



International Renewable Energy Agency

SOCIO-ECONOMIC FOOTPRINT OF THE ENERGY TRANSITION

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5th Berlin Energy Transition Dialogue
Berlin, 9th April 2019

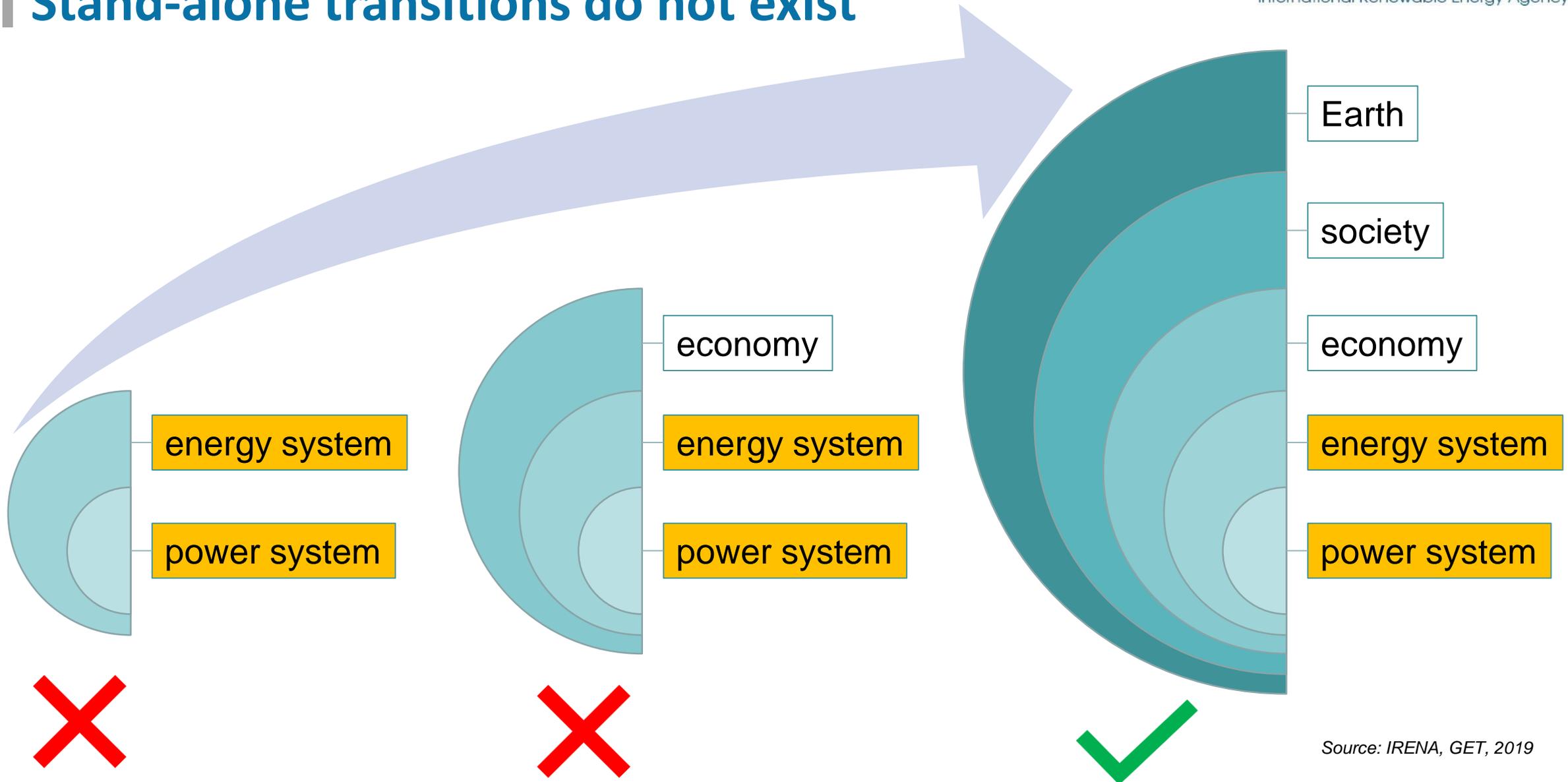
Scenarios to inform policy making

- Scenarios are not meant to guess the future
 - No scenario is true...
... but some are useful,
while others can become barriers.
- Improving the relevance for climate/transition policy making:
 - Focus on the whole (socio-economic perspective)
 - Provide insights about challenges and ‘inconvenient’ truths/facts



