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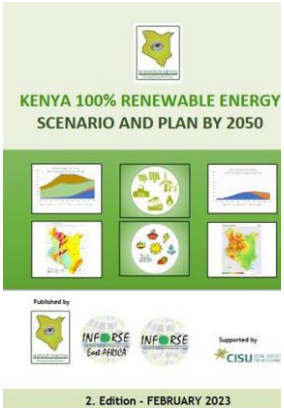
Kenya's 100% Renewable Energy Scenario and Plan Appeals for Diversification



The energy sector in Kenya is largely dominated by biomass (68% of the national energy consumption), electricity (9%) and imported petroleum (21%), with biomass (wood fuel, charcoal, and agricultural waste) providing the basic cooking and heating energy needs of the rural communities, urban poor and the informal sector.

According to 100-percent.org, the change to a renewable world (dependent on renewable resources, which are naturally replenished on a human timescale, including carbon neutral sources like sunlight, wind, rain, tides, waves, and geothermal heat) is inevitable – and the beginning steps pose the greatest challenge. A world so overwhelmingly dependent on fossil fuels requires bold ideas, dramatic shifts in thinking, and action without delay. Fortunately we can find examples of this change across the world, at all levels of personal and collective engagement.

A publication titled, "Kenya 100% Renewable Energy Scenario and Plan by 2050" was launched, and published on 3 September 2020, validated on May 21, 2021, when a policy brief "How Kenya can Become 100% Renewable" was also being launched. This report focuses on how to supply the energy for Kenya's development with renewable energy and how to increase energy use with modern, energy efficient technologies. In addition to the scenario for transition to 100% renewable energy, the report also includes a business-as-usual scenario for how Kenya might develop without focus on renewable energy. A comparison of the cost of energy supply of the two scenarios shows an economic benefit of the renewable energy scenario. Since its launch, the report has been presented by SusWatch Kenya at official side events including the annual UN climate change technical sessions in Bonn, COP26 and COP27. On these events, the Scenario report was welcomed by the Renewable Energy Department of the Kenya Ministry of Energy (MoE).

The scenario report explains specific policy proposals that could lead to 100% renewable energy development. The results include strongly increased electricity production from renewables, the change of the total primary energy demand to 100% renewables, reduction of biomass use to be within sustainable levels of biomass production in Kenya, reduced emissions of CO2 and estimates of costs of energy supply in the scenarios in 2030 and 2050. The most important specific proposals are: change to more efficient cooking, including efficient electric cooking and new highly efficient wood and charcoal stoves; change of transport gradually to electricity, hydrogen and new fuels (electrofuels); make charcoal production much more efficient, increase conversion efficiency from wood to charcoal from around 10% today to 25%. Already, Kenya has an ambitious target of achieving 100% access to modern cooking services by 2030, including efficient cook stoves for wood and charcoal, household biogas, LPG stoves, and others. The Report also calls for expansion of wind, solar and geothermal power in Kenya as well as scaling up electric international connectors. Furthermore, the Report calls for use biomass power plants to balance demand and supply, in addition to existing hydro power.

The Report was published by Sustainable Environmental Development Watch Kenya and the International Network for Sustainable Energy in the framework as part of a civil society cooperation project - *East African Civil Society for Sustainable Energy & Climate Action Project (EASE & CA)* in 2019-2023. Kenya has vast potentials for renewable energy and has been ranked fifth globally in an annual Bloomberg index measuring investments and opportunities in clean energy, two facts that together give a good basis for realizing a development in the 100% renewable energy scenario. Read the *Kenya 100% Renewable Energy Scenario and Plan by 2050* Second edition, February 2023, (First edition August 2020): www.suswatchkenya.org/100-renewable-energy-plan-for-kenya-by-2050/

Catalogue of Local Sustainable Solutions now summed up in 5 Languages to reach a Wider Audience in East Africa

The *Catalogue for Local Sustainable Solutions for East Africa* is a collection of most successful local sustainable solutions available in East Africa for addressing challenges related to energy poverty (for cooking and lighting), water scarcity, transportation and food insecurity.

Ahead of the annual UN High Level Political Forum (2023), the UN Secretary General's Report titled: 'Towards a Rescue Plan for People and Planet*'*, notes that, *'the promise to 'Leave no one behind – the defining principle of the 2030 Agenda for Sustainable Development by every country to work together to secure the rights and well-being of everyone on a healthy, thriving planet is in peril halfway to 2030….'* The Secretary General therefore calls for a fundamental shift (now) in commitment, solidarity, financing and action - to put the world on a better path.

With less than 7 years to go, there are global efforts to deliver the above promise—by mobilizing more governments, civil society, businesses and calling on all people to make the Sustainable Development Goals their own despite the impact of COVID 19, climate change and the global economic meltdown. The *Catalogue of Local Sustainable Solutions for East Africa* is one such action that seeks to contribute to increased citizens' and change agents' actions and direct involvement on delivery of affordable and clean energy; reduced inequalities; zero hunger; gender inequalities and climate action, among others.

