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Kenya Stakeholder Workshop, October 28, 2020

Designing policies for achieving simultaneous progress in multiple SDGs: an integrated assessment modelling exercise for Eastern Africa

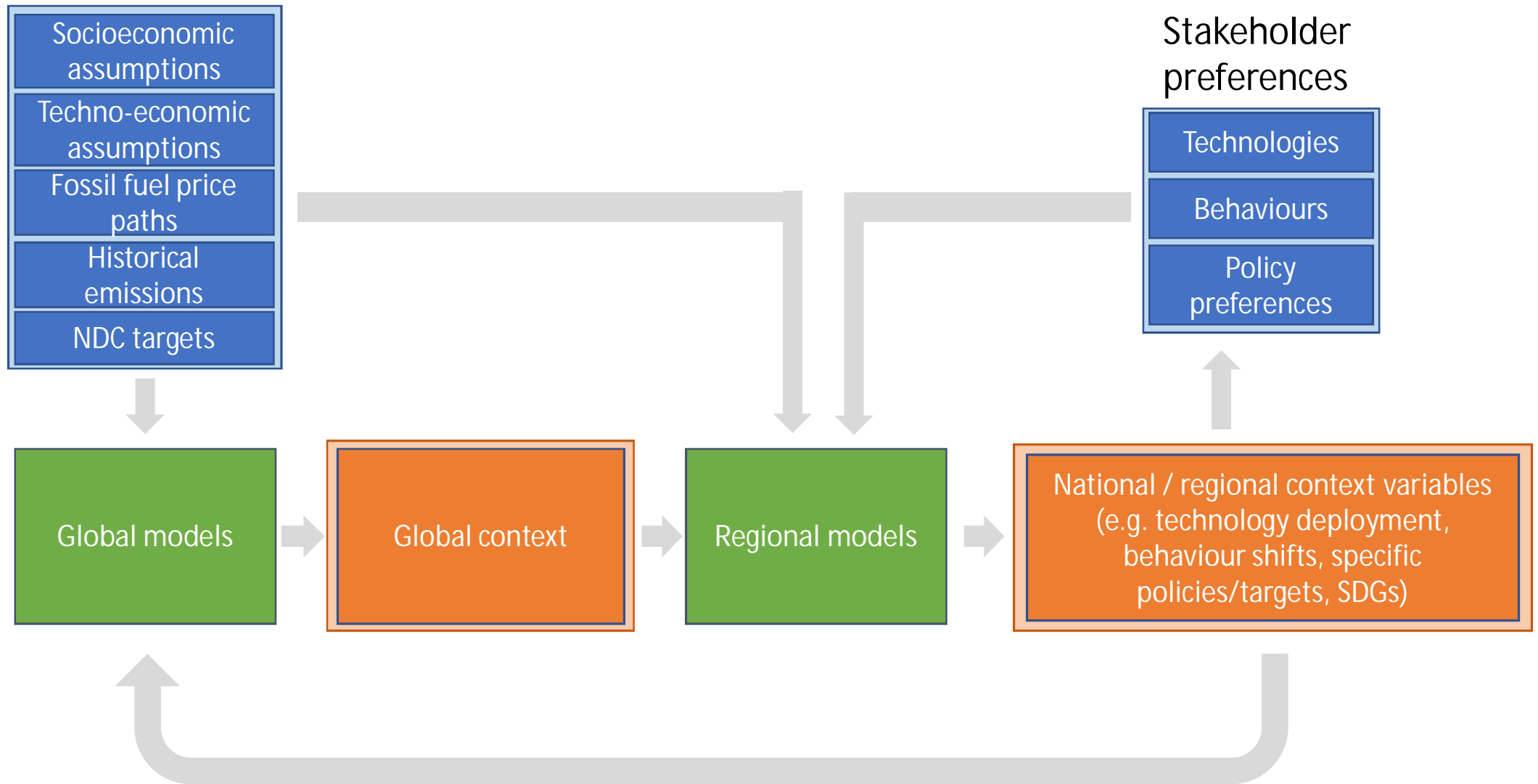
Dr. Dirk-Jan van de Ven (*Basque Centre for Climate Change*)



