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WATER ETHIC TO RENEW THE EARTH

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Psalms 24:1-2

The earth is the Lord's and all that it holds,
the world and those who live there.
For God founded it on the seas,
and established it over the rivers.

Introduction

As the articles in this issue of *Catholic Rural Life* attest, the world is running out of clean water. At the World Summit on Sustainable Development last year in Johannesburg, South Africa, a sufficient supply of clean water was one of the critical and immediate issues facing the governments of the world. The connection between lack of clean water and overwhelming poverty is great:

- 40 percent of the world's population has no access to safe drinking water.
- 80 percent of disease in two-thirds of the world is related to poor drinking water and sanitation.
- One-third of the world's households must use water sources outside the home.
- Half the world's poorest countries will face moderate to severe water shortages by the year 2025.

What factors cause water crises?

- Cumulative pollution of aquifers and water sources by agricultural, industrial and mining waste.
- Reduction in water-retention capacity of the earth's soil, primarily due to the destruction of 80 percent of the earth's forests.
- Excessive water consumption and wasteful overuse in the North.
- Degradation of the environment and loss of natural resources on which people in rural and remote areas depend for livelihood.
- Global warming and climate change lead to rising sea levels, altered seasonal patterns, and debilitating impacts on freshwater resources.

What is the Christian's response to the growing scarcity of clean water? The time is coming when many of those who currently have the ability to pay will feel the thirst that has long plagued poor and impoverished groups who lack clean water. Last year, after Bishop David Ricken of Cheyenne, WY, became board

president of NCRLC, he raised the issue of water on our list of rural life priorities in response to the needs of farmers and ranchers in the mountain west and northern and southern plains who continue to suffer from the devastating drought of the past year. Did he raise the issue's priority on the list, or raise it as a topic of discussion? Climatic difficulties are compounded by overuse; freshwater reservoirs are routinely depleted faster than they can be replenished. Amidst these problems, we watch with alarm as the privatization of water resources becomes the "rational solution" to the public matter of water management and distribution.

A Water Ethic Workshop

NCRLC decided to explore water-use policy and practice during the 2003 Catholic Social Ministry Gathering in Washington, DC, organized every February by the U.S. Conference of Catholic Bishops. We examined the management and distribution of high-quality freshwater in North America, where competing interests are already positioning themselves for control over future water supplies. More than this, we sought to develop a Christian perspective, based on Catholic social teaching, to help us examine and respond to water issues. This required us to articulate a set of principles that formed the framework for a "water ethic" similar to the "land ethic" that enriches the sustainable agriculture community.

The Water Workshop drew 33 participants from 16 states. Many of the participants were social justice workers in their dioceses. In our time together, we explored and contemplated the role of the church in assuring a sustainable supply of high-quality freshwater for God's creation. To this end, the workshop examined water resource policies in the light of sacred scripture and Catholic social teaching. The goal was to frame a vision of a just and sustainable water policy for the future. This vision is still evolving and will be widely publicized as part of the program work of the National Catholic Rural Life Conference. This article presents the outcome of the workshop after the prepared presentations, when participants discussed a socio-spiritual vision, the public and personal challenges to that vision, and a realistic framework for social action.

A Water Ethic for a Sacramental Commons

A water ethic begins with the primary (unless supreme is a technical word) principle that water is life. As a result, the right to water is an absolute. Clean water is essential for the health and well-being of communities and ecosystems. Access to water for basic human needs is a fundamental human right and a key component of any effective distribution strategy. Broad participation must be the basis of water management programs on all governmental levels — national, regional and local.

