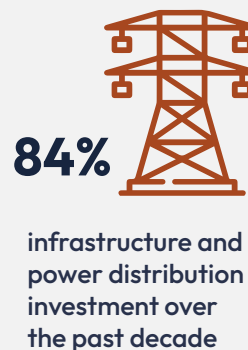
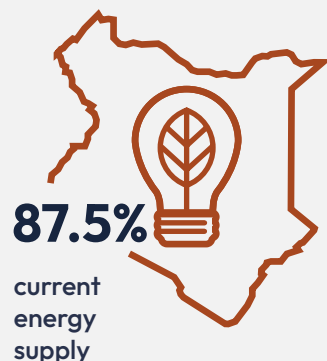




# A JUST ENERGY TRANSITION REPORT 2021-2024

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## INTRODUCTION

Kenya's current energy supply boasts 87.5% renewable energy<sup>1</sup>, based on decades of hydroelectric, solar, wind, and geothermal energy investment. Kenya's geothermal energy production costs are the lowest in the world, making it the most substantial and most viable form of renewable energy that meets the demands of its growing population. The country estimates that in 2045, it will have over 70 million people<sup>2</sup>, demanding more energy supply across the steadily urbanising country. Government-generated statistics state that the country's infrastructure and power distribution investment over the past decade has now seen access to the national electricity grid at 84%, and it is on track to meet its universal access plans by 2030.<sup>3</sup>

Despite Kenya's promising progress in building a strong reliance on renewable energies, there still seems to be an unjustified interest in Nuclear Energy. Critics argue that the country's future energy demands seem to be overstated. This interest has drawn concerns about Kenya's capacity for nuclear energy, the site selection of the proposed nuclear plant, its implications on human rights, and environmental and economic impacts.

## THE RISE IN NUCLEAR ENERGY INTEREST

In 2019, the Kenyan government established the Nuclear Power and Energy Agency (NuPEA) to promote and implement the development of the country's nuclear program.<sup>4</sup>

The International Atomic & Energy Agency (IAEA), whose statutory mandate is to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity worldwide, has 19 key infrastructure milestones towards Nuclear Power Generation.

<sup>1</sup><https://kippra.or.ke/addressing-high-electricity-prices-to-improve-kenyan-households-welfare/>

<sup>2</sup><https://www.knbs.or.ke/wp-content/uploads/2023/09/2019-Kenya-population-and-Housing-Census-Summary-Report-on-Kenyas-Population-Projections.pdf>

<sup>3</sup><https://www.trade.gov/country-commercial-guides/kenya-energy-electrical-power-systems>

<sup>4</sup><https://www.nuclear.co.ke/wp-content/uploads/2022/11/NuPEA-Strategic-Plan-2020-2025.pdf>



views and critique into the report.

### The Nuclear Power Programme

The implementation of KNPP is guided by the nineteen infrastructure issues as domesticated for newcomer countries. These issues include:

- |  |   |
|--|---|
| 1) establishing a National Position;                                       | 10) establishing capable management;                                  |
| 2) creating a Nuclear Fuel Cycle framework;                                | 11) developing Human Resource;  |
| 3) selecting appropriate Reactor Technology;                               | 12) establishing appropriate procurement framework;                   |
| 4) carrying-out an Electric System Analysis;                               | 13) nuclear Safeguards;   |
| 5) determining the appropriate site-selection considerations;              | 14) ensuring Nuclear Safety;  |
| 6) developing an appropriate Funding & Financing strategy;                 | 15) ensuring Nuclear Security;  |
| 7) ensuring effective and equitable development of industrial involvement; | 16) providing effective Physical Protection;                          |
| 8) building an appropriate Legislative and Regulatory Framework;           | 17) ensuring Environmental Protection;                                |
| 9) mapping and establishing criteria for Stakeholder involvement;          | 18) ensuring Radiation Protection;                                    |
|  | 19) providing a framework for effective Radioactive Waste Management. |

Three additional infrastructure issues were also identified including Nuclear Knowledge Management, Nuclear Research and Development and Capacity Building.