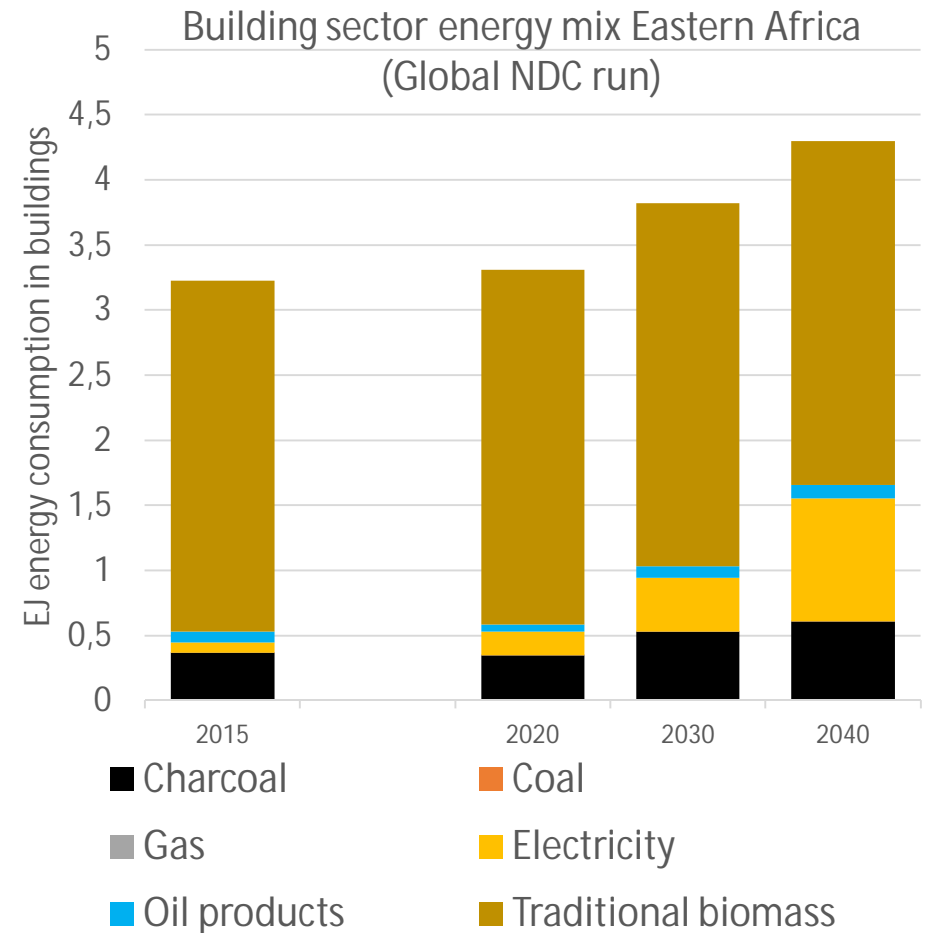
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- Global integrated assessment modelling exercises useful for the big picture:
  - Where is the climate heading?
  - What level of effort is required to avoid dangerous climate change?
  - What technologies have most potential?
- However, translating global scenarios to local policies (national/subnational) is like looking for *a needle in a haystack*
- Local insights / preferences required to calibrate models for designing useful scenarios



