

What can an integrated assessment of impacts, mitigation and adaptation look like?

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- IPCC AR5: „**Impact mosaic**“
- **Harmonization**: SSPs, RCPs, SPAs; ISI-MIP
- **Integrated assessment modelling**: IAMC results, focus on mitigation

- **Impact aggregation**: spatial, temporal (e.g. extreme events)
- **Inputs**: biophysical impacts, translations into economic variables (e.g. factors of production)
 - Factor productivities, loss of assets (capital, labour, land)
 - Health and labor productivity

- **Sector-specific** economic impacts (PE models): e.g. agriculture, energy, ... (see afternoon)
- **Multi-sectoral** economic impacts (CGE models)
- **Output aggregation**: Macroeconomic growth, GDP, savings and investment, technological change, welfare, non-market impacts (see below)
 - Economics approaches: theoretical, empirical, numerical modelling
 - Challenges: expectations, risk and uncertainty, foresight, rationality ...
 - Aggregation vs. prioritization? Welfare measurements?

- **Alternative outputs**: e.g. distribution, economic rents, poverty, child malnutrition, premature deaths, migration, conflicts, cultural heritage, ...
 - Linking climate change with human development and SDGs

- **Adaptation**: factor substitution, consumption patterns, trade, institutional and policy responses
- **Regional hotspots**: e.g. Sub-Sahara Africa, South Asia... (global-regional links)
- **Ethical questions**: society vs. nature, rich vs. poor, future generations, ...

1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



14 LIFE BELOW WATER



15 LIFE ON LAND



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS



Assessment of SDGs

- Climate impacts and adaptation -



Assessment of SDGs - Emission mitigation -



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