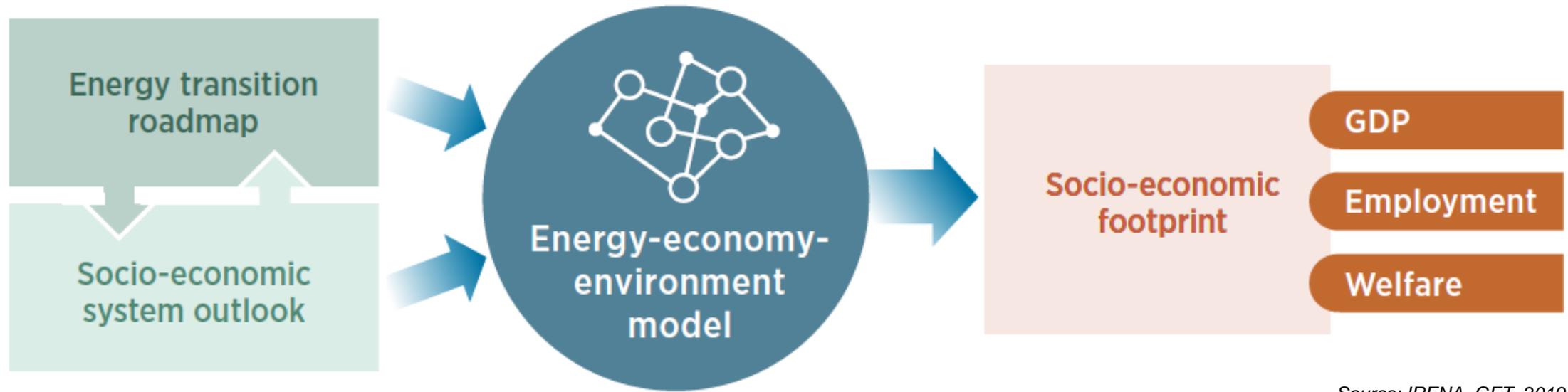
The goal should be laying down all relevant insights to inform policy making

Energy system's embedded nature: Stand-alone transitions do not exist



Source: IRENA, GET, 2019

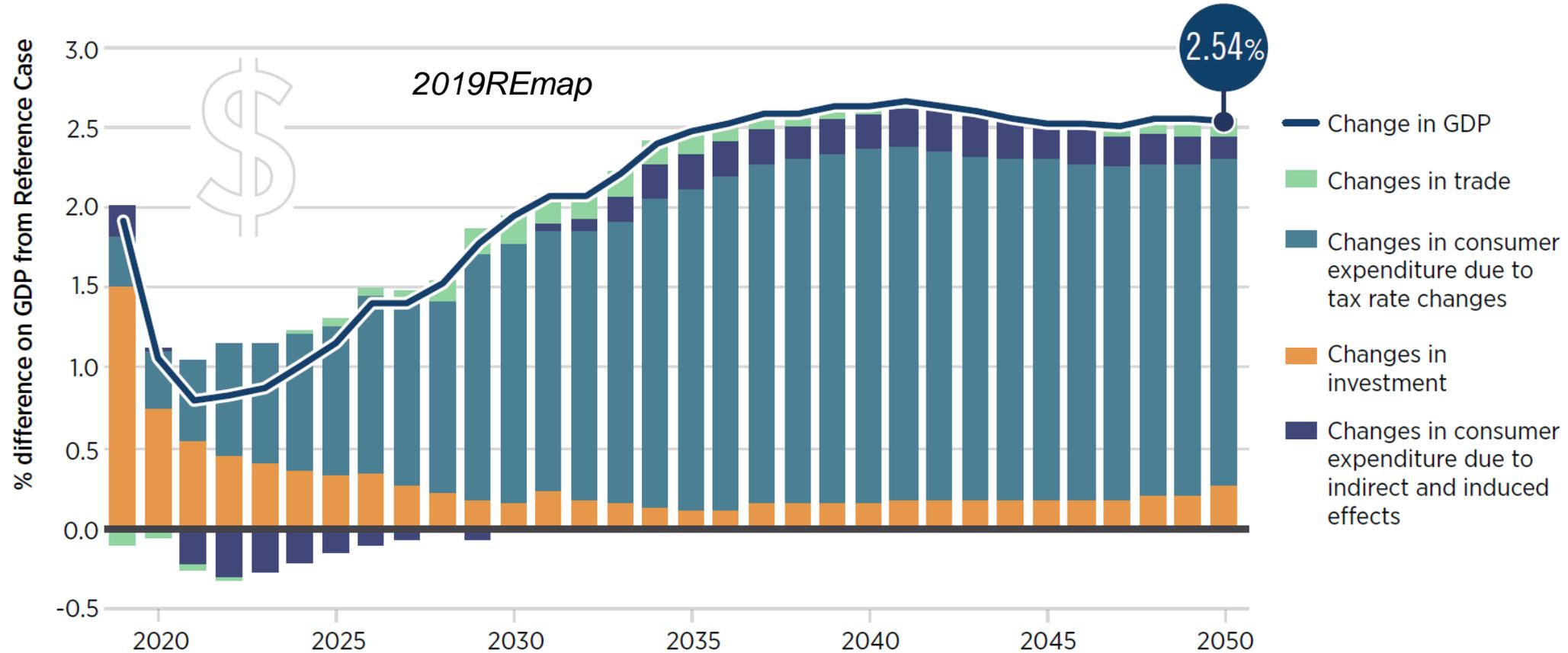
The socio-economic footprint of the energy transition



