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**Item 6: Economic development in Africa:  
Structural Transformation and Sustainable Development in Africa**

**Promoting Renewable Energy Development in Africa**

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*The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.*

# Promoting Renewable Energy Development in Africa

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# Outline

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- Background and stylized facts
- Opportunities for renewable energy (RE) development in Africa
- Challenges
- Policy options
- A comment on the Africa Report 2012

# Background

- Africa has a huge infrastructure deficit.
- Energy is by far Africa's largest infrastructure challenge.
  - At 124 KWh per capita, power consumption in Africa is about one-tenth the developing-world average.
  - An estimated 585 million people in SSA do not have access to electricity.
  - Over 30 countries report regular power shortages.
  - Power outages lead to loss of working days (13 on average in 2009)
  - ... and cause firms to lose about 5% of the sales.
  - For informal firms, the loss is even higher – at 20%.

Data source: Foster/AICD (2008)

The dark continent



# Opportunities

- Africa's energy poverty persists despite the continent's enormous potential in RE
  - 325 days of strong sunlight
  - 15% of world hydro-power potential (less than 10% of which is currently tapped)
  - Significant potential in wind (e.g., Mauritania) and geothermal energy

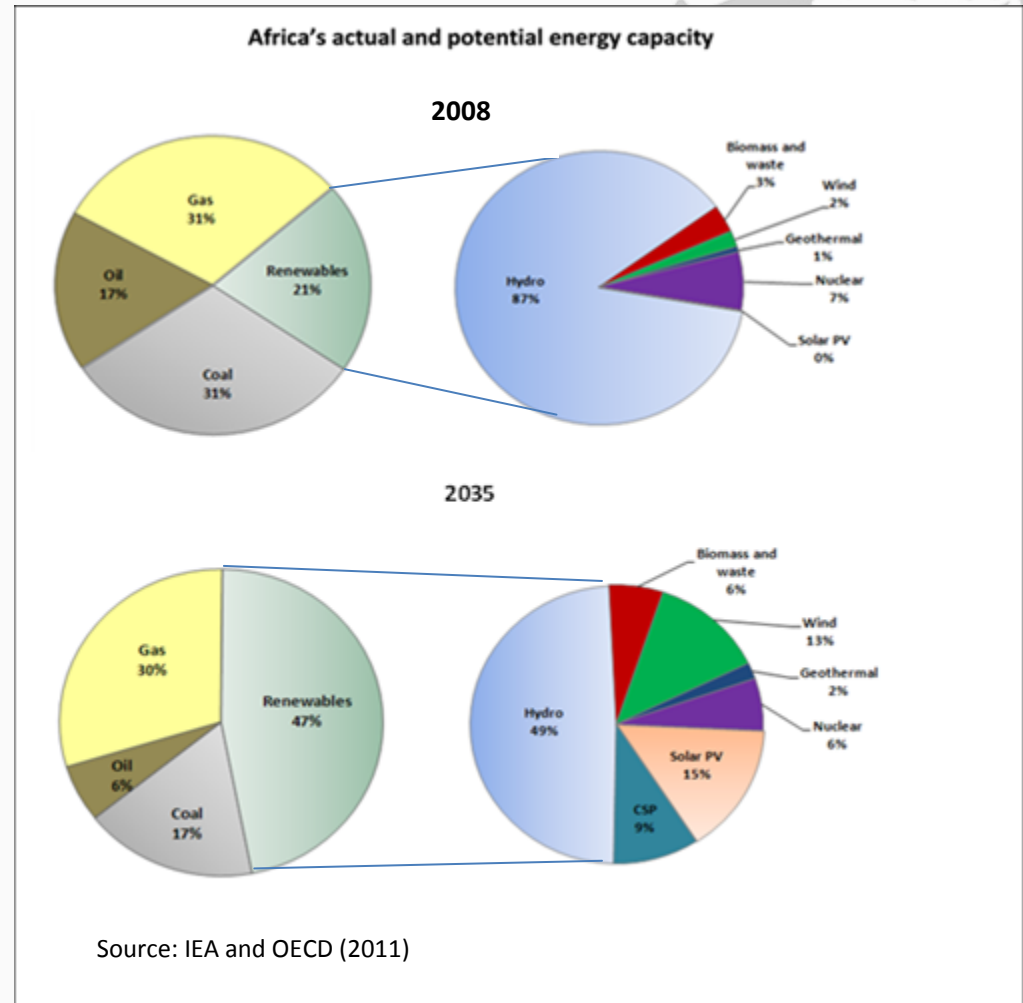
Table 1: Number of countries by region with highest RE potential

