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What does it mean for Ethiopia's development?

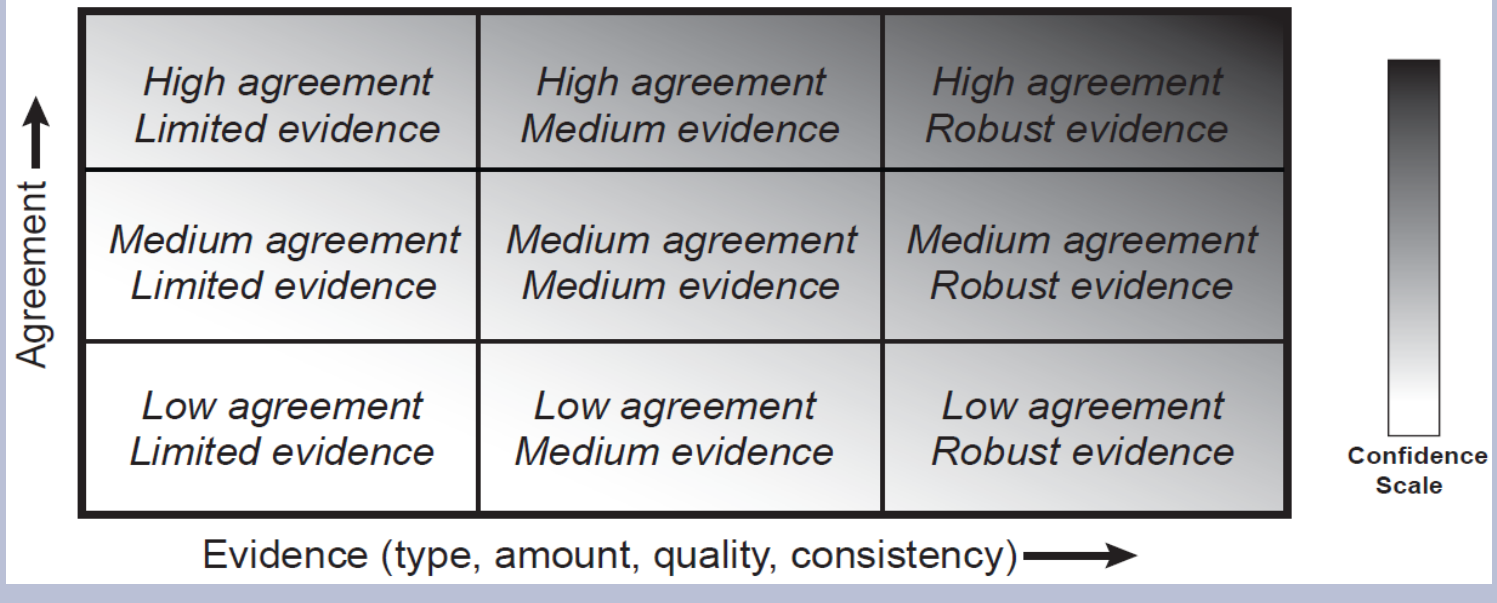
Uganda's low carbon development opportunities

