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Paul Williams

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FEATURE REVIEW

Nile co-operation through hydro- *realpolitik*?

PAUL WILLIAMS

The Nile Question: Hydropolitics, Legal Wrangling, Modus Vivendi and Perspectives

Tesfaye Tafesse

Münster, Lit Verlag, 2001

154 pp

The Nile Basin: National Determinants of Collective Action

John Waterbury

New Haven, CT: Yale University Press, 2002

211 pp

The decade following the 1992 Rio Conference on Environment and Development (UNCED) reinvigorated co-operation in international river basins once prone to considerable rancour. Israeli–Jordanian and Indo–Bangladeshi water-sharing agreements were concluded, and in 1993 the ‘Nile 2002 Conferences’ were inaugurated to cultivate, via informal dialogue, the trust needed to negotiate a comprehensive accord among 10 Nile Basin countries. In 1997 these countries began drafting a co-operative framework for determining ‘net equitable entitlements’ and undertaking ‘integrated water resources planning and management’; yet, as a Nile Basin Initiative report understates, ‘some key issues remain to be resolved’.¹ Indeed, rivalry among Egypt, Ethiopia and the Sudan, and the need to co-ordinate numerous actors to augment the Nile’s water supply, generate the vexing collective action problematic characteristic of what Elinor Ostrom terms ‘common property resources’ (CPRs),² from which excluding users is costly but uses are competitive and potentially deleterious to resource renewal.

Neither of the featured works shirks from engaging with CPR problems meriting further analysis if barriers to multilateral Nile Basin co-operation are to be meaningfully dismantled. The Waterbury book explicitly generalises Ostrom’s paradigm from a setting which the latter author restricted to symmetrically accessible domestic CPRs

*Paul Williams is in the Department of International Relations, Bilkent University, Ankara 06533, Turkey.
E-mail: paulw@bilkent.eclu.tr.*

to a potentially less tractable one of obtaining 10 states' voluntary agreement to collaborate in increasing available water in the Nile River, a large and asymmetrically accessible transboundary CPR, and in equitably apportioning its flow. Generally speaking, this positivist study hewing closely to realist international relations theory presents an analytically insightful, dispassionately argued and empirically thorough account of the hydro-political quandaries complicating Nile Basin co-operation. Yet the theoretical arguments developed in the first three chapters, which rest on the premise that the standard CPR model aptly depicts Nile hydro-politics, are somewhat inconsistent with the realist tenor of the subsequent empirical arguments, which elaborate on a narrative featuring a dominant party's ability to dominate access to scarce water resources at the expense of its weaker rivals. Conversely, by failing to derive more critical implications of his cogent assessment of Egypt's quasi-hegemonic power to deter others from increasing their water uses, the author may nonetheless overstate the upstreamers' ability to form an anti-Egyptian coalition.

Whereas Waterbury explicitly downplays the exigency of reaching a multilateral *modus vivendi*, Tafesse emphasises it. An admittedly Ethiopian-centric attempt to rectify a perceived underestimation of Ethiopia's 'water needs and rights' and 'to create awareness about the Nile resources' among an information-deprived Ethiopian public (p xii), his contribution is activated by an evident normative purpose of mobilising the requisite political will to remove status quo inequities (including many stakeholders' inability to participate in determining water uses). This raises obvious questions. Do the Ethiopians to which he refers comprise only the educated, English-conversant political elite? Will non-Ethiopians with a crucial stake in this matter discount national bias when assessing his views on who bears greater responsibility for initiating collective action? But it is the pervasive rhetorical assertion in a later chapter, associating the urgency of co-operation with the existence of patent inequities and untenable costs of non-co-operation, that begs the issue of why the status quo persists. This book contains two carefully rendered schematic maps, helpful details on the history of Egypto-Ethiopian hydro-politics and on the environmental consequences of the Aswan High Dam, and some interesting, but under-explored, facets of Ethiopian water policies. Yet the book leans heavily on factual description based on secondary sources, commits a few shoddy errors, suffers from unevenness of relevance (the second chapter, a standard inter-basin comparative survey, adds little overall value), and lacks the same rigor and coherence of Waterbury's conceptual framework.

