

# Africa Energy Outlook

A focus on energy prospects  
in sub-Saharan Africa

Istanbul  
20 October 2014

World Energy Outlook Special Report

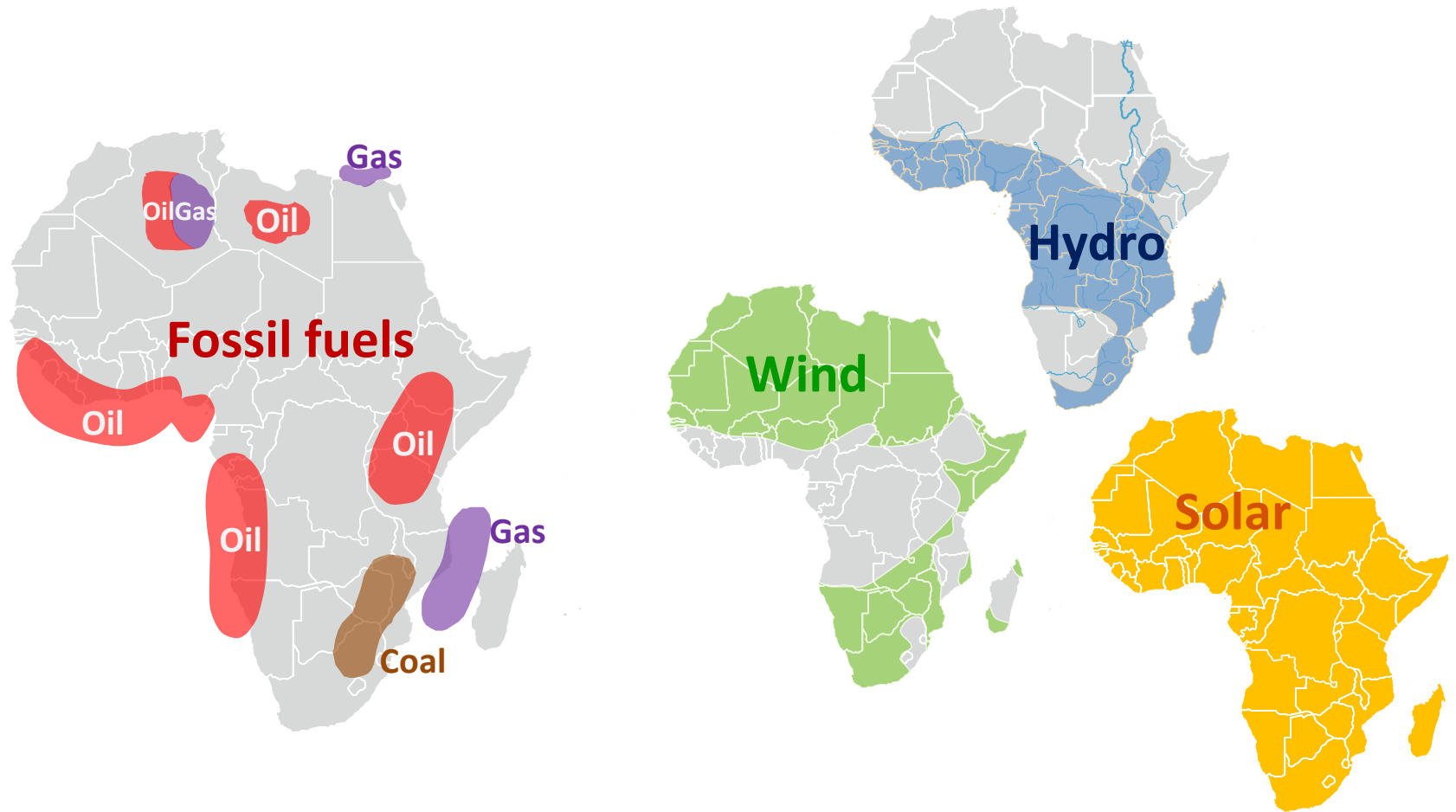
# The sub-Saharan context

- GDP is rising, but almost half of a fast-growing population lives in extreme poverty: energy is vital to the prospects for development
- Region accounts for 13% of global population, but only 4% of its energy demand: half of this is biomass
- Poor electricity infrastructure is a key impediment to growth
- Large resource base, exploited only in part in the case of oil, gas & coal, largely untouched in renewables
- Domestic energy reforms gaining speed, but two-thirds of energy investment since 2000 went to develop resources for export