Region	Total	Solar	Wind	Hydro	Geothermal
Sub-Saharan Africa	17	21	6	11	7
East Asia/Pacific	4	5	3	6	4
Europe/Central Asia	3	0	6	5	14
Latin America/Caribbean	7	5	8	9	3
Middle East/North Africa	2	3	3	0	2
South Asia	0	0	1	1	0
All Regions	33	34	27	32	30

Source: Buys et al. (2007)

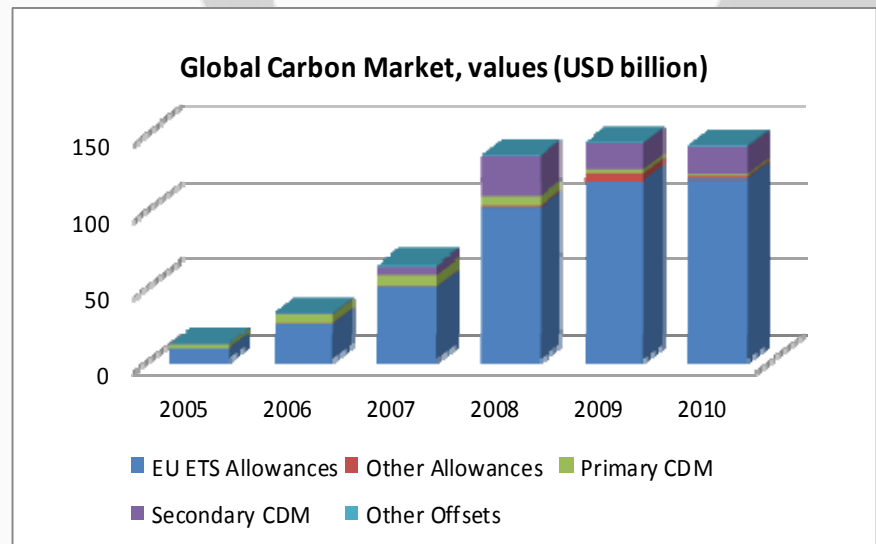
# Opportunities/2

- Share of renewables projected to increase from 21% of total electricity generation in 2008 to 47% by 2035.
- Distribution of renewable energy sources is also expected to undergo a radical change, with wind and solar power gaining further ground.



# Opportunities/3

- RE development can unlock new opportunities for ‘green growth’ in Africa.
- Africa has the opportunity to leap-frog to more efficient infrastructure and technologies.
- The global urgency to limit GHG emissions means that Africa is now in possession of an economic asset: *carbon!*
  - Benefits from PES and REDD+ schemes
  - Development of carbon market in Africa
  - Africa gets only 7% of CDM global market share.





