



Africa-Europe Foundation High-Level Special Dialogue: Energy and Climate in the Africa-Europe Partnership

CONTEXT

The Africa-Europe Foundation (AEF) aims to build a real, inclusive, and transformative partnership between Africa and Europe. The 6th AU-EU Summit planned to take place on 17-18 February 2022 represents a significant milestone in which to break new ground towards our shared future.

Ahead of the 6th Summit, to facilitate an open and frank dialogue on key, often contentious, issues between our two continents, AEF organised three high-level “Talking Africa-Europe” specials focusing on the priority issues of Energy and Climate (January 20), Migration and Mobility (January 27) and the Vaccine Challenge (February 3).

DIALOGUE ON ENERGY AND CLIMATE

COP 26 decisions have left unsatisfied both climate activists and African stakeholders keen to address the key challenge of insufficient access to energy on their own continent. Ensuring access to affordable, reliable, sustainable and modern energy for all citizens of both continents has to be a common goal and shared priority.

This debate aims to foster an honest and frank dialogue about the best pathways, and needed resources and tools, to energy transition for the two continents and its people, that support both access to energy for all and climate solutions.

SPEAKERS



Thierry Breton

European Commissioner for Internal Market



Ambroise Fayolle

Vice-President at the European Investment Bank (EIB)



Tanja Gönner

Chair of the Management Board at the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)



Mo Ibrahim

Co-founder of the Africa-Europe Foundation and Founder and Chairman of the Mo Ibrahim Foundation



Uzodinma Iweala

CEO of The Africa Centre



Wanjira Mathai

Vice-President and Regional Director for Africa at the World Resources Institute (WRI)



Charles Michel

President of the European Council



Damilola Ogunbiyi

CEO and Special Representative of the UN Secretary-General for Sustainable Energy for All (SEforAll) and Co-Chair of UN-Energy



Benedict Okey Oramah

President and Chairman of the Board of Directors of the African Export–Import Bank (Afreximbank)



Mary Robinson

Co-Honorary President of the Africa-Europe Foundation (AEF), Chair of the Elders



H.E Mr. Macky Sall

President of Senegal and Chairperson of the African Union



Vera Songwe

United Nations-Under Secretary- General & Executive Secretary, United Nations Economic Commission for Africa



Frans Timmermans

European Commission Executive Vice-President for the Green Deal



Laurence Tubiana

CEO of the European Climate Foundation (ECF)



Kandeh Yumkella

Co-chair of the Africa-Europe Foundation Strategy Group on Energy, Sierra Leonean Member of Parliament, and former CEO of Sustainable Energy for All (SEforAll)

EXTENDED REPORT OF THE DISCUSSION

“There is a gap between how Africans look at the joint issues of climate and energy and how our European friends look at them. We need to close that gap if we want to make progress” said **Mo Ibrahim**, Co-founder of the Africa-Europe Foundation and Founder and Chairman of the Mo Ibrahim Foundation.

In 2019, the entire population of the EU, accounting for just under 445 million people, had access to electricity, while just over half (54.7%) of the 1.3 billion people living in Africa had access. Almost 600 million Africans remain off-grid, more than 1.3 times the population of the EU. There are also stark inequalities within the African continent, and within African countries, when it comes to access to energy. Egypt for example has 100% coverage, while South Sudan has 6.7% coverage. All 27 EU member states have full coverage.

“I sincerely hope that the summit will be an opportunity for a new paradigm, approach and alliance for Africa and Europe,” declared **Charles Michel**, President of the European Council. *“We want more prosperity in Africa and Europe, taking into account the global challenges: climate change, the digital evolution, energy, infrastructure, health, and all other challenges.”*

“We need to agree – it will be one of the goals of the summit – on the principles for the future relationship between Africa and Europe,” Charles Michel continued. *“Mutual respect, sincerity, mutual interests, a role for the private sector, and how it is possible on both sides to improve governance.”* *“African economies are polluting the least, but we are the most affected by the aftermath of climate change,”* said **Macky Sall**, President of Senegal, and Chair of the African Union. He went on to argue



on the need to look at the substance of the issues to make a real step forward by the time of the summit. *“We should not put additional injustice on the shoulders of Africa by no longer subsidising fossil fuels, as was decided at COP 26.”*

“Together with Europe, we need to come up with a joint strategy that will be climate-friendly but also takes into account the development level of African countries,” he added.

Participant to the discussion, **Stephen Karekezi**, African Energy Policy Research Network (AFREPREN/FWD), commented: *“It is also important to underline that this injustice could also adversely affect Africa current and future contribution to not only Africa’s energy security but also Europe’s energy security and diversity of energy supply”.*

DIFFERENT STARTING POINTS

In 2019 Africa accounted for 17% of the global population but just 3.4% of global energy consumption, while the EU, representing 5.8% of the global population, accounted for 10.4% of global energy consumption.

This means that, in per capita terms, **someone living in the EU in 2019 consumed on average nine times as much energy as someone living in Africa.**

“The AU-EU summit is an opportunity for a renewed partnership for our two continents based on shared interests and shared values,” said European Commission Executive Vice-President for the Green Deal **Frans Timmermans**. *“The green transition should be at the heart of our cooperation agenda for the next 10 years, and of course we have different starting points.”*

Responding to the concerns raised about Europe refusing to fund gas projects in Africa, he said that the EU considers that *“gas can be a bridge to climate neutrality, but only if it replaces coal and if investments are hydrogen ready”.*

He mentioned the *“incredible improvement in competitiveness of wind and solar energy technologies”* in the last decade, highlighting how much cheaper they had become, and said *“the European Commission will bring to the summit a concrete offer to support energy access for the next decade”.*

“The Green Deal is not about a green fortress; it is about bringing others into green growth”. COP 27 is coming back to Africa, so let us grasp this opportunity and create a stronger alliance. Together we can go very, very far.”

“Our future is intertwined,” said European Commissioner for the Internal Market **Thierry Breton**. *“There can’t be European success without African success. The first thing we need to do is to listen to Africa when it comes to its energy needs.”*

He also highlighted the key role of private sector, stating that technological innovation will be needed, and that Africa may require €100 billion a year to fund electrification.

Mo Ibrahim highlighted that *“Africa is not against green technologies”* but argued it is *“morally*

indefensible to see Europe wallowing in gas, some of which comes from Africa, yet refusing to fund gas projects in African countries.”

Participant to the discussion, **Patrick Worms**, World Agroforestry Centre, added: *“as a Belgian, I am profoundly ashamed of the fact that we have decided to shut our low carbon nuclear power plans for irrational reasons and to build new gas plans to replace them, while at the same time voting to prevent funding of gas plants in Africa. That is hypocrisy of the greatest order”*.

NO DEVELOPMENT WITHOUT ENERGY

“There can’t be economic development without electricity,” insisted President **Macky Sall** as he closed the event.

To have electricity, he argued, there is a need for a basic source of power. For western economies, it has been coal, nuclear, and gas, which has guaranteed energy production at a low cost. Africa too, has the right to a basic source of power to economically develop.

