INTRODUCTION

In 2002, the United Nations Committee on Economic, Social and Cultural Rights (CESCR) published General Comment No. 15 (Comment 15). Comment 15 gave non-legally binding recognition to the right to water, and outlined obligations and guidelines for implementing this right. Comment 15 was followed in 2010 by a United Nations (UN) General Assembly Declaration recognizing “the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights.” One hundred twenty-four nations voted in favour of the declaration, forty-one abstained, and none were inclined to political suicide by voting against it. United States deputy representative to the Economic and Social Council, John Sammis, explained that his country abstained from voting because “the legal implications of a declared right to water have not yet been considered.” More than three years later, Sammis’ statement holds true.

There have been two main approaches taken by nations in crafting a human right to water which will be discussed in Parts I and II of this paper. First, the derivative approach recognizes a secondary human right to water as necessary to fulfilling primary economic, social, or political rights. An example is found in Botswana where courts have recognized an implied right to access water deriving from the primary right of any owner or occupier of land to sink or deepen a borehole or well and to extract water for domestic purposes. The second approach recognizes an independent positive human right to water. This approach has been taken in South Africa where the right to have access to sufficient water was granted constitutional protection.
On the surface, adding water to the roster of internationally recognized human rights, as urged by the UN High Commissioner for Human Rights (UNHCHR), seems unobjectionable: with statistics from the World Health Organization (WHO) that over one billion people lack access to safe drinking water and 2.5 billion lack the adequate sanitation necessary to reduce exposure to water related diseases, a human rights approach to water entitlements has an immediate appeal as a means of alleviating human suffering. However, case law from Botswana and South Africa has demonstrated that recognizing the existence of a human right to water does not account for the means of implementing or remedying violations of the right. There is little indication that establishing this right has led to substantive changes in government obligations or access to water in those countries in a manner otherwise unachievable under a more flexible property rights approach that frames water as an independently existing entity, the access and usage of which may be granted, transferred, or removed as appropriate. In contrast to religion, fair trials, or equality, water has not been successfully shaped into a human right because it is not a human creation. It is an invaluable natural entity necessary to sustain all living creatures and systems on the planet. Humans may better organize our own use of water through licensing or permitting systems based in property rights regimes and limit that use by acknowledging ecosystem needs. Prioritization of competing uses and regular interference with water rights will be essential because water is a scarce natural resource; as such, it is inappropriate to deem water a human right, which by definition would place it among “rights inherent to all human beings…[which are] interrelated, indivisible…and inalienable.”

While there is an impetus from international organizations to create a human right to water, this paper will not focus on the international legal recognition of such a right. Instead, this paper explores the ways in which individual states are shaping this right in domestic law. It will demonstrate that a human rights framework is not an appropriate vehicle for managing natural resources or expanding water supply to those in need by examining both the derivative and independent human right approaches. The discussion of each approach will contain an analysis of the legal foundation of that human right, a definition of the substance of the right, and a case study where the right has been recognized in that manner. To provide a broad overview of the topic, this paper will refer to statistics on global water usage and the cost of providing water as well as aspects of water rights regimes in countries including Botswana, South Africa, India, Bolivia, Canada, and the United States.


10 Common property rights approaches that utilize permitting systems include: i) Prior Allocation (transferable licences to certain allocations of water from a given source governed by priority of registrations); ii) Public Authority Management (“use it or lose it” permits governed by water boards); iii) Riparian Rights (owner of land bordering water source is entitled to access water flow in its natural quantity and quality for limited uses); and iv) Civil Codes (non-transferable use permits granted by various government ministries); see Randy Christensen and Anastasia Litner, “Trading Our Common Heritage?: The Debate over Water Rights Transfers in Canada” in Karen Bakker, ed, Eau Canada: The Future of Canada’s Water (Vancouver: University of British Columbia Press, 2007) 222 at 223.

I. THE DERIVATIVE RIGHT APPROACH

The derivative approach creates a subordinate human right to water implied within a primary right, which may be another human, legal, political, economic, or socio-cultural right. The idea that a human right to water can be derived through other rights arises from the basic understanding that humans require water for nearly all of our activities, from cleaning and cooking to drilling for oil and manufacturing cars. Following this logic, the human right to life as entrenched in section 7 of the Canadian Charter of Rights and Freedoms (“Charter”) cannot be exercised unless one has access to life-sustaining water.

A human right to water could be derived from a wide range of recognized primary rights. Comment 15 states that “[t]he human right to water […] is a prerequisite for the realization of other human rights.” This includes the right to life, liberty and security of the person under the Universal Declaration of Human Rights. The International Covenant on Economic, Social and Cultural Rights (“ICESCR”) includes the rights to make a living by work and to take part in cultural activities, the right to develop, and the right to adequate food, all of which may imply a subordinate right to water. Comment 15 would require states to provide water to meet the core obligations of each of the ICESCR rights, including a sufficient amount of clean water, safely accessible to all, at a low cost with proper monitoring and a plan of action. It would obligate States to take positive measures to assist individuals and communities to enjoy the right to water.

The CESCR noted that the right to health under the International Bill of Human Rights would require improvement of environmental hygiene, which implicates safe drinking water, protection of bodies of water from contamination, and water to clean up waste. Although statements from the CESCR are not legally binding, countries including South Africa and Botswana have utilized the language contained in Comment 15 to recognize a human right to water.

The UN Economic and Social Council (ECOSOC) estimated the minimum amount of water required for subsistence is 7.5 litres per day (L/day), which would cover only food incorporation and hydration, or 50 L/day to also account for sanitation and hygiene. The amount of water required for ensuring good health, if that is to include hygiene, is far more than that needed to satisfy the right to food. These are both far less than the amount of water needed to satisfy the ICESCR right to “develop” if that implies industrial development, which is unclear from the wording of ICESCR. Given the different quantities of water required for the broad range of activities contemplated by

---

14 Comment 15, supra note 1 at para 1.
15 Ibid.
17 Comment 15, supra note 1 at para 37.
18 Ibid at para 25.
20 See Part I-A and Part II-E below for more on this topic.
21 Huang, supra note 2 at 357.
22 ICESCR, supra note 16.
23 “Development” in this paper signifies the presence of sophisticated industry and infrastructure within a nation. This includes the presence of manufacturing or resource extraction practices that tend to require large amounts of water, and transportation infrastructure capable of reliably delivering water to various users. See Shrubsole & Draper, supra note 12.
the ICESCR, and the limited nature of water as a resource, the derivative right approach would require a hierarchy for determining which political, economic or socio-cultural rights should be provided for first. Yet an underlying human right to water would be incompatible with hierarchy because a human right is intended to be indivisible and non-discriminatory.²⁴

Even if the derivative human right to water could be limited to a few primary ICESCR rights like adequate food or health, allotments would have to be tailored to different regions in a country for the same right. For example, the water needed to produce adequate food varies with growing conditions, climate, and landscape, while the amount of water needed for health depends on climate and population, among numerous other factors. To avoid human rights violations and to provide an adequate amount of water for each activity would require historical knowledge and predictions of water availability each year, information that even a wealthy and developed country like Canada lacks.²⁵ Any prediction is subject to environmental conditions beyond human control or knowledge, and in any given year the available water may be so little as to render meaningless a specific entitlement to a finite resource that belongs to the entire population of a country.

