

#GreentoScale

Scaling up existing climate solutions in Kenya

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*Green to Scale:
how far can we go with
what we already have?*

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Exciting results in two studies



- **Global Green to Scale** in 2015 covered 17 solutions from both the global North and the South
- 12 Gt emission reduction potential – equal to about 1/4 of current global emissions
- Annual net costs at most \$94 billion – less than 1/5 of current direct fossil fuel subsidies

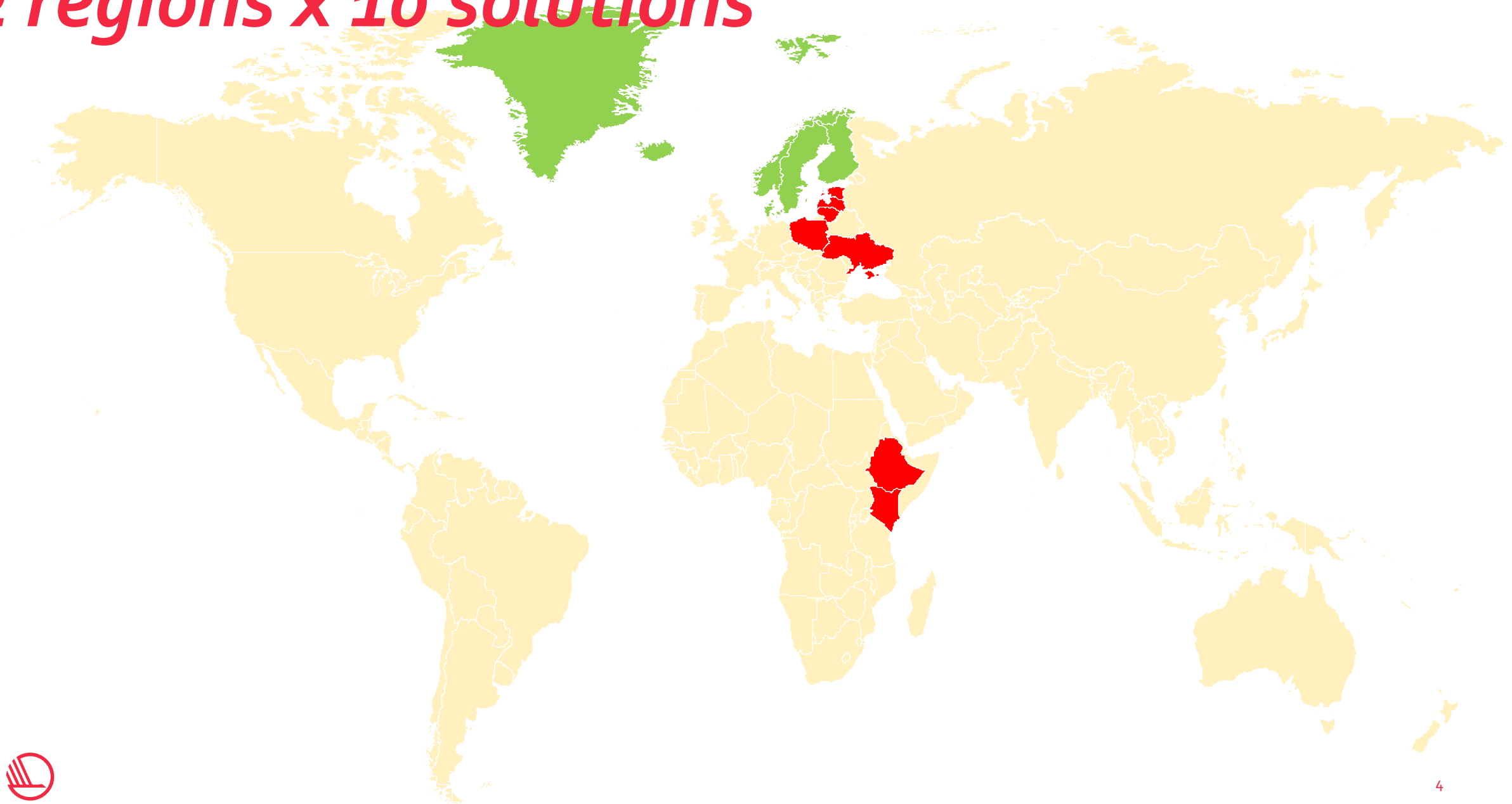


- **Nordic Green to Scale** in 2016 analysed the potential of 15 Nordic solutions
- 4 Gt emission reduction potential – equal to total EU emissions today
- Annual net costs \$13 billion – equal to 9 days of current direct fossil fuel subsidies

