

# **Bolstering Water Governance for Sustainability**

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**Kariuki Muigua**

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## *Bolstering Water Governance for Sustainability*

### **Bolstering Water Governance for Sustainability**

**Kariuki Muigua\***

#### ***Abstract***

*Achieving sustainability has become a clarion call across the globe in light of environmental, economic, and social challenges facing the planet including the triple planetary crisis of climate change, biodiversity loss, and pollution. Fostering sustainability has therefore emerged as an ideal towards establishing harmony between humanity and nature. One of the key factors in realizing sustainability is water. Water can unlock Sustainable Development. Consequently, effective and efficient governance of water and water resources is necessary for sustainability. This paper critically discusses the need for good governance of water and water resources. It argues that water plays a key role in Sustainable Development. The paper critically examines the role of water and water resources in sustainability. It also interrogates the current governance practices in the water sector and points out some of the key concerns. In addition, the paper suggests best practices towards bolstering water governance for sustainability.*

#### **1.0 Introduction**

With the planet facing mounting problems including environmental challenges such as climate change, pollution, and loss of biodiversity together with issues of poverty, increasing disparity between societies and the tensions brought by social inequalities, the need for sustainability has become urgent<sup>1</sup>. According to the United Nations Environment Programme (UNEP), environmental problems facing the planet including the triple planetary crisis of climate change, biodiversity loss, and pollution have heightened the importance of forging a new relationship between people and the planet

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<sup>1</sup> Giovannoni. E., & Fabietti. G., 'What Is Sustainability? A Review of the Concept and Its Applications.' In: Busco, C., Frigo, M., Riccaboni, A., Quattrone, P. (eds) Integrated Reporting. Springer, Cham. Available at [https://doi.org/10.1007/978-3-319-02168-3\\_2](https://doi.org/10.1007/978-3-319-02168-3_2) (Accessed on 20/03/2024)

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towards achieving sustainability<sup>2</sup>. Fostering sustainability has therefore emerged as an ideal towards establishing harmony between humanity and nature<sup>3</sup>.

The idea of sustainability entails creating and maintaining the conditions under which humanity and nature can exist in productive harmony to support present and future generations<sup>4</sup>. This is well captured under the concept of Sustainable Development which seeks to promote development that meets the needs of the present without compromising the ability of future generations to meet their own needs<sup>5</sup>. It aims to achieve sustainability by promoting environmental protection, economic development and social progress<sup>6</sup>. According to the United Nations, Sustainable Development requires an integrated approach that takes into consideration environmental concerns along with economic and social development<sup>7</sup>.

Sustainable Development has been embraced as the global blueprint for sustainability as enshrined under the United Nation's *2030 Agenda for Sustainable Development*<sup>8</sup>. The Agenda represents a shared blue print for peace and prosperity for people and the planet in the quest towards the ideal of Sustainable Development<sup>9</sup>. It envisions attainment of the ideal of Sustainable Development through 17 Sustainable Development Goals (SDGs)

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<sup>2</sup> United Nations Environment Programme., 'The Triple Planetary Crisis: Forging a New Relationship Between People and the Earth' Available at <https://www.unep.org/news-and-stories/speech/tripleplanetary-crisis-forging-new-relationship-between-people-and-earth> (Accessed on 20/03/2024)

<sup>3</sup> Ibid

<sup>4</sup> United States Environmental Protection Agency., 'What is Sustainability.' Available at <https://www.epa.gov/sustainability/learn-about-sustainability> (Accessed on 20/03/2024)

<sup>5</sup> World Commission on Environment and Development., 'Our Common Future.' Oxford, (Oxford University Press, 1987)

<sup>6</sup> Fitzmaurice. M., 'The Principle of Sustainable Development in International Development Law.' *International Sustainable Development Law.*, Vol 1

<sup>7</sup> United Nations., 'Sustainability' Available at <https://www.un.org/en/academic-impact/sustainability> (Accessed on 20/03/2024)

<sup>8</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 20/03/2024)

<sup>9</sup> Ibid

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which seek to strike a balance between social, economic and environmental facets of sustainability<sup>10</sup>.