“There must be some basic energy for Africa to economically develop, taking into account the energy needs of Africa, and this cannot be questioned”.

He also made reference to the fact that the whole continent of Africa consumes the same amount of energy as the island of Manhattan with around 25 countries consuming less than 500 megawatts and the largest just below 2000.

Participant to the discussion, **Hilary Barry**, LadyAgri, added: *“Without energy to transform our sustainable food systems, create jobs for women and youth, Europe will pay a very high price. We need less talk and more action in Europe... China and Russia are in the field and advancing quickly, working and financing agri-industry, mining, infrastructure”*.

IDENTIFY ENERGY TRANSITION PATHWAYS COMPATIBLE WITH BOTH CLIMATE AND THE FIGHT AGAINST POVERTY AND INEQUITY

A key focus of the debate was around subsidising fossil fuels, specifically gas, in Africa. But it also highlighted the need to identify “just” energy transition pathways, compatible with climate, but also with the need to fight poverty and inequality. It also noted the need to include health dimensions – such as the women and children death-toll from “unclean” cooking solutions.

Africa’s share of the global carbon emissions (4.0%) is less than half its share of the global population (17.0%), while the EU’s (8.2%) is considerably higher than its share of the global population (5.8%).

Damilola Ogunbiyi, CEO of Sustainable Energy for All (SEforAll), co-chair of UN Energy, and former CEO of Nigeria’s Rural Electrification Agency, highlighted that almost a billion people do not have access to clean cooking in Sub-Saharan Africa and that energy poverty kills 10 million Africans every decade.

“We are talking about asking countries to go on an energy transition - that is a full electrification of the entire economy - when these countries still want to achieve access to energy, industrialisation, and a better future for their people. For that to happen, gas has to be part of the transition. It is not one or the other: we need to supply adequate clean cooking; we have to supply gas to integrate as a baseload for renewables. Renewables don't just happen magically.”

Ogunbiyi argued that there is a lot of misconceptions about gas, but it has to be part of energy transition plans. *“I'm against people saying they will not fund any fossil at all... I'm for people saying we will fund projects as long as it's part of an energy transition plan and you see a pathway to net zero.”*

“Poverty is the biggest threat that is facing Africa today. And poverty is also the biggest threat to climate in Africa. It is not the pursuit of access to energy,” noted **Benedict O. Oramah**, the President of Afreximbank. *“If we want to attain the SDGs for Africa, we need to double electricity generation by 2030 and fivefold by 2050.”* To achieve net-zero, Africa requires \$2.8 trillion.

Echoing President Sall's comments, he said that *“Africa is a victim of the problem of climate change, rather than the cause”* – referring to the fact that while Africa currently represents 17% of the global population, the continent only accounts for 4% of global greenhouse gas emissions.

He highlighted that *“one third of African countries depend on fossil fuels for their foreign exchange revenues, fiscal revenues, and a significant portion of employment. So, if you just cut financing to fossil fuels, we are going to see many countries go up in flames”*.

From his perspective: *“the African continent has to begin to design the financing mechanisms that will help achieve and transit towards net-zero. This will happen by making sure we maintain sustainable financing of fossil fuels while also taking advantage of climate opportunities”*.

NO SILVER BULLET, NO ONE-SIZE-FITS-ALL

Without South Africa, Sub-Saharan Africa is responsible for only 0.55% of the current global greenhouse gas emissions. If this whole region were to be powered by gas to get people out of energy poverty, emissions would rise by 1.6%.

According to **Laurence Tubiana**, CEO of the European Climate Foundation: *“The EU should be consistent, in particular when preparing COP 27 in Sharm El-Sheikh, on the real support for each African countries' energy transition plans. There is no silver bullet, no one-size-fits-all. Every country has its own resources and the potential of developing them. The EU has to support these plans,”* she declared.

“The energy transition plan has to be discussed together and there has to be support for this perspective of how Africa, together with Europe, will really be fulfilling the Paris Agreement goals. There is a wonderful economic opportunity for Africa to go in the green direction but based on African countries' own discussions on what they want their energy transition to look like.”

Participant to the discussion, **Elisa Estrada Holteng**, The B Team, commented: *“In relation to gas as an element of medium term (2030) transition plans, how can we ensure there is going to be*

accountability in the longer term? How to ensure that the incentives for continuing to pursue transition timelines remain consistent - and improving - so that we avoid locking in gas reliance?”

NO “SUSTAINABLE” TRANSITION IF NOT “JUST”

Wanjira Mathai, Vice-President and Regional Director for Africa at the World Resource Institute (WRI), recalled that *“Africa’s role in the energy transition and low carbon economy is undeniable as a major source of minerals and precious metals central to the green technologies. By 2050 Africa will be the earth’s most populous continent”*.

“80% of the world’s poorest people will be in Africa by 2050. No-one should be left behind in a truly sustainable future. Activists are defining what a just transition means for Africa – what does it mean politically to develop and implement a just transition agenda in Africa’s hydrocarbon agriculture and mining dependent economies? How do we pursue, recognise, and measure “just” in Africa?”

She emphasised that Western partners should ensure that their development policies are consistent with African local visions for justice in this transition. She insisted that there is always a risk of poorly defined concepts driving the African agenda.

“Is it just for global industries to decarbonise in the name of the green economy while remaining profitable through the continued exploitation of workers in vulnerable countries?” she asked.

On the issue of gas, **Vera Songwe**, the United Nations-Under Secretary-General and Executive Secretary of UNECA expressed a strong view.

“Off the shores of Mozambique... we are still exploiting gas for European consumption. If you were a Mozambican who does not have access to energy, and only 17% do, seeing European companies continuing to exploit gas to take to Europe... and saying to Africans you cannot use gas - I think it is impossible.”

She argued that *“gas for Africa is not a question of whether we’re going to do climate change or not. We actually see that when we produce more gas, we actually reduce the consumption and production of carbon emissions by almost 38%.”*

“I worry when Africa waits for Europe to tell it what energy it will fund. If we wait for Europe to tell us, it won’t work, because it won’t push us.”

On this note, **Uzodinma Iweala**, the CEO of The Africa Centre, criticised the *“hypocrisy”* of those who are funding gas in their own countries and asking others not to do the same, so that they can maintain or enhance their lifestyles.

“You cannot ask the continent of Africa to carbon finance the lifestyles of wealthier nations,” he said, noting the need for African countries to push back on this. *“This is a global problem, this is a situation about justice and equity, this is a situation in which we all need to sit down and really think about what kind of lives we want to live in the future”*.

INCREASE INFRASTRUCTURE RESILIENCE

Ambroise Fayolle, Vice-President of the European Investment Bank (EIB), recalled that there is “a massive need to support more infrastructure resilience, including in the energy sector, and of course this is linked to the question of adaptation.”

He listed three challenges when it comes to financing energy access projects in Africa – supporting more infrastructure resilience in the energy sector, ensuring the private sector is participating as much as possible, and reinforcing the focus on access to energy through decentralised energy production – through mini-grids, solar home systems combined with storage.

