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# **NOT SO ROSY**

## **FARM WORKERS' HUMAN RIGHT TO WATER IN THE LAKE NAIVASHA BASIN**

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## Chapter 4

### *Not so Rosy: Farm Workers' Human Right to Water in the Lake Naivasha Basin*

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#### I. INTRODUCTION

In 2010, the United Nations General Assembly (UNGA) explicitly recognized the human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the full enjoyment of life and realization of all other human rights.<sup>1</sup> In the same year, the right to clean, safe and adequate water found its pride of place in the Kenyan Constitution.<sup>2</sup> The Constitution of Kenya, promulgated in 2010, includes the rights to water and sanitation in the Bill of Rights.<sup>3</sup> There is a 2014 draft Water Bill seeking, among other things, to implement the right to water, which is before parliament. This underscores the fact that the realization of these rights requires concerted efforts by all players considering that urban sanitation access level was stated to be 69% in 2011/12. This, however, is not very far below the sector target of 77.5% urban sanitation coverage by 2015.<sup>4</sup> With regard to water, the current access rate is 53% and it is likely that the sector target of 80% urban water coverage in 2015 will not be attained.<sup>5</sup> The improvement in coverage in 2014 has been a meagre 1%.<sup>6</sup>

Meeting water and sanitation needs must be considered within the

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1 UN General Assembly (2010).

2 Constitution of Kenya (2010) Article 43 (1)(d)

3 Ibid.

4 The challenge however is the verification of the reliability of on-site sanitation data. See Water Services Regulatory Board (2013).

5 Ibid. p. 12

6 Water Services Regulatory Board (2014).

context of a rapidly growing urban population and the proliferation of informal settlements as people migrate to urban areas in search of employment. In Kenya, devolution entailing the establishment of 47 counties under the Constitution with their own headquarters and staff will fuel the urban bulge and put stress on the water and sanitation facilities available unless the infrastructure is expanded. This chapter focuses on the right to water and sanitation in four villages hosting farm workers in the Lake Naivasha Basin. Since our concern is with the right to water<sup>7</sup> as defined by UNGA in the Resolution adopted on 28 July, in General Comment No. 15 on the Human Rights to Water adopted by the Committee on Economic, Social and Cultural Rights (CESCR)<sup>8</sup> and in the Kenyan Constitution, we focus on water use for domestic purposes. This is the predominant use in the target villages where the workers (with the exception of one village) are migrants from other parts of the country coming into the basin in search of livelihood opportunities linked to the flower and horticulture industry. It is, however, noteworthy that the broader livelihood uses of water (kitchen gardening and watering livestock) which are the concern of many poor, and especially women, in Kenya are only observed in one of the target informal settlements discussed below. The absence of use for broader livelihood purposes in the other villages is probably attributable to the fact that most of the workers in the basin are labourers with no land rights in the basin area. The increase of the basin population will increase the inhabitants in informal settlements and hence exacerbate the competition over available resources including water.<sup>9</sup> Whereas the right to water and sanitation applies to everyone, the CESCR committee has in General Comment No. 15 on the human right to water called upon states parties to: 'give special attention to those individuals and groups who have traditionally faced difficulties in exercising this right, including women, children, minority groups, indigenous peoples, refugees, asylum seekers, internally displaced people, migrant workers, prisoners and detainees'.<sup>10</sup>

Further, the right to water under international law, as discussed in Chapter 2 of this book imputes duties on State Parties to ensure that water is accessible by availing infrastructure to provide sufficient quantities

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7 As defined by the United Nations General Assembly (2010) Resolution A/RES/64/292, and the Constitution of Kenya (2010) Article 4(1)(d).

8 CESCR (2002).

9 WWF & Pegasys Strategy and Development (2012) p. 31.

10 CESCR (2003) para 18.

of water in households, schools, hospitals, work and public places.<sup>11</sup> Water must also be of such a quality that it does not pose a threat to human health.<sup>12</sup> On affordability, the CESCR committee has in General Comment No. 15 required that ‘Water, and water facilities and services must be affordable for all. The direct and indirect costs must not compromise or threaten the realization of other Covenant rights’<sup>13</sup> and ‘appropriate pricing policies – free or low-cost water’<sup>14</sup> should be put in place to ensure that ‘poorer households should not be disproportionately burdened with water expenses compared to richer households’.<sup>15</sup>

The International Covenant on Economic Social and Cultural Rights is part of Kenyan law as discussed in Chapter 3, by virtue of the Constitution.<sup>16</sup> Further, the State has been charged with the duty of ensuring that the needs of vulnerable groups are addressed.<sup>17</sup> Article 56(e) of the Constitution specifically obliges the State to put in place affirmative action programmes designed to ensure that minorities and marginalized groups have reasonable access to water, among other social services. It is within this context that this chapter looks at the intersectional discrimination of a vulnerable group – farm workers who are mainly women – and evaluates the extent to which their rights to water and sanitation have been realized.

In this chapter, the competition for water resources is demonstrated through an exploration of the disparate users and uses of water in the basin and the amounts of water they take up. We look at this within the context of several factors, which include land rights and their effect on the right to water; environmental degradation; and the poor working and living conditions of flower farm workers in the basin. The chapter highlights the status of the realization of the constitutional rights to water and sanitation for the farm workers living in informal settlements in the basin by assessing critical issues affecting their right to water for domestic use (washing, cooking, drinking and bathing) and their right to sanitation. Drawing on field studies carried out in four villages in the basin and augmented by cited literature, the chapter underscores the competition for

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11 Ibid. para 12 (c).

12 Ibid. para 12 (b).

13 Ibid. para. 12 (c).

14 Ibid. para. 27 (b).

15 Ibid. para. 26.

16 Constitution of Kenya (2010) Article 2 (6).

17 Ibid. Article 21 (3).

water resources between the disparate uses and users of water in the basin and analyses the relation between land rights, water use and the right to water. The large water users who are mainly flower and horticulture farms and also the land owners get the bulk of the water. In securing their land rights, these owners have curtailed access to the lake by other users specifically those needing water for domestic use such as the farm workers living in informal settlements. The chapter also assesses the living and working conditions of farm workers and how they impact on their right to water particularly with regard to affordability, quality and accessibility.

The main questions the chapter seeks to answer are whether the rights to water and sanitation for farm workers in the Lake Naivasha basin have been realized and whether services are affordable, accessible, sustainable, safe, sufficient and acceptable to the farm worker community. These questions are addressed through an exploration of the workers' knowledge of the existence of the rights; their perceptions on the extent to which the rights have been respected and protected; their participation in water governance; and the status of water and sanitation services' provision. It is worth noting that by looking at the different water uses in the basin and the allocation of water for these uses, the chapter demonstrates the low hierarchical level accorded to domestic water needs of residents of informal settlements around the lake, who are mainly farm workers and women.

