

ENERGY TRANSITION IN AFRICA

Tracking and Reporting SDG 7 Progress in Africa

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Highlights about The SDG Center for Africa (SDGCA)

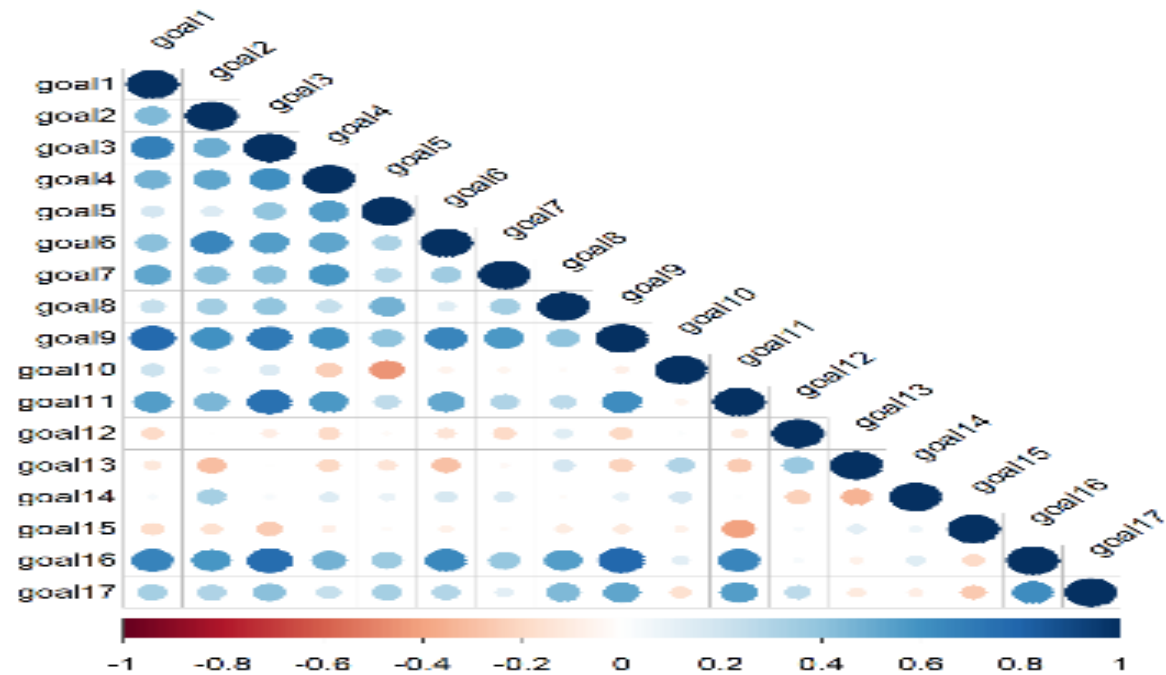
- An autonomous non-for-profit international organization
- Headed by a board of directors composed of the Presidents of African countries, and representatives from international organizations, academia and private sectors
- Based in Kigali, Rwanda and started its operations in July 2016
- Opened a sub-regional center in 2019 in Lusaka, Zambia for the Southern Africa region.
- Provide technical support in monitoring/tracking and reporting of the progress of the SDGs.
- Assess the situation and progress of Africa's SDGs 7 Affordable and Clean Energy



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Energy matters for other SDGs



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SDG Index and Dashboard Data & Method

- Methodology audited by the European Commission's Joint Research Centre
- 67 indicators retained from the global report and 30 Africa-specific indicators
- Coverage criteria: data must be available for 80% of countries
- Data sources
 - Official and non-official internationally harmonized data
 - International organizations, academia, research papers

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Limitations

- Insufficient data availability/coverage:
 - Equatorial Guinea and Seychelles excluded from Index ranking
- Statistical capacity: much of the data are collected by international organizations
- Time lag: some data points are old (for example from a single HH survey) and won't be updated

Tunisia Dashboards

▼ CURRENT ASSESSMENT – SDG DASHBOARD



▼ SDG TRENDS



Energy Supply and Consumption

Total Energy Supply by Source, Africa 2019-(IEA Africa Energy Outlook 2019)

Source	TJ	share (%)
Coal	4,971,786.0	13.9%
Natural gas	5,664,210.0	15.8%
Nuclear	144,567.0	0.4%
Hydro	489,393.0	1.4%
Wind, Solar, etc	303,543.0	0.8%
Biofuels & Waste	16,023,215.0	44.7%
Oil	8,278,885.0	23.1%
Total	35,875,599.0	

