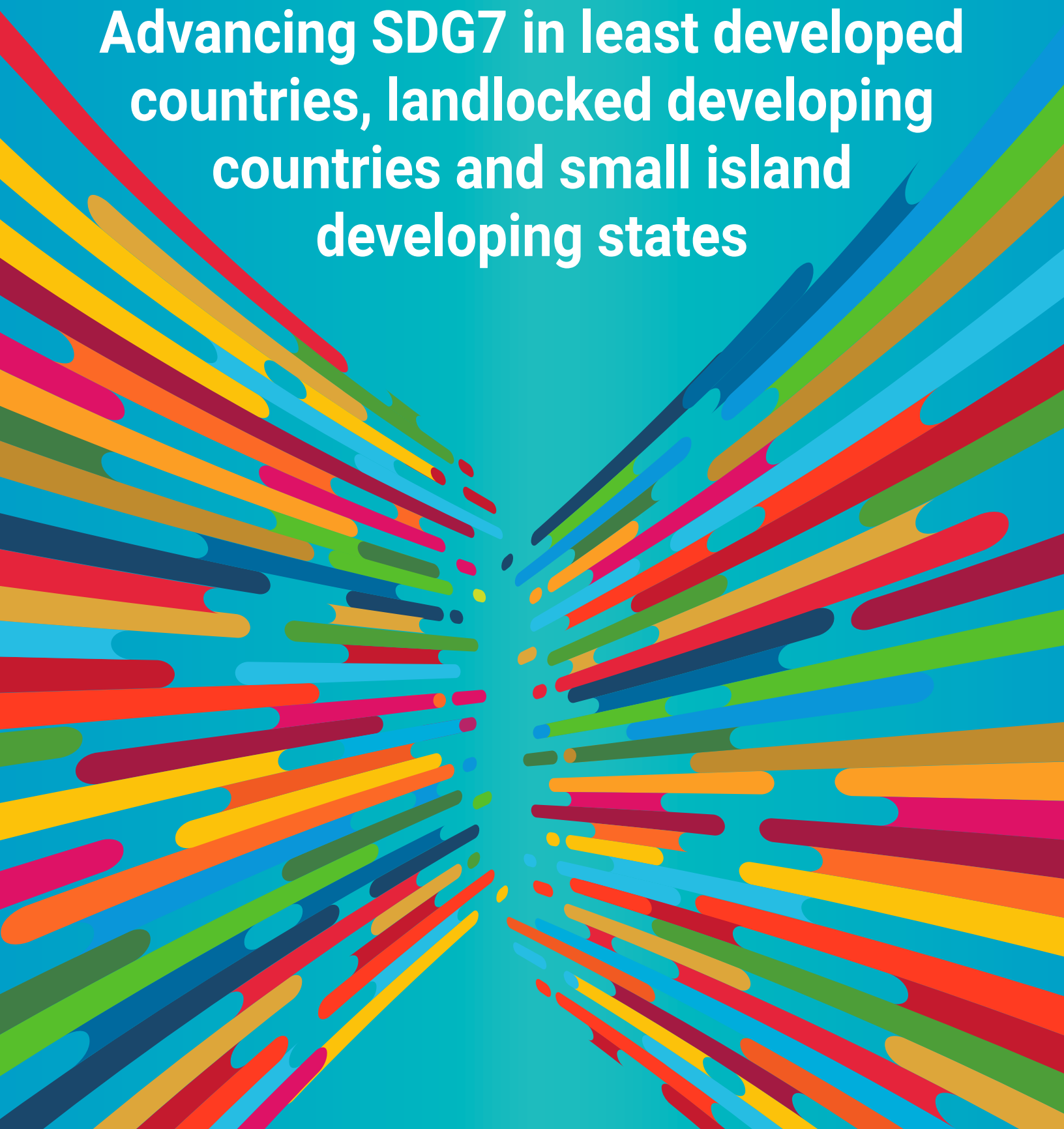




POLICY BRIEFS IN SUPPORT OF THE UN HIGH-LEVEL POLITICAL FORUM 2023

# Advancing SDG7 in least developed countries, landlocked developing countries and small island developing states



## SDG7 POLICY BRIEFS IN SUPPORT OF THE UN HLPF 2023

This document is part of a series of policy briefs compiled by the multistakeholder SDG7 Technical Advisory Group (SDG7 TAG) in support of the review of SDG7 at the High-level Political Forum (HLPF) 2023. Convened by UN DESA, the SDG7 TAG is composed of over 40 experts from governments, UN organizations, international organizations and other stakeholders. The HLPF is the central United Nations platform for the follow-up and review of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) at the global level. More information on the SDG7 TAG, including previous editions of the annual SDG7 Policy Briefs, is available at <https://sdgs.un.org/sdg7tag>