Source: IRENA, GET, 2019

Enabling the transition and unlocking its potential requires gaining insight and fostering synergies between the energy and socio-economic systems.

The energy transformation affects global GDP



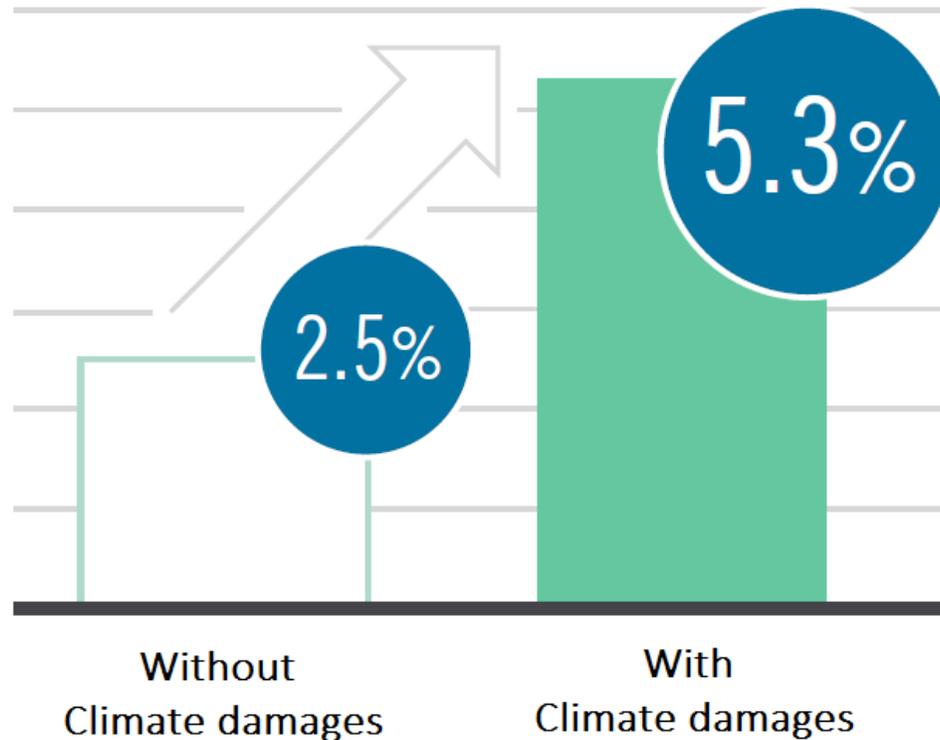
Source: IRENA, GET, 2019

Relevance of policy inputs:

