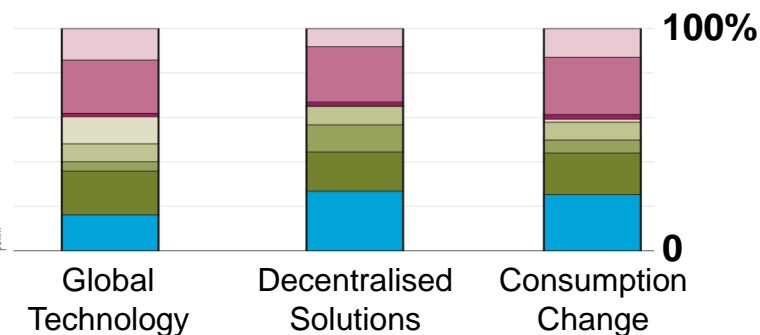
Greenhouse Gas Emissions



Drivers

Contribution to GHG emissions reduction

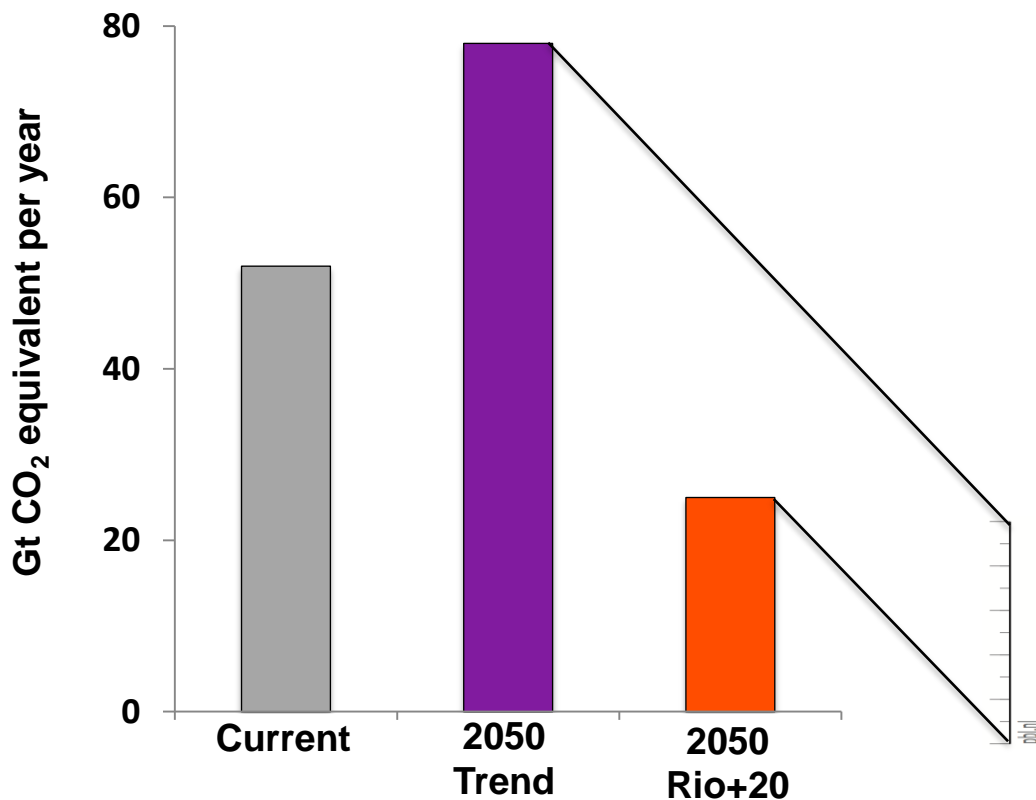
- Avoid deforestation
- Reduce other greenhouse gases
- Reduce other energy-related emissions
- Increase nuclear power
- Increase bio-energy
- Increase solar and wind power
- Increase CO₂ capture and storage
- Improve energy efficiency