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2 regions x 10 solutions



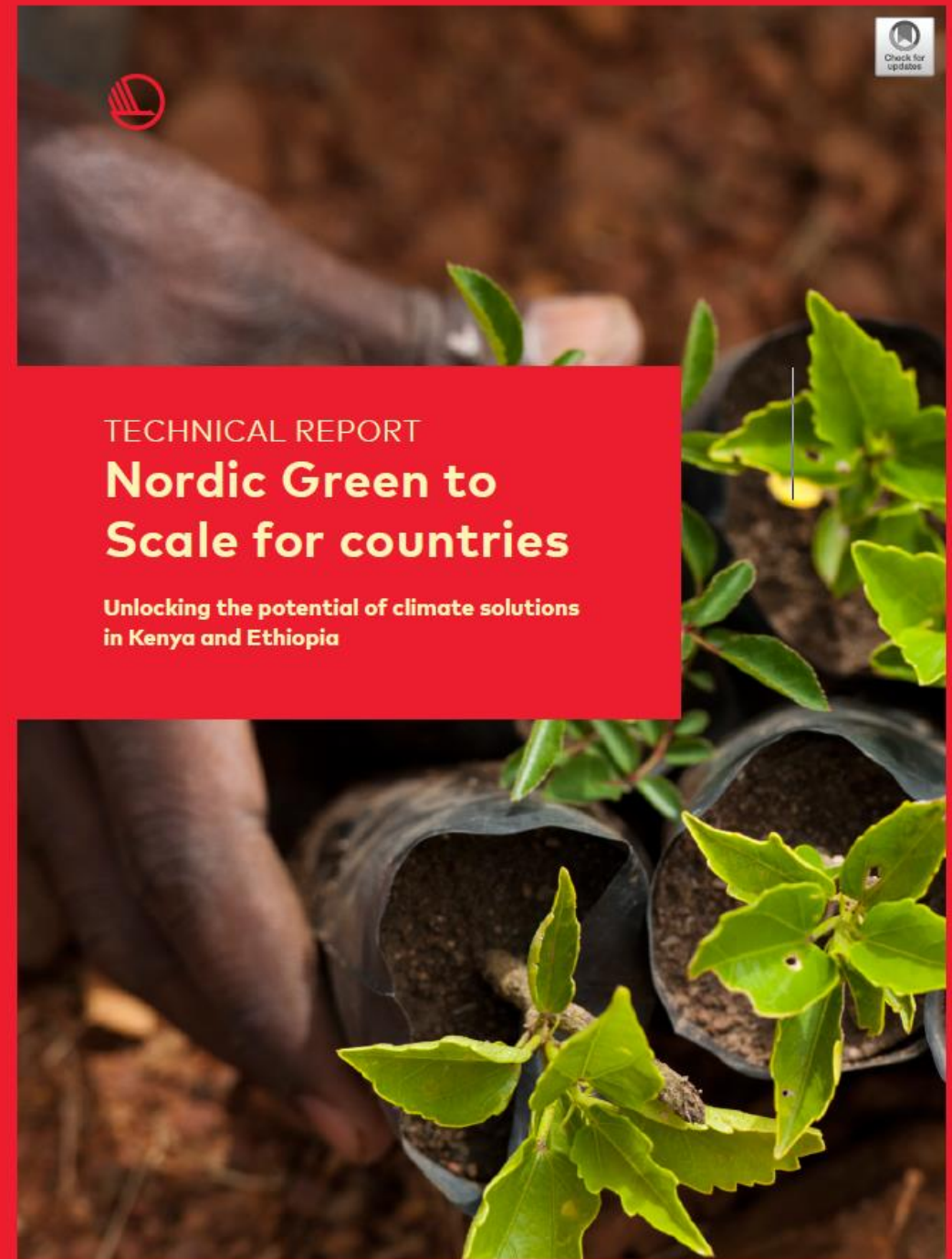
Who is behind Nordic Green to Scale

- Project co-ordinated by the Finnish Innovation Fund Sitra
- Nordic partners include CICERO (NO), CONCITO (DK) and University of Iceland (IS)
- Analysis carried out by Stockholm Environment Institute Africa Centre (Mbeo Ogeya, Anne Nyambane, Hannah Wanjiru) with the support of local experts
- Funding kindly provided by the Nordic Council of Ministers (NCM)
- Nordic Green to Scale included in the Nordic Prime Ministers' Initiative Nordic Solutions to Global Challenges



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Technical report:
***Nordic Green to Scale
for countries***
*Unlocking the potential of
climate solutions in Kenya and
Ethiopia*



TECHNICAL REPORT
**Nordic Green to
Scale for countries**

Unlocking the potential of climate solutions
in Kenya and Ethiopia

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*Key results: large potential
in scaling up existing
climate solutions*