## **2. THE LAKE NAIVASHA BASIN**

### **2.1 The Basin**

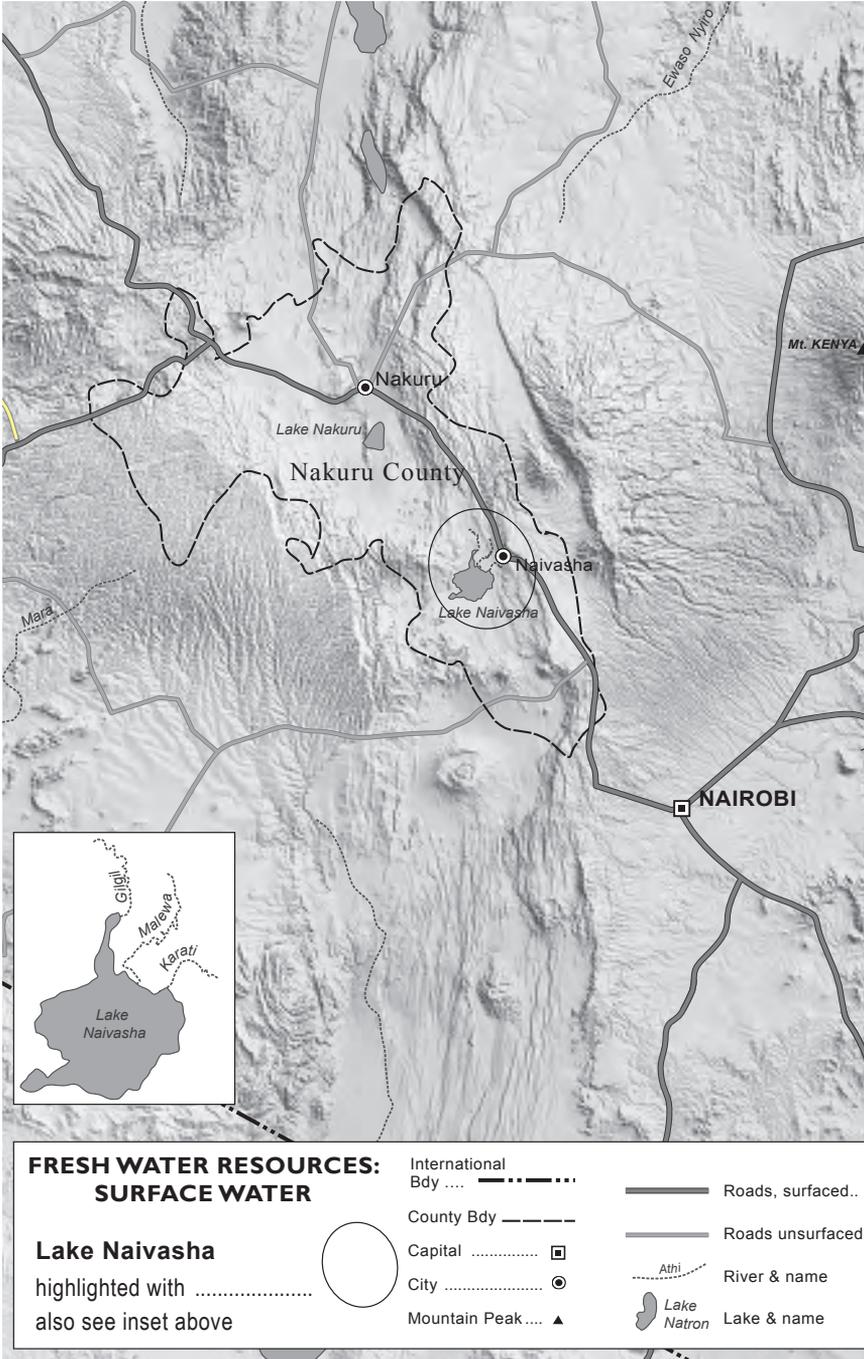
Lake Naivasha is an international conservation area and was declared a Ramsar site (wetland of international importance) in 1995.<sup>18</sup> It is the only freshwater lake in the Kenyan Rift Valley with a catchment area of approximately 3,400 km<sup>2</sup>.<sup>19</sup> It is Kenya's second largest freshwater lake and is located about 80 kilometres northwest of Nairobi, within the Nakuru County. It is surrounded by swamps and while its inflow comes mainly from the Aberdare Mountains, the lake has no outflow (Isyaku et al., 2011). It is fed by two perennial rivers, the Malewa and the Gilgil that contribute 80% and 20% of the total inflow of the lake respectively.<sup>20</sup> There are a range of other ephemeral rivers carrying storm water run-off to the lake. The largest of these is the Karati, which flows for two months

18 Second Ramsar site in Kenya designated on 10 April, 1995.

19 WWF & Pegasys Strategy and Development (2012) p. 6.

20 Ibid.

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of the year and drains the area east of the lake. It only reaches the lake in the high rains. The drainage from the west infiltrates before reaching the lake and there is not much runoff reaching the lake from the south.<sup>21</sup> It estimated that the lake holds approximately 680 Mm<sup>3</sup> of water but this level has fluctuated considerably over time (Otiang'a-Owiti and Oswe, 2007).

The lake supports a wide range of biodiversity and 'a rich ecosystem, with hundreds of bird species, papyrus fringes filled with hippos, riparian grass lands where waterbuck, giraffe, zebra and various antelopes graze, dense patches of riparian acacia forest with buffaloes, bushbuck and other creatures, [and] beautiful swampy areas where waterfowl breed and feed' (Becht et al., 2005). It is also a major source of water supply for both domestic and agricultural activities. Other economic activities sustained by the lake basin are small-scale agriculture, fishing, cattle ranching and grazing, tourism, and generation of geothermal electricity.

The 2009 census estimated the population of the basin to be 650,000 people of which approximately 160,000 lived around the lake itself.<sup>22</sup> Of these, about 50,000 are estimated to be workers on flower and horticultural farms. (Leipold and Morgante, 2013) These people depend on the basin's water resources for their water supply and waste water disposal. These activities have led to various impacts: depletion of basin flows, depletion of groundwater and lake levels due to over-abstraction, deforestation in the upper basin, deterioration of water quality through high nutrient and sediment runoff and pollution from agricultural chemicals and untreated waste, habitat degradation and riparian encroachment, eutrophication, over-fishing, introduction of invasive and alien species, access conflicts, and reduction in biodiversity (Hepworth et al., 2011: 8).

With regard to sanitation, the existing sewerage system, designed between 1974 and 1977 by Sweco Viak of Sweden, was for a population of 17,000 people by 1985 and was expected to be expanded to serve about 43,000 people by 2000. The expansion has not been implemented.<sup>23</sup> The available sanitation services are not equally distributed and the sewerage network is very limited (20% coverage) and is currently overloaded and unable to cope with demand. It does not serve the informal settlements where majority of the flower farm worker population resides. As the population in the Naivasha area increases, immense pressure will be put on

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21 Ibid.

22 Ibid. p. 7.

23 JICA and Ministry of Local Government (2003).

this already inadequate infrastructure. The basin has many large flower and horticulture farms which have attracted many people to the area in search of jobs as will be shown below.