“Given the characteristics of decentralised energy production and the importance of last mile connection, these are investments’ projects that the EIB believes should attract the private sector, including the local one.”

Participant to the discussion, **Stephen Karekezi**, commented: “There is a sector that is of interest to both sides of this debate, namely, energy efficiency investments, which can be pursued irrespective of which form of energy supply options. I would urge more attention on energy efficiency investments in the context of Europe-Africa cooperation.”

DEVELOP DECENTRALISED AND OFF-GRID SYSTEMS

“We need to respond to increasing energy demand to power sustainable agri-food systems and social economic development,” said **Tanja Gönner**, Chair of the Management Board of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). When discussing access to energy, Gönner insisted that there would be faster progress if there were more discussions about decentralised off-grid systems rather than just huge gas projects.

On a positive note, she declared that “technical and economic solutions exist for Africa to leapfrog into a green, resilient, and prosperous future, and clean energies are becoming cheaper. The solar revolution is well underway.” As a development partner, she insisted on the need to act in more coordinated ways. “The individual patchwork project approach is not enough; we have to work differently to be more systematic and coherent and to think out of the box.”

Participant to the discussion, **Ziad Hamoui**, Borderless Alliance, added: “Why do we talk about nationwide electrification, as if it’s an all-or-nothing package? Why can’t we decentralize the process by looking, for example, at deploying cost-effective renewable energy solutions at far-flung border communities, for example, which is a cheaper proposition for providing them with energy autonomy than building energy infrastructure all the way to the borders? This proposition also has the potential of reducing post-harvest loss and enhancing food security”

THE ELEPHANT IN THE ROOM: HOW TO FINANCE THIS?

According to **Frans Timmermans**, “with the Africa-EU Green Initiative, which will be announced at the summit, we want to focus on clean energy access. We also want to build the right environment for private capital to support large-scale investments in renewables.”

Participant to the discussion, **Irène Kamanzi**, PGI Invest, challenged: “We would like to present [green energy] opportunities to the Euro-African financial institutions in order to have a support in the debt financing part and a co-investment in the equity part. But it is impossible to find the right people to talk to. What should we do? We have waste to energy projects, solar parks ready but we need financing in debt and equity. We would like to present these opportunities to the Euro-African financial institutions in order to have support in debt financing and co-investment in equity.”

Participant to the discussion, **Pascaline Gaborit**, PILOT4DEV, added: “How can Europe combine efforts to make the shift towards renewable energy more financially attractive including on the financial markets?”

Participant to the discussion, **Jeffrey Rugare**, Global SolarLtd, commented: “What Africa needs now are serious investments for massive rollouts as Africa build purchasing power especially amongst the youth. We in Africa private sector we have the figures and the business models: give us the investments.”

Participant to the discussion, **Sami Mehiaoui**, Birbeck University of London, added: “I would like to draw your attention to the banking, financial and investment system. Europe expertise will help unlock funding opportunities for sustainable African projects. It will make the African Institutions/Organisations/Businesses thrive, impact employ and improve the life quality of us Africans. Let’s make a change and stop accusing each other!”

Ambroise Fayolle (EIB) called for more blending: “Public investments are very important, but we need also to try to make sure that the private sector is participating as much as possible and to maximise that. We need to find the right instruments, the right partnerships, and the right enabling environment. We need to do much more on combining the resources of the public and private sectors to lower the cost of capital, and this would be good for customers”

CARBON-PRICING

Referring to earlier comments from **Vera Songwe** that a carbon price could create 160 million jobs on the continent, **Mo Ibrahim** said that “if we want to deal with climate change, the most effective solution will be market-led”.

“We need to price carbon, that’s what changes behaviour, and I hope the EU and AU will come up with a clear proposal at next summit.”

ELABORATE A JOINT AFRICA-EUROPE APPROACH TO COP 27

“A climate justice approach is a people-centred approach,” stated **Mary Robinson**, Co-honorary President of the Africa-Europe Foundation and former President of Ireland.

She argued that the just transition applies to both continents, but the just transition in Europe should progress much faster to clean energy and out of fossil fuels, saying “it has both the capacity and responsibility to do so” and called for “different standards between the two continents.” In contrast “a just transition in Africa is at two levels: industries and manufacturing at the country level, and the household level”. She cautioned that the length of time and differences between countries need to be

taken into account, especially from the perspectives of energy poverty and access to clean cooking.

In the immediate term, *“we do need gas in Africa and in Europe in certain ways, as a transition out in order to transition in clean energy”*. She highlighted the fact that *“we just need criteria to say for how long, and in what context, and it will be different between continents and countries”*

“I would like the EU and AU to operationalise the COP 26 outcomes in the EU-Africa partnership. This means cooperating more closely on climate diplomacy, especially around loss and damage in the COP 27 in Africa”.

This point was also highlighted by **Vice-President Timmermans**: *“COP 27 is coming back to Africa, so let us grasp this opportunity and create a stronger alliance. Together we can go very, very far.”*

“Europe together with Africa can be a winning team and play a key role to solve the global issues,” said **President Sall**.

Participant to the discussion, **Johan van den Berg**, Africa-EU Energy Partnership (AEEP), commented: *“Climate and energy have been converging and the well-established energy partnership between the continents can now leverage on existing relationships and learnings to step up collaboration for the next ten years, and to ensure a partnership of equals with bi-directional benefits and flows.”*

CONCLUSION

“I’m quite optimistic when it comes to the relationship between Europe and Africa,” concluded **President Macky Sall**. *“Our two continents are on both sides of the Mediterranean Sea, we only have 14km between the two of us. I think that we need to tango together and work hand-in-hand.”*

“Generations in Africa and Europe are facing changes in the prosperity mode. I am fully convinced that Africa and Europe need to be together, be pragmatic, and show equity” declared President **Charles Michel**.

ANNEX: FACTS AND FIGURES

Africa and Europe

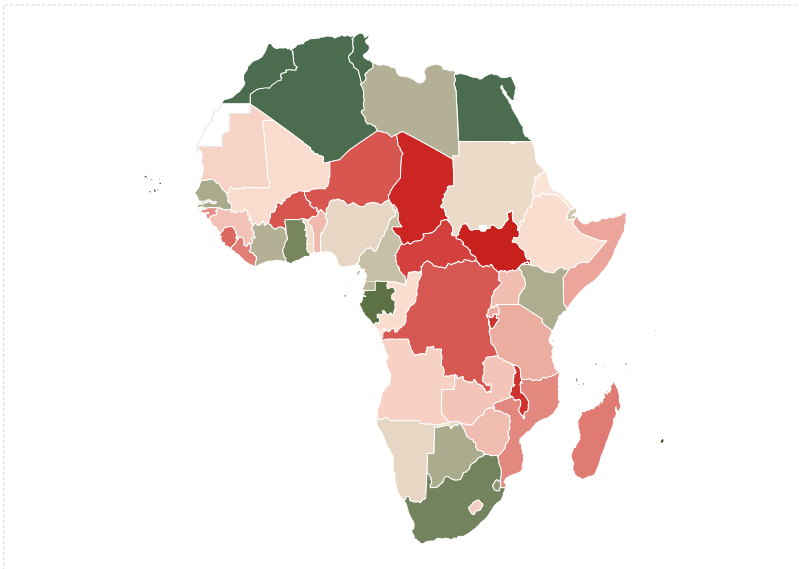
Facts and Figures on
Climate and Energy

Access to Energy: inequality between Europe and Africa, and between African countries

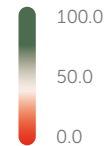
Access to energy is still very limited in many parts of Africa, whereas it is universal within the European Union (EU).

