

THE FUTURE OF DOMESTIC WATER LAW: TRENDS AND DEVELOPMENTS REVISITED

Stefano Burchi
Chairperson, International Association for Water Law (AIDA)
Rome, Italy

Abstract

A re-visitation of key trends in contemporary water resources legislation detected in prior essays by this author confirms the attraction of water resources in the public domain of the state; restraining the government authority to allocate and re-allocate water resources through regulatory mechanisms; regulated trading of water rights, and water resource charging; the rising profile of the environment in the allocation of water resources; capturing the land-water connection at points of regulatory intersection; and accounting for customary water rights. Acknowledging the human right to water, and improving access to justice in water disputes, emerge as new and additional trends.

1. Introduction

Water in general, and its sustainable management, have attracted standalone Sustainable Development Goal 6 (“Ensure availability and sustainable management of water and sanitation for all”), and relevant targets, adopted by the UN General Assembly in September 2015 alongside sixteen other SDGs and relevant targets (UNGA 2015). Water also plays an ancillary, instrumental role to the achievement of other SDGs. Although neither governance nor an enabling/supporting legal framework have made their way explicitly in SDG 6 or in the relevant targets, it is readily apparent from pre- and post-SDGs debates that governance, and an enabling/supporting legal framework, continue to retain the world community’s attention in view of their apparent instrumental role to the achievement of SDG 6 and, in particular, to that of all the relevant targets.

Picking up from where prior comparative analyses of water resources legislation by this author had left off (Burchi 2011, 2012), this paper will revisit and update salient features and trends in contemporary water resources legislation from a selection of countries, and add key innovative emerging features. The issues and the challenges which had emerged from this author’s prior work will also be revisited in the light of the analysis.

2. Salient features and trends in contemporary water resources legislation – revisited

2.1 Water’s legal status as a public good

As attested to by a spate of recent water laws, the trend to regard water as a public good, and to attract it as a result in the public domain of the State and in the scope of governmental or judicial allocation authority has solidified further. In a leap forward into seemingly un-charted legal territory, Japan's Water-cycle Act (2014) refers to water as "an asset shared by all human beings". Whether this expression equates to humankind is an open question, with unclear legal implications, if any. Ecuador's new Water Act (2014) goes as far as banning the "commodification" of water. Of note also the expansive legal definition of water resources, which often encompasses "non-conventional" sources, notably, treated wastewater, and water in the atmosphere. Exceptionally, private water heavens persist, notably as regards groundwater and as a result of judicial pronouncements (Supreme Court of the state of Texas (USA), rulings made in 2012 and 2016), or predicated on statute, but carefully delimited in scope (Bangladesh Water Act, 2013).

2.2 Limiting the arbitrariness of decision-making by government in regard to water abstraction and use, and to wastewater discharge

In addition and as a complement to statutory criteria prescribed for the guidance of governmental decision-making in the matter (e.g., Water Acts of Namibia (2013) Ecuador, Vietnam (2012), Bhutan (2011)), environmental impact assessment requirements of proposed water abstractions and/or of proposed wastewater discharges (see 2.5 below), water resources planning determinations (water resources plans at different scales are prescribed in the new water laws of Bangladesh, Namibia, Vietnam, Japan, the state of California (USA) (Sustainable Groundwater Management (SGM) Act, 2014), the imposition of ecological flow requirements of watercourses (see 2.5 below), and the "reserve" of volumes or flows for priority purposes (i.e., vital human needs, and the environment: Tanzania (Water Act, 2009), Namibia, Zambia (Water Act, 2011)), feature in contemporary water legislation and act as a limit to the arbitrariness of government as it allocates water, also for the conveyance and disposal of wastewater, through the grant of administrative rights. All the more so where, in particular, planning determinations have a binding effect on governmental decision-making (as in Bangladesh, Namibia, Vietnam, and, to some extent, in the state of California (USA) as regards groundwater in aquifers under stress).