When the UN General Assembly issued its 2010 declaration that the right to safe and clean drinking water is a right that is essential for the full enjoyment of life and all human rights,²⁶ Canada, the United States, Australia, and Britain were among the countries that abstained from adopting the non-binding resolution.²⁷ In effect, these countries refused to acknowledge the recommendation as a valid approach to realizing legal rights to water. The United States’ representative to ECOSOC, John Sammis, explained that

> this resolution describes a right to water and sanitation in a way that is not reflective of existing international law; as there is no “right to water and sanitation” in an international legal sense as described by this resolution.²⁸

Sammis’ response to the declaration typifies the weakness in the derivative approach to recognizing a human right to water. The derivative approach is burdened by the questionable existence of positive obligations on governments to satisfy primary rights. It also demands that governments prioritize primary human rights by determining which rights require water for their fulfilment. These issues are illustrated in the Botswana case of Matsipane Mosetlhanyane and Gokenyatsiwe Matsipane v. Attorney General (“Matsipane”),²⁹ where a human right to water was recognized in order to overcome discriminatory practices by a government against occupiers of wildlife reserve land.

### A. The Derivative Approach in Botswana

In 2011, the Botswana Court of Appeal quashed a prior ruling that denied the Basarwa (also known as Kalahari Bushmen) access to water on their ancestral lands located in

---

²⁴ _What are Human Rights_, supra note 11.
²⁵ Shrubsole & Draper, _supra_ note 12 at 47.
²⁶ _The Human Right to Water and Sanitation_, supra note 3.
²⁷ _Mchangama_, _supra_ note 4.
the Central Kalahari Game Reserve (CKGR).\textsuperscript{30} In 1961, the CKGR was established to conserve wildlife and provide residence for the Basarwa, who formed permanent hunter-gatherer settlements there.\textsuperscript{31} In 1986, the De Beers diamond company agreed to allow Basarwa residents to use a borehole that the company had sunk at Mothomelo for gathering water.\textsuperscript{32} The government maintained the engine of the borehole pump from 1986 – 2002.\textsuperscript{33}

In 2002, the government evicted the Basarwa from the CKGR after issuing a policy statement that the reserve existed solely for the purpose of wildlife conservation.\textsuperscript{34} The new policy deemed that human settlements were incompatible with that purpose, and bringing water infrastructure into the area would seriously compromise fauna conservation efforts.\textsuperscript{35} During relocation of the Basarwa, the pump engine and water tank built into the borehole were dismantled, and the borehole was sealed.\textsuperscript{36} The court speculated that these changes were likely done to induce the Basarwa to move, although many eventually returned to their settlements.\textsuperscript{37} The court called the ordeal, which persisted for several years, a “harrowing story of human suffering and despair from the shortage of water in a harsh climate.”\textsuperscript{38} The government’s action to decommission the borehole resulted in Basarwa residents becoming “weak and vulnerable to sickness,” and forced them to spend their days searching the bush for melons containing traces of water.\textsuperscript{39}

The Basarwa took the government to court, arguing that they had a right under section 6(1)(a) of Botswana’s \textit{Water Act} to re-commission or sink new boreholes at their own expense to take and use water for domestic purposes by virtue of their occupation or ownership of the land.\textsuperscript{40} In accordance with section 6, the Basarwa were not seeking a right to abstract at will unlimited quantities of water from an unspecified number of boreholes, but rather to use an existing or new hole.\textsuperscript{41} As such, they reasoned that section 9 of the \textit{Water Act}, which forbids taking water without an authorized water right, would not apply.\textsuperscript{42} Importantly, the Basarwa argued that being denied access to water for domestic purposes would make their occupation of the land meaningless.\textsuperscript{43} The Basarwa also claimed that the government violated section 7(1) of the \textit{Constitution of Botswana} (1966)\textsuperscript{44} by subjecting them to “inhuman or degrading punishment or treatment.”\textsuperscript{45}

In response, the government argued that the well was not a borehole as defined under the \textit{Water Act} but that it was a “prospecting hole” drilled for mineral prospecting and it was never meant to provide water to anyone.\textsuperscript{46} The government argued that, with section 6 being subject to section 9, the owner or occupier of land intending to sink or deepen wells or boreholes to take water for domestic purposes could only do so with a water right

\textsuperscript{30} Ibid.
\textsuperscript{31} Ibid at para 4.
\textsuperscript{32} Ibid at paras 4-5.
\textsuperscript{33} Ibid at para 5.
\textsuperscript{34} Ibid at para 6.
\textsuperscript{35} Ibid.
\textsuperscript{36} Ibid at para 7.
\textsuperscript{37} Ibid at paras 6-7.
\textsuperscript{38} Ibid at para 4.
\textsuperscript{39} Ibid at para 8.
\textsuperscript{40} Ibid at para 13.
\textsuperscript{41} Ibid at para 14.
\textsuperscript{42} The \textit{Water Act}, supra note 6, ss 6 and 9.
\textsuperscript{43} Matsipane, supra note 29 at paras 14-16.
\textsuperscript{44} Constitution of Botswana (1966), BWA-010, 1966, s 7(1).
\textsuperscript{45} Matsipane, supra note 29 at para 19.
\textsuperscript{46} Ibid at para 9.
granted under the Act.\textsuperscript{47} The Basarwa had therefore violated section 9 by failing to obtain a water right to use the borehole.\textsuperscript{48}

The court cited the decision in \textit{Sesana and Others v. A Attorney General (2006)},\textsuperscript{49} a related case brought by one of the same applicants in \textit{Matsipane}, to support their finding that the Basarwa were wrongly deprived of possession of their settlements. The court further held that the government had acted unlawfully and unconstitutionally by denying the Basarwa permits to enter the land.\textsuperscript{50} The borehole had ceased being a prospecting hole after being converted for domestic purposes for the benefit of the community, and there was no legal basis for denying access or sealing it.\textsuperscript{51} The court also agreed with the appellants’ statement that occupation rights without water rights would be meaningless:

[j]n a country in which an occupier of land may have to drill beneath it to find water he and his family will need if they are to live there, it is unsurprising that Parliament should have decided that he should have an ‘inherent’ right to do just that.\textsuperscript{52}

Their “inherent” right to access water was deemed absolute and unqualified, and the court held that the Basarwa did not need authorization to take water.\textsuperscript{53} This language suggests that the court granted a human right of access to water underlying the right to occupy land rather than a property right to use or own water.\textsuperscript{54} The language in the decision that permits access to water for domestic purposes is consistent with a human rights approach to water as it was granted to allow families to live and survive in the area that they occupy.\textsuperscript{55} The court acknowledged that Comment 15 guided their judgment, and quoted the General Assembly recognition of the right to safe and clean drinking water as a fundamental human right essential for the full enjoyment of life and all human rights.\textsuperscript{56}

This ruling shed light on how courts may address the issue of access to water when applicants live in areas where water is naturally scarce. In reference to the section 7(1) claim, the court agreed that the Basarwa were subjected to inhuman or degrading treatment in being denied permission to use or sink a borehole, at their own expense, for domestic purposes.\textsuperscript{57} This finding overruled the trial judge’s holding that the Basarwa had brought whatever hardships they suffered upon themselves by “freely choosing to go and live where there was no water.”\textsuperscript{58}

One problem with this judgment is the incongruity between the acknowledgment of a human right underlying the primary right to occupy land and the apparent lack of a positive governmental obligation to provide essential services. Although it was held by the court that the Basarwa had the right to use the borehole, the Basarwa asserted that use would be at their own expense, and in fact conceded to the respondent’s argument that

\textsuperscript{47} Ibid at para 13.

\textsuperscript{48} Ibid.


\textsuperscript{50} Matsipane, supra note 29 at para 12.

\textsuperscript{51} Ibid at paras 17-18.

\textsuperscript{52} Ibid at para 16.

\textsuperscript{53} Ibid at para 19.


\textsuperscript{55} Matsipane, supra note 29 at para 16.

\textsuperscript{56} Ibid at para 19.

\textsuperscript{57} Dinokopila, supra note 54 at 291.

\textsuperscript{58} Matsipane, supra note 29 at para 10.
the government was under no obligation to restore the provision of basic and essential services to residents of the CKGR, following Sesana. Therefore, the government would be barred from inflicting suffering by depriving citizens of self-financed access to water, but it need not take initiative to prevent suffering from lack of water. It appears the court has recognized a negative human right to water where one might expect a positive obligation on the government to provide water to protect citizens from inhumane conditions.

Legal scholar Bonolo Dinokopila suggests that the life threatening effects of the state’s decision to seal the borehole without authority gives a moral basis for recognizing a human right to water. However, the ruling in Matsipane was founded on the concept that an occupier of land needs to access water for the survival of his family. This reveals a reliance on the language of property rights even where moral considerations figure prominently. While this avoids a revolutionary expansion of human rights, it offers a pragmatic solution to a physical problem within the bounds of existing law: courts may recognize that a property right to land contains a property right to water.

Human rights exist as a category of rights intended to be inalienable, necessary, and of such basic importance that they are unchanging, yet a court’s binding judgments are subject to appeal. As the court in Matsipane implied by declining to reopen the Sesana ruling against a government obligation to provide essential services, there is a democratic deficit in allowing judges to read-in an underlying right and then dictate that the government must implement it. This criticism is especially true when the provision of services requires going beyond court expertise to policy making centred on how to obtain, manage, and pay for a scarce natural resource like water. However, the ambiguity that accompanies a judge-made derivative human right to water could be avoided by the creation of a human right to water that stands on its own authority.

II. THE INDEPENDENT RIGHT APPROACH

An independent human right to water could be initiated in the legislative branch of government and applied broadly to a range of water-based activities. Benefits of explicitly acknowledging a human right to water, according to Peter Gleick of the Pacific Institute, include encouraging and pressuring governments to meet basic water needs of their populations, and identifying minimum water requirements and allocations for parties within a particular watershed. This approach, which would marry the natural environment directly to human need with no possibility of divorce, faces inherent conceptual and remedial challenges. A description of various types of rights and their attendant remedies by law and economics scholar Guido Calabresi provides a useful framework for evaluating these challenges.

Calabresi notes that rights are protected either by property, liability, or inalienability rules. Interference with a right would be appropriate in the realm of property rights, which “involve a collective decision as to who is to be given an initial entitlement” and then permit removal of the entitlement through a voluntary transaction. An inalienable

59 Ibid at para 18.
60 Dinokopila, supra note 54 at 290-292.
61 What Are Human Rights, supra note 11.
64 Ibid.
65 Ibid at 1092.
right such as a human right “is inalienable to the extent that its transfer is not permitted between a willing buyer and a willing seller.”

Permitting interference with a right to water seems misplaced in a human rights context as human rights are absolute and indivisible. Comment 15, however, can be interpreted as permitting interference with an individual’s right to water as it notes that states or third parties must consult with and give notice of actions to affected individuals prior to the interference with their rights. CESCR may have included this statement in Comment 15 because the state must be able to regularly interfere with rights to resources that exist independently as natural, tangible entities both to deliver and manage them. This is particularly true where resources are scarce due to environmental factors beyond human control. However, this indicates that water rights do not fit comfortably within a human rights regime.

If rights are dependent on the rules and remedies that accompany them, as Calabresi suggests, then a right without remedy is no right at all. The remedies identified in Comment 15 to address violations of the human right to water include “adequate reparation, including restitution, compensation, satisfaction or guarantees of non-repetition” by the national or international judiciary. It follows that a human right to water must be adequately defined and provide for immediate remedial action in order to have any meaning. A human right to a substance necessary for life requires actual means of quickly resolving deficiencies in water availability and criteria for determining what is meant by deficiency.

As Gleick notes, a human right to water cannot imply the right to an unlimited amount of water, nor does it require that water be provided for free. It will be limited by resource scarcity, the need to maintain natural ecosystems, and economic and political factors. As such, it may only be applied to satisfy basic needs for drinking, cooking, and “fundamental domestic uses.”

