

# **Water Security in Africa: Strengthening Legal and Policy Frameworks, Nurturing Inclusivity and Halting Land Degradation**

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**Kariuki Muigua**

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**Water Security in Africa: Strengthening Legal and Policy Frameworks, Nurturing Inclusivity and Halting Land Degradation**

**Kariuki Muigua\***

**Abstract**

*This paper critically examines how the ideal of water security can be attained in Africa. The paper conceptualizes water security. It argues that achieving water security is crucial in unlocking the role of water for human health, well-being and development. Despite its role in the Sustainable Development agenda, the paper notes that the ideal of water security is yet to be realised in Africa. It discusses the key factors undermining water security in Africa. In light of these challenges, the paper argues that fostering water security is necessary and urgent in the pursuit for Sustainable Development in Africa. The paper discusses how water security can be achieved in Africa by strengthening legal and policy frameworks, nurturing inclusivity and halting land degradation.*

**1.0 Introduction**

Water plays a fundamental role in the pursuit of Sustainable Development. It has been argued that water is a key socio-economic driver for sustainable growth, livelihoods, poverty eradication, justice, food security and labour<sup>1</sup>. Water is crucial for socio-economic development, energy and food production, healthy ecosystems and for human health, well-being and survival towards Sustainable Development<sup>2</sup>. In addition, it has been argued that water is necessary for Sustainable Development since it offers benefits for climate adaptation, biodiversity, ecosystem services, economic growth and human

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<sup>1</sup> United Nations., 'Interactive dialogue 2: Water for Sustainable Development'. A/CONF.240/2023/5., Available at [https://sdgs.un.org/sites/default/files/2023-01/23-00159%20Concept%20Paper%20UNWC\\_ID2\\_Website.pdf](https://sdgs.un.org/sites/default/files/2023-01/23-00159%20Concept%20Paper%20UNWC_ID2_Website.pdf) (Accessed on 02/12/2025)

<sup>2</sup> United Nations., 'Water' Available at <https://www.un.org/en/global-issues/water#:~:text=The%20UN%20and%20Water,human%2C%20commercial%20and%20agricultural%20needs> (Accessed on 02/12/2025)

health<sup>3</sup>. According to the United Nations, access to safe water, sanitation and hygiene is the most basic human need for health and well-being<sup>4</sup>. The United Nations further notes that water is essential not only to health, but also to poverty reduction, food security, peace and human rights, ecosystems and education<sup>5</sup>. In addition, the World Health Organization (WHO) points out that safe and readily available water in adequate quantities is important for public health, whether it is used for drinking, domestic use, food production or recreational purposes<sup>6</sup>.

The *2030 Agenda for Sustainable Development*<sup>7</sup> recognises that water is crucial in all development efforts. Sustainable Development Goal (SDG) 6 under the Agenda seeks to ensure availability and sustainable management of water and sanitation for all<sup>8</sup>. According to the United Nations Environment Programme (UNEP), SDG 6 confirms the importance of water and sanitation in the global development agenda<sup>9</sup>. It has been argued that SDG 6 recognizes that social development and economic prosperity depends on the quality, availability and sustainable management of water<sup>10</sup>.

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<sup>3</sup> Stockholm International Water Institute., 'Why Water is Crucial to Climate Mitigation' Available at <https://siwi.org/latest/why-water-is-crucial-to-climate-mitigation/#:~:text=Protecting%20and%20restoring%20freshwater%20ecosystems,protecting%20us%20from%20disaster%20risks> (Accessed on 02/12/2025)

<sup>4</sup> United Nations., 'Goal 6: Ensure access to water and sanitation for all' Available at <https://www.un.org/sustainabledevelopment/water-and-sanitation/> (Accessed on 02/12/2025)

<sup>5</sup> Ibid

<sup>6</sup> World Health Organization., 'Water' Available at <https://www.afro.who.int/health-topics/water#:~:text=Inadequate%20management%20of%20urban%2C%20industrial,dangerously%20contaminated%20or%20chemically%20polluted> (Accessed on 02/12/2025)

