

The Globalization of Pollution

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Citizens for Global Solutions member **Marquita Hill**, living in Virginia after retirement from the University of Maine's Department of Chemical Engineering, has based this overview for *Minerva* — of some of the many transboundary pollution problems that cannot be solved without international cooperation — on the second edition of her book, *Understanding Environmental Pollution*, published in 2004 by Cambridge University Press.

Marquita Hill's review of several books on biological warfare appeared in *Minerva* #24 (November 2002).

ABSTRACT

The Globalization of Pollution introduces *transboundary pollution* – pollution moving across artificial human borders. It examines examples of the pervasive pollution that crosses borders, and goes on to look at using international treaties to reduce that pollution. The Kyoto Protocol, the purpose of which is to reduce emissions of heat-trapping gases, is used to illustrate the many problems arising when working on a complex and controversial international environmental problem. That Kyoto is finally coming into force is a triumph, but challenges that could overwhelm its goals lie ahead. At the same time, means do exist to move toward a sustainable future.

Introduction and examples of transboundary pollutants

Writing in the *Boston Globe* in July 1996, columnist David Nyhan aptly linked air pollution to global change: “Wind, rain and radioactivity do not stop at the border for passport control, but go where they will. Pollution? Coming soon to a place near you. We’re all Downwinders now.” Pollutants often move for hundreds or thousands of miles, sometimes worldwide. Even if amounts transported to distant points are low, pollutants that are environmentally persistent will build up over time if emissions continue.

Wind-blown pollutants have long been with us. Although humans did most of their metal mining in the twentieth century, the Greeks and Romans mined significant amounts of ore thousands of years ago: lead and copper ores smelted over open fires emitted copious amounts of metal particles, still detected today — in layers corresponding to the years when the mining occurred — in Arctic ice, ocean sediment, and bogs.

Three common, serious air pollution problems, all of which involve traveling pollutants, are touched upon below. All are largely attributed to burning fossil fuels (Table 1).

1. Ambient air pollution¹: smog and haze continue to impact human health in many US cities. In cities of less-developed nations — New Delhi, Beijing or Mexico City are examples — impacts are much worse. In both well-to-do and poor countries, urban pollution spills out to impact agriculture, forests, fish and other aquatic life, and wildlife. International borders are often crossed.

2. ‘Acid rain’: acid deposition results from sulfur dioxide and nitrogen oxide emissions. In the US sulfur dioxide emissions have decreased, resulting in less deposition of sulfuric acid. However, nitrogen oxides emissions have not decreased. The US exports acid deposition to Canada (more than Canada exports to us). Air masses containing acid precursors have also been tracked across the Atlantic Ocean from America’s Eastern coast to Western Europe.

In less-developed countries, sulfur dioxide and nitrogen-oxide emissions are poorly controlled or not controlled at all. Acid deposition is worsening in China and spilling over into other nations. South Korea estimates that perhaps 40% of its air pollution originates in China.

3. Global climate change: this looming problem attributed to heat-trapping gases, is deliberately placed after ambient air pollution and acid deposition. This is done to emphasize that fossil fuel burning has a number of major impacts.

Footnote 1: For unfamiliar terms, see the U.S. EPA’s Terms of the Environment on the web at <http://www.epa.gov/OCEPAterms/>

Increase in earth's surface temperature is explained by increases in atmospheric levels of the 'greenhouse' gas (GHG)² carbon dioxide, and to a lesser extent, of methane and other gases that can trap infrared radiation emanating from the earth.

• During monsoon months a dense brown haze hangs over the Indian Ocean and adjoining Asian lands. It is traced to burning **biofuels** (wood, dung, agricultural waste) in rural India and China. Fossil-fuel burning does contribute too. Biofuels produce

cursors within it lead to acid deposition as the haze moves back inland.

In 2004, pollution plumes from Asia were observed hanging over the East Coast of the US. They presented no problem. However, as Asian population grows and fossil-fuel burning continues upward, they have the potential to affect air quality. One scientist noted, "Unless international control measures are taken, air pollution ... will continue to grow into a global plume across the developed and the developing world."

• Desert sand storms are nothing new. But, with human misuse of land increasing, deserts are expanding, and long-existing deserts increasingly have their surface crusts broken. Sand storms in China create great yellow clouds — observable from NASA spacecraft. When such a storm reaches the city of Seoul, Korea, 750 miles away, impacts include heavy haze, breathing problems, flight cancellations, interference with sensitive manufacturing operations, and more. Japan, further away, is increasingly affected. Prolonged drought is partially responsible, but the Chinese Forestry Administration blames two-thirds of its ongoing desertification on agricultural practices and deforestation. The dust can reach US skies. After one Gobi storm in 2001, the dust crossed the Pacific, then California, and continued onward to Colorado where, over Boulder the sunlight decreased by about 25% before the cloud continued east.

Another type of destruction with long-distance and long-term consequences occurs in the Sahara. There, the number of dust storms has increased an estimated tenfold in the past 50 years. A major cause is the great increase in four-wheel-drive vehicles. Driving these over the desert destroys the lichen and stone crust, which protects the sand from the wind.

Footnote 2: For information on global warming see any environmental textbook, e.g., Chapter 7 in *Understanding Environmental Pollution*. Most texts describe the evidence that the earth is warming and why most of the warming is attributed to increased atmospheric levels of greenhouse gases.

Table 1 Transboundary Air Pollution^a Problems

<p>Pollution to which fossil-fuel burning is a major contributor (but, see 3)</p> <ol style="list-style-type: none"> 1. Ambient air pollution affects health, the environment, crops and forests – ozone and particulates are examples 2. Acid deposition (acid rain) – sulfur dioxide and nitrogen oxides are major offenders 3. Climate change – carbon dioxide is the primary offender. <ol style="list-style-type: none"> i. Methane, an important GHG is not formed by burning fossil fuels. 4. Haze over the wintertime Arctic – metal particulates and other particulates
<p>Pollution to which biofuel burning is a more important contributor than fossil-fuel burning</p> <ol style="list-style-type: none"> 5. Heavy haze over the Indian ocean
<p>Fossil fuel burning is not responsible for the following issues (but, see 6)</p> <ol style="list-style-type: none"> 6. Stratospheric ozone depletion – due to industrial chemicals, chlorofluorocarbons (CFCs) and halons. Other chemicals (such as agricultural fumigant, methyl bromide) contribute. <ol style="list-style-type: none"> i. Fossil-fuel burning has an indirect impact: it contributes particles on which the ozone-depleting reactions catalyzed by CFCs can occur 7. Persistent organic pollutants (POPs)—examples are DDT, dioxins, and polychlorinated biphenyls (PCBs). POPS are concentrating in the Arctic.^b 8. Dust storms originating in deserts and dry water beds in Africa, China, Russia, U.S., etc. 9. Radioactive substances, e.g., from explosion of Chernobyl nuclear power plant
<p>a Fossil-fuel burning also contributes to transboundary water pollution, not dealt with in this article. b Some metals, such as mercury, present problems similar to those of POPs (See issue 4). The acronym, PBTs (persistent, bioaccumulative, toxic) includes these problem metals as well as POPs</p>

It is not only pollutants resulting from fossil-fuel burning that cross borders. Consider issues 5 and 8 in Table 1.

an aerosol containing more soot, thus, the darkness of the haze. It may block 10% of incoming solar radiation; and the acid pre-

Reducing transboundary pollution

Almost by definition, we need international cooperation³ to solve the problems that transboundary pollution poses. Agreements between two adjoining friendly countries such as Canada and the US are less complex than those involving many countries. Our two nations have adopted a number of agreements on troublesome shared pollutants. One of these limits transboundary movement of acid rain pollutants.

International treaties often are developed under the aegis of the United Nations Environmental Program (UNEP). Dozens of examples exist. Consider several of these.

- Fifteen European Union (EU) countries adopted a Protocol in 1999 that set strict emission standards for sulfur dioxide, nitrogen oxides, volatile organic chemicals, and ammonia. As additional countries join the EU, each must meet the same standards, thus increasing the area within which pollutants are well controlled.
- The Stockholm Convention of 2000 was ratified by more than 50 countries. The US did sign, but has yet to ratify, this treaty, which bans or severely limits twelve persistent organic pollutants (POPs). (Also See Table 1, number 7.)
- Before the Kyoto Protocol described below, the most famous environmental treaty was the 1987 Montreal Protocol. With nearly 200 signatories, its purpose was to ban the use of substances that deplete the stratospheric ozone layer, especially chlorofluorocarbons and halons. One action contributing to the Protocol's success is a provision that richer countries provide technical and monetary assistance to less-developed countries to assist them in making the transition from CFCs to substitute refrigerants. Halts in CFC production are verified by experts outside the countries

Footnote 3: Although air pollution is emphasized here, pollutants also move across borders by river and ocean currents, and moving river sediments as well. They can also be carried by polluted fish.

being monitored. In the US, almost all manufacture of CFC and halons ceased by 1995. The Montreal Protocol represented the first global environmental-protection treaty. By the twenty-first century, although CFCs smuggling remains a vexing problem, the ozone layer is described as recovering and there is hope of complete recovery by about 2050.

Unfortunately, the Bush Administration has slowed the banning of another ozone-depleting chemical: responding to agricultural interests, the US government resists banning the agricultural fumigant, methyl bromide, and has obtained an exemption that allows its continued use. According to 1995 Nobel Prize winner Mario Molina, the person identifying the threat to the ozone layer, these exemptions may slow the recovery of the ozone layer. Farmers are, however, actively testing substitutes.

The Kyoto Protocol

In 1997, more than 160 countries met in Kyoto, Japan, and agreed after difficult bargaining to reduce the GHG emissions that lead to global warming. Carbon dioxide is the most significant GHG; methane is second in importance. Developed countries such as those in Europe agreed to reduce GHG emissions an average of 5.2% below 1990 levels no later than the year 2012. Before the Kyoto Protocol could become legally binding, at least 55 countries representing at least 55% of world GHG emissions had to ratify the treaty. Although the US signed the agreement, the Bush Administration later withdrew the US from the Protocol, calling it “fatally flawed”, and claiming that it would greatly hurt the US economy.

Because the US emits 25% of the world's greenhouse gases, many saw this as the end of Kyoto. However, one writer noted, “the inadvertent hero of Kyoto's revival has

Footnote 4: Emissions trading began with sulfur dioxide emissions: each coal-burning power plant is given a limit as to how much sulfur dioxide it can legally emit. If it makes improvements that reduce emissions below its permit, the plant can sell the ‘excess’ to a plant that is emitting above its limit.

been President Bush, whose rejection ... produced a backlash that breathed new life into the negotiations.” Nations continued to ratify the treaty over the following years. Russia, after much vacillation, ratified the Protocol in October 2004. Russia emits just enough greenhouse gases that its ratification tipped the scales over the 55% requirement, indeed up to 61%. Over 55 countries have joined: the total is actually 126, including China, but many are undeveloped countries that need not commit to GHG reductions. Even Saudi Arabia, after complaining about potential loss of oil revenue, recently joined. The Protocol comes into force in February 2005. Indeed, on January 1, 2005, thousands of power plants and other large facilities in Europe began operating under greenhouse gas quotas.

Reducing GHG emissions presents complexities far beyond those posed by reducing ozone-depleting chemicals, under the Montreal Protocol. The Montreal Protocol banned chemicals produced by a relatively small number of manufacturers. However, carbon dioxide is produced almost everywhere by everyone, anywhere that combustion occurs (cars, furnaces, forest fires, etc.). Add in the complications of reducing emissions of methane, nitrous oxide, and other greenhouse gases, and the problems are greater still.

Kyoto does have major problems. One is that the required reductions of 5% to 6% are very small compared to the 60% cuts deemed necessary to stabilize climate. More meaningful cuts clearly will be necessary “post-2012”. However, what the Protocol has already begun to accomplish is to set up the mechanisms to reduce GHG emissions: examples are research and development to bring sustainable energy sources to fruition, emissions trading⁴ for carbon dioxide, use of the clean development mechanism (CDM)⁵, and other steps important to future efforts. Kyoto is lay-

Footnote 5: A provision of the Kyoto Protocol, CDM allows a company to meet part of its lowered GHG emissions requirement by carrying out projects in less-developed countries. For instance, it may install solar roofs on homes, or install the means to capture methane from a landfill, or carry out a reforestation project.

ing out a framework and is also inspiring a new mode of thinking.

That Kyoto did not require less-developed countries also to reduce GHG emissions was especially irksome to the Bush administration. The reasoning that led to this result was that it was largely emissions from developed countries that have raised the atmospheric levels of carbon dioxide and other greenhouse gases to their present values. Moreover, the rich countries are better able, financially and technically, to lead the way.

Many American communities and state governments are choosing to bypass the federal government by making their own commitments to reduce GHG emissions. An increasing number of US corporations believe that eventual regulation of GHG emissions is inevitable, and some have made individual commitments. A few go well beyond a 5% reduction. For those American multinationals with operations in countries where Kyoto is in force, it is a disadvantage that the US is not a party, as they must comply with the Protocol in any case. In 2003, a group of companies (including DuPont, International Paper, Ford Motor, and Motorola) established the Chicago Climate Exchange to do GHG emissions trading based on voluntary emission caps. Insurance companies are increasingly concerned about payouts on a rising number of severe storm events. One giant insurer, the Swiss company Re, is telling its corporate clients to strategize for climate warming or lose their liability coverage. Investors, especially large ones such as those holding pension funds, have begun exerting pressure on the companies in which they invest. Investors can also choose to put their money in companies pursuing clean technologies.

It is increasingly seen that rejecting the Kyoto Protocol harms this country: had the US ratified the treaty and started intensive research and development on “climate-friendly” technologies, it could, as former US Senator Timothy Wirth phrased it, “create jobs and launch an era of economic growth akin to the start-up phase of the Internet”. Not doing so means we are leaving much of this rich potential to the Eu-

ropean Union and Japan. Meanwhile, the Bush Administration continues to oppose the treaty.

