Low emission development as a long term strategy of the European Union

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Artur Runge-Metzger

Director, European Commission

Climate Action

Outline

1. *A long-term strategy*
2. *Low emission development - Next milestones 2030*
   - **Four pillars of EU climate change policy**
   - **Energy policy**
   - **Mobility policy**
   - **Other policy areas**
3. *Outlook*

Climate
Action

Decoupling economic growth from greenhouse gas emissions
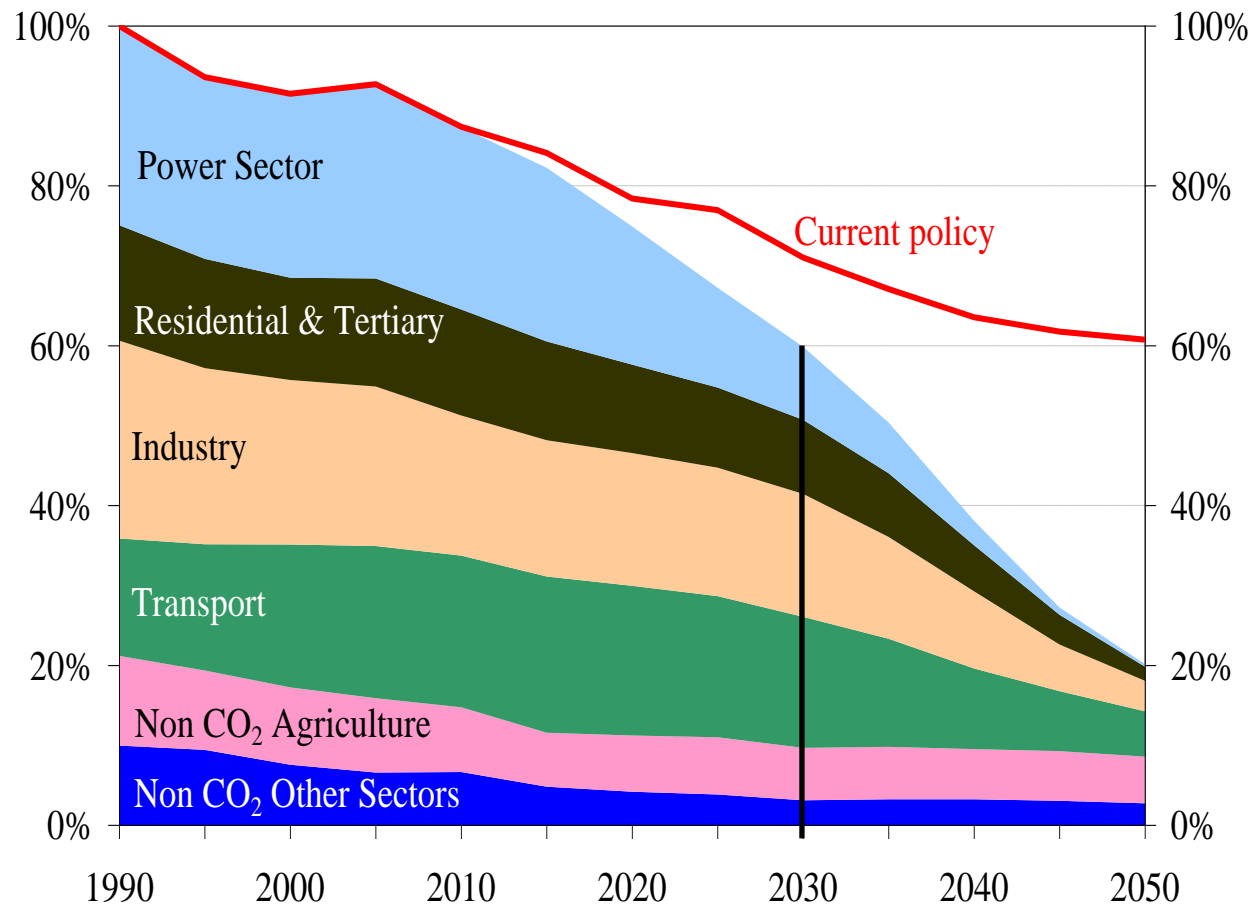