Africa Energy Supply

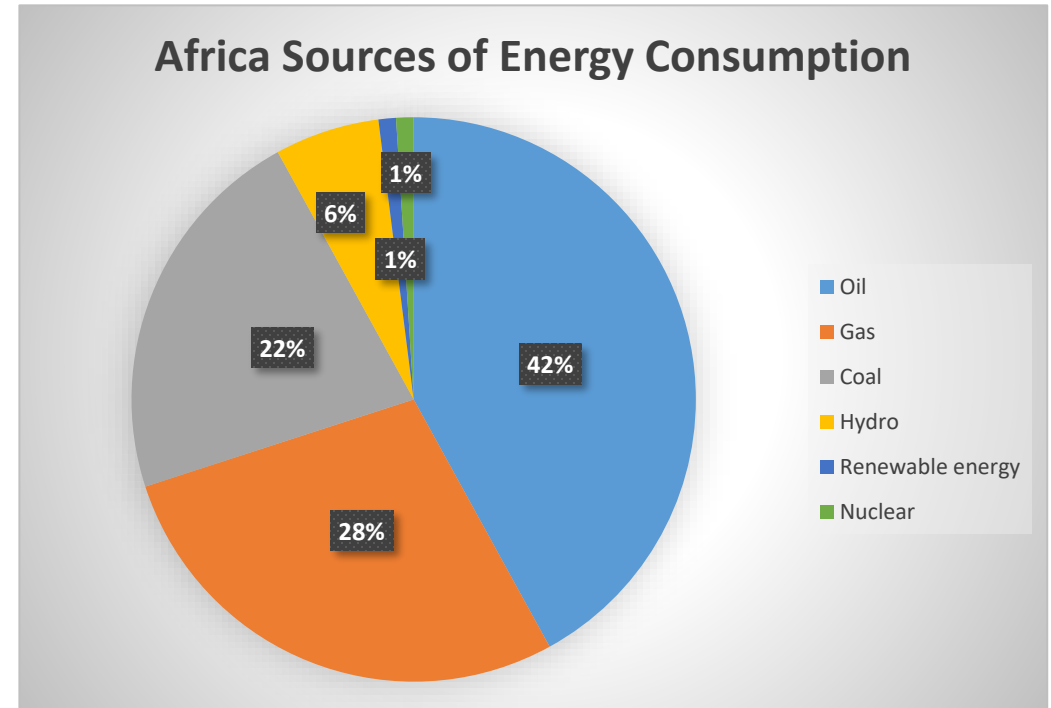
- The major supply source –biofuels & waste
- Total renewables account for 47%
- About 53% was from non-renewable sources (coal + natural gas + oil)

Energy Supply and Consumption (cont..)

Africa Energy Consumption by source

Sources of Energy consumption
(UNEP, 2017-Atlas of Africa Energy Resources)

- Of all energy sources, Africa consumes most oil (42 per cent of its total energy consumption) followed by gas (28 per cent), coal (22 per cent), hydro (6 per cent), renewable energy (1 per cent) and nuclear (1 per cent).

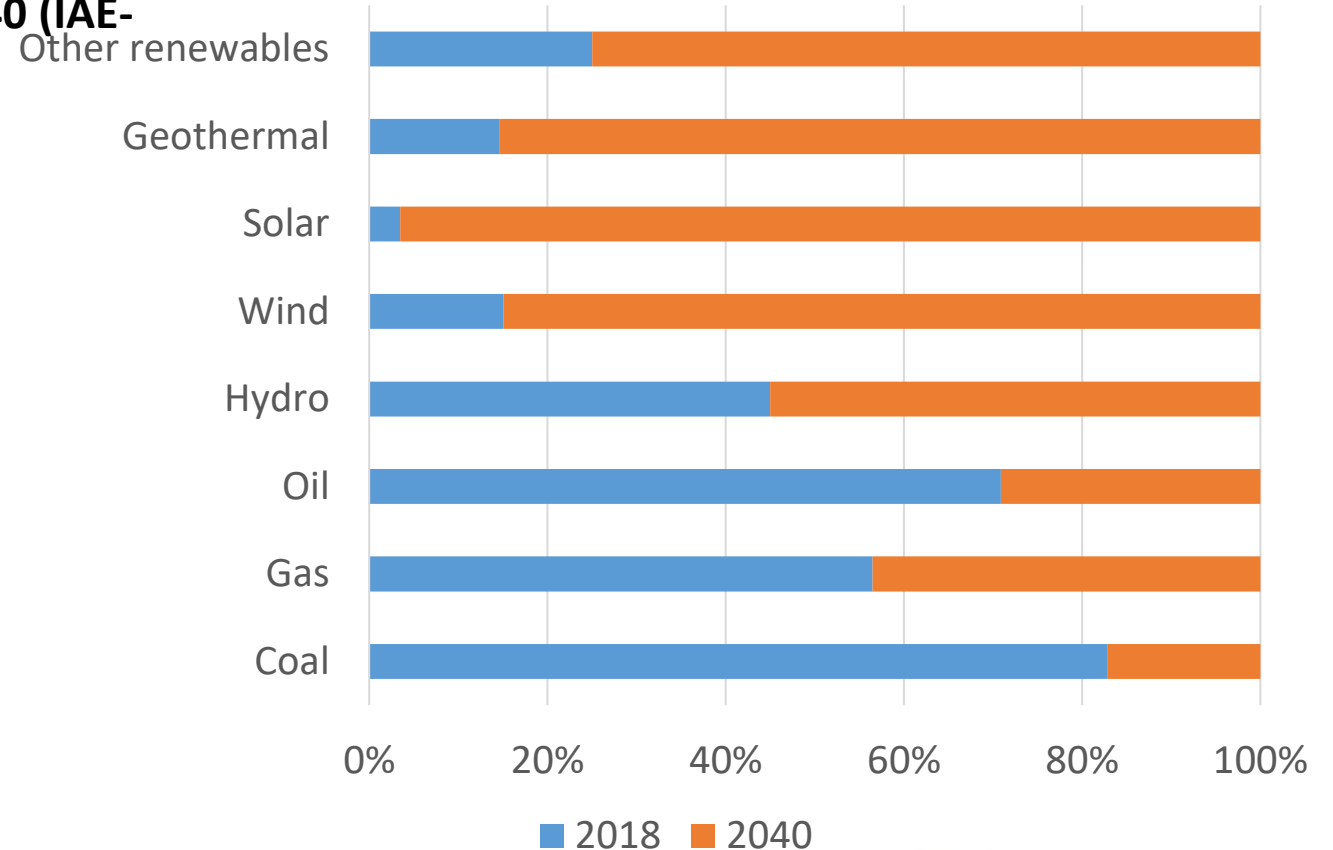


Energy Supply & Consumption

Electricity Generation in Africa by Scenario 2018-2040 (IAE-Africa Energy Outlook)