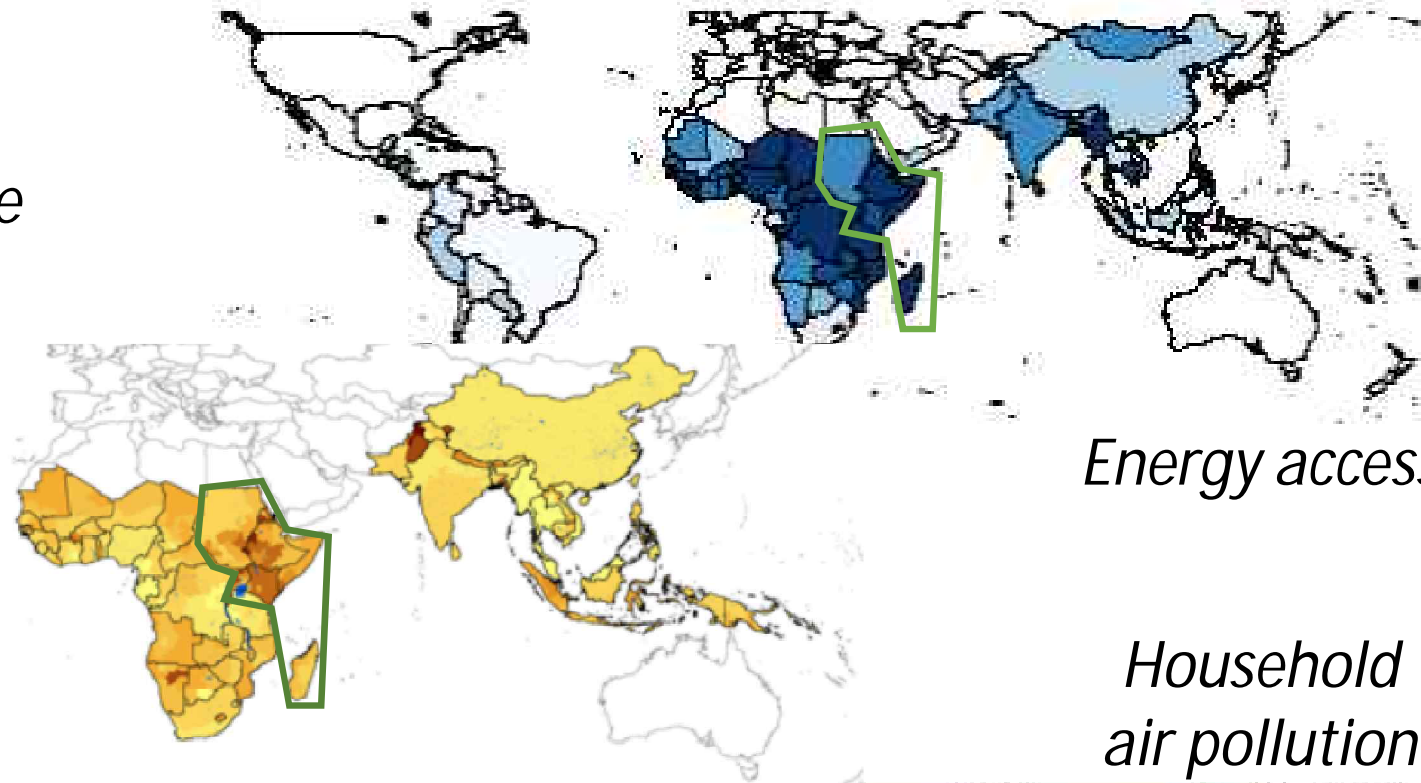
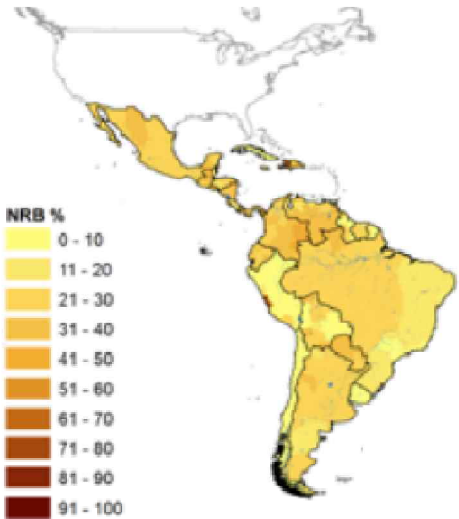


- In an earlier regional modelling exercise, we focused on residential energy use in Eastern Africa.
- By default, many global mitigation modelling exercises show an increasing use of traditional biomass in the residential sector in Africa
  - No emissions assumed
  - No other context variables
- So, staying with traditional biomass is good for climate change mitigation! Or maybe not?



