

*Full Length Research Paper*

# Water utilization and population demography in South Africa: Some ethical and human rights issues

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## Abstract

In addition to being a universal human right, access to sufficient water is a constitutional right in the Republic of South Africa. The Constitutional Bill of Rights gives South African citizens the right to reproductive choices. Globally, population numbers are ever growing and water, being finite continues to be scarcer. The concern over universal access to safe freshwater under these circumstances is a matter that authorities and environmentalists are grappling with. The aim of this study was to interrogate variance in legal and ethical framework relating to the various rights, namely; the right to access to water, the right to reproductive choices. The environmental resource of water in relation to the right to procreate was the basis of this paper. This was a normative study that included a review of the sections of the South African Constitution's Bill of Rights and the specific statutory instruments with relevance to water utilization and population dynamics. The results of this study revealed that the variance embodied in the meaning attached to the rights may lead to disproportionately leaning on the fulfilment of reproductive rights at the expense of the environment. This presents a problem as the Constitution also addresses the right to a healthy environment. It is arguable as to whether it is possible to conserve the environment and at the same time realize human reproductive rights. Rights are critical for the protection of the most vulnerable of our species. The rights given to humans as far as reproduction is concerned as well as the right to a healthy environment are seen to be at odds. What we should strive for is to ensure the quality of human life.

**Keywords:** Bioethics; water; environment; South Africa; population demography; human rights.

## INTRODUCTION

Globally, human population and concurrent consumerism raises the debate concerning the availability of water, goods and foodstuffs (Borlaug, 2004). Above all else, this growth seems to influence and heighten the demand for water. According to System of Environmental-Economic Accounting for Water (SEEAW) (2006), the Earth's water source is composed of 97% seawater and 3% fresh water. However, 87% of the global freshwater is not accessible; that is, 0.4% of global water. Thus as the human population continues to grow, more and more countries are facing water shortages (Falkenmark, 1993). Viewed on an aggregate level, Rijsberman (2004) basing on the year 2000 estimates calculated that the renewable freshwater supply on a global basis was around nine and

fourteen trillion cubic meters and usage at around four trillion cubic meters.

So, it would appear that it is possible for a larger human population to carry on with an adequate supply of fresh water for only a short period. The problem however is that the availability and quality of freshwater are not evenly distributed geographically or temporally throughout the world. To add to this, it is in the most environmentally peripheral regions such as Sub-Saharan Africa and Asia that water access is the lowest (Liberatore & Zilgalvis, 2008). Here it should be mentioned that there are ongoing debates concerning the classification of water when considered from different perspectives for example, it may be viewed as a chemi-

cal substance, or by quality and level or by structural changes. This can sometimes lead to confusion when discussing the topic of water. Therefore this paper used terms generally used to identify a type of water problem: 'water-shortage, water-scarcity, water-stressed & water-security'. *Water shortage* describes an absolute shortage where levels of available water do not meet certain minimum requirements. The problem is that often the actual water quality that defines the minimum may vary from place to place. *Water scarcity* is used, it is as a relative concept describing the relationship between demand for water by the human population and industry and its availability. *Water-stress* relates to the significant consequence of over-sectoral water usage above ten-percent of the supply and is associated with a decline in water quality. Finally, *water security* is a goal that refers to reliable and accessible water supply over time.

In South Africa, it is argued, three major forces influence the availability of freshwater. These are 1) Climate change, 2) Population growth and demographic shifts and 3) Policy concerning the management of water resources (Sun, Tong, Fang & Yang 2013).

*Climate change:* Global climate change is associated with environmental degradation and global warming. Anthropogenic tendencies and activities such as consumerism and wastefulness contribute to climate change. South Africa's population including industrial, domestic, and agricultural users is highly dependent on a reliable supply of water (South African Weather Service (SAWS) 2005). A reduction in rainfall amount or variability, or an increase in evaporation (due to global warming) would further strain the already limited amount of water resources. An increase in rainfall or a reduction in plant water use (due to a higher atmospheric concentration of carbon dioxide) could ease the problem.

*Population dynamics:* Population growth and demographic shifts. A tremendous change occurred with the industrial revolution: whereas it had taken 1800 years for the world population to reach one billion, the second billion was achieved in only 130 years (1930), the third billion in less than 30 years (1959), the fourth billion in 15 years (1974), and the fifth billion in only 13 years (1987). According to the World Population Clock, there are currently over 7.6 Billion people in the world (Worldometers. 2018).