Pope John Paul II has declared the natural environment a major concern for people of faith. He made this clear with his 1990 World Day of Peace message, "The Ecological Crisis: A Common Responsibility" in which he defined the ecological crisis as a moral problem. In his 1993 Lenten Message, the pope developed the biblical aspect of his ecological call, citing the frequent references of Jesus to water and to thirst. The Holy Father noted that human activity is the cause of the barrenness of the land and the pollution of clean water "the barrenness of the land" is nonspecific, unclear, and as a general statement about all land, inaccurate. Try "The Holy Father noted that human activity has rendered much land barren and much water unclean." The lack of clean drinking water has reduced large populations of people to destitution and disease. Cooperation between the powerful and the disenfranchised offers the only solution to such serious problems, he said. In a January 2001 message, the pope called the faithful to an "ecological conversion" —

a moral call to protect the environment and make the earth a place where all life is valued and can grow in harmony.

This acceptance of a sacramental universe and a sacramental commons, as John Hart expressed in his keynote presentation at the Water Workshop, will prove invaluable to Christians confronting the worsening water crisis. In recognition of this, NCRLC has begun to identify actions to restore, conserve, and increase the availability of “living water” to members of the sacramental community. In response to the four-step process identified by Dr. Hart as a way to promote care for the sacramental commons of water, the NCRLC workshop focused on the following:

- (1) *Social analysis* of the historical context of water issues: sources of pollution, politics of privatization, economic harms and threats to humans and other living beings.
- (2) *Spiritual reflection* on religious and spiritual teachings regarding care for creation, community, and the common good, with community discernment about which teachings would relate to local water issues.
- (3) *Social vision* that imagines what the commons might be like if spiritual teachings were implemented in the current water commons, in order to begin the transformation of polluted or privatized water and fully realize a renewed water commons.
- (4) *Social projects* that lead towards the socio-spiritual vision of a sacramental community living in a sacramental commons, sharing common goods and promoting the common good.

Principles of a Water Ethic

The six presenters at the workshop began the process of social analysis and spiritual reflection recorded in previous articles in this magazine. Workshop participants then began their own directed reflection towards a new social vision: “We dream of a viable, sustainable future in a nation, a continent, and a world of economic stability, ecological integrity, and local, regional, and national sustainability; a place where all people are treated justly. Although this dream may not be immediately practicable, it is something we can build toward.”

The following principles developed by workshop participants present a crossing over from spiritual reflection, based on Catholic social teaching, to a social vision based on a Christian water ethic.

Human dignity: Each person is made in the image of God. *This commands a consistent respect for human life and all creation.*

- Access to water and sanitation are basic human rights.
- All people should have sufficient, high-quality (or clean) water.
- The dignity of humans should take priority when distributing water. Water should not be used as a tool of oppression.

Preferential option for the poor: A fundamental question for Christians is, *how do human actions affect the most vulnerable among us?*

- Small farms and ranches should have access to affordable water.

- Openness, transparency, and strong public regulatory oversight are fundamental requirements when public responsibility for providing high-quality water is shifted to private entities.

Common good: Each person should act on behalf of the good of all. *This sets the direction for progress and the limits of material growth.*

- Water should be held in the public domain, as a common good.
- Nations should not go to war over water. Political boundaries should not hinder access to water.
- Care for water should be a priority in federal, state, and municipal government budgets.
- Water resource management should be based on the perception of water as an integral part of the ecosystem, a natural resource, and a social and economic good.

Solidarity: Everyone is called by God to self-transcending love. *We affirm the ethical significance of global interdependence and the common good.*

- People should work together in the design, planning, provision and monitoring of water and sanitation services.
- People should be educated to understand the sacredness of water.
- People should not take water for granted.

Stewardship of creation: The created order is one whole, and each being has its own worth. *This inspires a God-centered and sacramental view of the universe.*

- Science and technology should be applied to make water supplies clean, safe, and abundant.
- People should be good stewards of this sacred trust. Surface water ecosystems and groundwater resources should be re-established and maintained, and pollution prevented.
- The impacts of climate change on water supply and distribution should be studied and recognized.