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9 solutions from 4 sectors

Energy

1. Geothermal Energy
2. Wind power
3. Solar power
4. Combined Heat and Power (CHP)

Transport

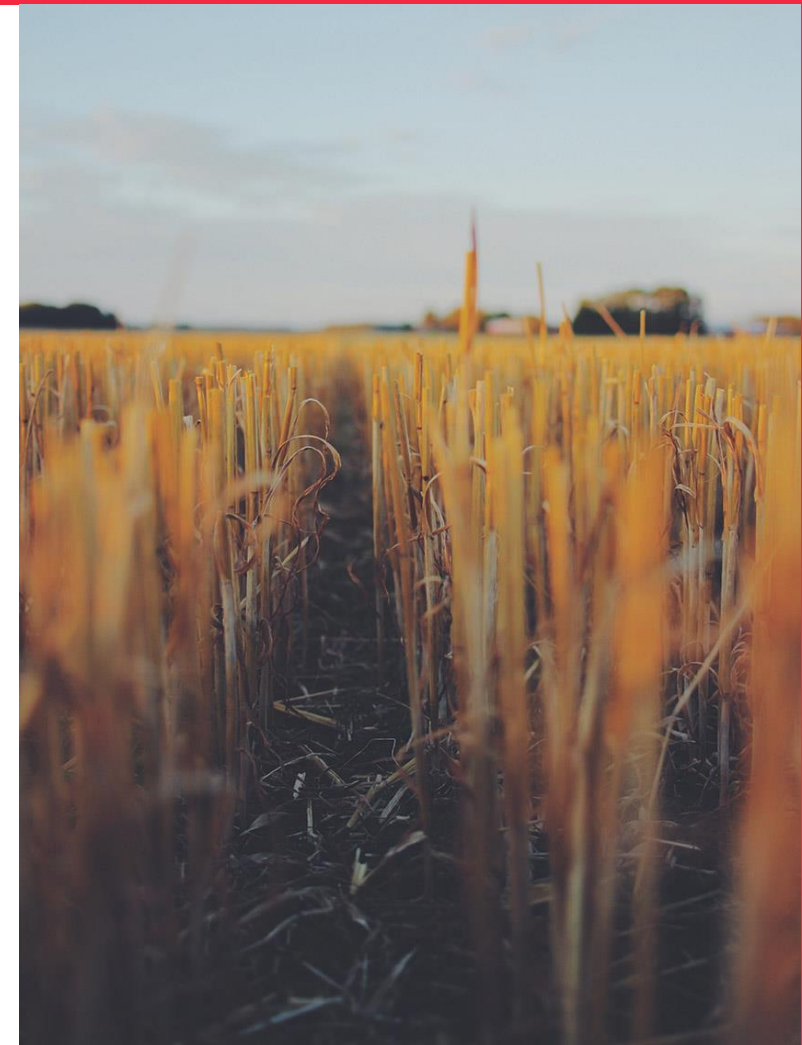
5. Cycling in cities

Buildings and households

6. Energy efficiency in buildings
7. Improved cookstoves

Agriculture and forests

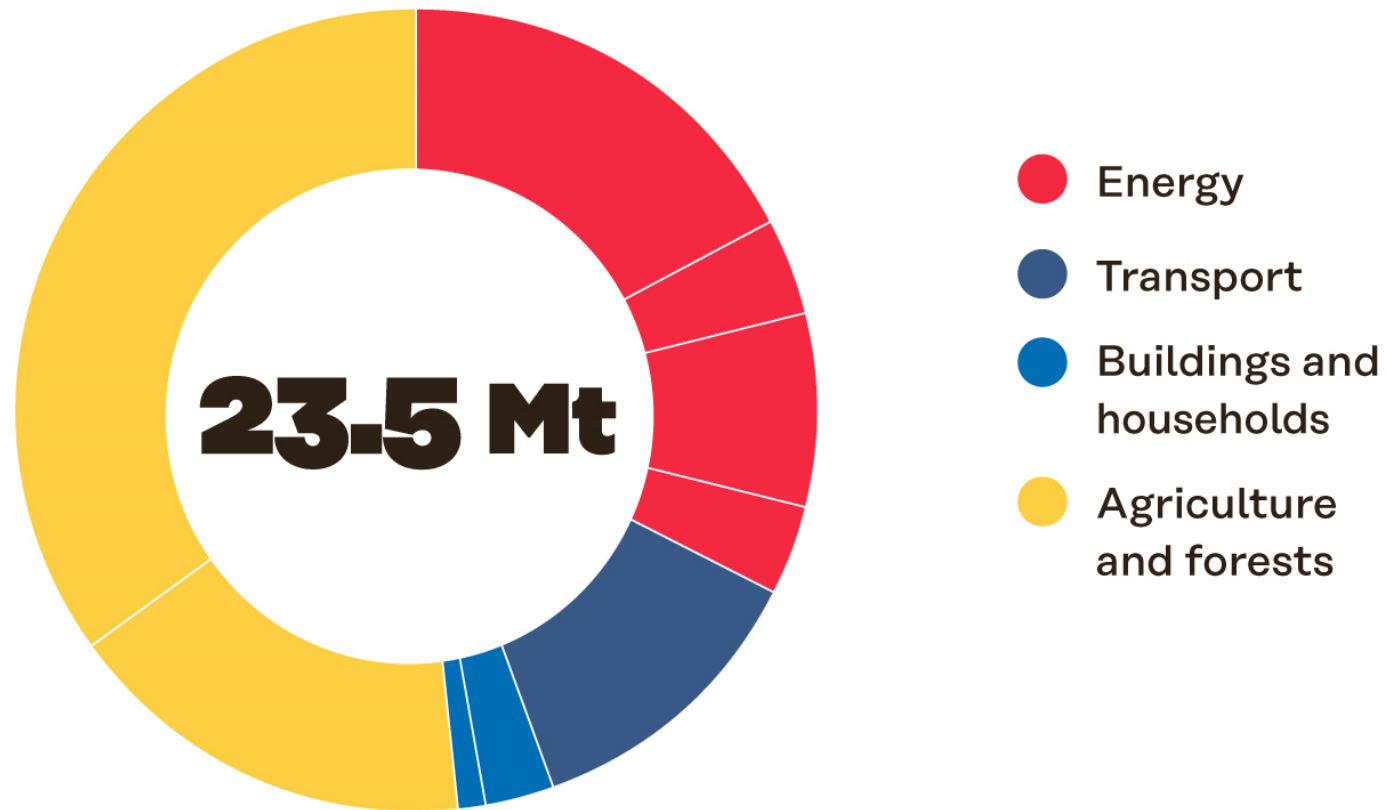
8. Afforestation and reforestation
9. Low-carbon agriculture