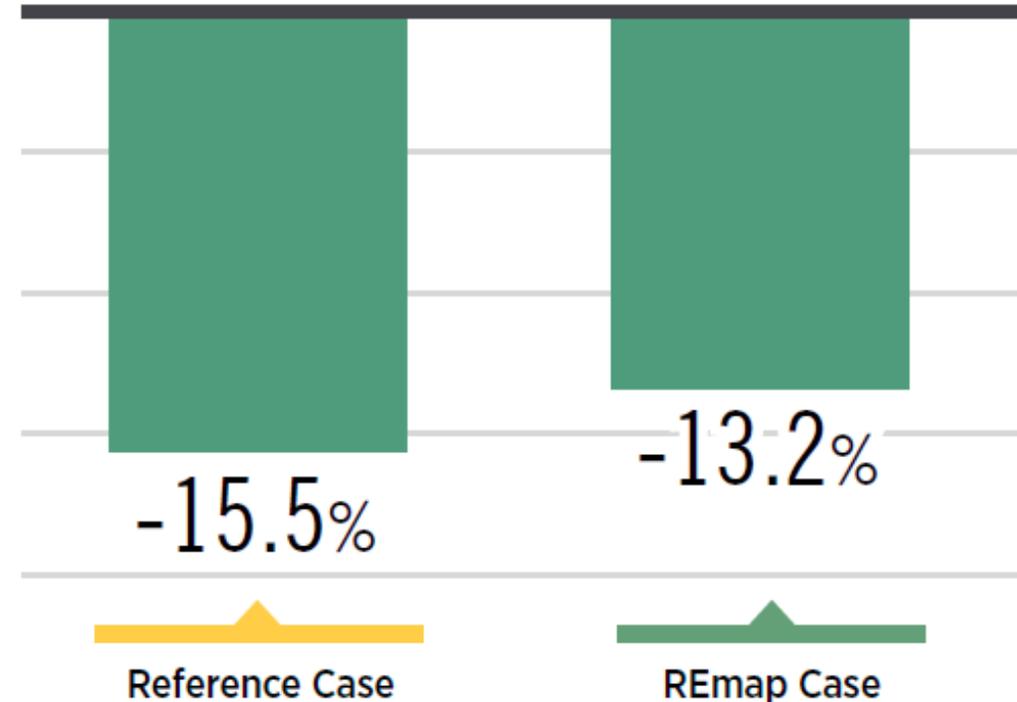
- Carbon taxes with a revenue recycling policy are the main driver leading to REmap's GDP result, but attention needs to be paid to its distributional impact.

Climate damages and the socio-economic footprint

Relative GDP performance improvement when including climate damages, 2050



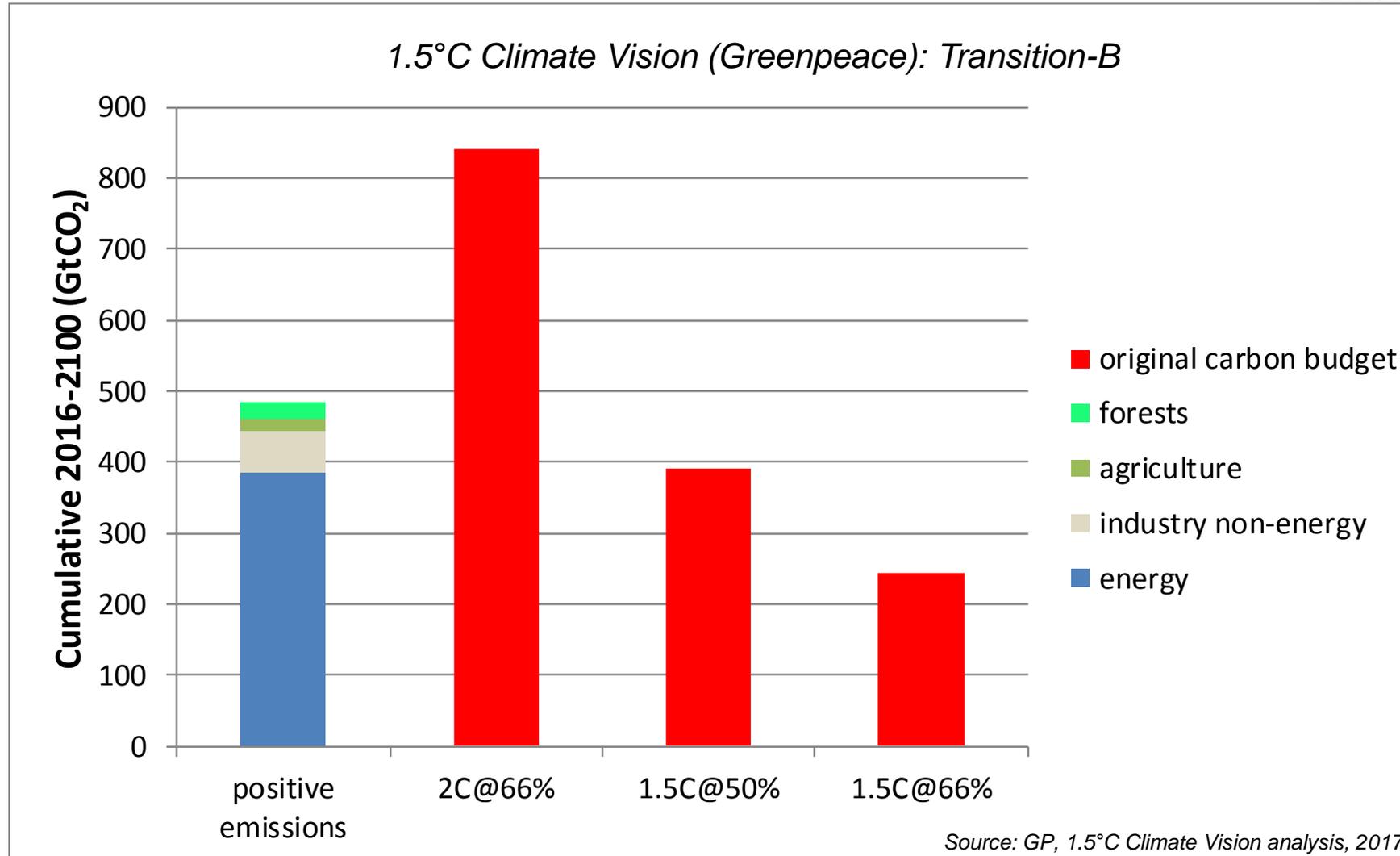
Climate damages impact on Reference and REmap GDP, 2050