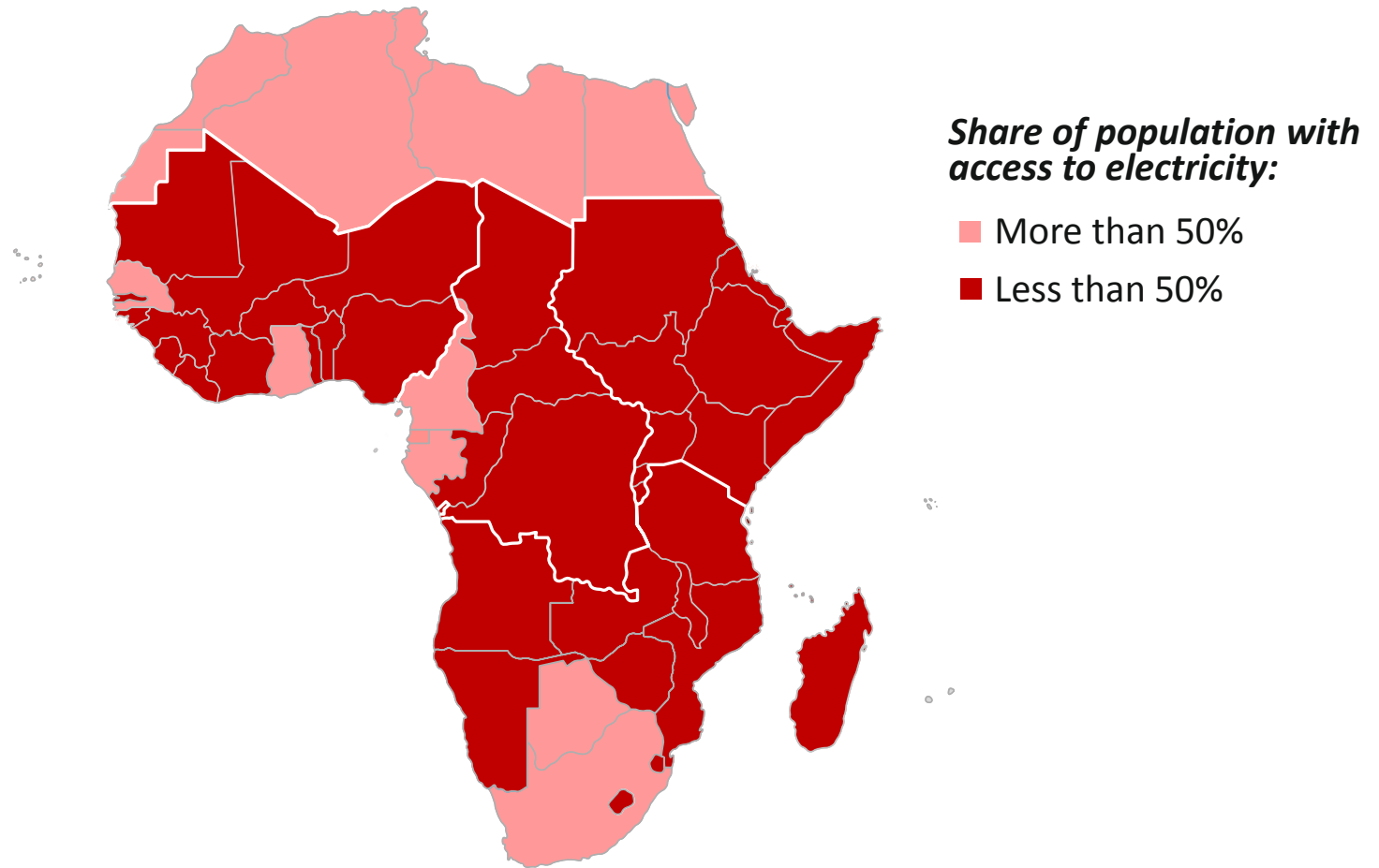
# Rich in resources

## Africa Energy Outlook



***In the last 5 years, almost 30% of global oil & discoveries were in sub-Saharan Africa; the region has vast untapped renewables potential, notably hydropower & solar***