<sup>7</sup> United Nations General Assembly., 'Transforming Our World: the 2030 Agenda for Sustainable Development.' 21 October 2015, A/RES/70/1., Available at <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf> (Accessed on 02/12/2025)

<sup>8</sup> Ibid

<sup>9</sup> United Nations Environment Programme., 'Supporting the Sustainable Development Goals and water' Available at <https://www.unep.org/explore-topics/water/what-we-do/supporting-sustainable-development-goals-and-water#:~:text=Advancing%20the%20Sustainable%20Development%20Goals,aquatic%20life%20and%20water%20purification.> (Accessed on 02/12/2025)

<sup>10</sup> Ibid

From the foregoing, it is evident that water is necessary for achieving Sustainable Development, peace, security and human health and well-being. However, it has been pointed out that the demand for water is rising all over the world due to rapid population growth, urbanization and increasing water needs from agriculture, industry, and energy sectors putting a lot of pressure on available water resources<sup>11</sup>. As a result, billions of people globally are still living without access to adequate and safely managed water and sanitation<sup>12</sup>. This problem is particularly severe in Africa where millions of people in the continent lack access to clean and safe drinking water and access to basic sanitation and hygiene services undermining development<sup>13</sup>. Fostering water security in Africa and globally is therefore necessary for development,

This paper critically examines how the ideal of water security can be attained in Africa. The paper conceptualizes water security. It argues that achieving water security is crucial in unlocking the role of water for human health, well-being and development. Despite its role in the Sustainable Development agenda, the paper notes that the ideal of water security is yet to be realised in Africa. It discusses the key factors undermining water security in Africa. In light of these challenges, the paper argues that fostering water security is necessary and urgent in the pursuit for Sustainable Development in Africa. The paper discusses how water security can be achieved in Africa by strengthening legal and policy frameworks, nurturing inclusivity and halting land degradation.

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<sup>11</sup> United Nations., 'Goal 6: Ensure access to water and sanitation for all' Op Cit

<sup>12</sup> United Nations., 'Human Rights to Water and Sanitation' Available at <https://www.unwater.org/water-facts/human-rights-water-and-sanitation> (Accessed on 02/12/2025)

<sup>13</sup> African Development Bank Group., 'World Water Day 2023: Accelerating Change in solving Africa's Water and Sanitation Crises' Available at <https://www.afdb.org/en/news-and-events/world-water-day-2023-accelerating-change-solving-africas-water-and-sanitation-crises-59935#:~:text=One%20in%20three%20Africans%20are,lack%20access%20to%20basic%20hygiene> (Accessed on 02/12/2025)

## **2.0 Water Security in Africa: Prospects and Challenges**

Water security is a concept that covers the availability, accessibility, affordability and sustainability of water<sup>14</sup>. In addition, it has been argued that water security refers to the availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems and production<sup>15</sup>. Water security covers the reliable supply of clean and safe water in adequate quantities, an acceptable level of protection from water-related hazards, and consideration of the role of water in supporting healthy ecosystems and habitats<sup>16</sup>. Further, it has been pointed out that water security entails securing a safe, adequate and reliable supply of water for people and planet, now and in the future<sup>17</sup>.

Achieving water security is vital for both people and planet in the quest for Sustainable Development. Water security ensures the availability of clean, safe and adequate water for human consumption and ecosystem health<sup>18</sup>. It has been argued that water security ensures the sustainable management, equitable distribution, and protection of water resources against contamination and depletion for sustainability<sup>19</sup>. Maintaining and improving water security is crucial towards tackling pressures on water resources including climate change, pollution, human development, water scarcity and ecosystem degradation in order to ensure the availability of clean, safe and adequate water for both the needs of humanity and nature<sup>20</sup>. It has been argued that fostering water security ensures sustainable access to adequate quantities of acceptable quality water for sustaining human health, livelihoods, well-being, and socio-economic development,