The Nile as 'common property'

Depicting the Nile River Basin as a 'common property resource' connotes possession of intrinsically complex structural attributes that may impede the search for a co-operative water-use regime and increase propensities for conflict among users. Following a cursory litany of the disparate stakes of the riparians in co-operation, Waterbury's introduction identifies the book's central issue as one of 'understanding under what circumstances ten sovereign riparian states would ever *voluntarily* [emphasis in the original] agree to manage their shared Nile water resources for the greater good of all the inhabitants of the watercourse' (p 8). Non-co-operation is

overdetermined, since the chronic instability and 'political ineptitude' of major stakeholders Ethiopia, the Sudan and Uganda combine with the intrinsic hydraulic difficulty of permanently excluding Egypt from access to water and compelling it to secure its Nile water uses by a multilateral legal framework. But these same factors undermining co-operation reduce *pari passu* the probability of a Nile 'water war' (a term not always properly restricted to cases where the *casus belli* is water deprivation and the targets are hydraulic installations). This argument diverges from Tafesse's reasoning that a '*modus vivendi*' is needed to avert potential conflict associated axiomatically with zero-sum water allocation disputes and that Ethiopia's development of the Nile Basin could impose losses on Egypt. Both authors hold that unilateralism detracts from welfare maximisation, but while Waterbury emphasises the costliness of building separate storage facilities, Tafesse tends to condemn it for infringing on others' rights.

Establishing an optimal joint water-use regime in the setting of the Nile Basin is made less tractable not only by disparate national interests but also by the peculiarities of the 'common property resource'. Waterbury unequivocally suggests that the opportunity costs of storing water are prohibitive, undergirding the gist of his contention that excluding users is infeasible. Unlike coffee and oil, water storage is hazardous (as the recent collapse of a Syrian dam on a small river upstream from Turkey attests) unless it can also be released for 'in-house' uses, un conducive to cartelisation, and likely to increase the probability of war (only if downstream consumers cannot fulfil vital needs). Yet, to borrow Ostrom's distinction, even if the Nile resource *system* resembles a public good, Nile water consumption, as both books amply indicate, exemplifies rivalry. Waterbury clarifies that rivalry is asymmetrical: transboundary watercourses 'do not constitute common *pool* [emphasis in the original] resources that can be exploited jointly and simultaneously by the riparians in the basin' (p 23); consequently, although he does not explicitly clarify this point, rivalry can become entrenched because sequential usage and negative externalities are unidirectional.

This reading of the Nile problematic dovetails with the author's later assertion that the Nile Basin lacks a crisis sufficient to mobilise collective action, suggesting that non-co-operation poses no 'tragedy of the commons' problem requiring emergency resuscitation. High rates of evaporation from Aswan High Dam's Lake Nasser tempt speculation that proliferation of unilaterally built dams could collectively harm *all* users, but Tafesse instead portrays the crisis as an incommensurable function of 'opportunity costs of silt accumulation, flooding, food insecurity, suspicions and mistrust [that] continue to accumulate to the detriment of all the beneficiaries' (p 117). Here, Waterbury's assessment is more provocative for its sobering implication that 'tragedy' is highly maldistributed. However, hydropolitics centrally involves upstream countries' conversion of geographical advantage into greater storage *and* diversion capacity (eg Turkey's Ataturk Dam on the Euphrates, India's Farakka Barrage on the Ganges and even Kyrgyzstan's Toktugul Reservoir on the Syr Darya), and the resulting impairment of downstream uses makes rivalry less characteristic of a CPR, where uncontrolled use can degrade resource stock, than of LeMarquand's 'upstream-downstream conflict'³ or Haftendorn's 'rambo situation',⁴ in which upstream stock provision can affect control of downstream usage.

