

SDG7 Technical Advisory Group

Policy Brief on Advancing SDG7 in LDCs, LLDCs, and SIDS

Draft of 4 May

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This draft was shared with participants of the Expert Group Meeting in Support of SDG7 review at the HLPF 2023, 11-12 May, as background information.

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Key Messages:

Urgent international attention is needed to address the inequalities in access to sustainable energy facing LDCs, LLDCs and SIDS. Unless efforts are scaled up significantly in these countries, the world will fall short of its target to achieve universal access to affordable, reliable, and modern energy services by 2030.

Faster deployment of renewables in the LDCs, LLDCs and the SIDS supported by technological leapfrogging can help to bridge the sustainable energy access gap, strengthen energy security and at the same time support climate ambition goals. A major shift in strategy is required, to significantly increase accessible and appropriate financing available to support clean or low-carbon energy initiatives. In this context, public finance remains crucial, in derisking and crowding in private sector investment, and to bring new markets to maturity in the LDCs, LLDCs and SIDS.

International public finance in support of energy is still concentrated in a few countries and on larger projects. Concerted efforts from developed countries, governments and international organizations are needed to support local enterprises, particularly those of small and medium-sized enterprises, off-grid developers and women led organizations in LDCs, LLDCs and SIDS for the development of new products and technologies address inequalities and in narrowing the access gap (electricity and clean cooking) between as well as within countries.

Accelerating access to reliable, affordable and modern energy services should be key elements of the new 10-year programmes of action for the SIDS and LLDCs to be adopted in 2024.

Energy Access: In 2021, electrification rates in LDCs and LLDCs continue to rise but remain low at 56% and 60% respectively. Access to electricity is higher in the SIDS at 76% however this rate has remained virtually unchanged since 2019. The global population without access to electricity are increasingly concentrated in the LDCs, accounting for 70% of those without any power. The overall figures hide urban rural disparities as well as significant progress made within some of these countries including some that achieved universal access for the first time in 2021.

Access to clean cooking: In line with worldwide trends, the clean cooking agenda has moved more slowly than electrification in LDCs, LLDCs, and SIDS during the past ten years. The population with access to clean cooking solutions in LDCs, LLDCs, and SIDS are 25%, 28%, and 58%, respectively, in comparison to the worldwide average of 71%. Faster rate of adoption of clean cooking technologies requires committed and sustained policies to provide easy access to modern fuels and stoves at affordable prices, and information and behaviour change messaging.

Renewable energy: There is potential for LDCs, LLDCs, and SIDS to make considerable strides toward achieving SDG 7 by using their abundant natural energy resources. In comparison to other developing economies, LDCs, LLDCs and SIDS are falling behind global trends in the adoption of cutting-edge renewable technologies. The share of modern renewables in Total Final Energy Consumption (TFEC) is progressing particularly slowly in LDCs (12%), LLDCs (10%) and SIDS (8%) as fossil fuels still meet a considerable share of the growth in final energy demand.

Installed renewable power generation capacity is growing in these countries, although more slowly than in other developing countries. The compounded annual growth rate of installed renewable capacity per capita was highest in the SIDS (8.5 %), followed by LDCs, (5.5%) and LLDCs (3.9%)

compared with global average of 9.6% in other developing countries over the period 2016 to 2021.

Energy intensity: For the most recent available data in 2020, energy intensity improved in SIDS and LLDCs while declining in LDCs. With huge drop in GDP, and energy consumption in 2020, it is difficult to make increase or decrease in energy intensity a trend as the indicator is affected by noise not related to energy efficiency.

International financial flows in support of clean energy fell for a fourth year in a row from USD 26 billion in 2017 to 10.8 billion in 2021. The countries where support is needed the most, received relatively little, with the 90 countries combined receiving less than a third of total flows – LDCs (2 billion), LLDCs (1.3 billion) and SIDS (198 million). The overall decline in support of clean energy is of grave concern given the urgent need for universal access to energy which is critical for reducing poverty, and structural transformation and clean energy systems to align development with climate goals.