## **2.2 Disparate uses and users of water in the Lake Naivasha Basin**

Lake Naivasha Basin has wetland ecosystems which co-exist with industrial scale intensive farming of cut-flowers and high value vegetables (Hepworth et al., 2011: 23). A rapidly growing population and economy also depend on the basin's water resources for their water supply and wastewater disposal, with other significant water uses including small scale agriculture, tourism and wildlife sectors, cattle ranching and grazing, fisheries and power generation.<sup>24</sup>

### **2.2.1 Export floriculture and horticulture**

Kenya sends more than 450,000 tons of fruit, vegetables and cut flowers to the European Union and United Kingdom each year and the sector remains one of Kenya's top foreign exchange earners. In Lake Naivasha, they occupy a total of 1,900 hectares and 1,200 hectares are grown in greenhouses. Due to its fertile conditions, Lake Naivasha is the heart of the flower industry and is home to at least 44 (60%) horticulture producers that hire approximately 70,000 people (Hepworth et al., 2011: 32).

Cut flowers take a large share of the water footprint<sup>25</sup> related to crop production around Lake Naivasha, contributing about 98% and 41% to the blue water (abstracted water) and total water volume respectively. Cut flowers consume about 16.8 Mm<sup>3</sup>/yr of water during production.<sup>26</sup> Flowers grown in greenhouses are assumed to be fully supplied with irrigation water, while flowers cultivated in the open field get both rainwater and irrigation water. For flowers grown in the open field the blue water component is only 24% of the total water footprint, while for flowers grown in greenhouses the evaporative water consumption is met fully from irrigation water (Mekonnen et al., 2012).

The average water footprint of cut flowers grown around Lake Naivasha is 367m<sup>3</sup>/ton. About 45% (165m<sup>3</sup>/ton) of this water footprint refers to blue water, 22% (79 m<sup>3</sup>/ton) to green water (water evapo-transpired from soil moisture) and 33% (123 m<sup>3</sup>/ton) to grey water, the volume of

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24 Ibid.

25 The water footprint of a product is the estimated volume of water indirectly or directly used to produce it, along its supply chain. See WWF & Pegasys Strategy and Development (2012) p. 22.

26 Mekonnen et al. (2012)

water needed to assimilate the nitrogen fertilizers that enter the water systems due to leaching or run-off.<sup>27</sup> The six big farms; Longonot Horticulture, Delamere, Oserian, Gordon-Miller, Marula Estate and Sher Agencies account for about 56% of the total operational water footprint around Lake Naivasha (lower part of the catchment) and 60% of the blue water footprint related to crop production in the whole basin.<sup>28</sup>

### **2.2.2 Domestic water use**

Farm workers live mainly in informal settlements around the lake and their need for water is mainly for drinking, food preparation, personal sanitation, and domestic hygiene (washing and cleaning) (Heemink, 2005). Though the Constitution of Kenya provides for the right to water and sanitation, according to an annual report by the Water Service Regulatory Board,<sup>29</sup> water connections in Naivasha serve an estimated 13% of the population. The Naivasha basin illustrates the challenge of informality where failure of water sector reforms to deliver water to all residents leads those not covered to look for alternatives through production (boreholes), distribution (reselling, home delivery and vendors) and free water sources (rivers, lakes and wells) (Jaglin, 2002). Flower farm workers living in the informal settlements are not served by the Naivasha Water, Sewerage and Sanitation Company (NAIVAWASSCO), the company responsible for water and sanitation provision in Naivasha. They rely on private, community or shared water supplies including groundwater and gravity fed schemes, with untreated lake water and surface water commonly used as a source for washing and bathing. Outside of urban areas in the basin, domestic water is obtained from untreated surface or shallow groundwater sources. Domestic water use in the basin accounts for 25% of the blue water footprint (Jaglin, 2002).

### **2.2.3 Smallholder agriculture**

It is estimated that around 10,000 small farms occupy an area of 40,000 hectares within the basin and grow mainly maize and vegetables.<sup>30</sup> These farms occupy areas that receive high rainfall; there are about 18,000 ha of farm land in the upper catchment of which only 2% is irrigated. The average water footprint related to the production of these crops over the period 1996-2005 was about 60 Mm<sup>3</sup>/yr (90.7% green water, 0.8% blue

27 Ibid.

28 Ibid.

29 Water Services Regulatory Board (2009).

30 Ibid.

water; 8.5% grey water). (Mekonnen et al., 2012) Smallholders equally contribute vegetables to the export market and whilst commercial farmers dominate the trade, out grower schemes allow smallholders to access the higher value export market.<sup>31</sup> Studies suggest that smallholder production for export markets is growing rapidly.<sup>32</sup> Although rates of return are higher for export, the majority of vegetable production by smallholders in the Naivasha basin is destined for the domestic market.

#### ***2.2.4 Geothermal power generation***

Geothermal power generation wells with capacity of 128 MW are based in Hell's Gate National park about 7 km south of the lake. Beginning in 1982, three geothermal projects now account for 19% of Kenya's power supply. The installations require water supply of 1Mm<sup>3</sup> per year which is obtained from the lake (Hepworth et al., 2011: 36). With Kenya striving to become a low carbon resilient economy and the hard-hitting impacts of climate change affecting rainfall patterns, investments in geothermal power and other renewable sources of energy are bound to increase.

#### ***2.2.5 Tourism and recreation***

Naivasha is a popular destination for national and international tourists. There are approximately 4,000 accommodation beds in the basin catering for a disparate range of visitors with an estimated 5% of Kenya's international tourists passing through the area. It also benefits as a destination for domestic and international conferences and meetings.<sup>33</sup> Water supplies for tourism and recreation are drawn from the lake or private groundwater supplies and although data on sewage treatment is unavailable, it is likely that this is via onsite septic tanks with discharge to the lake or via a soak away. As well as employment opportunities, local communities benefit directly through trade with tourists and provision of tour guides and boat trips on the lake.<sup>34</sup>

#### ***2.2.6 Fishing industry***

Commercial fisheries were established in the 1960s based on introduced black bass and tilapia.<sup>35</sup> The common carp was introduced in the 1990s. The performance of the fisheries has fluctuated due to overfishing and

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31 Ibid.

32 WWF & Pegasys Strategy and Development (2012) p. 13.

33 Ibid p. 36.

34 Ibid.

35 Ibid.

**TABLE 1**

Commercial Farms around the lake		Green WF (1,000 m <sup>3</sup> )	Blue WF (1,000 m <sup>3</sup> )	Total WF (1,000 m <sup>3</sup> )
	Area in (h)			
Flowers	1,911	3,640	31,388	35,028
Export vegetables	1,824	7,887	24,531	24,531
Fodder	665	3,716	16,644	6,910
Total of commercial farms	4,400	15,243	3,194	66,469
			51,226	
Upper catchment	Area in (h)			
Vegetables	6,500	20,181	7,118	27,299
Domestic market	5,720	16,808	-	16,808
Export market	780	3,373	7,118	10,491
Maize	30,000	87,824	-	
Fodder	4,300	24,028	-	24,028
Total	40,800	132,033	7,118	139,151

Source: WWF & Pegasys Strategy and Development (2012)

water level fluctuations. In addition, the introduction of exotic species has also disrupted the lake ecosystem.<sup>36</sup> The lake is also a considerable asset to the fishing community in Naivasha who earn their daily bread by selling the popular tilapia which has been depleting over the years due to interference with its breeding and the emission of toxins into the lake from the flower farms.<sup>37</sup>