Almost everyone recognizes that the world community must think beyond Kyoto. However, a major obstacle to reducing GHG emissions hangs in the offing. Two less-developed countries, China and India, are planning to build a total of almost 800 new coal-fired power plants in the coming decade. Among the fossil fuels, it is coal that emits the most carbon dioxide when burned. The increased carbon dioxide produced would swamp GHG reductions made by countries ratifying Kyoto. At the same time, a developed country — the United States — plans 72 new coal-fired plants. The coming into force of Kyoto will be a hollow victory if concerted efforts are not made to convince India and China that they too must reduce GHG emissions — and to *assist* them in doing so. But how do we convince the US to reduce emissions?

Coal *can* be burned more efficiently. More efficient burning means less coal would need to be used. Integrated gasification combined cycle (IGCC) technology is an efficient way to burn coal and to capture carbon dioxide at the same time. Sequestering⁶ the carbon dioxide produced is possible, although sequestration is currently expensive and controversial. Moreover, IGCC plants cost more than traditional facilities, and most companies will not invest the extra capital. Government subsidies would help.

Footnote 6: Sequestration means capturing carbon dioxide before it is released and burying it within geologic formations from which it is highly unlikely to escape. This is currently expensive, although the U.S. Department of Energy is actively supporting exploratory studies that would lower cost. Statoil is already using sequestration in Norway. Sequestration is also controversial: although carbon dioxide is not toxic at normal levels, if large amounts were ‘explosively’ released from a storage locale, it could suffocate life with which it came in contact. Release of large amounts could also defeat the purpose of storage.

A sustainable future

Building even highly efficient plants is not enough. We need to *conserve* energy, while also continuing active research and development on sustainable energy sources. Reputable estimates indicate that we could cut electric energy usage in the US by a third or more using a combination of conservation and efficiency measures — see the book by Romm (listed below). For a *hopeful* assessment on cutting greenhouse gases, see “Solving the Climate Problem” by S. Pacala and R. Socolow; these Princeton scientists believe that we already have the technology to stabilize climate. And, in “Red Sky at Morning, America and the Crisis of the Global Environment”, Yale’s James Speth argues for a new international organization — something similar to the World Trade Organization — to act on behalf of the environment.

Without being a Pollyanna, one probably can say that these problems are soluble. But solutions require concerned governments, engaged citizens, and a vital United Nations — a United Nations that American citizens appreciate and support. Each of us can be an engaged citizen, and work toward responsible government policies and for a revitalized United Nations. If too discouraged by the current federal government, one can work with state and local governments — such grassroots efforts are indispensable.

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Equitable and Reasonable Use of Water Within the Euphrates-Tigris River Basin

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Water consumption appears to be doubling every 20 years, at over twice the rate of human population growth.

I. Introduction

The principle of subsidiarity suggests that issues should be dealt with at the level upon which they can be resolved most effectively. Sharing water resources from international watercourses requires coordination among nations. The greater their interdependence, the more urgent it becomes for countries to cooperate. Within the framework of the United Nations, subsidiarity requires parties to try to settle disputes through peaceful means. Will dynamic approaches to sharing water be able to overcome Middle Eastern animosity over the Euphrates and Tigris Rivers? Sustainable watershed management involves understanding a given drainage basin, making informed decisions, and implementing egalitarian agreements between upstream and downstream riparians. Once the "cradle of civilization", Mesopotamia thrived upon human ingenuity and stewardship of water.¹ Euphrates-Tigris Basin States can avert conflict over increasing water scarcity by crafting integrated water resources measures, based upon equitable and sustainable utilization.

While water is one of the most abundant substances on the globe, humans can use less than 0.01 percent of the water in the world.² UNESCO notes that, "[i]n the past hundred years, the world population has tripled while world demand for water has increased seven-fold."³ UN Secretary-General Kofi Annan points out that "one person in six lives without regular access to safe drinking water".⁴ According to the United Nations Food and Agriculture Organization (FAO), approximately 10 percent of the world's freshwater is used domestically, 20 percent by industry, and 70 percent by agriculture.⁵

Energy and matter cannot be created or destroyed, according to the first law of thermodynamics. This suggests that we cannot expand the overall supply of water. Yet, Euphrates-Tigris Basin States have the capacity to increase levels of trust between co-

riparians. Clean water is fundamental to both individual and national security and survival. Political fragmentation has raised water management challenges to an international level. Large-scale projects that divert rivers cause rapid change to which co-riparians often lack the ability to adjust. Water has been a significant factor in economic development, explaining why early settlement occurred along rivers and coasts. Rapid population growth has left water-scarce countries at odds with one another over international watercourses. Treaties and joint commissions can allocate water between competing users in light of year-to-year variations in surface flow.

This article analyzes the conditions necessary for Euphrates-Tigris co-riparians to share water equitably. Part II discusses international freshwater law and its ability to balance sovereignty claims made by upper riparians with integrity claims of lower riparians. Part III applies international framework provisions to the Euphrates-Tigris Basin. Part IV assesses the prospect for joint management of the Euphrates-Tigris watershed in light of the region's history of conflict. Part V concludes that Euphrates-Tigris Basin States can collaborate and build upon the work of international and regional institutions to share water equitably.

II. Sovereignty versus Integrity

Freshwater agreements can be traced back to 2500 BC when Lagash and Umma ended their conflict over the Tigris River.⁶ Yet, international freshwater law remains in its infancy due to polarization between the doctrines of absolute territorial sovereignty (Harmon doctrine)⁷ and absolute territorial integrity.⁸ An emerging doctrine of limited territorial sovereignty requires riparians to share water based on equitable utilization.⁹

After more than 25 years of consensus building, the United Nations General Assembly adopted the Convention on the Law of Non-navigational Uses of International Watercourses in May 1997.¹⁰ The Convention sets forth limited territorial sovereignty as the international standard. As a general framework agreement, the Con-

vention seeks to prevent significant harm to downstream riparians while allowing equitable utilization by upper riparians. The Convention's preamble¹¹ refers to Agenda 21, Chapter 18, which emphasizes "the holistic management of freshwater as a finite and vulnerable resource." As a non-binding guide to freshwater management, Agenda 21 seeks "to make certain that adequate supplies of water of good quality are maintained for the entire population of the planet, while preserving the hydrological, biological, and chemical functions of ecosystems . . .".¹² While scientific and legal experts support a drainage basin doctrine,¹³ countries have yet to be willing to grant sufficient sovereignty to institutions responsible for drainage basin management. Upper riparians, such as Turkey, feel that such an approach would push the allocation of rights too far toward the absolute territorial integrity end of the continuum.¹⁴ Despite the urgent need for integrated watershed management, most countries have yet to agree to be bound by limited territorial sovereignty, let alone drainage basin management. Article 2(a) of the Convention clarifies that management should occur at the "watercourse" rather than the ecosystem level.¹⁵

A. Combining Equitable Utilization and No Significant Harm:

Article 5 sets forth "equitable and reasonable utilization" as the foundation principle of the Convention.¹⁶ A few months after the General Assembly adopted the Convention, the International Court of Justice (ICJ) quoted the entire equitable participation paragraph of Article 5(2) in the Court's judgment in the *Gabcikovo-Nagymaros* case, a dispute between Hungary and Slovakia.¹⁷ In relation to Slovakia's unilateral diversion of the Danube River, the Court concluded that Hungary had a "basic right to an equitable and reasonable sharing of the resources of an international watercourse."¹⁸ The Court held that both Hungary and Slovakia had breached a treaty signed in 1977 by the Hungarian People's Republic and the Czechoslovak People's Republic to construct the Gabcikovo-Nagymaros system of dams and locks on the Danube.¹⁹ Hungary abandoned the project, stating that it threatened

the environment and Budapest's water supply. Slovakia demanded that Hungary adhere to the 1977 treaty. Slovakia unilaterally built an alternative project within its own territory, impacting Hungary's allocation of water from the Danube. Without decreasing the gravity of Hungary's environmental argument, the Court found that Hungary should have sought an alternative to abandoning its treaty obligations²⁰ and that Slovakia should not have acted alone in diverting the watercourse.²¹ The Court recognized that environmental awareness had risen over the past two decades and that new standards should be applied not only to future plans but also to the completion of existing projects.²² Breach by both parties did not terminate the treaty.²³ Instead, Hungary and Slovakia remained under an obligation either to carry out the treaty terms or to negotiate a mutually agreed upon solution in light of recent international water law.

Article 6 of the Convention offers factors to help cooperating riparians, such as Hungary and Slovakia in Europe or the Euphrates-Tigris Basin States in the Middle East to find equitable and reasonable levels of water utilization.²⁴ Unpopular with upper riparians, Article 7 provides an obligation not to cause "significant harm."²⁵ Yet Articles 5, 6, and 7 are not to be read in isolation.²⁶ Together they form a flexible standard with which co-riparians can balance sovereignty and integrity. Article 3 encourages riparians to enter into agreements that fine-tune provisions of the Convention to specific watercourses. Countries are also asked to "consider harmonizing" existing water treaties with these principles.²⁷ Article 24 recommends that co-riparians establish joint management mechanisms.²⁸ Since it is difficult for countries to determine whether their water uses are equitable and reasonable without an understanding of the situation faced by co-riparians, Article 8 sets forth an obligation to cooperate²⁹ and Article 9 requires co-riparians to provide one another with information.³⁰ Articles 11 through 19 require notification, consultation, and negotiation before a riparian commences a water project that may significantly harm other watercourse States.³¹ Article 10 states that water disputes should be resolved with

respect to “vital human needs”.³² Sustainable development can be compatible with prioritizing “vital human needs” since intergenerational equity lies at the core of sustainability. Sustainable development meets current needs without compromising the capacity of future generations to meet their own needs. The Court affirmed the centrality of sustainable development in *Gabcikovo-Nagymaros* by stating, “[t]his need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development”.³³ Article 20 of the Convention requires riparians to “protect and preserve the ecosystems of international watercourses”.³⁴ While it takes into consideration both the fragility of the ecosystem and the capacity of a given State, the provision goes beyond significant harm to co-riparians. Article 20 encompasses significant harm to the environment in its own right.³⁵

B. Dispute Resolution

Article 33 calls upon countries to resolve disputes peacefully through the use of joint watercourse institutions.³⁶ Article 33 also suggests negotiation, mediation, arbitration, or submission to the International Court of Justice.³⁷ Peaceful resolution of water disputes has been particularly difficult within the Middle East where fifty percent of the population relies on water that originates in a different State.³⁸ Among the nations of the Euphrates-Tigris Basin, Syria and Iran voted for the Convention. Iraq did not participate. Viewing the provision as a violation of “the sovereignty of countries over the parts of international watercourses located in their territories”,³⁹ Turkey felt that the Convention required compulsory dispute resolution and provided a downstream riparian with veto power over development plans.⁴⁰ While Turkey was one of only three States that voted against the Convention, 37 countries abstained and only 12 States have ratified the instrument.⁴¹ Despite the support of the 103 countries that voted in favor of the General Assembly resolution to adopt the Convention, the slow rate of ratification calls into question the Convention’s influence.⁴² Lacking the requisite 35 ratifications necessary for it to enter into force,

the Convention is not legally binding.⁴³ Both upper and lower riparians had an opportunity to participate in the formulation of generally acceptable provisions.⁴⁴ They adopted a comprehensive document that addressed the global water crisis. Countries must gather the political willpower to commit to the Convention or implement a more effective international freshwater framework.

According to game theory, cooperation is more likely to occur between countries when they are involved in indefinite interactions.⁴⁵ States work together when they do not know when a series of interactions will end. Neighboring countries that share an international watercourse presumably must interact indefinitely. Many of these countries share water equitably with one another. International law can help increase interactions between co-riparians when trust has broken down. Direct negotiations between Euphrates-Tigris Basin States would enable co-riparians to exchange hydrological data and information concerning domestic political constraints. The process toward integrated water resources management could begin with individual studies and technical assistance moving on to joint commissions and a Euphrates-Tigris Basin treaty. Such measures are more likely to occur in a timely manner if seen as intermediate steps. Setting forth a goal of participatory watershed-based management allows politicians to find middle ground at the joint commission stage rather than the unilateral action stage. Forums that increase the frequency of interactions enable riparians to build trust and form stable expectations. Establishing a comprehensive regional authority would provide a setting for further communications and policy coordination. Such international institutions extend intergovernmental relations beyond treaty signing, allowing watercourse States to identify new concerns and collaborative responses to water scarcity.⁴⁶

III. Article 6 of Law of Non-navigational Uses of International Watercourses

In determining equitable and reasonable use, the list of factors set forth in Article 6(1) of the Convention can help Euphrates-

Tigris Basin States understand the dimensions of the conflict and coordinate ways to address growing regional water scarcity.⁴⁷

. . . [This central section of the paper details the hydrological, ecological, social and economic factors characterizing the states of the Euphrates-Tigris basin and their inter-relationships; please see *Environmental Law Reporter*, January 2005, pp 10045–49] . . .

Thomas Naff of Pennsylvania State University, an expert in Middle Eastern water systems, explains that generating the pressure needed to pump a barrel of oil requires a barrel of freshwater. He notes:

“At the core of every effort to establish good health care, good government and a good economy is clean water. You can’t provide any kind of stability without it.”

(Amanda Onion, *Aqua-fying Iraq: Postwar Iraq Faces Big Water Problems in Near and Far Future*, ABC NEWS, 18 April 2003.)

Achieving societal, ecological and economic equilibrium requires Euphrates-Tigris Basin States to design and implement a dynamic water management system.