Real apprehension towards uses of upstream storage (where reservoir surface-to-

volume ratios are more favourable to augmenting overall net supply) hardens downstream users' reluctance to approve the building of infrastructure which could increase mutual gains. The 1997 UN rivers convention offers a meagre means of reconciling this conflict (it incorporates the contrary doctrines of 'appreciable harm', protecting Egypt's 'acquired rights', and 'equitable use', supporting enlarged upstream water uses), and the authors pin more hope on conditional third-party funding and domestic water-sector reforms. Waterbury notes that the World Bank can compensate those (eg Egypt and Uganda) less interested in altering the status quo in exchange for backing a new regime revolving around the Nile Basin Initiative's Strategic Action Program, which 'would hew more closely to the principle of equitable use than to appreciable harm' and 'foster some form of reallocation' (p 173). In terms of establishing domestic 'best practices' to be undertaken, Tafesse focuses unsurprisingly on *Egypt's* need to earn confidence by junking its 1959 treaty with Sudan, shelving its New Valley irrigation expansion scheme, relying on 'virtual water' embodied in grain imports, and rationalising water prices. Waterbury believes that water-sector reform increases domestic gains even if done unilaterally, but his larger refrain that sub-national actors cannot compel this reform suggests that independently verified uniform constraints are needed to 'reduce fears that any given riparian will free-ride on the others' (p 53).

Egypt's 'control' of the upper basin

Downstream Egypt's interest in cultivating a hydrological hegemony to coerce upstream-state co-operation in preserving its extant water uses stems precisely from fear of being unable to free-ride on future upstream storage. Yet a hydrologically deterministic focus on upstream position obscures the unique sociopolitical factors confounding the usual power configuration: according to Tafesse, the Nile Basin is unique in that a bilateral accord is considered 'a legally binding basin-wide agreement', a vital upstream state 'is denied the usage of the water resources that flow within its territory', and one riparian state 'stands out as a hegemonic power' (pp 127–128). In some sense, Egypt's defence of a hydrologically extravagant agricultural lifestyle at the expense of water insecurity in the Sudan and Ethiopia is more analogous to the global economic system, which Barnett suggests externalises the environmental costs of Northern consumption patterns to the South.⁵ Waterbury does not extend his realist account of Egyptian influence far beyond recognising the relational dimension of power, but both authors intimate that forms of structural power are operative.

Egypt's hydro-hegemony originates in British colonisation of most of the basin. Waterbury's chapter three narrates that the imperial jockeying during the first Nile Basin regime of the latter 1800s led London to view 'defense in depth' as extending 'beyond controlling real estate to enhancing its productivity' (p 59) and to promote Egypt's and then the Sudan's (after Anglo-Egyptian occupation) irrigated agriculture. Britain's Century Water Scheme envisaged the White Nile's Lake Albert shared by the Congo and Uganda and the Blue Nile's Lake Tana in Ethiopia serving as reservoirs for 'timely' releases of water to Egypt during the March–July low flow. However, inability to dominate the Congo and especially Ethiopia, where annual rainfall generates 100 billion cubic metres in surface run-off for the Sudan and Egypt

(Ethiopia's highlands provide 86% of Lake Nasser's water), meant pursuing a collectively suboptimal strategy of storing water downstream while preventing major withdrawals upstream. Both authors' accounts concur, but Tafesse's longer historical perspective on Ethiopian–Egyptian rivalry contextualises *fin de siècle* hydropolitics to emphasise Egyptian motives over British politico-economic aims: the 'unity of the Nile Valley' idea is ascribed to Egyptian desires to conquer Ethiopia, and British acquiescence to 'Egyptian dreams of viewing the "whole of the Nile Basin as one hydro-economic and political unit"' (p 62) is also noted.