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# Advancing SDG7 in least developed countries, landlocked developing countries and small island developing states

## Contributing organizations:

United Nations Office of the High Representative for Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS)

## KEY MESSAGES

Urgent international attention is needed to address the inequalities in access to sustainable energy that are faced by the least developed countries (LDCs), landlocked developing countries (LLDCs) and small island developing states (SIDS). Unless efforts are scaled up significantly in these countries, the world will fall short of its target of universal access to affordable, reliable and modern energy services by 2030.

Supported by technological leapfrogging, faster deployment of renewables in the LDCs, LLDCs and the SIDS can help bridge the sustainable energy access gap, strengthen energy security and support climate goals. A major shift in strategy is required, however, to significantly increase these countries' access to accessible and appropriate financing and support clean or low-carbon energy initiatives. In this regard, public finance remains crucial to de-risking and crowding-in private sector investment, bringing new markets to maturity in the LDCs, LLDCs and SIDS.

Currently, international public finance in support of energy is still concentrated in a few countries and on larger projects. Therefore, a concerted effort is needed by developed countries, governments and international organizations to support local enterprises in the LDCs, LLDCs and SIDS, particularly small- and medium-sized enterprises, off-grid developers and organizations led by women. This can support the development of new products and technologies, address inequalities and narrow the gap in access to electricity and clean cooking between countries, as well as within them.

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

## SUMMARY OF PROGRESS WITH SDG7 INDICATORS

### SDG7.1.1 Access to electricity

In 2021, electrification rates in the LDCs and LLDCs continued to rise, but remained low, at 56 per cent and 60 per cent respectively. Access to electricity is higher in the SIDS, at 76 per cent. However, this rate has remained virtually unchanged since 2019.

The global population without access to electricity is increasingly concentrated in the LDCs, which accounted for 70 per cent of those without any power in 2021. The overall figures also hide urban/rural disparities, as well as the significant progress made in some countries. Indeed, in 2021, some achieved universal access for the first time.

### SDG7.1.2 Access to clean cooking technologies

In line with worldwide trends, in the LDCs, LLDCs and SIDS advances in access to clean cooking have been slower than in electrification over the past 10 years.

The proportion of the population with access to clean cooking solutions in the LDCs, LLDCs, and SIDS were 25 per cent, 28 per cent and 58 per cent, respectively, in 2021. In comparison, the worldwide average was 71 per cent.

A 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. It also requires the dissemination of information and messaging that can help change behaviour.

### SDG7.2 Substantially increasing the share of renewable energy

Potentially, the LDCs, LLDCs and SIDS could make considerable strides toward achieving SDG7 by using their abundant natural energy resources. Yet, in comparison to other developing economies, the 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 therefore progressing particularly slowly. In the LDCs, the average share was 12 per cent, in the LLDCs, 10 per cent and the SIDS, 8 per cent in 2021, with fossil fuels still meeting a substantial share of growth in TFEC.

### SDG7.A.1 International public financial flows to developing countries in support of renewable energy

In US dollar (US\$) terms, international financial flows in support of clean energy fell for a fourth year in a row in 2021, down to US\$ 10.8 billion after standing at US\$ 26 billion in 2017. The countries where support is needed the most received relatively little. The 92 countries in the LDC, LLDC, SIDS groups combined received less than a third of total global flows – the LDCs receiving US\$ 2 billion, the LLDCs US\$ 1.3 billion and the SIDS US\$ 198 million.

This overall decline in support of clean energy is of grave concern given the urgent need for universal access to energy, a critical factor in reducing poverty, as well as the need for structural transformation and clean energy systems that can align development with climate goals.

### SDG7.B.1 Installed renewable electricity-generating capacity in developing countries

Installed renewable power generation capacity is growing in the LDCs, LLDCs and SIDS, although more slowly than in other developing countries.

