# 159. Modelling approaches to support Kenya's sustainable development

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**Subtheme:** Pure and Applied Sciences for Climate Action

## Abstract

Neither the first round of Nationally Determined Contributions (NDCs) nor currently implemented climate policies are on track to meeting the Paris Agreement's objectives. Net-zero targets embedded within aggregated long-term intended strategies can arguably deliver on the temperature goal of 1.5°C, but they still feature considerable feasibility concerns, regarding their implementation. Countries are urged by UNFCC to increase their ambition and produce new NDCs covering the post-2030 period, aiming to bridge the triple gap of climate action (implementation, ratcheting, ambition). The design of a multi-dimensional set of policy measures that comprise countries' climate policy agendas is supported by equally diverse integrated assessment modelling (IAM) activities. Notwithstanding the recent progress in the IAM literature and scenario space, the modelling world has fallen short of its promise to include non-scientists in its process, to account for individual choices and lifestyle changes that are indirectly narrated as assumptions not interacting with the vividly modelled technology-economy-environment-policy flows, and to place climate action as a cross-cutting theme in the sustainability spectrum. In the light of these requirements, IAM COMPACT, an EU-funded research project under the Horizon Europe framework programme, aimed at effectively supporting the assessment of global climate goals, progress, and feasibility space, as well as the design of the next round of NDCs and policy planning beyond 2030 for major emitters and non-high-income countries. As part of the support provided for NDC and policy planning beyond 2030, IAM COMPACT also offered capacity development in the use of modelling tools to aid policy in four extra-EU countries: Ukraine, Sri Lanka, Ethiopia and Kenya. The Renewable Energy & Climate Change Research Center of the Technical University of Mombasa, with the participation and contribution of trainers from Politecnico di Milano, KTH Royal Institute of Technology and the National Technical University of Athens, Strathmore University organized the Kenyan NDC support workshop.

**Keywords:** *Paris Agreement's objectives, Net-zero targets, NDCs, integrated assessment modelling*