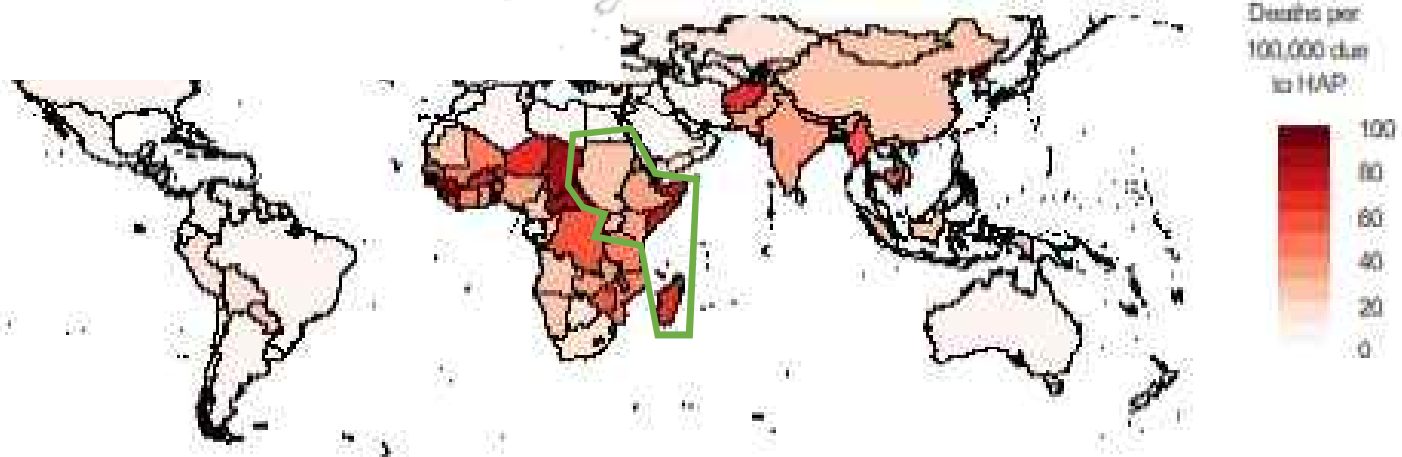


## Forest degradation and Land use change emissions



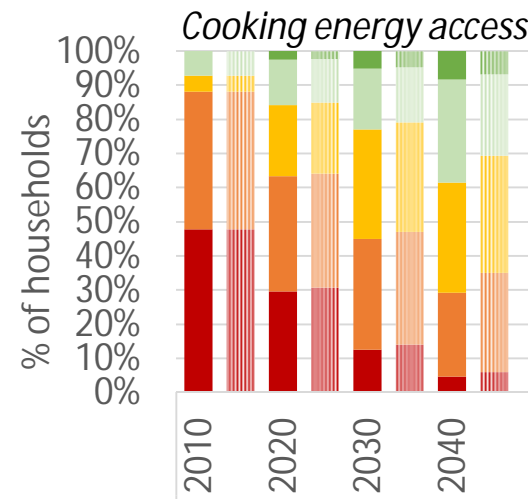
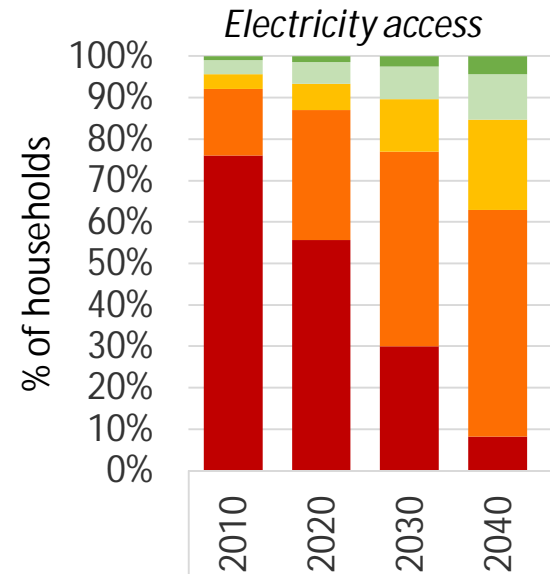
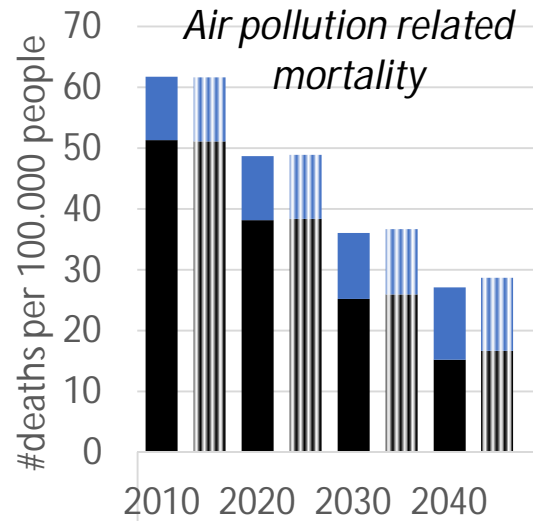
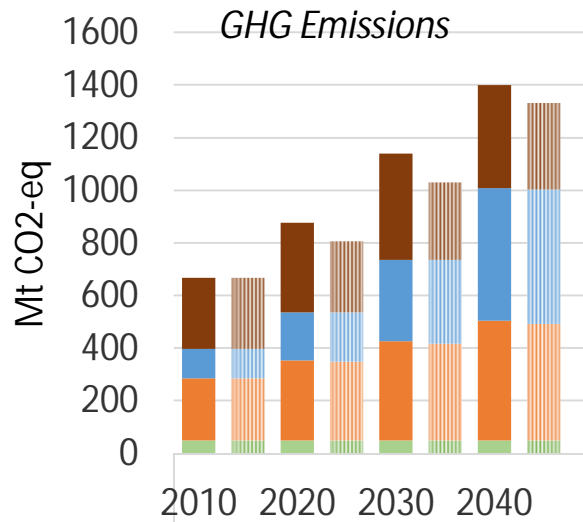
## Energy access

## Household air pollution



The PARIS REINFORCE project has received funding from European Union's Horizon 2020 Research and Innovation Programme under grant agreement No 820846.