Shuaib Lwasa, Lead Author WG 3

Makerere University

Date 21st August 2014

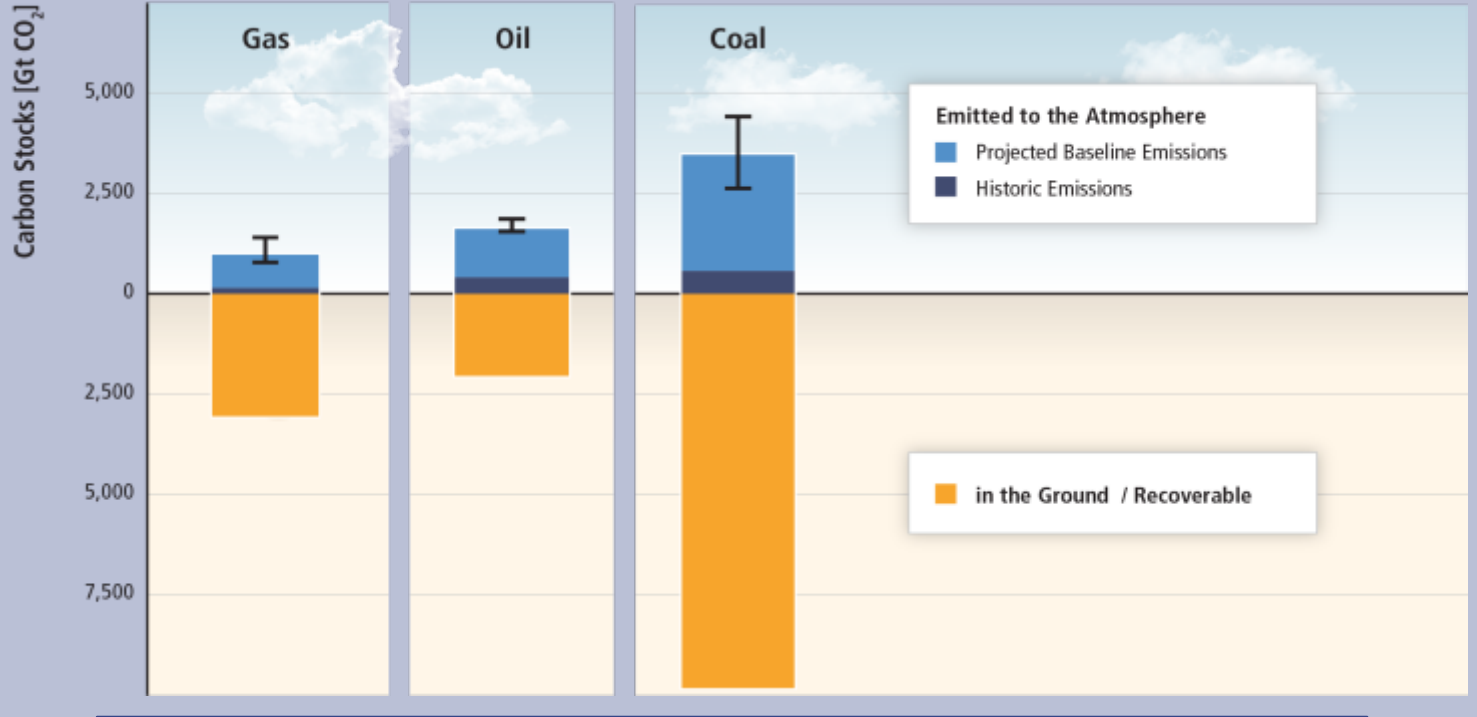
Framework for Assessment and evaluation of evidence and agreement into a judgment about the validity of findings



Probabilistic estimate embedded in confidence scale


Climate change, a global
commons problem: The drivers

There is far more carbon in the ground than emitted in any baseline scenario.