Source: IRENA, GET, 2019

Climate damages double the relative global GDP improvement. However, the absolute size of global economy shrinks, highlighting the urgency of increasing the ambition. Climate damages also increase inequalities.

Higher ambition: need and implications



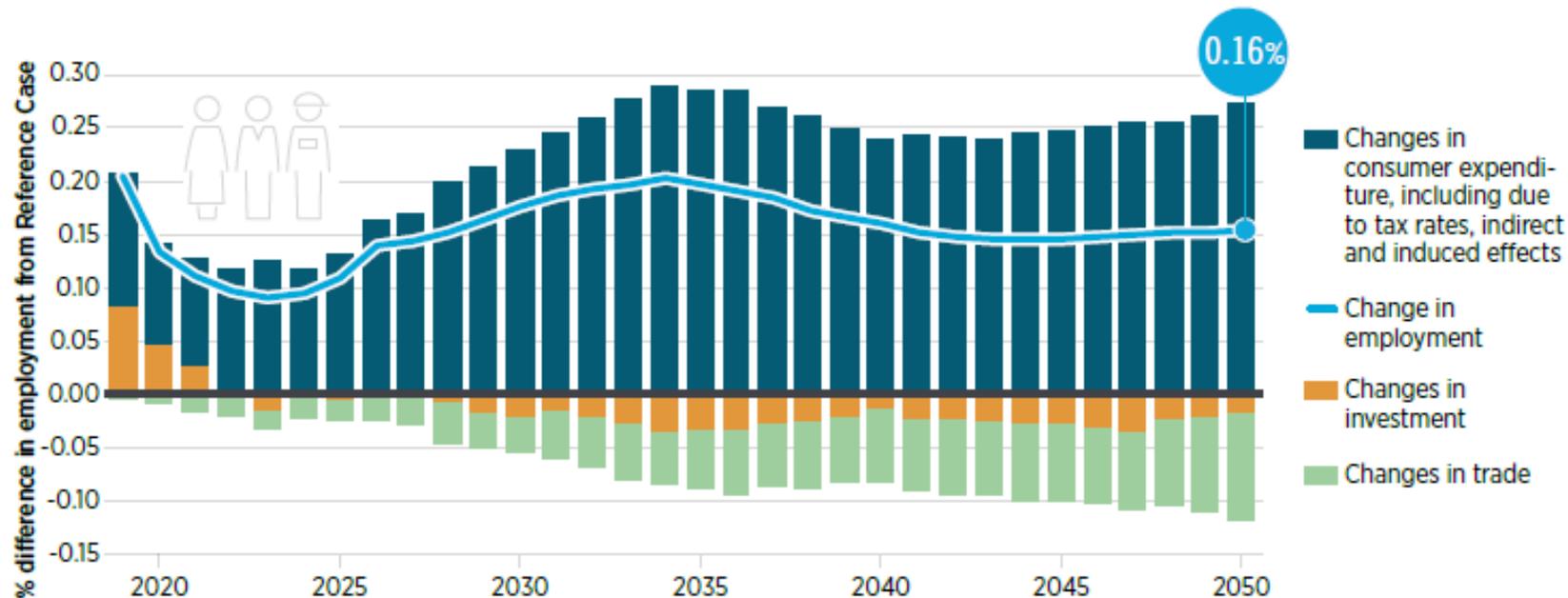
What is the maximum transition rate, and which are its implications and policy requirements?

