

— STRATEGIC INTELLIGENCE BRIEFS: RESILIENCE SERIES —

— PART —

3

# RENEWABLES FOR SOCIAL AND SOCIETAL RESILIENCE



## STRENGTHENING SOCIAL AND SOCIETAL RESILIENCE

**Resilience** is the capacity to recover, adapt, and develop when faced with adversity, challenges, or stress. Resilience is about bouncing back from difficult situations, maintaining strength, and learning from experiences to emerge stronger. It is not about avoiding hardship but responding to it, drawing on strengths, support systems, and coping strategies to move forward. Resilience might be best conceptualised as an ability for stakeholders to cope with all kinds of risks and shocks, whether predicted or unforeseen<sup>1</sup>.

**Social and societal resilience** refers to the capacity of individuals, communities, and societies to **withstand, recover from,** and **adapt to** adversity. Social resilience emphasises the role of social networks, trust, and support systems in enabling communities to respond effectively to crises such as natural disasters or economic challenges. In contrast, societal resilience involves the strength of broader systems, including governance, infrastructure, and institutions, in maintaining essential functions during large-scale disruptions. Both forms of resilience are **interconnected**, ensuring societies can endure and adapt through challenging times.

### About the resilience series

The impacts of climate change are escalating worldwide and building resilience is now inevitable. Strengthening climate, economic, and social resilience is crucial for adapting to climate change and limiting further harm. This series examines how renewable energy plays a pivotal role in strengthening these resilience aspects, supporting communities and economies as they confront climate disruptions.

REN21's Strategic Intelligence Briefs spotlight critical gaps in the energy landscape, providing data-driven insights to shape powerful renewable energy narratives, support informed debates among stakeholders, and foster collaborative global strategies within its community.

Cover photo: Preston Keres/USDA/FPAC



## RENEWABLE ENERGY

### THE HOLISTIC APPROACH TO

### LONG-TERM SUSTAINABILITY AND RESILIENCE



Pramod Kanakath / Climate Visuals Countdown



Abir Abdullah / Climate Visuals Countdown

**Renewable energy strengthens both social and societal resilience by promoting gender equity, supporting food security, enhancing health, and fostering peace through sustainable and inclusive energy systems.**

The distributed nature of renewables drives increased employment opportunities (18.2% growth from 2022 to 2023), flexible work environments, leadership roles, skill development programmes and higher female representations (Women account for

about 32% of the workforce in renewables, compared to only 22% in fossil fuels). For instance, solar-powered lighting allows for safer nighttime activities, while clean cooking solutions improve health and free time for other activities.

Renewables improve public health by emitting less pollution, preventing respiratory illnesses, enhancing access to clean water, and boosting wellbeing through better living conditions, climate resilience and economic

stability. They also play a critical role in supporting agricultural resilience by enabling solar-powered irrigation, cold storage, and mechanisation. These solutions reduce post-harvest losses, improve food preservation and enhance rural productivity.

Renewable energy fosters equitable access to electricity and clean energy solutions for remote communities, reduces energy costs for households and businesses, promotes community ownership and governance of





energy systems, and shares project benefits with vital institutions such as schools and hospitals, driving socio-economic development. By enhancing local energy access and supporting community-driven projects, renewables mitigate resource-based conflicts, create economic opportunities, and promote stability.

Maximising the social and societal benefits of renewable energy requires comprehensive and inclusive strategies. Investments should prioritise local capacity building, community ownership, and equitable energy distribution.

Policymakers, businesses, and civil society must work together to integrate renewables into frameworks for gender equity, public health, food security, and peacebuilding. It is essential that renewable energy systems are implemented equitably, ensuring that all populations, particularly the most vulnerable, can access their benefits.

**The shift to renewable energy is not just about sustainability but also about transforming social, economic, and cultural dynamics, fostering more equitable and inclusive societies.**



# RENEWABLES FOR SOCIAL AND SOCIETAL RESILIENCE: KEY TAKEAWAYS

## Renewable Energy is a Key Pillar of Social and Societal Resilience

Renewable energy strengthens social and societal resilience by ensuring equitable access to electricity and clean cooking, reducing energy bills for households and businesses, and empowering marginalised communities.

## Renewables Support Stable, Secure, Resilient Economies and Societies

Renewable energy fosters a more democratic energy landscape by supporting economic empowerment of marginalised communities and encouraging local ownership and decision-making opportunities. With a strong impact on alleviating climate and resource-related tensions, and growing competitiveness compared to fossil fuels, renewables play a critical role in ensuring long-term social and societal stability.

## Renewables Need Stronger Financial Support

Accessible funding expands renewable energy projects, lowers energy costs, addresses infrastructure challenges, and creates local jobs. Financial support for renewables helps communities reduce reliance on fossil fuels, ensuring greater gender equity, stronger food systems and improved resilience against adversity.

## A Multistakeholder Approach is Critical

Building social and societal resilience with renewable energy requires collaboration among national governments, local authorities, multilateral development banks, UN agencies, private companies, NGOs, foundations, and academia. Each stakeholder contributes through policy support, funding, advocacy, and research — essential for advancing renewables and challenging societal norms.