Despite the challenges noted above, Comment 15 provides a framework for countries seeking to implement an independent positive human right to water through its recognition of four key factors. These are defined by the statement that everyone is entitled to (1) sufficient, (2) safe and acceptable, (3) physically accessible, and (4) affordable water for personal and domestic uses. This section explores the substance of the four factors to shed light on issues with the definition and implementation of this right.

A. Sufficient Supply

Water supply for each person must be sufficient and continuous for personal and domestic uses, according to Comment 15. These uses include drinking water, human waste disposal, clothes washing, food preparation, and personal and household cleanliness. Comment 15 acknowledges “some individuals and groups may also require additional water due to health, climate, and work conditions.”

---

66 Ibid.
67 Comment 15, supra note 1 at para 56.
68 Calabresi & Melamed, supra note 63.
69 Ibid at para 55.
70 Gleick, supra note 62 at 4.
71 Ibid at 4.
72 Comment 15, supra note 1 at para 2.
73 Ibid at para 12(a).
74 Ibid.
The estimated minimum amount of water required for subsistence according to ECOSOC is 7.5 L/day, which covers only food preparation and hydration, or 50 L/day, which accounts for sanitation and hygiene.\textsuperscript{75} The WHO gives a higher estimate of at least 50 – 100 L/day for each person.\textsuperscript{76} According to Shrubsole and Draper, in 2006 each Canadian used an incredible 4400 L/day “to support our lifestyle,” with about 343 L/day allotted specifically to personal domestic use.\textsuperscript{77} In France and Sweden, individuals use only 150 L/day and 200 L/day respectively.\textsuperscript{78} This extreme variation in the quantities that individuals in different countries would consider necessary for fulfilling basic needs explains the lack of specificity in this category within Comment 15.

If water is recognized as an independent human right in water-poor countries like Botswana, which has only about 2.4 cubic kilometers (km\(^3\)) of internal renewable water resources per year for a population of about 1.8 million,\textsuperscript{79} governments would have to find alternative means of supplying the guaranteed quantities of water to their citizens. They may turn to bulk exports from countries like Canada where there is a perceived abundance of water, and an average internal annual renewable water resource of 2850 km\(^3\) for a population of 34 million.\textsuperscript{80}

Whether a country is considering bulk exports or determining the minimum amount of water necessary to satisfy basic human needs, a metering or usage monitoring system would likely have to be implemented to determine sufficient supply. According to a 2009 report by the Organisation for Economic Cooperation and Development (OECD), governmental expenditures on water infrastructure in OECD countries averaged $11.9 billion during 2006.\textsuperscript{81} While it would be a valuable long-term investment that could be used as a conservation tool, the cost of building and maintaining such a system could be a large burden in countries that lack infrastructure for extracting and purifying water, let alone measuring individual use.

The Klamath Basin dispute in northern California\textsuperscript{82} demonstrates scarcity issues more commonly faced in developed nations, and illustrates the efficacy of property rights regimes for protecting access to water. Although the parties in the dispute were not arguing over water supply for basic domestic uses as in Matsipane, poor water quality in the basin had an impact on water available for both basic and other needs.\textsuperscript{83}

Over-allocation of water, changing hydrology, and several hydro-electric dams negatively affected both the quality and quantity of water in the Klamath River.\textsuperscript{84} These changes

\textsuperscript{75} Huang, supra note 2 at 357.
\textsuperscript{77} Shrubsole & Draper, supra note 12 at 39.
\textsuperscript{78} Ibid.
\textsuperscript{83} Ibid.
\textsuperscript{84} Ibid at 7.
significantly impacted the ability of Indigenous communities to exercise their senior tribal right to fish given a major decline in salmon population. After years of shortage and litigation, Indigenous and agricultural rights holders negotiated the Klamath Basin Restoration Agreement in 2010. The agreement maintained the property rights-based system of prior allocation, but re-allocated water for salmon habitat restoration and granted agricultural users fifty percent of the forecasted supply for April to September, though they were legally entitled to greater supply. Finally, the agreement provided a dispute resolution mechanism to resolve any future conflicts.

The Klamath Basin dispute showed that “at the appropriate scale, people prefer to cooperate to solve conflicts over entitlements to and the use of resources rather than resort to legal rules and litigation.” While priority rules attached to property rights-based licencing regimes may fail to resolve disputes between competing interests through litigation, they provide a basis for negotiation. Successful negotiation relies upon flexibility and well-defined interests, and can be a valuable means of addressing scarcity, particularly in cases where governments cannot adequately dictate what supply will be available for a large group of stakeholders.

B. Safe Water

According to Comment 15, safe water for domestic or personal use must be “free from micro-organisms, chemical substances and radiological hazards that constitute a threat to a person’s health.” It should be of an “acceptable” color, odour, and taste, as determined by WHO drinking water guidelines. While water quality may be conceived as a problem facing underdeveloped countries like Botswana, it is a live issue on Canadian soil as well.

Safe water guidelines in Canada are set both federally and provincially, through provincial legislation such as the Drinking Water Protection Act in BC, and federally through non-binding guidelines set by Health Canada. Provincial standards for potable water recognize fecal coliform, e. coli, and total coliform, but do not address other potential health risks which may be present due to environmental factors in different locations affected by local industry or climate. Furthermore, insufficient funding, vast distances between sources, and poor central monitoring have resulted in fragmented management of thousands of water supply systems in BC. The consequences of a lack of federally binding guidelines are felt most distinctly by First Nations communities in Canada; a Health Canada report found that in 1999 water borne diseases like shigellosis, hepatitis A, and giardiasis, were respectively 20 times, 12 times, and 2 times worse on reserve than

---

85 Ibid at 8.
86 Ibid at 7.
87 Ibid at 8.
88 Ibid.
89 Ibid.
90 Ibid.
91 Comment 15, supra note 1 at para 12(b).
92 Ibid.
93 Drinking Water Protection Act, SBC 2001, c-9.
95 Drinking Water Protection Regulation, BC Reg 87/2011, ss 2.
96 Curran & Brandes, supra note 82.
in the general Canadian population. This major discrepancy is in large part caused by the fact that reserves, falling within federal jurisdiction by virtue of section 91(24) of the Constitution Act, 1867, are not covered by any binding guidelines. Without the threat of legal penalties for poor water quality to incentivize federal spending, populations on reserve have been left to deal with insufficient infrastructure and personnel training, and inadequate drinking water treatment and delivery.

In recognition of this problem, the federal government proposed in 2009 that provincial legislation for operational standards be referentially incorporated into regulations developed through consultation with First Nations. This proposal has culminated in the new Safe Drinking Water for First Nations Act. Critics like Constance MacIntosh hold that a federal regime will face challenges regarding off-reserve source water protection, as sources off-reserve would fall into provincial jurisdiction with its attendant land-use planning and activity control legislation.