Source	2018 (TWh)	Share	2040 (TWh)	Share
Coal	258	30.0%	171	6.2%
Gas	345	40.2%	850	31.0%
Oil	77	9.0%	102	3.7%
Hydro	131	15.3%	512	18.7%
Wind	15	1.7%	264	9.6%
Solar	6	0.7%	533	19.5%
Geothermal	5	0.6%	95	3.5%
Other renewables	22	2.6%	213	7.8%
Total	859		2740	

Energy sources	2018	2040 (Plan)
Renewables	20%	60%
Non-Renewables	80%	40%

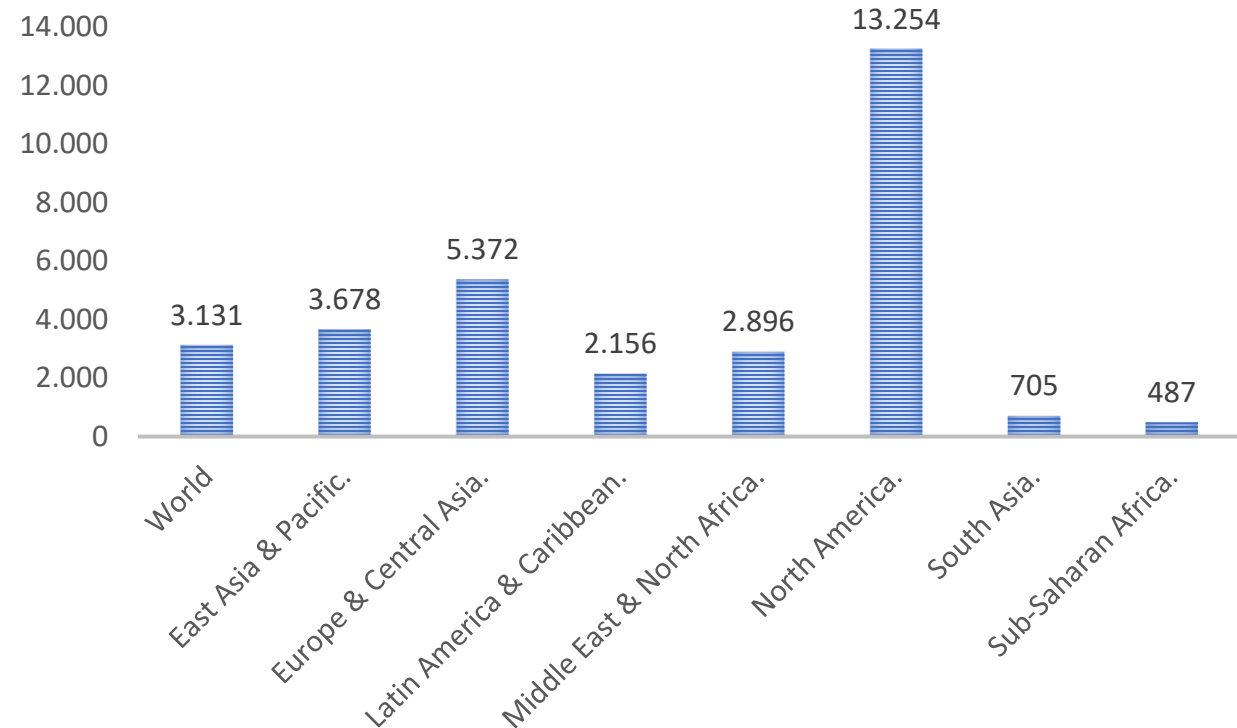


Energy Supply & Consumption

Electric Power Consumption of the world regions (World Bank Data)

- The electric power per capita consumption was the lowest in Sub-Saharan Africa compared with other regions of the world.
- It was more than six times lower than the world average, more than 27 times lower than the highest, North America.
- This low level of electric power consumption of Sub-Saharan Africa implies the reliance of the people on traditional sources of energy- biofuels