Legal–diplomatic instruments, chiefly the 1929 and 1949 agreements which Britain, respectively in control of Sudanese and Ugandan territory, concluded with Egypt and the 1959 Egypto-Sudanese treaty, undergirded Egyptian water claims. Waterbury highlights the 1929 treaty's 'overwhelming emphasis on maintaining acquired rights and on avoiding appreciable harm to Egypt's agricultural sector' (p 73) in terms of its award of 48 out of 52 billion cubic metres of usable flow to Egypt, and Tafesse adds that the treaty gave the latter additional rights to inspect and veto any control work along the Nile, monitor flow in the Sudan and undertake projects without upstreamers' consent. In accordance with the 1949 agreement, Egyptian engineers have been located at a gauging station upstream from Lake Victoria's Owen Falls Dam to verify that Uganda is operating the dam according to an 'agreed curve' simulating the Nile's natural flow. With Sudanese independence, the 1929 agreement was supplanted by the 1959 treaty, which raised the Sudan's water share to 18.5 out of an augmented 74 billion cubic metres and created a joint technical commission which carries out reciprocal monitoring of each country's storage discharge rates; however, as Waterbury observes, 'reciprocity has been unequal, with Egypt's two dozen or so engineers in the Sudan taking a more hands-on monitoring role than their Sudanese counterparts at the Aswan Dam' (p 133).

In their efforts to resolve the protracted 'legal wrangling' in the Nile Basin, multi-lateral institutions receive deserved criticism. Both authors debunk the wisdom that it was Egypt's need for World Bank funding that led to the 1959 agreement (Egypt had already garnered Soviet assistance during what Waterbury terms the 1945–89 Nile Basin regime) rather than the Sudan's desire to build Roseires Dam on the Blue Nile (upstream from Sennar Dam, built in 1925 to fulfil Egypt's water needs). Clearly, Egypt derives benefits from the historical saliency of its 'acquired rights' and the psychological prominence attached to preventing 'appreciable harm' to these rights, particularly because these doctrines are embodied in the World Bank's Operational Directive 7.50, which also exempts downstreamers from notifying upstreamers when building major works. Both authors remark on Egypt's skilful ensconcing of its personnel in multilateral institutions, with Waterbury citing a 1989 UNDP report to argue that Egypt's and the Sudan's position 'is not only taken as unassailable; it is sometimes argued more strenuously by third parties than by the two countries themselves' (p 132).

They also take up the issue of Egypt's destabilisation tactics. Undoubtedly, most Upper Nile Basin states have had violent conflicts detracting from hydraulic construction and even resulting in 'failed states'. Waterbury's mention of the southern Sudanese and Eritreans in qualifying his oft-reiterated realist point that the primary basin players can be understood in 'rational' and 'unitary' terms actually suggests the uncertain existence of the latter property, yet support for rebellion may

be both 'rational' (eg for Egypt) and otherwise (especially for Ethiopia and Uganda, which are more domestically vulnerable). As Waterbury contends, to the extent that neither Egypt nor Ethiopia want to initiate recognition of an autonomous southern Sudan, but that Egypt and Sudan desire to complete the Jonglei I project to convey more water to the White Nile through the Sudd swamps, while Ethiopia prefers to stem the flow of refugees, Africa's northeast manifests 'a three-party collective action problem, the solution to which is to find a formula to admit a fourth party to the table' (p 148). However, Egypt's interest in collective action remains weakest. Waterbury's dismissal of suspicions that Egypt fuels Sudan's conflict is undercut by a belief that 'Egyptian policy-makers are divided as to whether it would serve Egypt's long-term interests to see the Sudan enter a period of stability and prosperity' (p 149). Tafesse unreservedly links Egypt's water interests to the Ethiopia-Eritrea conflict.