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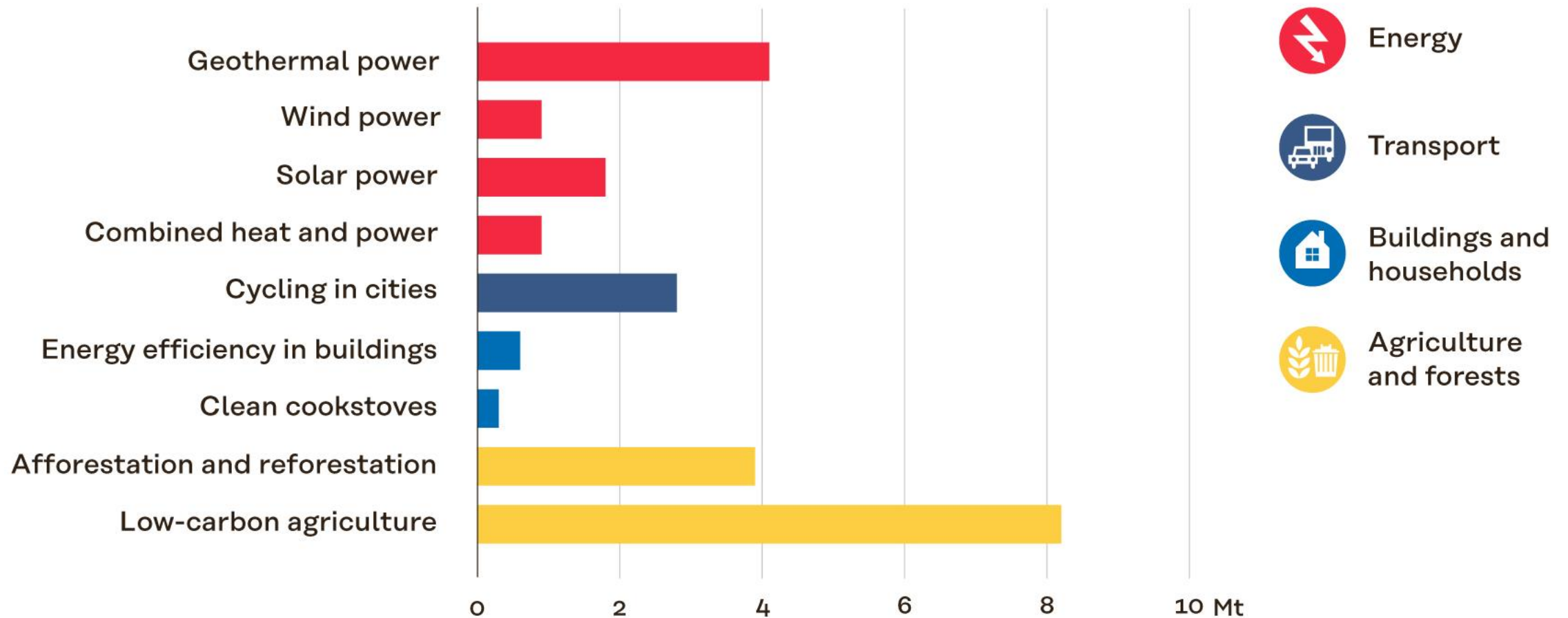
Significant reduction potential in 2030



Additional emission reduction potential of scaling up the solutions in Kenya when overlap is not accounted for.