An independent human rights approach could conceivably be effective in bridging the gap between provincial and federal jurisdiction over safe drinking water standards by giving a federally recognized human right to water paramountcy over provincial land-use legislation. This recognition could permit First Nations communities in particular, along with other Canadians, to hold both levels of state actors accountable for providing safe drinking water. However, section 35 of the Constitution Act, 1982 already imposes a fiduciary obligation on the federal government to act in the best interest of First Nations. It is not clear whether an extra layer of human rights protection would help to resolve the discrepancy in water quality on reserve or would further obscure the legal process surrounding Aboriginal Rights and Title claims. On the other hand, the traditional property rights approach allows individual actors to reorganize and redistribute their rights among themselves using negotiation as was done in the Klamath Basin.

Following Calabresi’s definition of inalienable rights as mentioned above, human rights cannot be negotiated or altered, and exist on a large scale as entitlements held by individuals which are only legally enforceable against the state. A human right to water recognized in domestic law would impose an obligation, rather than an option, upon the federal government to find a solution to the problem of water quality; yet it would not be effective in disputes between individuals as in the Klamath Basin dispute noted above. Where a dispute with the government arises, a human rights approach could create distance between citizens and the deemed solution by taking their particular interests out of the equation and rendering the decision non-negotiable.

98 Constitution Act 1867 (UK), 30 & 31 Vict, c-3, s 91(24).
99 MacIntosh, supra note 97 at 7.
100 Ibid at 5-6.
101 Ibid at 6.
103 MacIntosh, supra note 97 at 8.
104 Constitution Act 1982, being Schedule B to the Canada Act 1982 (UK), 1982, c-11, s 35.
106 Curran & Brandes, supra note 82.
107 See Part II, above and Calabresi & Melamed, supra note 63 at 1092.
108 What are Human Rights, supra note 11.
109 Ibid.
C. Physically Accessible

Under the requirement that water be accessible, Comment 15 specifies that water must be physically accessible to everyone without discrimination or threats of physical harm. The issue of physical accessibility was raised in Matsipane, where it was found at trial that the Basarwa subjected themselves to physical hardship by choosing to live on land where there was no readily available water. On appeal, the court rejected this argument because the Basarwa had established a water source with the borehole in the area where they lived, and the government had actively sealed it without any legal authority. The government’s argument is undoubtedly callous in the face of human suffering caused, not by the Basarwa acting foolishly, but by the government’s allegedly intentional infliction of suffering to force the Basarwa to relocate. However, in a different context, this type of argument could carry some weight.

At what point is it environmentally irresponsible for humans to live in a location which has limited or no natural water source simply because we desire to live there? The fact that California requires $400 million in taxes per year to subsidize a system of aqueducts for agricultural and domestic needs should tell us that the ecosystem is not capable of supporting such a large population. The state has recognized this issue, and although water rights transfers have increased to 1.2 million acre feet per year, the state has intervened to ensure that over one third of those transfers have been done to meet environmental, rather than human, needs. Needless to say, the cost of infrastructure and transfer facilitation at this volume is well beyond what most water-poor states could reasonably be expected to provide.

Environmental rights scholar David Boyd argues that benefits of a human rights regime for water would include protecting water from pollution and other adverse impacts. He is echoed by others who hold that human rights to water resonate more soundly than pure environmental claims, which are subject to regulatory whims, and human rights and environmental protection overlap in efforts to preserve the environment for the benefit of present and future generations. However, regulatory regimes are effective in promoting flexibility in conflicts over entitlements, which is not possible under a non-negotiable human rights regime, and often require precise definition of health risks and pollution-causing activities.

As Linda Nowlan points out, “water flow, or environmental flow, plays a critical role in ecosystem health; human uses for water compete with other species’ needs, often at the expense of freshwater biodiversity.” The amount of water needed for basic personal and domestic uses is relatively low compared to agricultural or industrial uses. However, 200 L/day for every person in a country of over a billion people—like India, which recognizes a human right to water through the constitutional right to life—adds up to an enormous amount of water being diverted from environmental flows to fulfill human needs in existing communities.

110 Comment 15, supra note 1 at para 12(c)(i) and (iii).
111 Matsipane, supra note 29 at para 10.
112 Ibid.
113 Christensen & Litner, supra note 10 at 232.
114 Ibid at 231.
115 Boyd, supra note 76 at 2.
116 Huang, supra note 2 at 359.
119 The enforcement of India’s right to water has been weak: see Narain, ibid.
If communities cannot afford to bring water to themselves, the government may force
groups to relocate, as was attempted illegally in Matsipane.\textsuperscript{120} That case highlights the
problem of competing human and environmental needs. While the government lacked
authority for shutting off access to the borehole, its plan to move humans out of the
CKGR was apparently motivated by wildlife conservation purposes.\textsuperscript{121} Relocations in
other states could violate enumerated rights such as that of housing in the Constitution
of the Republic of South Africa,\textsuperscript{122} or the freedom of movement under the Charter.\textsuperscript{123}
This problem is exacerbated in areas experiencing urban migration, where water systems
struggle to keep up with demand, and in favela-like squatter settlements whose long-
term existence governments do not wish to encourage.\textsuperscript{124}

Although a human right to water under Comment 15 would require water to be accessible
without discrimination, water sources are not typically distributed evenly by population
density in nature. Communities that cannot access enough clean water to fulfil their
basic needs either must have water sources brought to them, or must be relocated closer
to water. Bulk water removals to communities that can afford to bring the water to them
would be protected not simply by international trade law but by the more inflexible and
absolute guarantee of a human right. Yet major alterations of water flows pose a threat to
environmental health,\textsuperscript{125} and, consequently, human habitation.