A criterion hinging on *technical, economic, environmental and social* sustainability was used to identify and choose between available alternative nuclear technologies. Additionally, the *demand for water*

NuPEA

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SGS, SK.CEN & EHS

Source NuPEA, 2023

The Center for Justice Governance and Environmental Action (CJGEA), an environmental and human rights advocacy group, has raised concerns about NuPEA's adherence to IAEA infrastructure milestones. CJGEA states that NuPEA has yet to comply with the IAEA's first milestone, which is establishing a national position. This position is based on the latest national position published by the Presidential TaskForce on the review of Power Purchasing Agreements<sup>5</sup>, which states that Kenya is not yet ready to pursue nuclear power generation and recommended the disbandment of the Nuclear Power and Energy Agency (NuPEA).

NuPEA selected Matsangoni and Watamu Wards, Kilifi county, in coastal Kenya, as one of its most preferred locations to establish a Nuclear Power Plant. Matsangoni is home to a UNESCO Biosphere Reserve, which attracts global researchers, and the Watamu Marine National Park, a designated Marine Protected Area. It is also near the Arabuko-Sokoke Forest, the largest remaining fragment of the East African Coastal forest, which hosts a wide range of endangered animal species.

Kilifi is also a world-renowned tourist hub with rich white, untainted sandy beaches, pristine clear waters, and endangered mangroves covering over 1,746 hectares. The Matsangoni community rely heavily on ecotourism and fishing for their livelihoods and fear introducing a Nuclear Plant will significantly jeopardise them.

NuPEA's Strategic Environmental Assessment (SEA) states that the Nuclear Power Plant should not be established in an ecologically valuable and vulnerable area. Given that Matsangoni is home to both a UNESCO Biosphere Reserve and a World Heritage Site, this automatically excludes it as a potential site, raising concerns about the possibility of corrupt decision-making.

<sup>5</sup>[https://drive.google.com/file/d/1yV2DQJxokmV\\_mSdg7EuNUWyBjkcN8BN4/view?usp=sharing](https://drive.google.com/file/d/1yV2DQJxokmV_mSdg7EuNUWyBjkcN8BN4/view?usp=sharing)

# BACKGROUND

## 1. KENYA'S VISION 2030

The Kenyan government projects an increased demand for energy based on the Kenyan Vision 2030 – a national blueprint for realising a middle-income economy. The Nuclear Power and Energy Agency (NuPEA) advocates for nuclear energy, highlighting its potential to address climate change and provide zero emissions. The intermittent power supply of some renewable energy sources and the declining availability of water resources impact hydropower generation.

However, energy and environmental experts point out huge concerns, such as the inability of existing electricity grids to absorb the energy generated from the nuclear power plant, which Kenya is already struggling with. The proposal to destroy 1,746 hectares of mangrove forest, which sequesters carbon emissions to create space for a nuclear power plant, raises questions about the genuineness of this being a climate solution.

The reliance on uranium to create nuclear energy, which countries such as the United States are beginning to reduce their dependence on,<sup>6</sup> has also elicited widespread and genuine concerns from Kenyans. Kenya's vast untapped geothermal reserves also mean Kenya has viable and more affordable options, but the Kenyan government has been unable to explain why it cannot tap into these renewable resources.

The 2011 nuclear catastrophe in Fukushima, Japan, saw an earthquake and tsunami cause severe damage to six nuclear reactors<sup>2</sup> at the Fukushima Daiichi Nuclear Power Plant, resulting in the loss of over 18,000 lives. Japanese authorities stated that it would take 40 years to complete the decontamination of the region, which would cost the country's taxpayers trillions of Japanese yen<sup>1</sup>.

The varied arguments for nuclear energy are outweighed by the significant risk to the vulnerable and valuable ecosystem, the high cost of investment to construct nuclear power plants, and the sometimes irreversible human and environmental impact.