“Rio+20” socio-economic scenarios

And at the same time meeting climate mitigation objectives

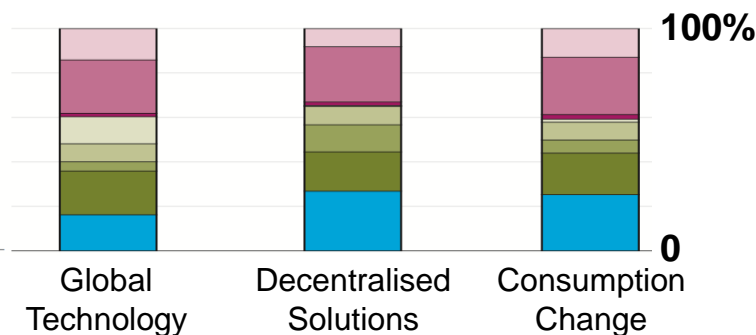
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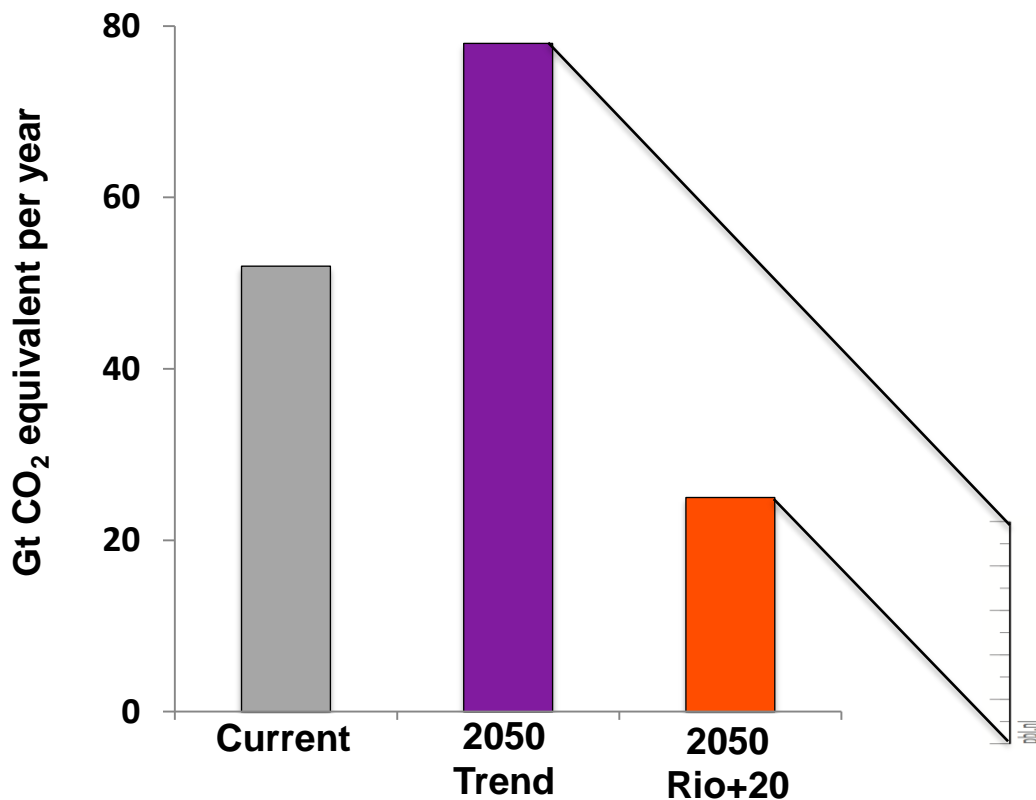
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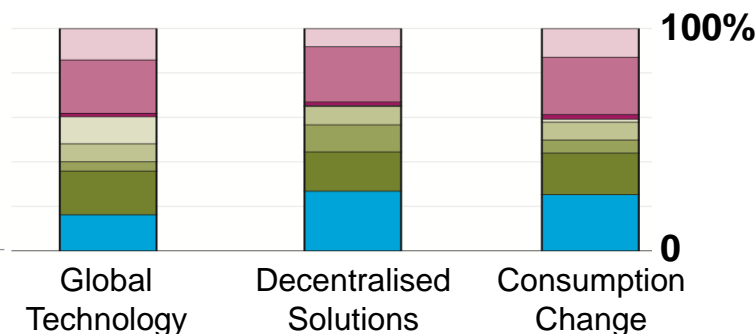
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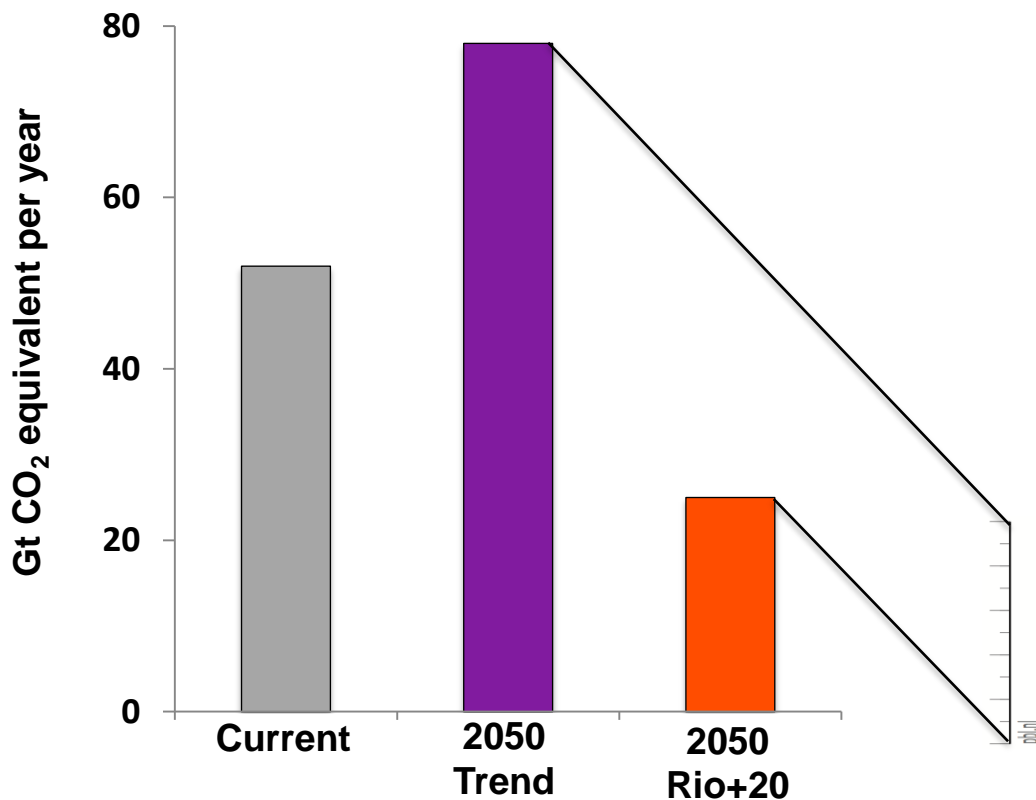
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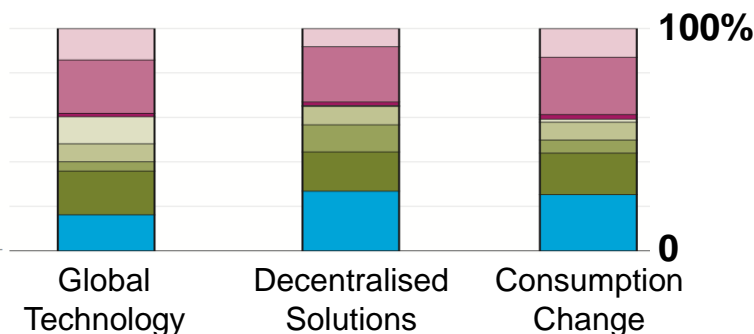
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“Rio+20” socio-economic scenarios

Scenarios aim at meeting multiple objectives

Keep global warming $<2^{\circ}$ C

Conserve biodiversity

Meet human development goals

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