One of the key factors in realizing sustainability is water<sup>11</sup>. It has been argued that water can unlock Sustainable Development<sup>12</sup>. Consequently, effective and efficient governance of water and water resources is necessary for sustainability<sup>13</sup>. This paper critically discusses the need for good governance of water and water resources. It argues that water plays a key role in Sustainable Development. The paper critically examines the role of water and water resources in sustainability. It also interrogates the current governance practices in the water sector and points out some of the key concerns. In addition, the paper suggests best practices towards bolstering water governance for sustainability.

### **2.0 Water and Sustainable Development**

Water and water resources play a key role in Sustainable Development. It has been noted that the Sustainable management of water resources and access to safe water and sanitation are essential for unlocking economic growth and productivity, and provide significant leverage for existing investments in health and education<sup>14</sup>. According to the United Nations, water is at the core of Sustainable Development and is critical for socio-economic development, healthy ecosystems and for survival of humanity<sup>15</sup>. It further opines that water is vital for reducing the global burden of disease and improving the health, welfare and productivity of populations<sup>16</sup>. Further, water is also at the heart of

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<sup>10</sup> Ibid

<sup>11</sup> United Nations Environment Programme, 'Goal 6: Clean Water and Sanitation' available at <https://www.unep.org/explore-topics/sustainable-development-goals/why-do-sustainable-development-goals-matter/goal-6>

<sup>12</sup> Ibid

<sup>13</sup> Ibid

<sup>14</sup> United Nations Environment Programme, 'Goal 6: Clean Water and Sanitation' Op Cit

<sup>15</sup> United Nations., 'Water and Sustainable Development' Available at [https://www.un.org/waterforlifedecade/water\\_and\\_sustainable\\_development.shtml](https://www.un.org/waterforlifedecade/water_and_sustainable_development.shtml) (Accessed on 20/03/2024)

<sup>16</sup> Ibid

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adaptation to climate change, serving as the crucial link between the climate system, human society and the environment<sup>17</sup>.

It has been argued that water is central in realizing all the 17 SDGs<sup>18</sup>. For example access to water plays a role in reducing poverty by removing barriers to economic growth for individuals and societies<sup>19</sup>; enhances food security by supporting agriculture and other food production activities<sup>20</sup>; fosters good health and well-being by improving public health; enhances energy production and access to clean and affordable energy<sup>21</sup>; promotes economic growth<sup>22</sup>; and strengthens climate change mitigation and adaptation measures<sup>23</sup>. As a result, it has been noted that water affects the entire Sustainable Development agenda<sup>24</sup>. It is embedded in almost all the SDGs especially those dealing with food, health, the environment and energy<sup>25</sup>. Attainment of the SDGs is therefore only plausible where the goal relating to water is achieved<sup>26</sup>.

Lack of access to water on the other hand undermines Sustainable Development<sup>27</sup>. It has been noted that water shortages undercut food security and the incomes of rural farmers while improving water management makes national economies, the agriculture and food sectors more resilient to rainfall variability and able to fulfil the needs of growing population<sup>28</sup>. Water scarcity has affected the socio-economic development agenda

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<sup>17</sup> Ibid

<sup>18</sup> SIWI, 'Water is Central in Achieving all 17 SDGs. But How?' Available at <https://siwi.org/latest/water-is-central-in-achieving-all-17-sdgs-but-how/> (Accessed on 20/03/2024)

<sup>19</sup> Ibid

<sup>20</sup> Ibid

<sup>21</sup> Ibid

<sup>22</sup> Ibid

<sup>23</sup> Ibid

<sup>24</sup> Ait-Kadi.M., 'Water for Development and Development for Water: Realizing the Sustainable Development Goals (SDGs) Vision' *Aquatic Procedia* 6 ( 2016 ) 106 - 110

<sup>25</sup> Ibid

<sup>26</sup> Ibid

<sup>27</sup> United Nations Environment Programme, 'Goal 6: Clean Water and Sanitation' Op Cit

<sup>28</sup> Ibid

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including food security, access to health, education, and energy in most cases resulting in underdevelopment especially in arid and semi-arid areas<sup>29</sup>.