IV. From Conflict to Consensus

Euphrates-Tigris Basin States share a common religion and heritage. Iraq, Syria and Turkey are not only all predominately Muslim nations, they spent centuries as a single empire. The Euphrates Basin and much of the Tigris Basin fell under Ottoman rule by the early sixteenth century. The Ottoman and Safavid Empires shared the Tigris River without significant conflict.⁴⁸ After World War I, Turkey shrank to its present size, Britain acquired a League of Nations Mandate over Iraq, and France gained a Mandate over Syria. The only

progress in joint management of the basin that included all three countries came in the form of a technical committee to share hydrological data. Meetings began in 1982 between Iraq and Turkey. Syria joined in 1983. Animosity over the Ataturk Dam dealt a fatal blow to these early stages of cooperation. The committee met 16 times before being discontinued in 1992.⁴⁹ In the absence of such multilateral mechanisms as a basin-wide treaty, informal agreements have not been sufficient to guarantee that Syria and Iraq continue to receive an adequate flow of Euphrates-Tigris water.⁵⁰

Iraq, Syria and Turkey need to revive negotiations that have been deadlocked since 1993 to address the effect that Turkey's water projects have had on Syria and the combined impact of Turkish and Syrian projects on Iraq. Both downstream riparians reject Turkey's claim to absolute sovereignty of the Euphrates-Tigris waters. Syria and Iraq fear that GAP [Turkey's Güneydoğu Anadolu Projesi, known in English as the Southeastern Anatolia Development Project] provides Turkey with complete control over the water supply of the region. At best GAP will cut 50 percent of the average flow of the Euphrates into Syria, approximately 500 m³/s. This leaves Syria and Iraq in conflict over the remaining 500 m³/s of water.

A. Existing Regional Organizations

Upon Syrian and Iraqi requests, the League of Arab States (Arab League) has urged Turkey to accept an international treaty.⁵¹ While existing regional organizations can be useful in resolving disputes, several factors make the Arab League ill suited to manage the Euphrates-Tigris Basin. Divisions between members on a wide range of issues hinder the Arab League's ability to provide a forum for conflict resolution. Turkey may be Muslim but it is not Arab and therefore cannot become a member of the Arab League. As a result, arbitration cannot become binding since such dispute resolution mechanisms are only available to members, pursuant to Article 5 of the Arab League Pact.⁵² A member and a nonmember can choose to mediate a dispute under the auspices of the Arab League. The fact that the League

asked Turkey to mediate during the Iran-Iraq War indicates that it is not necessarily the best facilitator when one of the parties is not a member, as was the case with Iran. Since then, Turkish desire to join the European Union (EU) has not been viewed with favor among its Arab neighbors, nor have they responded positively to Turkey signing a military agreement with Israel. Iraq and Syria became founding members in 1945. It would not be surprising, therefore, for Turkey to refuse Arab League involvement even if the League were in a position to mediate. As the upper riparian on the Euphrates-Tigris system, Turkey has little incentive to face two Arab opponents in an Arab forum. As a NATO member, Turkey has military as well as geographic advantage vis-à-vis Iraq and Syria. Significant pressure on the part of the United States and Europe appears to be necessary to induce Turkey to provide co-riparians with more water. Thus, international law and extra-regional pressure may offer the most likely means of establishing joint management of the watercourse.⁵³

B. United Nations Involvement

The United Nations should ensure peace and security in the Middle East by helping co-riparians draft a multilateral treaty suited to dynamic management of the Euphrates-Tigris Basin. Iraq, Syria, and Turkey can coordinate subsequent water sharing arrangements, ideally through the formation of an integrated management authority. If these States prove unable to establish such an institution or it is unable adequately to address problems that arise, then the UN should once again provide assistance. Gross violations of equitable and reasonable utilization should be subject to UN sanctions.⁵⁴ Such measures may be morally enforced through the General Assembly or mandated by the Security Council pursuant to Chapter VII of the UN Charter.⁵⁵

The UN already has played a significant role in Iraq. Averting a water war would help restore international peace and security. On the other hand, since China voted against the Convention, the Security Council may not be able to reach agreement regarding international watercourses. It is

also not clear that water tensions in the Euphrates-Tigris Basin amount to a threat to international peace and security pursuant to Article 39 of the UN Charter.⁵⁶ In the absence of such a threat, the principle of subsidiarity suggests that resolution of the dispute occur at the regional level. Even if the international community does not agree that the Euphrates-Tigris Basin dispute merits UN intervention, third parties to the conflict may still play a positive role in persuading Basin States to codify a water sharing agreement.⁵⁷

International law provides a framework for cooperation by holding everyone within a river basin to the same standard. Economists can offer incentives to internalize environmental externalities and determine whether water is being undervalued.⁵⁸ Scientists and engineers can provide reliable hydrological data. In this way, countries can find efficient, accurate solutions to technical issues. Negotiators have the responsibility to incorporate fairness into the distribution process in order to achieve sustainable sharing of water resources.⁵⁹ Consistent and coherent technological information should be made available to co-riparians. In addition to transparency, accountability is essential to equitable allocation. Joint commissions, authorities and other institutions need to be responsive to all stakeholders.⁶⁰

Cooperation must increase both on a regional and an international level. The international community has been discussing the codification of international freshwater law for over thirty years. The final report of the UN Water Conference at Mar del Plata in 1977 concluded: "It is necessary for States to cooperate in the case of shared water resources in recognition of the growing economic, environmental and physical interdependencies across international frontiers. Such cooperation must be exercised on the basis of the equality, sovereignty and territorial integrity of all States."⁶¹

Scientific contributions can depoliticize negotiations.⁶² Determining water use variables within each country allows leaders to present one another with fundamental needs. Sharing technical expertise allows

co-riparians to respond to unexpected water shortfalls of a temporary nature and come to terms with long-term water scarcity. Most importantly, leaders must agree upon ways in which to enforce mutually agreed upon decisions.⁶³ Article 8 of the Convention provides,

1. *Watercourse States shall cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilization and adequate protection of an international watercourse.*

2. *In determining the manner of such cooperation, watercourse States may consider the establishment of joint mechanisms or commissions, as deemed necessary by them, to facilitate cooperation on relevant measures and procedures in the light of experience gained through cooperation in existing joint mechanisms and commissions in various regions.*

Joint commissions and authorities can provide long-term continuity between countries. When disputes arise they can be resolved in an amicable and timely fashion when forums already exist. The Convention's Article 33 suggests a framework with which Basin States can structure dispute settlement provisions. If Turkey does not find politically feasible the six-month deadline found within Article 33(3) then perhaps the parameter can be extended or some other means can be mutually agreed upon in order for disputes to be resolved before they escalate into hostilities. "Impartial fact-finding" after six months does not provide a stringent obligation.⁶⁴

The Convention suggests that commissions consist of one representative from each country and a neutral chairman. If the parties cannot agree upon a suitable chairman, then either side may request that the UN Secretary-General appoint the chairman. Thus, the UN Secretariat may be able to help end the deadlock over GAP and other aspects of water allocation in the Euphrates-Tigris Basin.

C. Mesopotamia – the Land Between the Rivers⁶⁵

Conflict arises when physical and political changes occur within a watershed at a

rate beyond which a community can come to terms with those changes. Rapid physical change results when large-scale diversion projects, such as dams, alter the water supplies of lower riparians. Within the Euphrates-Tigris Basin this development followed rapid political change. "Internationalized" basins occur when water administration that originates within a cohesive political entity rapidly become fragmented into two or more countries. The collapse of the Ottoman Empire and subsequent colonization of the new States by France and Britain set the stage for wounded international relations and an inability to form regional institutions responsible for equitable water use.⁶⁶

Insisting on prior use rights that date back to antiquity, Iraq has requested that Turkey recognize the integrity of the watercourse, causing "no harm" to existing downstream uses. Syria has held to the doctrine of limited territorial sovereignty, ratifying the Convention in 1998.⁶⁷ While Syria remains one of the few countries to have ratified the Convention, Turkey is one of three nations to have voted against the Convention's adoption. The Turkish government opposes prior notification to co-riparians regarding water projects and the obligation not to significantly harm downstream countries. Syria is deeply disturbed by Turkey's relationship with Israel and Turkey cannot tolerate Syria's support of Kurdish insurgents. Syria's expulsion of Kurdish rebel leader Öcalan and his subsequent capture by Turkey have decreased Turkey's animosity toward Syria, but Turkey's military alliance with Israel continues to complicate Syria's ability to cooperate with Turkey. Syria and Iraq have suppressed their own differences and have presented united opposition to Turkey.⁶⁸ Syrian President Bashar al'Assad's January 2004 visit to Turkey marks a thaw in relations. It is the first visit by a Syrian head of State to Turkey and indicates that an equitable water sharing agreement is plausible.⁶⁹

Stretching from southeastern Europe to southwestern Asia, Turkey is a blend of European and Muslim cultures. While Turkey is the only Middle Eastern member of NATO, Turkish efforts to increase eco-

nomics ties within Europe have yet to result in European willingness to help finance GAP.⁷⁰ As a candidate for EU membership, Turkey might be willing to allow more water to flow to Syria and Iraq in order to gain entry into the EU.⁷¹ With regime change in Iraq, Euphrates-Tigris Basin States have an opportunity to establish integrated yet adaptable water management that can respond to increasing socioeconomic demands and decreasing water availability.⁷² Adaptable approaches make room for input by non-State actors and address the needs of non-signatory riparian States. Advances in information collection and monitoring allow countries to review the equity and sustainability of a given policy. Joint institutions can identify ways to allocate water in light of a common knowledge base concerning basin priorities and hydrological variables. Distributing benefits of water and agreeing to specific conflict resolution measures increases the lifespan of joint management.⁷³

D. Dynamic Response to Water Management:

One of the best examples of an international commission possessing decision-making authority is the International Joint Commission that governs watercourse relations between Canada and the United States.⁷⁴ These two countries have considerable cultural and economic ties.⁷⁵ They have sought to prevent uncoordinated development of the longest unguarded border on earth. Canada (originally negotiating through Great Britain) and the United States have permitted the International Joint Commission to issue binding orders upon the basis of equitable utilization regarding diversion of boundary waters.⁷⁶ Non-governmental representation within the International Joint Commission has proven particularly effective. Each country has an equal number of representatives. These individuals have the authority to make independent decisions without being bound by government instructions.⁷⁷

The 1909 Boundary Waters Treaty is among the earliest non-navigational international watercourse treaties and has become a model for integrated management.

In drafting the treaty, the United States agreed to be bound by International Joint Commission arbitration. In turn, Canada respected United States sovereignty reservations by agreeing to leave out tributaries from the treaty's purview. While "rival" may be derived from the Latin word for river,⁷⁸ riparians do not have to compete over water. Rival has been defined as "one of two or more striving to reach or obtain that which one only one can possess". By sharing water benefits, Canada and the United States have shown how zero-sum disputes can become positive-sum cooperation. Equitable distribution of benefits allocates hydropower and other benefits derived from water rather than the water itself.⁷⁹ Almost a century after its creation, the 1909 Boundary Waters Treaty remains an adaptable framework for cooperation.⁸⁰

In contrast to the 1909 Boundary Waters Treaty, the Indus Waters Treaty⁸¹ between India and Pakistan resolved a conflict between countries that despised one another. It did so through partition rather than integration. The Indus River and its tributaries carry much of the melt-water of the Western Himalayas across the wide plains of the northern Indian subcontinent. Dating back to antiquity and enhanced by British engineering, the irrigation network along the Indus had become the most extensive in the world by the signing of the Indian Independence Act of 15 August 1947.⁸² The vast irrigation system developed under a single administrative entity could resolve provincial water conflicts by executive order, however Indian independence internationalized the Indus dispute. When the British partitioned India in 1947, India's East Punjab controlled the headwaters for most of these rivers while Pakistan's West Punjab gained more irrigated farmland. A bloodbath ensued, induced by population displacement and unresolved territorial disputes between Hindus and Muslims. Ethnic and religious strife prevented the new States of India and Pakistan from resolving their water conflict.

India claimed absolute territorial sovereignty, insisting that water within its territory belonged entirely to India. An imbal-

ance of power contributed to the sluggish pace of negotiations, which lasted from 1951 to 1960. India's relative political cohesion and geographic advantage gave it an incentive to stall. Non-State actors contributed significantly to India and Pakistan's ability to construct a treaty.⁸³ The former head of the Tennessee Valley Authority indicated that an engineering perspective could contribute to resolving the political stalemate. He suggested that India and Pakistan agree to divide the Indus Basin geographically. India would have unrestricted use of the three Eastern Rivers while Pakistan would completely control the three Western Rivers.⁸⁴ The World Bank played a significant role by providing mediation, support staff, funding, and proposals. Financial assistance and creativity can lead to political breakthroughs. The Bank helped persuade the international community to contribute nearly US\$900 million.⁸⁵ The Indus Waters Treaty obligated Pakistan to build a canal system, decreasing its dependence on Indus tributaries given to India by utilizing previously less developed rivers.⁸⁶ India was able to cover the expense of construction with the help of a World Bank-administered development fund.⁸⁷ The Treaty requires India and Pakistan to exchange information and establish joint monitoring mechanisms to ensure enforcement.⁸⁸

Dispute resolution authority subjects parties to binding arbitration of technical questions.⁸⁹ A neutral expert addresses technical issues.⁹⁰ If conflicts rise to the level of a dispute, the permanent Indus River Commission will agree to mediation or arbitration.⁹¹ One representative from each country comprises the Indus River Commission. These representatives often are engineers rather than politicians.⁹² India and Pakistan constructed and carried out this agreement amidst skirmishes, threats, and full-scale war. Neither State sabotaged water projects during hostilities.⁹³ With help from the international community, water relations can become a cornerstone for rebuilding positive relations rather than a catalyst for conflict.