## Seize the Opportunity

Renewables-based energy systems provide a path to resilient societies, particularly in communities and regions vulnerable to adversity and prone to conflicts. Investing in decentralised, sustainable energy infrastructure strengthens local economies and reduces reliance on volatile energy imports, fostering a stable, self-sufficient future.

## Call To Action

Preparing societies and economies for a complete transition to renewable energy requires strategic planning, investment, and systemic transformation across all energy-use sectors. This ensures an equitable energy transition, strengthens social and societal resilience, and fosters sustainable development.



## RENEWABLE ENERGY IS A KEY PILLAR FOR SOCIAL AND SOCIETAL RESILIENCE

Thanks to their decentralised and distributed nature, renewables support resilient economies and societies.



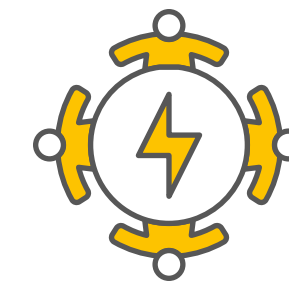
### Distributed benefits

Renewable energy projects deliver financial and non-financial benefits are shared with local community institutions such as schools and healthcare facilities.



### Democratic governance

Renewable energy projects foster participatory governance in energy systems, empowering local stakeholders.



### Community ownership and empowerment

Community-owned renewable energy enhances local decision making, generates economic benefits, and strengthens social cohesion through shared investment and sustainable development.



### Gender equality

Renewables empower women by reducing burdens, creating diverse job opportunities, and improving education, especially for girls overcoming societal barriers.

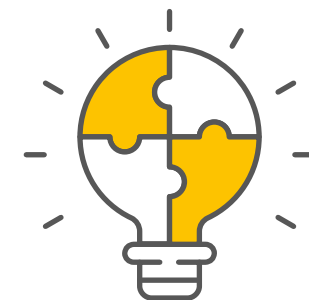


► RENEWABLE ENERGY IS A KEY PILLAR FOR SOCIAL AND SOCIETAL RESILIENCE



**Health**

Renewables produce less pollution, improve living conditions, and enhance wellbeing by creating healthier environments and enabling communities to withstand climate disruptions.



**Education and skills**

Renewables promote workforce training and develop local expertise through partnerships and knowledge-sharing initiatives.



**Economic resilience**

Renewable energy creates jobs, reduces energy costs, and helps communities overcome energy poverty, fostering self-sufficiency<sup>2</sup>.



**Climate resilience**

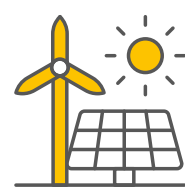
Decentralised renewables enhance energy security and enable communities to adapt to climate-related disruptions<sup>3</sup>.



## RENEWABLE ENERGY DRIVES GENDER EQUITY

From workforce participation to leadership roles and equitable pay, women continue to face significant gaps, highlighting the urgent need for transformative action to achieve gender equality.

### WOMEN IN THE ENERGY SECTOR<sup>4</sup>:



Represent **32%** of employees in the renewable energy sector in 2021.



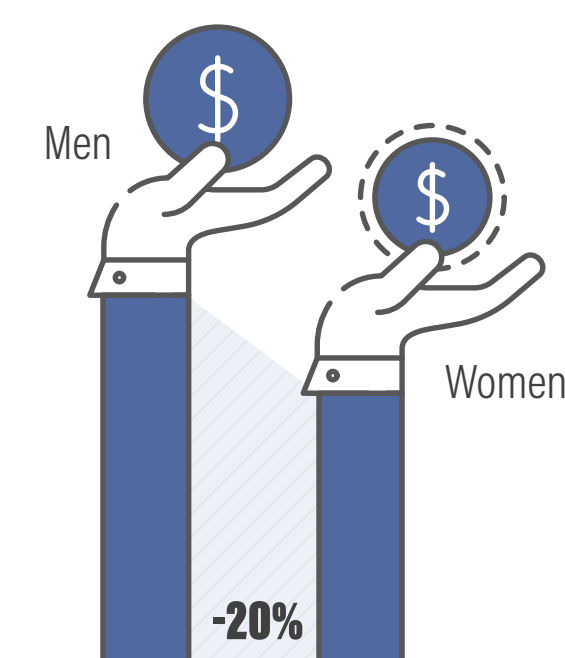
Make up just **22%** of the workforce in the in the oil and gas sector...



...and only **16%** in the energy sector overall.



Hold **11%** of ministerial roles in energy sectors across 190 countries as of January 2023.



Earn salaries that are **20%** lower than men in the same roles.



## RENEWABLES LEVERAGE FOOD SECURITY

Renewable energy plays a crucial role in enhancing food security and agricultural resilience by addressing inefficiencies and inequalities, particularly for vulnerable and remote communities.

- **Support food production:** Renewables enable irrigation (e.g. solar-powered pumps), mechanisation, and cold storage (e.g. solar- or wind-powered facilities).
- **Reduce reliance on fossil fuels:** Renewable energy offers stable, cost-effective alternatives.
- **Mitigate and adapt to climate change:** Renewables strengthens agricultural and food system resilience.
- **Reinforce energy access:** Decentralised and distributed renewables are more accessible to rural communities.





► RENEWABLES LEVERAGE FOOD SECURITY



Globally, over **931 MILLION TONNES** of food waste and agricultural losses occur annually, predominantly in rural areas with limited power and inadequate storage<sup>5</sup>.