The role of water in Sustainable Development is acknowledged under the United Nation's 2030 Agenda for Sustainable Development<sup>30</sup>. SDG 6 seeks to ensure availability and sustainable management of water and sanitation for all towards Sustainable Development<sup>31</sup>. It sets out several targets towards realizing this goal including achieving universal and equitable access to safe and affordable drinking water for all<sup>32</sup>; improving water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse of water globally<sup>33</sup>; increasing water-use efficiency across all sectors and ensuring sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity<sup>34</sup>; implementing integrated water resources management at all levels, including through transboundary cooperation as appropriate<sup>35</sup>; protecting and restoring water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes<sup>36</sup>; expanding international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment,

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<sup>29</sup> Biswas. A., 'Water for Sustainable Development in the 21<sup>st</sup> Century: A Global Perspective' available at <https://thirdworldcentre.org/wp-content/uploads/2015/05/Water-for-sustainable-development-in-the-21st-century.pdf> (Accessed on 20/03/2024)

<sup>30</sup> United Nations General Assembly., 'Transforming Our World: the 2030 Agenda for Sustainable Development.' 21 October 2015, A/RES/70/1., Op Cit

<sup>31</sup> Ibid

<sup>32</sup> Ibid

<sup>33</sup> Ibid

<sup>34</sup> Ibid

<sup>35</sup> Ibid

<sup>36</sup> Ibid

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recycling and reuse technologies<sup>37</sup>; and supporting and strengthening the participation of local communities in improving water and sanitation management<sup>38</sup>.

It has been argued that the inclusion SDG 6 in the Sustainable Development agenda recognizes that water is at the heart of all aspects of Sustainable Development<sup>39</sup>. According to UNEP, SDG 6 goes beyond drinking water, sanitation and hygiene to also address the quality and sustainability of water resources, which are critical to the survival of people and the planet<sup>40</sup>. The 2030 Agenda for Sustainable Development therefore recognizes the centrality of water and water resources to Sustainable Development and the vital role that improved drinking water, sanitation and hygiene play in progress in other areas, including health, education and poverty reduction<sup>41</sup>.

At a regional level, Africa Union's *Agenda 2063*<sup>42</sup> recognizes the role of water for the Sustainable Development of Africa. Agenda 2063 notes that despite the presence of huge fresh water resources, large rivers and lakes (including Rivers Congo, Nile, Zambezi and Niger and Lake Victoria), Africa still faces the problem of water scarcity<sup>43</sup>. Agenda 2063 seeks to enhance equitable and sustainable use and management of water and water resources for socio-economic development, regional cooperation and conservation of the environment in Africa<sup>44</sup>.

Water is therefore critical in the Sustainable Development agenda. It is therefore necessary to bolster water governance for sustainability. It has been noted that efficient

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<sup>37</sup> United Nations General Assembly., 'Transforming Our World: the 2030 Agenda for Sustainable Development.' 21 October 2015, A/RES/70/1., Op Cit

<sup>38</sup> Ibid

<sup>39</sup> Ait-Kadi.M., 'Water for Development and Development for Water: Realizing the Sustainable Development Goals (SDGs) Vision' Op Cit

<sup>40</sup> United Nations Environment Programme, 'Goal 6: Clean Water and Sanitation' Op Cit

<sup>41</sup> Ibid

<sup>42</sup> Africa 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 20/03/2024)

<sup>43</sup> Ibid

<sup>44</sup> Ibid

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water management can unlock Sustainable Development<sup>45</sup>. It is therefore necessary to strengthen water governance at all levels in order foster sustainability<sup>46</sup>.