2.3 Acknowledging the human right to water

With due regard for nuances as to the actual scope and strength of the right, access to water for the satisfaction of basic human needs is cast as a matter of human rights in increasing numbers of contemporary water statutes, like Peru's (Water Act, 2009), Bhutan's, Namibia's, Ecuador's, and Palestine's (Water Act, 2014). Of note, in this particular connection, the ancillary obligation placed on the government by the Peruvian statute to "guarantee" access to (natural and man-made) water sources, and to avoid their pollution. The Ecuadorian statute's direction that "quality" water be set aside by the government to satisfy the basic needs of present and future generations also helps operationalizing the right. The right is directly actionable, within the quantitative boundaries set by the Water Authority, and subject to a few conditionalities, also under the Ecuadorian dispensation. Of note also the ancillary obligation of the government to ensure equality and non-discrimination among right seekers. Whereas in the Namibian and in the Palestinian water statutes it is water delivered at the tap, and the relevant service, which are the apparent target of statutory

attention, the other statutes appear to target access to a source of raw water as a matter of human right and of statutory attention.

2.4 Pursuing efficiency of resource allocation: trading of water rights, charging for water abstraction and for wastewater discharge, and other means

Trading of water rights, and severance of the same from land rights, are a popular instrument in the pursuit of efficiency of allocation, attracting a mixed response from contemporary water laws. The response ranges from qualified endorsement as a legitimate means to pursue efficiency of resource allocation (Tanzania, Vietnam; Honduras (Water Act, 2009) allows mortgaging; Namibia allows trading of wastewater discharge rights; the regulated sale of groundwater extraction rights is contemplated in the state of California (USA) under the SGM Act) to effectively impeding trades by tying water abstraction rights to land (Zambia) to the outright ban of sales (Ecuador, Peru; trading of abstraction rights is banned in Namibia). Efficiency further underpins, overtly or by implication, the systems of water abstraction charges consistently provided for by contemporary water statutes across the globe (e.g., Bhutan, Honduras, Peru, Ecuador, Tanzania, Uruguay (National Water Policy Act, 2009), Zambia, Namibia, Palestine, state of California (USA), Vietnam), with some (Bhutan) including payment for ecosystem services. Efficiency also underpins the rebate of charges payable by water users who invest in making an efficient use of their water (Peru, Vietnam). Efficiency of use is a criterion for the determination of tariffs of charges for productive uses of water in Ecuador. Of particular note in this context is the novel instrument of “standards of efficiency of use”, and of relevant “compliance certificates” and attendant benefits, provided by the Peruvian Water Act. Perhaps the cancellation of abstraction grants in response to the hoarding of water, and the consequential release of volumes or flows for further allocation, prescribed by Ecuador’s Water Act, can be read as yet another pro-efficiency measure.

2.5 Boosting the “greening” process of water laws

The “greening” of water laws, i.e., the rising profile of the environment as a legitimate water user, and claimant of a share of available water resources, has received a considerable boost by a spate of contemporary water statutes. Evidence of this is multi-faceted and plentiful, ranging from environmental impact assessment requirements of proposed abstractions (Honduras, Peru, Zambia; in Bhutan, an “environmental clearance” substitutes for an abstraction licence) and of proposed wastewater disposal operations (Namibia) to the ecological flow requirements prescribed of watercourses (Honduras, Peru, Zambia, Ecuador, Namibia, Vietnam, Bhutan); and from the conservation of water-dependent ecosystems and aquatic habitats featuring on the statutory list of legitimate uses of water (Palestine), to accounting for environmental protection requirements in water resources planning (Vietnam), and for impacts on groundwater-dependent ecosystems of “groundwater sustainability plans” (state of California (USA)); all the way to a panoply of instruments of varying complexity and sophistication. In particular, not only are the environmental value of water resources (Peru), and the integrity of ecosystems (Tanzania), accorded equal standing to other competing values and pursuits as matters of principle; and the harmonization of human needs with the needs of the water-dependent environmental ecosystems is prescribed, also as a matter of policy (Namibia); or environmental considerations in general (Honduras), including, in particular, respect for the ecological flow requirements of

