

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.