- In 2019, the entire population of the EU, accounting for just under 445 million people, have access to electricity, while only just over half (54.7%) of the 1.3 billion people living in Africa, have access.
- Almost 600 million Africans remain off-grid, more than 1.3 times the population of the EU.
- There are stark inequalities between African countries. Egypt for example has 100% coverage while South Sudan only has 6.7% coverage .
- Only four African countries have 100% electricity coverage: Egypt, Mauritius, Seychelles, and Tunisia. All 27 EU member states have full coverage.

African countries: access to electricity (2019)

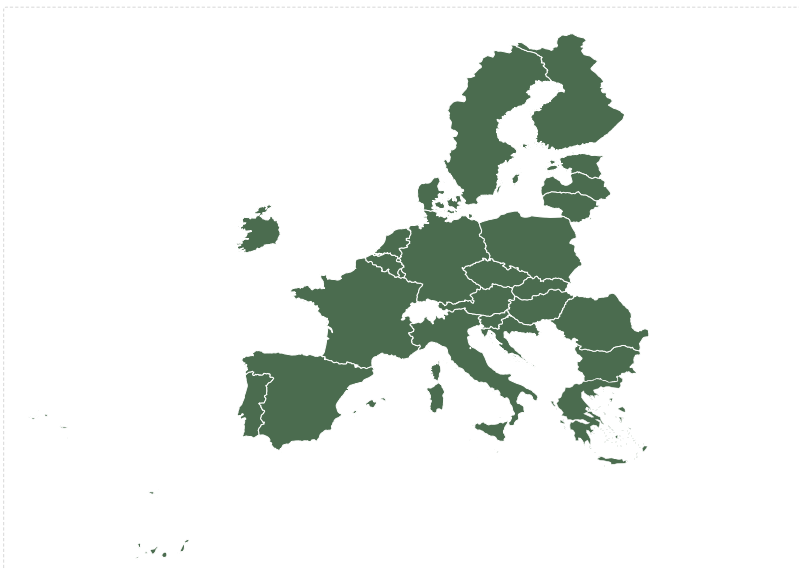


% of population

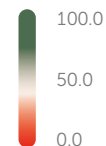


Source: MIF based on World Bank

EU countries: access to electricity (2019)



% of population

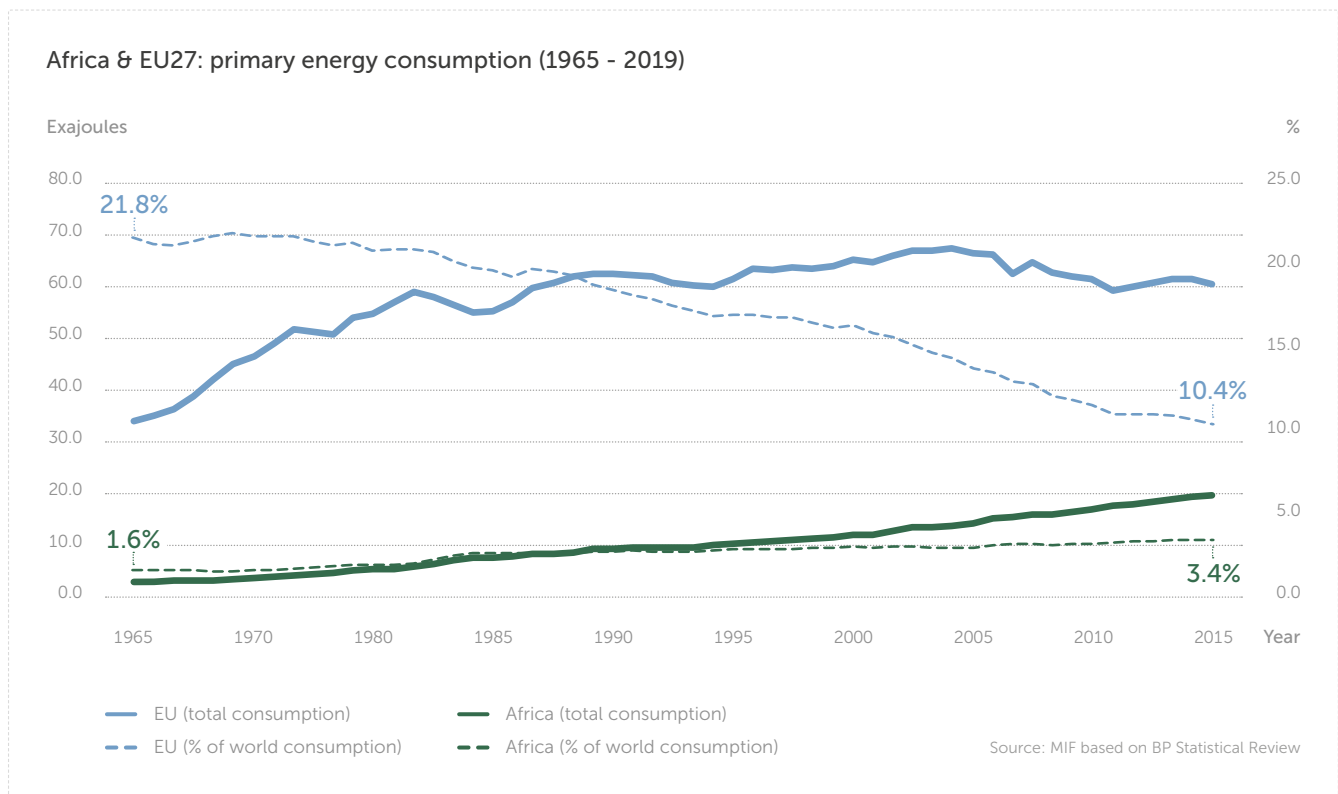


Source: MIF based on World Bank

Energy Consumption: Africa accounts for 17.0% of the global population but only for 3.4% of global energy consumption, while the European Union represents 5.8% of the global population but accounts for 10.4% of global energy consumption

While still going up, African countries' energy consumption still only accounted for 3.4% of the world's primary energy consumption in 2019, much lower than the 17.0% share of the global population they represent.

- African countries' energy consumption has increased almost eight-fold in absolute terms since 1965, while its population has increased four-fold in the same period.
- At 3.4% in 2019, Africa's share of global energy consumption has doubled since 1965 (1.6%). Africa's share of the global population has also near-doubled in this period, going from 9.6% in 1965 to 17.0% in 2019.
- In 2019, South Africa alone accounted for over a quarter of Africa's energy use.