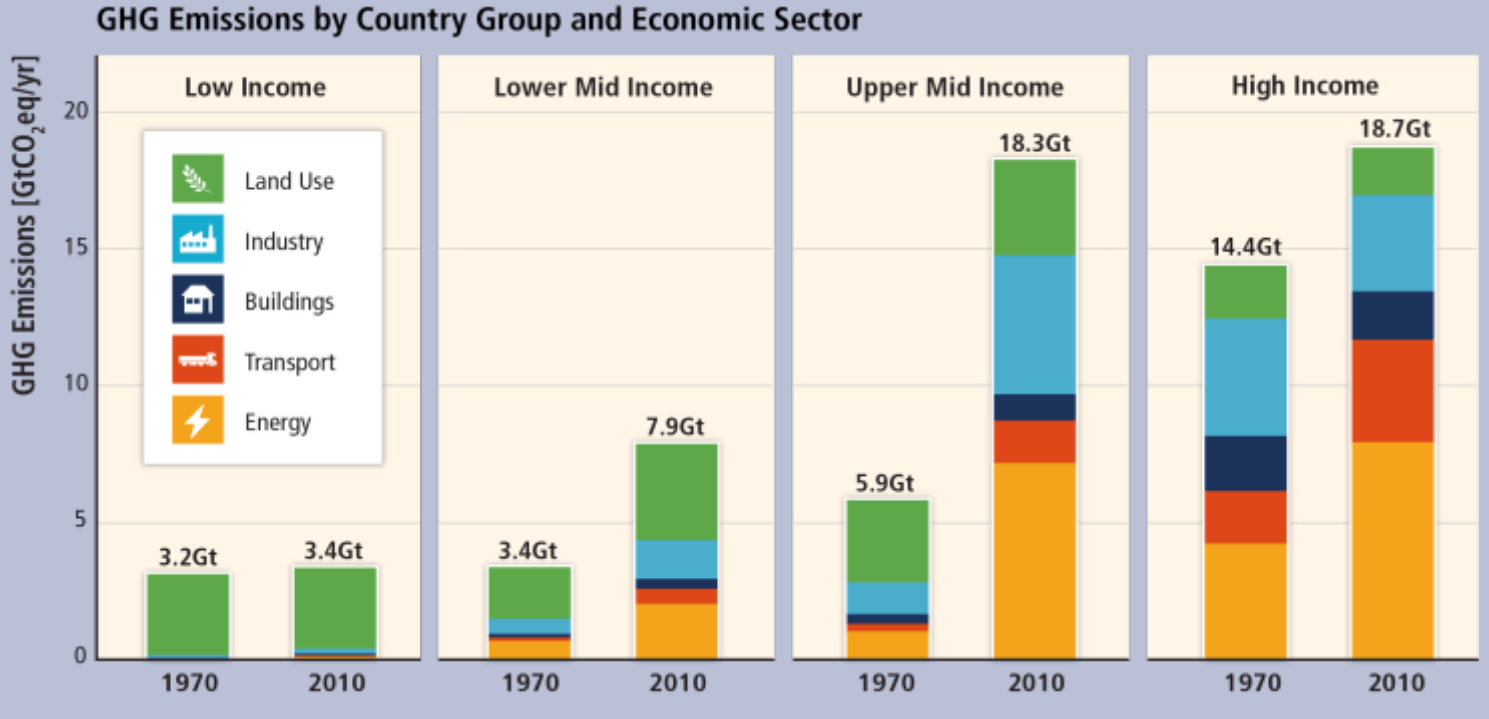


gure 1.7

Economic Growth and Population will most likely continue to dominate extraction and consumption of these resources


GHG emissions growth has accelerated
despite reduction efforts.

Regional patterns of GHG emissions are shifting along with changes in the world economy.



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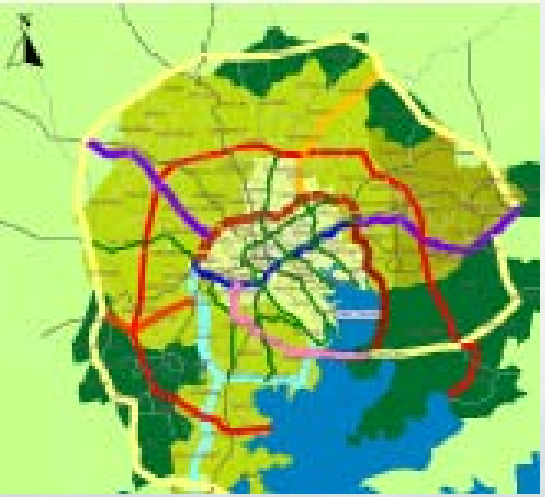
Limiting warming to 2°C involves substantial technological, economic and institutional challenges.

