



'Green' Features of Recent Water Law Reform in Eritrea: A Brief Appraisal

Zerisenay Habtezion*

Introduction

It is estimated that over 300 million people in Africa face water scarcity conditions.¹ A diversity of environmental and non-environmental stressors continues to plague the water sector and this has triggered regulatory reforms of the sector in many countries. *'As water becomes an increasingly scarce resource, threatened both qualitatively and quantitatively, many states are moving faster in the direction of adopting water resources legislation to address in detail the vast array of issues facing or emerging in the water sector.'*² A particularly notable feature in emerging water reform legislation is the move towards the inclusion of more environmentally-conscious provisions in water laws; a move referred to as the 'greening' of water

* Research fellow, Du Bois Institute, Harvard University. The Author has taught at the University of Asmara, Eritrea, and was involved in the drafting of the Eritrean Water Proclamation No. 162/2010. Email: zhabtez@fas.harvard.edu.

¹ African Union, *AA/NEPAD African Action Plan 2010-2015: Advancing Regional and Continental Integration in Africa* (2009) available at <http://www.oecd.org/dataoecd/27/32/44326734.pdf> visited November 20 2010, at 21.

² Bradlow et al, *Regulatory Frameworks for Water Resources Management: A Comparative Study* (2006) World Bank, Law, Justice and Development Series, at iii.

laws.³ This report looks into water reform efforts being introduced in Eritrea, namely the *Eritrean Water Proclamation* No. 162/2010, with accent on the 'green' aspects of the new legislation. The report provides a brief account of the new *Proclamation* and an appraisal of the environmentally conscious features of the law.

Water Resources and Stressors

No complete study exists regarding water resources in Eritrea. Yet, existing baseline research testifies to the fact that water is a scarce resource in Eritrea. There are three main drainage systems. There is only one perennial river – the *Setit* River – and all other rivers are seasonal and are dry all year long, except for the rainy season. There are no significant freshwater natural fresh water bodies, although there exist sporadic artificially dammed water bodies. The principal source of water in the country is groundwater tapped in different pockets of the country.⁴

The country's water sector has long been saddled with diverse stressors. A part of the Sahelian Africa, Eritrea is not blessed with rich surface and groundwater resources. In addition to physiographical mishaps, other water resources stressors in the country include increasing urbanization, population growth, land degradation, misuse, leakage, and inefficient agricultural and industrial practices and potential impacts of climate change. Pollution of the country's skimpy water resources is also a cause of concern.⁵ Further, legislative voids have exasperated the problem.⁶

³ S. Burch, 'The Interface Between Customary and Statutory Water Rights – A Statutory Perspective' (2005) Unpublished Paper presented at the International Workshop on African Water laws: Plural Legislative, 26-28 January 2005 at 5.

⁴ GoE, *Macro-Policy*, November 1994, at 40-44.

⁵ *Ibid*, at 44.

⁶ See further: GoE-MoA, *National Action Plan Programme for Eritrea to Combat Desertification and Mitigate the Effects of Drought* (2002) available at <http://www.unccd.int/actionprogrammes/africa/national/2002/eritrea-eng.pdf>.

Regulatory Voids

There is some groundwork in the national constitution, policy and sectoral planning tools for sound regulation of water resources in Eritrea.

The *Eritrean Constitution* provides that the state has the onus of 'managing all land, water, air and natural resources and for insuring their management in a balanced and sustainable manner; and for creating the right conditions to secure the participation of the people in safeguarding the environment'.⁷ This constitutional construct plausibly mandates the state to put in place regulatory framework aimed at, *inter alia*, the sustainable use and conservation of water resources. Moreover, there have been scanty provisions in the *Transitional Civil Code of Eritrea* as well as sectoral legislation that govern some facets of the water sector. These laws have, however, tended to lay more emphasis on water utilization. Conservation, development and protection of water bodies were not accorded due treatment.