### **3.0 Water Governance: Opportunities and Challenges**

Water governance refers to the political, social, economic, and administrative systems that influence the use and management of water<sup>47</sup>. It has been asserted that water governance is essentially about who gets what water, when and how, and who has the right to water, its related services, and their benefits<sup>48</sup>. Further, it has been posited that water governance is concerned with those political, social and economic organisations and institutions (and their relationships), which are important for water development and management<sup>49</sup>. It also comprises mechanisms, processes, and institutions through which all involved stakeholders, including citizens and interest groups, articulate their priorities, exercise their legal rights, meet their obligations and solve their differences relating to water<sup>50</sup>.

According to the United Nations Development Programme (UNDP), the representation of various interests in water-related decision-making and the role of power and politics are important components to consider when analysing water governance dynamics<sup>51</sup>. Further, it has been pointed out that given the complexities of water use within societies, developing, allocating and managing it equitably and efficiently and ensuring environmental sustainability requires that the disparate voices are heard and respected

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<sup>45</sup> Biswas. A., 'Water for Sustainable Development in the 21<sup>st</sup> Century: A Global Perspective' Op Cit

<sup>46</sup> Ibid

<sup>47</sup> SIWI., 'What is Water Governance?' Available at <https://siwi.org/undp-siwi-water-governance-facility/what-is-water-governance#:~:text=Water%20governance%20is%20one%20of,influence%20water's%20use%20and%20management> (Accessed on 21/03/2024)

<sup>48</sup> Ibid

<sup>49</sup> Rogers. P., & Hall. A., 'Effective Water Governance' Available at <http://vandensnamai.eu/wp-content/uploads/2015/01/TEC-7.pdf> (Accessed on 21/03/2024)

<sup>50</sup> Tortajada, C., 'Water Governance: Some Critical Issues,' *International Journal of Water Resources Development*, Vol. 26, No.2, 2010, pp.297-307, p. 298.

<sup>51</sup> United Nations Development Programme., 'Assessing Water Governance' Available at <https://www.undp.org/sites/g/files/zskgke326/files/publications/Users%20Guide%20on%20Assessing%20Water%20Governance1.pdf> (Accessed on 21/03/2024)

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in decisions over common waters and use of scarce financial and human resources<sup>52</sup>. As a result, effective governance of water resources and water service delivery requires the combined commitment of the state and various groups in civil society, particularly at local or community levels, as well as the private sector<sup>53</sup>. It has been noted that effective water governance has several dimensions which are: the *social dimension*, which focuses on equity of access to and use of water resources and includes issues such as the equitable distribution of water resources and services among various social and economic groups and its effects on society<sup>54</sup>; *economic dimension*, which highlights efficiency in water allocation and use<sup>55</sup>; *political dimension*, which focuses on providing stakeholders with equal rights and opportunities to take part in various decision-making processes<sup>56</sup>; and *environmental dimension*, which emphasizes sustainable use of water and related ecosystem services(Emphasis added)<sup>57</sup>.

It has been argued that how societies choose to govern their water resources and services has profound impacts on people's livelihood and the sustainability of such resources and services<sup>58</sup>. For example, access to water is a matter of daily survival and can in many cases help to break the vicious circle of poverty<sup>59</sup>. Improving water governance is therefore necessary in alleviating global poverty<sup>60</sup>. Sound governance of water resources is also essential for the attainment of the SDGs<sup>61</sup>.

The need for sound water governance was reaffirmed during the *International Conference on Water and the Environment (Dublin Conference)*<sup>62</sup>. One of the key instruments that

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<sup>52</sup> Rogers. P., & Hall. A., 'Effective Water Governance' Op Cit

<sup>53</sup> Ibid

<sup>54</sup> United Nations Development Programme., 'Assessing Water Governance' Op Cit

<sup>55</sup> Ibid

<sup>56</sup> Ibid

<sup>57</sup> Ibid

<sup>58</sup> SIWL., 'What is Water Governance?' Op Cit

<sup>59</sup> Ibid

<sup>60</sup> Ibid

<sup>61</sup> Ibid

<sup>62</sup> International Conference on Water and the Environment: 26-31 January 1992, Dublin, Ireland., Available at