# Detailed results for Eastern Africa



■ Baseline with adjusted model structure

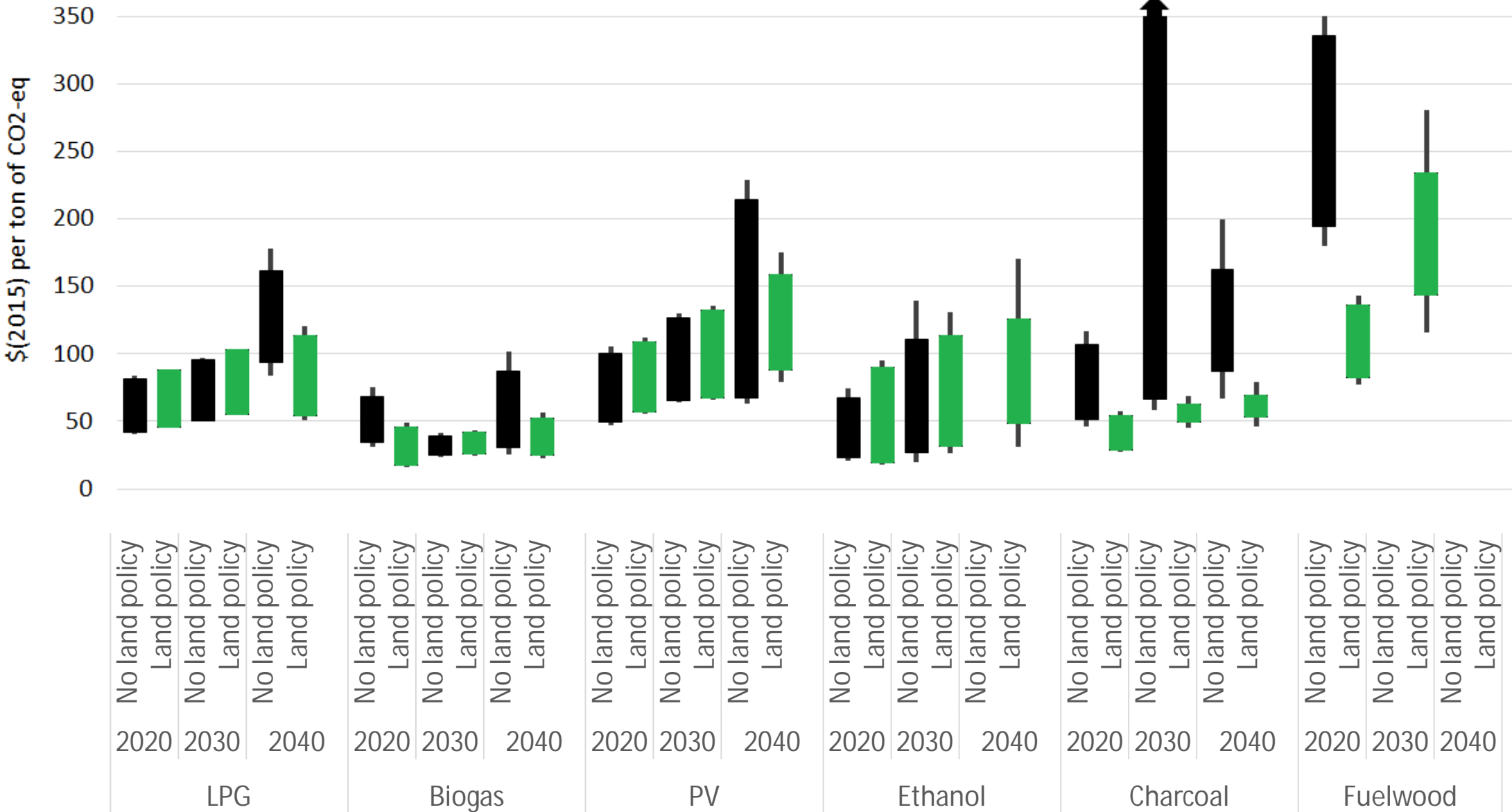
▨ Land policies: support for agroforestry and rotation forestry practices