Employment & Just transition

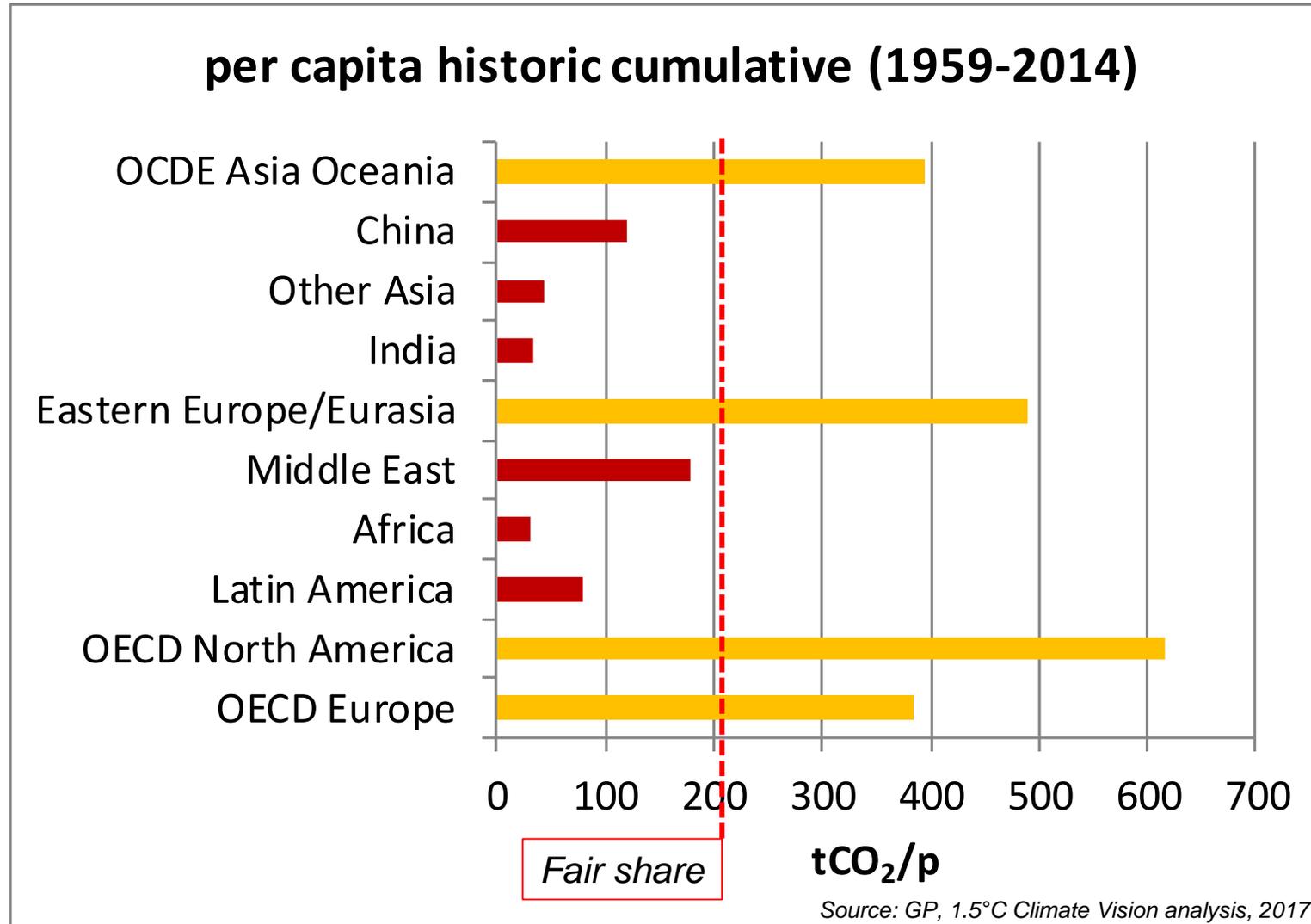
- The energy transition can deliver job increases...
...depending on accompanying policies and context
- But will always introduce misalignments: sectoral, temporal, spatial, educational.