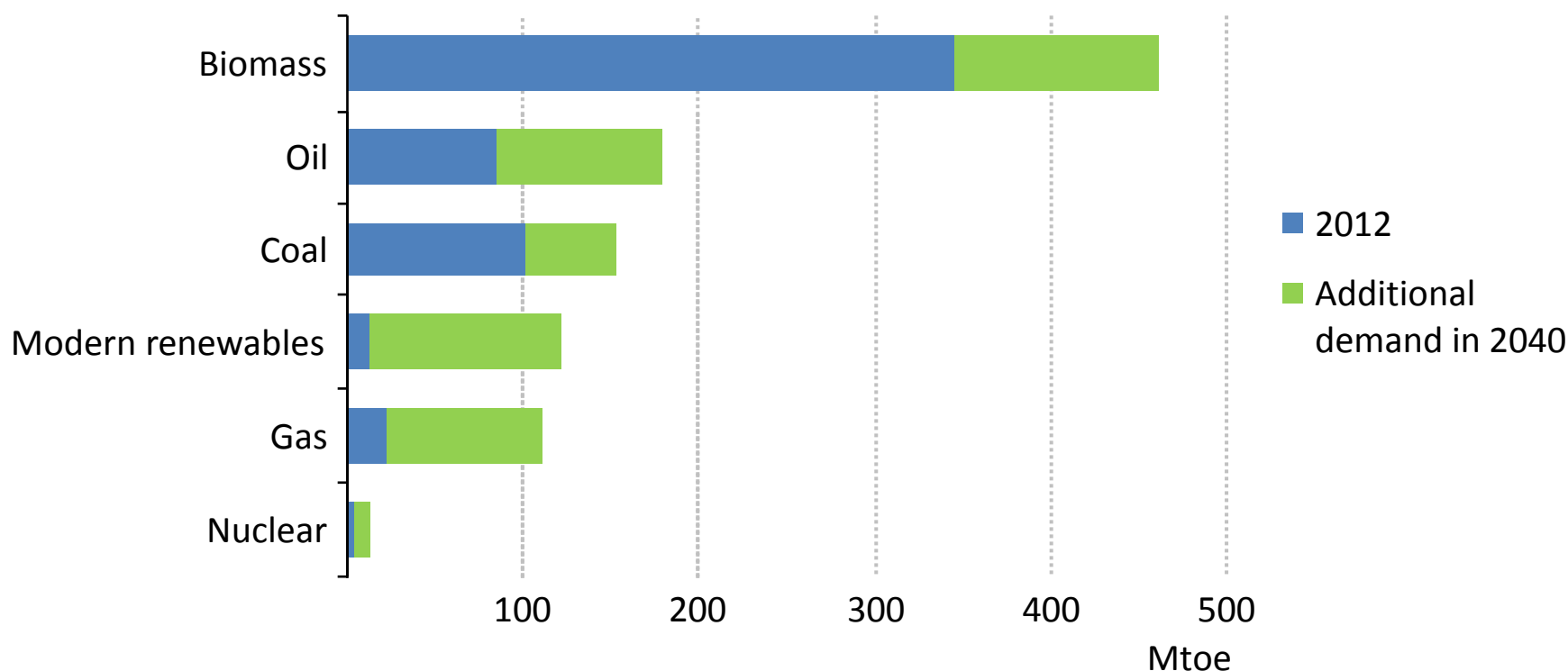
# Rich in resources, but poor in supply



***In sub-Saharan Africa, 620 million people – two-thirds of the population – live without electricity. Only a handful of countries have electrification rates above 50%***

# Biomass remains at the centre of the sub-Saharan energy mix

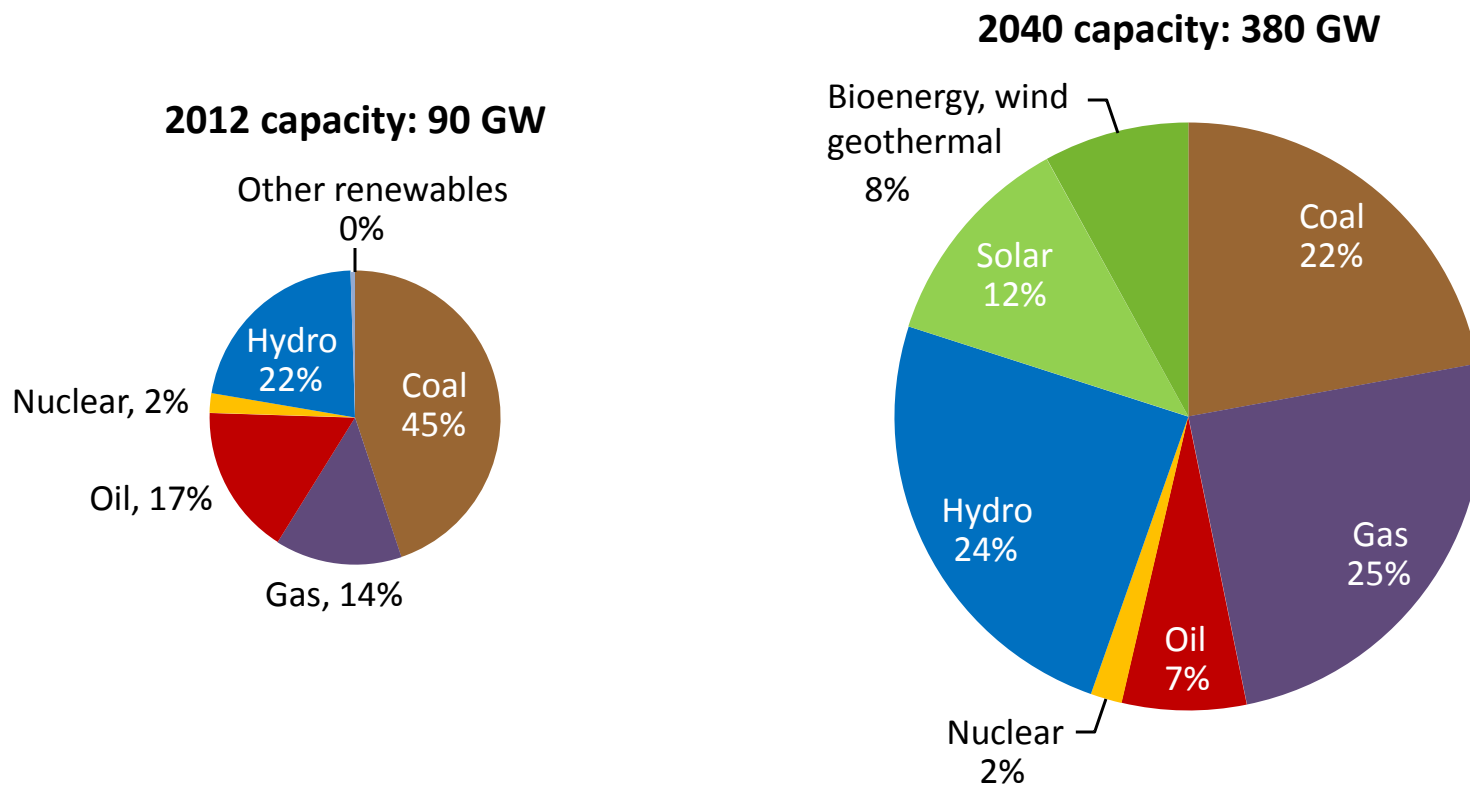
## Total primary energy demand in sub-Saharan Africa



***Reliance on fuelwood & charcoal remains high, even as incomes grow;  
650 million people still cook with biomass in an inefficient & hazardous way in 2040***