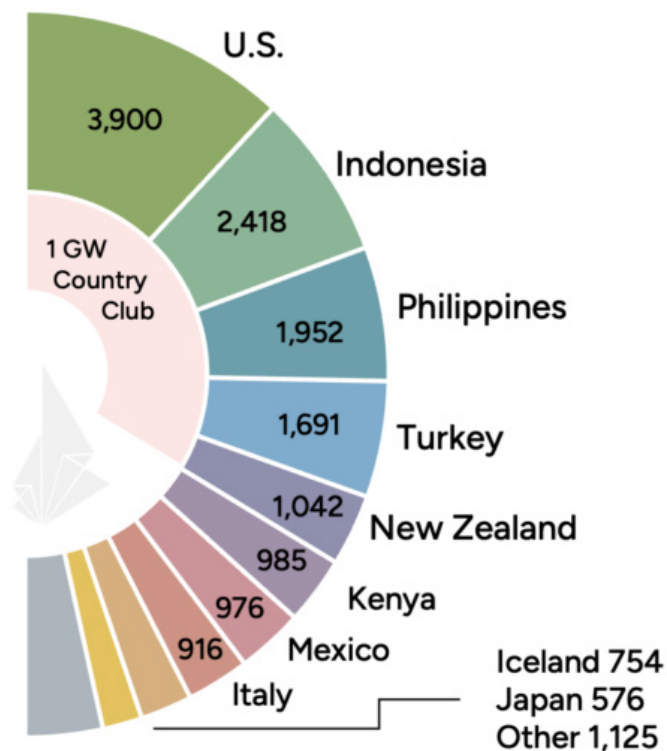
<sup>6</sup><https://www.theguardian.com/global-development/article/2024/jun/17/kenya-plans-first-nuclear-power-plant-kilifi-opposition-activists#:~:text=Musa%20Wafula%2C%20an%20engineer%20with,demand%20and%20trigger%20power%20cuts>

<sup>7</sup><https://www.ncbi.nlm.nih.gov/books/NBK253923/#:~:text=The%20March%2011%2C%202011%2C%20Great,released%20hydrogen%20and%20radioactive%20materials.>

## 2. RENEWABLE VS NUCLEAR ENERGY

Kenya has exploited nearly 950 megawatts of geothermal energy, powering 3.8 million homes.<sup>9</sup> The country ranks among the world's top 10 countries in installed Geothermal Power Generation Capacity.<sup>10</sup> with the majority of its geothermal potential still untapped. If fully developed, Kenya could become the global leader in geothermal capacity.

NuPEA argues that renewable energy is erratic and susceptible to the impacts of climate change, which affects the potential for long-term reliance on hydro-energy.<sup>11</sup> However, Kenya is uniquely positioned to run its energy supplies solely on renewable energy. Still, the government's plans to invest US \$ 3.8 billion in establishing a 1,000-megawatt nuclear power plant baffles most citizens, particularly given that this amount could instead be used to harness a significantly larger capacity from geothermal energy.



Source: ThinkGeoEnergy Research 2024

## TOP 10 Geothermal Countries 2023

Installed Capacity in  
MWe Year-End 2023

**Total 16,335 MW**



<sup>8</sup><https://www.bbc.com/news/world-asia-56252695>

<sup>9</sup><https://www.imf.org/en/Publications/fandd/issues/2022/12/country-case-kenya-taps-the-earth-heat>

<sup>10</sup><https://www.thinkgeoenergy.com/thinkgeoenergys-top-10-geothermal-countries-2023-power-generation-capacity/>

<sup>11</sup><https://www.nema.go.ke/images/Docs/SEA%20Reports/Final%20Draft%20NuPEA%20SEA%20REPORT%2004.07.2024.pdf>

### 3. ECONOMICS VS SOCIO-ENVIRONMENTAL IMPACT

Renewable energy is cheaper, safer and faster to implement than nuclear energy. The Government of Kenya is expected to invest US\$3.8 billion as it begins the construction of the 1,000-megawatt nuclear power plant (NPP) in 2027.<sup>12</sup>

Kenya's existing wind power plant in the north of the country, which houses the continent's largest wind power plant, costs approximately US\$ 682 million and constitutes almost a fifth of Kenya's national installed electricity generating capacity<sup>13</sup>. The wind power plant construction costs only 20% of the total projected nuclear power plant cost.

The Kenyan government has approved the construction of a second 1,000-megawatt wind power plant in Northern Kenya, with support from the French Development Agency<sup>14</sup>. With these vast opportunities to tap into renewable energy, Kenya does not need to explore nuclear power, which raises significant environmental, economic and health concerns for communities. Nuclear power waste management is an international concern that could be compounded in Kenya following the general challenges of oversight by existing government agencies such as the National Environment Management Authority (NEMA), which has fallen short in overseeing industrial waste management, noise and light pollution in cities.