EU GDP +50%

EU GHG emissions −22%
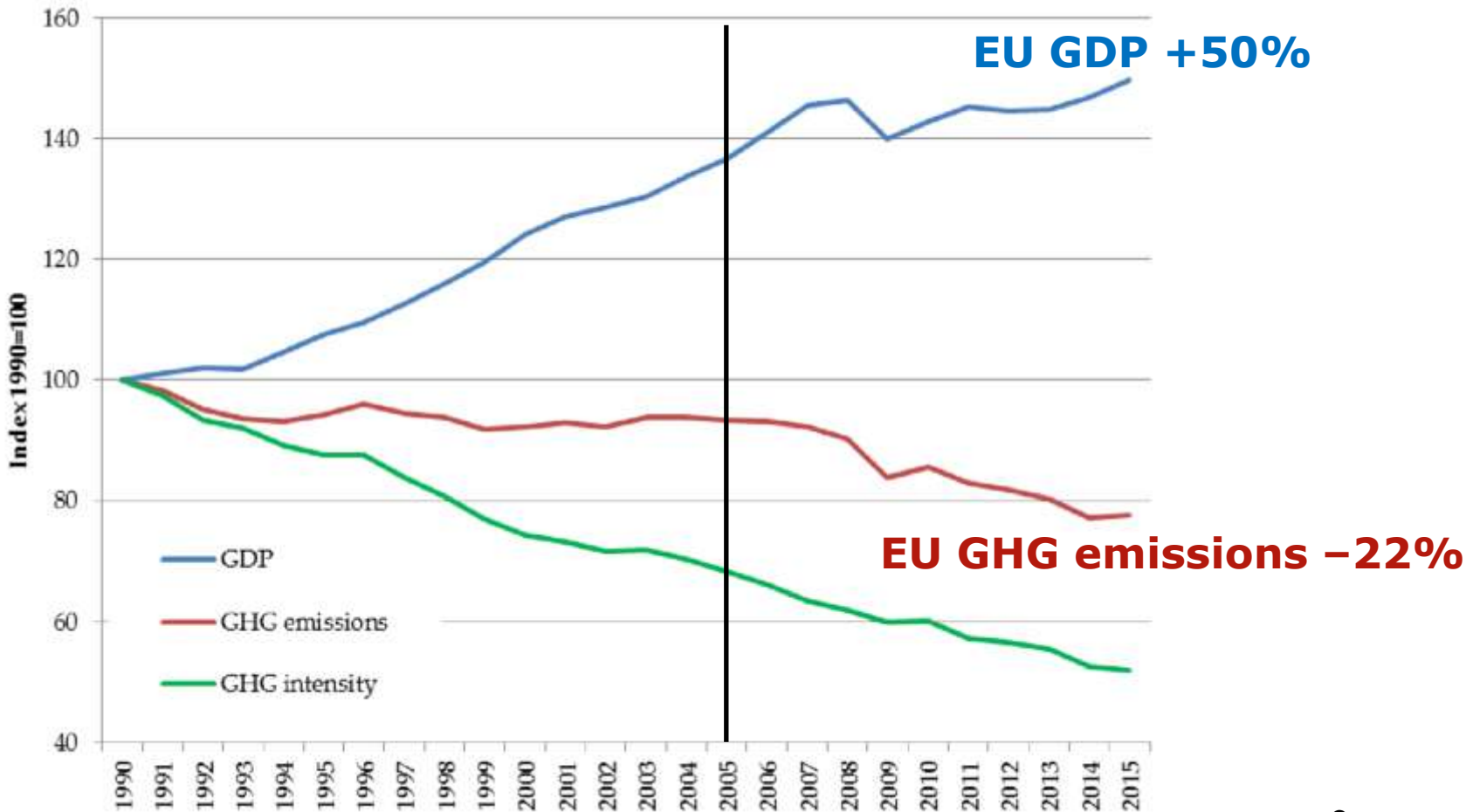
2050 Low Emission Roadmap

80% domestic reduction in 2050 is feasible:

- With currently available technologies,
- With behavioural change only induced through prices
- If all economic sectors contribute to a varying degree & pace.