watercourses (Bhutan, Peru, Ecuador, Tanzania), and the impact of a proposed abstraction or wastewater discharge on water which has been allocated for environmental purposes, and on aquatic ecosystems dependent on the water resource proposed to be abstracted (Namibia), are to enter allocation decisions and the relevant decision-making process; or the need to protect or restore the water-dependent ecosystems may result in the curtailment of abstraction rights (Honduras, Zambia; in Namibia this provision is available also in regard to well drilling rights, and to wastewater discharge rights); or the environment must not be harmed by a user's decision to transfer his/her abstraction right to a new user (Honduras); or the requirements of aquatic ecosystems take precedence over other demands competing for water, in particular at times of scarcity (Tanzania; in Zambia the said requirements rank second, right after the satisfaction of basic human needs, also in connection with sub-catchment allocation planning; in Ecuador they rank third); also, environmental and sustainability criteria are to enter determinations regarding the tariffs of water abstraction and of wastewater disposal charges, on a par with other criteria (Peru, Uruguay); and areas can be zoned and, as a result, abstraction rights can be curtailed, for purposes of protecting water-dependent ecosystems (Bhutan, Peru). Under the Bangladesh Water Act, zoning is also available to protect the integrity of a surface water source being the habitat of migratory birds. The "reserve" – i.e., a quantity and quality of water required to, among others, protect the aquatic ecosystem and, in general, the environment - provided for in the Tanzanian, the Namibian and in the Zambian statutes alike goes in the same direction. Moreover, legal rights to water for the environment have begun to emerge, as a category of entitlements enjoying the same features and legal protections as water held by other users. Such entitlements accrue to the environment in recognition of the fact that it requires a share of available water to maintain river and wetland health, and to support the river systems that other users depend on. Environmental water entitlements may be held and managed by a dedicated new entry in the constellation of known water institutions, i.e., the Environmental Water Holder (e.g., states of New South Wales and Victoria, Australia). In the USA, "Water Trusts" have formed in the Western states of Oregon, Montana, Colorado and Washington, to purchase consumptive water rights and dedicate them to instream use for the recovery and health of watercourses. In parallel, in those states the "beneficial use" standard of water rights legitimacy nowadays stretches to leaving water in the stream for ecological purposes, thus effectively blocking loss of rights for non-use. Japan's Water-Cycle Act resonates with similar concerns for the health of freshwater systems when it acknowledges the value of a healthy and functioning hydrologic cycle to the "global environment", and that the maintenance and recovery of a healthy hydrologic cycle is a matter of concern to "all mankind". The breadth of the Japanese lawmakers' concern, reaching out to planet Earth and to all men living on it, is a noteworthy and remarkable feature of the Act. The statute seems to reflect a supra-national vision overcoming the national boundaries of Japan - something powerfully inspirational, whose legal implications, if any, remain unclear however. Also in this same inspirational context, the personification of Mother Earth (*Pacha Mama*) as the holder of an original right to the conservation of water resources, is a noteworthy feature of Ecuador's Water Act. The contours of such right remain in limbo, yet the provisions of the Act which are prescriptive of ostensibly un-related, yet relevant behaviours and obligations of government, water users and the citizenry arguably concur breathing life into Mother Earth's right.