Furthermore, with the government's track record of failing to protect existing resources and its population, such as the Owino Uhuru Community in Mombasa, another coastal city, with a community suffering under the effects of unmitigated industrial lead poisoning, any nuclear accidents might result in the decimation of not only the Arabuko-Sokoke Forest in Kilifi and the Watamu Marine National Park but also of the communities living proximate to the Power Plant if so established.

The forest and the broader county of Kilifi are crucial biodiversity regions rich in ocean life in the Indian Ocean, where the proposed nuclear power plant will be located. Ruining these natural ecosystems hinders the enjoyment of the right to a clean and healthy environment enshrined in the Kenyan Constitution and recognised by the United Nations.


According to Article 42 of the Kenyan constitution:

**“Every person has the right to a clean and healthy environment, which includes the right**

- (a). to have the environment protected for the benefit of present and future generations through legislative and other measures, particularly those contemplated in Article 69 and
- (b). to have obligations relating to the environment fulfilled under Article 70.”

Moreover, no country has devised a solution to radioactive waste, with Finland recently developing a ‘solution’ that involves storing the radioactive waste for 100,000 years<sup>15</sup>.

**US\$3.8  
Billion**



**to begin the construction  
of 1,000-megawatt  
nuclear power plant**

<sup>12</sup><https://www.rfi.fr/en/africa/20240824-kenya-to-build-first-nuclear-power-plant-by-2034-amid-local-opposition>

<sup>13</sup><https://ltwp.co.ke/economic-impact/>

<sup>14</sup><https://www.trade.gov/market-intelligence/kenya-energy-plans-build-1000megawatt-wind-power-plant>

<sup>15</sup><https://www.bbc.com/future/article/20230613-onkalo-has-finland-found-the-answer-to-spent-nuclear-fuel-waste-by-burying-it>



## 4. HUMAN RIGHTS AND CIVIC ENGAGEMENT

A Just Energy Transition must include community voices and ensure that human rights are upheld and protected throughout the process. Human dignity and rights must never be compromised in the process. Therefore, this process must ensure procedural rights, i.e., access to information, public participation, and access to effective remedies for the communities involved.

It is urgent to seek the protection of various human and environmental rights enjoyed under the Kenyan Constitution and relevant international treaties and conventions the country has signed and ratified.

### a.) Article 42 of the Kenyan Constitution: The Right to Clean and Healthy Environment<sup>16</sup>

The right to a clean and healthy environment is paramount and recognised in Article 42 of the Kenyan Constitution of Kenya and the United Nations Rights Council through a resolution passed on 28 July 2022. This right is enforceable under Articles 22 and 70 of the Kenya Constitution. The right is recognised regionally in Article 24 of the African Charter on Humans and People's Rights (ACHPR), which states that

**“All peoples shall have the right to a general satisfactory environment favourable to their development”.** (1966, United Nations, Treaty Series, vol. 993).

Setting up the nuclear power plant without adequate protection would also violate the right to health, recognised in Article 12 of the International Covenant on Economic, Social and Cultural Rights. A covenant was adopted and opened for signature, ratification, and accession by General Assembly resolution 2200A (XXI) of 16 December 1966, which entered into force on 3 January 1976. The same right is recognised in Article 43 of the Kenya Constitution.

Despite the legal protection as explained, pollution in Kenya is rampant, yet a legal and institutional framework for environmental protection is in place to control it. Several environmental incidents in Kenya, such as the lead poisoning of the Owino Uhuru community<sup>17</sup> in coastal Kenya, have caused long-term suffering from extensive and irreparable ailments of brain and neural damage, kidney damage, cardiovascular problems, child developmental problems, and infertility, among other challenges. The incident led to environmental contamination, which to date has never been cleaned up despite having environmental orders in place for clean up. In the incident, the community, too, has never received compensation.

NEMA, the Kenyan environmental protection agency established under the Environmental Management and Coordination Act (EMCA), has instead contested community claims for compensation and cleaning up the area through courts rather than taking steps to remediate the land. There are also glaring weaknesses in enforcing the existing environmental guidelines and policies in the EMCA<sup>18</sup>.