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emerged from the conference is the *Dublin Statement*<sup>63</sup> which recognizes that concerted actions are needed to reverse the present trends in the water sector including overconsumption, pollution, and rising threats from drought and floods. The Dublin Statement identifies key principles of sound water governance which include participatory approaches involving users, planners and policy-makers at all levels<sup>64</sup>; the role of women in the provision, management and safeguarding of water<sup>65</sup>; the basic right of all human beings to have access to clean water and sanitation at an affordable price<sup>66</sup>; and effective management of water resources that takes a holistic approach, linking social and economic development with protection of natural ecosystems<sup>67</sup>. The Dublin Principles are key in bolstering water governance. It has been noted that the Dublin Principles bring water resources firmly under the State's function of clarifying and maintaining a system of property rights, and, through the principle of participatory management, asserts the relevance of meaningful decentralisation at the lowest appropriate level in effective governance of water<sup>68</sup>.

Strengthening water governance for sustainability is also enshrined under United Nation's *General Comment No. 15 on the Right to Water*<sup>69</sup>. This document recognizes that the human right to water is indispensable for leading a life in human dignity and that it is a prerequisite for the realization of other human rights<sup>70</sup>. It further acknowledges that the human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses<sup>71</sup>. In addition, it states

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<https://wedocs.unep.org/bitstream/handle/20.500.11822/30961/ICWE.pdf?sequence=1&isAllowed=y>  
(Accessed on 21/03/2024)

<sup>63</sup> Ibid

<sup>64</sup> Ibid

<sup>65</sup> Ibid

<sup>66</sup> Ibid

<sup>67</sup> Ibid

<sup>68</sup> Rogers. P., & Hall. A., 'Effective Water Governance' Op Cit

<sup>69</sup> United Nations, General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant), Adopted at the Twenty-ninth Session of the Committee on Economic, Social and Cultural Rights, on 20 January 2003 (Contained in Document E/C.12/2002/11)

<sup>70</sup> Ibid

<sup>71</sup> Ibid

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that an adequate amount of safe water is necessary to prevent death from dehydration, to reduce the risk of water-related disease and to provide for consumption, cooking, personal and domestic hygienic requirements<sup>72</sup>. In order to realize this right, The Document provides that national water strategies and plans of action should be based on the principles of accountability, transparency and independence of the judiciary, since *good governance* is essential to the effective implementation of all human rights, including the realization of the right to water (Emphasis added)<sup>73</sup>.

At a national level, the *Constitution of Kenya*<sup>74</sup> enshrines the right of every person to clean and safe water in adequate quantities as a core socio-economic right<sup>75</sup>. The Constitution further calls upon the national government to protect the environment and natural resources with a view of establishing a durable and sustainable system of development through inter alia protection of water and water resources<sup>76</sup>. County governments are also tasked with the implementation of specific national government policies on natural resources and environmental conservation, including water conservation<sup>77</sup>.

The *Water Act*<sup>78</sup> of Kenya provides for the regulation, management and development of water resources, water and sewerage services in Kenya among other connected purposes<sup>79</sup>. The Act provides that every water resource is vested in and held by the national government in trust for the people of Kenya<sup>80</sup>. It further establishes the Water Resources Authority whose functions include formulating and enforcing standards, procedures and Regulations for the management and use of water resources and flood mitigation; regulating the management and use of water resources; and coordinating

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<sup>72</sup> Ibid

<sup>73</sup> Ibid

<sup>74</sup> Constitution of Kenya., 2010., Government Printer, Nairobi

<sup>75</sup> Ibid, article 43 (1) (d)

<sup>76</sup> Ibid, Fourth Schedule, Part 1 (22) (c)

<sup>77</sup> Ibid, Fourth Schedule, Part 2 10 (a)

<sup>78</sup> Water Act., Cap 372, Government Printer, Nairobi

<sup>79</sup> Ibid

<sup>80</sup> Ibid, S 5

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with other regional, national and international bodies for the better regulation of the management and use of water resources<sup>81</sup>. Under the Act, Water Resource Users Associations may be established as associations of water resource users at the sub-basin level in accordance with Regulations prescribed by the Water Resources Authority<sup>82</sup>. It further provides that a Water Resource Users Association should be a community based association for collaborative management of water resources and resolution of conflicts concerning the use of water resources<sup>83</sup>. The Act therefore embraces the idea of community participation in water governance. Further, in order to bolster water governance in Kenya, the Act requires the formulation of a National Water Services Strategy which specifies existing water services; the number and location of persons who are not provided with a basic water supply and basic sewerage services; standards for the progressive realisation of the right to water; and a resource mobilization strategy for the implementation of the plans<sup>84</sup>.