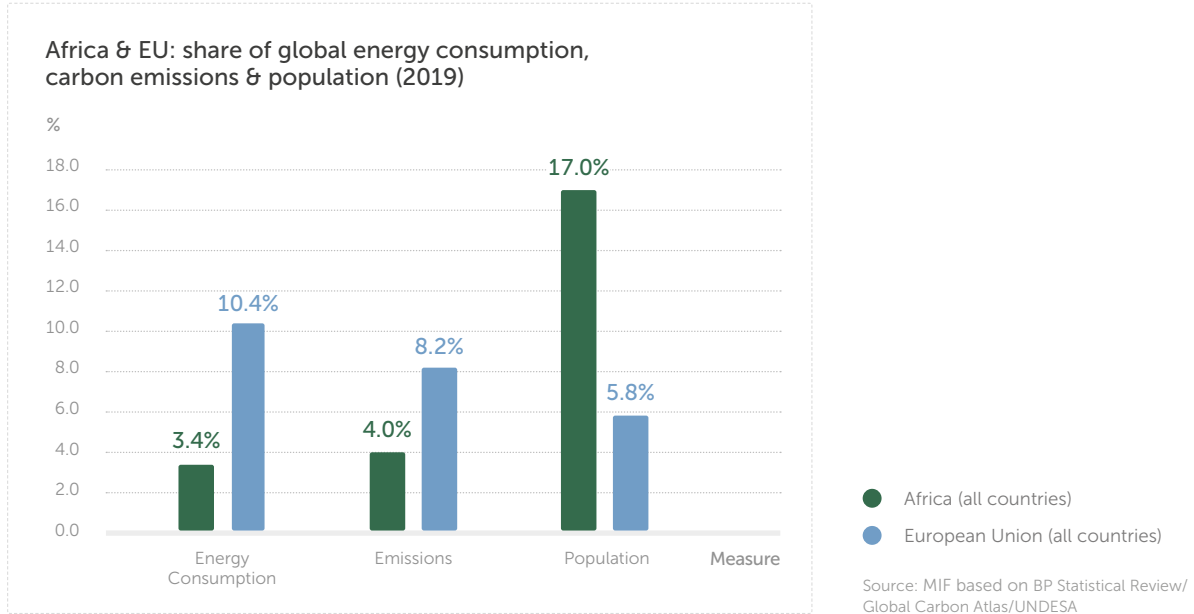


Meanwhile, EU countries accounted for 10.4% of the world's primary energy consumption in 2019, much higher than the 5.8% of the world's population the EU represents.

- The EU consumed over three times as much energy as Africa in 2019, despite having a population just over one third of the size of Africa's.
- **France's and Germany's combined energy consumption alone was greater than the entire African continent's in 2019.**
- In per capita terms, someone living in the EU in 2019 consumed on average **nine times** as much energy as someone living in Africa.
- Since 1965, the current EU countries energy consumption has almost doubled.

Carbon Emissions: Africa's share of the global carbon emissions (4.0%) is less than half its share of the global population (17.0%), while the EU's (8.2%) is considerably higher than its share of the global population (5.8%).

Olusegun Obasanjo, former President of Nigeria "No other continent in history has been tasked with the challenge of developing without polluting, whilst being simultaneously the major victim and lowest contributor to emissions".

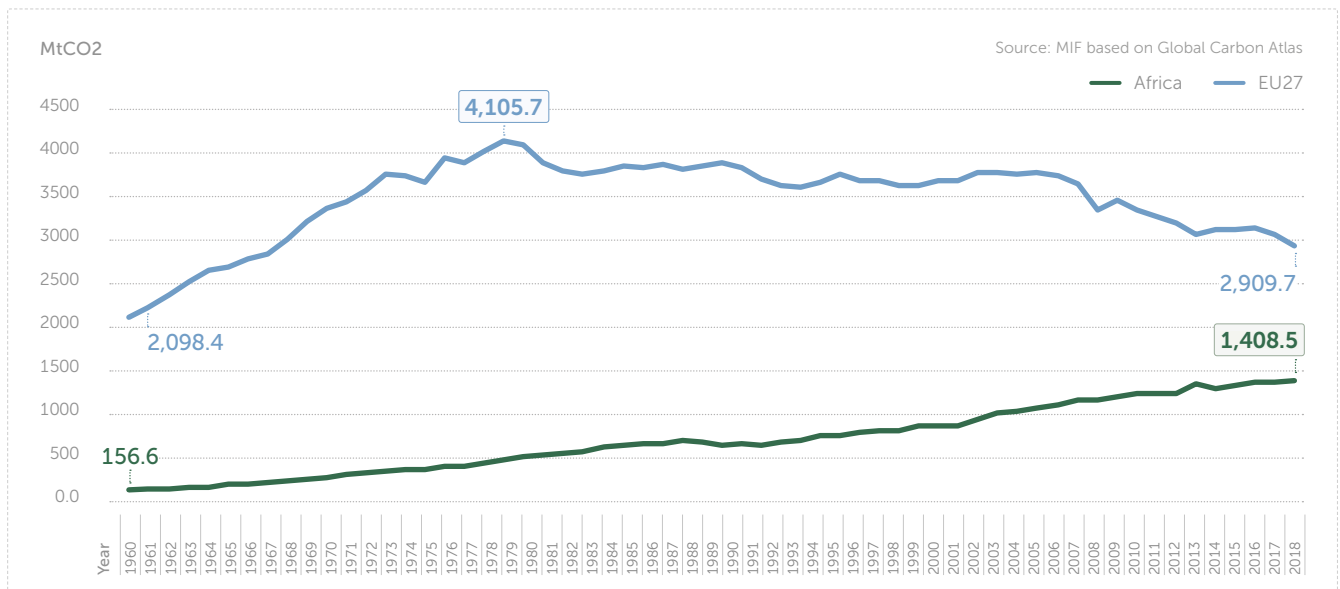


EU emissions still twice as high as Africa's despite opposing trajectories

Africa's carbon emissions are steadily going up and reached their highest ever levels in 2019.

The EU's carbon emissions have declined from a peak in 1979 yet in 2019 were still over twice as high as Africa's.