In 2023, **14%** of the world's food — worth an estimated USD 400 billion — was lost between harvest and retail. An additional **17%** was wasted at retail and consumer levels<sup>6</sup>.

In 2021, **BETWEEN 702 AND 828 MILLION PEOPLE** globally faced hunger.<sup>7</sup>



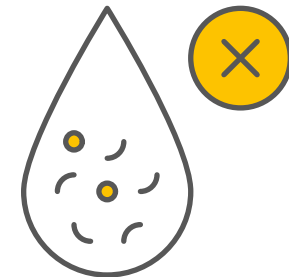
## RENEWABLE ENERGY

### PROMOTES A HEALTHIER SOCIETY

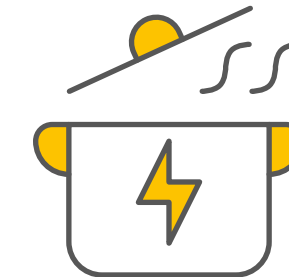
Compared to fossil fuels, renewable energy provides significant environmental and public health benefits while improving community welfare and diversity.



Produces less pollution than fossil fuels.



Minimises water contamination.



Improves access to clean cooking solutions.



Reduces health risks.



## RENEWABLES CONTRIBUTE TO STABLE AND SECURE SOCIETIES

**Renewables enhance energy independence, promote economic development, and mitigate climate- and resource-related tensions and conflicts.**

- **Peace potential:** Decentralised renewable energy systems (e.g. solar microgrids) reduce conflict by improving energy access, supporting local economies, and minimising reliance on conflict-prone fossil fuel supply chains<sup>8</sup>.
- **Broader impact:** The renewable energy transition reshapes geopolitics by reducing dependence on fossil fuels and addressing both local and global stability concerns.

To fully realise the transformative potential of renewables, equitable implementation, just energy distribution, and responsible resource sourcing are essential.





## RENEWABLE ENERGY DEPLOYMENT NEEDS TO CONSIDER TENSION POINTS

Expanding renewable energy - like any infrastructure - introduces challenges that must be addressed to ensure a fair and sustainable transition.

Key considerations include:

- **Resource Competition:** Conflicts may arise over land use, materials, access, and decision-making associated with renewable energy projects.
- **Conflict-Sensitivity:** Poorly planned projects risk exacerbating tensions if they fail to engage local communities and get their support or address local needs.
- **Economic and Geopolitical Shifts:** Transitioning from fossil fuels can destabilise economies reliant on oil and gas exports, creating new sources of instability.
- **Security Risks:** Fragile states face challenges for infrastructure development, governance, and attracting investment, increasing vulnerabilities during project implementation.