### b.) Article 69 of the Kenyan Constitution: Obligations in Respect of the Environment

Article 69 (d) of the Kenyan constitution states,

**“the State shall encourage public participation in the environmental management, protection and conservation”.**

Parliament is to facilitate this process. The Nuclear Power and Energy Agency has failed to engage the Matsangoni community in Kilifi County, denying them the right to decide their future. It has also violated their environmental rights by denying them access to information as enshrined in the Kenyan Constitution and the Information Act 2016<sup>21</sup> and remedies in the event of harm.

<sup>16</sup><https://www.klrc.go.ke/index.php/constitution-of-kenya/112-chapter-four-the-bill-of-rights/part-2-rights-and-fundamental-freedoms/208-42-environment>

<sup>17</sup><https://kenyalaw.org/caselaw/cases/view/198619/>

<sup>18</sup>[https://eregulations.invest.go.ke/media/emca\\_1.pdf](https://eregulations.invest.go.ke/media/emca_1.pdf)



## 5. LEGAL AND REGULATORY CHALLENGES

Kenya's existing legal framework concerning nuclear energy, particularly around liability and compensation in the case of a nuclear accident, is limited. Communities in regions of government interest in nuclear exploration demand Kenya sign treaties such as the Vienna Convention on Civil Liability for Nuclear Damage to protect their rights and health.

### **Vienna Convention for Civil Liability for Nuclear Damage<sup>22</sup>**

Kenya has not ratified the Vienna Convention for Civil Liability for Nuclear Damage, providing relevant frameworks for liability and compensation in case of nuclear accidents. This exposes communities to additional risks, severely threatening their health and livelihoods.

The EMCA 1999 is the country's only environmental framework guiding environmental management and protection. It has no provisions for nuclear waste management, which impedes any oversight of NuPEA. A stronger framework to regulate nuclear waste, disaster management, and public safety is needed before the country contemplates setting up a Nuclear Power Plant.



<sup>19</sup><https://www.klrc.go.ke/index.php/constitution-of-kenya/118-chapter-five-land-and-environment/part-2-environment-and-natural-resources/236-69-obligations-in-respect-of-the-environment>

<sup>20</sup>[http://www.parliament.go.ke/sites/default/files/2023-03/The\\_Constitution\\_of\\_Kenya\\_2010.pdf](http://www.parliament.go.ke/sites/default/files/2023-03/The_Constitution_of_Kenya_2010.pdf)