While the Indus River Commission has endured two Indian-Pakistani wars, its partition approach is not as well suited to the

geo-politics of the Euphrates-Tigris Basin. Co-riparian agreement to partition is not the only obstacle. Vast quantities of water will be lost through evaporation if storage capacity is constructed upon the scorching plains of Iraq and Syria rather than Turkey's cold mountain gorges.⁹⁴ Iraqi canals and reservoirs would provide better salt works than water management systems. Triplication of drainage diversion projects would add to salinity issues, not to mention infrastructure expense. Parallel canals on either side of the Iraqi-Syrian border are unnecessary, particularly in areas where integrated management could share water without a canal. Cooperation would be far less costly to both national budgets and the environment than unilateral overdevelopment within each State. Unlike the Indus Valley, the Euphrates-Tigris Basin does not appear to be amenable to division. Violations would be difficult and costly to monitor. Engineers, economists, and environmentalists all favor integrated basin-wide management.⁹⁵

Conflicts between and within Euphrates-Tigris Basin States are among the worst in the world. In this regard, the basin has comparable obstacles to overcome animosity as those of India and Pakistan. Kurdish populations have been ill-treated by every nation within which Kurds reside.⁹⁶ The human rights of Marsh Arabs should not be pitted against the Kurds of Anatolia. Both need water and respect. Local Kurdish communities need to be consulted regarding development on the scale of GAP. A regional organization could provide a forum for public input. Regional interaction over water could also have positive externalities for other sectors. Iraqi political, economic, and social isolation has led to mistrust. At a minimum a regional management authority should involve Iraq, Syria, and Turkey. Given its co-riparian status on the Tigris River, Iran should also become a member. It has only been two decades since Iran and Iraq fought the bloodiest war in the Middle East's recent history. On the other hand, increased population and water scarcity will not slow to the pace of reticent politics. A continued stalemate will lead to severe human rights abuses and environmental devastation. Just as Canada and the United States share a

common cultural heritage, Euphrates-Basin States have a shared background and legal base with which to build consensus. Traditional Islamic law has treated water as a communal resource rather than private property since the Code of Hammurabi. This indicates that Euphrates-Tigris Basin States can build upon a collective tradition of allocation of water for the welfare of the whole society and extend the community resource principle to include basin-wide integrated management.⁹⁷

V. Conclusion

Customary international law recognizes that riparian States alone have legal rights to a given international watercourse.⁹⁸ Limited territorial sovereignty is emerging as a customary rule of international law and is supported by the Convention on the Law of Non-navigational Uses of International Watercourses, the *Gabcikovo-Nagymaros* case, a growing number of regional water treaties, and the majority of the most highly qualified scholars.⁹⁹ In its *Gabcikovo-Nagymaros* decision, the ICJ has condemned unilateral action unequivocally. By establishing a comprehensive set of procedural rules, the Convention provides a framework within which States can exchange technical information and notification of water projects. Joint water management commissions and authorities enhance adaptable co-riparian cooperation. The growth of international organizations and multinational institutions is a tribute to nations' willingness to reallocate power. Yet, claims of sovereignty as unfettered autonomy continue to hinder cooperation between nations. UNESCO suggests that gradual degradation of water quantity & quality is more likely than armed conflict.¹⁰⁰ The World Water Report notes: "Quite simply, sustainable development is not being achieved. It is not being achieved through water supply, sanitation, natural or urban ecosystems, nor through food security industry, energy or economic and social advancement. The everyday lives of billions of people are not being made more secure."¹⁰¹

A year after the International Year of Freshwater, countries remain polarized between the doctrines of absolute territorial sover-

eignty and absolute territorial integrity. State recognition that sovereignty includes an obligation to cooperate as international interdependence grows has yet to translate into a binding international convention on freshwater. Either a minimum of 23 additional States need to ratify the Convention in a timely manner or the international community must gather the requisite collective willpower to draft a convention that can become binding upon the majority of States. Adopting international laws and assuring their compliance can be facilitated through the creation of joint commissions and authorities. Regional water agreements can help drip irrigation and other technological breakthroughs reach fields before salinization further reduces irrigable land.¹⁰²

The geo-politics of the Euphrates-Tigris Basin are marked by a scarcity of both water and trust. The Euphrates and Tigris did not become international rivers until after World War I. Since then rapid political and physical changes have outstripped institutional capacity to resolve disputes. Water scarcity combines with rapid population growth, a view of water as a national commodity, and reliance upon water originating from foreign sources. Until a multilateral agreement is reached, water projects such as GAP will destabilize Middle Eastern relations. A long-term commitment to equitable & reasonable use allows water allocations to be altered if use becomes inequitable or unreasonable.

Ostriches stick their heads in the sand to search for water. Human ingenuity has led to sophisticated hydrological analysis. Creativity also can transcend polarization between upper and lower riparian States. The ancestors of Euphrates-Tigris Basin inhabitants introduced the first written language to humanity. Their descendants must gather the willpower to put words to paper, committing to equitable and sustainable water use.

NOTES:

¹ The Sumer and Assyrians of Mesopotamia developed irrigation by channeling the Euphrates and Tigris. Eyal

Benvenisti, *Collective Action in the Utilization of Shared Freshwater: the Challenges of International Water Resources Law*, 90 AM. J. INT'L L. 384, 385 (1996).

² While water covers 70 percent of the earth's surface, polar caps and glaciers account for most of the freshwater in the world. UNESCO and UN/WWAP (United Nations/World Water Assessment Programme), *UN World Water Development Report: Water for People, Water for Life*. Oxford, 2003, 65-68. The *World Water Development Report* is the first UN system-wide assessment of the world's water resources. It was compiled by 23 UN partners, which together comprise a new UN agency called the World Water Assessment Programme (WWAP). Established in 2000, WWAP's Secretariat is located in the Paris headquarters of UNESCO. After Marrakech, The Hague and Kyoto, Mexico City will host the next World Water Forum in March 2006. In addition to leading the International Year of Freshwater (2003), UNESCO has established the UNESCO-IHE Institute for Water Education in Delft.

³ UNESCO-IHE Institute for Water Education, *From Potential Conflict to Cooperation Potential: Water for Peace Prevention and Resolution of Water Related Conflicts*. Japan, 3 (2003) available at <http://www.unesco.org/water/wwap/pccp> (last visited Jan 9, 2004). See also Population Reference Bureau, 1997 World Population Data Sheet, available at <http://www.prb.org/info/97wpds.htm> pop97, (last visited Jan. 9, 2004). Water consumption appears to be doubling every 20 years, at over twice the rate of human population growth. As global population increases by approximately 85 million people per year the availability of freshwater per head decreases. Maude Barlow and Tony Clarke, *Blue Gold*. New York, 2002, 7.

⁴ Three billion individuals lack adequate sanitation. UN Secretary-General Kofi Annan Message on World Environment Day, available at <http://www.escwa.org.lb/information/press/un/2003/june/5.html>, (last visited Dec. 20, 2003). See also, "In 1850, the amount of fresh water available to each person in the world was 43,000 cubic meters per annum, whereas it is under 9,000 today." Leticia Diaz and Barry Dubner, *The Necessity of Prevent-*

ing *Unilateral Responses to Water Scarcity—the Next Major Threat Against Mankind This Century*, 9 CARDOZO J. INT'L & COMP. L. 1, 4 (2001).

⁵ FAO, *Crops For Drops*. Rome (2002), 2. See also UNESCO and UN/WWAP, *World Water Report*, *supra* note 2, at 192, 224.

⁶ UNEP, *Atlas of International Freshwater Agreements*. Nairobi, 5, (2002) available at <http://www.transboundarywaters.orst.edu/publications/atlas/> (last visited Jan. 9, 2004).

⁷ The Harmon doctrine allows upstream riparians to do as they wish with waters within their territory, without consideration for consequences upon copriparians. It was named after US Attorney General Judson Harmon, who stated: "The fact that the Rio Grande lacks sufficient water to permit its use by inhabitants of both countries does not entitle Mexico to impose restrictions on the United States which would hamper the development of the latter's territory or deprive its inhabitants of an advantage with which nature had endowed them and which is situated entirely within its territory. To admit such a right would be completely contrary to the principle that the United States exercises full sovereignty over its natural territory." See *Treaty of Guadalupe Hidalgo*, 21 OP. ATT'Y GEN. 274, 283 (1895). See also Kevin Scanlan, *The International Law Commission's First Ten Draft Articles on the Law of the Non-Navigational Uses of International Watercourses: Do They Adequately Address All the Major Issues of Water Usage in the Middle East?* 19 FORDHAM INT. 2180, 2107 (1995-1996). See also Aaron Shwabach, *The United Nations Convention on the Law of Non-navigational Uses of International Watercourses, Customary International Law, and the Interests of Developing Upper Riparians*, 33 TEX. INT'L L. 257, 275 (1998).

⁸ Absolute territorial integrity permits a country to use water within its territories as long as it does not injure a co-riparian. This "do no harm" requirement entitles a downstream riparian to an uninterrupted flow of water quality and quantity. Shwabach, at 275-277.

⁹ *id.* at 275.

¹⁰ *Convention on the Law of the Non-*

navigational Uses of International Watercourses, G.A. Res. 51/229, UN GAOR, 51st Sess., UN Doc. A/RES/51/229 (1997); reprinted in 36 I.L.M. 700 (1997) ["The Convention", throughout].

¹¹ 36 I.L.M. 700, at 703 (1992).

¹² *Protection of the Quality and Supply of Freshwater Resources: Application of Integrated Approaches to the Development, Management and Use of Water Resources, Agenda 21*, Ch. 18, 1992, UN Doc. A/Conf. 151/26 (Vol. 2) at 166-67, reprinted in UN Sales No. E.93.I.11 (1993).

¹³ The drainage basin doctrine forms the basis of the International Law Association's Helsinki Rules. See generally, Shwabach, *supra* note 7, at 266.

¹⁴ *id.* at 148.

¹⁵ Article 2(a) explains that "'watercourse' means a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus," 36 I.L.M. 700, at 704.

¹⁶ 36 I.L.M. 700, at 705.

¹⁷ The ICJ declared that "[r]e-establishment of the joint regime will also reflect in an optimal way the concept of common utilization of shared water resources for the achievement of the several objectives mentioned in the Treaty, in concordance with Article 5, paragraph 2, of the Convention on the Law of the Non-Navigational Uses of International Watercourses, according to which: 'Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilize the watercourse and the duty to cooperate in the protection and development thereof, as provided in the present Convention.' (General Assembly Doc. A/51/869 of 11 April 1997.)" *Case Concerning the Gabčíkovo-Nagymaros Project* (Hungary v. Slovakia), 1997 ICJ, General List No. 92, (Judgment of 25 September), 37 I.L.M. 162, 201, para. 147, (1998), available at http://www.icj-cij.org/icjwww/idocket/ihs/ihsjudgment/ihs_ijudgment_970925_frame.htm (last visited Dec. 9, 2003).

¹⁸ *id.* at 190, para. 78.

¹⁹ *id.* at 202, para. 155.

²⁰ *id.* at 186, para. 56.

See also *id.* at 174, para. 18. in

which the ICJ explains that "Article 1, paragraph 1, of the 1977 Treaty describes the principal works to be constructed in pursuance of the Project. It provided for the building of two series of locks, one at Gabčíkovo (in Czechoslovak territory) and the other at Nagymaros (in Hungarian territory), to constitute "a single and indivisible operational system of works." The Danube flows through nine countries on its path from the Black Forest to the Black Sea. The Gabčíkovo-Nagymaros dispute occurred along a 200-kilometer stretch of the Danube that forms part of the Slovakia-Hungary border between Bratislava and Budapest.

²¹ "The Court considers that Czechoslovakia, by unilaterally assuming control of a shared resource, and thereby depriving Hungary of its right to an equitable and reasonable share of the natural resources of the Danube — with the continuing effects of the diversion of these waters on the ecology of the riparian area of the Szigetkoz — failed to respect the proportionality which is required by international law," *id.* at 112, para. 196.

²² "[T]he Court wishes to point out that newly developed norms of environmental law are relevant for the implementation of the Treaty," *id.* at 191, para. 85.

²³ *id.* at 194, para. 101.

²⁴ 36 I.L.M. 700, at 706.

²⁵ Article 7(1) states that "[w]atercourse States shall, in utilizing an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse States," *id.*

²⁶ Article 7(2) requires that, "[w]here significant harm nevertheless is caused to another watercourse State, the States whose use causes such harm shall, in the absence of agreement to such use, take all appropriate measures, having due regard for the provisions of articles 5 and 6, in consultation with the affected State, to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation," *id.*

²⁷ 36 I.L.M. 700, at 704.

²⁸ 36 I.L.M. 700, at 711.

²⁹ 36 I.L.M. 700, at 706-07.

³⁰ 36 I.L.M. 700, at 707.

³¹ 36 I.L.M. 700, at 707-710.

³² Article 10(2) explains that, “[i]n the event of a conflict between uses of an international watercourse, it shall be resolved with reference to articles 5 to 7, with special regard being given to the requirements of vital human needs.” 36 I.L.M. 700, at 707.

The Statements of Understanding Pertaining to Certain Articles of the Convention clarify that, “special attention is to be paid to providing sufficient water to sustain life, including both drinking water and water required for production of food in order to prevent starvation,” 36 I.L.M. 700, at 720.

³³ 1997 I.C.J. 92, at 201, para. 140.

³⁴ 36 I.L.M. 700, at 710.

³⁵ Stephen McCaffrey, *An Overview of the U.N. Convention on the Law of the Non-Navigational Uses of International Watercourses*, 20 J. LAND RESOURCES & ENVTL. L. 57, 66 (2000).

³⁶ 36 I.L.M. 700, at 713.

³⁷ 36 I.L.M. 700, at 713-14.

³⁸ Scanlan, *supra* note 7, at 218. See also, Christopher Kukk and David Deese, *At the Water's Edge: Regional Conflict and Cooperation Over Fresh Water*, 1 UCLA J. INT. 21, 27 (1996-1997). Climatic and hydrological conditions, such as high evaporation rates and low rainfall, add to the complexities of water scarcity.