# AFRICA IS IN DIRE NEED FOR RENEWABLE ENERGY

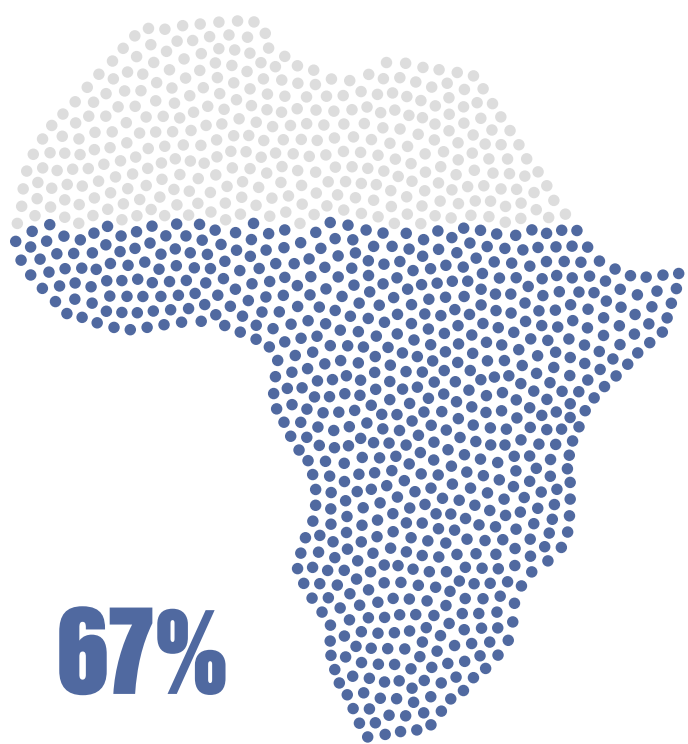
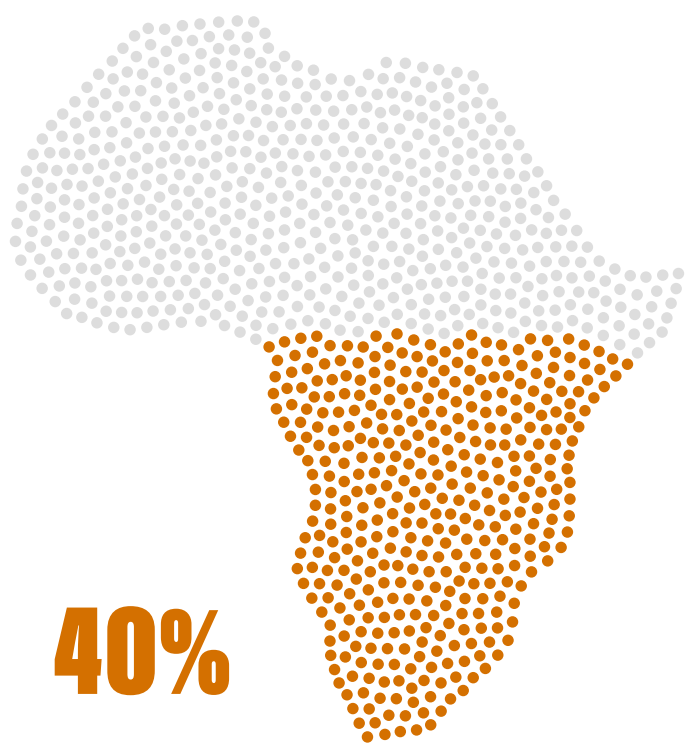
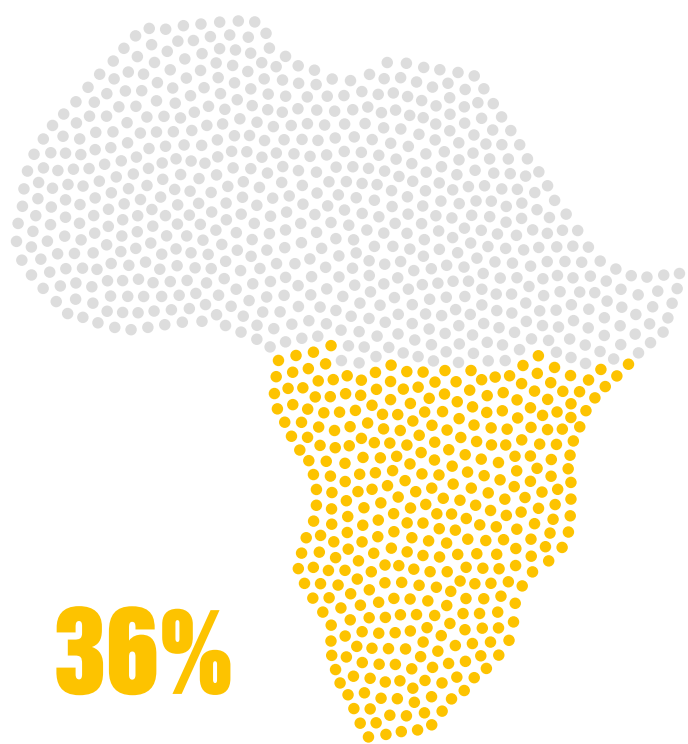
AFRICA IS HOME TO 1.5 BILLION PEOPLE, AND IN 2022:

**546  
MILLION**  
live in  
poverty<sup>9</sup>.

Approximately  
**600  
MILLION**  
lacked access  
to electricity<sup>10</sup>.

Nearly  
**1 BILLION**  
lacked access  
to clean cooking  
solutions<sup>11</sup>.

Africa and the Middle East  
account for just  
**3.6%**  
of global investment in  
renewables<sup>12</sup>, highlighting  
significant regional  
disparities.



● = 1 500 000 people

Access to energy  
is critical in Africa,  
enabling economic and  
societal development  
for the local  
communities.





## RENEWABLES ARE VITAL FOR FOOD SECURITY IN AFRICA

Renewable energy enhances Africa's food security by powering irrigation, cold storage and processing, reducing losses, cutting costs, and building resilience.



Africa accounts for more than one third of the world's population affected by hunger, estimated at **278 MILLION PEOPLE** in 2022<sup>13</sup>.

Post-harvest grain losses in sub-Saharan Africa are valued at **USD 4 BILLION**<sup>14</sup>.

Cold storage could significantly reduce the **30-40%** of post-harvest food loss in Sub-Saharan Africa<sup>15</sup>.