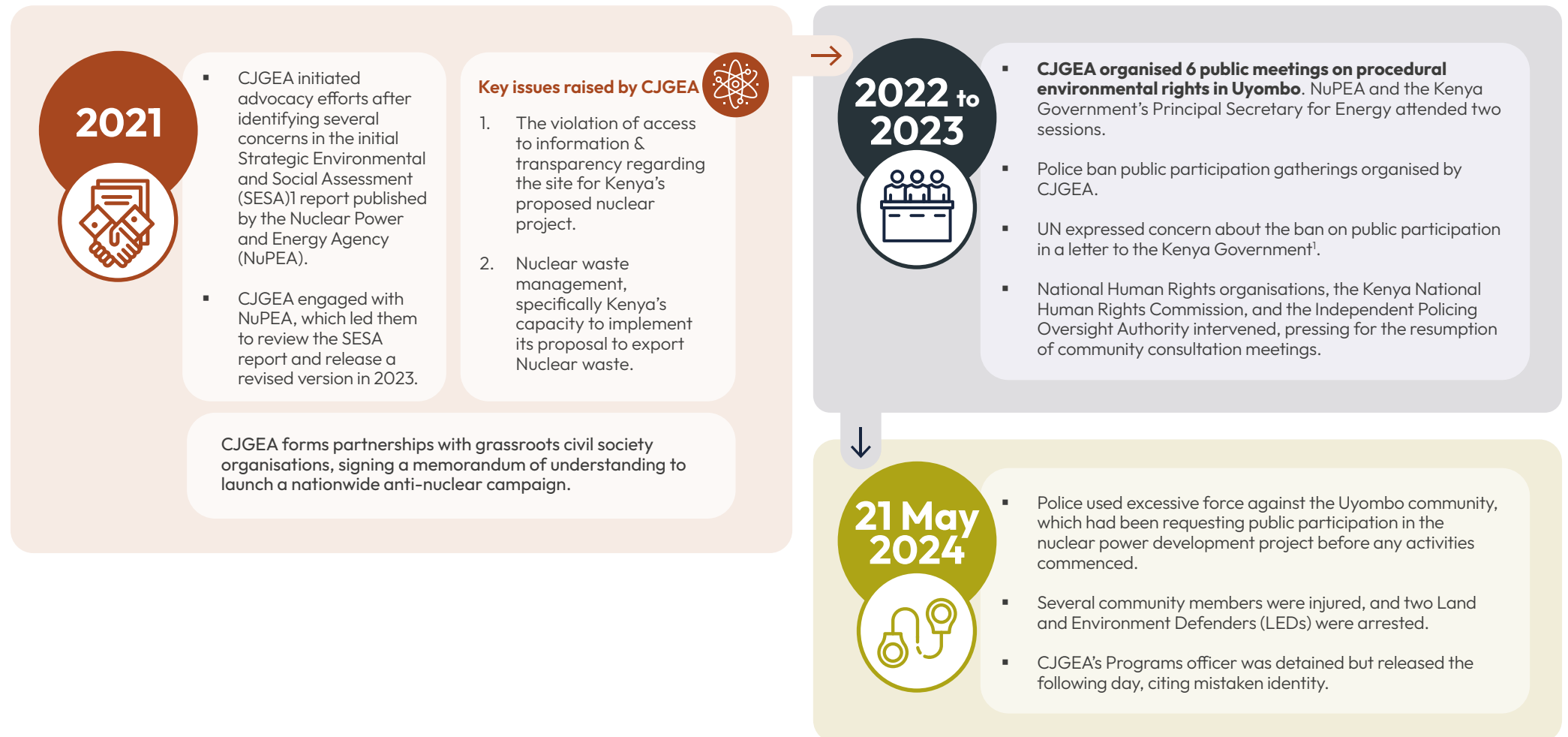
<sup>21</sup>[https://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/2016/No.\\_31\\_of\\_2016.pdf](https://kenyalaw.org/kl/fileadmin/pdfdownloads/Acts/2016/No._31_of_2016.pdf)

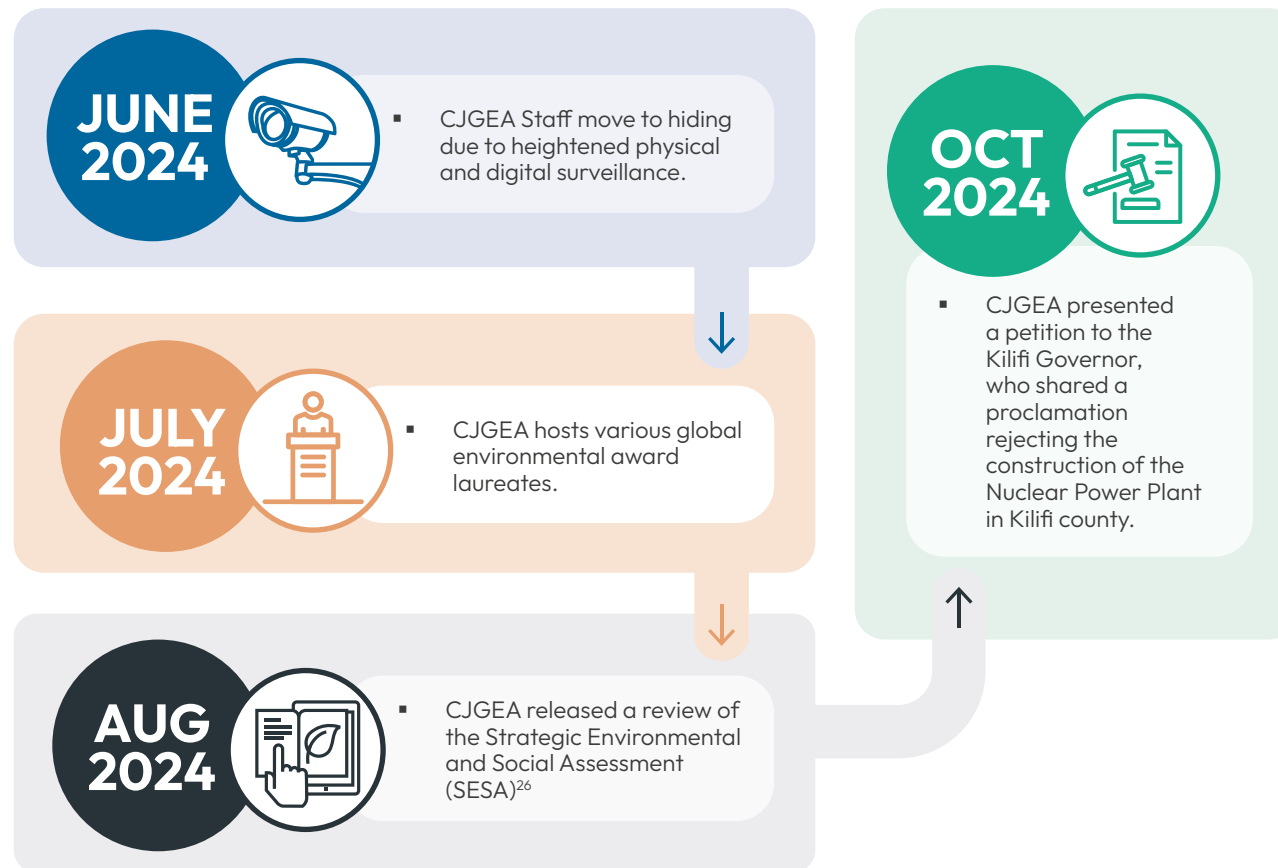
<sup>22</sup><https://treaties.un.org/doc/Publication/UNTS/Volume%201063/volume-1063-I-16197-English.pdf>