The nonexistence of comprehensive legislation on the water sector notwithstanding, there have been a few policy tools providing some form of guidance on water resources management in Eritrea. These include the *Eritrean Macro-Policy*, *National Environmental Management Plan for Eritrea (NEMP-E)*, *The National Action Plan Programme for Eritrea to Combat Desertification and Mitigate the Effects of Draught*, *National Environmental Assessment Procedures Guidelines (NEAPG)*; other sectoral environmental impact assessment (*EIA*) guidelines. All of these instruments have one thing in common - they all acknowledge the problem of scarcity of water in the country and they proclaim that judicious use of the resource is imperative. These instruments have, however, been very fragmented and, at times, conflicting. Besides, for whatever they are worth, they have largely been ignored. Another major problem emanating from these diverse sectoral policy enunciations is that they have promoted lack of integration and coordination on water resources management.⁸

⁷ GoE, *The Eritrean Constitution* (2007).

⁸ Consultancy on Technology, Marine, Resources and Environment, *Regulatory Framework for Water Resource Management in Eritrea* (2007) Consultancy Report prepared by SMAP Consultancy. The Report contains several annexures, including: *Draft Water Proclamation*;

The Legal Response: Proclamation No. 162/2010

Issued on 23 August 2010, the new *Eritrean Water Proclamation* contains 35 articles, distributed in 7 chapters and 16 pages. It is the first major attempt at serious regulation of the water sector and only the second major legislation geared towards conservation of the country's plummeting natural resources, next to the *Forestry and Wildlife Conservation and Development Proclamation*, No 115/2006.

The Preamble of the *Proclamation* acknowledges the fact that water is a scarce resource in the country; the need for comprehensive regulation of the water sector; and the importance of 'integrated planning and coordinated development strategy and practice, as well as conscious public participation' to ensure 'effective and sustainable management, conservation and utilization of water resources' in the country.

Among the stated objectives of the *Proclamation* is 'conservation and protection from pollution and related risk factors of the country's water resources'; 'promotion of integrated water resources management and development' and the 'establishment of pertinent legal framework and institutions with clear mandate in consonance with the principles of integrated water resource management' (article 3).

Among other things, the *Proclamation* declares all water resources 'public property' of the people of Eritrea (article 4), while simultaneously establishing a regime of permits for use of same (articles 5-7); creates a system of water resources planning by mandating inventory of water resources and national water resources master plan (articles 12-13); introduces novel provisions on pollution prevention (article 14) and water quality control (articles 16-17); lays out a framework for water pricing (article 19); and empowers the Ministry of Land, Water and Environment (MLWE) to implement the *Proclamation* (articles 10-11).

Water Commission Proclamation; Draft Waste Water Permits Regulations; and Draft Water Use Permits Regulations.

'Green' Features in the *Eritrean Water Proclamation*

Permitting Regime

The *Proclamation* puts forth general requirements for water and waste water use and discharge through a permitting regime. A permit shall now be required for the use and development of water resources, including surface and groundwater exploitation and use for municipal, industrial and agricultural purposes (article 6(1)); and the construction and operation of any kind of water related works (article 6(1)(c)). While the *Proclamation* does not detail the requirements and process associated with permits, it does provide general guidelines for potential permit-holders. Accordingly, a permit-holder: '(1) may not engage in actions that alter flow rate, quality, quantity of water without authorization; (2) may not utilize the water for any other purposes, and/or in any volume exceeding, than is allowable by the permit; (3) may not cause or allow any water to be polluted; (4) shall take precautions not to cause damage to the source from which water is taken, or to which water is discharged after use; (5) shall take precautions to ensure that no activities on the land where water is used results in the accumulation of any substance which may render water less fit; (6) shall observe conditions prescribed by regulations issued under this *Proclamation*; and (7) shall observe any special condition that may attach to the permit' (article 9).