³⁹ Schwabach, *supra* note 7, at 274.

⁴⁰ Jordan Kahn, *1997 United Nations Convention on the Law of the Non-navigational Uses of International Watercourses*, 1997 COLO. J. INT'L ENVTL. L. & POL'Y 178, at 182, (1998).

⁴¹ The UN Department of Public Information, available at <http://www.un.org/events/water/WaterWithoutBorders.pdf>. (last visited Jan 2, 2004). See also, UNEP, *Atlas of International Freshwater Agreements*, *supra* note 6, at 53. See also, United Nations, UN Treaty Collection, available by subscription at http://www.un.org/Depts/Treaty/final/ts2/new files/part_boo/xxviiiboo/xxvii_12.html.

⁴² 103 countries voted in favor of the Convention, 3 voted against, 37 abstained and 33 were absent. For a complete list of the States, see Convention on the Law of Non-navigational Uses of International Watercourses, UN GAOR, 51st Sess., 99th plen. mtg., UN Doc. A/51/PV.99 at 7-8. (1997). See also, UNEP, *Atlas of Interna-*

tional Freshwater Agreements, *supra* note 6, at 5.

⁴³ The UN Department of Public Information, *supra* note 41.

⁴⁴ McCaffrey, *supra* note 35, at 71.

⁴⁵ Repetition of negotiations increases cooperation. Jutta Brunnée and Stephen Toope, *Environmental Security and Freshwater Resources: Ecosystem Regime Building*, 91 AM. J. INT'L L. 26, 57 (1997). See also Franz Perrez, *The Efficiency of Cooperation: a Functional Analysis of Sovereignty*, 91 AM. J. INT'L L. 26, 554 (1997).

⁴⁶ Benvenisti, *supra* note 1, at 387-412. See also Shashank Upadhye, *The International Watercourse: an Exploitable Resource For the Developing Nation Under International Law?* 8 CARDOZO J. INT. 61, 101 (2000). See also Brunnée and Toope, *supra* note 45, at 39. See also UNESCO and UN/WWAP, *World Water Report*, *supra* note 2, at 299.

⁴⁷ Article 6(1) states, “Utilization of an international watercourse in an equitable and reasonable manner within the meaning of article 5 requires taking into account all relevant factors and circumstances, including:

(a) Geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;

(b) The social and economic needs of the watercourse States concerned;

(c) The population dependent on the watercourse in each watercourse State;

(d) The effects of the use or uses of the watercourses in one watercourse State on other watercourse States;

(e) Existing and potential uses of the watercourse;

(f) Conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect;

(g) The availability of alternatives, of comparable value, to a particular planned or existing use.”

36 I.L.M. 700, at 706.

⁴⁸ Joseph W. Dellapenna, *The Two Rivers and the Land Between: Mesopotamia and the International Law of Transboundary Waters*, 10 BYU J. PUB. L. 236 (1996).

⁴⁹ Todd McDowell, *Water Conflict and the Tigris-Euphrates Water Basin: A*

Status Report, 1997 COLO. J. INT'L ENVTL. L. & POL'Y, 204.

⁵⁰ Timeline of agreements after Mesopotamia was divided into Iraq, Syria, and Turkey:

• December 23, 1920 - The French and British created a joint committee (Convention on Certain Points Connected to the Mandates of Syria, the Lebanon, Palestine, and Mesopotamia).

• October 20, 1921 - Turkey and France permitted the Syrian city of Aleppo to withdraw water from the Euphrates (Agreement with a View to Promoting Peace).

• May 30, 1926 - General Turkish-French treaty lacking specificity (Treaty of Friendship and Good Neighborliness).

• May 3, 1930 - Declaration that disputes over the Tigris shall be resolved on the basis of complete equality (Final Demarcation Protocol of Commission on the Turco-Syrian Frontier).

• March 29, 1946 - Turkish-Iraqi treaty agreeing not to alter the Euphrates' flow in the absence of mutual consent (Protocol Relative to the Regulation of the Waters of the Tigris and Euphrates annexed to Treaty of Friendship and Good Neighborliness).

• 1973 - Keban and Tabqa Dams began to fill.

• June 13, 1975 - Treaty concerning the state frontier and neighborly relations between Iran and Iraq and protocol.

• December 26, 1975 - Agreement between Iran and Iraq concerning the use of frontier watercourses and protocol.

• 1980 - Turkey and Iraq established a Protocol of the Joint Economic Committee, permitting Joint Technical Committee meetings to discuss water.

• 1983 - Syria began participating in Joint Technical Committee meetings.

• 1986 - Unsuccessful tripartite meeting between Turkish, Syrian and Iraqi ministers.

• 1987 - During a visit to Syria, Turkish Prime Minister agreed to a minimum flow of 500 m³/s across the Turkish-Syrian border. In a security protocol signed the same day, Syria agreed to end incursions into Turkey by Kurdish separatists (nonbinding protocols of security co-operation and economic co-operation).

• April 17, 1989 - Syrian-Iraqi Joint minutes concerning the provisional division of waters of the Euphrates River.

- January 1990 - Turkey closed the gates to the reservoir on the Ataturk Dam, the largest of the GAP dams, stopping the flow of the Euphrates for 30 days.
- 1990 - At a tripartite meeting Iraq requested that 500 m³/s of water across the Syrian-Iraqi border. Turkish representatives classified the request as a technical issue and talks broke down.
- April 16, 1990 - Iraq and Syria agree to share whatever water reaches the Turkish-Syrian border on a basis of 58% to Iraq and 42% to Syria.
- 1992 - The first talks between Turkish, Syrian, and Iraqi following the Gulf War stalled when Iraq insisted that its 6,000-year-old irrigation economy needed a flow of 700 m³/s across the Syrian-Iraqi border.
- 1993 - Bilateral talks between Turkish Prime Minister and Syrian President produced a promise to resolve water allocations by the end of 1993. To date the issue remains unresolved.
- October 20, 1998 - Minutes between Syria and Turkey on cooperation in fighting terrorism, Annex 2.
- August 23, 2001 - Joint communiqué between Republic of Turkey Prime Ministry Southeastern Anatolia Project Regional Development Administration (GAP) and Arab Republic of Syria Ministry of Irrigation General Organization for Land Development (GOLD). GAP and GOLD agreed to collaborate on technical training.
- January 6, 2004 - President Bashar al' Assad makes first visit by a Syrian head of State to Turkey.

See Dellapenna, *supra* note 48, at 238; UNESCO and UN/WWAP, *World Water Report*, *supra* note 2, at 314; UNEP, *Atlas of International Freshwater Agreements*, (Agreements of Asia) *supra* note 6, at 51; Beach et al.; and Cohen, *supra* note 50, at 511-513. See also British Broadcasting Corporation, available at http://news.bbc.co.uk/1/hi/world/middle_east/3370917.stm (last visited Jan. 15, 2004).

⁵¹ Kukuk and Deese, *supra* note 38, at 49. See also McDowell, *supra* note 49, at 206.

⁵² Jonathan E. Cohen, *International Law and the Water Politics of the Euphrates*, 24 N.Y.U. J. INT'L L. & POL. 529 (1991).

⁵³ *id.* at 530.

⁵⁴ "The Security Council may decide

what measures not involving the use of armed force are to be employed to give effect to its decisions, and it may call upon the Members of the United Nations to apply such measures. These may include complete or partial interruption of economic relations and of rail, sea, air, postal, telegraphic, radio, and other means of communication, and the severance of diplomatic relations," *United Nations Charter* art. 41, para 1 (1945).

⁵⁵ *id.* at 554.

⁵⁶ "The Security Council shall determine the existence of any threat to the peace, breach of the peace, or act of aggression," *United Nations Charter* art. 39, para 1 (1945).

⁵⁷ Article 33(2) of the Convention provides that, "[i]f the Parties concerned cannot reach agreement by negotiation requested by one of them, they may jointly seek the good offices of, or request mediation or conciliation by, a third party, or make use, as appropriate, of any joint watercourse institutions that may have been established by them or agree to submit the dispute to arbitration or to the International Court of Justice." 36 I.L.M. 700, at 713.

⁵⁸ Equilibrium and efficiency are fundamental to both economics and law. "Economics studies rational behavior, defined as the pursuit of consistent ends by efficient means." Robert Cooter and Thomas Ulen, *Law and Economics*. New York: HarperCollins Publishers, 1 (1988).

⁵⁹ Katrina Smith, *Fairness In Water Quality: a Descriptive Approach*, 4 DUKE ENVTL. L. & POL'Y F. 85, 89 (1984).

⁶⁰ UNESCO and UN/WWAP, *World Water Report*, *supra* note 2, at 372.

⁶¹ *Report of the United Nations Water Conference*; Mar del Plata, Argentina, General Assembly, UN Doc. E/CONF.70/29 (1977), at 53. See generally Joseph Dellapenna, *Treaties as Instruments for Managing Internationally-Shared Water Resources: Restricted Sovereignty vs. Community of Property*, 26 Case W. Res. J. Int 27, 52 (1994). See generally Dellapenna, *supra* note 48, at 52.

⁶² Colleen Graffy, *Water, Water, Everywhere, Nor Any Drop to Drink: the Urgency of Transnational Solutions to International Riparian Disputes*, 10 GEO. INT'L ENVTL. L. REV. 440 (1998).

⁶³ Dellapenna, *supra* note 48, at 55.

⁶⁴ 36 I.L.M. 700, at 713.

⁶⁵ Dellapenna, *supra* note 48, at 214.

⁶⁶ Aaron T. Wolf et al., *Conflict and Cooperation: Survey of the Past and Reflection for the Future*, in WATER RESOURCES UPDATE 14 (Universities Council on Water Resources 2003), available at <http://www.transboundarywaters.orst.edu/publications/> at 9-10.

⁶⁷ Dellapenna, *supra* note 48, at 252-253.

⁶⁸ McDowell, *supra* note 49, at 207.

⁶⁹ British Broadcasting Corporation, available at http://news.bbc.co.uk/1/hi/world/middle_east/3370917.stm (Last visited Jan. 15, 2004).

⁷⁰ Dellapenna, *supra* note 48, at 231.

⁷¹ Amanda Onion, *Aquafying Iraq: Postwar Iraq Faces Big Water Problems in Near and Far Future*, ABC NEWS, available at http://abcnews.go.com/sections/scitech/World/Iraq_water_030418.html (last visited Dec. 27, 2003).

⁷² Iraq invaded Kuwait in August 1990 [until] the Gulf War of January-February 1991. . . . In March 2003, a US-led invasion of Iraq overthrew Saddam Hussein. These forces remain in Iraq . . .

⁷³ UNESCO and UN/WWAP, *World Water Report*, *supra* note 2, at 319.

⁷⁴ Article 7 of the *Treaty Between Great Britain and the United States Relating to Boundary Waters and Boundary Questions* states that "[t]he High Contracting Parties agree to establish and maintain an International Joint Commission of the United States and Canada, composed of six commissioners, three on the part of the United States, appointed by the President thereof, and three on the part of the United Kingdom, appointed by His Majesty on the recommendation of the Governor in Council of the Dominion of Canada." *Treaty Between Great Britain and the United States Relating to Boundary Waters and Boundary Questions*, Jan. 11, 1909, United States-Canada, 36 Stat. 2448 ["1909 Boundary Waters Treaty"].

⁷⁵ The Great Lakes-St. Lawrence River system comprises one-fifth of the world's surface freshwater and is home to the industrial epicenters of each country. Geographically, Canada is the second and the US is the third largest country. Both are leading forces in the global market. Their economies are technologically ad-

vanced and highly diversified. *CIA World Factbook 2003*, available at <http://www.cia.gov>.

⁷⁶ Industry rather than agriculture has had the greatest impact upon the Great Lakes Basin. Water quality provisions have lagged significantly behind water allocation measures. In 1987, Canada and the United States signed a pollution protocol, Article IV of which requires the two governments and the Commission to identify and work toward the elimination of critical pollutants. Canada and the United States currently divert between a half to three-fourths of the average flow of the Niagara River. In addition to allocating water quantity between each country, the 1909 Boundary Waters Treaty prohibited polluting shared waters. This provision was seldom enforced. Instead, both States courted industries with cheap electrical power generated by massive hydroelectric projects. An industrial corridor boomed, dumping billions of gallons of toxic chemicals directly into the Niagara River. While a practical location for chemical production, the Niagara Falls region is geologically ill suited to chemical spills. Beneath a thin layer of silt and sand, bedrock dolomite and shale form aquifers and subterranean cracks that deposit groundwater into the river. Chemical plants dumped sludge into open pits. As the city of Niagara grew, schools and neighborhoods were located on this land. The Love Canal disaster brought prominence to the human toll of chemical contamination.

In 1892 William Love began digging a canal. He hoped to provide inexpensive power by linking the upper and lower Niagara River via a man-made waterfall. Finances forced Love to abandon an incomplete three thousand feet long hole, which in 1920 was eventually sold at public auction. It served as a toxic waste dump until 1953. Hooker Chemical & Plastics Corporation, now owned by Occidental Chemical Company, was the primary contributor, disposing of over twenty-one thousand tons of chemicals. The US Army dumped parts of the Manhattan Project and other chemical warfare material into the Love Canal. When the unlined canal was full, Hooker covered it with dirt and sold the land to the Board of Education for one dollar. Hooker specified that it was not li-

able for any chemical waste buried on the site. Families who moved into the area were not warned about the dump.