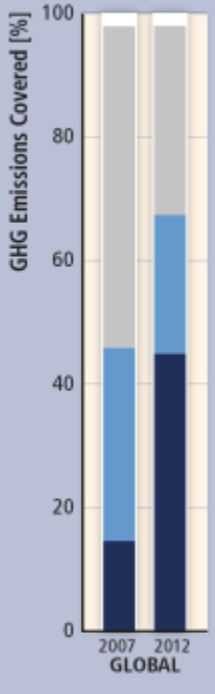
”

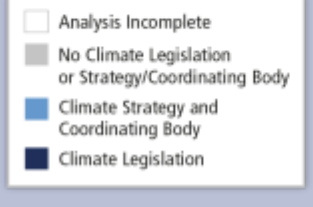
WG III SPM AR5

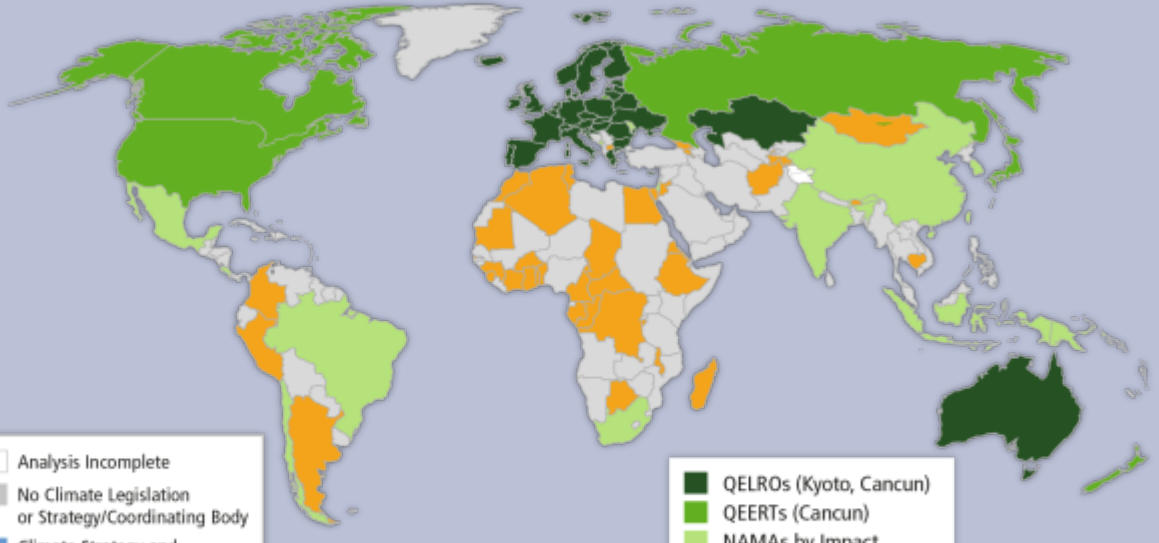


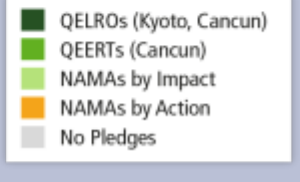
Human Settlements, Infrastructure, and Spatial Planning

There has been a considerable increase in national and sub-national mitigation policies since AR4.