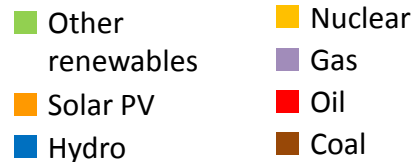
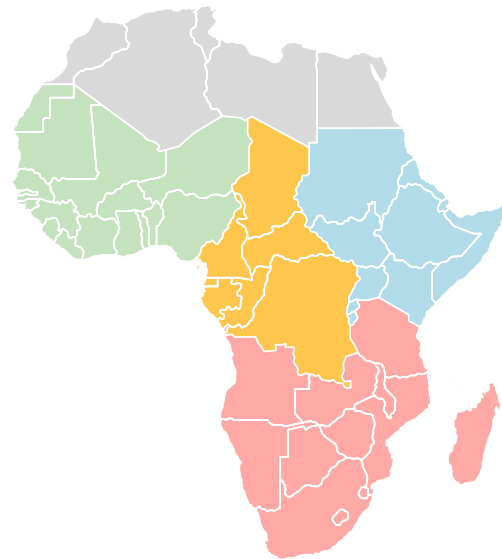
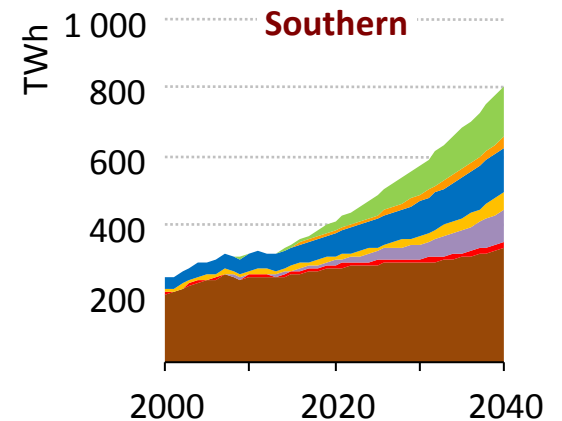
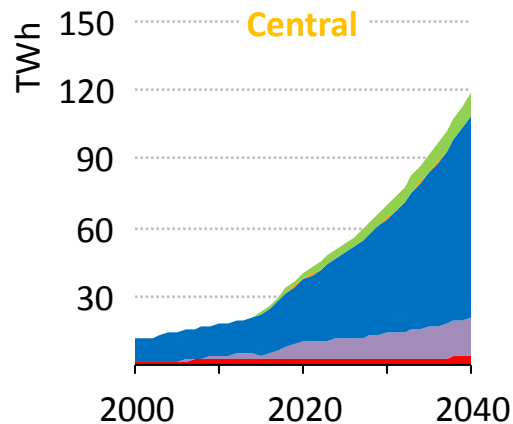
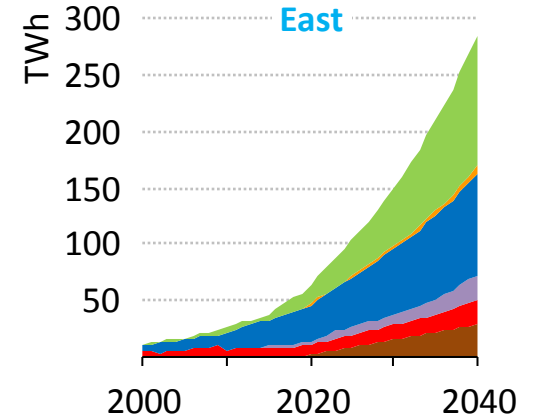
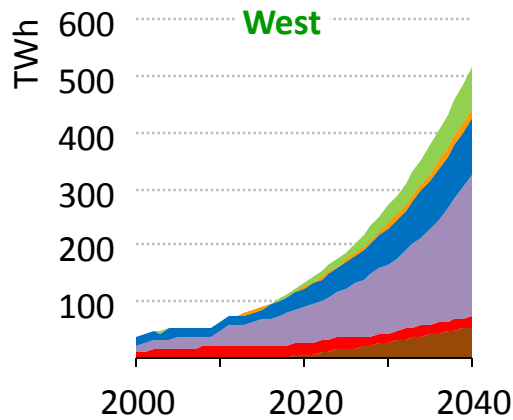
# Power to shape the future

## Installed power generation capacity by fuel in sub-Saharan Africa



***Renewables account for almost half the growth in overall power supply & for two-thirds of the mini-grid & off-grid systems installed in rural areas***