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<sup>14</sup> What is Water Security?., Available at <https://internationalsecurityjournal.com/what-is-water-security/> (Accessed on 02/12/2025)

<sup>15</sup> World Bank Group., 'Water Security Diagnostic Initiative' Available at <https://www.worldbank.org/en/topic/water/publication/water-security-diagnostic-initiative> (Accessed on 02/12/2025)

<sup>16</sup> What is Water Security?., Available at <https://www.lse.ac.uk/granthaminstitute/explainers/what-is-water-security-and-how-is-it-impacted-by-climate-change/> (Accessed on 02/12/2025)

<sup>17</sup> International Water Resources Association., 'Why Focus on Water Security?' Available at <https://www.iwra.org/watersecurity/> (Accessed on 02/12/2025)

<sup>18</sup> What is Water Security?., Op Cit

<sup>19</sup> Ibid

<sup>20</sup> What is Water Security?., Op Cit

while also ensuring protection against water-borne pollution and water-related disasters, and preserving ecosystems<sup>21</sup>.

Securing water security is a vital agenda for Africa. With an estimated population of 1.4 billion which is expected to rise to nearly 2.5 billion by 2050, achieving water security in Africa is necessary in meeting the rising demand for water for human health, livelihoods and development<sup>22</sup>. It has been argued that investing in water and sanitation in Africa is key in enhancing benefits across health, education, food security and environmental protection<sup>23</sup>. Africa is home to vital natural water towers, including forests, mountains and glaciers that can unlock water security and development in the continent<sup>24</sup>.

However, achieving water security remains an elusive dream for Africa. For example, it is estimated that one in three Africans are affected by water scarcity<sup>25</sup>. Further, it has been pointed out that in Sub-Saharan Africa alone, about 387 million people struggle daily without access to safe water<sup>26</sup>. Despite water being essential for life, health and development, millions of people across Africa especially in the Sub-Saharan region lack access to clean and safe water for their daily needs<sup>27</sup>. This has been attributed to factors such as climate change, pollution, rapid population growth, poor governance of water resources and inadequate infrastructure<sup>28</sup>. For instance, rapid population growth,

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<sup>21</sup> International Water Resources Association., 'Why Focus on Water Security?' Op Cit

<sup>22</sup> African Development Bank Group., 'World Water Day 2025: Preserving Africa's Water Resources' Available at <https://www.afdb.org/en/news-and-events/world-water-day-2025-preserving-africas-water-resources-81976> (Accessed on 02/12/2025)

<sup>23</sup> Ibid

<sup>24</sup> Ibid

<sup>25</sup> African Development Bank Group., 'World Water Day 2023: Accelerating Change in Solving Africa's Water and Sanitation Crises' Op Cit

<sup>26</sup> African Development Bank Group., 'World Water Day 2025: Preserving Africa's Water Resources' Op Cit

<sup>27</sup> World Bank Group., 'Celebrating Water Day: Why access to clean water is vital for Africa' Available at <https://blogs.worldbank.org/en/africacan/celebrating-water-day--why-access-to-clean-water-is-vital-for-af> (Accessed on 02/12/2025)

<sup>28</sup> Africa's Water Crisis Require Urgent Action For Clean Water, Climate Resilience., Available at <https://pacja.org/africas-water-crisis-require-urgent-action-for-clean-water-climate-resilience/> (Accessed on 02/12/2025)

urbanization and economic development has increased the demand for water in Africa leading to overexploitation of the continent's water resources thus causing water insecurity<sup>29</sup>. Pollution is also a major threat to water security in Africa. It has been pointed out that plastic waste, industrial waste including untreated sewage, and fertilisers and pesticides used in agricultural activities are polluting Africa's water resources including rivers, lakes and oceans with severe consequences for human and ecosystem health<sup>30</sup>.