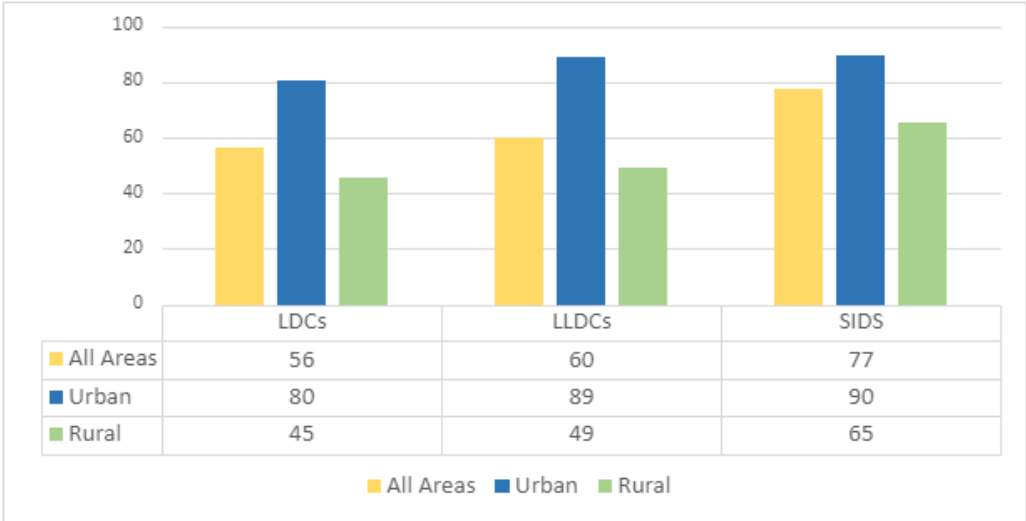
Achieving universal access to electricity in LDCs, LLDCs and SIDS

SDG 7.1 target on universal access to affordable, reliable, sustainable, and modern energy offers opportunities for improvements in poverty, clean water, decent work, health, education and gender equality. The three groups of countries have made considerable progress over the last decade. It is encouraging to see access rates in LDCs, improving from 55% to 56%, despite the global pandemic over the period 2020 to 2021 (World Bank, 2023a). At the same time, 473 million people in LDCs are without any connection to electricity, accounting for almost two-thirds of the global population lacking access. An estimated 31 million people a year were connected in LDCs between 2019 and 2021 (SDG 7 Tracking Report, 2023). This rate needs to more than double (to 63 million new connections per year) to reach the goal of universal access by 2030 (RMI/OHRLLS, 2021). Only 3 LDCs have reached the goal of universal access to date (Bhutan in 2019, followed by Timor-Leste and Lao PDR in 2021). To reach universal access, urgent actions are needed to scale up support to LDCs, prioritizing the poorest and rural communities.

On average, 60% of the population in LLDCs have access to electricity in 2021 (World Bank 2023a). Almost half of the 32 LLDCs, have achieved rates over 97% of the population living with access to electricity (with 10 reaching the universal access target). The low average for the LLDCs reflect the low access rates of LLDCs which are also LDCs.

These figures hide huge disparities within countries as well as between urban and rural areas (Chart 1). On average across the 37 SIDS, access to electricity is 76% (World Bank 2023a). Country level data reveals that, 25 SIDS have access rates above 95 % percent with 17 SIDS having already achieved the goal of universal access by 2021. Among the 5 SIDS with the lowest access rates, 4 are also classified as LDCs, the only exception being Papua New Guinea with an access rate of 21%, the lowest rate among all SIDS.