Food, land use and renewables most promising



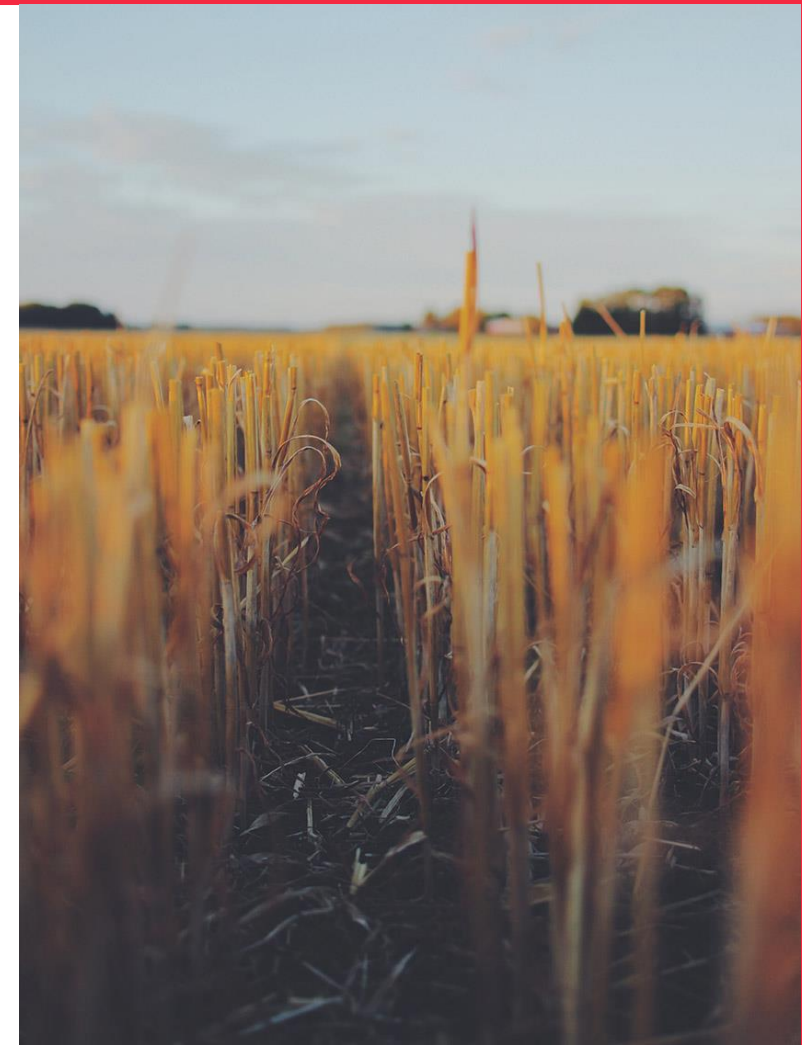
Additional emission reduction potential of scaling up the solutions in Kenya when overlap is not accounted for



Solutions provide benefits to people and the environment

Climate solutions provide a range of other benefits to people and the environment (co-benefits), such as:

- cutting air pollution and related health impacts;
- reducing energy imports and energy poverty, improving energy security;
- creating or retaining jobs;
- increasing or maintaining ecosystem services;
- providing new income streams and tax revenue



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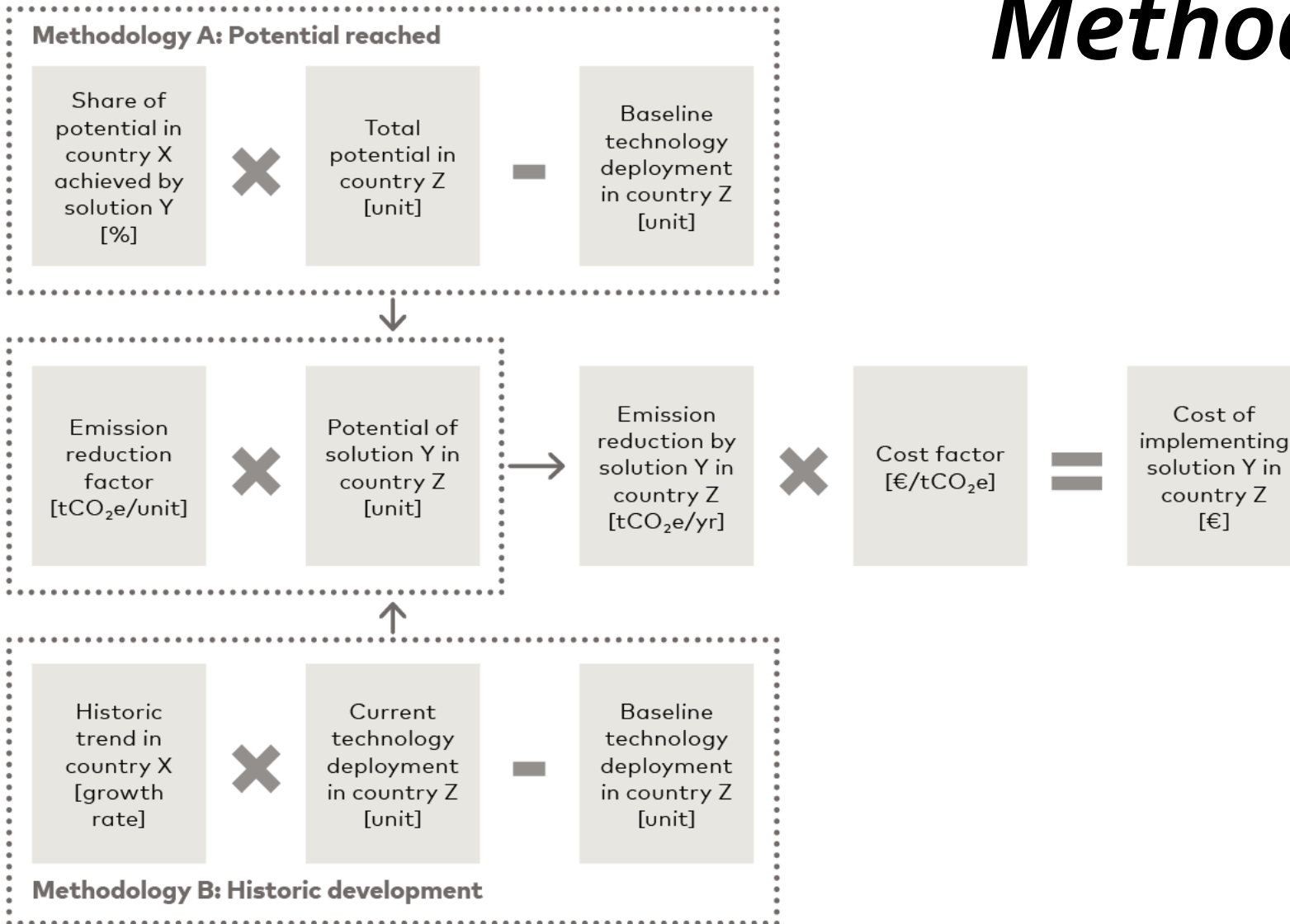
What to make of the results?