### **3. IMPACTS OF DISPARATE WATER USES AND USERS ON LAKE NAIVASHA**

Having analysed the different users and uses of water in the Naivasha basin, it is apparent that the challenges of meeting the needs and managing the impacts of these multiple uses occur against a difficult physical, socio-economic and institutional backdrop.<sup>38</sup> The continued unsustainable utilization of water resources poses hardship to basin stakeholders and if left unchecked these problems threaten the ecological integrity of the basin, the human right to water as well as the reputational and financial impacts for export growers and tourism enterprises.<sup>39</sup> Indeed, there have been reports of threats from the European Union to bar imports of flower and horticultural products from Kenya on account of their carbon footprint and the levels of pesticide residue.<sup>40</sup>

#### **3.1 Economic contribution and water footprint analysis**

The water footprint approach can be used to estimate the indirect and direct water consumption of a catchment area, by summing up the individual water uses of the products and the services that they consume. This concept can then be applied to identify how water flows through the economy of a basin and a country. Its objective is not to just estimate the volume of water embedded in the products of a particular area but to compare how different water uses contribute to economic activity and job creation.<sup>41</sup> An analysis by WWF revealed that the Lake Naivasha basin accounts for 70% of Kenya's cut flower and 20% of vegetable exports, gen-

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36 Ibid. For example, the introduction of Louisiana crayfish in the 1970s for the international market devastated the aquatic vegetation until predation brought some better balance in the 1980s. Also in the 1980s water hyacinth reached the lake forming characteristic dense littoral and floating mats and has since been the focus of control efforts using the hyacinth weevil.

37 KHRC et al. (2008) p. 37.

38 Ibid. p. 28.

39 Ibid.

40 *Business Daily* (n.d.).

41 KHRC et al. (2008) p. 22.

erates at least 10.7% of Kenya's export earnings, and accounts for around 2.1% of national GDP.

The analysis found that flowers generate the greatest income and jobs per volume of water than other activities, though interestingly vegetables grown for domestic markets in the upper catchment brought higher incomes per water used than those for export markets. Relative figures for job creation per water used were not available for vegetable production in the upper catchment though it is likely that significant livelihood benefits and resilience accrue from smallholder farming.

Table 1 illustrates the high level water footprint for the Lake Naivasha basin<sup>42</sup>

### **3.2 Ecological impacts**

The competing uses and users of water in the Naivasha basin have significant adverse effects on the ecology. There are several resulting water related impacts which include: depletion of basin flows, groundwater and lake levels due to over-abstraction and drought; water quality deterioration through high nutrient and sediment run-off and pollution from agricultural chemicals and untreated waste, habitat degradation and riparian encroachment, access conflicts, invasive species and reduction in biodiversity and fishery production.<sup>43</sup>

### **3.3 Impacts on the right to water**

As earlier mentioned, water levels in Lake Naivasha have gone down significantly. The massive use of water for irrigating greenhouses owned by commercial flower farms plays a leading role in depriving a section of local communities one of the few sources of water in a very arid region. In addition, residents face the challenge of lack of clean and safe water as water quality in the region continues to deteriorate through high nutrient and sediment run-off and pollution from agricultural chemicals and untreated waste finding its way to the lake. The right to water as will be seen in the next section is further compounded by land rights that affect water use around the lake. Similarly, the case of flower farm workers in the villages around the lake provides greater insight on the extent to which this basic right is being denied.

### **3.4 Land rights and water use in the Lake Naivasha Basin**

In Kenya, land continues to have an immense social, economic, cultur-

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42 WWF & Pegasys Strategy and Development (2012) p. 23.

43 Ibid.

al and political value. Over the years, dynamic changes in land ownership and use surrounding the lake, and enhanced water resource conflicts between stakeholders have been observed (Everard and Harper, 2002). There appears to be a direct correlation between surface water use, the land tenure system and water resource legislative framework (Heemink, 2005: 4). Water rights are linked to land tenure such that property rights determine access to water resources. In Kenya, one of the requirements for the provision of a water permit is that the applicant must demonstrate ownership of land.<sup>44</sup> Currently, there do not appear to be laws enabling the government to intervene on freehold land or leased freehold land for the purposes of allocating surface water access or use (Onyango et al., 2005).

Flower farm workers who predominantly reside in informal settlements in the basin have no land rights as pointed out above. Their access to water is therefore limited compared to land owners around the lake and in the upper catchment areas who own land. Related to this is the fact that the cost of water in informal settlements<sup>45</sup> around the lake is much higher than for the land owners. Some of the characteristics of informal settlements are prevalent poverty of the inhabitants; and lack of basic municipal services, inclusive of water supply, sanitary sewage, transportation infrastructure, and electricity. Indeed informal settlements are not recognized as inhabited areas in law and policy. Lacking recognition renders them invisible to government entities responsible for planning and service provision, including those providing domestic water supply services (Weru, 2000).

A study conducted in the informal settlements of Naivasha in 2005 revealed that access to surface water is limited because almost all the land along the riparian boundary is privately owned (Heemink, 2005: 87). Access to surface water for residents of informal settlements was limited to five access routes that ranged in distance between 1.25 and 12 km (Heemink, 2005: 88). Similarly, another study conducted by the Kenya Human Rights Commission in relation to sealing off of the corridors that facilitate access to the lake revealed that there is massive encroachment by commercial companies on the riparian land.<sup>46</sup> Sher Agencies (the largest flower farm) is one of the companies that have not only encroached on

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44 Water Act, 2002; Mumma (2005).

45 Nabutola (2004) described informal settlements as human habitats without formal license or lease, and the tenants pay rent to unofficial landlords.

46 KHRC et al. (2008) p. 37.

such land, but have also erected permanent buildings on it. This concern was also raised by the Presidential Commission on Illegal and Irregular Allocation of Public Land.<sup>47</sup> Consequently, there were complaints within the local community about the lack of access by locals to the lake (though there are few public corridors to the lake that are still open). The residents claimed that people who accessed the lake using the grabbed corridors were charged with trespassing and farm owners had erected 'No Trespassing' signs on riparian land claiming that they had negotiated with the colonial government to move their fences towards the lake when the waters rescind.<sup>48</sup>

It is apparent that the informal settlements' residents' right to water is being limited not only through the restriction of access routes to the lake meaning, less amounts of water for them, but also through the physical accessibility of water as they have to travel more than a kilometre to obtain it. The basin users of water for agricultural and commercial purposes (Gitahi, 2005) have grievances relating to their enjoyment of their rights. Those who are private landowners have to ward off trespassers; local communities and others dependent on the lake water for domestic purposes resent private land owners who they consider as having privatized public resources and are unhappy with the favouritism which, they argue, is exercised for the agriculturalists in the basin. Behind these complaints lies the fact that only five out of 16 access roads to the lake remain open;<sup>49</sup> many hotels are also being built which will significantly affect access to water; and corridors previously used by game and cattle to access the lake continue to decrease as land around the lake is privatized. Fishing communities' access to landing sites has also been affected.