Chart 1: Access to electricity in all areas, urban areas and rural areas, in LDCs, LLDCs, and SIDS, 2021



Source: World Bank, 2023a, 2023b

Access to clean fuels and technologies for cooking

Unless clean cooking finds a lasting place on the global political agenda, more than 2.1 billion people will continue to rely on traditional uses of biomass, kerosene, or coal for cooking in 2030 (SDG7 tracking report, 2022). Household air pollution, mostly from cooking smoke disproportionately affects women and children and is linked to almost 2.5 million premature deaths a year (IEA, 2022). Scaling up of clean cooking solutions can help reduce direct carbon emissions, conserve the environment, and is considered a cost-effective way to incorporate nature-based climate solutions.

In 2021, 880 million people, almost 80% of the population, are lacking clean cooking facilities in LDCs (WHO, 2023). In 20 LDCs, the problem is acute with less than 5 % having access to clean fuels for cooking in 2021. The share of LLDCs' overall population with access to clean cooking fuel increased by only 3 percentage points from 25% in 2010 to 28% in 2021 (WHO, 2023). In SIDS, access to clean cooking and technologies increased by around 1 percentage point annually from 2000 and has plateaued at 58% since 2010 (WHO, 2023).

Several factors are attributed to the slow rate of adoption of clean cooking technologies – from supply-side factors (infrastructure barriers such as access to electricity for electric stoves) to lack of income and affordability as well as behavioral and cultural factors – where traditional ways for food preparation using wood may take preference in household decision to switch to clean cooking (Timilsina and Malla, 2021).

If universal access to clean cooking is not achieved, the cost of inaction—driven by negative externalities on health, gender, and climate—is estimated at USD 2.4 trillion a year (ESMAP, 2020). Scaling up efforts to reach universal access requires committed and sustained policies to provide easy access to modern fuels and stoves at affordable prices, and information and behaviour change messaging (Pachauri, S., Pobleto-Cazenave, M., Aktas, A. et al, 2020). Greater involvement of women led organizations and empowerment of women is also critical to this target. Achieving this milestone would require strengthening policy support in all sectors and implementing effective tools to further mobilize private capital, especially in the LDCs, LLDCs and the SIDS.

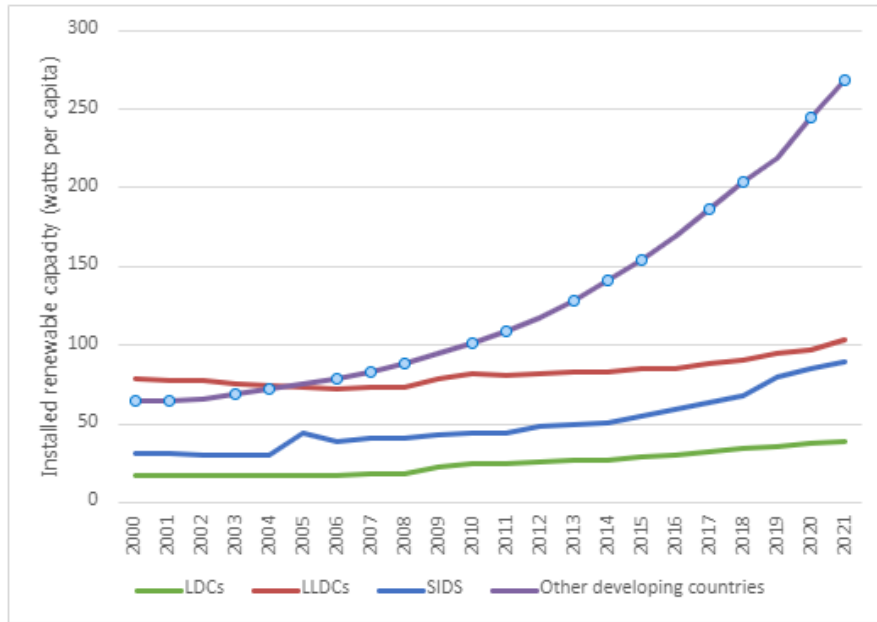
Renewables

The total the share of renewable energy sources in Total Final Energy Consumption (TFEC), remains high especially in LDCs (71%), where a majority of the population relies on traditional uses of biomass – wood fuel, and crop and animal residues – for cooking and heating (IRENA, 2023a). This figure stands at 45% in LLDCs and 20% in SIDS. Excluding traditional use of biomass, the share of renewables in TFEC drops down significantly in LDCs (12%), LLDCs (10%) and SIDS (8%) (IEA, 2023).