In 2021, the compounded annual growth rate of installed renewable capacity per capita was highest in the SIDS, at 8.5 per cent, followed by the LDCs, at 5.5 per cent and the LLDCs, at 3.9 per cent. This compared to a global average of 9.6 per cent in other developing countries over the period 2016 to 2021.

### SDG7.3 Energy efficiency

Using the most recent available data, for 2020, energy intensity improved in the SIDS and LLDCs while declining in LDCs. There was a huge drop in gross domestic product (GDP) and energy consumption in 2020, it difficult to identify any particular trend in energy intensity, as the indicator was affected by factors unrelated to energy efficiency during the period in question.

## PROGRESS AND PROSPECTS WITH SDG7 INDICATORS

### SDG7.1.1 Access to electricity

Regarding the target of universal access to affordable, reliable, sustainable and modern energy, the LDCs, LLDCs and SIDS have made considerable progress over the last decade.

Access rates in the LDCs improved from 55 per cent to 56 per cent between 2020 and 2021, despite the global pandemic.<sup>1</sup> Yet, this still meant 481 million people in the LDCs were without any connection to electricity in 2021. This figure was almost two-thirds of the total global population lacking access.

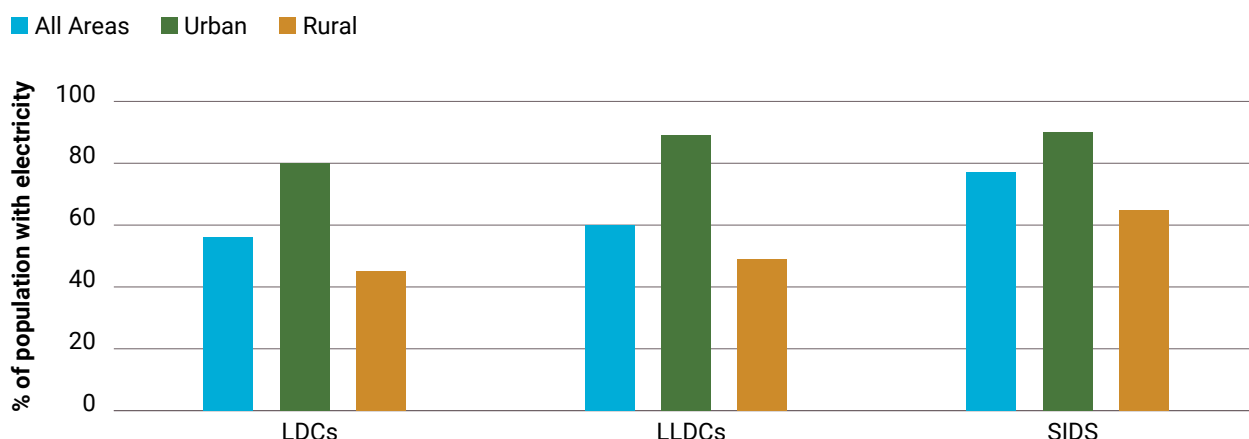
An estimated 32 million people a year in the LDCs were connected to electricity between 2019 and 2021.<sup>2</sup> Yet, this rate needs to more than double, to 63 million new connections per year, if the goal of universal access is to be achieved by 2030.<sup>3</sup>

Meanwhile, up to 2021, only 3 LDCs have reached the goal of universal access (Bhutan in 2019, followed by Timor-Leste and the Lao People's Democratic Republic in 2021). Urgent actions are therefore needed to scale up support for LDCs, prioritizing the poorest and rural communities, if they are to reach universal access.

Regarding the LLDCs, on average, 60 per cent of the population in these countries had access to electricity in 2021.<sup>4</sup> By then, almost half of the 32 LLDCs had access rates of over 97 per cent of the population, with 10 reaching the universal access target. The low average for the LLDCs reflects the especially low access rates of those LLDCs which are also LDCs.

These figures, however, hide huge disparities within countries, as well as between urban and rural areas (Figure 1).

**FIGURE 1. Percentage of the population with access to electricity in all areas, urban areas and rural areas, in LDCs, LLDCs, and SIDS, 2021**



Source: From data supplied to UN-OHRLLS by the World Bank, April 2023.

