

# PRACTICING HYDRODIPLOMACY IN THE 21ST CENTURY

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## INTRODUCTION

The last half of the 20th century is characterized by significant changes in the planning, design, and management of water resources all over the planet. Mounting concerns about the environmental impacts of human activities, potential climatic shifts, expanding populations and demands as well as new knowledge are all expressions of the pressing need to develop also alternative institutional schemes for managing in an integrated manner scarce natural resources. Most recently, the UN publication, The Comprehensive Management of the Freshwater Resources of the World (1997) warns that we must fundamentally change the way we think about and manage water. It also cautions that we must embrace new policies that are comprehensive, participatory, and environmentally sound. Many nations and regions have increasingly been turning attention to both streamlining existing administrative mechanisms and to introducing innovative institutional arrangements with regard to quantitative and qualitative aspects of their water resources. At the same time, the political significance of water becomes most important not only because of its scarcity in densely populated regions, but also because of its sharing across national boundaries.

In this kind of a complex environment we can detect four possible etiological categories of concern:

- a) Eco-metabolism or ecosystemic changes including land degradation, natural resources, ecosystemic hazards, global warming and climatic anomalies, soil exhaustion, desertification or sea level rise;
- b) Human-induced disasters including industrial disasters and the effects of public projects such as dams, environmental despoliation, resource exploitation and degradation including homesteading, deterioration of major watersheds, deforestation, etc.;
- c) Eco-political upheavals including shifting, fading and disputed frontiers, confrontations, revolutions and wars, collapse of regimes, or centrifugal forces of nationalism;
- d) Socio-economic dislocations including collapse of expectations, shifts in the international economy, bad development strategies, water scarcity, access to resources and social turmoil.

Thus, there has been quite a clamor for international cooperation and macro-engineering schemes such as in the Danube, Senegal, Mekong, Amazon, Indus, Niger, Nile, Parana/ LaPlata and other international river basins. But as many authors have repeatedly pointed out, international river basins' institutions have largely proven unsatisfactory. Beyond broad legal imperatives and implicit or expressed political will for cooperation, the practice has been predominantly one of no authority, of rare meetings of interested and/or affected parties, unwillingness to pay, little or no information exchanged, etc.

Experts disagree about how much water is available in given regions. However, awareness is growing that nations must cooperatively manage, engineer, and conserve available water resources. Indeed, as Gleick points out, no region of the world with shared international water is exempt from water-related controversies, though the most serious problems occur in water-scarce regions. Without cooperative management a zero-sum competition will emerge over water. Seasonal and regional water shortages may exacerbate social tensions and precipitate violence. Sharing and cooperation can provide benefits that exceed those achieved by attempts to maximize individual and national self-interest. Ideally, such cooperation requires a new "diplomacy", alternative institutional arrangements, larger financial resources, and effective adjudication or conflict management mechanisms.

There is no need to repeat the context of competing and conflicting demands all over the planet. What is particularly noticeable in many examples of transboundary water dependencies is that countries can come close to severe conflicts over water schemes as e.g. between Hungary and Slovakia regarding the Gabčíkovo/Nagymaros dams, around the Jordan and the Litani in the Middle East, the Ganges in the Indian subcontinent, in the Balkans, the Iberian peninsula and so on. Recent history, rapid socio-economic changes, socio-

political upheavals and the transitions necessitated by the turbulent decades of the 80s and 90s underscore the increasing emphasis on the variety of environmental challenges, the search for sustainable development, the promotion of integrated planning and management, and the attempt to combine structural and non-structural solutions to persistent water resources problems. In this setting of increasing complexity, interdependence and vulnerability, there is an urgent need for intergovernmental integration (through coordination, cooperation and consolidation) of: a) hydrological interdependencies in terms of both uses (rural, urban, industrial, recreational, etc.) and water regime (i.e., surface and ground water, quality and quantity); b) political interdependencies both in terms of horizontal coordination in space and vertical cooperation between levels of government units; c) transboundary interdependencies, representing both social and hydrological trans-state interdependencies; and d) exogenous interdependencies, most notably the potentially dramatic impacts and consequences of climatic shifts and emerging hydrological alterations.