The provisions noted above are noteworthy not only by virtue of the fact that they target water pollution and safe discharge of used water, but also in that they address the other major water resource stressor (*i.e.* misuse). It is expected that the guidelines under article 9 will further be enunciated by future regulations promulgated under articles 6(7) and 33(8). The success of the permitting regime will arguably hinge on its application to other government agencies and the Eritrean defense forces in particular. The latter have thus far been responsible for the bulk of the development activities in the country, including building of water works (e.g. dams), infrastructure, major industries and commercial agriculture.

Environmental Impact Assessment

The *Proclamation* provides that issuance of permits for water use is contingent on prior submission of an EIA (article 8) This is a fairly elastic stipulation and its significance will only be understood within the larger context of existing normative regime on EIA and current practice in Eritrea.

In 1997, the government issued the *National Environmental Assessment Procedures and Guidelines*⁹ (*NEAPG*) for the first time with the view to protecting the environment by integrating environmental considerations into national development processes. *NEAPG* puts water and water-related projects into Category 'A' and 'B' projects. Activities of storage dams with surface area of more than 0.5 km diversions of river base flows and geothermal activities are categorized as Category 'A' projects while construction of storage dams with surface area of less than 0.5 km sq., diversion of river flood flows, flood-control schemes and drilling for the purpose of utilizing groundwater resources fall within Category 'B' projects. Category 'A' projects ordinarily warrant full EIA while the EIA requirements for Category B projects are less stringent. It is to be noted also that a project ordinarily falling within Category B, can be environmentally screened as Category 'A' project if it lies in an area which is designated as an 'environmentally sensitive area' by the *NEMPG*. The following areas are considered as sensitive areas as concerns the water sector: any areas which already serve important water supply functions for domestic or agricultural use; any permanent or seasonal water bodies used for domestic or agricultural water supply; and, all major perennial and seasonal rivers.¹⁰

Besides the *NEMPG*, there are also sectoral EIA requiring guidelines that are tangentially relevant for the water sector. Two are noteworthy for purposes of this paper: the *Environmental and Social Impact Management Guidelines for Road*

⁹ GoE, *The National Environmental Assessment Procedures and Guidelines* (1997).

¹⁰ *Ibid*, at 66-67.

*Operations*¹¹ (*EESIAGRO*) and *Draft Environmental Assessment Procedures and Guidelines for Agricultural Projects*¹² (*DEAPGAP*).

EESIAGRO identifies the potential impact of road operations on water resource. Groundwater draw down, diversion of water courses and disruption of irrigation water supplies are some of the recognized ecological impacts of road operations. Similar to the *NEMPG*, *EESIAGRO* provides detailed EIA schemes in all phases of road operations. Detail notwithstanding, the guidelines in *EESIAGRO* lack the force of law and their application is entirely consensual.

Relatedly, *DEAPGAP* treats 'large scale agricultural development projects', 'large scale irrigated crop production', 'construction of big dams; diversion structures and digging wells for irrigation development', and 'irrigation schemes using untreated waste water' as 'Category A' projects; 'medium scale agricultural development projects', 'medium scale irrigation schemes', 'large and medium scale drip irrigation projects', 'digging of wells and boreholes as watering points for livestock' as 'Category B' projects; and 'small scale agricultural development projects', 'small scale irrigation schemes' and 'medium scale drip irrigation projects' as 'Category C' projects. *DEAPGAP* also recognize environmentally sensitive areas and, to this effect, cross reference is made to *NEAPG*, which means that if an agricultural project ordinarily falling in a given category is sited in an environmentally sensitive area, according to *NEAPG*, it would be treated as project falling into a superior category.

DEAPGAP is an important planning tool in addressing the pollution and/or misuse of water resources. Yet, there are points where *DEAPGAP* is divergent from the new water legislation. To illustrate, *DEAPGAP* treats 'irrigation schemes using untreated waste water' as 'Category A' projects while this is not the case under the *Proclamation*.

¹¹ GoE-MoPW, *Environmental and Social Impact Management Guidelines for Road Operations* (2003).