Regarding the 37 SIDS, on average, the proportion of the population with access to electricity was 76 per cent in 2021.<sup>5</sup> Country level data reveals that 25 SIDS had access rates above 95 per cent that year, with 17 SIDS having already achieved the goal of universal access by 2021. Among the 5 SIDS with the lowest access rates, 4 were also classified as LDCs. The exception was Papua New Guinea, which had an access rate of 21 per cent – the lowest rate among all SIDS.

### **SDG7.1.2 Access to clean cooking solutions**

Unless clean cooking finds a lasting place on the global political agenda, by 2030, more than 2.1 billion people will continue to rely on fuels such as biomass, kerosene or coal for cooking.<sup>6</sup> Household air pollution, mostly smoke from cooking, disproportionately affects women and children and is linked to almost 2.5 million premature deaths a year.<sup>7</sup> Scaling up of clean cooking solutions can help reduce direct carbon emissions and conserve the environment. It is also considered a cost-effective way to incorporate nature-based climate solutions.

In 2021, almost 80 per cent of the population living in the LDCs – some 880 million people – lacked clean cooking facilities.<sup>8</sup> In 20 LDCs the problem was acute, with less than 5 per cent having access to clean fuels for cooking.

In the LLDCs, the proportion of the overall population with access to clean cooking increased by only 3 percentage points between 2010 and 2021, rising from 25 per cent to 28 per cent.<sup>9</sup> In the SIDS, access to clean cooking and technologies increased by around 1 percentage point annually from 2000, plateauing at 58 per cent in 2010.<sup>10</sup>

Several factors lie behind the slow rate of adoption of clean cooking technologies. These include infrastructure barriers, such as access to electricity for electric stoves, lack of income and affordability, as well as behavioural and cultural factors. Regarding the latter, traditional methods of food preparation using wood may take preference in a household's decision whether or not to switch to clean cooking.<sup>11</sup>

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 US\$ 2.4 trillion a year.<sup>12</sup> Scaling up efforts to reach universal access requires committed and sustained policies to provide easy access to modern fuels and stoves at affordable prices. It also requires information distribution and messaging aimed at changing behaviour.<sup>13</sup> Greater involvement of organizations led by women and the empowerment of women are 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 SIDS.

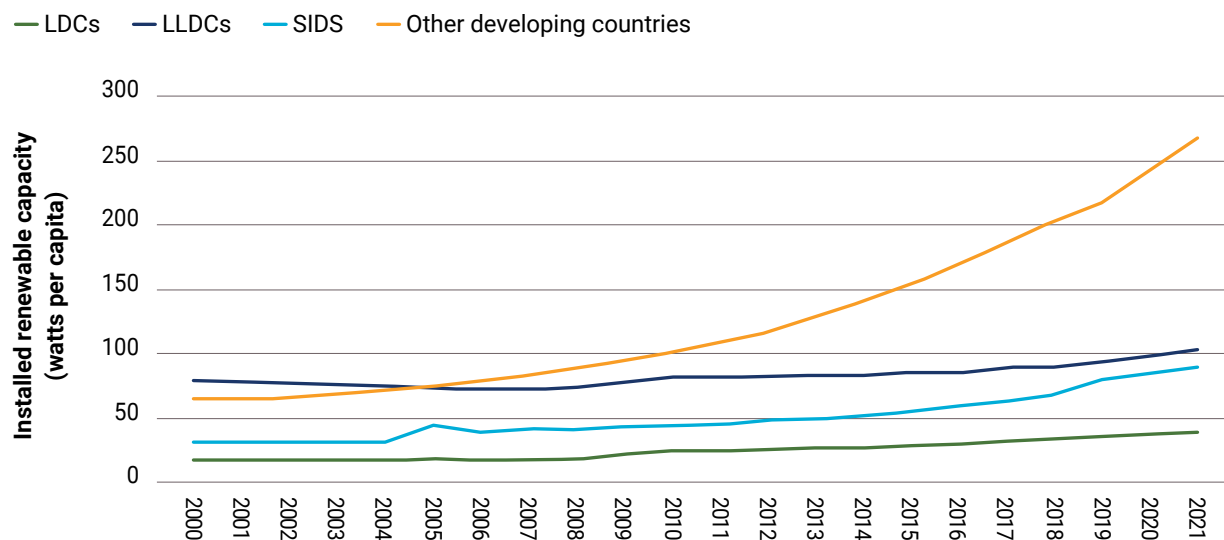
### **SDG7.2 Substantially increasing the share of renewable energy**