By now it should be apparent that the themes of interdependence, globalization, ecosystemic unity and sustainable development throw new light to traditional understandings of the geopolitical nature of water. River basins can, then, become an expression of "transnational regimes" in environmental politics (from global to bilateral scales). Such regimes can be defined either as a set of norms, rules, or decision-making procedures that produce some convergence in the actors' expectations in water related issues; or, as explicit rules specified in multilateral legal instruments regulating national actions (such as conventions or protocols). The geopolitical nature of water rests on a combination of geography and technology and results not only in variegated historical and cultural paths for various nations, but also in intricate ecological adaptations and capabilities marking manifestations of power and command over resources. The depletion of national water resources, recurring droughts, expanding socio-economic demands have fueled confrontations and have forced international exchanges and cooperation. Since the 805 AD deed of Charlemagne to a monastery for the navigation of the Rhine, more than 3800 unilateral, bilateral, or multi-lateral declarations or conventions on water have been identified with 286 actual treaties of which 61 refer to 200 international river basins (Sironneau, 1993).

Looking back at the historical experience of such efforts, it has been noted that the obstacles erected in the way of the efficient harnessing of these resources by the political boundaries that cut across them have often proved very

difficult to surmount (Godana, 1985). But, recently, there has been not only increased awareness but also noticeable agreement among many States that the interconnection of water resources and the interdependence of developmental interests can be best affected by a commitment to principles of cooperation, effective international law, and a wide range of complimentary mechanisms of conflict management and consensus building.

The geopolitical significance of water is further accentuated by the variety of the conditions outlined above and especially by its scarcity, maldistribution and misuse. The mismatch between political boundaries and natural river basins, becomes, then, a focal point for the variety of difficulties reported in the literature vis-a-vis joint planning, allocation of costs, advantages of scale, exercise of power and coordination, and the whole range of issues associated with integrated, holistic management. Cooperation and conflict are, then, expressions of the same quest for improving effective planning and management, for promoting new ways for sustainable development, and for accommodating the realities of geography to the social context of shared water resources. Such international responsibilities tend to fall into three general categories. First, the "downstream responsibilities" of the water of one state which flows into another. Second, the "upstream responsibilities" of states whose activities may extend upstream and affect another state. And, finally, "cross-stream responsibilities" of countries whose common border is formed by a river, or even when they share underground reserves (Rose 1993).

## ON HYDRODIPLOMACY

The comprehensiveness of water resource planning has been the subject of controversy and debate in the literature. It has been recognized, however, that in order to be able to maximize the benefits from any water resource project a much larger systemic analysis of the surrounding environment is needed, a broadening of the traditionally narrow planning and management approaches, and an increased sensitivity to decision-making problems associated with multi-objective and multi-purpose actions. In this vein a recent publication of the World Bank (1993) has elaborated the need for a comprehensive framework for analyzing policies and options where water scarcities exist, inefficiencies persist and environmental damages are becoming apparent.

Geography suggests that, by virtue of physical unity and regardless of political divisions, a river basin should be developed and managed as a single indivisible whole.

This is because moving water ties land together and interference with its movement has repercussions elsewhere in the basin. While geographic ties prescribe the unitary development of river basins, politics and history distort this process. The nation-state covets its sovereignty. Moreover, the desire to maximize benefits for itself provides the nation state with a powerful incentive to exploit resources unilaterally. This myopic behavior can generate international frictions, confrontations, conflicts, and even war. We are, therefore, faced with a situation in which states, confronted with sub-optimal choices tend to adopt a non-cooperative stance, although cooperation, on specific issues, would be in their mutual interest.

As Mandel (1991) has pointed out, the sources of dispute over international river basins encompasses such diverse disciplines as ecology, economics, social psychology, religion, cultural anthropology, engineering, hydrology, and geopolitics. The author suggests a three-stage explanatory process starting from a non-cooperative setting (with pre-existing general antagonism); to a stage of environmental imbalance encompassing perceived growing scarcity of usable water and inequalities in distribution; to, finally, power asymmetries among riparian nations and little reciprocal interdependence.