Efficient pathway and milestones:

- -25% in 2020
- -40% in 2030
- -60% in 2040

Chart areas (bottom to top): Non CO_2 Other Sectors, Non CO_2 Agriculture, Transport, Industry, Residential & Tertiary, Power Sector. Red line labelled "Current policy". X-axis years 1990–2050. Y-axis 0%–100%.

Three pillars of EU climate policy reducing greenhouse gas emissions until 2030

Emissions trading

-43 %

Including: Power/Energy Sector and Industry, Aviation

Max 100 MtCO2eq

Non-emissions trading

-30 %

Effort sharing

-30 %

Including: road transport, buildings, waste, agriculture non CO2

Full flexibility

Max 280 MtCO2eq

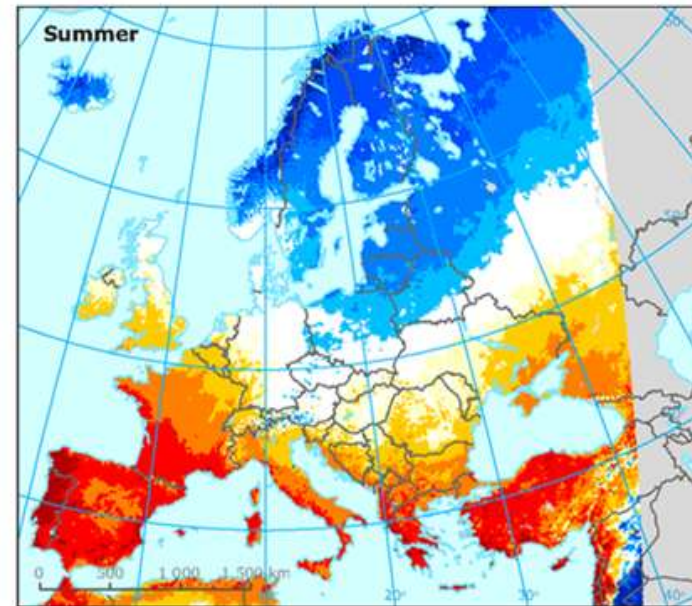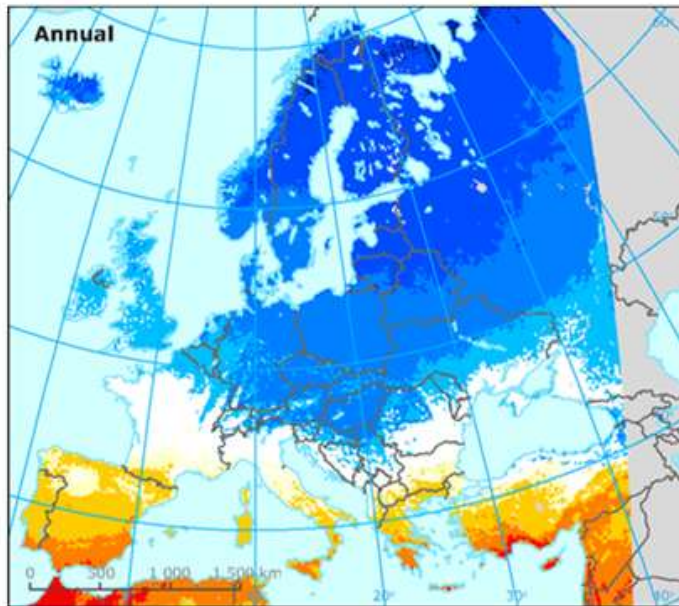**Land use, land use change, forestry**

"No-Debit"

Fourth pillar of EU climate policy adapting to the adverse effects of climate change
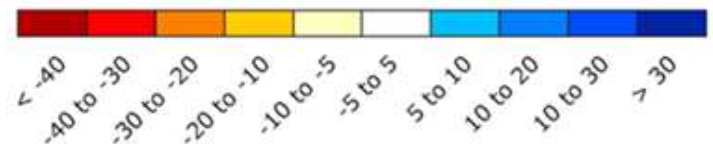
Projected changes in mean annual and summer precipitation (%) in the period 2071-2100 compared to the baseline period 1971-2000

Annual   **Summer**

Projected change in annual and summer precipitation (%)

< -40 -40 to -30 -30 to -20 -20 to -10 -10 to -5 -5 to 5 5 to 10 10 to 20 10 to 30 > 30