# Different paths to power across the continent

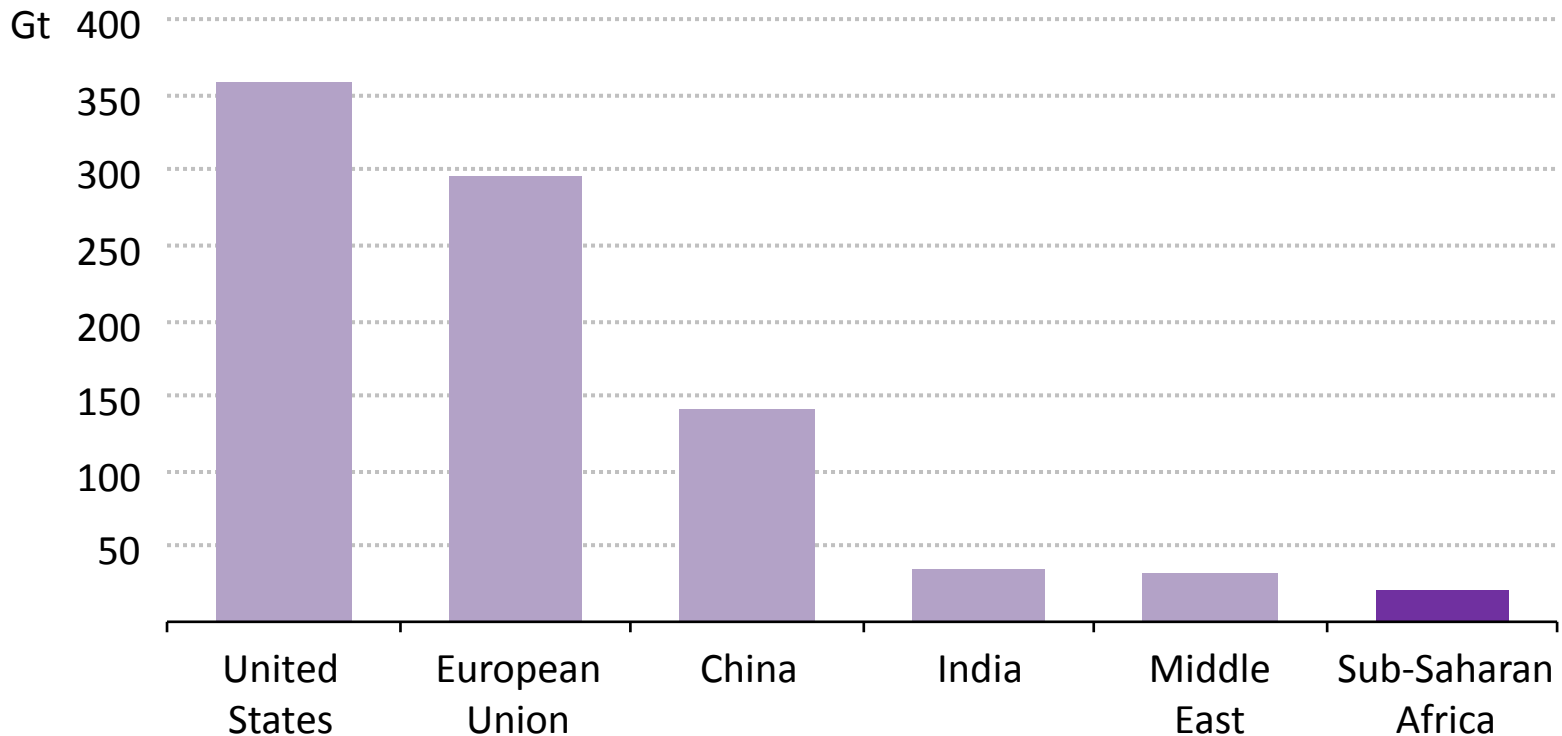


***The power mix by sub-region reflects local resource endowments; well-functioning regional power pools help to unlock new projects, lower costs & improve reliability***