*Water resources:* Water availability as well as scarcity are influenced by demand and wasteful practices leading to over use. It is grappling whether it is possible to sustain such a large world population with our limited resources and the accentuated societal demands driven by development. This is exacerbated by unhygienic practices and over exploitation of finite resources (Grant 2012). The quality of water as a natural resource is adversely affected by pollution from two broad categories namely, point and non-point pollution (Hogan 2010 & World Wildlife Fund 2014).

## DISCUSSION

### Rights in Variance

In South Africa, human rights as well as rights to a healthy environment are enshrined in the Constitution thus implying that the State has a duty and responsibility to ensure that these rights are realized, albeit progressively. The sections of the Constitution of the Republic of South Africa that are particularly of interest to this study are 12(2)(a), 27(1)(a) and 24(a) & (b). These are concerned with human reproductive rights, the right of access to water and the right to a healthy environment respectively. Section 24 (b) in particular deals with the integrity of the environment and biodiversity, thus paragraphs 24(b)(i) & (ii) have ecocentric implications (South African 1996). However, sustainable delivery of safe water together with protection of the natural resources requires planned strategy to counter the challenges and threats (United Nations UN-Water/Africa (Agency) et al 2009).

### The right to make one's own decisions concerning reproduction and the right to access reproductive health

First, we will be obliged to accept that the right to make decisions concerning reproduction equals the right to procreate (or not). In the context of this discussion concerning disadvantages of the human population growth to the environment, we will also have to narrow this again to the right to procreate. If we accept this right, should it follow that there is a right to produce as many children as one desires? This question is raised because it is argued that it is an infringement on one's liberty if their number of offspring is limited (Bayles 1976). After all, article 16 of the United Nations Universal Declaration of Human Rights (1948) supports this, giving each individual the right to reproduce and self-determination concerning family size (United Nations Declaration of Human Rights. 1948).

### The right to access sufficient water

Historically, water issues have been associated with the contentious legal approach of ownership in addition to rights relating to its use. Over the last 100 years, the legal status of water in South Africa has evolved with along with law and judicial reforms. Previously, the emphasis was put on the distinction between privately and publicly owned water; the former belonging to the landlord and the latter to the state according to to the 1912 Water Conservation Act (South Africa 1912). Under the new Constitutional order, this has changed as water belongs to all the people of the nation since it is a natural resource in accordance with the National Water Act 38 of 1998 (South Africa 1998; Pienaar & van der Schyff 2007).

South Africa is the only country in the world where the right of access to sufficient water is enshrined in its

Constitution. Section 27(1)(b) of the Constitution states that everyone has the right to have access to sufficient water. Section 27(2) requires the State to take reasonable legislative and other measures, within its available resources, to achieve the progressive realization of this right. Also, the South African Constitution provides for 'an environment that is not harmful to health and well-being.'

This right is fulfilled by the duty of government to provide for the minimum standards that define a non-harmful environment by way of legalization.

This obligation is mandated by the Department of Water Affairs and Forestry which recommends provision of enough water, defined as basic water supply as follows: 25 litres per person per day or 6000 litres per household per month (South Africa 1997). This is derived from the right as provided for by the Constitution of the Republic of South Africa: Section 27(1)(b) of the Constitution states that everyone has the right to have access to sufficient water. Moreover, item 7 of the Millennium Development Goals aimed at improving access to safe drinking water was probably the only one whose target was realised in the whole of sub-Saharan Africa (Nyalugwe K. 2017).

Water is essential for all forms of life and health of humankind – but water is finite. It is probably impossible to realize the various water rights in light of ever-increasing population sizes and yet still be able to protect the environment. Also, given that the Constitution is the supreme law in the country, it can be argued that the unalienable human rights enshrined therein should always take precedence over any concerns for the environment. Since access to water is a basic right as enshrined in the Constitution, it implies that the state has an obligation to avail all its citizens with access to water irrespective of where they live or their ability to pay for the service. Based on this, it is conceivable that individuals could take legal action against the state if water access is denied. According to Section 1 of the Water Services Act 108 of 1997, basic water supply is defined as; 'the prescribed minimum standard of water supply service necessary for the supply of sufficient quantity and quality of water to households, including informal households, to support life and personal hygiene.'