Universal destination of goods: Private ownership has a social mortgage. *This demands fair and equitable use of the earth's resources.*

- Nonproductive consumptive use of water should be minimized.
- Livestock should not be concentrated in large numbers.
- Water-use productivity should be continually improved.
- Bottled water should not be sold as a commodity unless locally needed because of short-term contamination.

Subsidiarity: No higher power should deny lower levels freedom of self-governance. *This ethic promotes cooperation and sharing in the world community.*

- All parties affected by water management decisions should be involved in the decision-making process.
- People should accept responsibility for care of water and understand the connection between environment and human rights and the physical, cultural, and spiritual needs of people for the future.
- Landscaping of homes and recreational areas should consist of native plants with minimal water requirements. (unless those two categories are distinct: plants native to the area with high or low water requirements, and non-native plants with low water requirements)

Challenges to Social Action

In order to carry forth a water-ethic vision based on Catholic social teaching, we realized that certain challenges are entrenched in public policy, the marketplace, and personal habits. These challenges must be identified and faced before any real (or substantial, depending on their intention) social change can occur. The Water Workshop considered five cross-cutting areas related to societal and environmental needs for clean and abundant water: public health, agriculture, supply & management, biodiversity, and energy. Participants clarified water-use concerns for each of these areas, then identified some of the challenges we face to enact a water ethic and bring about a renewed earth.

Water and Public Health

Concerns

Twelve percent of the freshwater used in the U.S. is used for drinking water and sanitation. Seven percent is used for industrial production. Although water is the stuff of life, it can also be a carrier of disease, antibiotics, and toxins such as arsenic, nitrates, cyanide, mercury, lead, PCBs, and pesticides. Workshop participants envisioned a world where water supplies are clean and safe and readily accessible to all people. They also cited the following challenges to that sustainable future.

Challenges

- Health issues may not receive national or even statewide attention because they are localized and therefore are not addressed in national public policy. Water pollution can be very localized, e.g. cyanide contamination near gold mining operations. The water quality concerns of local, marginalized populations tend to go unheeded by those who set policy.
- Herbicide and fertilizer use on lawns, golf courses, and other recreational areas contributes substantially to water contamination.
- Existing public policy such as the Clean Water Act either is not being implemented or is being watered down and becoming more shortsighted.
- Bacteria, increasingly resistant to antibiotics, are becoming an important health threat. Poultry, pork, and beef producers commonly overuse antibiotics to promote growth and minimize the health hazards of overcrowded conditions in animal confinements. Unused antibiotics are routinely flushed into water systems. Antibiotics and antibiotic resistant bacteria are increasingly found in water, air, and meat products. Antibiotics are also over-prescribed by physicians, and consumers, fixated on cleanliness, unnecessarily use antibacterial personal care and cleaning products.
- Many who use water for economic benefit do not make management decisions for the common good, but for personal gain.
- People generally do not view themselves as caregivers for the earth, responsible for each other's well-being and that of the earth.
- Although education about water contamination is common in school systems, connections are not being made in formal educational settings, in churches, or in places of employment to foster a stewardship ethic among people.
- Privatization of water supply and sanitation systems seems to institutionalize the management of water as only an economic good to the detriment of the social good.
- There is no national water policy, so water policy is fragmented and geographically focused.

- The use of pesticides to kill mosquitoes and other disease-carrying pests contributes to water contamination.

Water and Agriculture

Concerns

Forty-two percent of U.S. freshwater use is agricultural; 98 percent of agricultural water is used for irrigation and the rest for livestock, poultry, and fish production. Sixty percent of the water used for irrigation is used consumptively; that is, it is not immediately available for use downstream because it has evaporated, been transpired by plants, or become part of the crop. About 20 percent is lost in conveyance. There is continuing concern about the inefficient use of water in agriculture, the degradation of waterways by agricultural practices, and increasing competition among water uses, particularly in water-scarce areas of the U.S. While expressing a vision that all farmers and ranchers should have access to affordable water, workshop participants also thought nonconsumptive uses draining wet lands should be minimized and that aquatic ecosystems should be restored. Participants identified several challenges to this vision