Climate change also amplifies water security challenges in Africa. For example, climate change is altering temperature and precipitation patterns across Africa leading to unpredictable rainfall patterns and more frequent and severe droughts affecting water security in the continent<sup>31</sup>. In addition, it has been pointed out that adverse climatic events including extreme floods also pose a threat to water security in Africa by causing infrastructural damage, increasing pollution of water sources, and damaging drainage systems<sup>32</sup>. Further, due to adverse impacts of climate change, glaciers in the Rwenzori Mountains, Mount Kilimanjaro, Mount Kenya, and the Virunga Mountains are shrinking at a rapid pace and are expected to vanish entirely by 2050 posing a threat to water security in Africa<sup>33</sup>.

In light of the foregoing challenges, it is imperative to strengthen water security in Africa for development.

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<sup>29</sup> World Bank Group., 'African water resources : challenges and opportunities for sustainable development' Available at <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/867161468767675673> (Accessed on 02/12/2025)

<sup>30</sup> Nkatha. K., 'Water woes: 13 undeniable facts about Africa's water scarcity' Available at <https://www.greenpeace.org/africa/en/blog/55086/water-woes-13-undeniable-facts-about-africas-water-scarcity/> (Accessed on 02/12/2025)

<sup>31</sup> African Development Bank Group., 'Climate Change in Africa' Available at <https://www.afdb.org/en/cop25/climate-change-africa#:~:text=Africa%2C%20despite%20its%20low%20contribution,losses%20and%20increased%20food%20insecurity> (Accessed on 02/12/2025)

<sup>32</sup> Nkatha. K., 'Water woes: 13 undeniable facts about Africa's water scarcity' Op Cit

<sup>33</sup> African Development Bank Group., 'World Water Day 2025: Preserving Africa's Water Resources' Op Cit

### **3.0 Towards Water Security in Africa**

Achieving water security in Africa is important in the quest for Sustainable Development. African Union's *Agenda 2063*<sup>34</sup> seeks to ensure that every citizen in Africa has affordable and sustainable access to quality basic services including access to adequate and clean water and sanitation towards fast-tracking the Sustainable Development agenda in Africa<sup>35</sup>. It further acknowledges that fostering water security is vital in ensuring environmentally sustainable and climate resilient economies and communities in Africa<sup>36</sup>. Agenda 2063 seeks to foster healthy ecosystems including water resources in the pursuit of Africa's development<sup>37</sup>. However, despite the ideal of water security, challenges such as rapid population growth, pollution, climate change, poor governance and ecosystem degradation continue to undermine the availability, accessibility and sustainability of water in Africa<sup>38</sup>. These challenges are fuelling water insecurity in Africa with adverse consequences for vulnerable groups including women and girls who usually bear the responsibility of collecting water for their families, a task that can consume valuable time and energy, limiting their opportunities in other areas including education and economic empowerment<sup>39</sup>.

In light of the foregoing, fostering water security is an urgent priority for Africa. Achieving this goal requires strengthening legal and policy frameworks at regional and national levels. It has been argued that sound legal frameworks are necessary in achieving efficiency in governance of water resources, equity in the allocation of water, and environmental sustainability by protecting water resources and ecosystems from

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<sup>34</sup> African Union., 'Agenda 2063: The Africa we Want' Available at [https://au.int/sites/default/files/documents/33126-doc-framework\\_document\\_book.pdf](https://au.int/sites/default/files/documents/33126-doc-framework_document_book.pdf) (Accessed on 02/12/2025)

<sup>35</sup> Ibid

<sup>36</sup> Ibid

<sup>37</sup> Ibid

<sup>38</sup> African Development Bank Group., 'World Water Day 2025: Preserving Africa's Water Resources' Op Cit

<sup>39</sup> Africa's Water Crisis Require Urgent Action For Clean Water, Climate Resilience., Op Cit

degradation, pollution and climate change<sup>40</sup>. In addition, it is imperative to nurture inclusivity towards achieving water security in Africa. The *Dublin Statement* which was adopted during *the International Conference on Water and the Environment (Dublin Conference)* acknowledges the role of inclusivity and collaboration in fostering water security<sup>41</sup>. The Dublin Statement urges states to embrace participatory and inclusive approaches involving users, planners and policy-makers at all levels including women, the youth, indigenous peoples and local communities towards effective management of water resources<sup>42</sup>. It is therefore necessary for African countries to embrace inclusive and collaborative approaches involving women, the youth, local communities, governments at all levels and the private sector towards strengthening water governance and security in Africa<sup>43</sup>.