- The study helps to identify solutions in which additional potential is available – and successful policies to deploy them
- Emission reduction potential and cost estimates should be seen as indicative rather than accurate
- The analysis can hopefully serve as inspiration for taking climate action
- All countries have areas where they can learn from the experiences of others – and also where their experiences can be valuable for other countries
- By learning from each other and sharing best practices and lessons learnt, all countries can move forward together

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Methodology in brief

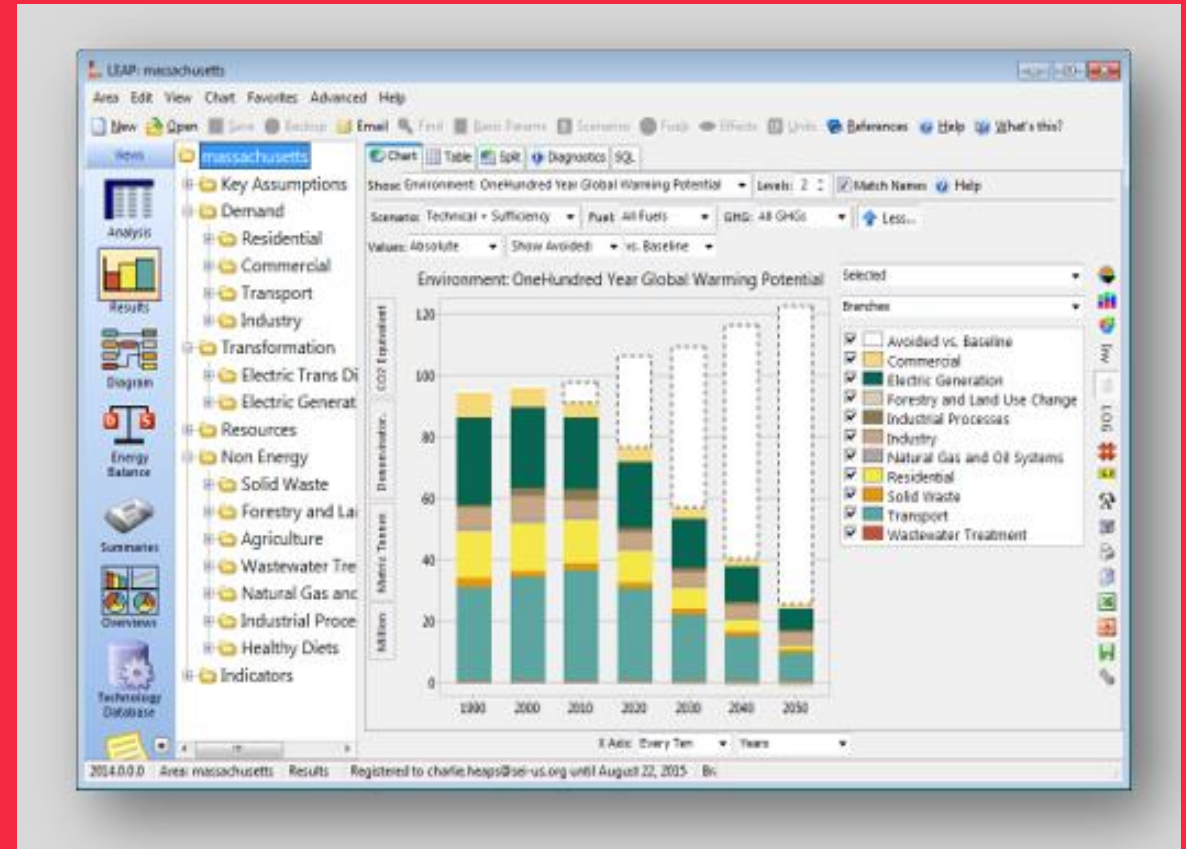


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Methodology in brief

- LEAP Scenario modelling
 - BAU based on micro-economic indicators, population growth and implementation of limited national plans
 - Nordic Green to Scale solution scenarios (Geothermal, Solar, Wind, ICS, City biking and Energy efficient buildings)
- Historic growth trend and forecasting from FAO stat (Agriculture and Forestry)
- NB: No consideration of project leakages