In the LDCs, LLDCs and SIDS the share of renewable energy sources in TFEC remains high. This is especially so in the LDCs, where the share was 71 per cent in 2021. This high figure, however, is because in the LDCs the majority of the population relies on traditional uses of biomass (wood fuel and crop and animal residues) for cooking and heating.<sup>14</sup>

In the LLDCs, the share of renewable energy sources in TFEC in 2021 was 45 per cent and in the SIDS it was 20 per cent. When traditional use of biomass is excluded, the share of renewables in TFEC drops significantly – in the LDCs to 12 per cent, the LLDCs to 10 per cent and the SIDS to 8 per cent.<sup>15</sup>

During the COVID-19 pandemic, economic activity and global supply chains were continuously disrupted. Yet renewable energy consumption continued to grow globally, in contrast to the consumption of other energy sources.<sup>16</sup>

**FIGURE 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, 2023.

Nonetheless, the LDCs, LLDCs and SIDS fell behind this positive global trend (Figure 2), although there is huge potential for these countries to capitalize on their natural energy resources, particularly as renewable energy becomes increasingly competitive, worldwide. Scaling up decentralized energy systems, for example, can have a great impact in lifting millions out of energy poverty and maximizing the productive capacity of sectors such as agriculture – the backbone of many of these countries’ economies. In many developing countries, especially the LDCs, LLDCs and SIDS, the private sector finances most renewable energy investments, yet the public sector remains pivotal in financing projects directly, or in leveraging private capital.

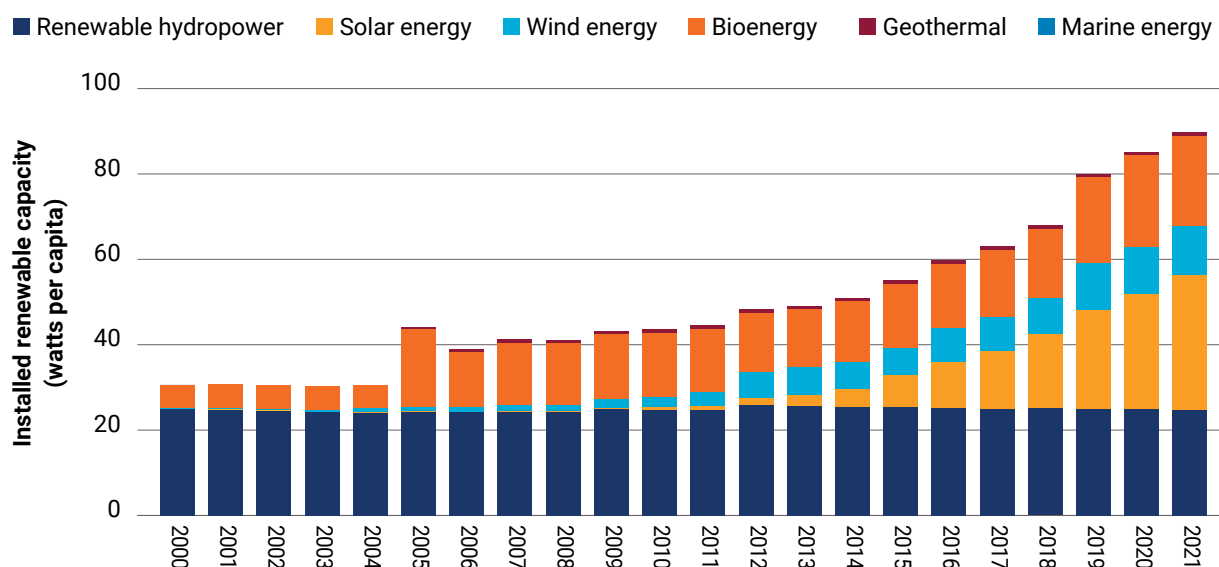
Out of the three groups, the SIDS have made the most progress in adding renewable energy generating capacity to their energy mix. They achieved a compound annual growth rate (CAGR) for installed renewable electricity generating capacity (in watts per capita) of 8.5 per cent between 2016 and 2021.

Many SIDS do not have any indigenous fossil fuel supply and therefore import up to 100 per cent of their petroleum products. These, in turn, comprise most of their energy mix and their emissions. Shifting away from fuel imports can increase the energy independence of the SIDS, based on utilization of their abundant natural energy resources. It would also improve their balance of payments position 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 photovoltaic (PV) systems, globally. On these island nations, the second largest capacity by technology is renewable hydropower, followed by bioenergy (Figure 3).