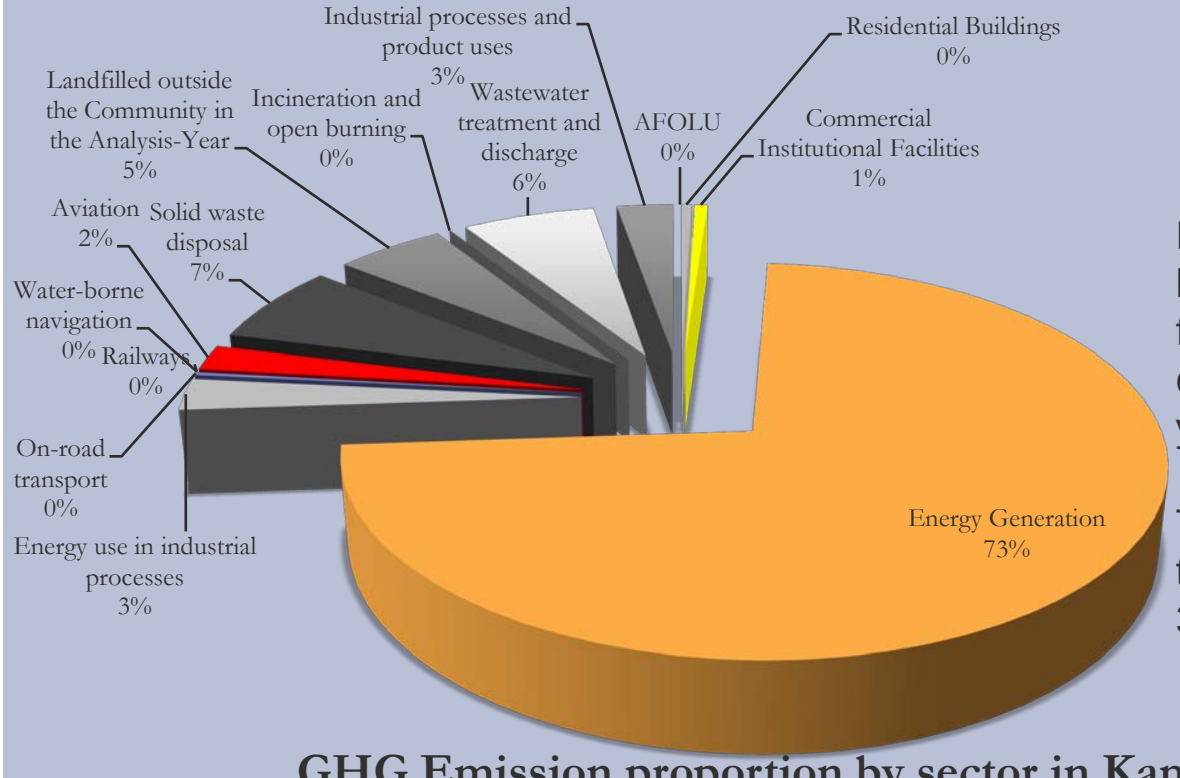






Based on Figures 15.1 and 13.3

Not IPCC finding but a local example



GHG Emission proportion by sector in Kampala: based on 2012 baseline

Based on 2012 baseline ~ Mt 42,960 from transportation over a period of 25 years.

The BRT NAMA targets reduction by 30%

“

The anticipated growth in urban population will require a massive build-up of urban infrastructure, which is a key driver of emissions across multiple sectors

limited evidence, high agreement

WG III CH_12

In Africa, the urban population is growing faster

UN-Habitat 2012/2013

”

“That is happening in the second urbanization wave which is dependent on significant increases in global resource extraction and consumption”

Swilling et al 2012

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What does it mean for Ethiopia?

- In the second urbanization wave, Africa and Uganda in particular is highly urbanizing