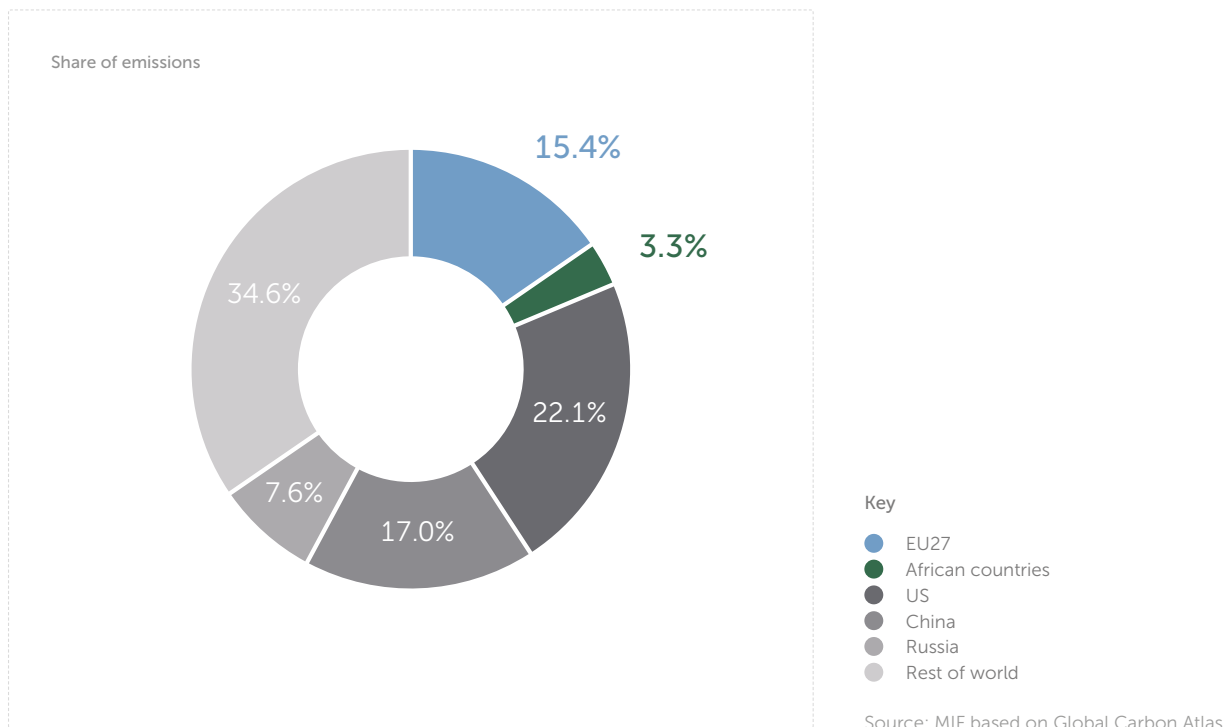
Africa & EU27: territorial carbon emissions (1960-2019)



Historically, the EU bears a much larger responsibility for climate change, with a longer and greater legacy of carbon emissions compared to Africa.

- In 1960, the EU27 countries, with a population only marginally larger than Africa's at the time, emitted more than thirteen times as much carbon as the entire African continent.
- Between 1960 and 2020 current EU countries have been responsible for 15.4% of all global carbon emissions while African countries have accounted for only 3.3%.
 - Germany alone accounted for 4.2% of global carbon emissions between 1960 and 2020, more than all African countries combined.
 - South Africa alone accounted for 42.3% of Africa's carbon emissions between 1960 and 2020.

Selected regional groups and countries: share of global carbon emissions (1960-2020)



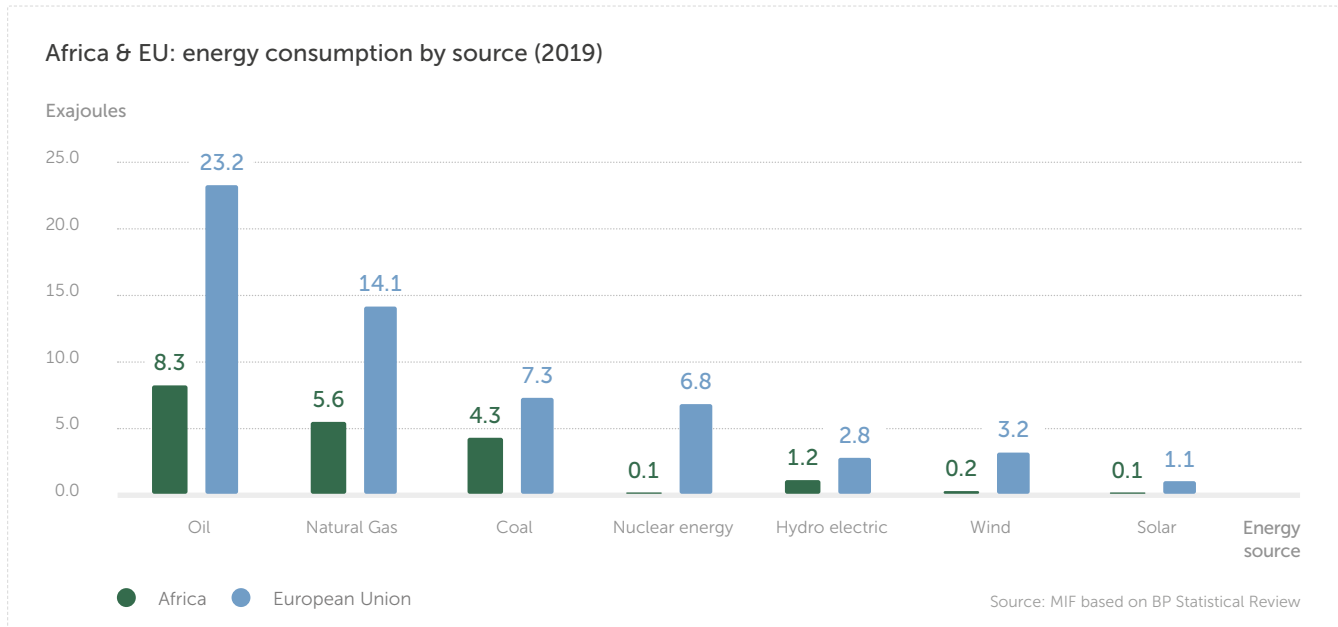
Energy sources: fossil fuels still dominate in both EU and Africa

Fossil fuels

Fossil fuels play a prominent part in energy provision in both Africa and the EU, with oil, gas and coal the three leading commercially traded fuels for electricity generation in both regions.

- Oil remains the primary energy source for both regions, followed by natural gas and coal.
 - These three fossil fuels account for 91.5% of energy consumption in Africa and 73.4% of energy consumption in the EU.

- Energy consumption from oil, gas and coal is growing in Africa, but declining in the EU.
- However, in absolute terms the EU still consumes over twice as much energy through fossil fuels than Africa.



- Over six times as much energy is consumed from oil, gas and coal in the EU than from renewables such as hydro, wind and solar.
- Germany is the EU's biggest consumer of fossil fuels and accounts for almost one third (30.7%) of the bloc's coal consumption.
- Over twelve times as much energy is produced from oil, gas and coal in Africa than from renewables such as hydro, wind and solar.
- South Africa alone accounted for 84.3% of Africa's coal consumption and over a quarter of the continent's overall fossil fuel consumption in 2019.

Natural Gas

Abundant in Africa, gas is also the cleanest burning fossil fuel and thus could be the best transitional fuel to increase energy access. Some African leaders, such as President Macky Sall, incoming President of the African Union, have touted gas as a transitional fuel. It has contributed to almost one-third of total energy demand growth globally throughout the last decade .

At 14.9 trillion cubic metres, Africa's proven natural gas reserves were over 33 times larger than the EU's at 0.4 trillion cubic metres in 2019. In the same year Africa's gas production stood at 243.8 billion cubic metres, almost four times greater than the EU's at 61.1 billion cubic metres.