Despite continued disruptions in economic activity and supply chains, renewable energy consumption grew through the pandemic, in contrast with other energy sources (SDG 7 Tracking, 2022). The LDCs, LLDCs and SIDS are falling behind this positive global trend (Chart 2). There is huge potential in these countries to capitalize on their natural energy sources and increasing economic competitiveness of renewable energy solutions, globally. Scaling up decentralized energy systems has been particularly impactful in lifting millions out of energy poverty and maximizing productive capacity of sectors such as agriculture which is the backbone of many of these countries. Although the private sector finances most renewable energy investments, the public sector remains pivotal to

finance projects directly or leverage private capitals, particularly for many developing countries, especially the LDCs, LLDCs and the SIDS.

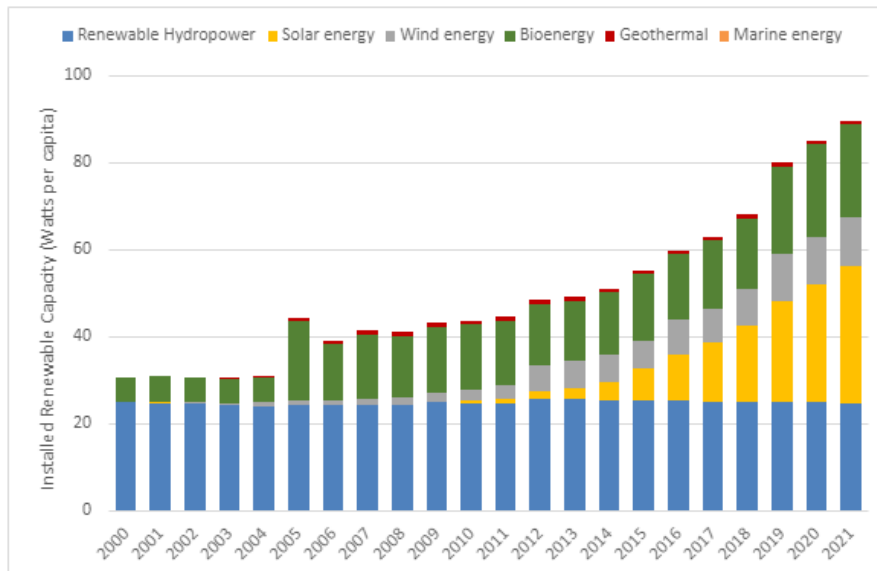
Chart 2: Installed renewable electricity-generating capacity (watts per capita) in LDCs, LLDCS and SIDS compared with the other developing countries (2000 to 2021).



Source: IRENA 2023a

Among the three groups, SIDS have made the most progress in adding renewable generating capacity to their energy mix, at compounded annual growth rate (CAGR) of installed renewable electricity generating capacity (watts per capita) of 8.5% between 2016 and 2021.

Chart 3: Renewable installed generating capacity in SIDS (2000 to 2021)



Source: IRENA 2023

Many SIDS without any indigenous fossil fuel supply, imports up to 100 percent of their petroleum products, which comprise the major share of their energy mix and emissions. Shifting away from fuel imports can increase SIDS' energy independence based on utilization of their abundant natural energy resources, improve their balance of payments and at the same time help meet their ambitious targets on climate action.

Most SIDS have already started this transition, with growth in solar supported by the competitiveness of PV systems, globally. The second largest capacity by technology is renewable hydropower followed by bioenergy (Chart 3).