Challenges

- Agricultural water is used and allocated inefficiently.
- Trends toward larger and confined livestock and poultry operations concentrate more manure and related contaminants (e.g. pathogens, antibiotics, antibiotic resistant bacteria), increasing negative impacts on surface and groundwater resources.
- Tax revenues are declining in rural communities as small, independent businesses lose market battles with distant megastores. This strains the capabilities of municipal governments to provide high-quality water and sanitation and may encourage the privatization of these services.
- Trends toward the transfer of water from agricultural to urban areas threaten rural communities with the loss of water necessary for employment and community well-being.
- Farmers and ranchers increasingly compete with municipalities for limited water supplies.
- Increasing use of groundwater for irrigation is reducing groundwater availability for personal and municipal uses.
- Owners of mega-farms and mega-ranches often live far from the land they own, and operators often fail to realize their connectedness to the earth and their community. This leads to increased pesticide and nitrate contamination of drinking water supplies.
- Subsidized water rates for agriculture exacerbate the negative impacts of crop subsidies on developing countries and their resources.
- The possible effects of global climate change on agriculture are not being identified or are largely being ignored (e.g. impacts of long-term water shortages)
- People, industry, and governments generally do not approach water management with a long-term view for responsible stewardship.
- The federal government subsidizes the production of water-intensive crops in arid regions.
- There is little support in Congress and in the Bush administration for water conservation legislative initiatives.
- General lack of knowledge of food production practices makes it difficult to generate interest among the public and among policy makers about agriculture and water concerns.

- In the absence of long-term national water policy in the U.S., water management is by crisis and tends to be of national or regional concern only when problems or conflicts require action on those levels.

Water Supply and Quality Management

Concerns

The annual renewable freshwater resource in the U.S. is 2478 cubic kilometers. About 20 percent of that available supply is withdrawn annually. On average, the price of water in the U.S. is fifty cents per cubic meter. That's relatively inexpensive when compared to the United Kingdom's \$1.15, France's \$1.17, and Germany's \$1.81. Although the total water supply in the U.S. appears at first glance more than adequate to meet current and future needs, the uneven geographic distribution of freshwater poses problems. People living in areas of water abundance tend to take water for granted, while those living in areas of water scarcity are embroiled in sometimes unrepresentative conflicts over water rights. Several major challenges stand in the way of widespread access to sufficient, high-quality water and an inclusive policy-making process for water management.

Challenges

- Water distribution varies naturally by geography, fostering regionalization of issues.
- Water supply problems are more a matter of declining water quality and increasing consumptive use than water quantity.
- Improvements in water-use efficiency are needed in almost all sectors.
- The public considers water conservation practical only in emergency situations or? when technological changes have the potential to reduce residential water use substantially without altering lifestyle.
- Education about the impacts of consumer choices on water use is inadequate. Industrial water use depends to a large extent on the mix of goods and services demanded by consumers.

Water and Biodiversity

Concerns

Over a period of 200 years (1780-1980), the lower 48 states have lost 53 percent of their original wetlands. California has lost 91 percent. Wetlands play a key role in the overall health of rivers and provide critical habitats for freshwater fish and wildlife, the most threatened animals on the planet. Workshop participants expressed a vision in which people understand the sacredness of water and take seriously the stewardship of God's creation, including the restoration of "wet" ecosystems. They cited the following challenges to that vision.

Challenges

- Uncontrolled land development that doesn't consider impacts on water results in loss of or damage to ecosystems and biodiversity.
- Enforcement of the few government regulations that exist is difficult or ignored.
- Government subsidies support the sugar cane industry that has drained nearly 700,000 acres of the Florida Everglades. The drainage has disrupted the groundwater aquifer, resulting in saltwater intrusion of the region's water supply and the endangerment of more than 50 species.