- Algeria, Egypt, Libya and Nigeria each have more proven gas reserves than the entire EU.
- Algeria and Egypt each produced more natural gas in 2019 than the entire EU.

- Algeria (87.0 bcm), Egypt (64.9 bcm) and Nigeria (49.3 bcm) are Africa's biggest natural gas producers, accounting for 82.5% of Africa's total production.
- Netherlands (27.8 bcm), Romania (9.6 bcm) and Germany (5.3 bcm) are the EU's biggest producers of natural gas producers accounting for 70.1% of the EU's total production.
 - Europe's major producers are not EU member states, with levels of production in both Russia and Norway higher than for the entire EU.

However, in 2019, the EU consumed over two and a half times more energy from natural gas than African countries.

- Germany and Italy are the biggest consumers of natural gas within the EU, accounting for over 40% of the bloc's total consumption. Oil was still the primary fuel source in both countries in 2019, though gas was almost on par in Italy.
- Algeria and Egypt account for 67.0% of Africa's energy consumption through natural gas, with the fuel accounting for over half of all energy consumption in both countries.
- Italy and Germany combined consumed more energy from natural gas in 2019 than the entire African continent.

Europe currently has 585 natural gas pipelines in operation, with another 27 under construction. Africa currently has 86 under operation with four under construction .

In 2019, African countries exported \$19.7 billion worth of natural gas collectively .

- Over half of all African natural gas exports went to four EU countries - France, Italy, Portugal and Spain. All four countries committed to withdrawing funding for overseas gas projects at COP26.

Nuclear

Nuclear power accounts for a uniquely large share of EU energy consumption at 11.2%, higher than for any other world region. In Africa it only accounts for 0.6% of energy consumption.

- France alone accounts for 52.1% of total nuclear energy consumption within the EU, with nuclear providing more than one third of France's energy.
- South Africa is currently the only African country with an operating nuclear power plant, that accounts 2.3% of the country's energy consumption.
- Egypt has commissioned a nuclear power plant that will begin operations in 2026
- Algeria, Ghana, Kenya, Morocco, Nigeria and Sudan all have plans in place that could see them generating nuclear power in the 2030's .

Renewables (hydro, solar, wind)

Currently, the EU consumes a higher share of its energy through commercially traded renewables than Africa.

- Energy sources such as hydro-electric, wind and solar energy account for 7.5% of energy consumption in Africa and 11.8% in the EU.

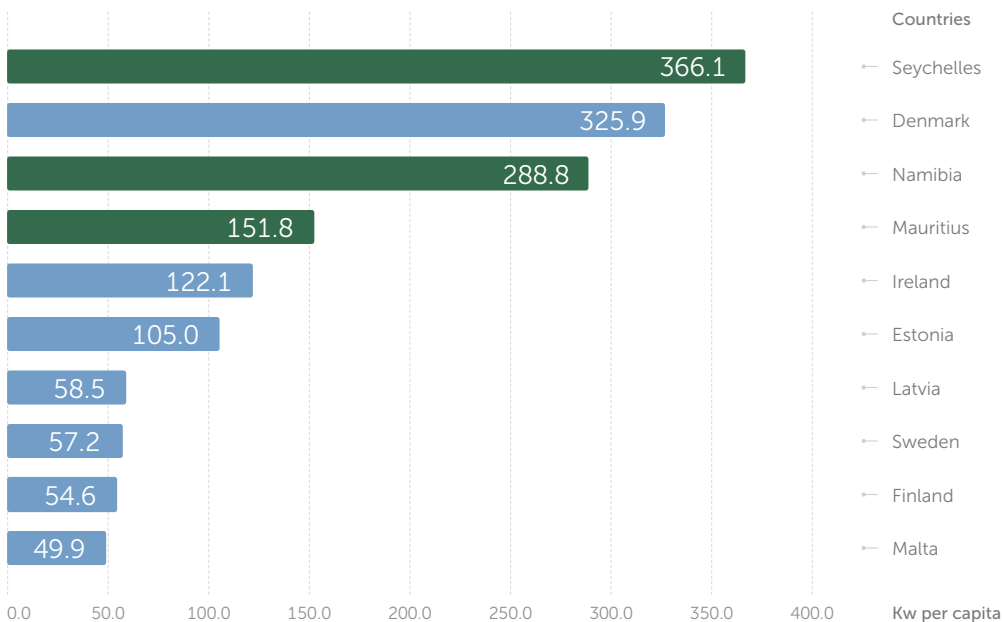
However, solar and wind are the fastest growing energy sources in both Africa and the EU. The renewable potential of Africa is vast, particularly in solar.

- **Africa's solar potential is almost three times that of the EU's.**
 - Resources are being mobilised to realise this potential through programmes such as the African Development Banks 'Desert to Power' initiative in the Sahel.
- The rate of solar growth between 2009 and 2019 in Africa (+60.0%) has been over twice as fast as in the EU (+24.0%).
- Cyprus has the most solar potential in the EU, but 19 African countries have greater solar energy potential than Cyprus.
 - Namibia has the greatest solar potential in Africa.

The EU's combined potential for offshore wind is greater than Africa's, but some African countries have very high potential.

- Seychelles has the highest offshore wind potential out of the EU and Africa, while Denmark has the highest offshore wind potential in the EU.
 - Offshore wind has the potential to provide over 100 KW per capita in Seychelles, Namibia and Mauritius in Africa and in Denmark, Ireland and Estonia in the EU.
- The rate of offshore wind growth in Africa (+27.0%) between 2009 and 2019 has been over twice as fast in the EU (+11.0%).

Selected African & EU countries: greatest offshore wind potential per capita (2019)