Electric power consumption (kwh per capita , 2014)-World Bank data



Discussion point

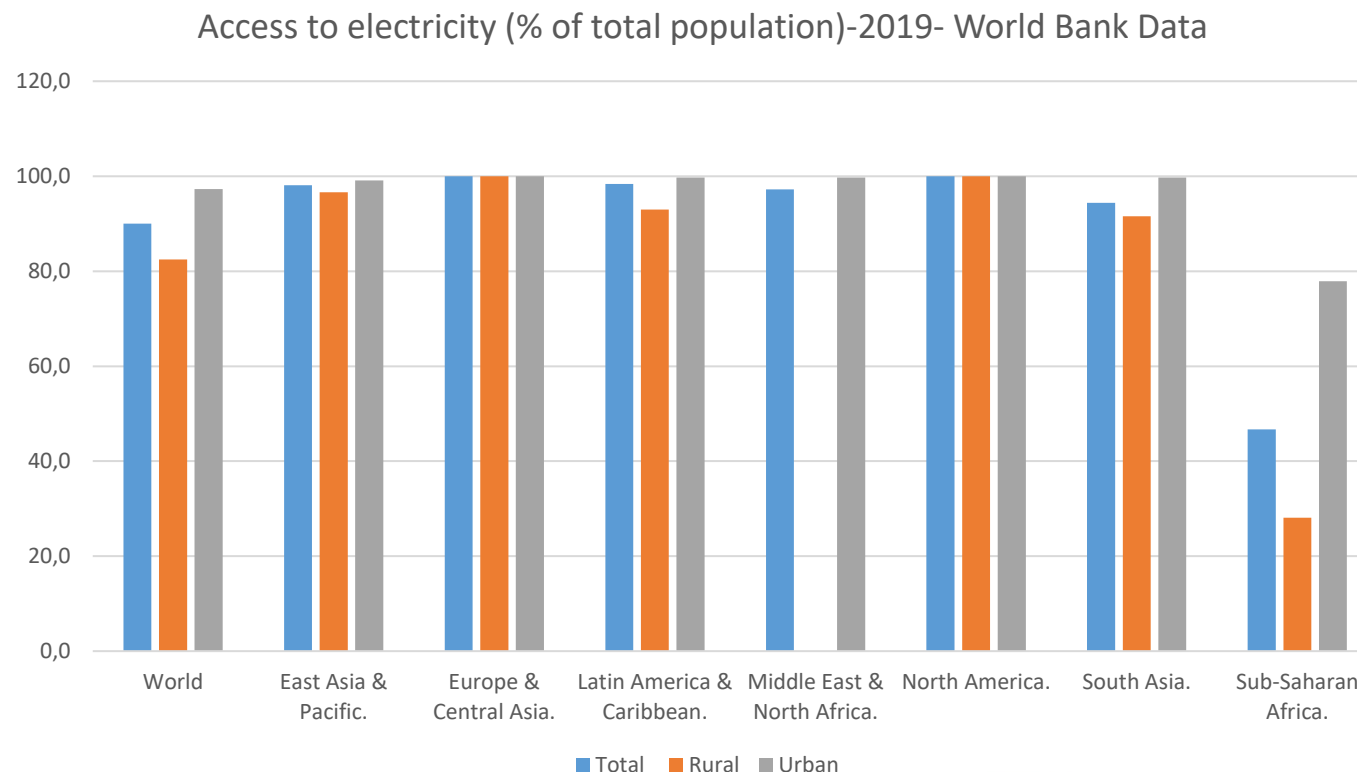
Africa uses more renewable energy than any other of the world's regions, deriving as much as 70 per cent of its energy consumption from renewable sources. One of the reasons, however, is its heavy reliance on traditional uses of biomass by both households and industry. It is estimated that 4 out of 5 rely on solid biomass, mainly fuelwood and charcoal for cooking (UNEP- Atlas of Africa Energy) . Given this fact, then what are the opinions of the participants in transforming the enormous renewable energy resources of Africa into a modern, efficient and environmental friendly manner?

Access to modern energy

Access to electricity of world regions

Energy poverty remains a serious obstacle in Sub-Saharan Africa

- Sub-Saharan Africa has remained to be the lowest in the world in terms of access to electricity
- High disparity between the urban and rural in Sub-Saharan Africa in access to electricity

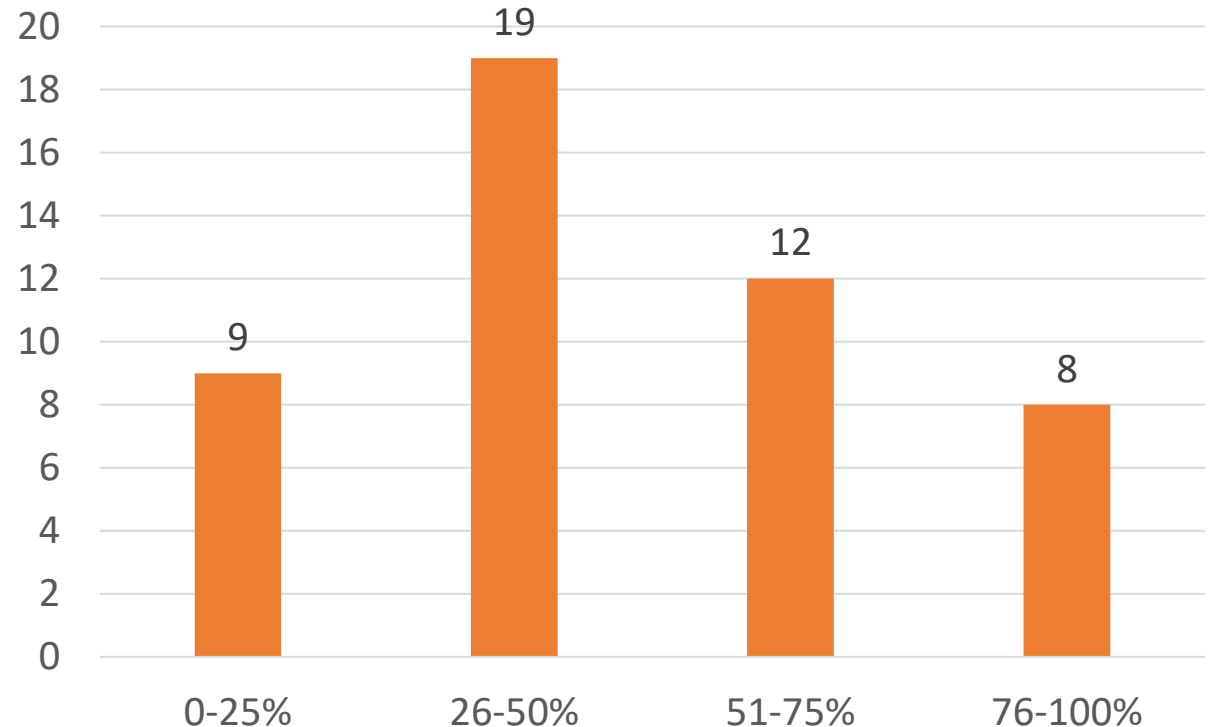


Access to Electricity

Of 48 countries of Sub-Saharan Africa:

- More than 58% (28 countries) had less than 50% access to electricity of their total population.
- The three islands (Cabo Verde 95.5%, Mauritius 100%, and Seychelles 100%) with the smallest number of population have the highest rates of access to electricity.
- The two most populous countries (Nigeria 55.4% and Ethiopia 48.3%) have relatively low percentages of population with access to electricity

Number of countries by range of access to electricity (2019)-
World Bank Data

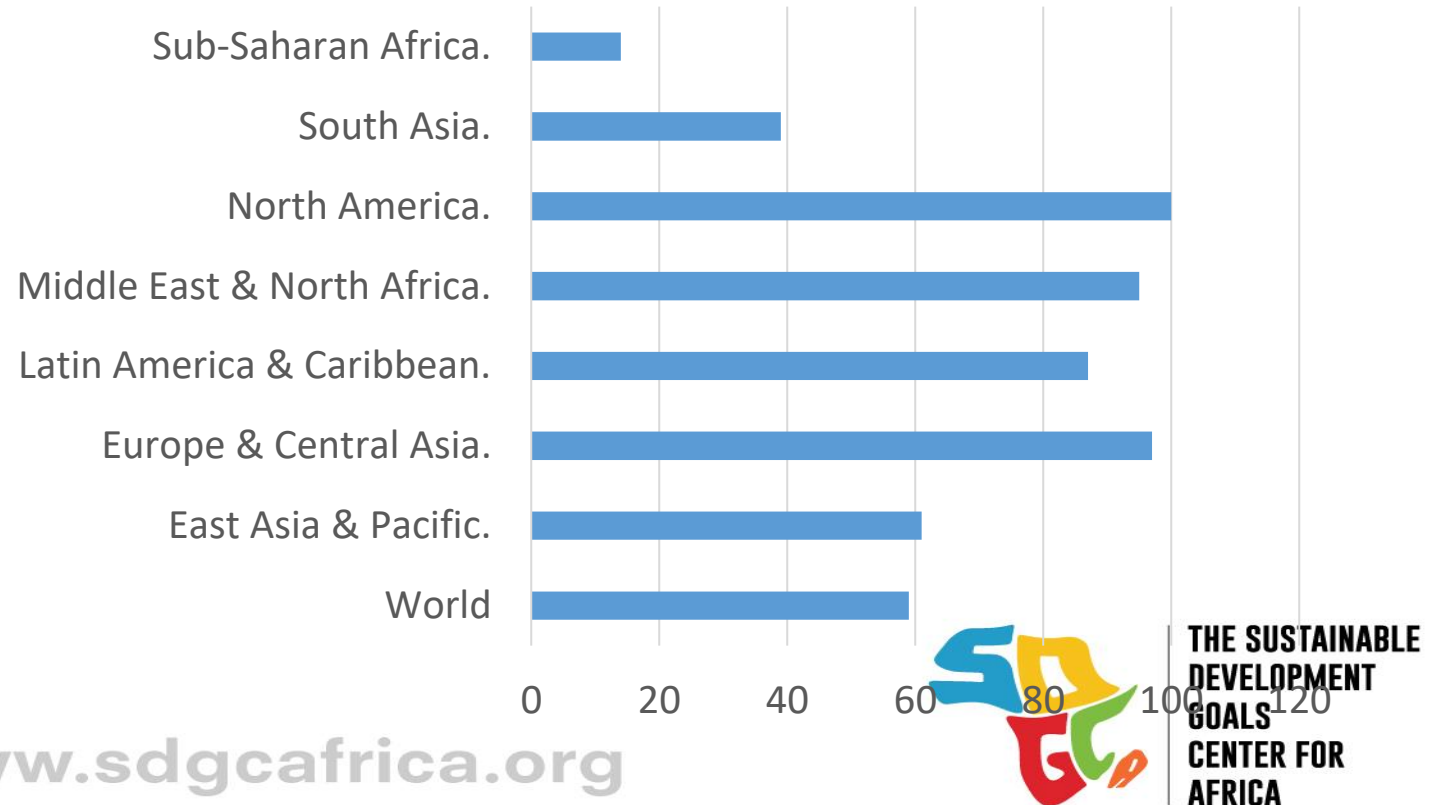


Access to modern energy

Access to clean fuels & technology for cooking

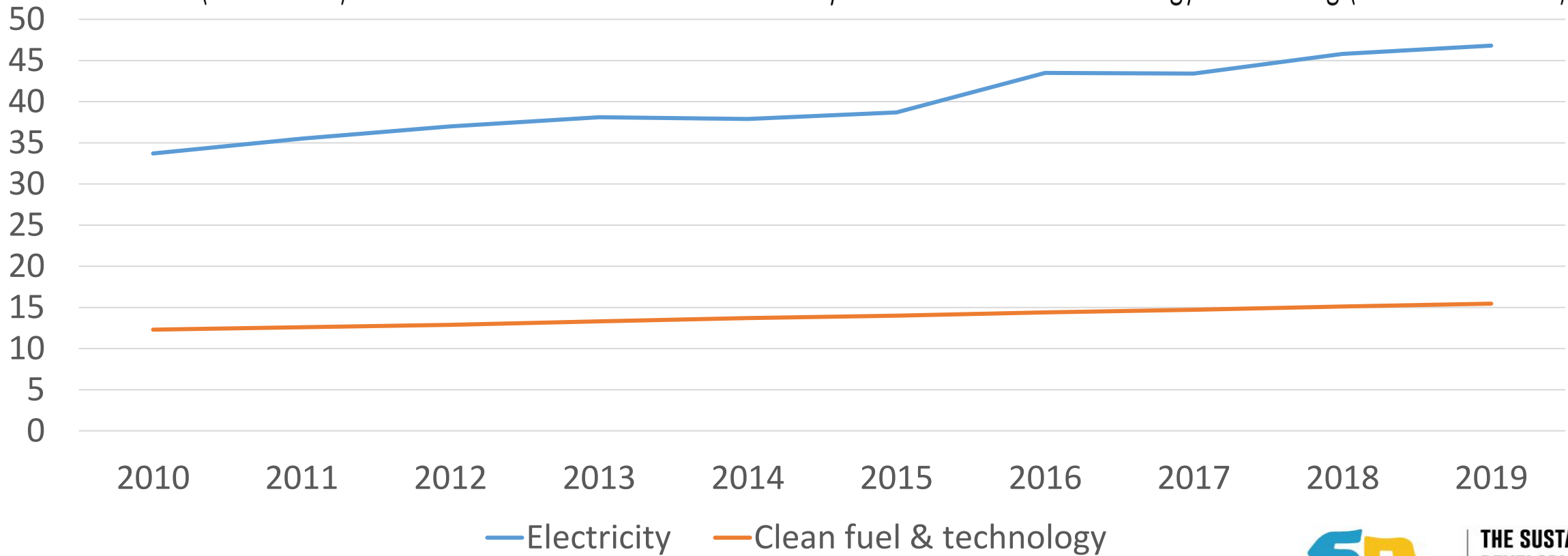