¹² GoE-MoA, *Draft Environmental Assessment Procedures and Guidelines for Agricultural Projects* (2005).

Coming back to the EIA requirement set out under article 8 of the *Proclamation* itself, it is unclear whether the EIA regime contemplated for the water sector would be subservient to *NEAPG* and/or override the sectoral EIAs dealt with above. The modalities for application of EIA for the water sector should arguably be fleshed out by future regulations promulgated by the MLWE and serious effort made in adopting a sound national EIA regime. In the same vein, any meaningful EIA regime needs to seriously regulate development projects initiated by different government agencies, including those by the military. As it stands, the national as well as sectoral EIA guidelines have no regulatory teeth and thus far only projects funded by international organizations such as the World Bank have been seriously subjected to the EIA requirement.¹³

Pollution Prevention and Abatement

The *Proclamation* devotes a full chapter to water pollution and abatement. Article 14(1) stipulates that '(t)he water resources and related ecosystem of the country shall be protected against pollution...'. Furthermore, article 15 provides a direct prohibition against pollution. Accordingly, '(n)o person may intentionally and/or negligently pollute or contaminate water resources by direct or indirect means' (article 15(1)). In the same vein, the *Proclamation* also empowers the MLWE to set standards and prescribe guidelines for water quality (article 16) and wastewater quality (article 17).

Whereas the above stipulations in favor of pollution prevention are creditworthy, more could have been done. For one, a specific provision on aquifers would have been appropriate, given the fact that this is the principal source of water resources in the country and there are looming concerns over safety of groundwater resources in the country, in light of proliferation of mining projects in the country. In the *Draft Water Proclamation* (2007), there was a provision stating that 'stringent regulations' may be put in place protecting 'groundwater resources in general and fossil aquifers in particular'.¹⁴ Another apparent omission made in the *Proclamation* is the fact that

¹³ K. Tesfagabir, 'Gaps in the Law and Practice of Environmental Impact Assessments: Case Study of the *Warsay-Yikallo* Campaign' Unpublished Paper (May 2005), University of Asmara, at 80-101.

¹⁴ Consultancy on Technology, Marine, Resources and Environment, *Regulatory Framework for Water Resource Management in Eritrea* (2007) Consultancy Report prepared by SMAP

article 15 has taken a rather more restrained stance on the role of inspectors in policing discharge of waste or any pollutants into water, by direct or indirect means. Although the *Proclamation* empowers inspectors to enter private land, it adds 'provided no rights of privacy are violated'. The *Draft Water Proclamation* (2007) did state that inspectors may, in *exigent circumstances*, 'take such measures as may be necessary, including entry to land, without court warrant, to ensure compliance with the provisions of the proclamation'.¹⁵ Furthermore, article 30 states that any person convicted of an offence under the *Proclamation* 'shall be punished in accordance with the penal code of Eritrea'. Article 506 of the *Transitional Penal Code of Eritrea*¹⁶ (*TPCE*) states that '(1) A person who intentionally and without lawful excuse contaminates by means of substances harmful to health drinking water serving the needs of man or beast, is punishable, the extent of the damage, with fine or with simple imprisonment for not less than one month or in more serious cases, with rigorous imprisonment not exceeding five years'. In cases of intentional poisoning of wells or cisterns, springs, waterholes, rivers or lakes rigorous imprisonment shall not exceed fifteen years.¹⁷ Obviously the scenarios contemplated in the *TPCE* fall short of covering most situations in which the *Proclamation* could be violated and the *Proclamation* should ideally have prescribed specific offences. This is arguably one of the most conspicuous failings of the *Proclamation*. The *TPCE* dates back to 1957. It will accordingly be difficult to use the Code in prosecuting the manifold violations that could arise in the context of implementing the *Proclamation*.