Just transition considerations reaching beyond the energy sector



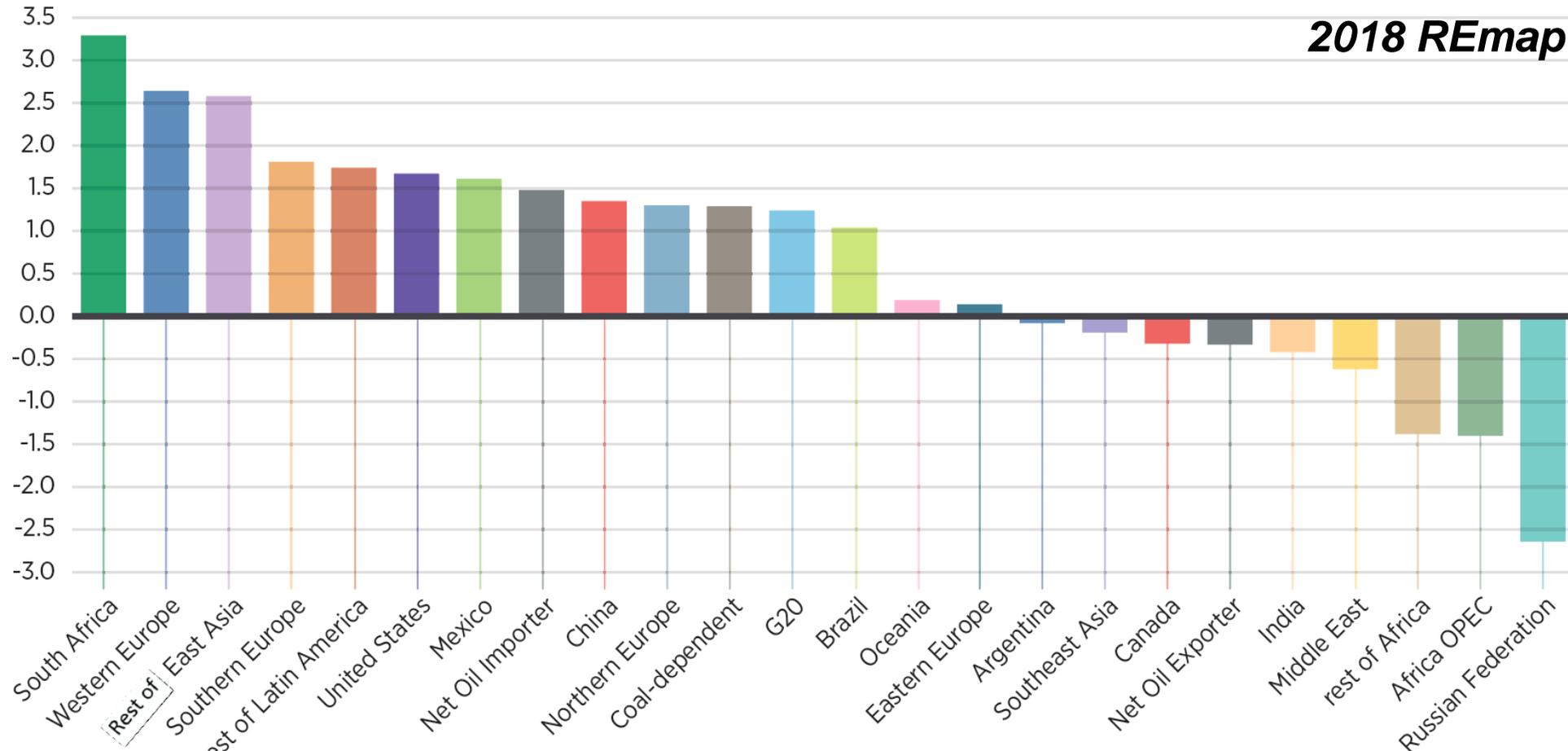
Addressing fair transition requirements



The scale of the challenge requires deep collaboration: cannot be achieved without fairness