There is concern with regard to over-exploitation of the lake's surface water by commercial growers and the continued issuance of water permits to such growers despite acknowledged and growing concern for the sustainability of Lake Naivasha as a water resource. The situation is aggravated by ineffective monitoring of existing water permits concerning the actual versus permitted surface water extraction amounts (Heemink, 2005: 14). The growth of the horticulture and flower industry and associated population increase has also led to concerns about potential water resource conflicts by different water users linked to inequitable land ownership and use based on the current land tenure system, the absence

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47 Commonly known as the 'Ndungu Report'.

48 KHRC et al. (2008) p. 37.

49 Ibid.

of effective enforcement of the water resource legislative framework, and the potential socio-economic divergences between stakeholders relying on the same water resource.<sup>50</sup>

These factors may promote inequitable surface water use, surface water access, distance, and retrieval and transportation methods, and sources of alternative domestic water supplies. This contributes to discrepancies in domestic water consumption such that the basic human water consumption (BWR) needs of residents of informal settlements around the lake at the rate of 50 litres per person per day are not met, whereas commercial farms are consuming domestic water in excess of the BWR.<sup>51</sup>

#### **4. FLOWER FARM WORKERS IN THE LAKE NAIVASHA BASIN**

##### **4.1 The research issue**

The flower and horticulture farms around Lake Naivasha employ 70,000-100,000 people. Like other people around the lake, they depend on the basin's water resources for their water supply and waste-water disposal. Our concern here, however, is with of the villages around the lake, which have sprung up to host the labourers as the farming, hospitality and other commercial activities have intensified. The population of these villages is estimated to be 40,000-50,000 with women comprising 65-75%.<sup>52</sup>

To understand the different users and uses in a smaller area in the basin, the Gender, Human Right and Water Governance research team collected empirical data between 3 and 21 July 2012 covering four villages namely, Karagita; Mirera; Kamere; and Kasarani. Survey questionnaires were administered at household level in all the villages. A total of 242 were completed: 57.9% of the respondents were female, mainly farm workers who are rights' holders. For the duty bearers, a total of ten key informants were interviewed using a key informant guide. These included the local administrators such as the chief, the local community elders, government officers and NGO officials water service providers and flower farms.

The broad aim of the study was to map the different uses of water in the Lake Naivasha Basin with a view to excavating the context within which the human right to water provided for in the Constitution is being implemented in the target villages. The main concerns were gender-equal participation and the realization of the right to water taking into account

50 Ibid. p. 98.

51 Ibid. p. 100.

52 Opondo (2005).

gender roles and vulnerabilities. Key informants drawn from local and national institutions were interviewed and focus group discussions held with women groups, water vendors, water users' associations (WUAs), Water Resource Users' Associations (WRUAs) and youth groups to clarify issues raised in the survey.

The decision to focus on farm workers was made in February 2014 when the interviews revealed that the workers' access to water and sanitation was a burning issue. Additional data was consequently sought through review of available literature and interviews to supplement the information available from the 2012 research.<sup>53</sup> There is a growing population of migrant workers on flower and horticulture farms living in the informal settlements around the lake. They consider Naivasha a place to settle as the area offers work but their homes are in other parts of the country. These migrants do not generally own land in Naivasha and live in rented accommodation in informal settlements. They have very basic water needs for domestic and minimal livelihood use for kitchen gardens and livestock.

Despite being a top foreign exchange earner, the flower and horticulture industry in Kenya has come under massive criticism regarding its impact on workers' livelihoods, environmental sustainability and on the Kenyan economy. Flower farm owners have been accused of human and worker rights' abuses (particularly through low wages that are below the living wage), diminishing Kenya's already scarce water resources (particularly in Lake Naivasha), and water pollution by poisoning water supplies through the dumping and leaking of pesticides and chemicals (Leipold and Morgante, 2013) and this has direct implications on the flower farm workers' right to water.

The flower industry has a much higher proportion of women than other sectors, making women's issues particularly pressing.<sup>54</sup> According to studies conducted in 2012 and 2013,<sup>55</sup> an improvement in flower farm workers' working conditions has been marked since the enactment of the new labour laws,<sup>56</sup> the new Constitution and the influence of accredita-

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53 This latter research focuses generally on the working conditions of flower farm workers, many of whom are women. One limitation of the research is that it did not initially focus directly on flower farm workers.

54 Working Women Worldwide (2008).

55 Kenya Human Rights Commission (2012).

56 Ibid. p. 9.

tion bodies such as EureGAP.<sup>57</sup> Challenges that persist include sexual abuse; limited freedom of association; childcare services; and unfair termination and dismissal. Sexual harassment in the industry is also a major challenge that disproportionately affects women in comparison to their male counterparts. Further, according to a study by the Kenya Human Rights Commission,<sup>58</sup> there is an increase in women-headed households in the cut-flower sector with over 55% of women workers being single mothers with an average of three children. Although some companies have on-site clinics providing limited family planning services based on hormonal methods, the study found work demands to be incompatible with access to reproductive and other promotional healthcare services for majority of the women workers.<sup>59</sup>

Childcare facilities are not available and women have to resort to informal day care facilities based in cramped rooms, which tend to spread of communicable diseases. Moreover, because of the hours of work, women have limited time to care for their children and men do not generally assist.<sup>60</sup> Lastly, whereas companies have adopted the equal pay for equal work principle, practice differs. The study by the Kenya Human Rights Commission revealed that women and men do not earn equally as more men are concentrated in managerial positions; women in management are mainly relegated to lower level supervisory jobs with salaries similar to those of manual labourers.<sup>61</sup> This is compounded by the fact that women are 'time poor' because of their dual roles in the household economy and the labour market. On average women work longer hours (12.9 hours per day) compared with those of men (8.2 hours per day), yet women earn less because these additional hours are not remunerated. Working hours in the cut-flower sector are much higher than the national average with 16-hour days being common during peak seasons.<sup>62</sup>

Within this context, we were concerned with two questions:

- i. Has the right to water and sanitation for domestic use for farm workers in the Lake Naivasha basin been realized?

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57 EurepGAP is a common standard for farm management practice created in the late 1990s by several European supermarket chains and their major suppliers. GAP is an acronym for Good Agricultural Practices.

58 KHRC (2012) p. 10.

59 Ibid. p. 60.

60 Ibid. p. 61.

61 Ibid. p. 11.

62 Ibid. p. 17.

- ii. Is water and sanitation affordable, accessible, sustainable, safe, sufficient and acceptable to the farm worker community?

We sought to answer these questions by focusing on the following themes:

1. Extent of awareness of the constitutional right to water and sanitation
2. Responsibility for ensuring that people enjoy the right to water and sanitation
3. Main uses of water in the community and what should be accorded highest priority
4. Participation in water and sanitation governance
5. Water and sanitation services' provision

#### **4.2 Awareness of the constitutional right to water**

The majority of the rights' holders and duty bearers were aware of the constitutional right to water and sanitation; indeed, local leaders' levels of awareness were remarkably high. At various institutional levels for duty bearers and groups of rights' holders (such as women's groups), there were not only high levels of awareness but clarity on specific provisions of the Constitution – some even quoting the relevant provisions. The high level of awareness of the constitutional provisions on the right to water is attributable to civic education around the referendum leading to the adoption of the Constitution.