# Minor cause, but major effect

## Cumulative energy-related CO<sub>2</sub> emissions, 1890-2012

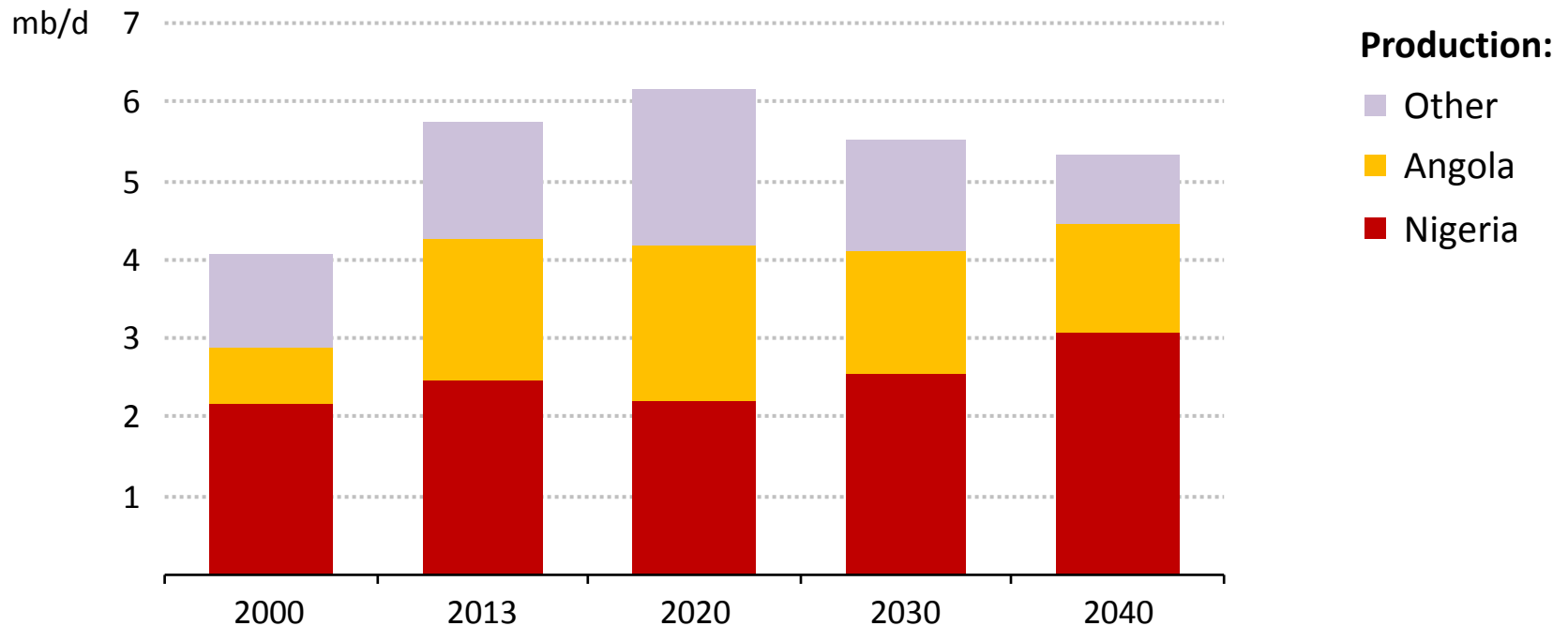


***Sub-Saharan Africa is in the front line to feel the effects of a changing climate but, even with an extra 25 Gt to 2040, accounts for only a marginal share of emissions***



# A changing balance to oil production

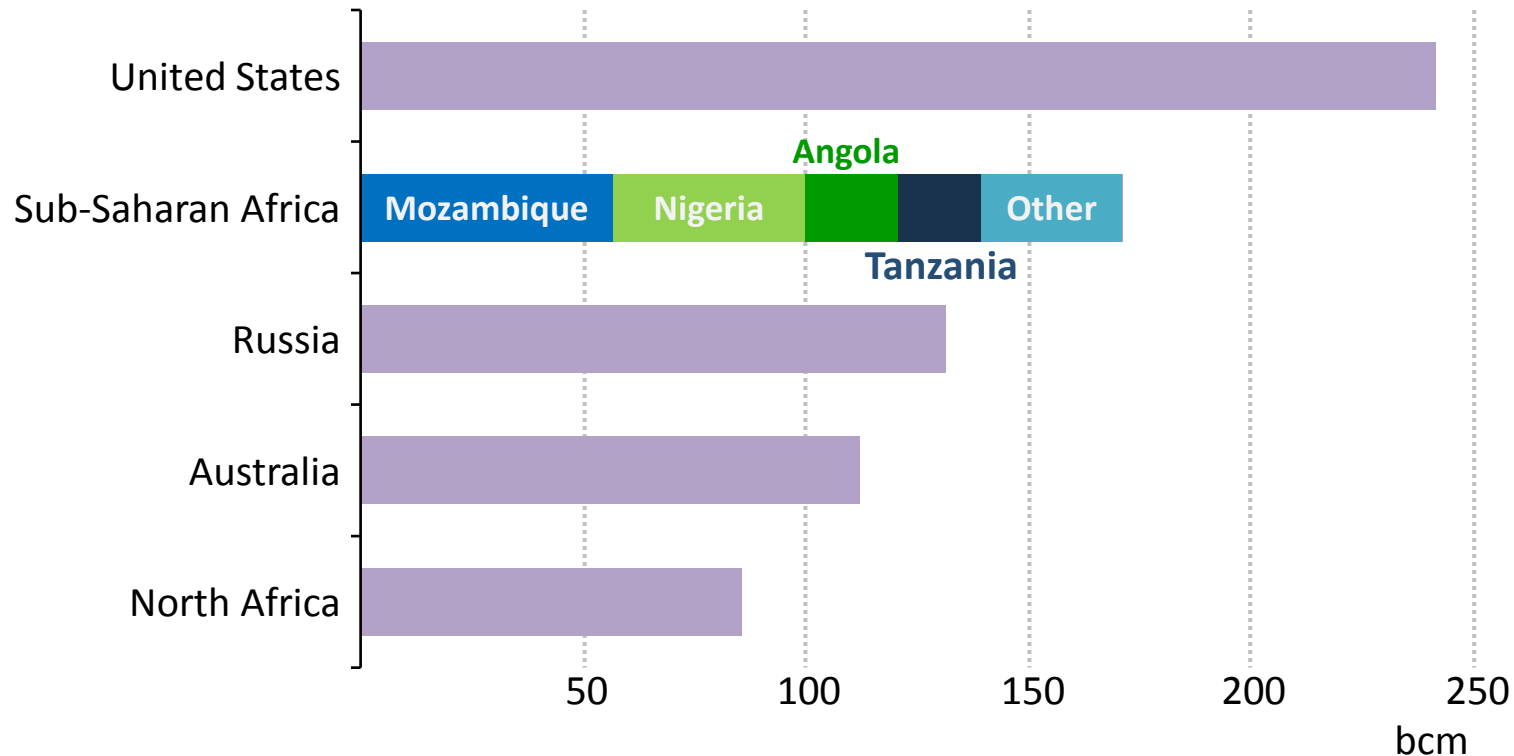
## Oil production in sub-Saharan Africa



*The region remains a major global supplier, although regulatory uncertainty, unrest & oil theft in Nigeria make Angola the main producer of crude oil until the 2020s*