# SOCIAL AND SOCIETAL RESILIENCE IS GAINING MEDIA ATTENTION ACROSS AFRICA

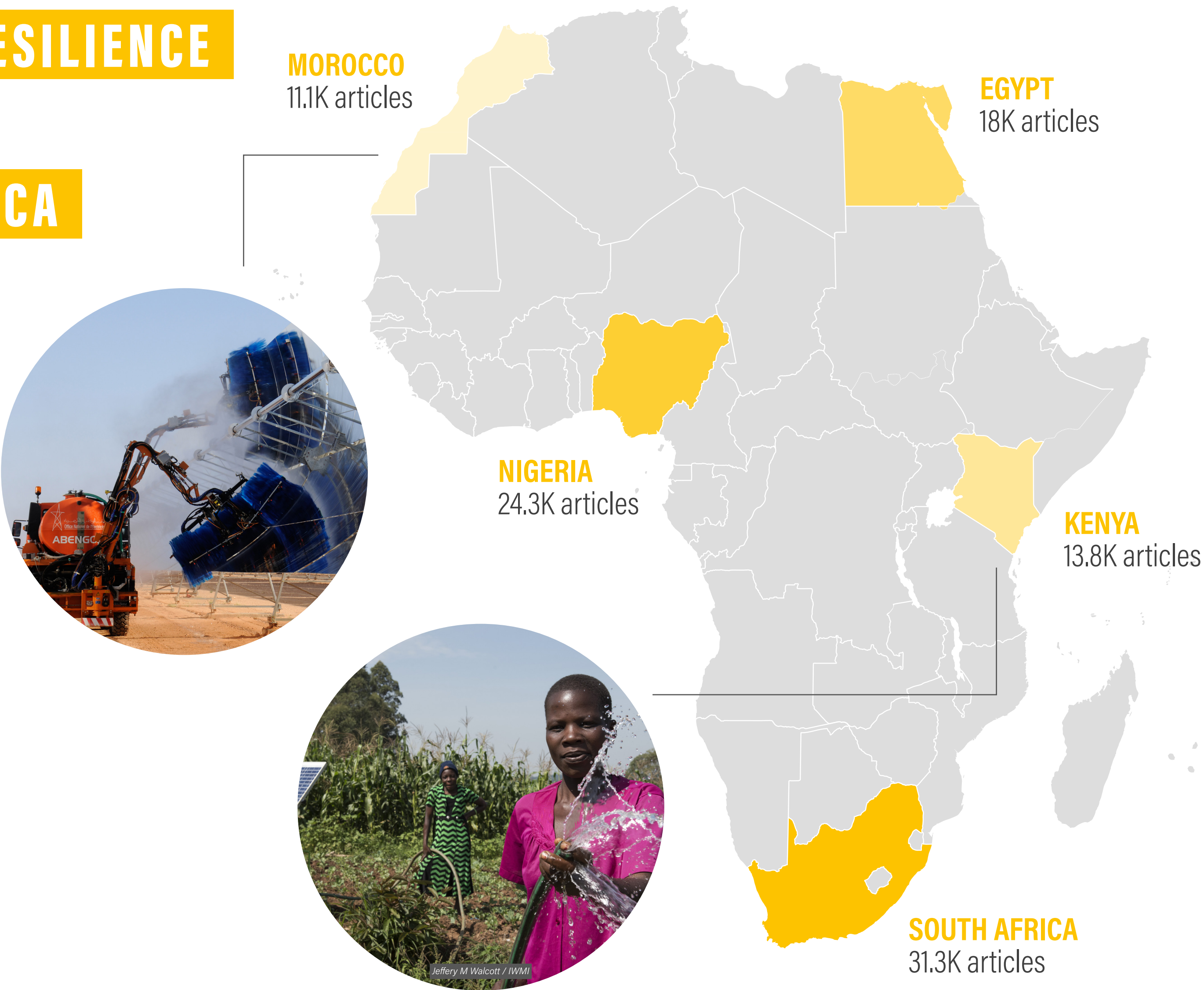
## Media coverage heatmap – Social and societal resilience:

South Africa, Nigeria, Egypt, Kenya and Morocco have received the most media attention on social and societal resilience.

Media about social and societal resilience was tracked via *Atium* (REN21's strategic intelligence tool). It covered the following issues: Public-Private Partnerships, Citizen Participation, Climate Change, Just Transition, First Nations, Human Rights, Gender, Health and Access to Clean Cooking.

Time frame: 01 April - 30 September 2024.

The data reflects the total volume of media mentions and posts related to the topics and does not indicate regional positioning towards specific topics.







## South Africa

The country's energy transition navigates the challenge of reducing coal dependence while advancing renewable energy adoption, addressing aging infrastructure, emissions, and socio-economic impacts. The Just Energy Transition Partnership faces delays, underscoring the need for Eskom reforms and alignment of environmental and economic priorities<sup>16</sup>.

## Egypt

The Orman Association, in partnership with FABMISR bank, is strengthening Al Falouga village's social resilience and financial inclusion<sup>17</sup>. The initiative enhances local living standards by reducing reliance on gas cylinders and promoting renewable energy through a biogas project.