#### **4.3 Obligation to fulfill the right to water and sanitation: perceptions**

The rights' holders and duty bearers differed in their perception about who should be responsible for ensuring that people enjoyed their right to water and sanitation. The majority of government officers and NGOs felt that the government, through the ministry responsible for water and irrigation, has the core obligation through institutions mandated to provide these services. These include Water Service Boards (WSBs) and Water Service Providers (WSPs). Residents in the informal settlements, however, did not have high expectations of the government and seemed not to be aware that the government was the main duty bearer. They talked about the role of other players such as NGOs. Further, they were of the view that citizens have a role to play in ensuring that the right to water is realized. These perceptions reflect the reality that community based

organizations (CBOs) and NGOs are the key players in water provision. Respondents perceived government actors, such as the Ministry of Public Health, as playing a significant role through enforcement of the set standards in the provision of water and sanitation. The rights' holders perceived the responsibility of the Water Resources' Management Authority to be that of protecting the water resources against degradation, pollution, and regulating abstraction in order to ensure a continuous flow of water. The majority of farm workers living in the informal settlements blamed the municipal council for their water and sanitation woes, although they felt strongly that individual users have a responsibility for ensuring that their rights were not abused.

WSPs perceived the government's role as that of facilitator. The managing director of NAIVAWASSCO, the main WSP, told us the government should focus on providing the infrastructure and financial support, while the main responsibility for ensuring water a continuous water supply should be left to the WSPs. This feeling was reinforced by a small-scale WSP in the Karagita informal settlement who observed:

*Before, I felt that the government should ensure that people enjoy their right to water and sanitation, but not anymore. The government may not reach the communities at the lowest level and so the private sector (WSPs) should take a more active role at that level. The government should only provide infrastructure and private sector should ensure distribution.*<sup>63</sup>

#### **4.4 Affordability of water for flower farm workers**

The average wages in the flower farm and worker data were negligibly different at KSh5,485 and KSh5,257 respectively. This is below the legal basic minimum wage.<sup>64</sup> The table below, based on worker testimony and data on Kenya living expenses, illustrates the insufficiency of the wages. It shows the monthly breakdown of living expenses for an average worker with two children, one in primary school and one in secondary school. This breakdown clearly illustrates that the amount of money spent on water is well above the recommended 3% of one's household income,<sup>65</sup> and therefore means that water is not affordable for these residents. Monthly expenditure amounts to KSh9,260. Even with the additional KSh1,500 provided as housing allowance, this amount is well above the average

63 Geoffrey Macharia, Water Service Provider.

64 Leipold and Morgante (2013) p.1.

65 Scanlon et al. (2004).

wage earned by flower farm workers. Workers cover the shortfall through loans (usually through workplace co-operatives), their spouse's income, occasional bonuses and second jobs. This leaves a very low savings rate with workers reporting saving on average between KSh200 and KSh500 a month.<sup>66</sup> The clear message is that their wages are low, and do not provide a decent standard of living. As noted above, the direct and indirect costs of water must not compromise or threaten the realization of other Covenant rights<sup>67</sup> and 'appropriate pricing policies – free or low-cost water'<sup>68</sup> should be put in place to ensure that 'poorer households should not be disproportionately burdened with water expenses compared to richer households'.<sup>69</sup>

Water vendors charge high prices for water and delivery services making it difficult for poor urban residents in general to afford water for their daily needs. Cost of water can thus threaten farm workers' enjoyment of the right to livelihood, housing, an adequate standard of living, health and education. There are no pricing policies in the informal water provision networks and the net effect is that the poor pay a lot more for water than rich large water users. On a positive note, however, the entry of the Water and Sanitation for the Urban Poor (WSUP) into the villages has brought down water costs and while residents in Karagita paid KSh5-10 previously, they currently pay between KSh2-3 per 20-litre jerrican. Piped schemes' water would be the most affordable and convenient for the poor but the service is very limited.

There are currently no water strategies in place which focus on water provision for the most vulnerable members of society: this despite both national and international law charging the State with the duty of ensuring that their rights are addressed.<sup>70</sup> The only option the poor have if they cannot pay for water is to collect it from the lake. However, access to the lake is not guaranteed and the water is not safe, as pointed out above. Article 56(e) of the Constitution, which obliges the State to put in place affirmative action programmes to ensure that minorities and marginalized groups have reasonable access to water (among other social services)

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66 Ibid.

67 CESCR (2003), para. 12 (c).

68 Ibid. para. 27 (b).

69 Ibid. para. 26.

70 See General Comment No. 15, para. 18. (Twenty-ninth session, 2002), U.N. Doc. E/C.12/2002/11 (2003), Constitution of Kenya (2010) Article 2 (6) and Article 21 (3)

could provide an entry point for designing such strategies. Further, the Water Bill 2014 has included urban water access as a function of the Water Services' Trust Fund; this will also contribute to availing water for the poor. Tariffs for water services need to be adapted to peoples' economic capacities to ensure that the right to water is guaranteed for poor people living in informal settlements.

**MONTHLY WORKER INCOME AND EXPENSES<sup>71</sup>**

<b>EXPENDITURE</b>	<b>KENYA SHILLINGS</b>
Food	4,000
Primary school expenses	500
Secondary school expenses	2,200
Rent	1,350
Water and electricity	700
Social security	360
KEPAWU membership	150
<b>Total</b>	<b>9,260</b>
Income	5,000
Housing allowance	1,500
<b>Total</b>	<b>6,500</b>

#### **4.5 Access to water and sanitation in flower farm workers' settlements**

The right to water encompasses water for personal and domestic uses.<sup>72</sup> However, our argument in this book is that the right should cover water for livelihood purposes as well.

The main uses of water according to respondents in the target villages confirm available findings: it includes domestic, environmental services, irrigation by large scale farmers mostly for horticulture and floriculture purposes, industry (hotels and factories such as Keroche, hydropower production) and pastoralism. In the villages studied, water is mainly used for domestic purposes (washing, cooking, drinking and bathing). Usage is a critical issue considering the water footprint data above. It also underscores an unstated fact that water use is gendered because of the gender division of labour that ascribes the main uses of water to roles performed by women. The plight of the villages' residents confirms that access, allocation and cost of water hinges on security of tenure to land in Naivasha, with the owners of flower farms around the lake and in the upper catchment having secure tenure and a greater voice in water related

71 Leipold and Morgante (2013).

72 See discussions in chapters 2 and 3.

issues. The information below illustrates that the human right to water for farm workers living in the informal settlements is at the bottom of the water use hierarchy and should be given priority from a human rights perspective. It is noteworthy that water use in three of the four villages researched is for personal and domestic purposes only. Use of water for livelihood (kitchen gardening and watering livestock), which is a concern for many poor and especially women in Kenya, are only observed in one of the target informal settlements.

In Mirera, kitchen gardening, poultry and livestock keeping (zero grazing) are common practices while in Karagita, Kasarani and Kamere, water is primarily used for domestic purposes. This is related to the fact that in Mirera, unlike the other three villages, the residents own their plots and occupy spaces of up to half an acre. A small number of those interviewed across the villages also indicated that they use water as a source of livelihood as water vendors. The absence of use for broader livelihood purposes in the other villages is probably attributable to the fact that most workers in the basin are migrants coming into the area in search of job opportunities linked to the flower and horticulture industry.