- Deforestation of watersheds increases surface runoff and flooding while reducing aquifer recharge.
- Emphases on treating water as an economic rather than a social good threatens natural ecosystems that depend on water.
- Trends toward the transfer of water from rural areas to urban areas may disrupt environmental water uses.
- Biodiversity is not a high priority as a competitive use for limited water supplies. Economic benefits and personal gain generally override concerns for the common good and integrity of creation. This is even the case with uses that could readily accommodate biodiversity and water concerns, such as recreation and tourism.
- Water quality impairments change the biodiversity of species. Fertilizer runoff from sugar cane fields nourishes phosphorous-loving cattails at the expense of native saw grass.
- Tinkering with “wet” ecosystems must be done carefully. Well-meaning efforts to enhance salmon populations through fish hatcheries in the northwest have inadvertently produced weaker strains of wild salmon and altered ecosystems.
- Although the consumptive use of water, which prevents its immediate reuse by evaporation, plant transpiration, contamination, or incorporation into a finished product, is decreasing nationally, further decreases are crucial in vulnerable ecosystems and places where competition for limited supplies abounds.

Water and Energy

Concerns

Thirty-nine percent of the freshwater used in the U.S. is used in the production of electrical energy and mining. The growing reliance upon electrical energy by consumers and the complex relationships between water and energy makes it difficult to achieve the participants’ vision in which people accept responsibility for care of water and understand the connection between environment and human rights and the physical, cultural, and spiritual needs of people for the future. (see previous note on this phrase) Some concerns related to this issue are: using water as a source of additional electricity and as a renewable energy source for pumping and treating water; international or multi-jurisdictional impacts of water impoundments; permanent flooding of private land for hydropower reservoirs; acid precipitation; and the impacts of mountain top removal and strip- and deep-pit mining on water quality. The relationship of water and energy was discussed subsequent to the workshop.

Challenges

- In the name of mining efficiency, jobs, and enhanced land development, mountain top removal is becoming the prevalent method of extracting coal in the Appalachian Mountains, where mining waste buries entire watersheds and reroutes streams.
- Although air quality from coal-burning power plants has been regulated for several years, acid precipitation continues to plague ecosystems throughout North America.
- Runoff from coal stockpiles at power plants carries toxins to waterways.
- Uncooled water from unregulated power plants warms stream waters, resulting in greatly reduced diversity of fish species important for the environmental health of the stream.
- Hydropower subsidies are provided to particular regions and industries at the expense of (something).

Social Projects: A Beginning

Building on the social projects suggested at the end of John Hart's article *Living Water: A Sacramental Commons*, workshop participants added the following ideas that may help realize the socio-spiritual vision of a sacramental community living in a sacramental commons.

Conserving water and reducing demand

- Reduce water use at home through flow restriction devices.
- Encourage the use of low-energy precision application irrigation sprinkler systems in agriculture and drip irrigation in orchards and vineyards.
- Reinforce through Catholic social teaching that conservation is the right thing to do all the time, even where water is abundant.
- Encourage recycling as a water-conserving practice.

Growing an eco-spirituality

- Start action planning with reconciliation and repentance.
- Provide parish and diocesan liturgy committees with suggestions of how to incorporate water topics into liturgies, especially by making connections between the lectionary and water issues.
- Emphasize water as a sacramental sign, dedicated to God and the common good, perhaps requiring sacrifice to make it holy.
- Make connections between water stewardship and?
- Draw attention to the Pope's writings and Bishops' pastorals expressing concern for creation, the environment, and water, especially through John Hart's upcoming book that will review pastorals from the 1970s to 2000.
- Help priests understand Catholic social teaching and its relationship to water and the faith community.
- Organize prayerful celebrations of creation on feast days honoring St. Maria, St. Francis of Assisi, and St. Isidore, and on other special days such as World Day of Water, Thanksgiving, Rogations Days, Earth Day, and World Environment Day.