## Kenya

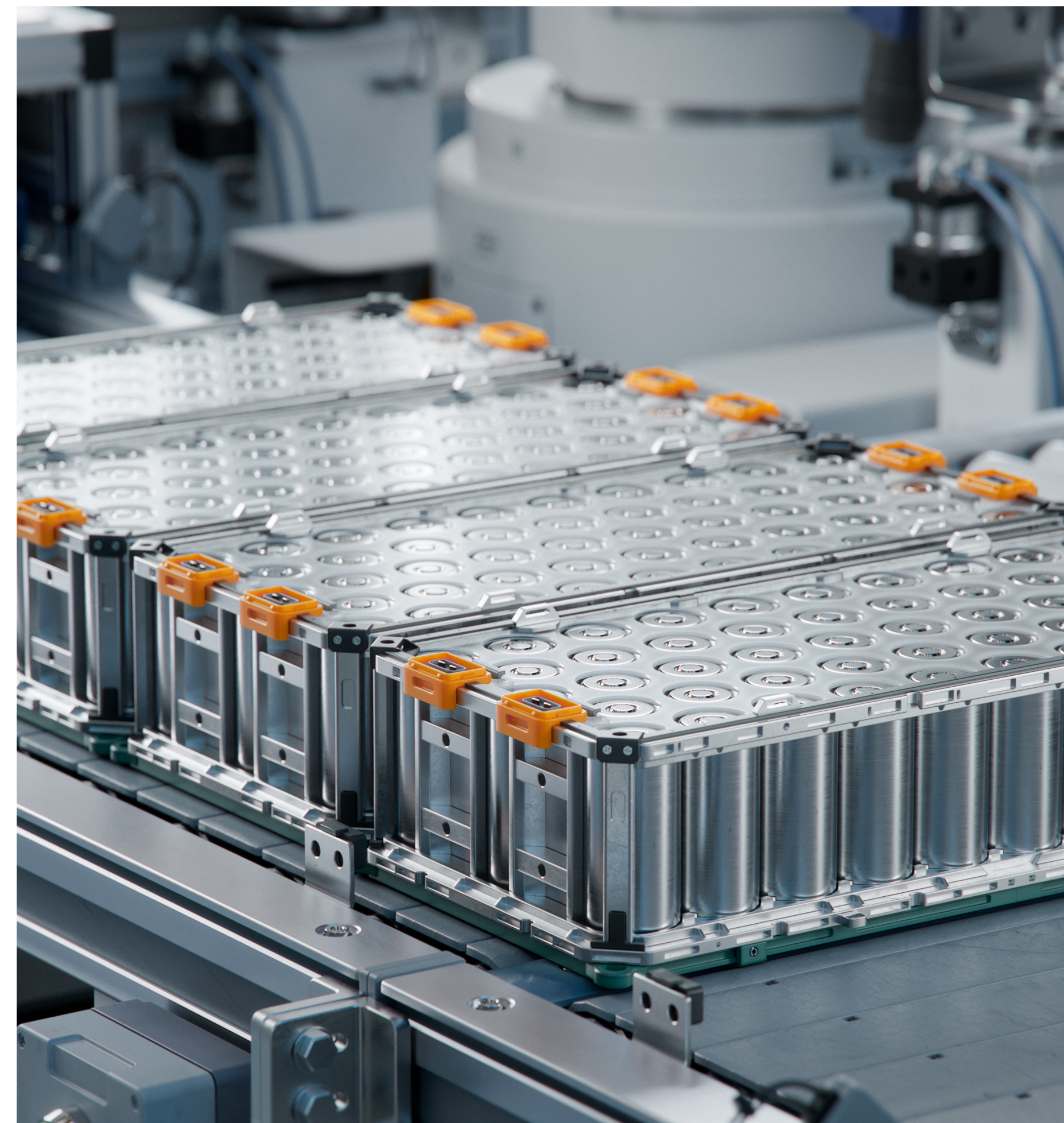
Microsoft and G42 are investing USD 1 billion in a geothermal-powered data centre and digital skilling programmes, fostering innovation, supporting AI-driven research, and boosting societal development in Kenya<sup>18</sup>.

## Nigeria

Advocates<sup>19</sup> call for stronger climate action, urging leaders to prioritize renewable energy, infrastructure investment, youth engagement, and comprehensive policies for long-term resilience. The Northwest Climate Security Project<sup>20</sup>, led by the United Nations Development Programme (UNDP), trains youth in conflict-affected regions to install solar power systems, enhancing local resilience and creating economic opportunities.

## Morocco

Gotion High-Tech's \$1.3 billion electric battery gigafactory in Kenitra, Morocco, is set to start production in 2026, creating thousands of jobs and boosting the local economy<sup>21</sup>. The project aligns Morocco's economic stability and societal resilience with the country's renewable energy goals, particularly in the context of the evolving global energy landscape.





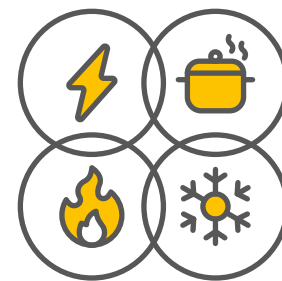
# INTEGRATING RENEWABLES FOR SOCIAL AND SOCIETAL RESILIENCE

Countries must reassess their strategies to integrate renewable energy as a foundation for social and societal resilience.

## INVESTING IN RENEWABLES WILL:



Enhance **energy security** and **independence**.