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

**FIGURE 3. Renewable installed generating capacity in SIDS, 2000 to 2021**



Source: IRENA, 2023.

### 7.A.1 International financial flows to developing countries in support of renewable energy

Significant initial upfront investment costs are required to increase the share of renewables in the energy-mix. Other challenges, such as current dependence on fossil fuels, may also make the energy transition challenging for the LDCs, LLDCs and SIDS. Additionally, without development finance acting as a catalyst, the limited market size of these countries makes it difficult to overcome the perceived and real risks investors see in the LDCs, LLDCs and SIDS. Rising commodity prices have also increased the cost of producing solar modules, wind turbines and biofuels. This has reversed the previous, declining cost trend seen in renewable energy.<sup>17</sup>

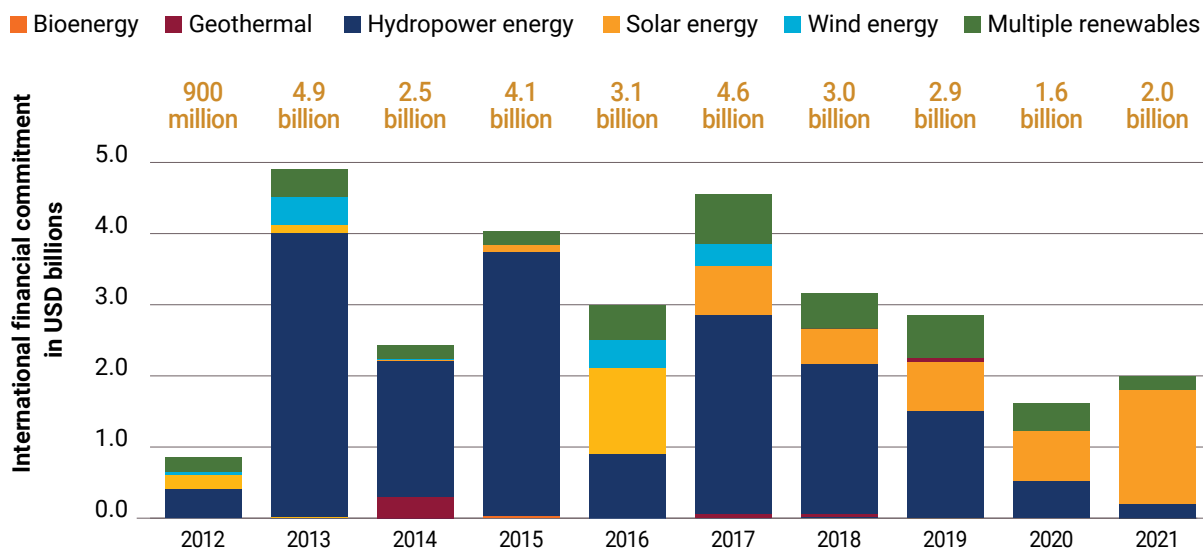
Globally, international financial flows to developing countries in support of renewable energy had started declining even before the onset of the COVID-19 pandemic. This decline continued through 2021, when these flows amounted to US\$ 10.8 billion. Of this, US\$ 2.0 billion went to the LDCs, US\$ 1.3 billion to the LLDCs and US\$ 198 million to the SIDS – an amount significantly smaller than that going to the other two groups.<sup>18</sup>

The current level of international public financial flows to the LDCs, LLDCs and SIDS for clean energy is therefore insufficient to spur larger volumes of investments from the private sector, a flow which is critical to expedite progress on SDG7.

A closer look at the international financial flows to LDCs by technology type also reveals wide variations between regions and countries, with large scale investments concentrated in a few places. In 2013, for example, a peak in financial flows to LDCs occurred. Yet, this flow was accounted for by just a handful of LDCs where major hydropower generation capacity was being developed. In 2017, too, the Lao People's Democratic Republic received almost half of all flows to LDCs globally, yet this was for a single scheme, the Nam Theun 2 Hydropower Project.<sup>19</sup>



**FIGURE 4. International financial flows in support of clean energy by technology to LDCs, 2012-2021**



Source: IRENA, 2023.