Increasingly, in the last fifty years, national interests to divert and develop international water resources, use the resources as a conduit for waste disposal and assimilation, and to preserve certain environmental amenities beyond the historical uses of international rivers have given rise to new international agreements. Yet, as Susskind (1994) notes, the task of generating international agreement on anything is extremely difficult. The procedures currently used to formulate global agreements were not designed for complex ecosystemic and environmental problems, negotiators need to have unique interdisciplinary and technical skills, linkages among environmental concerns and other policy issues must be adequately established, and, effective monitoring and enforcement arrangements must also be devised and properly implemented. In such a demanding task Susskind ends with the pessimistic note as to the serious obstacles to global cooperation, including the increasing split between the developed nations of the North and the developing nations of the South; the persistence of national sovereignty; and the lack of incentives sufficient to bring nations to the table for serious and sustained negotiations.

There are currently a variety of multi-institutional approaches ranging from local institutions involving riverine institutions, national and international NGOs

and research institutions, private sector participants (especially construction firms), bilateral and multi-lateral donors, riparian government institutions, all the way to transnational river basins. All such multiple actors and institutions face problems of vertical and horizontal integration not only in water resources projects, programs and policies; but, also, within and between other resource management entities and local, national, regional, and international organizations. These are principles from international law and their letter and spirit derive from bilateral and multilateral treaties, binding acts of international organizations, rules of customary international law, and judgments of international courts and tribunals. All such components, provide for some general principles and rules with regard to environmental matters (Sands, 1994). Such principles and rules include sovereignty over natural resources, good neighborliness and international cooperation, the precautionary principle (especially when there is scientific uncertainty), the polluter pays principle, and, the common but differentiated responsibility.

Three international legal organizations of high repute have conducted empirical studies of State practice, on the basis of which they have drafted sets of draft rules for the non-navigational uses of international water resources. The Institut de Droit (Institute of International Law, IIL) drafted and approved the 1961 Salzburg Resolution on the Use of International Non-Maritime Waters and the 1979 Athens Resolution on the Pollution of Lakes and Rivers and International Law. In a similar fashion, the International Law Association (ILA) drafted and approved the 1966 Helsinki Rules on the Uses of International Rivers and the 1982 Montreal Rules on Water Pollution in an International Drainage Basin. Finally, the International Law Commission, an independent United Nations legal organization, was commissioned in 1970 to prepare an authoritative set of rules to be adopted by the United Nations General Assembly. In July, 1994 the ILC completed its draft articles on The Non-Navigational Uses of International Watercourses and recommended that the articles be elaborated into a convention by the UN General Assembly or an international conference of plenipotentiaries (George Radosevich, personal communication).

Although there are some subtle differences between the IIL, ILA, and ILC drafts, all three contain the same fundamental principles. It is instructive, then, to summarize five major legal principles that are shaping and will further affect the "hydrodiplomacy" practice. These are (1) the Principle of international water and the concept of an international "watercourse;" (2) the Principle of reasonable and equitable utilization, a

principle that has generated interminable debates and interpretations as to "reasonableness" and "equity;" (3) Obligation not to cause significant harm and the exercise of due diligence in the utilization of an international watercourse; (4) the Principle of notification and negotiations on planned measures; and (5) the Duty to cooperate, including regular exchanges of data.

Cross-cutting this complex legal, planning and management plane are also theoretical problems of the legal doctrines governing the utilization by States of shared water resources. The four doctrines and theoretical approaches most usually encountered include:

- a) the doctrine of absolute territorial sovereignty (the so-called Harmon doctrine), where a riparian may do what it will with the water;
- b) the doctrine of absolute territorial integrity, regarding uninterrupted downstream flow;
- c) the doctrine of limited territorial sovereignty or equitable utilization, which accords recognition to a riparian's jurisdiction, but, at the same time, ensures downstream states a reasonable share of water in reasonable condition; and
- d) the doctrine of community co-riparian states, community of interests in the water or, integrated drainage basin development transcending national boundaries.

River basin planning and management has a long-time honored tradition, from the development of the Tennessee Valley Authority, to the Senegal and Mekong development plans of more recent years. The underlying, common thread in all such efforts has been the development of water resources for a variety of beneficial uses. From such obvious premises, the existing literature has raised the fundamental question as to whether such integrative regional water plans can be fitted within the geographic limits of a whole river basin or watershed. The question of scale, boundary, and geographic planning unit is of central concern for efforts of definition of the problem, identification of parties-at-interest, and implementation mechanisms. Can such joint planning and management take place in the vast expanses of the Nile, the Amazon, the Parana/LaPlata, or should it be restricted to more regional, specific socio-political conflicts of rather well-defined geographic, cultural, environmental, physiographic, economic boundaries? This is why some authors prefer to talk more about "problemsheds" rather than watersheds.