D. Affordable

The requirement that states provide access to a sufficient supply of clean water is
inextricably connected with the issue of affordability. Comment 15 requires that water,
the necessary facilities and services, and all direct or indirect charges are affordable for
all.\textsuperscript{126} Whether privately or publicly provided, these services must be charged based on
the principle of equity, which demands that poorer households not be disproportionately
burdened with water expenses.\textsuperscript{127}

To ensure affordability it is suggested that states adopt any necessary measures, which
may include a range of appropriate low-cost techniques and technologies, appropriate
pricing policies like free or low-cost water, and income supplements.\textsuperscript{128}

It has been argued that a human right to water could prevent the privatization of
water resources. This is a matter of concern particularly in countries that are straining
to meet the heavy costs of implementing or improving water systems, as occurred
in Cochabamba, Bolivia.\textsuperscript{129} In 2000, less than sixty percent of the population of
Cochabamba had access to a water supply system, in part due to the large number of
squatter settlements in the city; consequently, private water vendors began acting as the
primary suppliers.\textsuperscript{130} To resolve this problem, the Bolivian government deemed water a
state-owned commodity that could be licenced to private companies for distribution.\textsuperscript{131}
Accordingly, the government prohibited any independent water collection, including the

\begin{itemize}
\item \textsuperscript{120} Matsipane, supra note 29 at para 6.
\item \textsuperscript{121} Ibid.
\item \textsuperscript{122} Constitution of the Republic of South Africa, 1996, supra note 8 at s 26.
\item \textsuperscript{123} Charter, supra note 13 at s 6.
\item \textsuperscript{124} Bluemel, supra note 7 at 988.
\item \textsuperscript{125} Nowlan, supra note 117 at 244.
\item \textsuperscript{126} Comment 15, supra note 1 at para 12(c)(ii).
\item \textsuperscript{127} Ibid at para 27.
\item \textsuperscript{128} Ibid.
\item \textsuperscript{129} Bluemel, supra note 7 at 966-7.
\item \textsuperscript{130} Ibid at 965.
\item \textsuperscript{131} Ibid at 966.
\end{itemize}
use of rainwater barrels.\textsuperscript{132} Licenced companies pursued a program of full cost recovery, which allowed water suppliers to recover the full cost of supplying water to all users; this measure immediately increased water costs to account for over twenty percent of household income.\textsuperscript{133} Four months after the scheme began, Bolivians erupted into violent protests, which ultimately forced the government to end privatized water delivery, and return water to government control.\textsuperscript{134} While there may be controversy around the notion that water, as a human right, “should be available to all regardless of ability to pay,”\textsuperscript{135} the Bolivian experience points to the existence of an informal ceiling on the price of water at least in that community.

The OECD published a report on global tariff policies for water supply and sanitation in 2009, which gave a rare look into actual costs and methods of paying for water systems in both OECD and non-OECD countries.\textsuperscript{136} It found that tariffs, or charges to household users, are an important means of providing ongoing funding for water supply systems, achieving a sustainable level of cost recovery, and reducing waste or undervaluation of water as a resource.\textsuperscript{137} However, full cost recovery from tariffs alone, as occurred in Cochabamba, “is far from the norm.”\textsuperscript{138}

To avoid imposing crippling tariffs, countries are shifting towards local commercial finance, which is reimbursed by user charges.\textsuperscript{139} Federal grants and loans are common, and financing through pollution charges and municipal bonds has increased, with the latter occurring in India and South Africa.\textsuperscript{140} Finally, the OECD found that countries initially relied on dedicated water financing agencies to support infrastructure development, and have lessened this reliance over time.\textsuperscript{141} Donors and international financial institutions usually aimed for three to five percent of household income covering water tariffs when planning for water infrastructure investment projects.\textsuperscript{142}

According to the 2012 GWI/OECD Global Water Tariff Survey, the average combined water and wastewater tariff among 310 cities was US$1.98 per cubic meter (m$^3$).\textsuperscript{143} Surprisingly, the lowest average residential tariffs were found in water-poor countries with Saudi Arabia charging US$0.03/m$^3$, and Cuba charging US$0.04/m$^3$.\textsuperscript{144} The highest costs were found in Australia at US$6.47/m$^3$ and Denmark, where residents pay up to US$9.21/m$^3$.\textsuperscript{145} In 2007, Toronto residents paid US$1.64/m$^3$, and users in Gaberone, Botswana paid US$0.53/m$^3$.\textsuperscript{146} The OECD report found that water charges in developing countries, such as Egypt, usually account for a maximum of two percent of household income, while OECD countries only spend one percent of household income on water.\textsuperscript{147} However, even in OECD countries such as Denmark, New Zealand, and

\textsuperscript{132} Ibid.
\textsuperscript{133} Ibid.
\textsuperscript{134} Ibid at 966.
\textsuperscript{135} Ibid at 967.
\textsuperscript{136} OECD, supra note 81.
\textsuperscript{137} Ibid.
\textsuperscript{138} Ibid at 80.
\textsuperscript{139} Ibid at 55.
\textsuperscript{140} Ibid.
\textsuperscript{141} Ibid.
\textsuperscript{142} Ibid at 57.
\textsuperscript{144} Ibid.
\textsuperscript{145} Ibid at 37-41.
\textsuperscript{146} Ibid.
\textsuperscript{147} OECD, supra note 81 at 57.
Turkey, the lowest decile of the population was found to spend as much as 3.0 – 10.3 percent of household income on water and wastewater bills.\(^{148}\)

Affordability does not simply demand that states offer the lowest possible rates for water use, but it requires a consideration of fair pricing to account for long term economic and water needs. Environment Canada reported that the National Round Table on Environment and Economy found “unmet water and wastewater infrastructure needs […] were $38-49 billion (CAD) in 1996, and capital costs for the following 20 years will be in the order of $70-90 billion.”\(^{149}\) The clear way to deal with the problem, it states, is to pay realistic rates for municipal water service that are sufficient to cover the true cost, based on actual quantity used. The Municipal Pricing Report found that the average domestic water user paid CAD$1.26 for 1000 L in 2004, a rate which Environment Canada deemed to be too low;\(^{150}\) although it is unclear whether any governmental policy exists which suggests what a fair rate would be.

Undervaluing water in Canada is caused by a perceived super abundance based on statistics stating Canada contains twenty percent of the water in all the world’s lakes, despite the fact that Canada only has 6.5 percent of the world’s total renewable water supply.\(^{151}\) In countries like Canada where water is undervalued, a human right to water could possibly inhibit or cause delay in adjusting water prices to reflect true value by giving individuals a basis to complain that they should be entitled to free or low-cost (i.e. undervalued) water.

The OECD reported that Canada’s current expenditure on water infrastructure was US$7.88 billion with an average annual investment projected to be US$2.75 billion by 2015, and US$4.38 billion by 2025.\(^{152}\) According to the WHO, the costs of implementing suitable water and sanitation systems in countries currently lacking them would range from $135 – 327 billion.\(^{153}\) This cost will be a major hurdle for water-poor countries in which a human right to safe and sufficient water would be a means of holding irresponsible or unreactive governments accountable for failing to provide access to sufficient and safe water.\(^{154}\)

As indicated by the affordability factor in Comment 15, part of the purpose of recognizing a human right to water is to ensure that states provide access to water even to those who cannot afford it under the principle of full cost recovery.\(^{155}\) It is clear from the underpricing of water in Canada that presently the government is not pursuing a full cost recovery on water use or infrastructure, even absent a human right to water.