Encouraging conscious consumption

- Make connections between personal consumption and environment so people will better understand water use in food production, processing, marketing, distribution, and consumption. Increase consumer and policymaker awareness of food production practices by promoting local food systems that develop personal relationships with farmers.
- Shift from historic water planning methods that try to find enough water to meet projections of human desires to an approach that explores how to meet present and future human needs with available water.
- Practice energy conservation as a way of reducing related water pollution and water consumption resulting from electrical energy production and coalmining activities.
- Take responsibility for personal actions and change personal consumption to use fewer products created using toxic materials (e.g. gold/cyanide) that enter waterways.
- Have drinking water tested and use water filters if appropriate.

Protecting ecosystems

1. Minimize the use of pesticides in home gardens by learning and implementing integrated pest management alternatives.
2. Uphold the integrity of creation.
3. Promote the preservation of threatened and endangered species, the restoration of native ecosystems, and the preservation of natural seed stocks.
4. Respect diversity of “place.”

Supporting participatory interventions

- Remind people that they have the right to be involved in issues concerning them.
- Organize parish, deanery, and diocesan educational and action sessions to encourage more public response.
- Organize water quality monitoring groups for local streams using widely accepted techniques and principles.
- Emphasize civic and faith community-based participation.
- Encourage “green” congregations (e.g. architectural, landscape management, systems approach to building, eco-spirituality).
- Initiate a pledge program at church, in your neighborhood, in your community, and on the web.
- Help congregations learn how to make ecologically-informed decisions.

Building effective water institutions and non-governmental organizations

- Improve institutions responsible for managing local water resources.
- Create permeable borders among religious, environmental, health, and sustainable agriculture organizations to encourage interaction.
- Communicate with coalitions of organizations in other regions of the country for support and cooperative action on region-specific issues.

Gathering and sharing resources

- Acquire and analyze credible data from government and non-governmental organizations regarding health-degrading pollutants and reshape the data into understandable and user-friendly information for public dissemination.
- Identify and share contact information for credible organizations and agencies.
- Apply Catholic social teaching to specific water issues in your area.

Advocating for policy changes

- Monitor revisions to and implementation of the Clean Water Act.
- Hold accountable state and federal agencies responsible for implementation of the Clean Water Act by drawing public attention to their actions or lack of action.
- Encourage legislation to close agricultural drainage wells.
- Encourage the development of legislation that will help rediversify agriculture, encourage new entrants to agriculture, improve agricultural sustainability, and build regional and local marketing with an eye to the improvement of water supply and quality.
- Support, when necessary, government regulation of water for the common good.

Building a more water-aware new generation

- Provide schools, camps, and clubs with curriculum-enhancing water activities.
- Provide schools, camps, and clubs with ideas to celebrate special observances such as Earth Day, World Water Day, Thanksgiving, and World Environment Day and provide Catholic schools and organizations with ideas for Rogation Days and feast days honoring Sts. Maria, Isidore, and Francis of Assisi.
- Organize water festivals with local water utilities and other organizations.

Conclusion

The framework described in these pages is but a beginning of an ongoing creation of a water ethic, a Christian perspective and process that will help us reflect, judge, and act individually and in community on water issues for years to come. We have begun this process with the confidence that God guides us as promised in Isaiah 43:2 —

“When you pass through the water,
I will be with you;
in the rivers you shall not drown.”

We will proceed prudently, prayerfully and in confidence that this co-creative work will bear fruit in God’s name and for the common good as in Isaiah 43:19 —

“See, I am doing something new!
Now it springs forth, do you not perceive it?
In the desert I make a way, in the wasteland, rivers.”

We ask you to join the workshop participants and the National Catholic Rural Life Conference as we continue to shape this water ethic online and through the mail. Let us know if you want to be a Water Ethic Steward at NCRLC, 4625 Beaver Ave., Des Moines, IA 50310; 515.270.2634; or ncrlc@aol.com.



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