What are the implications for the future of an emphasis on a process of conflict management rather than exact legal products? First, we need to recognize the difficulties associated with formal, legalistic approaches which tend to emphasize predominantly conduct rather than reasonable management (especially where there is no agreed upon river regime). Second, the existing legal approaches (necessary for conduct and enforcement) can be supplemented by such flexible mechanisms as:

- "second track" diplomacy (environmental diplomacy or hydrodiplomacy).
- Alternative Dispute Resolution (ADR) through international bodies or in the spirit of Agenda 21.
- technical/professional or independent panels of experts or what have been called "epistemic communities."
- public awareness, participation and mobilization.

The operational terms for international law and other conflict management mechanisms are complementarily and implementation. At the same time, in existing multilateral agencies there seem to be three vexing problems. One has to do with the historical and cultural inertia of past differences and practices. The second, with the calculation of all costs involved in shared waters' development. And, the third, with the incorporation of social and environmental concerns into planning. These broad problems emphasize once again the need for negotiation, for third party expertise and for dialogue based on factual information. The agreements which have emerged from efforts of "hydrodiplomacy" reflect, in great part, the desire of the signatories to engage in comprehensive national planning, basin-wide management, multi-purpose development, and water quality control. As such, they constitute, first, tangible evidence of an increasing concern with the need to craft flexible but durable regimes capable of enhancing the protection of the ecosystem; and, second, a desire to serve the interests of all parties involved by reducing uncertainty, stabilizing expectations, and promoting the "routinization" of conflict resolution or conflict management.

## **CONSENSUS BUILDING AND CONFLICT MANAGEMENT**

Two terms that are often encountered in discussions of environmental diplomacy are "settlement of disputes" and "conflict resolution." The first usually connotes a more or less permanent institutional machinery for formal

settling of disputes and of ironing out differences. The second can be more conveniently used for more informal ways of managing disagreements and for avoiding or minimizing conflict escalation. The principles of international law, i.e., reasonable and equitable utilization, prevention of significant harm to other states, obligation to notify and inform, obligation to share data, cooperative management of international rivers, obligation to resolve disputes peacefully, as well as formal treaties become the instruments for settling disputes and disagreements.

As we look to the future and in discussing water conflicts for a fast changing, interdependent and turbulent world, we may want to recognize three distinct phases, i.e., conflict creation, conflict management, and conflict resolution. In the first (the genesis of conflicts), the emphasis is on diagnosis, anticipation and prevention, problem architecture, and joint fact-finding. The second phase denotes a stage for the development of confidence and trust through such mechanisms as mediation, arbitration, neutral expert fact-finding, etc. Finally, conflict resolution involves consensus building and depolarizing of conflicting interests through public finding processes or adjudication.

The search for a typology of conflicts and of appropriate responses has led to many speculative thrusts and interesting conceptual schemes. The implication of such attempts is that we should pay more attention to international river basins where the conflict potential is greatest, especially as rivers forming a shared boundary between nations; where human action (e.g., construction of a dam) trigger disruptions; in cases of power asymmetries and non-cooperative settings; and, in cases of noticeable, temporary or permanent, environmental imbalances (as e.g., desertification, drought, water shortages, etc.). It is at this point that writers usually distinguish between "crisis politics" and "routine politics," or between "acute conflicts" (foreign policy, confrontation) and "low politics" (aspects of economic welfare) (See among others Frey, 1993).

International relations have become so complex that alternative dispute resolution means have become important in managing or resolving inter-societal conflicts. The search for alternatives to legal institutions to arbitrate disputes has been prompted not only by a saturation of legal mandates, but also by increasing litigation and confrontation. Mediation, as a compromised discussion between disputants aided by a neutral third party whose judgment is respected, has become a viable alternative to adversarial processes. The gamut of adjudication, arbitration, mediation, conciliation

and even "principled negotiation", expresses various alternative processes of dispute resolution. But criticisms have also risen as to whether such processes can compensate for inequitable power relations or can provide incentives for compliance or acknowledgement of the third party decision when there is no recourse to legal sanctions.