# Challenges



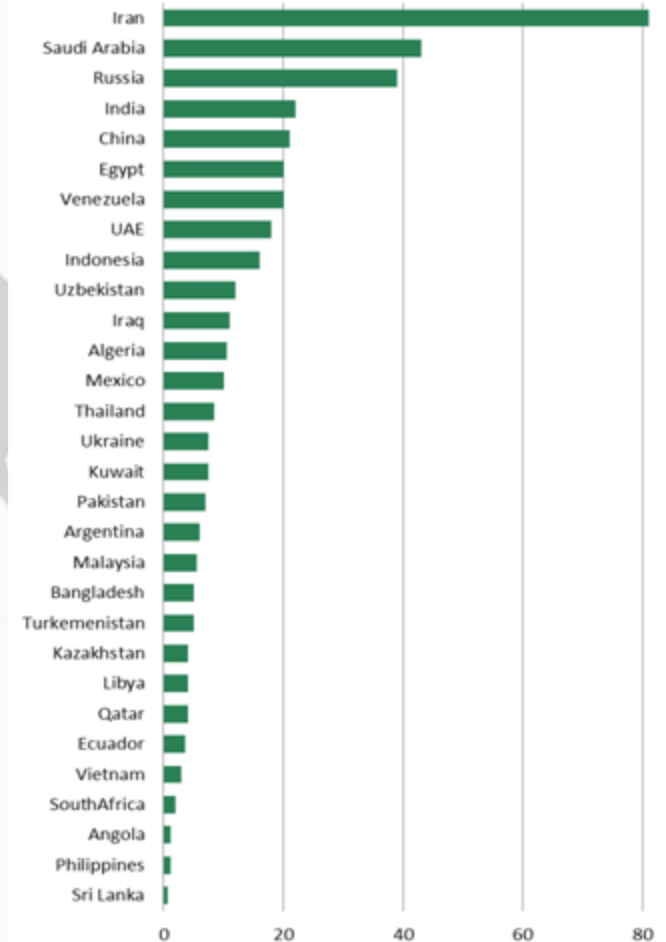
- Financing – arguably the most important constraint to RE development.
  - RE projects involve huge upfront investments while payoffs are spread out into the future and are uncertain.
  - Too risky or beyond the means of any single financier or investor.
  - African countries with high perceived risk find it even more difficult to attract low-carbon finance at commercially viable interest rates.
  - Policymakers too focused on short-term costs
  - Uncertainty with existing financing mechanisms, including CDM; others not easily accessible.



# Challenges/2

- Regulatory challenge: how to curb fossil fuel subsidies?
  - Africa's oil-producing countries spend billions on subsidizing fossil-fuel energy.
  - Egypt – 6<sup>th</sup> largest subsidizer in the developing world – spends US\$20 billion annually.
  - Powerful vested interests help perpetuate economic dependence of fossil fuels.
  - Political challenge of reform – case of Nigeria.

Figure 5: Largest subsidizers of fossil-fuel energy (USD billion)



# Policies to promote RE development

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- Government must establish a set of enabling conditions to speed up RE development. Policy should aim at:
  - Gradually phasing out subsidies on fossil fuels. Oil-rich countries can use part of the proceeds from fuel exports to invest in renewable energy projects, as in Egypt.
  - Addressing market failures through the provision of incentives (e.g., feed-in tariffs) and appropriate regulatory frameworks, including taxes and standards.
  - Strengthening market infrastructure and market-based mechanisms such as the Africa carbon market and the CDM.
  - Boosting public investment in renewable energy, and providing an environment conducive to attracting private investment, including FDI.
  - Enabling appropriate technology development, transfer and adoption (through enhanced capacity building).

# Policies to promote RE development/2



- Regional entities and the international community have a crucial role to play.
- **Regional entities should:**
  - Coordinate investment promotion efforts to avoid a “race to the bottom”.
  - Develop policies for regional power sharing.
  - Target funding to help member states harness their RE potential.
  - Make concerted efforts to develop an Africa carbon market and an Africa Green Fund.
- **The international community must:**
  - Deliver on its pledges.
  - Make sustained efforts to agree on a global climate deal favourable to poor countries, and to Africa.
  - Move fast to operationalize the GCF.
  - Work together to ease African countries’ access to global climate finance mechanisms such as the WB’s CIF.

# Comment on the Africa Report

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- The Report provides a thorough analysis and makes recommendations for promoting a “green” structural transformation in Africa through a processing of “relative decoupling” of resource use and its attendant environmental impacts from economic growth.
- It makes the point that it is possible for Africa to promote growth through structural transformation without compromising the environment.
- Policy recommendations focus on aid and technology transfer and adoption in three key sectors, namely agriculture, energy and industry. The role of the private sector in the SST process is highlighted.

# Comment on the Africa Report/2

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## Food for thought:

- Given the extremely slow pace of structural transformation in Africa, is the debate on SST relevant?
- Experience suggest that where there is strong political will, the SST process could be launched on the basis of locally available technologies (and with limited external funding). Taking the process to the next level, though, requires a change in the mind-set of economic actors and a change in policy.
- Therefore, is the emphasis on technology and innovation exaggerated? Doesn't it make more sense to focus on information and sensitization?
- If finance is the ultimate constraining factor, shouldn't the Report have devoted more space to this issue, and engage discussion on innovative mechanisms for financing SST?
- While the GG and SST discourse places the ball in the developing countries' camp, does it constitute a diversion from the more important issue of climate change (adaptation)?

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