2.6 Bridging the land/water divide

Traditionally, flood control has provided the “space” where the connection between land and (too much) water is readily apparent, and where attempts can be detected in contemporary water statutes to link the regulation of water resources development and use with land use/town & country planning regulation (e.g., Tanzania. In Bangladesh, zoning of wetlands is an available option for flood control purposes). Another connecting space is that of the “diffuse” pollution of water resources, with inroads made by much contemporary water legislation to tackle diffuse pollution sources via zoning and the regulation of land-based activities such as, notably, cropping and animal rearing (e.g., Namibia). A generic direction that all land-based and underground development projects with a potential to pollute or degrade water resources must take measures to prevent and control pollution or degradation features in Vietnam’s new Water Act. So does another, equally generic direction in the same statute that the application and use of pesticides and other chemicals in agriculture, animal husbandry and aquaculture must be in compliance with the norms in effect, and must not cause water pollution. Significant space for interaction comes also from the natural surface water and groundwater recharge and discharge processes, and the influence that human activities aboveground and underground have on such processes. Attention to the land/water interface is reflected, for instance, in two new laws of the Indian states of, respectively, Punjab (2009) and Haryana (2009), regulating paddy cultivation from a groundwater conservation perspective. The land/water connection is also readily apparent in the new Water Act of Honduras’ direction that the loss of the naturally recharging capacity of aquifers due to urban expansion and development be compensated for by providing, presumably through the relevant town and country planning and zoning instruments, gardens or other similar open spaces, or by other similar means. Under Tanzania’s new Water Act, not only is the land/water interface addressed where it most readily and apparently occurs, i.e., in the floodplain areas of rivers, by directing cooperation between the arms of government respectively responsible for water resources regulation, and for land use regulation. The statute further directs consultation between the two government administrations in the zoning of land “draining” to freshwater sources, notably, aquifers, springs and wetlands, inhibiting as a result land uses that are inimical to the survival of such freshwater bodies. Tanzania’s legislative response to the connection between land use and the occurrence and quality of water resources reaches out to coordination/consultation between the separate government administrations in charge of separate but interdependent natural resources and uses, and seems to thus point in a direction seldom seen in mainstream water resources legislation. Zambia’s Water Act’s more limited but no less novel response, directing that catchment planning be linked to town and country planning, and that government departments consult with, and abide by the advice of, the water administration, in the process of administering non-water legislation affecting water resources, points in the same direction. So do, in a remarkably consistent fashion: a similar provision in Vietnam’s Water Act directing that water resources planning be linked to land use planning; a direction in Ecuador’s Water Act that land use/town & country planning take into account water resources plans; a direction in the state of California (USA) SGM Act that groundwater sustainability plans be formed in coordination with land use plans and land use planning agencies, and that such plans map, among other things, the recharge area of aquifers; and another direction in the same statute to the effect that “groundwater sustainability plans” be considered by local governments when taking certain land use planning actions; and

a direction in Japan's Water-Cycle Act to government, local and national, to look to forests, farmland and urban facilities to maintain and enhance the water storage and recharge functions in the country's watersheds (the water-retention function of forests comes also within the cone of attention of Vietnam's Water Act, if only through generic directions). The zoning mechanisms of water resources at risk, featured in many a contemporary water laws, also attest to the growing attention to the land/water interface. Zoning of water resources at risk from certain activities, including in particular the risk of pollution from the application of fertilizers and pesticides to cropland, features for example in Bhutan's Water Act; a similar zoning mechanism of water resources at risk from "any activity", including by implication land uses, features in Zambia's Water Act; so does the zoning of the recharge areas of aquifers in the Water Act of Bangladesh; the zoning of water protection areas, also from the effects of land uses, in Ecuador's Water Act; the zoning of water protection areas for restricted activities aboveground and underground, triggering also the curtailment of abstractions and of discharges in progress, in Namibia's Water Act; and the zoning of the artificial recharge areas of designated aquifers, in Vietnam's Water Act. The voluntary fallowing of cropland for the purposes of implementing the "groundwater sustainability plans" prescribed by the state of California (USA) SGM Act also bears evidence of growing statutory attention to the land/water interface.

