Sustainable Development Goals

The need to assess climate action in conjunction with other Sustainable Development Goals (SDGs) has in the modelling literature been addressed by means of treating SDGs as trade-offs of low-carbon mitigation pathways, either explicitly or implicitly. Despite having been designed and/or adapted to support climate policy, integrated assessment models like the ones used in PARIS REINFORCE have been found well-equipped to deal with most other goals of sustainable development, through their output metrics related to SDG targets. Each SDG has several metrics influenced by a range of factors, e.g. changes in energy prices are relevant to SDG7 (affordable and clean energy) and also indirectly to SDG1 (eliminating poverty) if considered a driver of poverty. Additionally, the coverage of a particular SDG does not imply the use of the same metric, so different metrics can be used to cover the same SDG, e.g. mortality due to air pollutants and healthy life expectancy for SDG3 (good health and well-being) or access to electricity and renewable electricity share for SDG7. Evidently, global models used in the project have the capacity to provide some information relevant to most SDGs, with the exception of SDGs 14 (life below water) and 17 (partnerships for the goals), with ICES in particular having been explicitly designed to output information on most SDG indicators. Models focusing on the EU, on the other hand, focus on a subset of SDGs (6-13). Overall, models can output more information for SDGs featuring significant interactions with energy and economy.



DICE E3ME Gemini-E3 ICES MUSE TIAM NATEM EU-TIMES NEMESIS



Annual growth rate of real GDP per capita, Annual growth rate of real GDP per employed person, Average hourly earnings of employees by educational level, Unemployment rate by educational level, Energy export revenues, GDP loss, Impact to GDP growth from mitigation and climate impacts, GDP per capita, GDP growth, GDP per capita annual growth (%), GDP per person employed, Employment-to-population ratio (%), GDP and employment

DICE E3ME Gemini-E3 ICES TIAM NATEM TIMES-CAC EU-TIMES NEMESIS



Food prices, Food prices by region, Agricultural prices by region, Prevalece of undernourishment

E3ME, GCAM, Gemini-E3, ICES



TRUCTURE INFRAS⁻ S ш GOVERNANC

DEVELOPMENT

HUMAN

US RESOURCE