It emerged from the realization that there is a huge information gap on what citizens and their leaders can do at their own level to adapt to climate change, which is fanning hunger, poverty and inequality across East Africa. For example, maize, a staple food crop in East Africa is sensitive to even a few days of high temperatures, as a rise of one degree may reduce productivity and crop yields. Indeed, USAID (2007) notes that this may affect food security, as maize accounts for a significant proportion of daily calories in East Africa.

Hence, this *Catalogue of Local Sustainable Solutions* was developed as a result of a collective hands-on documentation process portraying some of the most successful local solutions in East Africa. It is jointly made by TaTEDO, SusWatch Kenya, Uganda Coalition for Sustainable Development and Joint Energy and Environment programme of Uganda, the International Network for Sustainable Energy, INFORSE East Africa and the Nordic Folkecenter for Renewable Energy in Denmark as part of the *East African Civil Society for Sustainable Energy and Climate Action* (EASE-CA) Project, with financial support from CISU-Denmark. Years of collaborative effort have produced practical modifications and construction that clearly can improve local as well as regional access to cleaner energy and safe water supplies (SDG 5, 6 and 7), contribute to reducing carbon emissions and effectively build community resilience to climate change in East Africa (SDG 3, 10, 11 and 13). Most solutions that are presented are low-cost or at least often affordable.

In order to have this appreciated and to be a source of inspiration and action, the EASA CA project partners have gone a step further to translate this Catalogue (accessible in print, offline / downloadable and online versions) into summaries in 5 widely spoken languages in Uganda (*Luo, Luganda, Runyakitara*); Swahili (for wider East African audience) in addition to English. **The Catalogue of Local Solutions can be accessed online from**: https://localsolutions.inforse.org/index.html

How Business Entities Can Support Biodiversity Conservation in East Africa

East Africa is well endowed with a variety of ecosystems that provide wide-ranging services, as well as habitats for diverse plant and animal species. According to the East African Community (EAC), four of the eight biodiversity hotspots in Africa are found in the region, and are located at shared trans-boundary sites where they are critical for regionally migratory species. These hotspots include the Eastern Afromontane (Rwanda, Uganda and the DRC) and the Coastal Forests of Eastern Africa (Kenya and Tanzania).

Biodiversity is a basis for many businesses including tourism; food and fisheries; water dependent industries like breweries and irrigation farms; pharmaceutical industries, among others. According to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), Africa is home to many subsistence farmers, small-scale livestock herders and pastoralists who maintain a range of plant and animal genetic resources for food and agriculture, which tends to mitigate the consequences of drought, pests and changing environmental conditions. Also, many food crops originate in Africa, including species of wheat, barley, millet and sorghum and coffee (*Coffea arabica*).

Thus, the IPBES (2018) notes that the value of biodiversity and ecosystem services is critical to achieving the Sustainable Development Goals 14 and 15, which are focused on conservation and the sustainable use of natural resources in the context of contributions to human well-being (for example SDGs 1, 2, 3, 5, 6 and 7). Furthermore, biodiversity may benefit from the achievement of SDGs 11 and 13, which offer nature-based solutions.

But the IPBES has identified five key drivers of biodiversity loss as: changes in land and sea use; direct exploitation of natural resources; climate change; pollution; and the invasion of alien species like the water hyacinth. In Kenya for example, the forests have dwindled because large tracts of terrestrial and wetland ecosystems have been converted to farmland. The once extensive Mau Forest has been seriously degraded by human actions. This situation is threatening the very existence of the ecologically and economically important Masai Mara Game Reserve, and the Sondu Miriu and Mara rivers (Africa's Lakes Atlas, 2006).

The global response to this though still far short of the current challenges, includes adoption by 196 nations in December 2022 of the historic Kunming-Montréal Global Biodiversity Framework (KM-GBF). According to Vigdis Vandvik (2023), the KM-GBF is historic because it is arguably, the first global agreement to fully acknowledge and incorporate 'societal transformation' as a necessary prerequisite to solve global environmental crises (for example goals 14-23 of this Framework). In that vein, it is also historic as it is the first global biodiversity agreement to not only set goals for *what we want* to achieve, but also to set a number of quite operational goals for *how we should go about* to achieve it. In addition, it's the first one to be based on science.

During the 2022 Biodiversity Day Campaign, 22 actions for biodiversity conservation were released by the Secretariat of the UN Convention on Biodiversity for various businesses, to inspire action for nature. The actions that are aligned with the KM-GBF, include: **sourcing raw materials from local and eco-friendly suppliers; reduction and elimination of waste generation; encouraging employees to choose greener alternatives; choosing business partners that share their sustainability goals; educating customers about greener alternatives; and fostering urban biodiversity.** Read all the 22 Actions for Biodiversity (Actions by businesses) from: https://www.cbd.int/idb/activities/22actions-sm-business-en.pdf