# THE BIRTH OF THE ANTI-NUCLEAR CAMPAIGN

The Center for Justice, Governance and Environmental Action (CJGEA), in partnership with other environmental civil society organisations, raised the alarm and concerns about the government's nuclear exploration and development plans in Matsangoni, Kilifi County, Coastal Kenya.

## TIMELINE





<sup>23</sup><https://www.nuclear.co.ke/wp-content/uploads/2023/03/SESA-Report-for-the-Kenya-Nuclear-Power-Programme.pdf&sa=D&source=docs&ust=1729524755138293&usg=AOvVaw1ffFHqRs6CXQUKTKhlaPE4>

<sup>24</sup><https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gld=28605>

<sup>25</sup><https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gld=28605>

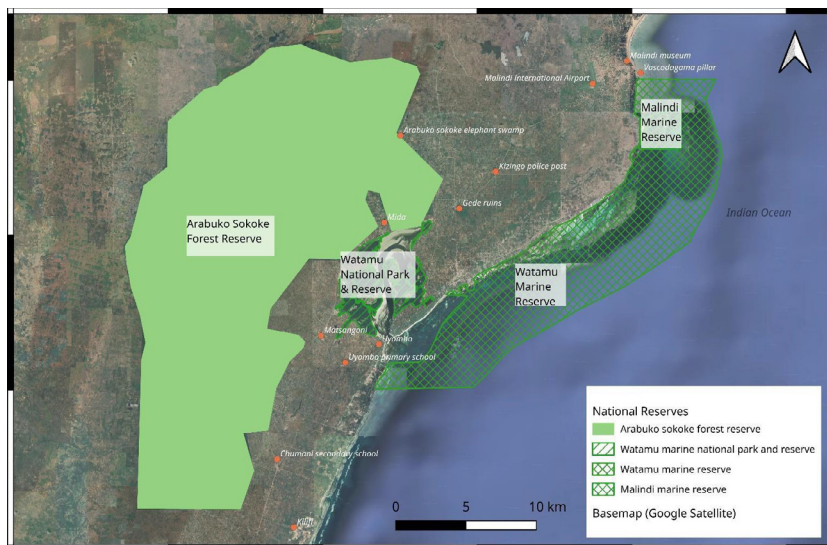
<sup>26</sup><https://www.centerforjgea.com/assets/reports/Review-of-the-SESA-report.pdf>

## ACHIEVEMENTS

**CJGEA, in partnership with OEKO Institute, a longstanding partner and German-based non-profit private sector environmental research institute, reviewed the updated Strategic Environmental and Social Assessment (SESA) report that highlighted various inaccuracies and contradictions in the SESA.**