Both authors suggest that Egypt's structural power is egregiously exhibited in its downstream unilateralism. According to Waterbury, Ethiopia has protested at Egypt's scheme to pipe four billion cubic meters of water to the Sinai and another plan to pump 5.5 billion cubic meters from Lake Nasser to the southwestern desert not only on the normative grounds that 'unilateralism is to be condemned wherever and whenever in a watershed it may occur', but also according to the criteria that any 'slack' should be used to meet '*some* [emphasis in the original] of the water needs of the upper basin riparian' and 'that downstream actions can cause appreciable harm upstream' by creating new 'acquired rights' (p 85). Tafesse's reasoning on this issue is more convoluted and shoddy. He backhandedly defends Egypt's plans on cost-effectiveness criteria by briefly citing dormant Ethiopian plans to ship water from the Atbara tributary to Saudi Arabia via Port Sudan without analysing the cost-benefit ratio. But in condemning their illegitimacy, he erroneously compares Egypt's plans with the 1980s Turkish 'Peace Pipeline' project,⁶ designed neither to take water from the Tigris-Euphrates River Basin (but from two national rivers, as Turkey wanted an alternative supply scheme to propitiate Syrian opposition to efforts to store and divert Euphrates water *within* Turkey) nor to convey it through Iraq, then fighting a war with Iran.

Can upstreamers balance power?

As E H Carr would argue,⁷ great powers have to rely on a mixture of consent and coercion in maintaining favoured international regimes. Extrapolating from an analogous theoretical observation made in chapter one, and anticipating his later observation that Egypt has compensated for its lack of 'pure' hegemony by 'suborning the Sudan in an alliance implicitly aimed at thwarting Ethiopia' (p 131), Waterbury pursues an original analysis of the nature of the aforementioned 1959 treaty. Though faulting it for fixing allocations and disallowing 'rights' to be traded, the author notes that, in terms of apportioning a net gain of 22 (74 less 52) billion cubic metres of water over the 1929 agreement, the 1959 treaty contains greater recognition of Sudanese 'equitable uses'. That is, 'two-thirds of the net gain was allocated according to equitable use [ie to the Sudan] and one-third according to acquired rights [ie to Egypt]' (p 74). Moreover, by mandating that Egypt and the Sudan would jointly enter negotiations with other riparians and reduce their share in

equal parts in the event of reallocation, the treaty, which Tafesse recommends abolishing for this reason, could pave the way for accommodating others' equitable uses as well.

Nonetheless, the dominant message is that Egyptian resistance to changing the 1959 status quo water-sharing formula will lessen only if upstream states engage in a *realpolitik* combining a reconciliation of compatible water uses and formation of a (hydro-)logical Ethiopian–Sudanese alliance. This counter-intuitive Machiavellianism pivots on recognition that augmented Ethiopian storage capacity will threaten Egyptian privileges less by leading to increased water withdrawals in Ethiopia than by allowing them in the Sudan. While displaying superficial disagreement here, both authors suggest that Ethiopia, which sought US help in developing its Blue Nile and Atbara tributaries against the respective opposition of the British and Soviets in the 1930s and early 1960s, has minimal capacity to diminish Egyptian water uses. Other than misplaced 'water wars'-like hyperbole, featuring Ethiopia's potential use of the Atbara's hydropower potential to lure private capital and its building of 'hundreds' of microdam projects to utilise large volumes of water (a contention derived from an earlier work disputed by Tafesse), Waterbury enumerates formidable obstacles underlying the 'imperfect logic' of attaining Ethiopian food security with large projects. Besides low incentives to improve agricultural productivity related to insecure property rights and problems with microdam maintenance, Ethiopian dam sites with the lowest sedimentation and evaporation rates, the benefits of which Tafesse emphasises rather uncritically, are those least capable of generating hydropower and furthest from irrigable land.

Thus, while multiyear storage could, according to Tafesse, permit Ethiopia to dam roughly 51 billion cubic metres of Nile tributary water, Ethiopia is not expected to consume much more than 10% of this. Conversely, as Waterbury astutely posits, the Sudan 'consistently portrays itself officially as in harmony with Egypt's Nile policies and acquired rights' but, because it could double irrigated acreage, adding 25 billion cubic metres to its water needs, it is 'in profound structural contradiction with its northern neighbor' (p 129). Sudanese dams have been degraded by high sedimentation rates, but the authors detail how the 'master of the middle' could use dams located on the Ethiopian portion of the Blue Nile tributary and on the Akabo–Baro tributary of the White Nile to exploit gravity to convey water to the Sudan's vast irrigable lands, reduce silt accumulation and secure a more reliable power source for the energy-short Khartoum and Wad Medani areas. In Waterbury's thinking, the 'incentive inconsistency' related to the Sudan's midstream position could break the deadlock characterised by Egypt's consistent espousal of 'appreciable harm', reflecting its 'pure' downstream status, and Ethiopia's adamant defence of 'absolute territorial sovereignty' befitting its 'pure' upstream status (a tact Tafesse faults for causing Ethiopia to squander opportunities to influence Egypt more constructively).