Solar energy projects are typically smaller in financial value, with funding for solar overtaking hydropower in recent years (Figure 4). More LDCs are receiving at least some funding for solar, although almost half of the flows in 2021 still went to just three countries – Ethiopia, Niger and Tanzania. Over the last decade, the countries receiving the largest flows have also achieved the fastest growth in electrification rates, underscoring the importance of these flows in unlocking investments in the LDCs.

Efforts in the LDCs, LLDCs and SIDS must also be scaled up to support local enterprises. This is especially the case for micro-, small- and medium-size enterprises (MSMEs) and off-grid developers, if new markets are to be brought to maturation.

Off-grid and decentralised energy systems provide a viable electrification solution that requires low initial investment, is rapidly deployable, environmentally sound, can be suited to match local needs and has the potential to empower rural communities. Such schemes can also have a focus on youth and women.<sup>20</sup> In particular, huge opportunities exist to scale up the application of renewables and energy efficient technologies in the agrifood sector in these most vulnerable nations. This sector is particularly at risk and faces an uncertain future due to climate change, water stress, pests and diseases, trade and macroeconomic policies and other, unexpected events.

## PRIORITY ACTIONS TO ACCELERATE SDG7 IMPLEMENTATION

To achieve the SDG7 targets, there is an urgent need to enhance global efforts to address the specific barriers that exist in the 46 LDCs, 32 LLDCs and 37 SIDS.

Along with electrification efforts to provide universal access, additional challenges must be tackled in order to provide a sustainable energy supply that is conducive to economic growth. This is also vital in facilitating progress toward the achievement of all the other SDGs.

Enacting enabling policy and regulatory frameworks to support the energy sector in the 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 these countries' climate goals.

The following priority actions are therefore recommended:

- Seize every opportunity to rapidly accelerate efforts in the LDCs, LLDCs and SIDS in order to achieve universal access to energy by 2030. This will require stronger political support and long-term energy planning, identifying least-cost pathways and appropriate financing to ensure universal access to sustainable energy in the shortest time possible.
- Reaffirm the central role of public finance in sustainable financing of energy projects.
- Significantly scale up international public financial flows to the LDCs, LLDCs and SIDS in order to leverage private capital and bolster energy investments in quality climate-resilient energy infrastructure. This will enable both economic and environmental benefits.
- Ensure that clean energy transitions are cost-efficient, people-centred and inclusive. Governments have a key role in this. A comprehensive energy sector subsidy reform plan that phases out fossil fuel subsidies and redirects finances to better targeted social spending can help reduce inefficiencies in the allocation of resources.
- Energy transition also represents better opportunities for the LDCs, LLDCs and SIDS to attract investments from a wider pool of funding sources, including climate financing facilities. Capacity constraints facing LDCs and SIDS must be addressed in order to expand financial access and to navigate multiple financing facilities. This is also key to successful project preparation and bankability.
- Enhance the linkages between energy and agrifood systems. Promoting investment in renewable energy solutions and adopting new holistic approaches, such as integrated food-energy systems and the water-energy-food-land nexus, which minimise competition and leverage synergies in water and land use, can directly advance energy and food security. They can also contribute to job creation, gender equality and climate resilience and adaptation.
- Increase support for MSMEs, including support for decentralized renewables, which are often at the forefront of delivering energy services in poorer and rural communities. These and off-grid systems should be supported in order to bring new markets to maturity.