- Also, Sub-Saharan Africa is the lowest in terms of access to clean fuels & technology as compared to the rest of the regions in the world.

Access to clean fuels & technology (% of total population)-2016-World Bank Data



Tracking progress

Historical data (2010-2019)- Sub-Saharan Africa access to electricity and clean fuels & technology for cooking (World Bank Data)



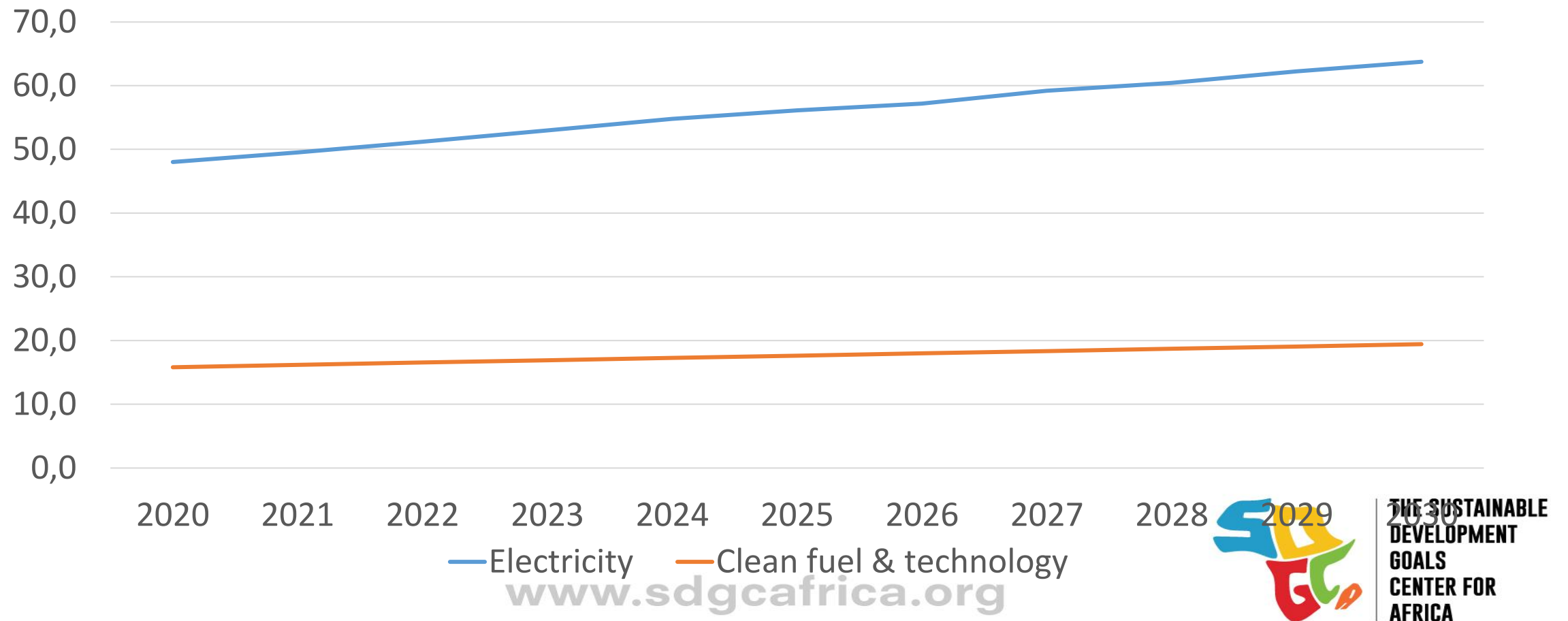
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Tracking progress

Sub-Saharan Africa- forecast of access to electricity and clean fuels & technology for cooking based on the historical pace of progress (2010-2019)



Tracking progress

Sub-Saharan population without access to electricity and clean fuels & technology for cooking scenarios