Despite existence of the foregoing instruments, water governance at local, national, regional, and global levels faces several challenges. They include poor resource management, corruption, inappropriate institutional arrangements, bureaucratic inertia, insufficient human capacity, and shortages of finances for investments<sup>85</sup>. The Dublin Statement also recognizes that concerted actions are needed to reverse the present trends in the water sector including overconsumption, pollution, and rising threats from drought and floods<sup>86</sup>. It is therefore necessary to address these challenges and bolster water governance in order to foster sustainability.

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<sup>81</sup> Ibid

<sup>82</sup> Ibid, 29 (1)

<sup>83</sup> Ibid, S 29 (2)

<sup>84</sup> Ibid, s 64

<sup>85</sup> SIWL, 'What is Water Governance?' Op Cit

<sup>86</sup> International Conference on Water and the Environment: 26-31 January 1992, Dublin, Ireland, Op Cit

#### **4.0 Way Forward**

It has been opined that there is need to embrace Integrated Water Resources Management (IWRM) in order to strengthen the governance of water resources<sup>87</sup>. According to UNEP, IWRM is a process that promotes the coordinated development and management of water, land and related resources in order to maximize economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems<sup>88</sup>. It has been noted that IWRM is a cross-sectoral policy approach designed to replace the traditional, fragmented sectoral approach to water resources and management that has resulted in poor services and unsustainable resource use<sup>89</sup>. It is premised on the understanding that water resources are an integral component of the ecosystem, a natural resource, and a social and economic good<sup>90</sup>. IWRM can bolster water governance by promoting effective management practices and fostering productive relationships among stakeholders<sup>91</sup>. In addition, it has been noted that the design of the IWRM approach, including its pillars and principles, can enhance good water governance and effective resource management<sup>92</sup>. It is therefore necessary to embrace IWRM in order to improve the governance of water resources.

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<sup>87</sup> Muigua. K., 'Streamlining Water Governance in Kenya for Sustainable Development' Available at <https://kmco.co.ke/wp-content/uploads/2018/08/Streamlining-Water-Governance-in-Kenya-17TH-FEBRUARY-2017.pdf> (Accessed on 21/03/2024)

<sup>88</sup> United Nations Environment Programme., 'What is Integrated Water Resources Management?' Available at [https://www.unep.org/explore-topics/disasters-conflicts/where-we-work/sudan/what-integrated-water-resources-management#:~:text=Integrated%20Water%20Resources%20Management%20\(IWRM,the%20sustainability%20of%20vital%20ecosystems.](https://www.unep.org/explore-topics/disasters-conflicts/where-we-work/sudan/what-integrated-water-resources-management#:~:text=Integrated%20Water%20Resources%20Management%20(IWRM,the%20sustainability%20of%20vital%20ecosystems.) (Accessed on 21/03/2024)

<sup>89</sup> Ibid

<sup>90</sup> Ibid

<sup>91</sup> Grigg. N., 'IWRM and Water Governance' Integrated Water Resource Management. Palgrave Macmillan, London. Available at [https://doi.org/10.1057/978-1-137-57615-6\\_5](https://doi.org/10.1057/978-1-137-57615-6_5) (Accessed on 21/03/2024)

<sup>92</sup> Katusiime. J., & Schutt... B., 'Integrated Water Resources Management Approaches to Improve Water Resources Governance' *Water* 2020, 12(12), 3424; Available at <https://doi.org/10.3390/w12123424> (Accessed on 21/03/2024)