This was tested in a landmark ruling in 2006 in a court of law in South Africa in which it was determined that inability to pay is not a good enough reason to disconnect someone's water supply. In its ruling, the court determined that every household must be provided with a minimum of 50 litres of water per day, (increased from the earlier ruling of 25 litres) even if they cannot afford it (Conteh & Khalfan 2008).

### **Ethics and the environment**

Ethical issues regarding environmental matters are most often punctuated with and hijacked by political concerns of the different parties involved in the affairs of their

respective nations yet inability to address these issues in their entirety may put lives at risk. Resolutions that are aimed at protecting the environment in many cases wind up reflecting anthropocentric interests rather than those that benefit the environment in itself. For example, even when attempts are made towards conserving the environment, still the efforts are hijacked solely for the sake of human beings. Let us consider section 24(b) of the constitution of the Republic of South Africa for instance, which says that; 'Everyone has the right to have the environment protected for the benefit of the present and future generation.....' This does not spell the eco-centric spirit of environmental protection but rather, that the envisaged conservation is for the good of humans (anthropocentric approach). Another good example is the Rio Declaration in which anthropocentric interests overtook the concerns of conserving the environment, yet the conference was dubbed the Earth Summit. Rolston III (2003), argues that it seems to be a common practice for 'humans to act in their self-interest; and they will do so to the degradation of the environment—unless environmental policy gives them incentive otherwise.' Issues of environmental concern such as ecological sustainability and sustainable development contain some ambiguities that need to be resolved (Cairns 2004).

The majority of the arguments in the rights-responsibility arena concern the intra-agency of human responsibility and value. In the context of the responsibility not to procreate under certain circumstances, Wellman writes, '... There is probably the duty not to procreate when one knows or ought to know that one is unwilling or unable to rear, or arrange for others to rear, one's child adequately.' What he refers to are proper human factors such as care and concern, food, shelter, clothing and education (Wellman 2005). However, what may also be considered is that a child should live in a physical environment conducive to positive growth, from e.g. protection from pollutants and assurance of fresh water, to the chance to enjoy the beauty of the environment. In this regard, Viski (2008) asks a question: 'if the right to avoid starvation is a human right, who exactly is bound to provide nourishment for countless hungry mouths?' This is a complex question and from the perspective of Raz (1988), one need not dismiss certain rights as claims. Rather, the reflection associated with interrogating the question should lead to an understanding of who is bound to fulfil the duties that certain rights entail. Moreover, the rights claim should be viewed in a cultural, socio-political, environmental context. It is proposed that the implications of a right ... 'and the duties it grounds, depend on additional premises and these cannot in principle be wholly determined in advance. This observation, particularly in the context of an unknown future, grounds rights and responsibilities in a particular time and place. For example, ideas about what is right and good have always had a time and place dimension.'

Thus it can be argued that rights can be described as dynamic. Importantly, if rights are by definition dynamic, the term 'universal rights' would be inconsistent with this definition. Rights cannot be universal and vibrant, or universal and prone to future uncertainties, or universal and influenced by circumstance.

## CONCLUSION

The South African government can reverse the trend in water degradation and the pending scarcity by among others promoting the advantages of having smaller families, stopping wastefulness and reviewing the relevant laws in the context of the environmental crisis we face today. Education concerning the value of nature should be a requisite for all human beings.

It is important that all human beings are made aware that we do not exist alone as a species. Rather we are all a part of larger networks of living things and all that exists is connected albeit in different ways. Population issues are not only demographic. They also involve economics, the environment, politics, laws, policies and values. Rights are essential for the protection of the most vulnerable of our species. However, the insistence of separating human rights from environmental reality is, I suggest risky. The rights given to humans as far as reproduction goes and the right to a healthy environment are at variance. What we should strive for is to ensure the quality of human life and to be knowledgeable about what it means to take part in existence that is good for both humans and nature. We should strive for an enlightened anthropocentric view and have the foresight to realize that not all of our rights can be realized. We should recognise that we are bound up in the lives of other living things, dependent for our survival on our environment, and also realize that we are all connected in Earth's complex systems.

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## COMPETING INTERESTS

The author declares that there are no conflicting interests.