## ENDNOTES

- <sup>1</sup> From data on electricity access supplied to UN-OHRLLS by the World Bank, April 2023.
- <sup>2</sup> SDG7 Tracking Report, 2023. Tracking SDG7: The Energy Progress Report 2023 (who.int), [www.who.int/publications/m/item/tracking-sdg7--the-energy-progress-report-2023](http://www.who.int/publications/m/item/tracking-sdg7--the-energy-progress-report-2023)
- <sup>3</sup> RMI/UN-OHRLLS, 2021. [ohrlls\\_ldcs\\_report\\_vok.pdf](http://ohrlls_ldcs_report_vok.pdf) (un.org.) [www.un.org/ohrlls/sites/www.un.org.ohrlls/files/ohrlls\\_ldcs\\_report\\_vok.pdf](http://www.un.org/ohrlls/sites/www.un.org.ohrlls/files/ohrlls_ldcs_report_vok.pdf)
- <sup>4</sup> From data on electricity access supplied to UN-OHRLLS by the World Bank, April 2023.
- <sup>5</sup> Ibid.
- <sup>6</sup> See International Energy Authority (IEA) (2022), "SDG7: Data and Projections", IEA, Paris, <https://www.iea.org/reports/sdg7-data-and-projections/access-to-clean-cooking>, accessed 10 June 2023.
- <sup>7</sup> Ibid.
- <sup>8</sup> Global Health Observatory (GHO), World Health Organisation (WHO) (2023), "Proportion of population with primary reliance on clean fuels and technology", GHO/WHO, [www.who.int/data/gho/data/indicators/indicator-details/GHO/gho-phe-primary-reliance-on-clean-fuels-and-technologies-proportion](http://www.who.int/data/gho/data/indicators/indicator-details/GHO/gho-phe-primary-reliance-on-clean-fuels-and-technologies-proportion), accessed 11 June 2023.
- <sup>9</sup> Ibid.
- <sup>10</sup> Ibid.
- <sup>11</sup> Govinda R. Timilsina and Sunil Malla (2021), "Clean cooking: Why is adoption slow despite large health and environmental benefits?", *Economics of Energy & Environmental Policy*, Volume 10, Number 1, International Association for Energy Economics, Cleveland, <https://econpapers.repec.org/article/aeneepjl/eeep10-1-timilsina.htm> accessed 10 June 2023.
- <sup>12</sup> ESMAP (2020), "The State of Access to Modern Energy Cooking Services", Energy Sector Management Assistance Programme, World Bank, Washington, D.C., <https://documents1.worldbank.org/curated/en/937141600195758792/pdf/The-State-of-Access-to-Modern-Energy-Cooking-Services.pdf>, accessed 10 June 2023.
- <sup>13</sup> Shonali Pachauri and others (2021), "Access to clean cooking services in energy and emission scenarios after COVID-19", *Nature Energy* 6, <https://doi.org/10.1038/s41560-021-00911-9>, accessed 10 June 2023.
- <sup>14</sup> See IRENA (2023), "Renewable capacity statistics 2023", IRENA, Abu Dhabi, [https://mc-cd8320d4-36a1-40ac-83cc-3389-cdn-endpoint.azureedge.net/-/media/Files/IRENA/Agency/Publication/2023/Mar/IRENA\\_RE\\_Capacity\\_Statistics\\_2023.pdf?rev=d2949151ee6a4625b65c-82881403c2a7](https://mc-cd8320d4-36a1-40ac-83cc-3389-cdn-endpoint.azureedge.net/-/media/Files/IRENA/Agency/Publication/2023/Mar/IRENA_RE_Capacity_Statistics_2023.pdf?rev=d2949151ee6a4625b65c-82881403c2a7), accessed 10 June 2023.
- <sup>15</sup> IEA (2023) Raw data shared with OHRLLS by IAE
- <sup>16</sup> See IEA (2022), "SDG7: Data and Projections", IEA, Paris, [www.iea.org/reports/sdg7-data-and-projections/access-to-clean-cooking](http://www.iea.org/reports/sdg7-data-and-projections/access-to-clean-cooking) accessed 10 June 2023.
- <sup>17</sup> IEA (2021), "Renewables 2021", IEA, Paris, [www.iea.org/reports/renewables-2021](http://www.iea.org/reports/renewables-2021), accessed 11 June 2023.
- <sup>18</sup> IRENA (2023), Figures given are commitments by recipient country, in million US dollars at 2019 prices and exchange rates and using donor country deflators.
- <sup>19</sup> World Bank (2020), "Lao People's Democratic Republic: Nam Theun 2 Hydroelectric and Social and Environment Projects", World Bank Group, Washington D.C., <https://documents1.worldbank.org/curated/en/813141611764408784/pdf/Lao-Peoples-Democratic-Republic-Nam-Theun-2-Hydroelectric-and-Social-and-Environment-Project.pdf>, accessed 11 June 2023.
- <sup>20</sup> IRENA, UN-OHRLLS (2022), "Scaling up renewables in landlocked developing countries", IRENA, UNOHRLLS, [www.un.org/ohrlls/sites/www.un.org.ohrlls/files/irena\\_lddc\\_report\\_2022.pdf](http://www.un.org/ohrlls/sites/www.un.org.ohrlls/files/irena_lddc_report_2022.pdf), accessed 11 June 2023.



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