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In addition, it is vital embrace public/community participation in order to bolster water governance<sup>93</sup>. It has been correctly observed that public participation produces a sense of community between the administration and users of water, lowers administration costs, and ensures that the interests of users are taken into account<sup>94</sup>. It is therefore necessary for water-user associations and water management institutions to include local communities in decision-making processes<sup>95</sup>. Public participation, community-led water resource management and engagement of local stakeholders fosters responsible management of water resources<sup>96</sup>. These groups are closer to water resources and therefore it is desirable for them to ensure the sustainability of water resources for long term socio-economic benefits<sup>97</sup>. The 2030 Agenda for Sustainable Development acknowledges the role of public participation in water governance and urges states to support and strengthen the participation of local communities in improving water and sanitation management<sup>98</sup>. It is therefore necessary to enhance public/community participation in order to bolster water governance.

Further, it is imperative to strengthen international cooperation in the management of water resources in order to bolster water governance<sup>99</sup>. Some water resources including oceans, lakes, and rivers are shared by different states<sup>100</sup>. The governance of transboundary water resources presents opportunities for international cooperation<sup>101</sup>. Benefits of cooperation in such cases include the costs averted by reducing tensions and

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<sup>93</sup> Solanes. M., Jouravlev. A., 'Water Governance for Development and Sustainability' Available at <https://fr.ircwash.org/sites/default/files/Solanes-2006-Water.pdf> (Accessed on 21/03/2024)

<sup>94</sup> Ibid

<sup>95</sup> Food and Agriculture Organization., 'Land and Water Governance to Achieve the SDGs in Fragile Systems' Available at <https://www.fao.org/3/ca5172en/CA5172EN.pdf> (Accessed on 21/03/2024)

<sup>96</sup> Ibid

<sup>97</sup> Ibid

<sup>98</sup> United Nations General Assembly., 'Transforming Our World: the 2030 Agenda for Sustainable Development.' 21 October 2015, A/RES/70/1., Op Cit

<sup>99</sup> Ibid

<sup>100</sup> Woodhouse. P., & Muller. M., 'Water Governance – An Historical Perspective on Current Debates' Available at <https://www.sciencedirect.com/science/article/abs/pii/S0305750X16305460?via%3Dihub> (Accessed on 21/03/2024)

<sup>101</sup> Ibid

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disputes between neighbours<sup>102</sup>. Strained interstate relations linked to water management can inhibit regional cooperation across a broad front, including trade, transport, telecommunications and labour markets<sup>103</sup>. It has been noted that international and regional frameworks provide an important role in cooperation for sustainable and equitable use of resources between states<sup>104</sup>. This cooperation is particularly significant in regions coping with fragile systems, as incompatible management of transboundary water resources can result in conflict<sup>105</sup>. The *Convention on the Law of the Non-navigational Uses of International Watercourses*<sup>106</sup> recognizes the importance of international cooperation in the governance of transboundary water resources. It urges watercourse states to cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilization and adequate protection of an international watercourse<sup>107</sup>. It is thus vital to strengthen international cooperation in order to promote sound governance of transboundary water resources.

Finally, it is necessary to promote effective management of water related conflicts<sup>108</sup>. It has been correctly pointed out that given the social and economic characteristics and benefits of water, its potential for generating conflicts is unlimited<sup>109</sup>. Prolonged conflicts over water harm conservation and threaten Sustainable Development<sup>110</sup>. It has been noted that one of the key components of sound governance in the water sector is effective conflict management<sup>111</sup>. It is therefore necessary to design and embrace efficient conflict-

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<sup>102</sup> United Nations., 'Water Cooperation' Available at [https://www.un.org/waterforlifedecade/water\\_cooperation.shtml](https://www.un.org/waterforlifedecade/water_cooperation.shtml) (Accessed on 21/03/2024)

<sup>103</sup> Ibid

<sup>104</sup> Food and Agriculture Organization., 'Land and Water Governance to Achieve the SDGs in Fragile Systems' Op Cit

<sup>105</sup> Ibid

<sup>106</sup> Convention on the Law of the Non-navigational Uses of International Watercourses., United Nations, 1997., Available at [https://legal.un.org/ilc/texts/instruments/english/conventions/8\\_3\\_1997.pdf](https://legal.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf) (Accessed on 21/03/2024)