Returning to article 14(1), which states that '(t)he water resources and related ecosystem of the country shall be protected against pollution...', it is noteworthy that the *Proclamation* does seek to protect both water resources and *water related ecosystems*. Bringing water related ecosystems within the purview of the *Proclamation* signifies a progressive approach to water resource regulation. Relatedly, the *Proclamation* also empowers the MLWE to delimit the boundaries of banks of water bodies (article 14(2)(a)); prohibit clearing, cutting trees or vegetation and construction of buildings and structures, within the delimited water bodies (article

Consultancy. The Report contains several annexes, including: *Draft Water Proclamation*; *Water Commission Proclamation*; *Draft Waste Water Permits Regulations*; and *Draft Water Use Permits Regulations*.

¹⁵ Ibid.

¹⁶ GoE, *Transitional Penal Code of Eritrea* (1957).

¹⁷ *Supra*, article 506(2).

14(2)(b)); and if the environmental sustainability of a given water resource so requires, declare it as off-limits for agricultural and industrial use (article 14(2)(c))'. These provisions are noteworthy. It will, however, remain to be seen whether these ambitious enunciations geared toward the regulation of water-related ecosystems as well as prohibitions of construction, agricultural and industrial activities near delimited bodies will be enforced with discipline, given the competing sectoral powers of enforcement provided to the MLWE (articles 10-11) as well as other sectoral agencies, especially the Ministry of Agriculture. It is instructive to note that the *Draft Water Resources Proclamation (2007)*¹⁸ had provided for the constitution of an independent water commission (with commissioner to be appointed by none less than the head of state) to be composed of inter-ministerial board, to ensure more integration and coordination, among different government bodies. With the MLWE's entrusted with jurisdiction that extends beyond water resources and bodies could potentially offer the fodder for inter-ministerial grudges, undermining the new water law. The *Proclamation* does empower the MLWE to monitor its implementation (articles 10-11) and pursuant to article 34, any laws or directives that are inconsistent with the *Proclamation* shall be null and void. The literal meaning of these two provisions read together would lead to the conclusion that all water-related provisions in other sectoral legislation would now be replaced with the new water law. The situation is, however, more complicated than meets the eye.

The Ministry of Mines and Energy is currently empowered to regulate some aspects water resources as pertains to their respective mandates.¹⁹ Likewise, the Ministry of Agriculture is also mandated, among other things, to oversee forestry resources and activities, including riverside forests.²⁰

¹⁸ Supra note 14.

¹⁹ See in this regard: GoE, Legal Notice No. 45/2000, *Revised Regulations on Petroleum Operations* (2000); GoE, Proclamation No.108/ 2000, *A Revised Proclamation to Govern Petroleum Operations* (2000); GoE, Proclamation No.68/1995, *Proclamation to Promote the Development of Mineral Resources*; and GoE, Legal Notice No. 19/1995, *Regulations on Mining Operations* (1995).

²⁰ GoE, *The Wildlife and Forestry Development and Conservation Proclamation* No. 155/2006.

Water Resources Planning

The *Proclamation* introduces some novel nuts and bolts for water planning and policy. Article 12 deals with inventories and the need for establishment of a database on water resources for the country while article 13 provides for the national water resources master plan. Accordingly, systematic studies are to be conducted, among other things, on ‘assessing water pollution or contamination levels and tracing sources of pollution and contamination and possible treatment methods’ (article 12(1)(e)) These studies along with ‘surface and subsurface hydrologic investigations (article 12(1)(e)) will contribute to a national water resources database which shall be established and kept under constant review and be updated, as necessary. Similarly, the national water resources master plan, which shall be prepared under the *Proclamation* envisages long term process by which, among other things, the water resource potential of the country’s river basins are evaluated and the economic and social benefits of same evaluated. Finally, the *Proclamation* mandates an integrated water resource management approach in the implementation of the master plan (article 13(3)).