Source: EURO-CORDEX (Jacob, et al., 2014)

Accompanying EU energy policies until 2030

Annual State of the Energy Union

February 2016: Sustainable energy security package

November 2016: Clean energy for all Europeans package

New Electricity Market Design (Regulation internal market electricity)

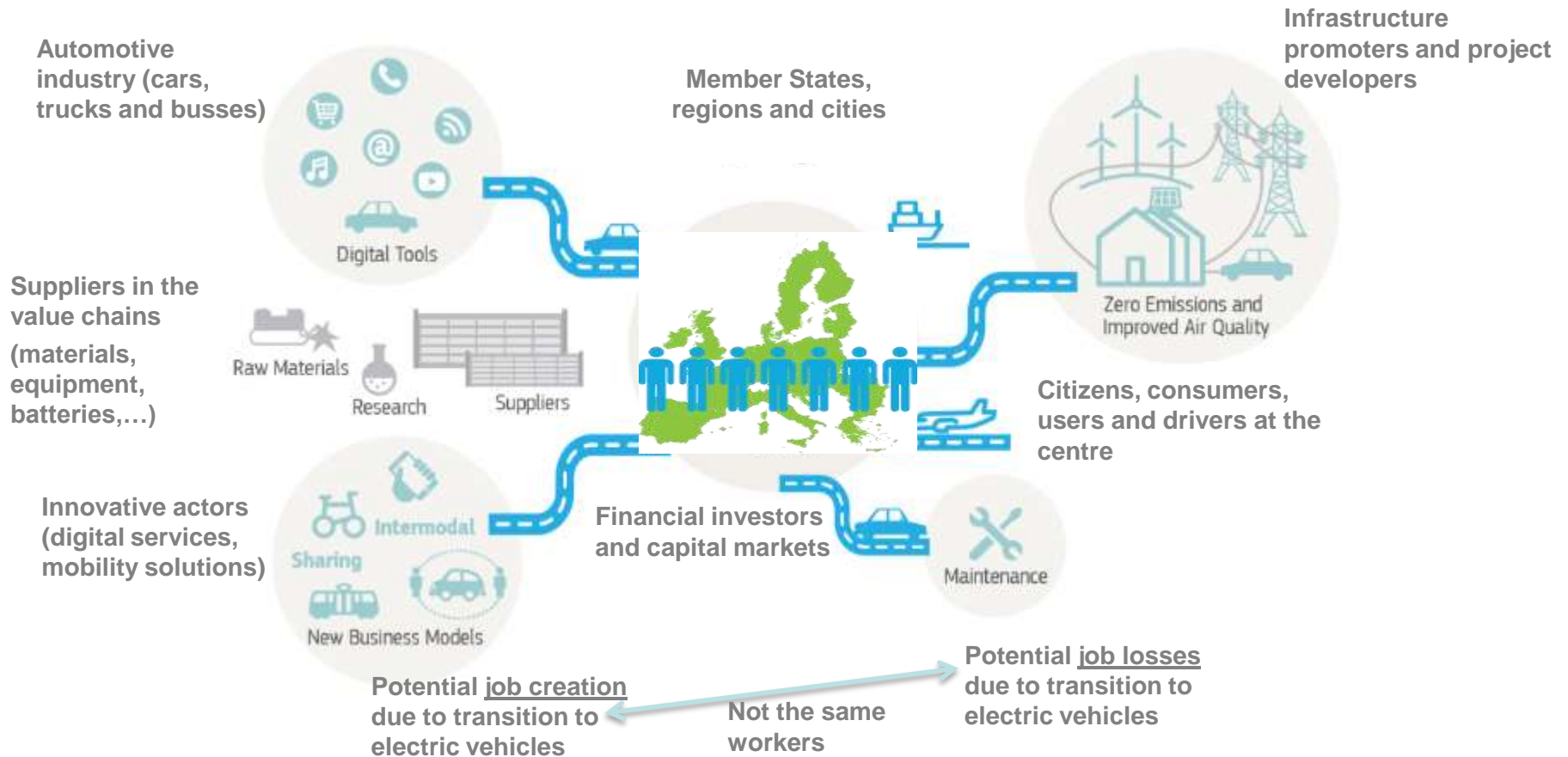**Energy Efficiency** (Energy Efficiency Directive, European Performance of Buildings Directive)