Halting and reversing land degradation is also vital in ensuring water security in Africa. It has been pointed out that land is being degraded rapidly in Africa largely due to climate change, unsustainable agricultural practices, and deforestation<sup>44</sup>. According to UNEP, Africa is particularly vulnerable to land degradation and desertification, and it is the most severely affected region in the world<sup>45</sup>. Land degradation causes water scarcity since healthy land has a natural capacity to store and filter water, but this capacity is lost

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<sup>40</sup> United Nation's Environment Programme., 'Integrated Water Resources Management' Available at <https://www.unep.org/topics/fresh-water/water-resources-management/integrated-water-resources-management> (Accessed on 02/12/2025)

<sup>41</sup> International Conference on Water and the Environment: 26-31 January 1992, Dublin, Ireland., Available at <https://wedocs.unep.org/bitstream/handle/20.500.11822/30961/ICWE.pdf?sequence=1&isAllowed=y> (Accessed on 02/12/2025)

<sup>42</sup> Ibid

<sup>43</sup> Lai. C., 'Water Scarcity in Africa: Causes, Effects, and Solutions' Available at <https://earth.org/water-scarcity-in-africa/> (Accessed on 02/12/2025)

<sup>44</sup> Nyemeck. M-L., Canestrelli. A. P., & Edoe. R., 'Local Action on Sustainable Land Management' Available at [https://www.thegef.org/sites/default/files/documents/2022-05/SGP\\_Local\\_Action\\_SLM\\_2022\\_05.pdf](https://www.thegef.org/sites/default/files/documents/2022-05/SGP_Local_Action_SLM_2022_05.pdf) (Accessed on 02/12/2025)

<sup>45</sup> United Nations Environment Programme., 'The Economics of Land Degradation in Africa: Benefits of Action Outweigh the Costs; A complementary report to the ELD Initiative' Available at <https://www.unep.org/resources/report/economics-land-degradation-africa-benefits-action-outweigh-costsa-complementary> (Accessed on 02/12/2025)

when land is degraded<sup>46</sup>. Further, land-use changes, such as the conversion of wetlands and forests for agriculture, urbanization and infrastructure development among other uses disrupts the water cycle and hydrological functions leading to water scarcity. Halting land degradation in Africa including through sustainable agricultural practices, ecosystem restoration and integrated land and water management is therefore key towards fostering water security<sup>47</sup>.

#### **4.0 Conclusion**

Realising water security in Africa remains a major obstacle in the pursuit of development. It is imperative to fast-track this ideal through appropriate legal and policy frameworks at the regional and national levels<sup>48</sup>; inclusive and collaborative approaches involving women, the youth, local communities, governments at all levels and the private sector<sup>49</sup>; and halting land degradation<sup>50</sup>. Fostering water security in Africa is therefore a practical endeavour that should be implemented for people and planet.

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<sup>46</sup> Food and Agriculture Organization of the United Nations., 'Land Degradation Neutrality for Water Security and Combatting Drought' Available at <https://openknowledge.fao.org/server/api/core/bitstreams/bb372c0d-49b9-445a-8a0a-b9824f343957/content> (Accessed on 02/12/2025)

<sup>47</sup> United Nations Environment Programme., 'The Economics of Land Degradation in Africa: Benefits of Action Outweigh the Costs; A complementary report to the ELD Initiative' Op Cit

<sup>48</sup> United Nation's Environment Programme., 'Integrated Water Resources Management' Op Cit

<sup>49</sup> Lai. C., 'Water Scarcity in Africa: Causes, Effects, and Solutions' Op Cit

<sup>50</sup> Food and Agriculture Organization of the United Nations., 'Land Degradation Neutrality for Water Security and Combatting Drought' Op Cit

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