Between 2016 to 2021, installed renewable capacity grew the fastest in Antigua and Barbuda, Barbados, Maldives, Nauru and the Seychelles. In addition, Belize, Dominican Republic, Fiji, Mauritius, and Samoa, all have a long-standing record of high renewable generation capacity. However, some SIDS have seen a decline in their renewable capacity in recent years.

International public financial flows in support of clean energy

SDG7 target 7.a calls for enhanced international cooperation to facilitate access to clean energy and target 7.b further calls for by 2030, to expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular, the LDCs, LLDCs and the SIDS, in accordance with their respective programmes of support.

Significant initial upfront investment costs are required to increase renewables in the energy-mix. Other challenges such as dependence on fossil fuels (due to reserves or imports) for their energy needs may also make it challenging for these countries to transition their energy sectors. Additionally, limited market size makes it difficult to attract investors without catalytic development finance to bolster perceived and real risks to investing in LDCs, LLDCs and SIDS. Rising commodity prices have also increased the cost of producing solar modules, wind turbines and biofuels reversing the cost reduction trends in the industry for the last decade (IEA, 2021).

Globally, international financial flows started a decreasing trend even before the onset of the COVID-19 pandemic and continued through 2021. International financial flows in support of clean energy to developing countries amounted to USD 10.8 billion of which, USD 2.0 billion were allocated to the LDCs while flows to the LLDCs were USD 1.3 billion and to the SIDS 198 million, significantly smaller than the other groups (IRENA 2023b).

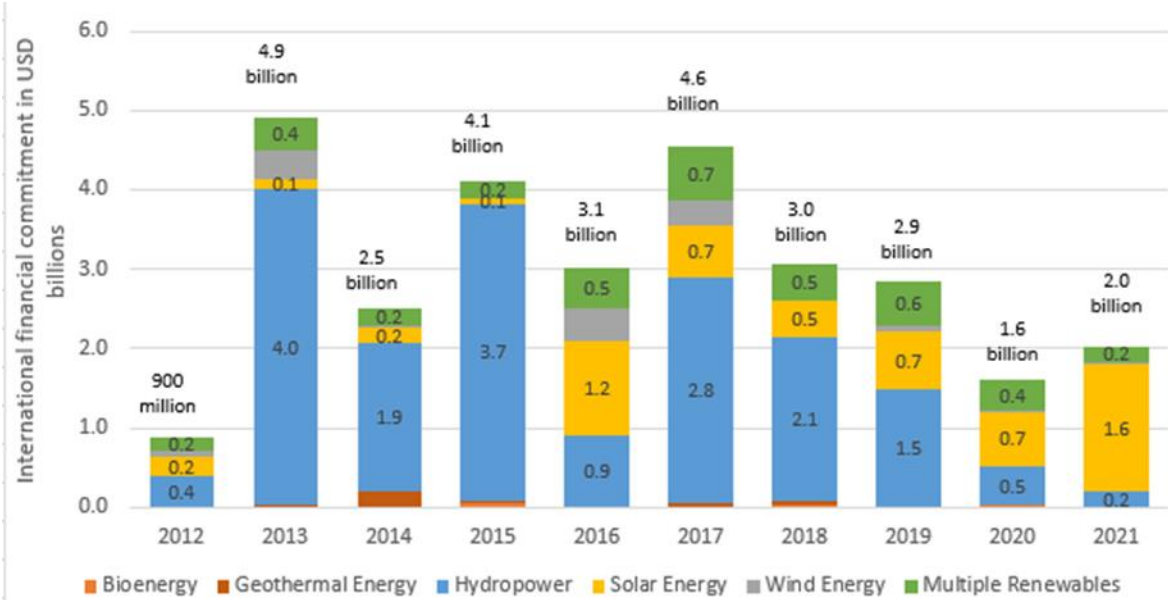
The current level of international public financial flows to LDCs, LLDCs and SIDS for clean energy, is insufficient to spur larger volumes of investments including from the private sector, which is critical to expedite progress on SDG 7.