Following the lesson from Cochabamba, total privatization of water supplies in water-poor countries, or those lacking infrastructure, seems unlikely. Private companies would have no motivation for investing billions into a system where users and governments will not or cannot afford to pay even relatively low charges. A human rights approach may be more valuable in developing countries where there is an actual possibility of recovery of the hundreds of billions required to build adequate water supply systems. Even so,

\(^{148}\) Ibid at 88, figure 3.3.
\(^{150}\) Ibid.
\(^{152}\) OECD, supra note 81 at 42.
\(^{153}\) Ibid at 52.
\(^{154}\) Ibid at 52.
\(^{155}\) Bluemel, supra note 7 at 963.
the OECD report shows that a variety of approaches to financing are being taken in most developing countries.\footnote{OECD, supra note 81.} This approach decreases the likelihood of a single private or state entity taking control over water supply systems, and exploiting or refusing to provide water to local populations, which removes an incentive for the strict human rights approach.

As demonstrated in \textit{Lindiwe Mazibuko and Others v. City of Johannesburg and Others ("Lindiwe")},\footnote{Lindiwe Mazibuko and Others v City of Johannesburg and Others, Case CCT 39/09, [2009] ZACC 28, online: Southern African Legal Information Institute <http://www.saflii.org/za/cases/ZACC/2009/28.html> [Lindiwe].} protection from privatization does not necessarily ensure complete affordability or access to water resources. Local governments who control water resources also have the power to turn off the tap, even when an independent human right to water is constitutionally recognized. While a human right to water could guide a country’s approach to financing and determining affordable tariffs to fund its water systems, conscientious policymakers could pursue an affordable pricing regime absent a human right to water.

\textbf{E. The Independent Right Approach in South Africa’s Constitution}

In the 2009 \textit{Lindiwe} case, the South African Constitutional Court was faced with its first opportunity to interpret section 27(1)(b) of the \textit{Constitution of the Republic of South Africa ("Constitution")}, which provides that everyone has the right to have access to sufficient water.\footnote{Constitution of the Republic of South Africa, 1996, supra note 8, s 27(1)(b).} The court concluded that the achievement of equality, a founding principle in the constitution, cannot be accomplished “while water is abundantly available to the wealthy, but not to the poor.”\footnote{Lindiwe, supra note 157 at para 2.}

Johannesburg Water, the company that provides water services to city residents, estimated that one-quarter to one-third of all water it purchased was distributed to the impoverished Soweto district with only one percent of revenue coming back due to the failure of many residents to pay consumption charges.\footnote{Ibid at para 12.} Further, the company could not account for about seventy-five percent of water pumped to Soweto.\footnote{Ibid.} In response to these problems, the city and Johannesburg Water developed a three-tiered water services policy under the \textit{Water Services Act} (1994).\footnote{Ibid at para 14.} Every household would receive 6000 L of water per month (or 25 L per person per day) available for free following section 11 of the \textit{Water Services Act}; consumers would pay for any water used in excess of that amount.\footnote{Ibid at para 80-81.} The tariff followed a rising block structure so that heavier water users paid a higher per kilolitre tariff.\footnote{Ibid at para 80.} Low-income households could register as indigent, which required them to obtain pre-paid meters but made them eligible for a yearly allocation of 4000 L for emergency use, and wrote off all arrears owed to the city.\footnote{Ibid at para 81.} Only pre-paid meters were available in the Soweto neighbourhood of Phiri while credit-meters were permitted in other communities.\footnote{Ibid at para 14.}

During the implementation of the new policy, one of the Applicants refused to have a pre-paid meter installed, which resulted in her connection being cut off until she applied
for a meter seven months later.\textsuperscript{167} The Applicants argued that section 11 of the \textit{Water Services Act} conflicted with section 27(1)(b) of the \textit{Constitution} as the 25 L amount was insufficient and should have been set at 50 L.\textsuperscript{168} They criticised the scheme for being inflexible and applying unfairly based on economic status.\textsuperscript{169}

As noted by the court, this case dealt with the problem of requiring courts to determine the extent of state’s positive obligations relating to the attainment of constitutional rights. Following precedent,\textsuperscript{170} the court read section 27(1) together with section 27(2), which requires the government to take reasonable measures within available resources “to achieve the progressive realization of the right.”\textsuperscript{171}

In response to the argument that the minimum amount of water per person should be changed, the court made reference to ECOSOC’s 1990 General Comment 3, which contained similar language to Comment 15.\textsuperscript{172} Both Comments declare that states have a “minimum core obligation” to ensure the satisfaction of minimum essential levels of each individual right.\textsuperscript{173} The court maintained “courts are ill-suited to adjudicate upon issues where court orders could have multiple social and economic consequences for the community,” and interpreted “minimum core” as something relevant to reasonableness, not a self-standing right conferred on everyone.\textsuperscript{174} As a result, the minimum amount under the city policy was not found to be insufficient. The court upheld prior rulings rejecting the argument that social and economic rights in South Africa’s constitution “contain a minimum core which the state is obliged to furnish.”\textsuperscript{175}

The difficulty and variety of means of supplying water in part determines what constitutes “sufficient water,” yet the court lacks the expertise for making these assessments “for both institutional and democratic reasons.”\textsuperscript{176} However, the court held that positive obligations imposed on the government by the \textit{Constitution} could be enforced if courts required the government to take progressive steps where they had previously failed, or required review or removal of government measures if they did not meet the constitutional standard of reasonableness.\textsuperscript{177} This standard would not be met if the policy made no provision for those most desperately in need.\textsuperscript{178} The court found that progressive steps were exemplified in the city’s revision of its indigent policy to provide more water for poor households.\textsuperscript{179}