<sup>107</sup> Ibid, article 8

<sup>108</sup> Solanes. M., Jouravlev. A., 'Water Governance for Development and Sustainability' Op Cit

<sup>109</sup> Ibid

<sup>110</sup> Ibid

<sup>111</sup> United Nations Development Programme., 'Assessing Water Governance' Op Cit

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solving mechanisms that ensure social, environmental and economic factors relevant to water governance are adequately considered when adjudicating conflicts<sup>112</sup>. Alternative Dispute Resolution (ADR) mechanisms such as negotiation and mediation have been hailed as appropriate in managing conflicts relating to water due to their potential to resolve underlying issues in conflicts, preserve relationships, and promote collaboration in the management of water resources<sup>113</sup>. Further, water diplomacy has also been advanced as key tool conflict prevention, de-escalation and management in the water sector<sup>114</sup>. For example, international diplomacy in relation to water can foster the establishment of a global framework for water governance which may then be used in the further development of multilateral and bilateral water treaties and agreements<sup>115</sup>. It has been noted that such an approach can help define rights to use, water allocations, the appropriate bodies to deal with disputes among other key factors<sup>116</sup>. Effective management of conflicts over water through ADR mechanisms and water diplomacy is vital in bolstering water governance<sup>117</sup>.

### **5.0 Conclusion**

Water plays a key role in Sustainable Development and is central in realizing all the 17 SDGs<sup>118</sup>. Effective and efficient governance of water and water resources is therefore necessary for sustainability<sup>119</sup>. However, water governance at local, national, regional, and global levels faces several challenges including poor resource management, corruption, inappropriate institutional arrangements, bureaucratic inertia, insufficient human capacity, and shortages of finances for investments<sup>120</sup>. It is vital to address these

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<sup>112</sup> Rogers. P., & Hall. A., 'Effective Water Governance' Op Cit

<sup>113</sup> United Nations., 'Mediation and Dispute Resolution' Available at [https://www.un.org/waterforlifedecade/water\\_cooperation\\_2013/mediation\\_and\\_dispute\\_resolution.shtml#:~:text=Alternative%20Dispute%20Resolution%20\(ADR%2C%20sometimes,in%20a%20non%2Dconfrontational%20way.](https://www.un.org/waterforlifedecade/water_cooperation_2013/mediation_and_dispute_resolution.shtml#:~:text=Alternative%20Dispute%20Resolution%20(ADR%2C%20sometimes,in%20a%20non%2Dconfrontational%20way.) (Accessed on 21/03/2024)

<sup>114</sup> Ibid

<sup>115</sup> Ibid

<sup>116</sup> Ibid

<sup>117</sup> Ibid

<sup>118</sup> SIWI., 'Water is Central in Achieving all 17 SDGs. But How?' Op Cit

<sup>119</sup> United Nations Environment Programme, 'Goal 6: Clean Water and Sanitation' Op Cit

<sup>120</sup> SIWI., 'What is Water Governance?' Op Cit

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challenges and strengthen water governance for sustainability. In order to achieve this goal, it is necessary to embrace IWRM<sup>121</sup>; promote public/community participation<sup>122</sup>; strengthen international cooperation in the management of transboundary water resources<sup>123</sup>; and promote effective management of water related conflicts<sup>124</sup>. Bolstering water governance for sustainability is a crucial goal that needs to be urgently realized.

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<sup>121</sup> Muigua. K., 'Streamlining Water Governance in Kenya for Sustainable Development' Op Cit

<sup>122</sup> Solanes. M., Jouravlev. A., 'Water Governance for Development and Sustainability' Op Cit

<sup>123</sup> United Nations General Assembly., 'Transforming Our World: the 2030 Agenda for Sustainable Development.' 21 October 2015, A/RES/70/1., Op Cit

<sup>124</sup> Solanes. M., Jouravlev. A., 'Water Governance for Development and Sustainability' Op Cit

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