- New urban developments driven by resource extractive industry

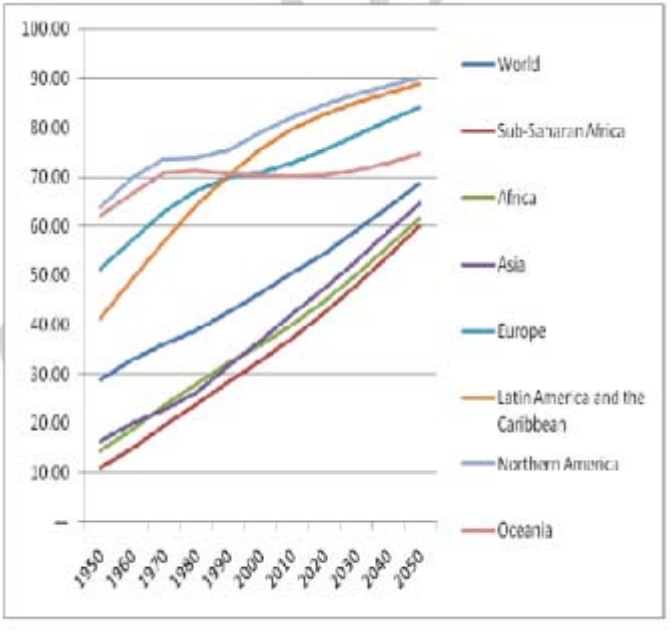

Figure 1.6. Percentage of population living in urban areas in different world regions (1950-2050) (Source: UN 2010)[86]

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What does it mean for Uganda?

Although cities only occupy 4% of the earth's land surface, 75% of all natural resources are consumed within cities, and as of 2007

Urbanization nationally and Kampala's growth was at 3.72% by 2010 with a share of national population of 4.7% and projected share of 6.09% in 2025

Importance of taking action about small-medium sized cities

Source: OpenData_IUWM_31citiesAfrica accessed 2013

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Key issues from findings for Uganda

- Infrastructure and urban form are strongly linked, especially among transportation infrastructure provision, travel demand and vehicle kilometres travelled (*robust evidence, high agreement*).

- Key urban form drivers of energy and GHG emissions are density, land use mix, connectivity, and accessibility (*medium evidence, high agreement*)

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Key Opportunities

- The largest opportunities for future urban GHG emissions reduction are in rapidly urbanizing areas where urban form and infrastructure are not locked-in, but where there are often limited governance, technical, financial, and institutional capacities (*robust evidence, high agreement*)

- Greening urban systems, ecological enhancement, opportunities creation are important for cities in this wave