Inequality and socio-economic footprint

% difference in GDP from Reference Case

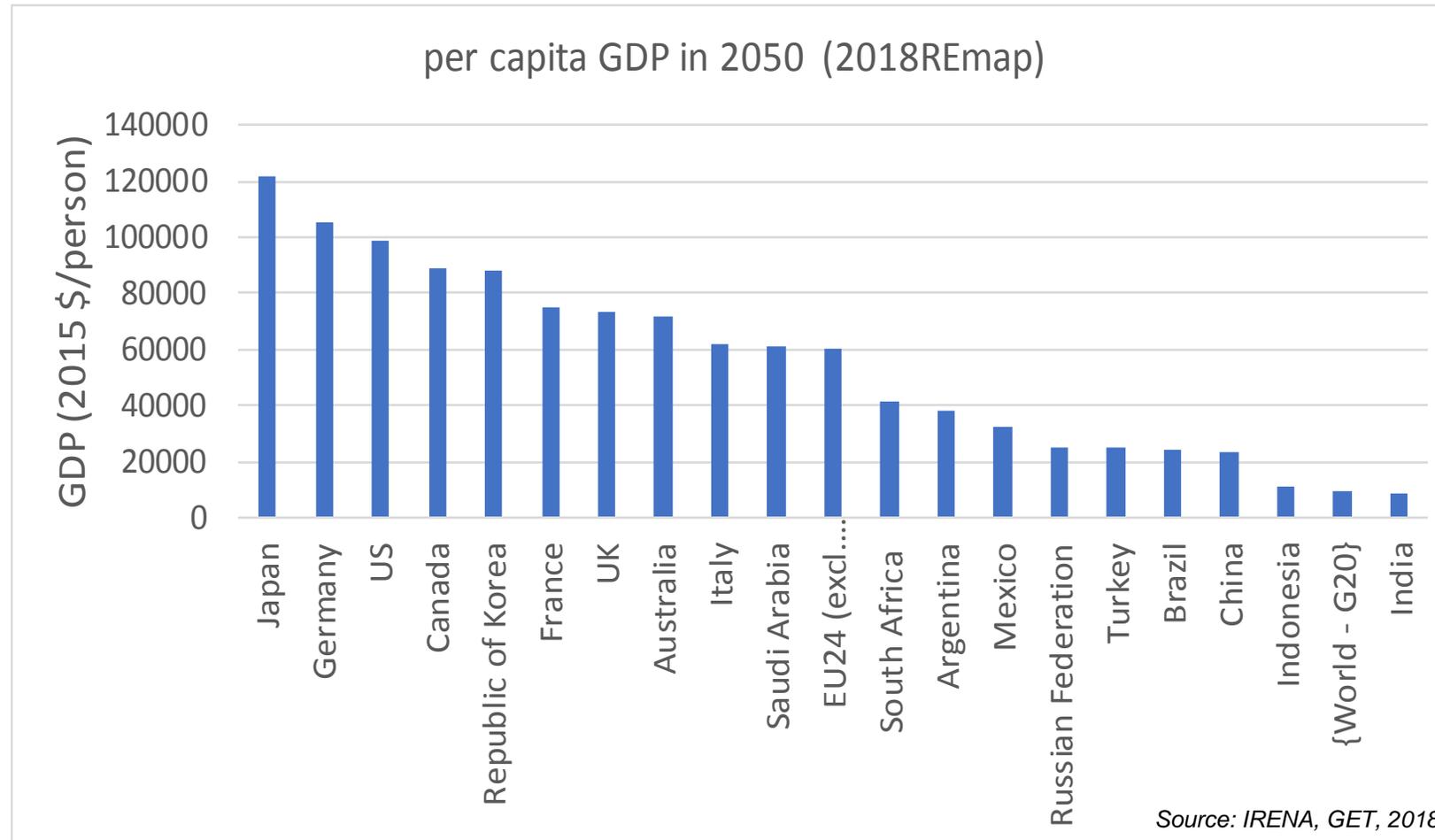


Source: IRENA, GET, 2018

What are the structural drivers of diverging outcomes?

What is the impact of policies addressing them?

Addressing convergence



What are the implications of convergence ?

What is the impact from policies addressing it?

Thanks for your attention



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