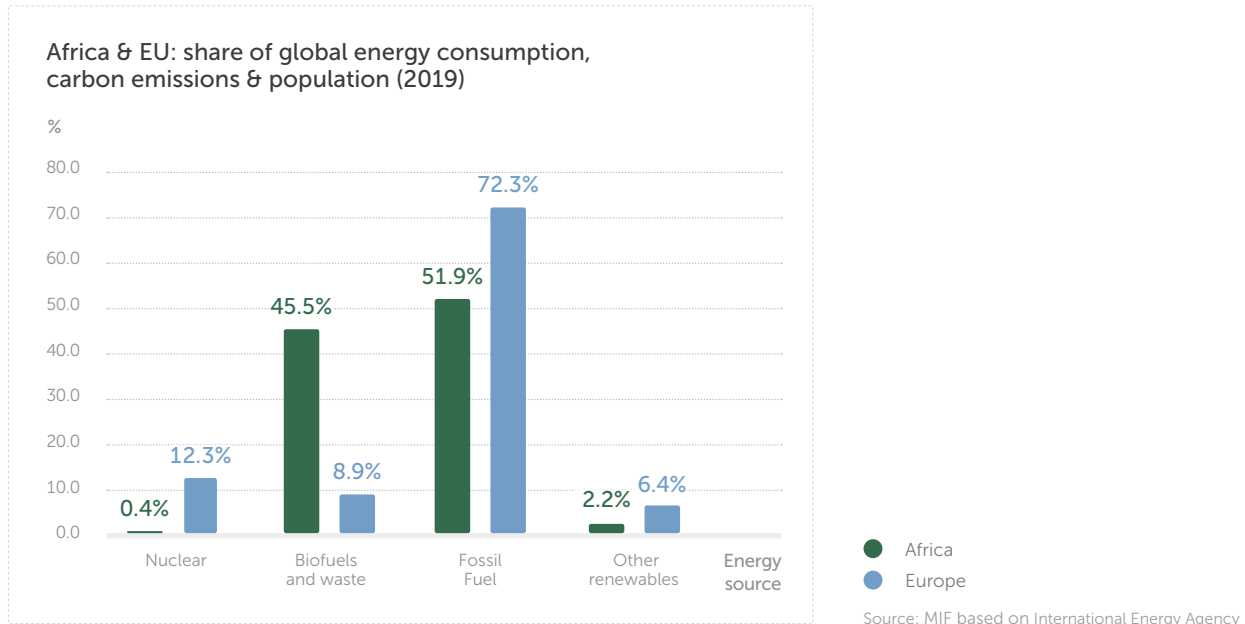
Source: MIF based on World Bank

Africa's renewable potential varies greatly between countries.

- Ethiopia, endowed with hydro- and geothermal assets, or Seychelles with high offshore wind capacity in the short-term have much greater potential to utilise green technologies than countries such as Nigeria, which is heavily dependent on oil and gas.

Biofuels and waste

Much of the current data on energy balance only accounts for commercially traded fuels, excluding biofuels and waste produced directly or indirectly from organic material – biomass – including plant materials and animal waste.



Biofuels are a key aspect of the energy landscape in Africa, where many use wood or charcoal for cooking and heating.

- According to the International Energy Agency, when biofuels and waste are included in addition to commercially traded fuels, they are the leading source of energy in Africa, accounting for 45.5% of energy supply in 2018.
- In Europe, biofuels and waste only made up 8.9% of energy supply.
- When biofuels are included fossil fuels only account for 51.9% of energy production in Africa, in comparison to 72.3% in Europe.

The relationship between biofuels and climate is complicated. Biofuels are renewable unlike fossil fuels, but like fossil fuels are also combustible. Biofuels produce emissions when burnt, but also sequester carbon from the atmosphere as they grow. The net emissions vary based on the type of biofuel. However, biofuels such as wood and charcoal can also contribute to deforestation, cause major air pollution and pose serious risks to the health .

The case of cooking fuel

- In Africa, only 26.6% had access to clean cooking fuels in 2016 compared to 98.8% in the EU.
 - In sub-Saharan Africa, around 70% of households depend on wood fuel for energy .
 - More than 50% of deaths from pneumonia, cancer and chronic long disease in sub-Saharan Africa are a result of solid fuel combustion .

COP26, Europe's 'Green New Deal', and the impacts for Africa:

Thirty-nine countries and development agencies pledged to stop funding overseas fossil fuel projects on 4th November at COP26 in Glasgow. This included major European donors but also included some African countries and institutions. The agreements go further than previous similar deals, such as the G20 commitment to phasing out coal, and includes the lower-emitting fossil fuel natural gas.

- Twelve EU countries - Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Portugal, Slovenia, Spain, Sweden – plus the European Investment Bank and French and Dutch development agencies were signatories to the agreement reached in Glasgow.
- Seven African countries also signed the agreement - Burkina Faso, Ethiopia, Gabon, Gambia, Mali, South Sudan and Zambia, plus the East African Development Bank.

This builds upon the EU's Green New Deal, which saw a commitment from the European Investment Bank in 2019 to phase out fossil fuel investments within two years, including to polluting companies engaged in low-carbon projects.

EU Taxonomy of Environmentally Sustainable Economic Activities

The EU Taxonomy of Environmentally Sustainable Economic Activities is a common framework to help asset managers inside the bloc and make green activities more visible and attractive to investors. It will set specific criteria on emissions and other metrics that each economic activity must meet to be classed as a green investment . Coming into force in July 2020, secondary legislation released on 31st December 2021 raised controversy as it classifies nuclear and gas as green activities . It has led to disagreement among EU member states and could lead to accusations of hypocrisy from developing countries, where funding for new gas projects is drying up.

- The taxonomy has been greeted with criticism from the new German government and the Austrian government, with the latter threatening to sue the European Commission .
- Bulgaria, Croatia, Czechia, Finland, France, Hungary, Poland, Romania, Slovakia, and Slovenia signed a joint article to push for the inclusion of nuclear energy in the taxonomy. The Netherlands and Sweden also offered their support, while Austria, Luxembourg and Denmark are cynical about the inclusion of nuclear. Germany has been a long-term opponent of nuclear .
- Bulgaria, Croatia, Cyprus, Czechia, Greece, Hungary, Malta, Poland, Romania, and Slovakia vetoed a previous attempt to exclude gas from the taxonomy, due to its use as a transition fuel .

A counter-productive approach?

The one-size-fits-all approach seen at COP26 does not consider the specific situation of the African continent, where access to energy is still lacking for 600 million people, nor consider that resources vary greatly between countries.

An excessive focus on wind and solar across the continent could leave many with unreliable and expensive power.

- Wind and solar are not consistently reliable, while potential varies between countries. The technologies still depend on diesel generators or batteries on overcast and still days.

If all funding for overseas gas projects is cut, it could be counterproductive pushing many in African countries towards cheaper, but higher polluting fuels.

- Cutting funding for gas projects leaves cooking with gas expensive and inaccessible for most Africans. Instead, this encourages wood and charcoal cooking, which creates more carbon emissions, has severe health consequences, and is contributing to the deforestation of the Congo Basin.
- China and Japan who have not mirrored the EU commitments could still provide finance for fossil fuel projects overseas including oil, which is more polluting than gas.

The Carbon Border Adjustment Mechanism (CBAM) proposed as part of the EU's Green New Deal, that could also see taxes imposed on imports to the European Union where production has caused emissions could also penalise African exporters in countries with limited renewable technologies.

Cutting overseas funding for all fossil fuel projects has led to accusations of hypocrisy, with many EU countries continuing to invest in and provide subsidies to fossil fuel intensive industries domestically.

- In 2020, Italy provided 9.02 billion Euros in fossil fuel subsidies, Germany provided 8.42 billion while France provided 7.9 billion
- Nine of the twelve EU countries to sign the COP26 pledge had new fossil fuel pipelines in development as of December 2020 : Belgium, Denmark, Germany, Ireland, Italy, the Netherlands, Portugal, Slovenia, and Spain.
 - Twelve new gas pipelines were in development in Italy, with three already under construction
 - Seven new gas pipelines were in development in Slovenia
 - Four new gas pipelines were already under construction in Germany, while one oil pipeline was in development
 - Three new gas pipelines were in development in Spain, with one already under construction
- Furthermore, climate funds from the European Commission and the EIB to developing countries has not increased from an average of around 5.7 billion Euros since 2018.

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