Levi, in his seminal work Contemporary International Law, has succinctly observed that international disputes are nowhere defined in conventions or treaties. But when an international dispute is found to exist states are obliged to settle it by peaceful means in such a manner that international peace and security and justice are not threatened (Levi, 1994). Some states have their own institutions for the settlement of regional disputes (as e.g. the European Union), while other international agencies have specialized procedures. There are a multitude of international organizations and agencies within which disputes can be settled peacefully. Other Accords (such as the Helsinki Accord of 1975) refer directly to disputes among participating states, while the U.N. Convention on the Law of the Sea (1982) foresees the creation of an international tribunal.

There are quite a number of methods available to disputing parties, but no standard legal structure for proceeding. Important here is the entire gamut of voluntary methods of no legally binding nature, but representing the wish to settle disputes without decisions by third parties (e.g. negotiation, mediation, enquiry, and conciliation). In other cases, third parties can through arbitration or adjudication help diffuse and settle conflicts. All such efforts and similar voluntary mechanisms for helping settle conflicts form the backdrop for the practice of Alternative Dispute Resolution. Considerable evidence for the practice of ADR from many parts of the earth creates a basis for some realistic optimism (Gray 1993). Theoretically, collaboration for addressing a wide range of environmental disputes involves three phases, i.e., problem setting (problem definition or problem architecture), direction setting (predominantly negotiations over substantive problems), and implementation (systematic management of inter-organizational relations and monitoring of agreements). All alternative processes proposed (direct negotiations, good officers, mediation, conciliation, etc.) could allow the parties to reach a faster, more timely, and hopefully, more appropriate resolution of disputes or conflict management.

In this context, one can observe in on-going management practices the convergence of formal international legal practices, alternative dispute resolution methods, and

innovative water institutions. The search for comprehensive approaches is calling for more integrated water resources management across boundaries, jurisdictions and uses. Furthermore, cross-boundary, comprehensive, integrated river basin approaches become more feasible when international institutions can serve as magnifiers of public pressure and as sounding boards in competitive politics (as was the case in the Baltic and North Sea ministerial meeting and successive ozone talks after 1987 -- Haas et al. 1993); as springboards for the creation of what the same author has labelled "epistemic communities," i.e., experts in environmental issues sharing principled values regarding the enhancement of collective welfare; as enhancers of a contextual framework for credible commitments among states; and as vehicles for building national capacity through inter-organizational networks and transferring of water relevant information. Such catalytic functions can help promote a more global approach and strengthen any relevant effort for integrated water resources management.

Given such considerations and strong socio-political divisions (even centrifugal forces and fragmentations in many nations) there are three responses that we should consider. First improve efforts towards the utilization of "hydrodiplomacy" in terms of understanding alternative dispute resolution and conflict management efforts to transboundary water resources. Second, recognize again the river basin approach as a cooperative mechanism and authority, and as being much more sensitive to ecosystemic interdependencies. And, third, place particular emphasis on integrated water resources management (including the building of more robust water resources institutions).

The international conference in Dublin on Water and the Environment (1992) and the UN Conference on Environment and Development (UNCED) in Rio de Janeiro during the same year are but only two recent manifestations of the centrality of water, environment and development. A whole host of various "declarations," the various "drafts" of international law organizations, the creation of the World Water Council and similar international efforts all aim at expanding the spatial envelope and in accentuating global perspectives. The transition to the 21st century will require also an institutional order of cooperation, of comprehensive management principles, and of sharing of experiences gained in the practice of ecosystemic principles in water resources projects. Paths to effectiveness for some authors imply the boosting of governmental concern; the enhancement of a contractual and bargaining environment, and, finally, the building of national

capacity (Levi et al. 1991). Others (e.g. Carbonneau, 1989) discuss larger educational and epistemological goals in ADR and in the existing legal system including the building of decentralized alliances, provision of prenegotiation assistance to individual countries, new approaches to treaty drafting, expansion of the role for nongovernmental interests, balancing science and politics, or encouraging issue linkages. The question that should worry us, though, is to what extent sovereign states, multinational corporations, NGOs, or existing international bodies can respond in sharing long acquired power and in implementing action that promotes ecological interdependence and globality of increasing environmental challenges. At the same time, rapid population increases and expansion of activities are creating unprecedented situations requiring new economic paradigms of planning and action. The main problem, then, will be how to achieve integrated planning and management within institutional frameworks which have evolved under different historical and socio-economic conditions and for needs which are incongruous with the present and certainly will differ from projected or desired futures.

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