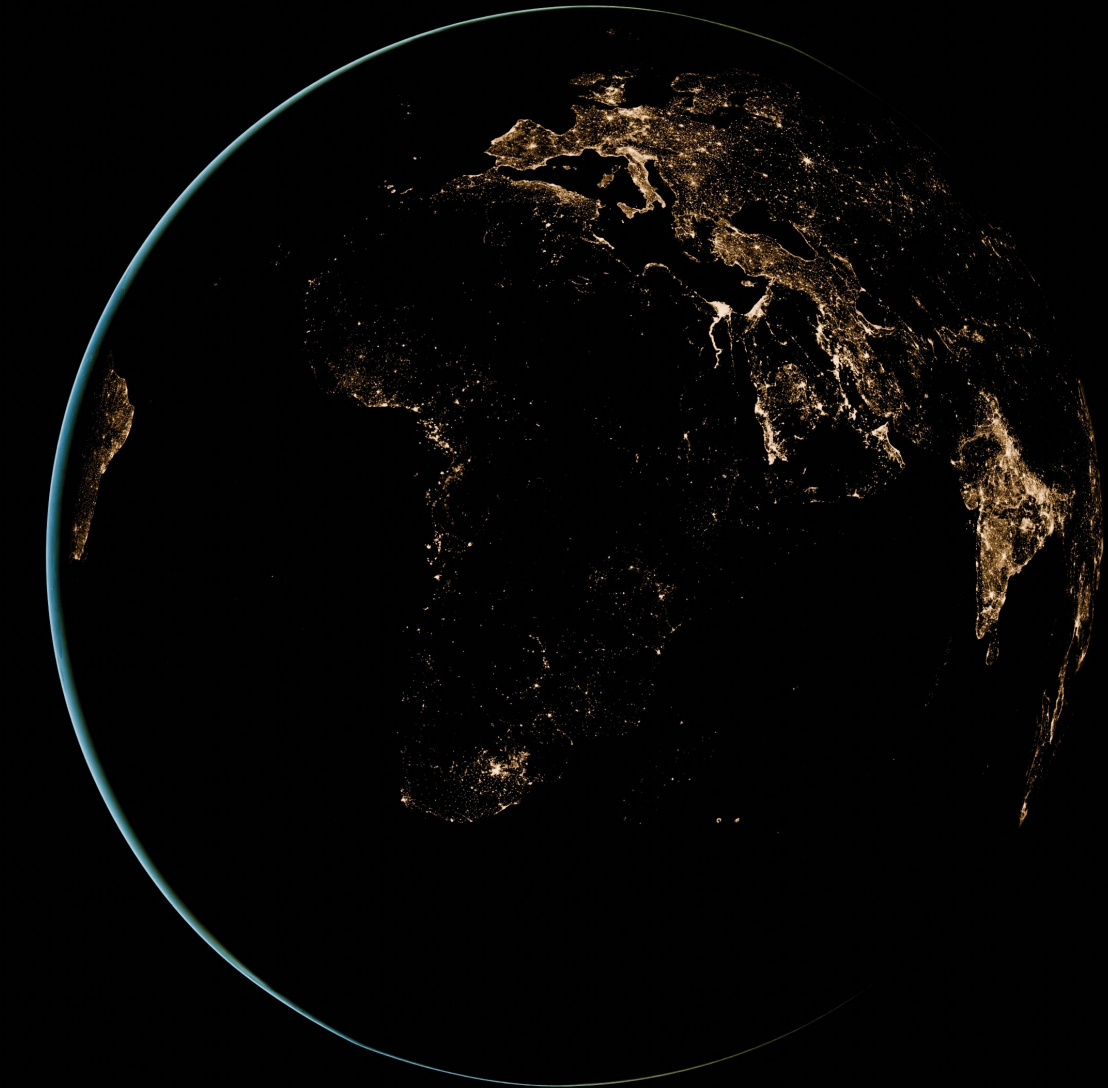
Ensure **equitable access** to electricity, clean cooking, heating and cooling, especially for remote and vulnerable communities.



**Lower energy bills** for households and businesses, fostering economic stability.



**Reduce reliance** on fossil fuels.



A collaborative, multistakeholder approach is crucial for funding renewable energy projects and addressing challenges effectively. Governments, financial institutions, UN agencies, businesses, NGOs, and academic institutions must work together to create enabling policies, secure financing, advocate for renewables, and conduct research that supports comprehensive strategies.



## CALL TO ACTION

It is time to fully leverage renewable energy for social and societal resilience.



Develop comprehensive policies and targets that integrate renewable energy with strategies for inclusion, diversity, gender equity, peacebuilding, health, and clean cooking.



Challenge societal norms that perpetuate barriers in education and workplaces.



Strengthen local capacity building to empower communities.



Foster community ownership and raise awareness of renewable energy benefits.



Prioritise energy efficiency and diversify renewable energy sources.



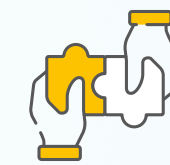
Increase and de-risk investment in renewable energy projects and research and development (R&D).



Modernise energy infrastructure to support the energy transition.



Consolidate data to demonstrate how renewables enhance social and societal resilience.



Encourage collaboration across sectors, stakeholders, and governance levels to drive transformative change.



ENDNOTES

1 International Institute for Environment and Development (IIED), Johnstone, K. and Greene, S. "Energising adaptation: key considerations for coupling energy access with climate adaptation and resilience", September 2024, <https://www.iied.org/22506iied>.

2 REN21, "Renewables for Economic Resilience", Accessed 15 November 2024, <https://www.ren21.net/your-network/strategic-intelligence-renewable-energy-leadership-2/>.

3 REN21, "Renewables for Climate Resilience", Accessed 15 November 2024, <https://www.ren21.net/your-network/strategic-intelligence-renewable-energy-leadership-2/>.

4 REN21, "Renewables Global Status Report 2024 – Economic and social Value Creation Module", November 2024, [https://www.ren21.net/wp-content/uploads/2019/05/gsr2024\\_ESVC\\_Report.pdf](https://www.ren21.net/wp-content/uploads/2019/05/gsr2024_ESVC_Report.pdf); REN21, "Renewables 2023 Global Status Report: Economic and Social Value Creation", 2023, [https://www.ren21.net/wp-content/uploads/2019/05/GSR2023\\_EconSocialValueCreation\\_Full\\_Report\\_with\\_endnotes\\_web.pdf](https://www.ren21.net/wp-content/uploads/2019/05/GSR2023_EconSocialValueCreation_Full_Report_with_endnotes_web.pdf); International Renewable Energy Agency (IRENA), "Renewable Energy: A Gender Perspective", January 2019, <https://www.irena.org/publications/2019/Jan/Renewable-Energy-A-Gender-Perspective>.