By contrast, as detailed in chapter seven of Waterbury, Egypt's more logical hydro-political ally is arguably Uganda, whose 'stake' is predominantly in hydro-electricity, which does not interfere with Egypt's irrigation requirements because it consumes no water and because much of the released water evaporates in the Sudd swamps. The author asserts that Egypt can even free-ride on Uganda to ensure its rights against Kenyan, Tanzanian and Rwandan attempts further upstream to reduce outflows into Lake Victoria (from the Kagera and six smaller Kenyan tributaries) or

to remove water from the lake itself. It is not clarified under what conditions Egypt would assist Uganda in controlling water hyacinth proliferation in the Equatorial lakes (weed growth worsens the problem of Lake Victoria's surface evaporation, already 100 billion cubic metres of water per year), but the suggestion is that any Egyptian motivation to compensate Uganda for augmenting water storage in lakes Victoria and Albert is contingent on building the Jonglei II canalisation project (which could increase the White Nile's flow by 14–20 billion cubic metres) through the Sudd swamps.

Conclusion

Both the featured works here discursively bridge varying fractions of the socio-economic, hydropolitical and geographical distances to multilateral Nile Basin co-operation. As opposed to Tafesse's alarmist conclusion that there is a 'dire need to come up with a basin-wide institutional framework that would have its own legal and technical jurisdiction to implement a fair and equitable entitlement of the waters of the Nile' (p 101), perhaps Waterbury's admonition that solving 'collective action problems in the Nile basin requires a more humble, less ambitious, and more patient philosophy on the part of the concerned parties' (p 12) foreshadows the ironic effect that his dispassionate account could have on undercutting the rigid ideologies of the major Nile stakeholders, on generating awareness among the disinterested Equatorial lakes' states and on promoting the participation of under-represented sub-national groups (consonant with a 2000 report of the World Commission on Dams⁸). Waterbury engages in more explicit norm-building endeavours by arguing for limiting the protections afforded by the doctrine of 'appreciable harm' to vital drinking water needs and for enlisting this principle to protect the interests of the least developed and the environment, especially in the southern Sudan, where the disaffected have indeed asserted a negative veto on collective action. Consequently, if an avenue for further research exists, it may lie in identifying how the various Nile Basin interests can achieve 'comprehensive' human security encompassing more than just state-centric 'common security'.

Notes

- ¹ *Nile Basin Initiative Shared Vision Program: Socio-Economic Development and Benefit Sharing*, Entebbe: Nile Council of Water Ministers, 2001, p 2, available at www.nilebasin.org.
- ² E Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge: Cambridge University Press, 1991.
- ³ D LeMarquand, *International Rivers: The Politics of Cooperation*, Vancouver: University of British Columbia, 1977.
- ⁴ H Haftendorn, 'Water and international conflict', *Third World Quarterly*, 21 (1), 2000, pp 51–68.
- ⁵ J Barnett, *The Meaning of Environmental Security: Ecological Politics and Policy in the New Security Era*, London: Zed Books, 2001.
- ⁶ This project is analysed in P Williams, 'Turkey's h:o diplomacy in the middle east', *Security Dialogue*, 32 (1), 2001, pp 27–40.
- ⁷ E H Carr, *The Twenty Years' Crisis, 1919–1939*, New York: Harper and Row, 1964.
- ⁸ World Commission on Dams, *Dams and Development: A New Framework for Decision-Making*, London: Earthscan, 2000.