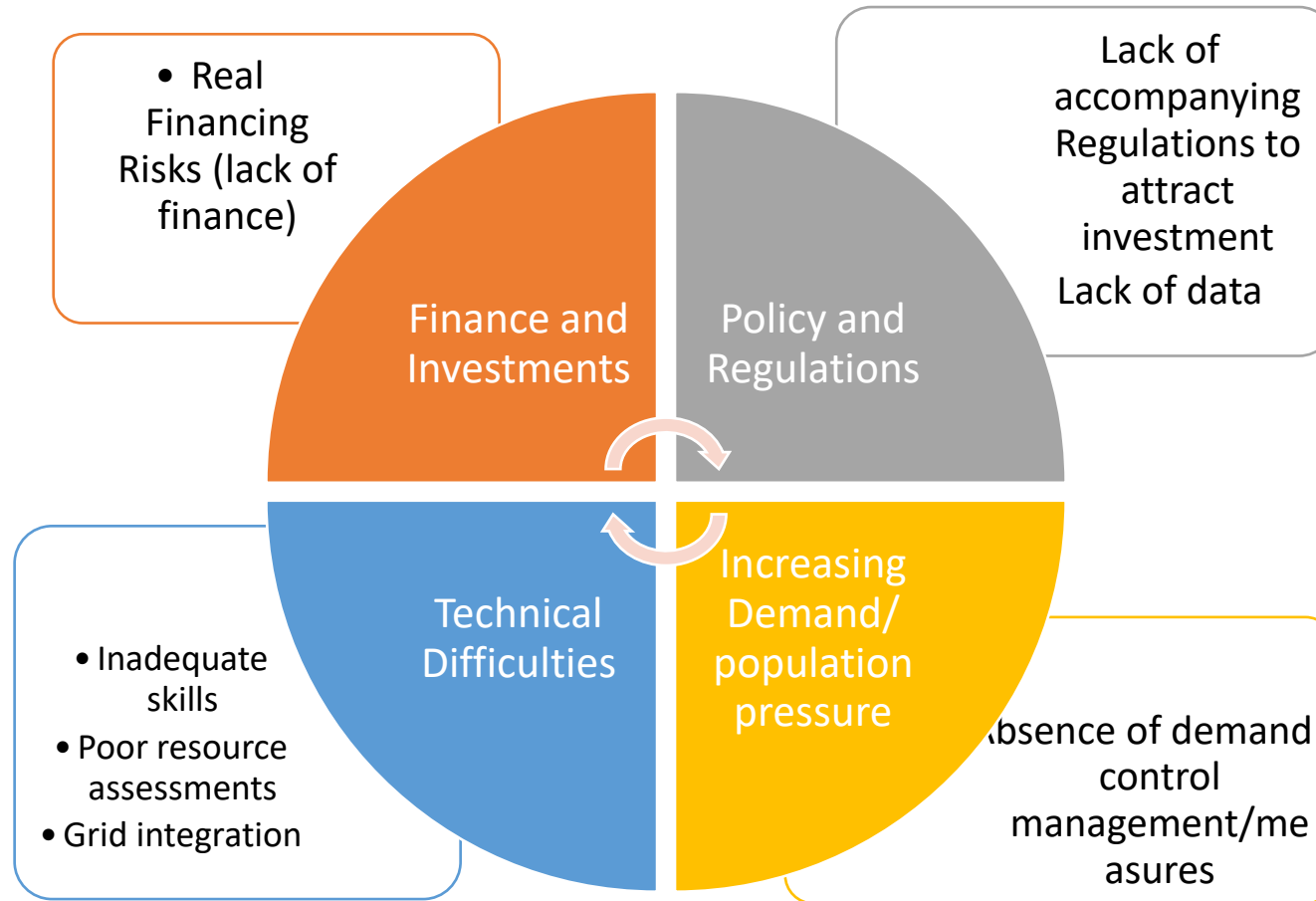
Year	2010	2019	2030
People without access to electricity	576,433,000	589,477,000	611,172,000
Increase		13,044,000	21,695,000
Year	2010	2016	2030
People without access to clean fuels for cooking	762,639,000	875,821,000	1,360,786,000
Increase		113,182,000	484,965,000

- The accesses to electricity and clean fuels for cooking have not kept pace with population increase of Africa.
- There were more people without access to electricity and clean fuels in 2019 than in 2010
- If the pace of progress between 2010-2019 will continue (business as usual scenario), again more people will remain without access to electricity and clean fuels in 2030.

Discussion point

Do participants share these concerns of not meeting the SDG 7 targets by 2030? If so, what are the major challenges? What opportunities exist? What practical measures need to be taken in order to get out of such barriers? Do we think also that the pandemic has aggravated the problem?