# A new global gas player

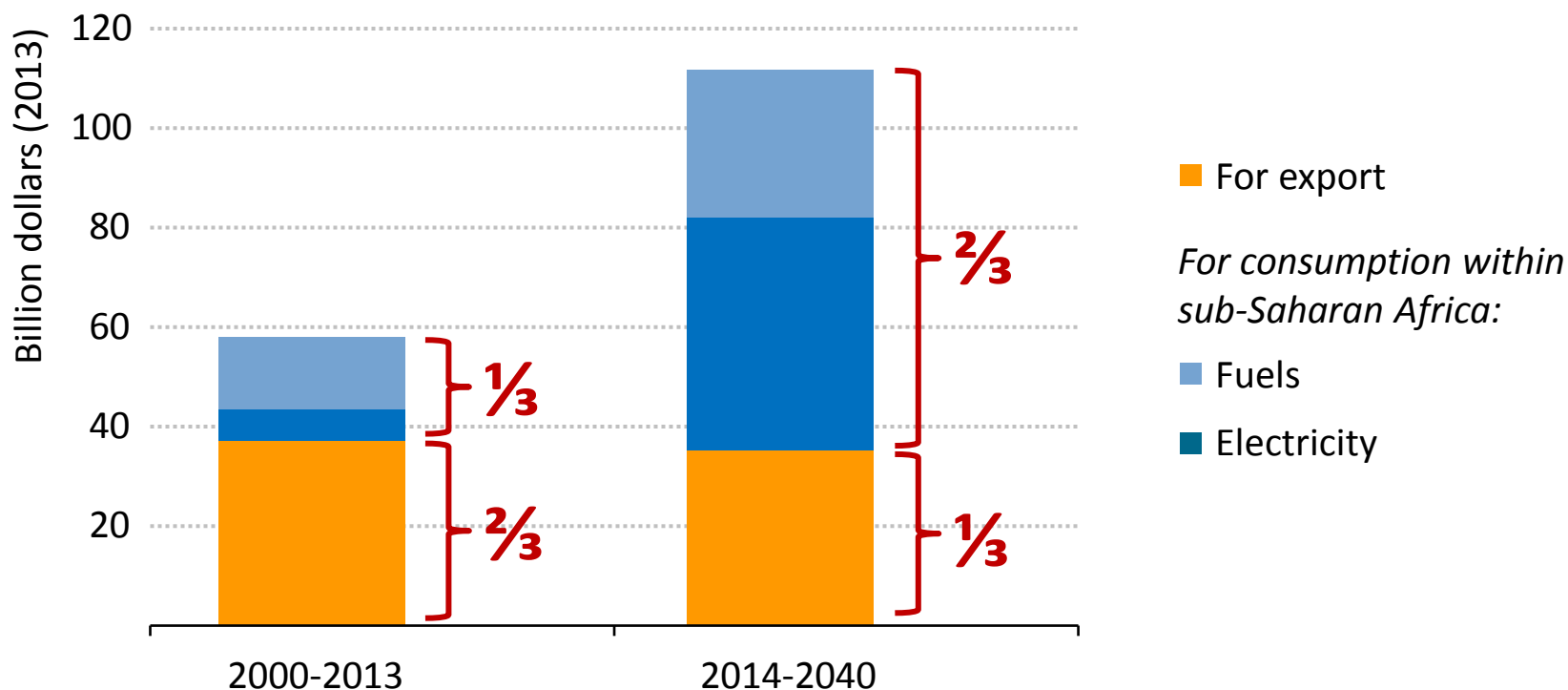
## Increase in gas production in selected countries & regions, 2012-2040



***LNG export is the anchor for the east coast gas discoveries, but half of the overall increase in gas output goes to domestic power generation & industry***

# Investment has to come home

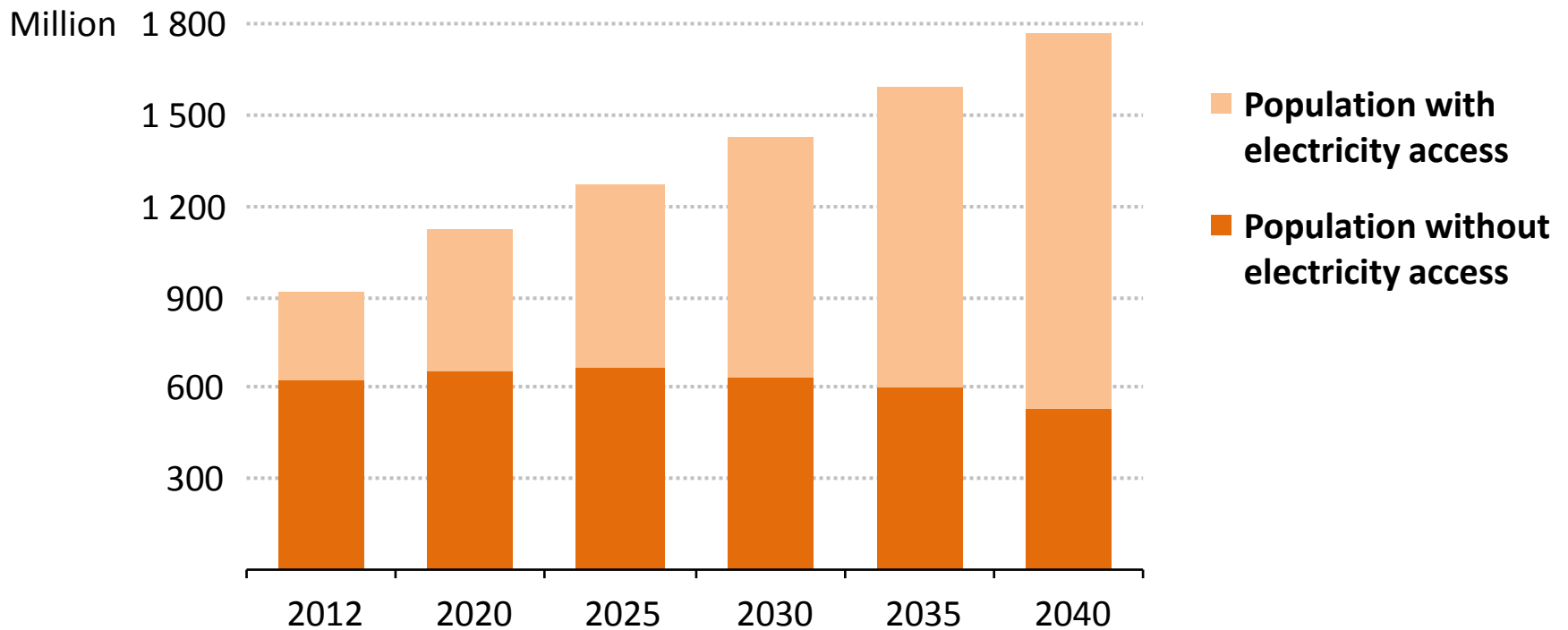
## Average annual investment in sub-Saharan energy supply