5 World Economic Forum (WEF), "The world's food waste problem is bigger than we thought - here's what we can do about it", 26 March 2021, <https://www.weforum.org/stories/2021/03/global-food-waste-solutions/>.

6 Food and Agriculture Organisation (FAO), "Policy Support and Governance Gateway - Food Loss and Food Waste", Accessed 04 December 2024, <https://www.fao.org/policy-support/policy-themes/food-loss-food-waste/en/>.

7 Food and Agriculture Organisation (FAO), "The State of Food Security and Nutrition in the World 2022", 2022, <https://openknowledge.fao.org/items/c0239a36-7f34-4170-87f7-2fcc179ef064>.

8 Clingdael, "Why Renewable Energy Matters in the Context of Peace and Stability", 7 November 2024, <https://www.clingendael.org/publication/why-renewable-energy-matters-context-peace-and-stability>.

9 United Nations Economic Commission for Africa (ECA), "Africa needs to curb poverty and social inequality to meet development goals", 15 March 2023, <https://www.uneca.org/eca-events/stories/africa-needs-curb-poverty-and-social-inequality-meet-development-goals>.

10 International Energy Agency (IEA), "World Energy Investment 2024", June 2024, <https://www.iea.org/reports/world-energy-investment-2024/africa>.

11 REN21, "Renewables Global Status Report 2024 – Global Overview Module", April 2024, [https://www.ren21.net/wp-content/uploads/2019/05/GSR2024\\_GlobalOverview\\_Full\\_Report\\_with\\_endnotes\\_web.pdf](https://www.ren21.net/wp-content/uploads/2019/05/GSR2024_GlobalOverview_Full_Report_with_endnotes_web.pdf).

12 REN21, "Renewables Global Status Report 2024 – Energy Supply Module", Juin 2024, [https://www.ren21.net/wp-content/uploads/2019/05/GSR2024\\_Supply.pdf](https://www.ren21.net/wp-content/uploads/2019/05/GSR2024_Supply.pdf).

13 Food and Agriculture Organisation (FAO), "The State of Food Security and Nutrition in the World 2022", 2022, <https://openknowledge.fao.org/items/c0239a36-7f34-4170-87f7-2fcc179ef064>.

14 World Resources Institute (WRI), "3 Ways to Tackle Food Loss and Waste in Africa", 25 January 2022, <https://www.wri.org/insights/3-ways-reduce-food-loss-waste-africa>.

15 REN21, "Renewables Global Status Report 2024 – Renewables in Energy Demand Module", May 2024, [https://www.ren21.net/wp-content/uploads/2019/05/GSR2024\\_Demand\\_Full\\_Report.pdf](https://www.ren21.net/wp-content/uploads/2019/05/GSR2024_Demand_Full_Report.pdf).

16 ESI Africa, "South Africa's coal and Just Energy Transition juggling act", 27 August 2024, Accessed 04 December 2024, <https://www.esi-africa.com/renewable-energy/south-africas-coal-and-just-energy-transition-juggling-act/>.

17 Eleqtisade News, "FABMISR Partners with Orman Association to Cultivate Prosperity in Al Falouga Village in Beheira", 29 April 2024, <https://eleqtisadenews.com/en/fabmisr-partners-with-orman-association-to-cultivate-prosperity-in-al-falouga-village-in-beheira/>.

18 Business Now, "Microsoft and G42 announce \$1 billion investment in Kenya", 22 May 2024, <https://businessnow.co.ke/microsoft-and-g42-announce-1-billion-investment-in-kenya/>.

19 Baliqees Salaudeen-Ibrahim, 'Seyifunmi Adebote, Yazid Mikail, Lauritta Boniface and Lawrence Akpoterai for Our Future Agenda, "Now is the time to show leadership on Climate Action in Nigeria", Accessed 04 December 2024, <https://ourfuture-agenda.org/now-is-the-time-to-show-leadership-on-climate-action-in-nigeria/>.

20 United Nations Development Programme (UNDP), "Empowering Youth with Green Skills While Promoting Clean Energy in Northwest Nigeria", 19 August 2024, <https://www.undp.org/nigeria/stories/empowering-youth-green-skills-while-promoting-clean-energy-northwest-nigeria>.

21 Ahmed Eljechtimi for Reuters, "Gotion High Tech Morocco gigafactory to start production in 2026", 07 June 2024, Accessed 04 December 2024, <https://www.reuters.com/technology/gotion-high-tech-morocco-gigafactory-start-production-2026-2024-06-07/>; Asmae Daoudi for Morocco World News, "CDG, Gotion High-Tech Finalize Agreement for \$1.3 Billion Electric Battery Gigafactory in Kenitra", 13 November 2024, Accessed 04 December 2024, <https://www.moroccoworldnews.com/2024/11/366329/cdg-gotion-high-tech-sign-agreement-for-1-3-billion-electric-battery-gigafactory-in-kenitra>.



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