2.7 Accounting for the customary water rights and practices of traditional communities in statutory dispensations, and defusing opportunities for conflict with formal water rights

Accounting for the customary water rights and practices of traditional communities is an emerging pre-occupation of lawmakers in countries with substantial traditional populations. Whereas such pre-occupation may not go beyond some form of blanket statutory recognition of customary rights and practices (Bangladesh, Tanzania), which leaves the potential for collision with formal water rights systems intact, there is at the same time evidence of efforts to provide more articulate statutory responses. Of particular note in this connection, the Peruvian State's undertaking to "recognize and to respect" the native communities' water rights, not only as a matter of principle, but also in practice via the inalienability of such rights, their immunity to forfeiture, the priority status they are accorded – presumably in the allocation decisions made by the government water administration -, and the explicit reference to Convention No.169 of the International Labour Organization on the rights of indigenous peoples, as a yardstick for the interpretation of the provisions of the Water Act. Of note also the State's obligation not to affect the water rights of native communities as a result of water development projects. This particular direction is of note insofar as it zooms in on the interface between customary water rights and formal water rights based on administrative grants and, in particular, on the competition and conflict that the intersection of the two categories of water rights may generate. To a more limited extent in view of its sweep, so does the generic priority accorded customary water rights, also in the Peruvian statute, and the priority similarly accorded ethnic minorities, featured among the criteria guiding governmental water allocation decisions in the new Vietnamese dispensation. Similar concerns to Peru's are echoed in Tanzania's Water Act, where customary rights are recognized by the statute and are granted equal status to formal rights. At the same time, however, these rights can be limited by government as to their duration, and can be subjected to the payment of charges. The Bhutanese Water Act's approach is somewhat different, in that the water uses practised by

traditional communities, be they for livelihood or for religious purposes, are insulated from the administrative approval requirements of water utilizations under the Act. At the same time, however, the statute directs that such practices be taken into account in deciding on the approval of proposed abstractions. So do the Zambian Water Act in relation to abstraction permits, and the Namibian Water Act in relation to water abstraction, well drilling, and wastewater discharge permits. This is precisely the point at which customary and formal rights interface and maybe collide, and which is in need of statutory attention as a result. Interestingly enough, the Bhutanese statute goes as far as codifying the otherwise loose notion of “customary practices” and uses, by reference to a kind of formal accreditation by local beneficiaries’ groups, but also by reference to substantive criteria of fairness, equity and duration. In similar fashion, the Water Authority is directed by Ecuador’s Water Act to record the water-related customary practices and rights of traditional communities and indigenous peoples, which are binding on all community members and on the government water administration alike. Limited to the waters that flow through their lands, the Act expressly safeguards the traditional water management practices of communities and indigenous peoples, and their customs as regards the allocation of water among their members. Orders issued by such communities and peoples as regards the use and allocation of water flowing past their lands are regarded as a legitimate exercise of their customary practices and rights. However, except for a direction that, in the water abstraction permitting process, the Water Authority respect and preserve the locations where traditional communities practise water-based rituals and observe their cultural values and practices, the points of interface and maybe collision of customary water rights with formal water rights escape the Ecuadorian statute’s cone of attention. Of note in this context also the mandatory representation of traditional communities in the catchment-level water administration of Zambia, in the river basin committees of Bhutan, and in the apex government water administration of Peru.

2.8 Improving access to justice in water disputes?

Access to formal justice in water disputes is generally secured in water legislation through the hierarchical appeal process of administrative determinations involving, notably, the grant or denial of abstraction and discharge rights, and the judicial review of final administrative determinations by the ordinary courts or by administrative tribunals, including special-purpose Water Tribunals (e.g., Namibia). Recourse to alternative dispute resolution mechanisms, notably, mediation and conciliation, is encouraged by increasing numbers of contemporary water statutes (e.g., Bhutan, Ecuador, Namibia, Zambia) as a means of resolving water disputes locally, and improving access to justice. Recourse to ADR mechanisms opens up new opportunities in the pursuit of justice, far from the intricacies, the uncertainties, the duration and the costs of formal litigation in the courts of law located in the country’s capital or in the major urban centres.