***In a reversal of current trends, 2 out of 3 future investment dollars produce energy for sub-Saharan consumers, but this is still not enough to meet their needs in full***

# A large step towards universal access, but still a long way to go

## Access to electricity in sub-Saharan Africa



***Nearly one billion people gain access to electricity, but this still leaves 530 million, primarily in rural communities, without power in 2040***

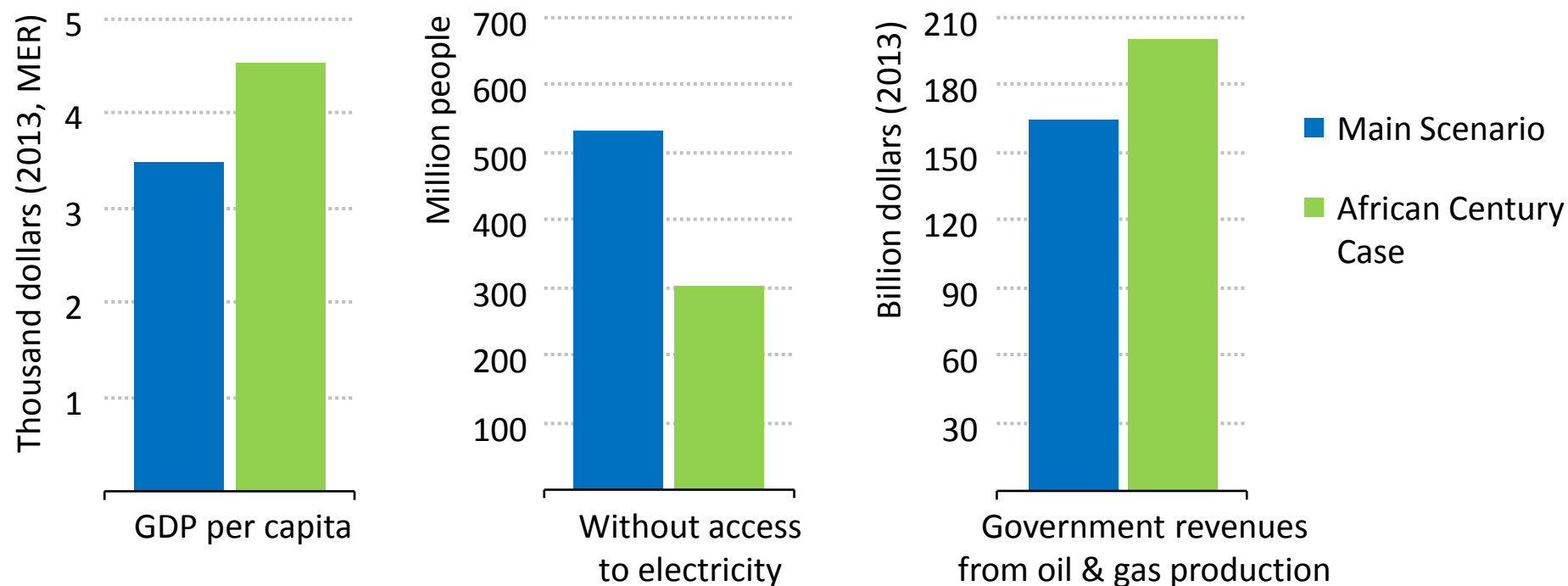


# How could energy make the 21<sup>st</sup> an African Century?

- **Energy could do more to act as an engine of inclusive economic & social development**
- **An African Century Case assesses the impact of faster movement in three key areas:**
  - *An upgraded power sector; reducing power outages by half & achieving universal access in urban areas*
  - *Deeper regional co-operation; expanding markets & unlocking a greater share of the continent's hydropower potential*
  - *Better management of resources & revenues; more efficiency & transparency in financing essential infrastructure*

# Energy can build a shorter path to prosperity

## Outcomes in the African Century Case, 2040



***By increasing the coverage & reliability of energy supply, the African Century Case unlocks an extra decade's worth of growth in per-capita incomes by 2040***

- **Energy is a cornerstone of sub-Saharan strategies for poverty reduction & economic growth**
- **Improvements in sector governance are needed to bring in new energy investors & kick-start development**
- **More efficient & sustainable use of biomass will create a more healthy domestic energy balance**
- **Sub-Saharan Africa remains a mainstay of global oil production & emerges as a major player in natural gas**
- **Concerted action to improve the functioning of the energy sector is essential if the 21<sup>st</sup> is to become an African century.**