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Methodology in brief

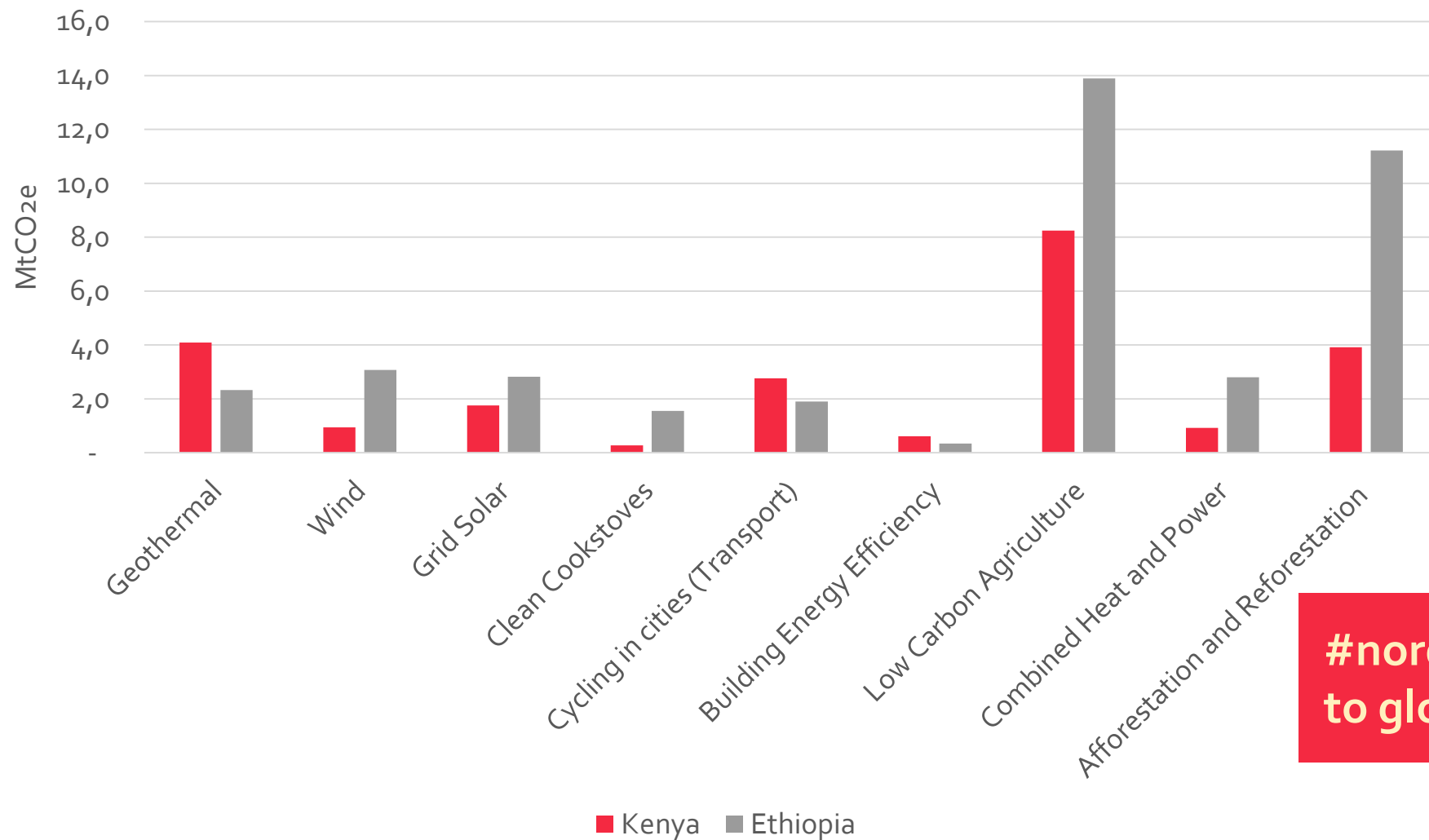
Sector	Solution	Reference country	Scaling up target share/growth rate
Energy	Geothermal power	Iceland	11% annual growth
	Wind power	Sweden	7.3% share in national grid
	Solar power	Germany	7.2% share in national grid
	Combined heat and power	Finland	12% adoption share
Transport	Cycling in cities	Denmark	10% share
Buildings and households	Improved cookstoves	China	100% adoption
	Energy efficiency in buildings	Mexico	30% adoption CFL, -1.5% annual plugin intensity
Agriculture and forestry	Afforestation and reforestation	Costa Rica	1.18% afforestation rate
	Low-carbon agriculture	Brazil	8% GHG reduction target

