

## Press Release

Paris, 30 January 2024:

### **Groundbreaking report presents “success recipe” for a just and sustainable energy transition to deliver on COP28 commitments.**

*REN21’s Renewable Energy and Sustainability Report (RESR)* shatters myths and misconceptions about renewable energy and demonstrates how renewables hold the key to a healthier, more sustainable world.

- **REN21’s RESR builds global confidence and provides shared understanding to embark on a path for a sustainable and equitable energy transition.**
- **The RESR confirms that renewables have far lower environmental and social impacts than all other energy sources.**
- **The benefits of renewables largely outweigh the potential negative impacts they may generate.**
- **The potential negative impacts of renewables can be avoided or mitigated with the adoption of existing best practices.**

**Paris, 30 January 2024** – The recent COP28 commitment signed by world leaders to triple renewable energy capacity by the end of the decade was welcomed by many stakeholders, but it also raises questions about the potential impacts of such a rapid scale-up.

*REN21’s Renewable Energy and Sustainability Report (RESR)* is timely. Building on a year-long research and consultative process across a wide range of stakeholders, both inside and outside the renewable energy sector, the report demonstrates that renewables are the most sustainable energy source. The report maps and analyses the potential negative impacts that can emerge from scaling up renewables – including on critical issues such as land and water use, biodiversity, forests, human rights, critical materials and waste generation. The RESR concludes that the benefits of renewables largely outweigh their potential negative impacts and that any such negative impacts can be mitigated with the adoption of existing best practices.

For the first time in the renewable energy sector, REN21’s RESR brings together crowd-sourced data and evidence from diverse stakeholders and perspectives such as environmentalists, industry leaders, human rights organisations and others. The RESR’s findings represent a solid shared understanding of how to maximise the benefits of renewables and reduce and/or eliminate their potential negative impacts. The key sustainability principles outlined in the report include, among others, the careful siting of renewable energy infrastructure and the preservation of natural resources, the development of circularity in renewables supply chains, and the involvement of all stakeholders, especially affected communities.

REN21's RESR also provides numerous examples of good practices, effective regulations, and industry standards and certifications, as well as inspiring initiatives that can be applied or adapted to ensure the sustainable deployment of renewables.

A groundbreaking report in its approach and methodology, REN21's RESR is the starting point of a dynamic process. It is built around knowledge aggregation and multi-stakeholder dialogues to track the continuous innovation and technological advancements in the renewable energy sector, including evolving policies, regulations and standards.

**Quote from Rana Adib, Executive Director, REN21:** "The evidence is clear - there is no room for skepticism and excuses: Renewables are the most sustainable energy source. They help tackle climate change, pollution and biodiversity loss. The REN21 Renewable Energy and Sustainability Report outlines how to maximise the benefits of renewables across our economies and communities, while reducing possible negative impacts. Developed using a collaborative and cross-sectoral process, this report should be a guide for all decision makers who have committed to tripling renewable energy capacity by 2030 and need to ensure societal support to make the energy transition happen."

**Quote from Ute Collier, Acting Director Knowledge, Policy and Finance Centre, IRENA:** "The RESR provides decision-makers with a recipe for putting sustainability and equity at the heart of the renewables-based energy transition."

**Quote from Rachel Asante, Senior Programme Coordinator, International Union for Conservation of Nature:** "Governments have an important responsibility to enact and enforce policies and regulations that ensure the deployment of renewables in a sustainable way."

**Quote from Caroline Avan, Business & Human Rights Resource Centre:**

"The involvement of all relevant stakeholders in planning processes, and especially those potentially affected by the deployment of new infrastructure, is key to ensure that the benefits of the energy transition are equitable."

## **How do renewables compare to fossil fuels?**

It is well known that fossil fuels, responsible for 75% of human-induced greenhouse gas emissions, are the main driver of climate change. The pollution generated by their extraction, production and burning is also responsible for millions of premature deaths and is an important driver of biodiversity loss.

In comparison, the average median emissions of all renewable energy technologies, from a life-cycle perspective, are proven to be much lower than those of fossil gas and coal, respectively. While fossil fuel operations and their extraction sites leave land polluted, degraded and depleted long after the facilities are decommissioned, renewables do not have the same long-term impacts on land and water. In addition, most renewable energy installations can co-exist with other uses like agriculture or fishing. Renewables can also be deployed on degraded or former industrial, contaminated and marginal land and can leverage existing infrastructure such as rooftops, railways, highways and parking lots to reduce their impact on land.

Materials extracted for renewables are used to build facilities and infrastructure, and most of them are highly recyclable, unlike fossil fuels that are continuously extracted to be burned. In 2021, fossil fuel extraction amounted to more than 8 billion tonnes of coal, 4 billion tonnes of oil and the equivalent of 2.6 billion tonnes of fossil gas; by comparison, materials extracted for renewables included only 21 million tonnes of copper, 2.6 million tonnes of nickel, 0.17 million tonnes of cobalt and 0.11 million tonnes of lithium.

In most of the energy transition scenarios, expanding solar photovoltaics (PV) and wind energy represent a minor share of the projected increase in material demand. The bulk of the rise in material demand is represented by electricity networks as well as battery storage, especially for electric vehicles, which are essential for a systemic energy transition. Scaling up energy efficiency, and implementing sustainable mobility practices such as walking, cycling, and public transport, can further minimise the use of non-renewable materials (such as critical minerals). Technology advancements, design choices and implementation of circularity principles will also minimise critical material uses.

## **NOTE TO THE EDITORS**

The nature and scale of the resource demands and environmental impacts associated with energy provision and infrastructure are context-specific and vary depending on a range of factors, including the technology in question, the deployment method and the location. Generic statements overlook these specificities and oversimplify complex realities. Assessing the environmental and social sustainability of renewables is complex. It requires a holistic approach and comprehensive data from diverse sources. To reflect these diverse perspectives and realities, it is essential to use a crowd-sourced, multi-stakeholder-based approach to build trusted evidence and a common ground of understanding about the energy transition.

## **ABOUT REN21**

REN21 is the only global renewable energy community that brings together actors from science, academia, governments, NGOs and industry to collectively drive the rapid, fair transition to renewables. Founded in 2004, REN21 has 20 years of experience in providing credible insights and connecting ecosystems inside and outside the renewable energy sphere. The objective of REN21 is to support and accelerate the transition to renewable energy. Today, REN21 drives the renewable energy transition by creating an enabling environment for renewables to become the obvious choice. It ensures a systemic approach, opening multi-sectoral and inter-disciplinary spaces for communication and debate to drive the uptake of renewables. REN21's ever-growing community comprises over 100 members and more than 4,000 experts from all regions who continuously contribute to its knowledge, dialogue and communication efforts. Collectively, REN21 works to drive the rapid uptake of renewables. Together. NOW.

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