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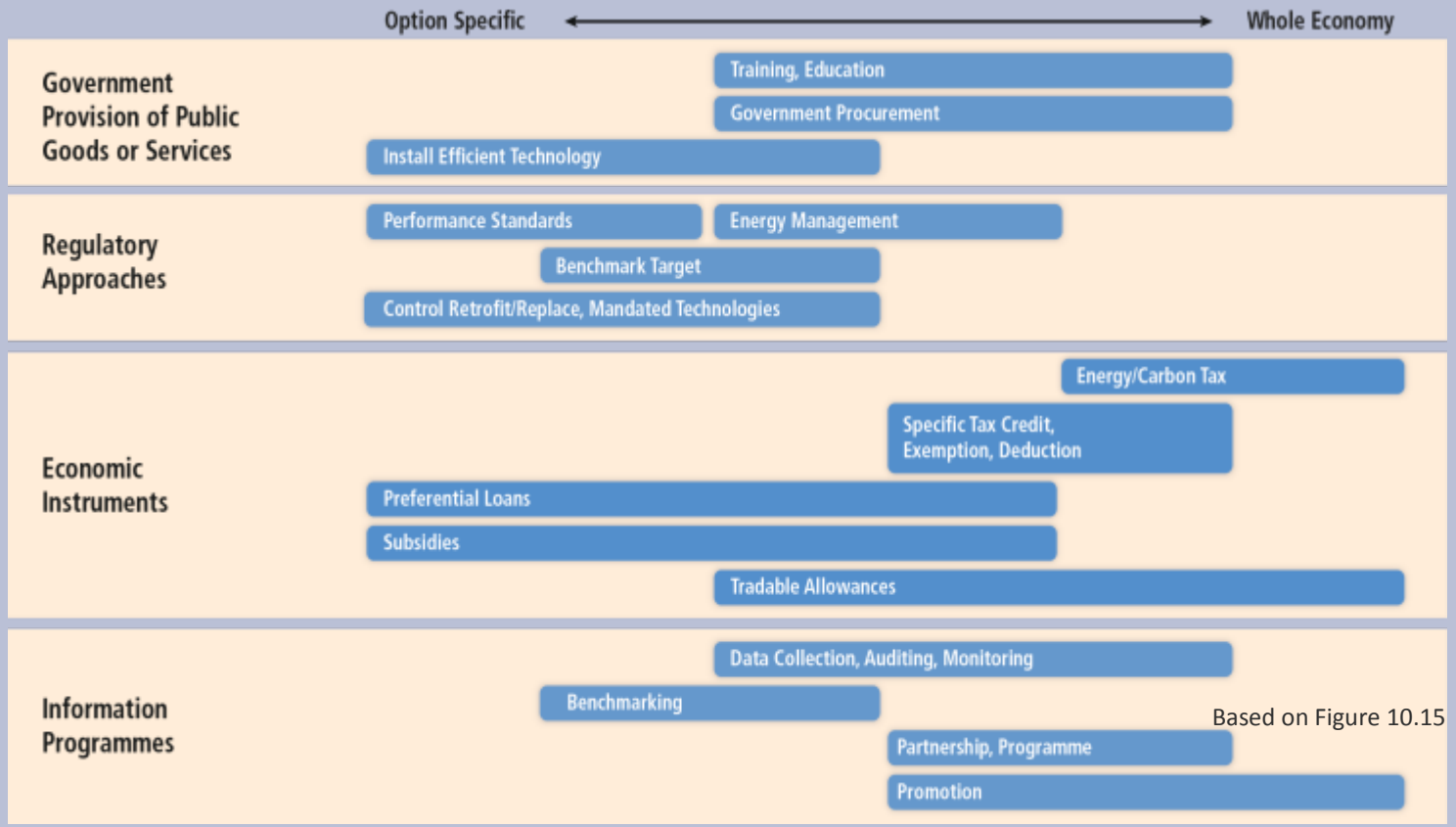
Key Issues for mitigation in Uganda

- Successful implementation of urban climate change mitigation strategies can provide co-benefits (*robust evidence, high agreement*).

- Thousands of cities are undertaking climate action plans, but their aggregate impact on urban emissions is uncertain (*robust evidence, high agreement*)

- The feasibility of spatial planning instruments for climate change mitigation is highly dependent on a city's financial and governance capability (*robust evidence, high agreement*).

Sector-specific policies have been more widely used than economy-wide policies.



Based on Figure 10.15

Options of urban policies for reduction of emissions

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Table 12.4 | Examples of policies across sectors and mitigation options at the scale of human settlements.

	ENERGY SYSTEMS (Chapter 7)	TRANSPORT (Chapter 8)	BUILDINGS (Chapter 9)	INDUSTRY (Chapter 10)	AFOLU (Chapter 11)
Carbon Sinks / Sequestration					Tradable Credits, EQ Policies
Energy Efficiency	Taxes, Credits/ Permits	Subsidies for Fuel Efficiency, Standards, Targets	Taxes, Preferential Lending, Codes, Standards	Taxes, Standards, Emissions Trading, Target-setting	
Fuel / Energy Switching / Renewables	Taxes, EQ Policies, Ren Energy Portfolio Stds, Energy Security Policies	Taxes, Biofuel Incentives, Standards			Taxes, Targets, Subsidies
High-Performance / Passive Design		Bike sharing, Urban Planning	Codes, Standards, Integrated Planning, Certification		
Improved Planning / Management	Demand Response Measures	Integrated Planning	Commissioning, Audits, Education		Land Planning, Protected Areas
Materials Efficiency			Codes, Standards, Taxes, LCA, Certification	Standards	Taxes
New / Improved Technology	R&D Policies, Low Carbon Tech Targets	Subsidies for Fuel Efficiency, Bike Sharing, Real-time Information	Real-time Information		Bioenergy Targets
Recycling / Reducing Waste				Taxes, Target-setting, Education	Education
Reduced Demand / Behavior Change		Tolls, Congestion Pricing		Taxes, Subsidies, Education	Education, Standards
Urban Form / Density		Smart Growth, Urban Planning, Growth Management	Certification, Urban Planning		