Scaling up solutions

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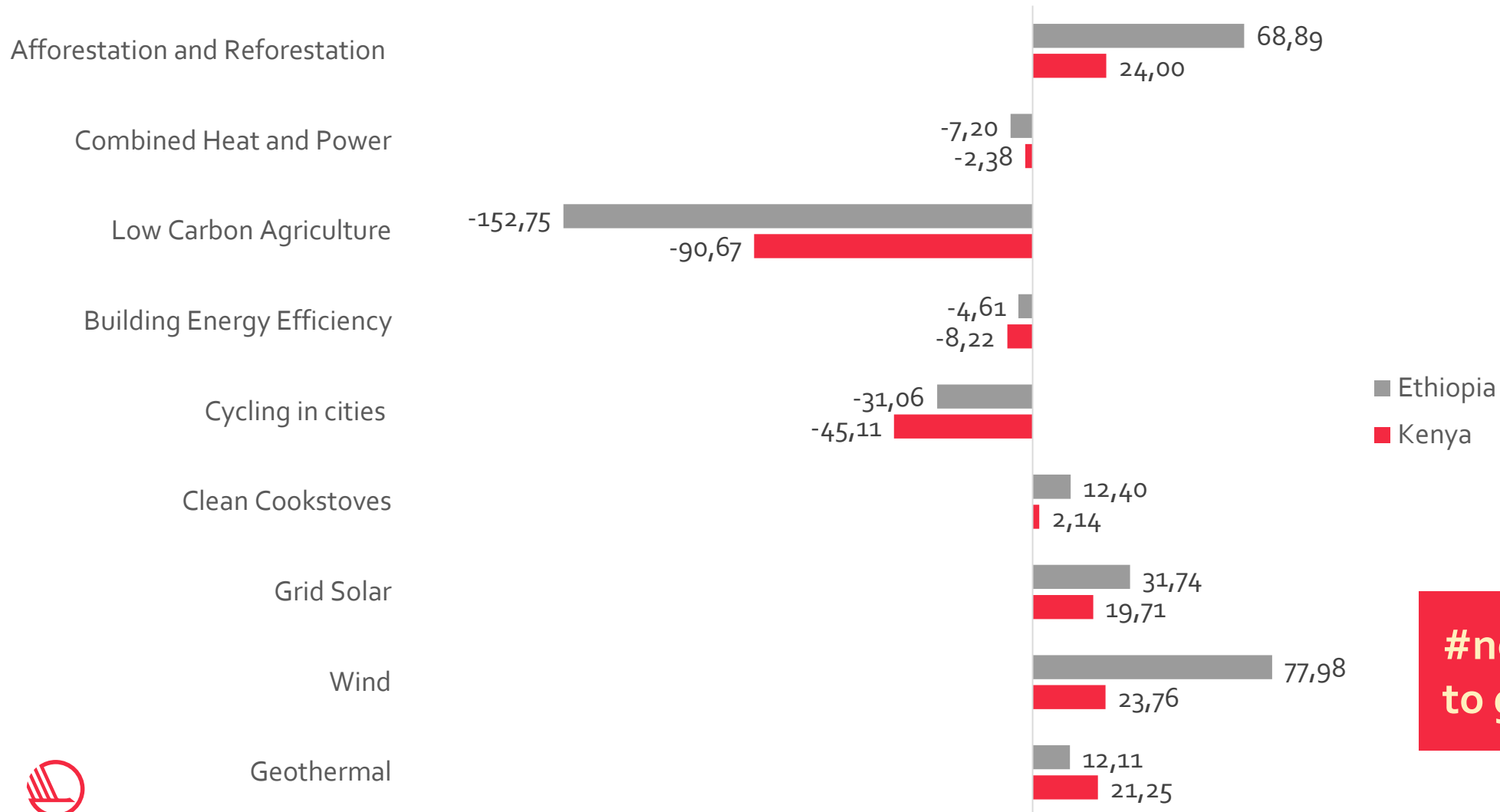
Ethiopia and Kenya: Abatement potential



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Ethiopia and Kenya: Abatement cost (million USD)



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*From analysis to action:
how to use the results*

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Important enablers

- Structural arrangements and national policies: establishment of GDC, NAMATA, NMT policy, FiT etc.
- Accelerated involvement of private sector and multinational agencies in the energy sector (multiple solar PV in pipeline, >300MW wind, over 20 private sector interest in geothermal)
- Increased access to information e.g. SWERA report, wind atlas
- Financial incentives especially in industrial energy efficiency, the VAT Act 2013, zero rating tax on solar accessories
- Ban on importation of inefficient bulbs and standards and labeling program
- Global commitments and national initiatives in forestry e.g. Tree Fund Initiative

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Key barriers to overcome

- Capital intensiveness and land tenure challenges in implementing renewable energy solutions
- Inadequate collaboration during planning, designing and implementation of projects in the transport sector
- Poor compliance and inadequate implementation of building codes; lack of awareness by constructors on efficient appliances to install; consumer behavior and choice
- Inadequate finances to support various afforestation, reforestation and deforestation reduction activities sustainably and poor post planting management
- Inadequate knowledge of the full benefits of forest conservation at community level

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Key policies for Kenya

- Institutional and incentive frameworks for renewable energy and combined heat and power production to keep investment conditions stable
- Institutional frameworks that encourages collaboration between and among ministries
- Training activities and financial incentives to promote for energy efficiency and forest conservation practices
- Long-term financing mechanism to ensure sustainability of the various initiatives
- Increased awareness creation and methodology to ensure behaviour change and cultural barriers



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Conclusions

- Scaling up existing low carbon solutions is feasible, affordable and attractive
- Learning from the countries that have already deployed these solutions helps in avoiding barriers
- Governments have a major role to play in terms of policies and institutional to enable deployment of these solutions
- It's all about enhancing human well-being, therefore trade-offs are key



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What next?

- Polish launch event November 2018
- Next phase: Green to Scale Cities in 2019
- **Interested? We are open for co-operation!**



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Thank you
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