A closer look at the international financial flows to LDCs by technology type reveals large variations flows between regions and countries, with large scale investments concentrated in a few countries. In 2013, the peak in financial flows to LDCs represent funding to a handful of LDCs for major hydropower generation capacity development. In 2017, Lao PDR received almost half of all flows for the Nam Theun 2 Hydropower Project (NT2 HPP). The project was developed primarily to export electricity to Thailand to boost economic growth in Lao PDR in support of the implementation of the country's Growth and Poverty Elimination Strategy (World Bank, 2020).

Funding for solar energy projects are typically smaller in value, and with funding for solar over taking hydropower (Chart 4), more LDCs are receiving at least some funding although still the bulk of the finance (almost half of the flows) are to Ethiopia, Niger and Tanzania in 2021. Historically, the countries receiving the largest flows have also achieved the fastest growth in electrification rates over the last decade underscoring the important role of public financial in unlocking investments in LDCs.

In all three groups of countries, efforts must also be scaled up to support local enterprises, especially MSMEs and off-grid developers to bring new markets to maturation. Off-grid and decentralised energy systems provide a viable electrification solution that requires low initial investment, is rapidly deployable, is environmentally sound, can be suited to match local needs and has the potential to empower rural communities, with a focus on youth and women (IRENA, OHRLLS, 2022). Huge opportunities exist to scale up the application of renewables and energy efficient technologies in the agrifood sector, in these most vulnerable nations to agrifood systems’ risk and uncertainty brought by climate change, water stresses, pests and diseases, trade and macroeconomic policies and unexpected events.

Chart 4: International financial flows in support of clean energy by technology to LDCs (2012-2021).



Source: IRENA 2023b

- There is an urgent need to enhance global efforts to address the specific barriers to reaching the SDG 7 targets in the 46 LDCs, 32 LLDCs, and 37 SIDS. Along with electrification efforts to provide universal access, additional challenges must be tackled to provide a sustainable energy supply that is conducive to economic growth and facilitates progress toward the achievement of all other SDGs. Enacting enabling policy and regulatory frameworks to support the energy sector in LDCs, LLDCs and SIDS must be a top priority in both national, regional, and international settings. Faster deployment of renewables supported by

technological leapfrogging can help to bridge the sustainable energy access gap and at the same time support climate ambition goals in these countries.

Policy recommendations

- Seize every opportunity to move towards the goal of universal access in the next few years. This will require stronger political support and long-term energy planning, identifying least-cost pathways and appropriate financing to ensure universal access in the shortest time possible.
- Enact comprehensive energy sector subsidy reform plan to phase out fossil fuel subsidies and redirect finances for better targeted social spending, protecting the poor, reducing inefficiencies in allocation of resources.
- Develop capacities in LDCs to navigate the multiple financing facilities and for project preparation and bankability. Energy transition also represents better opportunities for these countries to attract investments from a wider pool of funding sources including climate financing facilities.
- Enhance the linkages between energy and agrifood systems is key. Promoting investment in renewable energy solutions and adopting new holistic approaches such as integrated food-energy systems and water-energy-food-land nexus, which minimise competition and leverage synergies in water and land use, can directly advance energy and food security, while also contributing to job creation, gender equality, and climate resilience and adaptation.
- Reaffirm the central role of public finance in sustainable financing of energy projects, particularly in LDCs, LLDCs and SIDS. Significantly scale up international public financial flows to these countries, to leverage private capital and bolster energy investments in quality climate-resilient energy infrastructure enabling both economic and environmental benefits.
- Increase support for micro, small and medium enterprises, including decentralized renewables which, are often at the forefront of delivering energy services in poorer and rural communities (including off-grid systems) can be supported to bring new markets to maturity.

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