Renewables (Revised Renewable Energy Directive)

Energy Union Governance (Governance Regulation)

The upcoming mobility package until 2030

Automotive industry (cars, trucks and busses)

Infrastructure promoters and project developers

Member States, regions and cities

Suppliers in the value chains
(materials, equipment, batteries,…)

Digital Tools

Raw Materials

Research

Suppliers

Zero Emissions and Improved Air Quality

Citizens, consumers, users and drivers at the centre

Innovative actors (digital services, mobility solutions)

Intermodal

Sharing

New Business Models

Financial investors and capital markets

Maintenance

Potential job creation due to transition to electric vehicles

Not the same workers

Potential job losses due to transition to electric vehicles

Integrating climate and energy objectives into all policy areas until 2030

Outlook: EU 2030

EU is set to become the
most greenhouse gas
efficient economy
in the G20
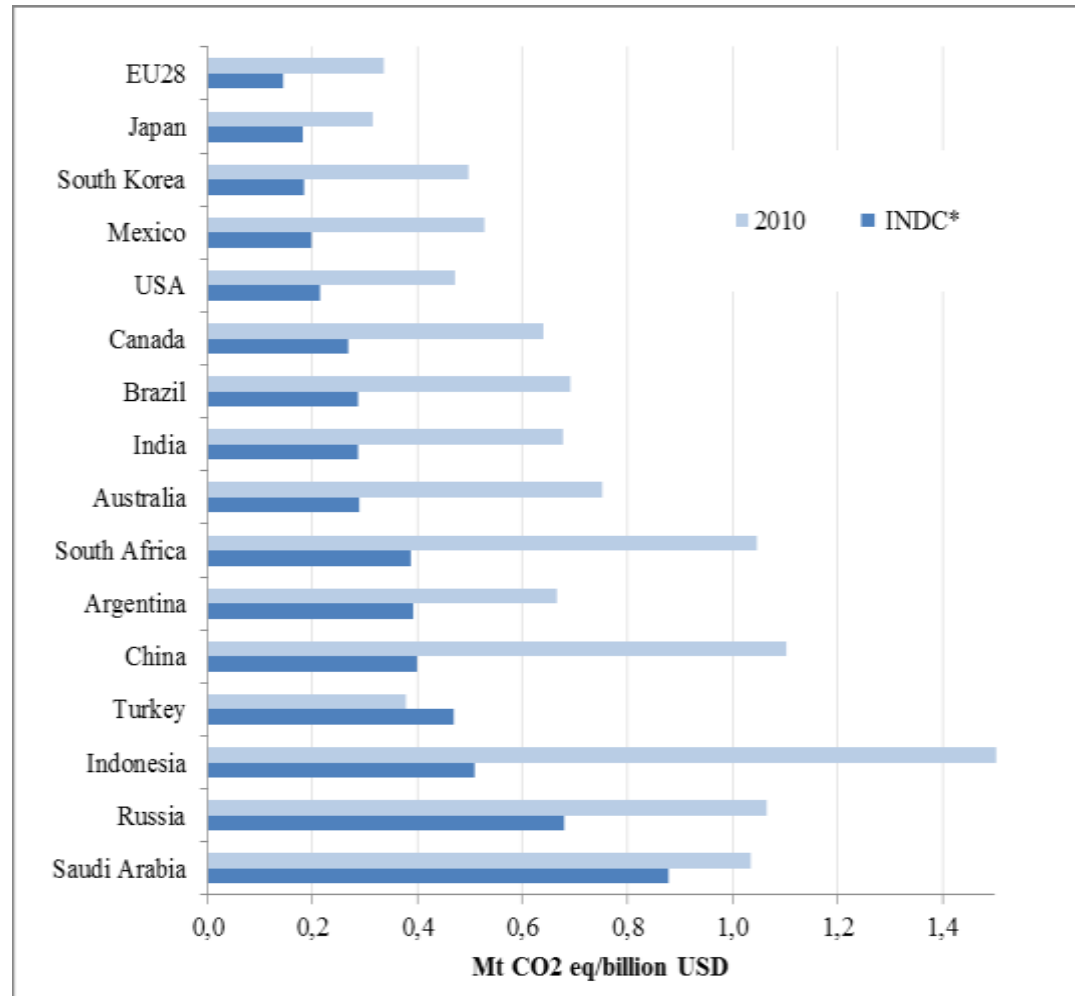
Outlook: International job unfinished
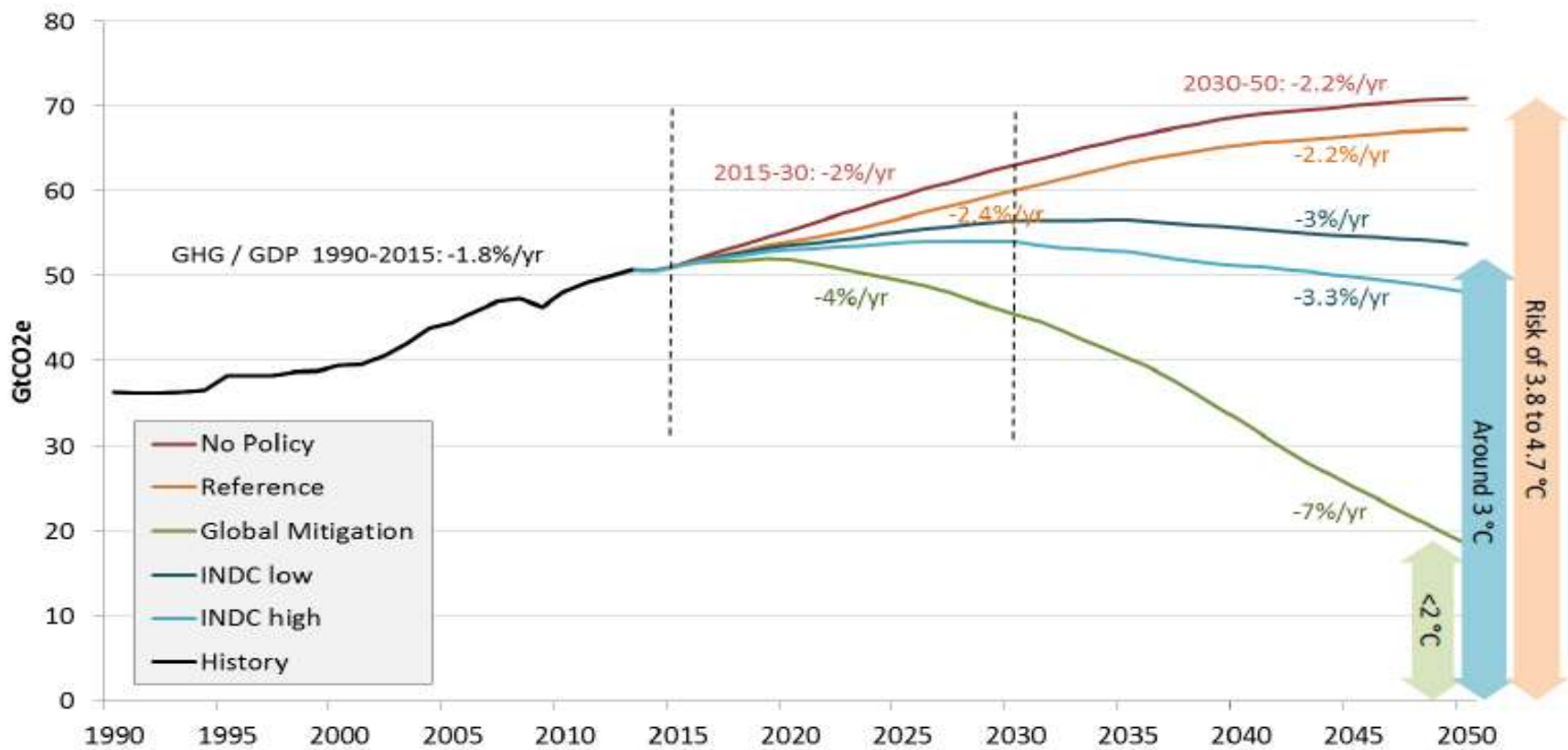
Source: POLES – JRC Model

Thank you!

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