In 1978, Lois Gibbs read in the newspaper that her child was attending an elementary school on top of a toxic waste dump. She began by canvassing her neighborhood with a petition to close the school. She ultimately formed a national campaign. Local, state, and federal government officials initially joined Occidental in denying a relationship between leeching chemicals and sick and dying residents. Before the year was out, the first two rows of houses surrounding the dump had been evacuated. Since the removal of these first two hundred and thirty-nine families had not been based on any understanding as to the extent of contamination, the remaining ten-block area including Lois Gibbs' family did not accept that they were not at risk. They continued to organize. Community health studies identified abnormality clusters along old streambeds. In 1979 the health department issued a second evacuation order for pregnant women and children under two. Ultimately, President Carter came to Niagara Falls in 1980 to sign an Emergency Declaration funding the permanent relocation of all 900 families. While twenty thousand tons of waste are still buried in the center of this community and no one has deemed it "safe", by 1988 Love Canal was declared "habitable". New families became bound to clauses stating that if they were harmed due to the toxic chemical dump, the government was not responsible.

The City of Niagara Falls, New York is one of twenty-six Superfund sites in Niagara County. Roughly seventy thousand people live within three miles of the canal. Only six of twenty-six Niagara River toxic priority sites that were identified for rapid cleanup in 1987 have been remedied. Water quality may not appear as crucial as water quantity. Yet, the overall cost of development without regard for the limitations of the environment can be catastrophic. See New York State Department of Health, <http://www.health.state.ny.us/nysdoh/environ/lovecan.htm> (last visited Jan. 8, 2004); Environmental Protection Agency, <http://www.epa.gov/history/topics/lovecanal/> (last visited Jan. 8, 2004); *Habitability of the Love Canal Area: An*

Analysis of the Technical Basis for the Division on the Habitability of the Emergency Declaration Area - A Technical Memorandum (Washington, DC: US Congress, Office of Technology Assessment, OTA-TM-M-13, June 1983); and University Archives, University Libraries, State University of New York at Buffalo available at http://ublib.buffalo.edu/libraries/projects/lovecanal/background_lovecanal.html (last visited Jan. 8, 2004).

⁷⁷ Grafty, *supra* note 62, at 424.

⁷⁸ Daniel Webster, *Webster's New International Dictionary*. Cambridge: The Riverside Press, 1924. Literally it means the inhabitant of the opposite bank of a river.

⁷⁹ Hydropower generation accounts for 57.9 percent of Canada's production of electricity. *CIA World Factbook 2003*, *supra* note 75.

⁸⁰ UNESCO and UN/WWAP, *World Water Report*, *supra* note 2, at 319.

⁸¹ *Indus Waters Treaty*, Sept. 19, 1960, India-Pak., 419 UNTS 125.

⁸² Like Mesopotamia, the Indus Valley has been irrigated since ancient times. The eighth century brought Arabs and the twelfth century saw the arrival of Turks. Britain controlled India by the nineteenth century. While Gandhi led a nonviolent movement that regained independence in 1947, partition of the subcontinent into the secular state of India and the Muslim state of Pakistan proved to be far from peaceful.

⁸³ Grafty, *supra* note 62, at 425-427.

⁸⁴ Article 2(1) provides that "all the waters of the Eastern Rivers shall be available for the unrestricted use of India, except as otherwise expressly provided in this Article" and Article 3(1) states that "Pakistan shall receive for unrestricted use all those waters of the Western Rivers," *Indus Waters Treaty*, 419 UNTS 125.

⁸⁵ UNEP, *Atlas of International Freshwater Agreements*, (Indus Case Study) *supra* note 6, at <http://www.transboundarywaters.orst.edu/projects/casestudies/indus.html> (last visited Jan. 9, 2004).

⁸⁶ Article 4(1) requires that "Pakistan shall use its best endeavors to construct and bring into operation, with due regard to expedition and economy, that part of a system of works which will accomplish the replacement, from the Western Rivers and

Resources

other sources, of water supplies for irrigation canals in Pakistan which, on 15th August 1947, were dependent on water supplies from Eastern Rivers," *Indus Waters Treaty*, Sept. 19, 1960, India-Pak., 419 UNTS 125.

⁸⁷ Article 5(1) states that, "In consideration of the fact that the purpose of part of the system of works referred to in Article IV (1) is the replacement, from the Western Rivers and other sources, of water supplies for irrigation canals in Pakistan which, on 15th August 1947 were dependent on water supplies from the Eastern Rivers, India agrees to make a fixed contribution of Pounds Sterling 62,060,000 towards the costs of these works," *Indus Waters Treaty*, Sept. 19, 1960, India-Pak., 419 UNTS 125.

⁸⁸ Article 6, *Indus Waters Treaty*, Sept. 19, 1960, India-Pak., 419 UNTS 125.

⁸⁹ Article 9(5), *Indus Waters Treaty*, Sept. 19, 1960, India-Pak., 419 UNTS 125.

⁹⁰ Article 9(2)a, *Indus Waters Treaty*, Sept. 19, 1960, India-Pak., 419 UNTS 125.

⁹¹ Article 8(4) explains that, "the purpose and functions of the Commission shall be to establish and maintain co-operation between the Parties in the development of the waters of the Rivers." *Indus Waters Treaty*, Sept. 19, 1960, India-Pak., 419 UNTS 125. See also Dellapenna, *supra* note 48, at 46.

⁹² Article 8(1) provides that "India and Pakistan shall each create a permanent post of Commissioner for Indus Waters, and shall appoint to this post, as often as a vacancy occurs, a person who should ordinarily be a high-ranking engineer competent in the field of hydrology and water-

use," *Indus Waters Treaty*, Sept. 19, 1960, India-Pak., 419 UNTS 125. See also UNESCO and UN/WWAP, *World Water Report*, *supra* note 2, at 314.

⁹³ Dellapenna, *supra* note 48, at 261.

⁹⁴ This is also true regarding the geopolitics of Ethiopia 7 Egypt on the Nile.

⁹⁵ The United Nations champions regional watershed management as often as possible. Dellapenna, *supra* note 48, at 257-258.

⁹⁶ Recent animosity stems from the 1978 creation of the Kurdistan Workers' Party (PKK). Calling for an independent Kurdistan, this . . . group instigated insurgency activities in Anatolia. [It] has adhered to a cease-fire since September 1999, after the capture of PKK leader Abdullah Ocalan in Kenya. Several thousand PKK militants are located in northern Iraq, where they have had several clashes with Turkish military units. In April 2002, PKK renamed itself the Kurdistan Freedom and Democracy Congress (KADEK).

⁹⁷ The Shari'a originally meant "the path to the watering place." Dellapenna, *supra* note 48, at 260-261.

⁹⁸ Dellapenna, *supra* note 48, at 35.

⁹⁹ *id.* at 36.

¹⁰⁰ UNESCO and UN/WWAP, *World Water Report*, *supra* note 2, at 319.

¹⁰¹ *id.* at 508. As this article was going to press in the EJRW, UNESCO helped support the international conference on "Regional Hydro-Political Challenges of Sustainable Management of Trans-boundary River Basins", in Beirut, October 2004.

¹⁰² Kukuk and Deese, *supra* note 38, at 57.

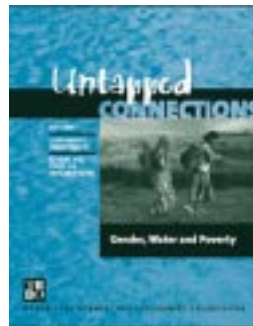
Common Ground - Women's Access to Natural Resources and the United Nations Millennium Development Goals, by Rebecca Pearl, is a presentation of the Women's Environment and Development Organization (WEDO), with UNFPA support. It can be obtained at <www.wedo.org> or 355 Lexington Avenue, 3rd floor, New York, NY 10017-6603; tel 212-973-0325; fax 212-973-0335.

Gender, Water and Poverty: Key Issues, Government Commitments And Actions for Sustainable Development, written by Prabha Khosla & Rebecca Pearl and offered by WEDO & UNFPA, includes a section on "International Commitments on Gender, Poverty and Water".

Also from WEDO (and Public Citizen), with support from the Water Unit of the Ministry of Foreign Affairs of The Netherlands: ***Diverting the Flow - A Resource Guide to Gender, Rights and Water Privatization***, edited by Anna Grossman, Nadia Johnson and Gretchen Sidhu.

At the third session of the Permanent Forum on Indigenous Issues in New York, WEDO and the United Nations Environment Programme (UNEP) launched a new policy series publication, ***Women and the Environment***, making explicit the "decisive roles women play in managing and preserving biodiversity, water, land and other natural resources". That they are so often "ignored or exploited . . . means that a chance for better management of those resources is lost, along with opportunities for greater ecological diversity, productivity for human sustenance and economic development," writes UNEP Executive Director Klaus Toepfer, outlining why gender equity is essential for achieving sustainable development, eliminating poverty and upholding human rights. The publication, funded by the United Nations Foundation, "urges women and men to take an active role in environmental governance and offers specific guidelines on gender mainstreaming and analysis in project planning and implementation".

See also: "Dehydrating Conflict", by Sandra L. Postel and Aaron T. Wolf, in *Minerva* #24 (November 2002)



A new "concept of shared sovereignty" of natural resources between countries could avert wars over controlling water, said UNESCO's water division Director Andras Szollosi-Nagy at the August 2000 International Geological Congress in Rio de Janeiro.

Women's Environment & Development Organization (WEDO) is an international advocacy organization that seeks to increase the power of women worldwide as policymakers at all levels in governments, institutions and forums to achieve economic and social justice, a healthy and peaceful planet, and human rights for all.

Four books on economic globalization & employment from WomenInk (777 UN Plaza, New York, NY 10017):

Chains of Fortune: Linking Women Producers and Workers with Global Markets (September 2004), edited by Marilyn Carr, argues that, while "much has been written about the negative impact of globalization on the world's poor, and especially on women, . . . globalization also opens up new economic opportunities if poor women producers and workers are enabled to take advantage of them". It presents six case studies of successful integration — in Ghana, Samoa, Mozambique, South Africa, Bangladesh, and India — and "aims to present decision-makers with concrete examples which spread the gains of globalization to poor working women through shifting the balance of access, power and returns within global value chains".

Introducing Gender, Development and Trade (Oxfam Focus on Gender Series, November 2004), edited by Maree Keating, IWTC's Booklink says: "Women all over the world are increasingly joining the bottom rungs of the global supply chain. . . . [Their] labor and skill are crucial elements of the scaling-up of globalized production processes. It can be argued that increased opportunities to join the cash economy are a positive development for women, whose additional income has the potential to increase both their status and the well-being of the family. But what are the hidden costs of new trade regimes, and do they outweigh the benefits? What do women stand to lose and how do trade agreements on intellectual property, movement of migrant labour, and agriculture potentially entrench overall poverty and women's overburdened gender role further? Women are finding ways to influence national and international trade policy

agendas in developed countries and are linking globally at forums such as Cancun. Contributors to this volume cover issues in countries including China, Botswana, Mozambique & Mexico and explore some of the many dimensions of gender and trade in local and cross-border enterprise, regional agreements, and the WTO."

Trading Away Our Rights - Women Working in Global Supply Chains (May 2004), by Kate Raworth, argues that women workers "systematically are being denied their fair share of the benefits from their labor" and that "failure to address this injustice will perpetuate a model of globalization that is failing poor people."

In *Mainstreaming Informal Employment and Gender in Poverty Reduction: A handbook for policy-makers and other stakeholders* (September 2004), Martha Alter Chen, Joann Vanek and Marilyn Carr emphasize "the lack of attention to employment, and especially informal employment, in poverty reduction strategies and point to the links between being informally employed, being a woman or a man, and being poor — in the context of major changes related to economic restructuring and liberalization. The book draws on recent data of the global research policy network called Women in Informal Employment: Globalizing and Organizing (WIEGO) as well as experience of the grassroots organizations in the network. It "provides a convincing case for an increased emphasis on informal employment and gender in poverty reduction strategies, and sets out a strategic framework that offers guidelines for policy-makers seeking to follow this approach".

"Premised on the need for women workers to organize at local and international levels in order to respond effectively to the new opportunities — and negative impacts — associated with global trade and investment, **Women in Informal Employment: Globalizing and Organizing (WIEGO)** is "a global research and policy analysis network linked to the SEWA-inspired international movement of women in the informal economy. A major thrust of WIEGO's work is to mobilize credible research and statistics in support of the working poor

— especially women — in the informal economy." FMI: <www.wiego.org>.

To deal with specific trade issues, the **International Gender and Trade Network** "brings together gender advocates actively working to promote equitable, social, and sustainable trade using research, advocacy and economic literacy". Its bulletin and papers are at <www.genderandtrade.net>.

For papers from the 13th annual conference (August, in Oxford, England) of the **International Association for Feminist Economics (IAFFE)**, go to <www.iaffe.org>. Themes: Poverty and Gender, Engendering the Environment Debate, Gender and the Legacy of Empire, Gender Gaps in Property and Wealth, Governance and Institutions, Gender and Aging and Migration and Gender in the Context of Globalization. The 2005 IAFFE conference will be held in Washington DC, June 17-19.

IAFFE's *Feminist Economics: Journal of the International Association for Feminist Economics* "provides an open forum for dialogue and debate about feminist economic perspectives with an aim of opening new areas of economic inquiry, fostering diverse voices and encouraging critical exchanges". This year a special issue is planned on Gender and Aging.

Network Women in Development Europe (WIDE) "monitors and influences international economic and development policy and practice from a feminist perspective". Its website section on economic literacy is reputed to be especially useful <www.eurosur.org/wid>.

One of the useful resources listed there: *Gender-Specific Curricula and Training Resources on Globalization and Trade*, a work in progress compiled by Carol Barton and Mariama Williams. This annotated bibliography includes curricula and popular pamphlets "for use in economic literacy training with an explicit gender-focus".

Women in the Market: A Manual for Popular Economic Literacy, produced by

WIDE, “combines gender analysis and gender sensitivity with the essential principles and techniques of popular education training to develop a better understanding of the fundamental working of a market economy.”