Key Policy Options for consideration Ethiopia

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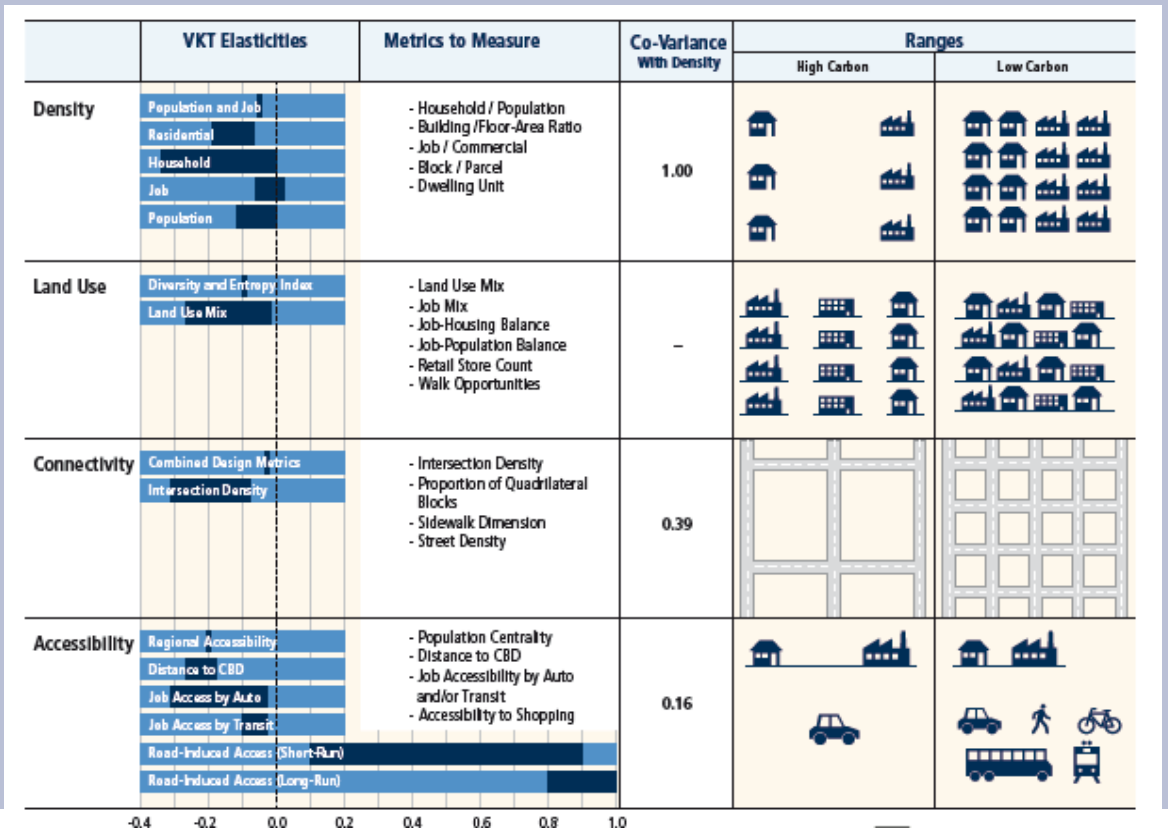

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Conclusion

- Cities and national governments have started to work towards reducing GHG emissions

- But future urban trajectories indicate that most likely cities will grow as extraction and consumption patterns change

- Reducing GHG emissions from cities and making them sustainable is key to a national, regional and global cumulative reduction of emissions