**CJGEA conducted a geographical information system (GIS) mapping exercise<sup>27</sup> using the mapping-informed outreach efforts and human rights capacity-building plans for 2023 and 2024.**



**CJGEA ramps advocacy** by engaging with Senator Okiya Omtata to present petitions to the Senate, Parliament, and the National Cabinet. These efforts garnered support from some cabinet secretary members, the local Member of Parliament, and the Kilifi County Governor, who publicly expressed opposition to nuclear power projects in the county during his tenure. The advocacy also gained international attention, with partners from Germany, Russia, South Africa, Sweden and Switzerland participating in meetings with local representatives and NuPEA.

### CJGEA hosted an Energy Conference

- The Principal Secretary of Energy, NuPEA, and NEMA attended the conference.
- The Kenya Anti-Nuclear Alliance (KANA) was born from the conference. KANA is Swahili for “SAY NO”, articulating the movement’s drive against nuclear power in Kenya.

**CJGEA Advocacy continues** – KANA grows to include more dissenting voices against nuclear energy from government agencies, civil society organisations, community leaders, international actors, and the media.



**CJGEA petitioned the Governor of Kilifi County** and spearheaded the community’s efforts to secure a declaration from the Governor affirming his support for the community and CJGEA’s refusal of the proposed nuclear power plant.

<sup>27</sup><https://drive.google.com/file/d/1IDcLBXMyXDdSVRMIIYaSiUJYdHFKLle2/view?usp=sharing>





Community Visit during the Solidarity Visit



Visit to Owen Hon. Owen Baya's office



International Laureates during community visit



Procession to the Governor's Office



## FUTURE PLANS

**There are commitments from the current Governor of Kilifi County and the area member of Parliament of Kilifi North Constituency, where Matsangoni and Watamu are located. Both offices have committed to preventing the proposed nuclear plant development. However, since these are political offices, there is no guarantee that future officeholders will hold the same commitments and convictions.**

The current Member of Parliament of Kilifi North, Hon. Owen Baya, has recently submitted a Petition to the Kenya National Assembly to challenge the development of nuclear energy in Kenya.

### **The petition's key demands include:**

1. Clarification on whether Kenya is prepared to handle a nuclear disaster and, if so, provision of the specific policy measures that have been implemented to address such emergencies.
2. Clarification on whether public participation in the project was conducted per legal parameters, particularly given that the majority of community views, which opposed the project, were ignored.
3. Provision of comprehensive details regarding the environmental impact assessment conducted for the project.
4. Inquiry into the arbitrary arrests and the use of excessive force against the community in an apparent bid to force them to accept the project.
5. An inquiry to establish whether there is a breach of Constitutional provisions and if so, provision of a detailed report with recommendations on the implementation of the project to ensure proper processes are followed for the safety of the community.

## CJGEA CONTINUES TO:

1



Conduct grassroots advocacy and campaigns against nuclear power exploration and development in Kenya,

4



Utilise state-of-the-art Artificial Intelligence models to assess the rich biodiversity of Matsangoni and Watamu,

2



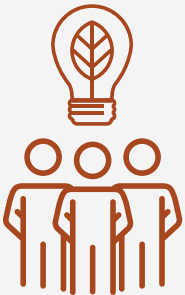
Actively drive public participation in Kilifi County and nationally,

5



Conduct a comprehensive Scientific Environmental Impact Assessment of the Nuclear Power Plant involving a team of nuclear energy and environmental experts and

3



Drive nationwide advocacy towards investment into renewable energy and against the investment in nuclear power in Kenya,

6



Develop a legal strategy to file a Class Action Suit on behalf of the Matsangoni and Watamu communities in Kilifi County.

## SUPPORT US TODAY



**US\$200,000**

ensure that the rights of the  
Matsangoni and Watamu  
communities are protected

Your support goes a long way in helping us realise safe and prosperous Matsangoni and Watamu communities with rich bio-diverse environments in Kilifi County, Coastal Kenya.

From as little as US\$200,000 annually, you ensure that the rights of the Matsangoni and Watamu communities are protected and that our rich, biodiverse ecosystems, which are recognised UNESCO biosphere reserves, will be enjoyed and thrive for generations to come.



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