■ Tier 1 ■ Tier 2 ■ Tier 3 ■ Tier 4 ■ Tier 5



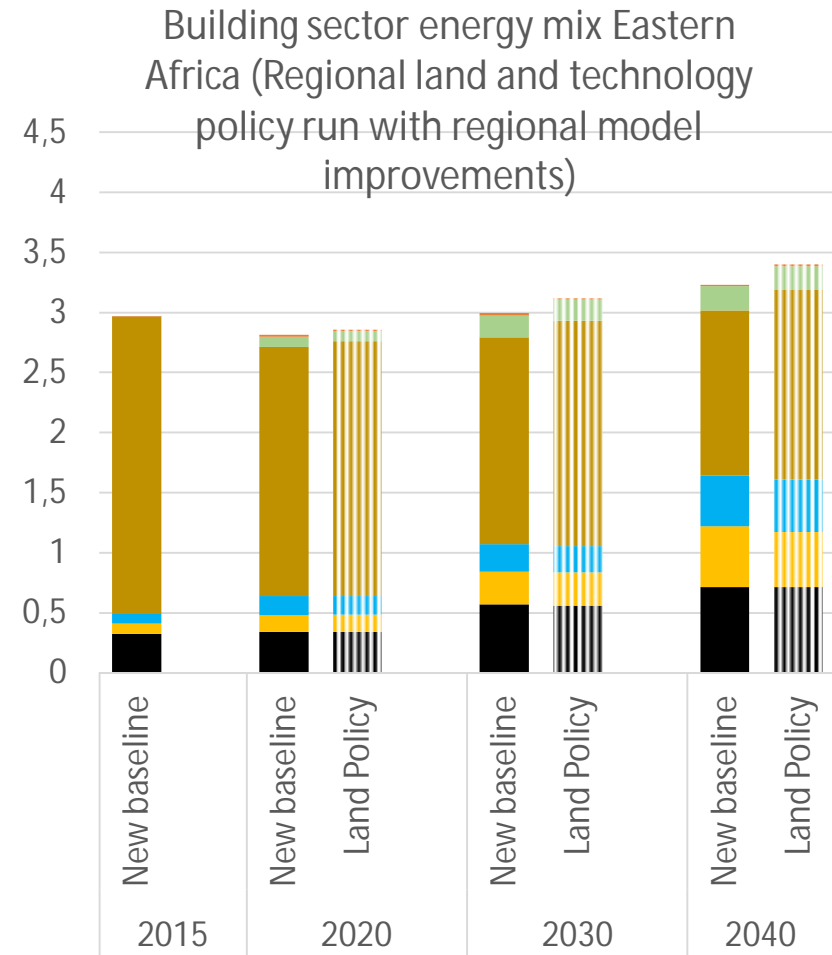
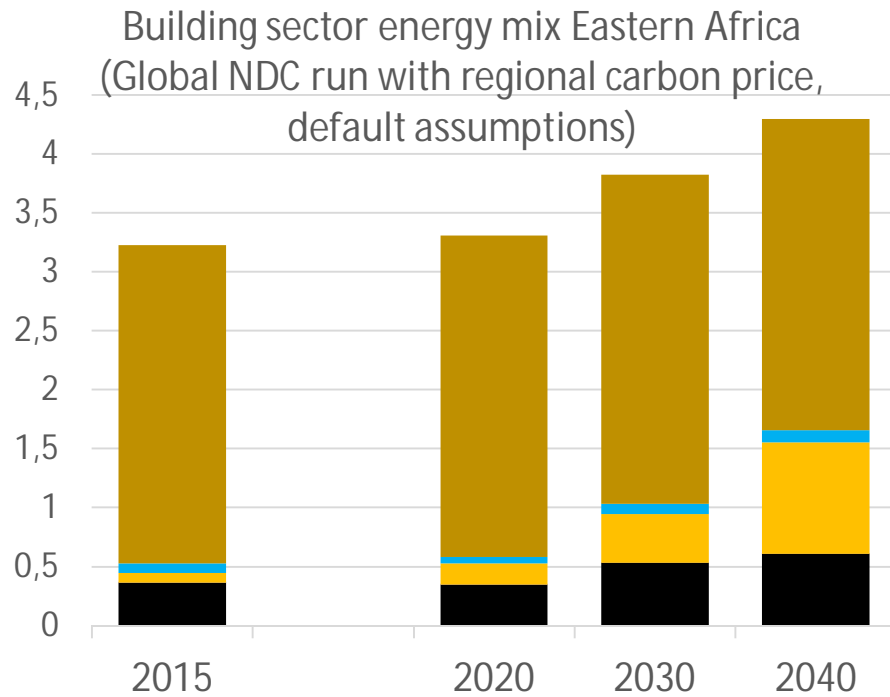
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# Policy effectiveness results



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# Global vs specified regional model run



- Charcoal
- Gas
- Oil products
- Coal
- Electricity
- Traditional biomass

- Charcoal
- Oil products
- Biogas
- Electricity
- Traditional biomass
- Ethanol



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- A big step from global scenarios based on rough global assumptions, to regional/national scenarios with relevant stakeholder inputs:
  - Highlighting regional / local problems and priorities
  - Updating local technology preferences
  - Informing on local sectoral focus
- Your inputs are crucial to design policy-relevant scenarios and abstract policy recommendations that make sense for Kenya and Africa !





Thank you!

Van de Ven, D.J., et al.  
*"Integrated policy assessment  
and optimisation over multiple  
sustainable development goals  
in Eastern Africa."*

Environmental Research  
Letters 14.9 (2019): 094001.

<https://doi.org/10.1088/1748-9326/ab375d>

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