#### **4.5.1 Water supply**

The residents in the villages are workers on the farms and other establishments around the lake. The residents in Mirera recorded a higher incidence of plot ownership. Not surprisingly, access to water from individually or communally owned boreholes is better in Mirera than where residents are tenants in Karagita, Kamere and Kasarani. Out of the six boreholes that were identified in Mirera, three are community owned and managed.<sup>73</sup> Some residents own donkey carts that help them obtain water from the water points; others use water transported by vendors. The residents have access to piped water supplied into the yard but the water supply is unreliable due to regular power cuts or blackouts. The water also has high fluoride levels. Many of these residents practice small-scale farming and have dug water pans to collect rain-water for farming and livestock.

In Karagita, most residents are tenants working as casual labourers on the flower farms and in the hospitality industry. Their main sources of water are communal water kiosks installed by the Water and Sanitation for the Urban Poor (WSUP) or private individuals. The water kiosks supply

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73 Munyu Station Borehole, Mirera Water Project Borehole and a new borehole near the AIPCA Rubiri church built by the East African Breweries Limited (EABL) Foundation.

two types of water: defluoridated and non-defluoridated water. Defluoridated water costs KSh3 and non-defluoridated KSh2 per 20 litres. There are still people who get water from water vendors (donkey transported) at KSh5 for 20 litres while a few others collect water directly from the lake.

In Kamere, like in Karagita, most of the residents work in the flower farms. Residents share water and sanitation facilities. The main water supply is from water vendors who transport water from the lake on bicycles. Water vendors take advantage of the fact that there is a shortage of water in the area and charge exorbitantly – up to KSh10 per 20 litres. Some residents have installed large storage tanks and practice rain-water harvesting. Most residents of Kasarani are also casual workers on the flower farms. Their main sources of water are water kiosks supplied by boreholes and direct use of the lake. The boreholes are privately or communally owned and managed.

In some cases, the flower farms have installed and equipped boreholes or taps for use by the community as part of their corporate social responsibility programmes. The Constituency Development Fund (CDF) has also supported the installation of boreholes or storage tanks in some communities. In Kamere for instance, CDF supported the installation of a tank but it was not working at the time the research was carried out. Residents claimed that it had never worked and that even when full of water, it seemed to leak, as the water disappeared.

#### **4.5.2 Sanitation**

Unlike the other three villages, most Mirera residents have good sanitation facilities that are individually owned and used by individual households. This is attributable to the fact that they own the homes they live in and that their plots are large enough to allow for the construction of sanitation facilities for the family. Solid waste disposal however remains a challenge. Residents disposed of solid waste into compost pits where it is regularly burnt. It is never separated and even plastic is burnt posing a health hazard of which the residents are unfortunately unaware.

Toilets and bathrooms in Karagita are shared by an average of ten households which can translate to 30 people per bathroom. In many cases, there are no separate bathrooms and toilets for women and men. Toilets are generally in very poor condition due to lack of routine repairs and maintenance by landlords. There is a public facility in the area that was constructed by the Institute of Environment and Water Management that is available for use at KSh5 per entry. The facility is managed by a

private vendor. Waste is disposed of in pits dug at the corner of the plots where both solid and liquid waste is dumped. These pits are both health hazards and a safety risk to the children who play outside every day.

Toilets and bathrooms in Kamere are in dire need of improvement. The existing toilets are poorly constructed mud slabs with a superstructure made of plastic. Most toilets are rarely emptied. There are some public toilets that are no longer in usable condition. Due to the instability of the soil structure in the area, toilet pits are shallow and fill up quite fast. Many residents use their houses as bathrooms because such facilities were not catered for during building or because they are not in usable condition. Solid waste disposal and drainage systems are also major challenges. Heaps of garbage are strewn all over in open spaces and on roadsides. When it rains, the floods become violent. On some occasions, houses have been swept away. This is because the terrain in Kamere is bare, parched and hilly, and there are no drainage systems.

As in Karagita and Kamere, residents in Kasarani live in plots as tenants and therefore share toilet and bathroom facilities. Most are poorly constructed and maintained. The public facilities are in such a terrible state that they are inaccessible. Heaps of garbage are strewn all over the streets and passages.

#### **4.6 Conclusions regarding water and sanitation services' provision in the Target Villages**

The right to water and sanitation for flower farm workers is less than optimal. Service provision in Mirera, Karagita, Kamere and Kasarani villages has been facilitated with interventions by the communities, NGOs and private sector groups. WSUP's interventions, for instance, have sought to increase coverage for water supply and sanitation services in the study area. Residents have appreciated increased reliability and quality in water service provision.

It is surprising that sanitation still lags behind water supply as the former is estimated at over 70% compared to water at 54% in Kenya. Installation of sanitation facilities in public places, households and schools has increased access. But, as mentioned earlier, these interventions are not evenly distributed. Karagita has greatly benefited from the donor interventions. Other villages are still hoping that some good samaritans will provide support. Other success stories include intervention by the public health officers through enforcement of compliance with the building code. In Kamere, some plots had been closed by the Public Health Office

for lack of sanitation facilities. At the time of the visit, two plots were still without tenants. Residents felt that this was a welcome action since hygiene thereon had been compromised by open defecation.

There are many reasons which have contributed to the noted successes. These include co-operation between players on the water and sanitation challenge and entry of private and individual players into the sector; and the shift from communal water management to private-sector-based management has yielded greater results. Two community water management schemes stalled due to poor governance, lack of skills and endemic conflicts over financial management, disagreements, poor operations and maintenance. Further, interventions by public health officers and community health workers in enforcement have also helped. For example, the closure of those residential plots that lacked sanitation facilities has triggered some behaviour change. Increasingly new plots are providing for sanitation facilities. Co-operation between the private sector, NGOs, government departments, and NAIVAWASSCO has also contributed to the realization of the right to water and sanitation. For example, Water and Sanitation for the Urban Poor (WSUP) and the Institute of Environment and Water have contributed greatly to the water and sanitation sector in Naivasha as elaborated above.

### **5. Realization of the rights to water and sanitation for farm workers**

The realization of the rights to water and sanitation for residents in informal settlements in Naivasha is a long way off. As far as water is concerned, availability, quality, governance, affordability, equity, justice and participation are still issues of concern. With regard to water availability, the demand for water in the area is estimated at 60,000 cubic metres per day by NAIVAWASSCO but only 5,000 cubic metres are produced, yet population growth is very rapid. Regarding quality, high levels of fluoride and the mode of water transportation by vendors remain of key concern to the residents as they affect the quality of the water delivered.

Regarding governance, areas of concern include conflicts over use at different levels as outlined above; vandalism of water supply systems associated with water vendors and community water projects; corruption in governance organs; misappropriation of finances, poor operations and maintenance. Most water and sanitation systems are in disrepair. For example, in Kamere, the cement water tank has been leaking for over three years and no action has been taken to solve this problem.