Needless to say, these planning tools will help enhance the country’s ability to methodically understand the water resource situation in the country and promote the sustainable utilization and conservation of the resource. It is to be noted, however, that article 12 and 13 of the *Proclamation* are a watered down version of the original draft. The earlier draft had two other tools as part of its chapter on planning – with additional provisions on water policy and river basin management plans. The latter was a particularly ambitious exercise in that management plans were to be specifically adopted for all existing river basins that, among other things: ‘(a) scientifically describe the resource; (b) state the objectives to be achieved in the management of the area, including environmental, social, economic and other objectives; (c) set out zones where development activities may be conducted; (d) set out the conditions that apply regarding any allowed development activity; (e) set out zones that are considered to be off-limits for any development activity; (f) articulate the responsibilities of River Basin committees vis-à-vis the River-Basin in question; and (g) detail the measures that need to be in place to facilitate the participation of

local communities and other stake holders in the management of the given river basin or aquifer'.²¹

Regulatory Powers

The *Proclamation* both mandates and empowers the MWLE to implement the new water law while at the same time empowering it to further regulate the water sector, in consonance with the *Proclamation*. The MWLE is now expressly mandated to ensure and monitor the implementation of the *Proclamation* and 'ensure that the desired water quality standard is maintained and all-water related bodies and structures receive due protection against pollution, contamination and physical damage' (article 10(2)(d)). By the same token, the Ministry is also empowered to issue regulations under article 33, which states that the Minister may, inter alia, issue regulations regarding 'water resources management and quality control works, or related activities such as water conservation and water saving measures'; water fees and charges; water permits; and 'such other matters as may be deemed necessary for the proper implementation of the Proclamation'. Further, the *Proclamation* empowers the MLWE to regulate specific water bodies. Accordingly, the MLWE may '...in relation to the use of any water source, where the situation so requires, ... (a) regulate and/or restrict given water resource to be used for particular purposes; (b) revoke or suspend a given water use permit at times of shortage or anticipated shortage; (c) restrict or prohibit waste discharge permit or other permit issued under this Proclamation; and (d) provisionally or permanently, prohibit the use of water from a given source' (article 10(3)). These regulatory powers, it is submitted, could be utilized to promote sustainable uses and protection of the country's meager water resources.

Progressive Pricing

Article 19 of the *Proclamation* provides for the employment of progressive rates to be employed as part of water pricing scheme. Water scarcity is perhaps the most daunting environmental and survival challenge in Eritrea. This is a sound provision in that it will provide the incentive for putting a price and value on water as a scarce

²¹ Supra note 14.

resource. This will also ostensibly incentivize judicious use and help users make investments, with a view to avoiding leakage. As it stands, in some regions in the country, estimated loss of water due to leakage is 50 per cent.²² It is, therefore, fitting that the *Proclamation* has put forth a mandate on developing of guidelines on water pricing based on progressively graduating rates that encourage judicious use.

Conclusion

Water presents a complex set of issues that challenge leadership and require vision, deep commitment and action. The *Proclamation* presents both an opportunity and a challenge for the country's leadership. By and large, the new water law is in keeping with modern trends on water regulatory reform; it is particularly noteworthy that the new *Proclamation* has incorporated considerable 'green' stipulations.

It is hoped that the MLWE will methodically use its regulatory powers in detailing and clarifying some of the nuanced enunciations of the *Proclamation*, in favor of furthering the 'green' provisions of the new law. In the same vein, it is important that the MLWE swiftly move to establish the 'national water resources advisory board' envisaged under article 10(5) comprising different stakeholders and regional committees. This would help ensure integration and coordination, which are critical ingredients of IWRM.

Looking forward, the biggest challenges will be none other than implementation. Eritrea's environmental regime is far from developed. The country's 1997 *Constitution* is yet to be enforced and a framework environmental proclamation is yet to be promulgated. It will remain to be seen how this law will interface with existing sectoral legislation on agriculture, mining and, perhaps most importantly, with development activities by the Eritrean defense forces. The government has taken an important step by promulgating the *Proclamation*; and it is time for the government to put its money where its mouth is.

²² GoE, *National Environmental Management Plan - Eritrea* (1995), at 43.