A Fair Globalization: Creating Opportunities for All is a report of the **World Commission on the Social Dimension of Globalization**, an ILO initiative. Gender is a crosscutting issue appearing throughout. Noting that global unemployment has reached over 185 million people, while the ‘informal economy’ continues to grow, the report stresses that “successful policies to respond to globalization need to start with local communities, . . . including defending rights to voice, culture and identity, and building up local production capabilities that can hold their own in the global economy while respecting local aspirations and priorities”. It proposes “a series of multi-stakeholder Policy Development Dialogues to work on key issues including gender equality as an instrument for a more inclusive globalization”. For a full copy of the 168-page report, go to <www.ilo.org/public/english/wcsdg/index.htm>; for a 4-page summary, see the UN Non-Governmental Liaison Service (NGLS) Roundup #112, April 2004, available at <www.un-ngls.org>.

The Institute for Women’s Policy Research (IWPR), the Women’s Studies Program at the George Washington University, and the Friedrich Ebert Foundation are sponsoring the **International Women’s Policy Research Conference**: “When Women Gain, So Does the World”, 20–21 June 2005. FMI: <www.iwpr.org>

In Washington DC in November, a group of women’s organizations announced a new book by Arvonne Fraser and Irene Tinker, *Developing Power: How Women Transformed International Development* (Feminist Press).

The Women’s Environment & Development Organization has prepared an information & action guide called *Women’s*

Empowerment: Gender Equity and the Millennium Development Goals, downloadable at <www.wedo.org>.

Women Unlimited <womenunltd@vsnl.net>, an associate of Kali for Women (India’s first and oldest feminist press), includes in its publications list scholarly books (usually in English), monographs, pamphlets and other “activist material” often dealing with issues of development and religious fundamentalisms.

Resources Against Communalism and Religious Fundamentalism in India, a bibliography compiled by Indian activist Harsh Kapoor, is part of a series that seeks systematically to “list and document information on the worldwide rise of fundamentalism and its effects on women”; it also lists “initiatives and writings that are attempting to counter such movements”. It may be found at the website of **Women Living Under Muslim Laws** <www.wluml.org/english/index.shtml>, an “international solidarity network that provides information, support and a collective space for women whose lives are shaped, conditioned or governed by laws and customs said to derive from Islam”.

Challenging Fundamentalisms: A Web Resource for Women’s Human Rights arose from an international meeting in 2002 on the “Warning Signs of Fundamentalism”. It “monitors and analyses fundamentalism and its adverse effects on women across the globe”, in matters such as health and sexuality, education, employment, political participation, etc. It includes interviews with “women who are leading initiatives to protect rights where they are undermined by fundamentalism”. Maintained by the Association for Women’s Rights in Development (AWID), Rights and Democracy and Women Living Under Muslim Laws, the website also provides “an online research tool specific to fundamentalism” <www.whrnet.org/fundamentalisms/>.

Women Against Fundamentalisms is an online journal <<http://waf.gn.apc.org/articles.htm>> managed by a London-based organization of the same name to discuss “the impact of religious fundamentalism”

on women in Bangladesh, India, Pakistan, and other countries.

UNFPA has released a new publication, *Culture Matters - Working with Communities and Faith Based Organizations: Case Studies from Country Programs*, that “highlights case studies of strategies to deal with cultural and religious factors impeding women’s health”.

The **National Council for Research on Women** revealed last year that more than 25 popular factsheets and statistical reports on topics ranging from reproductive health care to pay equity have been removed from the website of the US Department of Labor’s Women’s Bureau.

Cultural Survival is an organization that works to promote the human rights of indigenous peoples across the globe. With an “emphasis on the health, migration, legal standing, natural resources and cultures of indigenous peoples”, its website <www.culturalsurvival.org> includes *Women the World Must Hear* and other resources on women’s rights.

“When security scholars survey the most worrisome potential conflicts in Asia, they should keep in mind a variable to which they might not have given much thought: the sex ratios of the countries involved,” write Valerie M. Hudson and Andrea M. Den Boer, authors of *Bare Branches: The Security Implications of Asia’s Surplus Male Population* (*International Herald Tribune*, 13 May 2004). Centuries-old son preference and modern birth policies & practices in China continue to mean a shortage of women and an unruly surplus of what are called “bare branches” there. Chinese officials now are warning that severe gender imbalance could encourage men who are unable to find wives to engage in prostitution, sex crimes, and kidnapping & selling of brides (BBC News, May 2004). Similar problems in India and elsewhere in Asia are worsening also, as the first generation of bare branches since the advent of sex identification technology

is turning 20. Hudson and Den Boer state that “conservative estimates of the number of young adult bare branches in China in 2020 will be about 30 million, in India about 28 million”, and there already are large numbers of them in contested places such as Kashmir and Taiwan (*Washington Post*, 4 July 2004). They point out that scarcity of women tends to produce a permanent subclass of restless unmarried men with little or no stake in society — aggravating social instability and evoking desperate authoritarian reactions. “In societies where the status of women is so low that they are routinely culled from the population, even before birth, the prospects for peace and democracy are seriously diminished. . . . At some point, governments consider how they can export their problem, either by encouraging emigration of young adult men or harnessing their energies in martial adventures abroad. There are very few good options for governments that find that their greatest threat emanates not from an external source but from an internal one. . . . Abnormal sex ratios may very well alter security calculations concerning threat and deterrence.” Obviously this does not affect Asia alone.

The Women’s Learning Partnership for Rights, Development, and Peace, headed by Mahnaz Afkhami, works “to strengthen the transnational women’s movement emerging from the Global South” through transnational cooperation “built around dialogue-based horizontal and participatory communication”. It has conducted leadership trainings with thousands of women, developed IT training centers for women in the Middle East and Africa, and produced culture-specific multimedia learning tools in nine languages. “Participants in WLP’s programs have developed and implemented projects in their communities [on] issues such as women’s economic empowerment, adult literacy, reproductive health, HIV/AIDS, advocating for family laws that better protect women’s rights, and increasing the number of women candidates in elections.”

Papers presented at WLP’s international conference “Clash or Consensus: Gender and Human Security in a Globalized

World,” held in Washington, DC in October 2003, are now available online <<http://www.learningpartnership.org/events/2003/clashorconsensus/program.phtml>>. The papers “discuss human security in relation to development, human rights, religious fundamentalisms, democratic governance, and post-conflict reconstruction”.

The universality of human rights and, alas, of violence against women is demonstrated in a new report by the **World Organization Against Torture**, examining Bangladesh, Brazil, Cameroon, Colombia, Eritrea, Estonia, Mali, Russia, Turkey, and the United Kingdom.

The Canada-based **Coalition for Women’s Human Rights in Conflict Situations** — established in 1996 “to promote adequate prosecution of perpetrators of crimes of gender violence in transitional justice systems based in Africa, in order to create precedents that recognise violence against women in conflict situations and help find ways to obtain justice for women survivors of sexual violence” — has launched a website <www.womensrightscoalition.org> that “examines the advocacy work of the Coalition at the International Criminal Tribunal for Rwanda, the International Criminal Tribunal for the Former Yugoslavia, and the Sierra Leone Truth and Reconciliation Commission on strategies for the prosecution and investigation of gender crimes, including rape as a crime of genocide, witness protection and support, the disclosure of rape witnesses’ medical records during trial,” and so forth. “The site contains *amicus curiae* briefs, letters, memorandums and articles by the Coalition [that] can be used as a resource by women’s rights activists, international legal experts, [and] students.” The Coalition’s activities are coordinated by the Women’s Rights Programme at Montreal-based Rights & Democracy <www.ichrdd.ca>.

In March 2004 **Amnesty International** launched its multi-year international campaign to Stop Violence Against Women, a project aiming to ensure that all nations have adequate resources to protect women

from violence everywhere, and to “underscore the varying social, cultural and economic factors that lead to oppression of women”. Amnesty plans a “Global Week of Action for Women’s Rights”, 1–8 March 2005.

Global Prescriptions: Gendering Health and Human Rights (2003), by Rosalind Petchesky, “reviews a decade of women’s participation in UN conferences, transnational networks, national advocacy efforts and sexual and reproductive health provision, assessing both their strengths and weaknesses. It critiques the Cairo, Beijing and Copenhagen conference documents and World Bank, WHO and health sector reform policies. It also offers case studies of national-level reform and advocacy efforts and appraises the controversy concerning trade and AIDS drugs.” This book is available from <www.womenink.org>, where there are many other titles on women & global health issues.

Women and Aids: Confronting the Crisis — a Joint Report by UNAIDS / UNFPA / UNIFEM — “is an urgent call to action to address the triple threat of gender inequality, poverty and HIV/AIDS, because “by tackling these forces simultaneously, we can reduce the spread of the epidemic and its devastating consequences”. It focuses on areas identified by the Global Coalition on Women and AIDS. A copy may be requested from <Yvans.Joseph@undp.org>.

The Global Coalition on Women and AIDS is “a movement of partners and organizations launched in 2004 to work towards mitigating the impact of AIDS on women and girls worldwide. It seeks to promote concrete, effective action that will improve the[ir] daily lives” FMI: <<http://womenandaids.unaids.org/>>

UNIFEM and UNAIDS host a “comprehensive” gender and **HIV/AIDS web portal** at <www.genderandAIDS.org>.

The Geneva-based **Joint United Nations Programme on HIV/AIDS** (UNAIDS <www.unaids.org>) “brings together nine

UN agencies in a common effort to fight the epidemic”: UNICEF, the World Food Programme (WFP), the UN Development Programme (UNDP), UNFPA, the Office on Drugs and Crime (UNODC), the International Labour Organization (ILO), UNESCO, the World Health Organization (WHO), and the World Bank. UNAIDS “works with a broad range of partners — governmental and nongovernmental, business, scientific and lay — to share knowledge, skills and best practices across boundaries”. One of its “special initiatives” is the Global Coalition on Women and AIDS.

Aimed at “connecting young women activists and leaders, facilitating inter-generational dialogue, and encouraging more women to participate in development and advocacy”, **AWID’s Young Women and Leadership Program** provides a variety of e-resources and an online mentorship program. It also sponsors the Young Women and Leadership Institute (YWLI), which focused last year on strategies for tackling HIV/AIDS and poverty. FMI: <www.awid.org>

Advancing Women’s Leadership: Training of Trainers Guide (2004), by Mary Jo Larson and Xiaoping Tian, is published by **The Centre for Development and Population Activities** (CEDPA <www.cedpa.org>) “as a tool to develop Women’s leadership in development and health” and is available from <www.womenink.org>.

In December UNFPA issued its 2004 report, *Cairo Consensus 10 Years After: Population, Reproductive Health and World Efforts to End Poverty*, stating that every year over 500,000 women die of preventable causes. FMI: <www.unfpa.org>

In its annual *State of the World’s Children* report (2004), UNICEF for the first time published tables listing all the world’s countries and comparing their records on problem areas including health, child mortality, education, economy and nutrition — in order to shame governments into action,

said its head, Carol Bellamy. “The data is not a one-day story. It sure as heck ought to be used to try and accelerate better investments in children,” she told Reuters (9 December). See the grim details at <www.unicef.org>.

The *Child Soldiers Global Report 2004*, presented to the public in November and now online at <www.child-soldiers.org>, documents policies and practices related to child recruitment in 196 countries, and examines regional and global trends since the **Coalition to Stop the Use of Child Soldiers** published its last report in 2001. Casey Kelso, Coordinator of the Coalition, writes in “Time to Honor Commitments” (editorial, *Child Soldiers Newsletter* #12, Autumn 2004) that the UN Security Council repeatedly has “identified and condemned those who enlist children in their wars, but has failed to act on their condemnations. ‘The problem is not that we lack the power to do this — the problem is our failure to use the power effectively, consistently and urgently,’ according to Graça Machel, the author of a 1998 UN study, *The Impact of Armed Conflict on Children*. Those of us who must deal with the consequences of that failure for children can become disheartened by the continuing violence that threatens young people in so many countries. Many who read the *Child Soldiers Global Report 2004* may be dismayed at the lack of progress. But in her preface to the [it], Graça Machel sends a special message of encouragement to all activists — in the Coalition, in families, in governments and UN agencies, and in civil society groups. Her powerful words set a tone of hope for such distressing documentation. . . . ‘Your determination to bring an end to the use of child soldiers, your perseverance and your unstinting efforts in the face of grave dangers are shining examples of what true humanity and commitment mean,’ she says. ‘You keep alive the flame of hope and the belief that by working together we can create a world where children can grow up with love, in dignity and in peace.’” FMI: Coalition to Stop the Use of Child Soldiers International Secretariat, 2nd Floor, 2-12 Pentonville Rd, London N1 9HF, United Kingdom <www.child-soldiers.org>

In October the United Nations published its *Gender Resource Package for Peacekeeping Operations* — a comprehensive guide for those serving in the field and at headquarters, “aimed at integrating concerns about equality and the particular concerns of women into the workings of missions across the globe”. The UN calls this “the latest manifestation of a growing trend towards tackling gender issues in the once male-dominated world of peacekeeping. It also reflects the changing nature of conflicts themselves, which increasingly not only target women but involve them as fighters Specific instructions are offered for sensitizing peacekeeping personnel to gender issues, including increasing women’s representation [only 1.5% in 2003] in the missions, especially in the higher ranks.” As there is still much to learn in this realm, the guide is acknowledged to be “very much a work in progress”.

The 2004 **US Department of State** *Trafficking in Persons Report* is available at <www.state.gov/g/tip/rls/tiprpt/2004>.

The **Institute for International Law of Peace and Armed Conflict** <www.ifhv.de>, established in 1988 at the University of Bochum in Germany, publishes a quarterly journal and books, organizes conferences and seminars in humanitarian law and human rights law, and makes statements on current international issues.

The **Academy on Human Rights and Humanitarian Law** of American University’s Washington College of Law is accepting applications through 6 May 2005 to participate in an intensive 3-week summer program, 31 May–17 June. For details and applications, visit <www.wcl.american.edu/humright/hracademy>.