## REFERENCES

Borlaug, NE. 2004. Perspectives in world food and agriculture 2004. In: C. G Scanes & J. A. Miranowski, (eds). Feeding a world of 10 billion people: our 21st

century challenge. Des Moines: Iowa State University Press.

System of Environmental-Economic Accounting for Water (SEEA). 2006. Integrated water resources management. NY: Workshop Notes.

Falkenmark, M. 1993. Water scarcity: Time for realism. *Populi*, 20(6): 11-12.

Rijsberman, F. 2004. The Water Challenge. Copenhagen Consensus Challenge Paper. Environmental Assessment Institute. (Accessed April 2008) Available from: <http://www.copenhagenconsensus.com>.

Liberatore, A. & Zilgalvis, P. 2008. Water, conflicts and human rights: some reflections. (European Union Governance and Ethics Directorate General). Brussels: The EU.

Sun Y, Tong STY, Fang M, Yang YJ. Exploring the effects of population growth on future land use change in the Las Vegas Wash watershed: An integrated approach of geospatial modelling and analytics. *Environment Developmental Sustainability*. 2013; 15(6)1495–1515.

South African Weather Service (SAWS) 2005. Climate Change. (Accessed May 2009). Available from:

<http://www.weathersa.co.za/References/Climchange.jsp>

Worldometers. 2018. World Current World Population. Accessed 16 August 2017.

Available from: <http://www.worldometers.info/world-population/>

Grant, S. 2012. Botswana and its national heritage. Gaborone: Unknown publisher.

Hogan MC. Water pollution. Encyclopedia of Earth, Topic ed. Mark McGinley, ed., in chief Cleveland, National Council on Science and the Environment, Washington DC. 2010:

World Wildlife Fund. 2014. Farming pollution. Accessed 26 January 2015. Available from: <http://www.panda.org>

South African. Constitution of the Republic of South Africa No 108 of 1996.

United Nations., UN-Water/Africa (Agency), United Nations., African Union., & African Development Bank. (2009). *The Africa Water Vision for 2025: Equitable and sustainable use of water for socioeconomic development*. Addis Ababa: Economic Commission for Africa. Bayles, M. Limits on the right to procreate. In: Ethics and Population. M. Bayles (ed.) Cambridge MA: Schenkman Publishers, 1976: 41-55

United Nations Declaration of Human Rights. 1948. The Universal Declaration of Human Rights. General Assembly of the United Nations. Accessed 20 April 2007. Available from:

[www.un.org/en/documents/udhr/.htm](http://www.un.org/en/documents/udhr/.htm)

South Africa. Water conservation Act No. of 1912.

South Africa. National Water Act No. 36 of 1998.

Pienaar, G.J. & van der Schyff, E. 2007. The Reform of Water Rights in South Africa. Law, Environment and

- Development Journal. Accessed Jan 2016). Available from: <http://www.leadjournal.org/content/07179.pdf>
- South Africa. Water Services Act of 1997. Regulations Relating to Compulsory National Standards and Measures to Conserve Water. Government Gazette No 7079, 2001. (Published under Government Notice No. 22355)
- Nyalugwe K. 2017. Policy Framework on Africa wastewater management and sanitation provision. *Africa water vision 2025*. Addis Ababa
- South Africa. Water Services Act 108 of 1997.
- Conteh, S and Khalfan, A. 2008. Analysis of the Judgment of the High Court of South Africa in the pre-paid water meter case. Summary of Judgment delivered 30/4/2008. Accessed June 2009. Available from: <http://www.cohre.org/store/attachments/RWP%20%20PHIRI%20CASE%20ANALYSIS%20%20May%2008.pdf>
- Rolston III, H. Environmental Ethics. In Nicholas Bunnin and E. P. Tsui-James, eds., *The Blackwell Companion to Philosophy*, 2nd ed. Oxford: Blackwell Publishing, 2003: 517-530.
- Cairns, J. Jr. Sustainability Ethics. *World Population Growth and Migration. Mankind Quarterly*, 2004;45 (2) 169-194.
- Wellman, C. 2005. *Medical Law and Moral Rights*. Netherlands: Springer.
- Viski A. 2008. Joseph Raz: Legal Theory and Human Rights. Accessed June 2008. Available from: <http://andreaviski.blogspot.com/2008/04/josephraz-legal-theory-andhuman.html>
- Raz J. 1988. *The Morality of Freedom*. Oxford: Oxford University Press.