Challenges

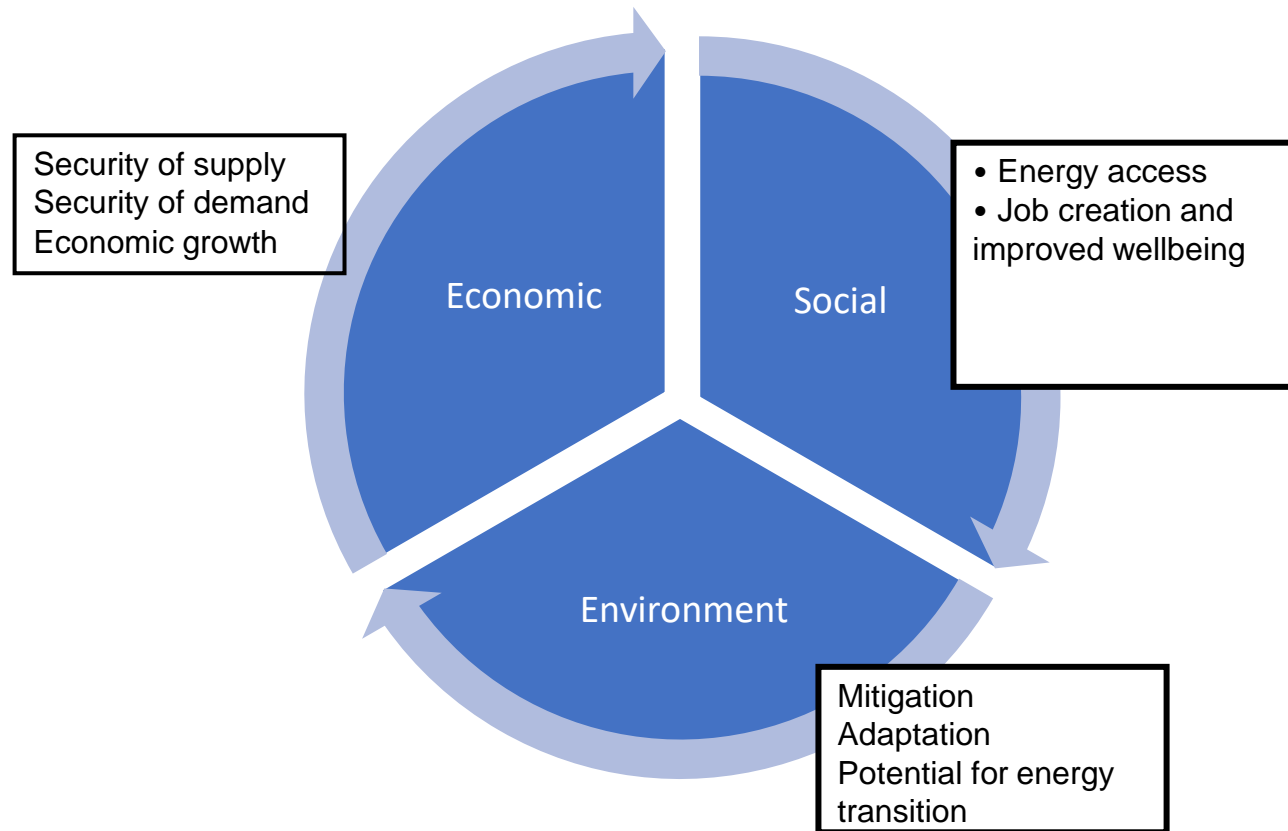


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Opportunities



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Global & Regional Initiatives

GLOBAL AND CONTINENTAL DEVELOPMENT POLICY PROCESSES TO PROMOTE SUSTAINABLE ENERGY IN AFRICAN COUNTRIES

- The combination of the adoption of the 2015 **Paris Agreement** and **Sustainable Development Goal 7** of the 2030 Agenda for Sustainable Development,
- The designation of 2014–2024 as the “**United Nations Decade of Sustainable Energy for All**”
- **African Union Agenda 2063 on Energy** that calls for the harnessing all African energy resources to ensure modern, efficient, reliable, cost-effective, renewable and environmentally friendly energy to all African households, businesses, industries and institutions, through building the national and regional energy pools and grids,
- The creation of **the solar Alliance, of which 49 out of the 54 African countries** are either members or prospective members.
- Implementation of activities under the goal is achieved through **the Programme for Infrastructure Development in Africa (PIDA) energy projects.**
- **African Renewable Energy Initiative** that aspires to achieve at least 10 GW of new and additional renewable energy generation capacity by 2020 and mobilize the African potential to generate at least 300 GW by 2030.
- Decisions by the African Ministers for Environment (i) during their 16th session of **African Ministerial Conference (AMCEN-16)** held in Libreville, Gabon (June 2017) in their declaration on Investing in Innovative Environmental Solutions; and (ii) During the 14th session of AMCEN (AMCEN-14) and its adoption of the Regional Flagship Programme on “African Sustainable Energy Development in Africa” in support of the implementation of Rio+20 outcome in Africa.
- “**Aide Memoire**” between UN Environment Africa office and the African Union Commission (AUC)’s Department for Infrastructure and Energy on the subject of cooperation and collaboration on Sustainable Energy Development Programmes in Africa.
- The **Communique on Renewal Energy between African Ministers of Energy and International Renewable Energy Agency (IRENA)** in 2011
- The **Johannesburg Energy Declaration by Ministers of Energy** in 2011.

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Global & Regional Initiatives

Some initiatives by SDGCA+Partners

- **Optimal Energy Mix Planning**- to support and provide guidance to East & South African countries in optimizing Energy Mix towards the realization of achieving the Global and Continental Development Policy Processes, i.e. Sustainable Development Goals, Paris Agreement 2015 and the AU Agenda 2063: The Africa we want.
- **Water-Energy-Food Nexus**- research initiative to enable rural households to guarantee their livelihoods through utilisation of the water, food, energy nexus under changing climatic conditions.
- **Renewable Energy for Africa Agriculture**-based on best practices and accumulated knowledge, assesses the nexus between renewable energy, water, agriculture and socio-economic development in Africa

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Conclusion

- Needs extra ordinary efforts to overcome the challenges, exploit opportunities and accelerate the access to modern energy
- Energy transition for Africa is to shift from non-renewables to renewables + from traditional way of use to modern, economical and efficient way of use
- Removing physical, legal, financial, socio-cultural and political barriers, in particular for the poor and disadvantaged groups is a critical step to increase access to basic services.
- Finally, Africans need to join hands to get rid of poverty in energy and also poverty in all forms.



Africa can do it ...



We shall leave no One behind

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THANK YOU!!!

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