As part of the *Exploring Humanitarian Law* materials that the Education Development Center (EDC) in Massachusetts has developed for the International Committee of the Red Cross (ICRC), a selection of the Basic Rules of IHL (international humanitarian law) — “to convey the substance and spirit of the laws to second-

ary school students” — is being made available, with permission of the ICRC, on EDC’s Global Learning Group website <<http://www2.edc.org/glg/>> as a resource for educators.

Human Rights Watch’s *Genocide, War Crimes, and Crimes Against Humanity: Topical Digests of the Case Law of the International Criminal Tribunal for Rwanda and the International Criminal Tribunal for the former Yugoslavia* is available online <<http://hrw.org/reports/2004/ij/>> and in print <<http://store.yahoo.com/hrwpubs/2004reports.html>>.

The Permanent International Criminal Court - Legal and Policy Issues (Hart Publishing Ltd., March 2004), edited by Dominic McGoldrick, Peter Rowe and Eric Donnelly, “critically examines the fundamental legal and policy issues involved in the establishment and functioning” of the ICC. FMI: <www.hart.oxi.net/bookdetails.asp?id=380&bnd=1>

In late 2004, a special report by *American Prospect* magazine on the standing of human rights in the US included an article by Anne-Marie Slaughter, Dean of the Woodrow Wilson School of Public and International Affairs at Princeton University, on “**The Partial Rule of Law: America’s opposition to the ICC is self-defeating and hypocritical**”, accessible at <www.prospect.org>.

The creation of the ICC is one of the world’s best examples of concerted engagement of NGOs, including a very effective gender justice caucus. In presenting the report of the Panel of Eminent Persons on Civil Society-UN Relationship, known as the **Cardoso Panel**, to the UN General Assembly in October, the Secretary-General cited as particularly significant its first proposal: that the UN “... should become a more outward-looking organization, making more of its role as a global convener of diverse constituencies relevant to an issue.” This can contribute to more realistic solutions to problems than sole reliance on states, he said; for example, it may be useful to the Security

Council to consult with civil society in post-conflict peacebuilding. Furthermore, “more effective engagement with NGOs also increases the likelihood that UN decisions will be better understood and supported by a broad and diverse public.”

A New Weave of People, Power and Politics: The Action Guide for Advocacy and Participation (World Neighbors, 2002), by Lisa Veneklasen and Valerie Miller, “breaks down the traditional boxes separating human rights, rule of law, development, and governance, and reconnects them in order to create an integrated approach to rights-based political empowerment”. It promises to combine practical action with a sound theoretical foundation for activists and researchers “dealing with power, politics and exclusion”. Find it at <www.womenink.org>.

The contributors to ***Inclusive Citizenship: Meanings and Expressions*** (2004, edited by Naila Kabeer), who explore many difficult questions of citizenship & identity and their policy implications, include several women, and there is a chapter on indigenous women & citizenship <www.womenink.org>.

Educating Citizens for Global Awareness, edited by Nel Noddings, is presented by the Boston Research Center for the 21st Century (January 2005) in hope of stimulating “conversation with educators”. It can be purchased from Teachers College Press <www.tcpress.com>. FMI: <www.brc21.org/books>

At last year’s session of the UN Commission on Human Rights, Costa Rica called for a **Second UN Decade for Human Rights Education** (HRE) to begin this year and for an International Plan of Action for HRE for 2005—2014.

In Capetown at the beginning of the month that ended in tragic destruction along the coasts of Southeast Asia and East Africa, the **Inter-Agency Network for Education in Emergencies** (INEE) — made up of UN agencies, NGOs, governments and consultants — issued *Minimum Standards for*

Education in Emergencies, Chronic Crises and Early Reconstruction, a handbook for relief organizations, aiming to “plug a gap in existing standards for disaster relief by redefining education as a potentially lifesaving activity” (Reuters, 8 December 2004). Resulting from a 10-year project, the guidelines emphasize the importance of classrooms, however makeshift, as an essential aspect of emergency response — offering a sense of stability & hope as well as psychosocial support, survival skills, protection from exploitation, formal schooling, structured playtime, and orientation toward conflict resolution and peacebuilding. The handbook specifies minimum levels of provision alongside key indicators for assessment, focuses on integration of community participation and local resources, and in particular urges agencies to consider the barriers frequently preventing girls from attending school.

Women’s Intercultural Network, Inc. (WIN), based in San Francisco, “links women & girls across cultures, globally and in US communities. WIN creates settings and opportunities for women & girls to come together to exchange ideas & skills in professional, economic and political leadership and to foster better understanding for cross-cultural relationships”.

In situations — positive or negative — where rapid response grantmaking can have a “significant impact”, the **Urgent Action Fund for Women’s Human Rights** provides “financial support for strategic interventions” in three categories: situations of armed conflict, escalating violence or politically volatile environments; precedent-setting legal or legislative action; and protection of women human rights defenders. Grants are made in accordance with the Beijing Platform for Action. For example, when UN peacekeepers first entered Sierra Leone to support a fragile peace agreement, “an investigation by the Women’s International League for Peace and Freedom (WILPF) and other Sierra Leonean activists revealed that there was no provision to train the soldiers on issues surrounding gender and children in armed conflict. Taking the initiative, with

an Urgent Action Fund grant, WILPF negotiated a first-of-its-kind agreement with the Department of Peacekeeping Operations (DPKO) under which NGOs could assist with gender training to the UN troops." And in Nigeria in 2000, when officials suddenly destroyed market stalls of women traders, many of them widows with no other means of support, the International Federation of Women Lawyers (FIDA) used a grant to help the traders & their supporters organize a protest march, file a legal suit, and launch a public awareness campaign. "Today, the women traders have their stalls back and have secured the legal right to the spaces. This initiative has demonstrated to the women involved the positive outcomes that can be achieved by organizing peacefully against violations of their rights." For other sample grants, additional criteria, and application procedures, see <www.urgentactionfund.org>.

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The best clue to . . . development potential is the status and role of women.
 - **David S. Landes**, economic historian at Harvard, *The Wealth and Poverty of Nations*

Letters to the editor:

During the period of uncertainty about *Minerva's* fate while the World Federalist Association and Campaign for UN Reform evolved into Citizens for Global Solutions, the editor appreciated the many expressions of appreciation and support sent by readers. Thanks especially to advocacy by Ron Glossop during the formation of the new World Federalist Institute of Citizens for Global Solutions, the Institute has decided to continue *Minerva*, twice yearly. As she evolves in this new phase, your comments and contributions are welcome.

Thank you,
Thesil

Establishment of Women's Initiatives for Gender Justice

Dear colleagues and friends,

On behalf of the Board, the Advisory Council and the staff, I announce with great pleasure the establishment of Women's Initiatives for Gender Justice (WIGJ, formerly Women's Caucus for Gender Justice) in The Hague. . . . With the institution of the International Criminal Court . . . in The Hague, the [New York-based] function of advocacy in the process that the Women's Caucus so wonderfully performed ceased to exist. Instead a need for an institution has arisen that would perform the function of a "gender watch" of the Court in The Hague. WIGJ has been established . . . in response to this need. More specifically, WIGJ would:

- monitor the developments at the International Criminal Court from a gender perspective and ensure the implementation of the gender mainstreaming mandates in the Statute of the Court throughout all stages;
- ensure that the International Criminal Court adequately equips itself to be willing and able to address and provide redress for violations against women;
- facilitate and maintain a pool of experts on sexual and gender violence, victims and witnesses and institutional aspects of gender mainstreaming to support the Court's efforts in this respect;
- network with women's human rights constituencies around the world to spread awareness of the existence of the International Criminal Court and to explore together ways to assist women victims access the Court for justice;
- support, encourage and assist women's initiatives and women's groups in the regions to engage in education and training activities on issues related to gender and international justice mechanisms.

As an individual, group or network that supported the core principles of the Women's Caucus, we hope you would

continue your support of the above functions of the Women's Initiatives for Gender Justice as well.

While the institutional matters of WIGJ [are] led and managed by a small team of Board members and staff, its substantive work will be driven with the advice and contributions from members of its Advisory Council. The Board members and staff are: Betty Murungi - Kenya, Loeky Drogen - The Netherlands, Vahida Nainar - India (Chair), Brigid Inder - New Zealand (Executive Director) and Nathalie Lasslop - Germany (Office Manager), with Brigid and Nathalie being the full-time staff. The Advisory Council [is a] highly experienced team of women activists, lawyers, jurists and academics with expertise on matters concerning sexual and gender crimes and/or international humanitarian and human rights laws. Advisory Council members are:
 Ariane Brunet, Canada
 Cecelia Medina, Chile
 Christine Chinkins, UK
 Dubravka Zarkov, The Netherlands
 Eleanora Zeolinska, Poland
 Gabi Mischkowski, Germany
 Heisoo Shin, South Korea
 Hillary Charlesworth, Australia
 Kerstin Grebäck, Sweden
 Lorena Fries, Chile
 Mary Robinson, Ireland
 Nazhat Shamim, Fiji
 Pam Spees, USA
 Paula Escarameia, Portugal
 Purev Tsetsgee, Mongolia
 Rashida Manjoo, South Africa
 Rhonda Copelon, USA
 Ruth Ojiambo Ochieng, Uganda
 Sara Hossain, Bangladesh
 Sara Sharrat, Costa Rica
 Tina Dolgopool, Australia

We would like to acknowledge all those without whose support the re-grouping and establishment of WIGJ in The Hague would not have been possible. First, we acknowledge all of you for recognizing the importance of and consistent support the work of the Women's Caucus. The phenomenal success that women around the world have achieved in influencing the creation of the ICC is the result of

your support, encouragement and advocacy. Second, we would like to thank the Ford Foundation for providing the basic financial support to establish our office in The Hague. Finally, we would like to acknowledge the support of the Coalition of NGOs for an ICC (CICC) for providing all the interim logistical assistance and for “holding space” for women during critical interventions throughout 2003.

We take this opportunity to introduce Brigid Inder . . . Brigid has been closely following the work of the Women’s Caucus and the creation of the International Criminal Court. She has been working on issues of women’s human rights and gender equality for the past fifteen years, particularly in areas of HIV/AIDS, sexual and reproductive rights, access to legal services and anti-discrimination measures. Brigid has a great deal of experience running NGOs, and brings more than a decade’s experience in international advocacy specifically in her work on a number of United Nations negotiations and processes. Nathalie Lasslop has work experience of about two years on economic impact of globalization on women and is keenly interested on issues of human rights and justice for gender and sexual violence. Both Brigid and Nathalie will work full time for WIGJ out of our new office in The Hague. We are confident about facilitating the work of influencing the Court from a gender perspective by women from around the world with as much success and would seek your support on on-going campaigns from time to time.

Vahida Nainar

Chair, Women’s Initiatives
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“Toward Delegitimizing War”, but not with unlimited national sovereignty

Dear colleagues:

The paper “Toward Delegitimizing War”, from the Canadian Voice of Women for Peace [prepared for NGO endorsements in advance of the 48th session of the UN Commission on the Status of Women; see <<http://www.vowpeace.org>>] is a very well written and strong statement! I think its basic concept is “. . . the common enemy is the war system itself with its vast infrastructure of supporting institutions”. So far, don’t we all agree?

However, the paper also says: “‘Human security’ has been posited to validate ‘humanitarian intervention’ and used to legitimize violent military intervention.” It also urges that “Chapter VII (of the UN Charter), which condones conditional legitimization of war, must be recognized as being in contravention of the purpose of the UN Charter itself”.

Since the inception of the United Nations, various countries, usually under totalitarian regimes, have refused to permit even inquiry into practices abusive of the opposition to the ruling authorities, or of women, children, and other minorities, on the basis that such matters were internal or domestic for which that country had no accountability to the United Nations or the international community (Chapter 1, Article 2, Section 7 of the UN Charter). That section of the Charter goes on to say, “but this principle shall not prejudice the application of enforcement measures under Chapter VII”. It was an important advance for humanity when the international community finally recognized that grievous persistent violation of human rights was not protected as internal and domestic, but could constitute a threat to the peace under Chapter VII, and that, therefore, the Security Council shall decide what measures as it deems necessary or desirable shall be taken. Chapter VII clearly supposes that the Security Council will consider using measures not involving the use of armed force, and will use military force only if

other measures are considered to be inadequate.

It is common, when intervention is required by police or military power to protect individuals or peoples, to criticize some or all of the methods used. Any action, any time, even under Chapter VI as well as under Chapter VII, is likely to be imperfect. It is right that wrongful actions should be criticized and punished when found themselves to be violations of international law. But, the fact that “state sovereignty” is not a shield for the basic humanitarian crimes under Chapter VI must be preserved.

State Sovereignty and with it over-zealous support for political, religious, ethnic, and cultural causes are the foundations of war, not the availability of Chapter VII as a means to quell their inhuman expressions

It is a common error, particularly by national leaders, reinforced by definitions in abbreviated dictionaries, to think that State Sovereignty includes the right to do anything they consider to be in the national interest. “State Sovereignty” has never, in international law, been considered to mean that. In fact, from the earliest development of Nation States, it has been recognized that State Sovereignty is limited by generally accepted moral principles (Human Rights), by the civil rights of people, by customary international law, and by applicable international treaties (including the Charter of the United Nations).

The article “sovereignty” in the *Encyclopaedia Britannica* gives an excellent history of the concept of sovereignty and its limitations, including its more modern understanding since the creation of the United Nations.

The incorrect exercise of State Sovereignty is the greatest element in the War System, not the authority of the Security Council under Chapter VII created to protect World Peace.

Robert Haines
Colorado

Minerva

This ten-year-old twice-yearly collation, now supported by the World Federalist Institute of Citizens for Global Solutions, is named in honor of one of the four women signers of the United Nations Charter, Minerva Bernardino, who helped found the UN Commission on the Status of Women.



Information cut-off date
for this edition:
20 January 2005

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Minerva includes attributed opinions & information that may not represent official positions of Citizens for Global Solutions.