3. Pointers for the future of water law reform

Linked to the attainment of SDG 6 and of other water-dependent SDGs, the agenda of water law reform will likely be informed by a handful of issues of mixed policy and law, most already detected in prior comparative analysis by this author, some new and emerging. Such issues can be summed up as follows:

3.1 Reconciling security of tenure with risk and uncertainty

Increasingly in the face of climate variability, the security of water development rights tenure sought by investors need be reconciled with changing hydrological, hydro-geological, technological, economic, and environmental circumstances. Widely practised regulatory instruments must be adaptable to rapidly changing circumstances with minimum conflict. This will require doing away with grants and rights of indefinite duration, fine-tuning grants to actual or predictable water availability, scaling existing grants downwards to reflect a variety of changing circumstances, including those driven by climate variability, and releasing the surpluses for further allocation to where priorities dictate. Some of these measures trigger in turn delicate legal issues regarding, notably, compensation of affected rights.

3.2 Pursuing opportunities for efficiency gains, without neglecting equity

In an environment dominated by dwindling water stocks, efficiency in the allocation and use of scarce water resources is a legitimate concern, destined to command priority attention. Efficiency, however, cannot come at the total expense of social and environmental equity. This is why markets for water rights tend to be regulated, to protect third party's interests and such intangibles as environmental, amenity, and cultural values. Charging for raw water at source, and rewarding in a variety of ways efficient user behaviour, also respond to the quest for efficiency of allocation and, like regulated water rights markets, are not immune to tension with social and environmental equity.

3.3 Reconciling the environment-support function with the development-support function of water resources

The environmental requirements of freshwater bodies, and those of water-dependent habitats, increasingly compete for statutory attention and standing with development needs. The process known as "greening" of water laws is evidence of such competition, and of the underlying tension between the environment-support and the development-support functions of water resources. Reconciliation of these seemingly conflicting functions can be painful and costly, insofar as it may involve the review and adjustment of allocations made and of the grant of relevant rights.

3.4 Recouping the connection between water resources regulation (and administration) and land use regulation (and administration)

There is growing evidence of inroads made in contemporary mainstream water legislation by awareness of the influence of land-based human activities on water resources, surface and underground alike. The approaches to coordination of the legislation regulating the development and use of water resources in general and, in particular, of groundwater, and the legislation governing town and country planning and urban and rural development, are destined for increasing uptake in mainstream water legislation. This is a grey area of water legislation which needs revisiting, in conjunction with a parallel re-visitation of town and country planning and urban and rural development legislation, with a view to weaving in the fabric of both sets of laws consistent substantive and procedural requirements aimed at a common purpose –

i.e., that of protecting water resources from man-made interferences originating aboveground or underground, and impacting on water quality and volumes/flows.

3.5 Defusing the potential for collision and conflict between customary and statutory water rights, and fostering peaceful co-existence of the formal and informal systems of water allocation and use

Customary water allocation and use systems have attracted, at best, the benign neglect of mainstream water resources legislation. Yet, as competition for a scarce resource heightens, the customary water rights and practices of traditional communities out in the rural areas of many parts of the world are bound to come under stress from the growing appetites of home and overseas investors. Opportunities for conflict between the customary and the formal water allocation and use systems are bound to multiply as a result. This is an area of mainstream water legislation which has been coming under increasing attention, and showing already considerable innovation and dynamism in the search for mechanisms to accommodate traditional systems in the fold of statutory dispensations, and to facilitate their co-existence alongside statutory systems of water resources allocation and use.

3.6 Ensuring the human right to water

Access to water for the satisfaction of basic human needs as a matter of (human) right has already come out of the limbo of international pronouncements, and made its way into contemporary mainstream water legislation, as a matter of statutory law and/or policy. The contours of the right, and its operationalization “on the ground” through administrative and/or judicial action remain open issues, however. These are beginning to be addressed, with mainstream water legislation addressing access rights to water at source – as distinct to access rights to water delivery at the tap, which tends to be the province of separate water services regulation.

3.7 Improving access to justice in water disputes

This is an emerging area of attention in mainstream water legislation, attested to by references to ADR mechanisms as a means to resolve disputes and obtain redress locally, in lieu of formal litigation before the courts of law located in the capital city and in the regional or provincial capitals. Besides, co-existence of customary and formal water rights systems, and access to justice locally, can be characterized as manifestations of legal pluralism in the field of water resources regulation.

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