The 6000 L allowance for all households was found reasonable because the block tariff structure ensured that wealthier customers who use more water would be charged more, and because of the difficulty of distinguishing which households would be deserving of free water.\textsuperscript{180} Further, the court held that the free allowance would provide average households of 3.2 people with 60 L per person per day, which was far more than the

\begin{itemize}
  \item \textsuperscript{167} \textit{Ibid} at paras 15-16.
  \item \textsuperscript{168} \textit{Ibid} at para 44.
  \item \textsuperscript{169} \textit{Ibid} at para 44.
  \item \textsuperscript{170} On “defining the scope of positive rights…and the corresponding obligations on the State”, \textit{ibid} at para 49, quoting \textit{Treatment Action Campaign No.2 [2002] ZACC 15} at para 39.
  \item \textsuperscript{171} \textit{Lindiwe, supra note 157} at para 50.
  \item \textsuperscript{172} \textit{Ibid} at para 40.
  \item \textsuperscript{173} \textit{Ibid} at para 52.
  \item \textsuperscript{174} \textit{Ibid} at paras 54-5.
  \item \textsuperscript{175} \textit{Ibid} at para 53 citing \textit{Government of South Africa and Others v. Grooiboom and Others [2000] ZACC 19} at para 34, and \textit{Treatment Action Campaign} at para 34 supra note 170.
  \item \textsuperscript{176} \textit{Lindiwe, supra note 157} at para 62.
  \item \textsuperscript{177} \textit{Ibid} at para 67.
  \item \textsuperscript{178} \textit{Ibid} at para 67.
  \item \textsuperscript{179} \textit{Ibid} at para 95.
  \item \textsuperscript{180} \textit{Ibid} at 84.
\end{itemize}
prescribed minimum of 25 L.\textsuperscript{181} Increasing minimum amounts to benefit poor areas with a larger number of users would be unreasonably burdensome to the city, and overly generous to households with fewer users given that the court had already decided against allotting on a per person basis.\textsuperscript{182}

The city’s requirement that pre-paid or credit meters be mandatorily installed based on geographic area was justified as a power “reasonably incidental to providing services to citizens in a sustainable manner that permits cost recovery.”\textsuperscript{183} This policy reflected the reality that residents in Soweto had a history of failing to pay their water bills.\textsuperscript{184} The court held that temporarily suspending service to customers with prepaid meters that have not purchased additional credit after their monthly basic supply or prior credit has been used up did not amount to unconstitutional, permanent discontinuation of water supply.\textsuperscript{185}

This judgment provides a significant amount of guidance as to the limitations and powers of an independent human right to water within South Africa, as well as broader guidance to any positive rights to government-provided services.

First, a state recognizing a human right to water may not be required to immediately provide every person with sufficient water; rather, it must take reasonable steps to progressively implement the right. This approach diminishes the added protection of having an absolute human right to water as this right must be realized like any other right: with flexibility and balancing of surrounding factors.

Second, minimum standards are to be determined by the state though they are reviewable by the courts. Counter to the notion of human rights being absolute and indivisible, the court in \textit{Lindiwe} held that “fixing a quantified content might, in a rigid and counter-productive manner, prevent an analysis of context.”\textsuperscript{186} Again, the court was guided by the concept of reasonableness, which applies in the more flexible property and liability rights regimes as defined by Calabresi.\textsuperscript{187}

Third, the court’s emphasis on progressive realization and statement that it would be overly burdensome to determine the monthly amount of free water on a per person basis\textsuperscript{188} indicates that this human right can be significantly limited by administrative realities. The court seems willing to limit the force of human rights protection due to its self-professed discomfort in imposing costly positive obligations on the government.

Finally, the court found that temporary cut-off due to failure or inability to pay after using the allotted minimum free allowance of water did not amount to a suspension of human rights.\textsuperscript{189} This finding is controversial on its face as a human right is intended to be absolute and protected against any alteration; yet it is clear that water shut-off changes one’s living conditions and prevents one’s daily water needs from being fulfilled. However, the court was understandably reluctant to hold the government to any positive obligation to immediately provide water as cost recovery through tariffs is necessary in order to provide water at all. The ability to suspend water rights, and the reasonable

\begin{flushleft}
\textsuperscript{181} Ibid at para 88.
\textsuperscript{182} Ibid at paras 88-89.
\textsuperscript{183} Ibid at para 111.
\textsuperscript{184} Ibid at para 139.
\textsuperscript{185} Ibid at para 124.
\textsuperscript{186} Ibid at para 60.
\textsuperscript{187} Calabresi & Melamed, supra note 63.
\textsuperscript{188} Lindiwe, supra note 157 at paras 88-89.
\textsuperscript{189} Ibid at para 124.
\end{flushleft}
motivation to do so, suggests that a human rights framework is not appropriate where water rights are concerned.

CONCLUSION

The human right to water was recognized in the 2002 CESCR General Comment 15 as well as in a 2010 UN General Assembly Declaration. While a human right to water may appear attractive as a means of preventing water-borne disease and ensuring adequate supply of water for basic domestic needs, many questions are raised when one considers how a declaration of the right translates into an actual legal entitlement.

Courts in Botswana have attempted to derive a human right to sink or deepen a borehole and abstract water for domestic purposes from the primary right of an individual to own or occupy land. In South Africa, the government has entrenched an independent human right to sufficient supply of water within its Constitution. However, the Lindiwe case from South Africa shows that available resources limit the human right to water. Further, a human right to water does not permit citizens to immediately demand provision of water services, and does not guard against water shut-off for non-payment of a water tariff. The Matsipane case from Botswana demonstrates the difficulty in defining a human right to water as a means of achieving other rights. The human right to water in that case suffered from the questionable justiciability of positive rights. The case also hinted at the tension between conservation needs and human needs as well as the environmental costs of delivery of water to individuals who live in areas lacking sufficient water supplies.

The human rights framework does little to add protection to water rights beyond what could be offered by a responsibly crafted property rights-based regulatory framework that manages access and usage of water through permitting systems. The ability to grant or remove property rights as needed is balanced, particularly in the common law, by a legal tradition that acknowledges the validity of those rights and offers them a high degree of protection. As the negotiated resolution of the Klamath Basin dispute demonstrates, flexibility and responsiveness to environmental conditions are necessary elements for successfully addressing scarcity, and are inherent to property rights-based regimes.

Yet flexibility and responsiveness are precisely what indivisible, inalienable and non-discriminatory human rights regimes are created to avoid. Inalienable rights, as noted by Calabresi, cannot be negotiated, altered, or interfered with. Water, however, is a naturally occurring entity that exists with or without humans, and that we cannot exist without: it is already alienated from us. Ironically perhaps, treating water as property acknowledges it as a substance outside of human control, as something to which we must be granted a right and which should not be confined to being considered first and foremost in terms of human consumption.

190 Comment 15, supra note 1; The Human Right to Water and Sanitation, supra note 3.
191 Matsipane, supra note 29.
193 Lindiwe, supra note 157.
194 Curran & Brandes, supra note 82.
195 Calabresi & Melamed, supra note 63.