Unreliable water supply attributable to high costs of power affecting NAIWAWASSCO and other WSPs is also a problem. Additionally, there is inefficient water use and wastage amounting to over 50% unaccounted for water in Naivasha. This is also evidenced by the leaking water storage tank in Kamere.

Regarding affordability, residents in the target informal settlements pay from KSh2-10 for 20 litres of water depending on how they access the water while large scale water users only pay 50cts for 1m<sup>3</sup>. This raises concern among the domestic water users who feel that they are discriminated against and their water needs are not prioritized. The Karagita Water Users Association (KWUA) also stated that the government had done little for them in terms of water provision. They were of the view that the Naivasha water service provider does not do anything to improve water and sanitation access in their area and yet they pay for water. In their words

*NAIWAWASSCO collects money it does not deserve. WSUP laid the pipes, owns the infrastructure and we manage the project. NAIWAWASSCO does not co-operate in the local water development and management activities, but they get the money.*

Access to the lake resources and its management was said to be inequitable on account of the rights to land around the lake as elaborated above. In the words of one respondent,

*It is a show of the mighty. It is like a club, the locals cannot penetrate the lake Naivasha management 'club'. Access to water and the lake resources by the locals is also a challenge. There are many barriers of access, with some corridors for fishermen and pastoralists completely sealed with either a perimeter fence or privatizing of public corridors to the lake.*

Regarding participation, mechanisms for ensuring participation of women and men in sanitation, water supply and resources management at various levels have been put in place through national initiatives such as the Presidential Directive on Affirmative Action discussed in Chapter 3 which has informed the formation of Water Users Associations (WUAs) and Water Resources Users Association (WRUAs).

With regard to Sanitation, the government has established an Inter-agency Co-ordination Committee with sub-thematic committees to address a wide range of issues to do with water and sanitation. In Naivasha, however, meetings about water and sanitation were uncommon

according to respondents, and where there were reports of such, local administration, elders, civil leaders and committee members would be the main attendees. Of the participants, 77.3% and 81.4% stated that they had not participated in water and sanitation meetings in their neighbourhoods. Those who participated stated that they did not contribute to the deliberations for a variety of reasons such as time available for participant contributions; that they were not given an opportunity; that what they would have wanted to say had already been said; or they agreed with what had been discussed and did not see the need to intervene. However, many of the respondents to the survey questionnaire wrote 'Not Applicable' as they had never been invited to the meetings.

The local community plays a key role in water supply management, but less so in sanitation management. In Mirera, a private WSP and water vendors supply water. Karagita WUA is also taking great responsibility in managing the water supply project. They ensure that water is available to the community at all times and that the operations work smoothly. 'We are the eyes of the government and of the people', KWUA members told us. In addition to the WUAs and WRUAs, there are also a number of formal and informal CBOs operating in the area. Most of them are self-help groups that women and their communities form to raise their standards of living. It is noteworthy that women form a substantial membership of the self-help groups. In many cases, these groups have the potential to enhance participation of their members into different development activities including water and sanitation. However, although membership in such organizations is open to everyone, some interested members are constrained by the requirement of a financial contribution. As such, it is not everyone in the community that is able to become a member of a CBO even if they wish to. On a positive note, women participate in and are involved in leadership positions in these groups.

The mode of communication between organizations and local institutions is both formal and informal. Information dissemination on water, sanitation and hygiene is diverse. It is done through posters and flyers, chiefs' *barazas*, word of mouth and seminars. Groups are also key channels of information to the members. Telephones are used but mostly for communicating short message texts like meeting notifications and invitation.

Inadequate and poor quality /types of sanitation facilities are prevalent in the area. Toilets are inadequate and in many cases are also used as bathrooms. Overall there are still many residential plots without usable sani-

tation facilities because they are unhygienic owing to poor maintenance, and because they are rarely emptied. Many people opt for flying toilets<sup>74</sup> when the toilets are not in usable condition. Poor solid waste management is also a common factor in all the villages. Indiscriminate disposal of waste is practiced everywhere. The sewerage network is very limited with about 20% coverage (compare to the estimated national coverage of 77%) and is unable to cope with current demand.

There are no formal methods of solid waste collection and disposal although there was an attempt by a community group to initiate an organized garbage collection system. In Karagita, the disabled group has organized itself in a CBO that deals with household solid waste collect at a cost of KSh300 per household per month. This has only worked in a very limited area because of the unwillingness of many residents to pay for such services and inadequate support from the municipal council. As mentioned earlier, refuse disposal is done in compost pits and or burning.

Drainage is also key challenge: waste water is not addressed in any way. When it rains flooding becomes a major hazard due to the poor drainage. There is also no system for sludge management in all the villages visited. As such, many toilet facilities were found to be full but not evacuated.

## **6. CONCLUSION**

As we have seen water use is gendered because of the gender division of labour that ascribes the main uses of water to roles performed by women. It is apparent that women suffer disproportionately in the struggle to realize their right to water as they have to contend with longer work hours, poorer pay and poor work conditions. In addition, while access to sanitation is deplorable for all residents in the target villages, women are more affected by lack of access to adequate sanitation services because of menstrual hygiene management<sup>75</sup>.

Farm workers still earn wages that are below the legal basic minimum wage. They can barely sustain a decent life let alone afford water for domestic use. Their situation is aggravated because domestic use of water is lowest ranked amid the competing uses of water in the Naivasha basin, a remarkable fact given the high usage of water for agriculture. Accessibility of water for the workers is also a challenge and is affected by land tenure issues, corruption and poor governance. The sustainability of water in Lake Naivasha whose ecology has been adversely affected due

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74 Waste put in plastic bags and thrown out.

75 See Chapter 2

to competing uses and users of water as well as mismanagement. This compounds the right to water for the farm workers as they have to pay higher prices, walk further distances, and contend with conflicts in order to access this precious commodity.

In addition, the water safety is compromised by high levels of fluoride, nutrient and sediment run-off, pollution from agricultural chemicals, and untreated waste, among other factors. Thus residents in the informal settlements are exposed to health hazards. The study concluded that the water needs of those living in the informal settlements around the lake, the majority of whom are women, are not met; whereas commercial farms consume water that should be availed for domestic use, thus raising serious concerns as to equity and justice.

The sanitation facilities in the informal settlements are in a deplorable state. Access to sanitation is affected by land tenure, cost and availability. The right to water and sanitation is essential to human life and dignity. Failing to realize this right relegates people to inadequate living standards: water deprivation is often intrinsic to poverty.<sup>76</sup> Considering the interrelatedness of the rights to water and sanitation with other economic and social rights such as the rights to food, a healthy environment, housing, education, health and social security, their negation has far-reaching implications. Indeed, the realization of this right would have multiple benefits not only for the farm workers but the community as a whole. In realizing the right to water in the Naivasha basin, low wages of the farm workers, environmental concerns, corruption in governance structures, gender disparities, issues of public participation in decision-making as well as access to information will be effectively addressed promoting an equitable and just society. It is our expectation that the Water Bill 2014 which unpacks the constitutional right to water will result in the meaningful realization of the right to water for all Kenyans including flower farm workers in Naivasha.

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76 IWMI (2004)