

Principles of Water Ethics

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The significance of water for life and health is fundamental and can scarcely be overstated, and hence the pertinence of ethics to water utilization and management is clear in a general sense. It is important for everyone involved in water resource management and in public health to have a well-reasoned understanding of the moral values and obligations that correspond to that significance. In the domain of ethics, questions of scientific knowledge come

together with aspects of cultural meaning and perception; questions of conservation, sanitation, and health promotion come together with questions of justice, equity, and human rights; questions of sustainability and biodiversity come together with questions of democratic governance, law, and policy.

Access to clean water and adequate sanitation is a growing problem for many parts of the world. More than one billion people are in need of clean water, and 2.6 billion lack access to basic sanitation. Water intensive agricultural, manufacturing, and land use practices throughout much of the world are drawing down or contaminating groundwater at an alarming rate.

Many questions confront the world today. How can we ensure that an adequate supply of clean water is available, both for today and for coming generations? How equitable will access to it be? How should it be managed, and by whom? What will the implications of climate change be on the quality and quantity of fresh water? Is clean water destined to become for the twenty-first century what petroleum was for the twentieth, a source of geopolitical power and conflict? Will social change concerning water

use come through technological innovation or through cultural and value change, or some combination of both?

Concurrent with the ecological dimensions of the water crisis are public health dimensions, including, but not limited to, the spread of water-borne diseases, particularly in the developing world. Existing systems need to be modified, or new systems need to be created, so as to achieve more just access to clean drinking water, as well as to provide for effective societal responses to public health concerns. From a systems perspective, water is more than simply a medium for vectors of infectious disease; it is a foundation for maintaining the social determinants and human capacities that sustain and promote health and well-being. Water is not so much a “resource” as it is a lynchpin in the entire web of planetary life. The focus of ethics is therefore not on water in isolation, but on the water cycle and how the cycle connects the land and the atmosphere. The notion of a “watershed” has this connotation, connecting water, the soil, and the biotic community.

Water is dynamic, elusive, determined, and a fecund source for the human moral and spiritual imagination. We

talk about water as a medium of disease transmission, as a fluid essential for biological functioning, and as a thing to be manipulated with wells, pumps, sluice gates, dams, and dikes. When we talk about the scientific and engineering aspects of water, we should not lose sight of the fact that water is also a vital source of cultural meaning, which not only sustains our biological life but also our imagination and spirit. No culture or tradition known to us is indifferent to it. It is a symbol of purification, rebirth, and reconciliation, even as it is also a source of animosity and conflict. Water, with its close connection with fertility and life, figures deeply in religious and metaphysical worldviews of virtually all peoples. There is a prototypically two sided aspect to the way water is represented and imagined in most traditions.

Principles of Water Management Ethics

- » equal respect for human dignity
- » equity and proportionality
- » solidarity
- » the common good
- » right relationship or responsible stewardship
- » inclusive and deliberative participation

Water is the place from which order comes, but it is itself without form. It is life nurturing and yet unshapeable, uncontrollable at the same time. If the creator could manage it, human beings cannot. It is protean and relentless. It floods and recedes, indifferent to human constructions on a floodplain. It finds tiny fissures and eventually splits the hardest rock and enters the best sealed dwellings. Its changing physical state slowly reshapes the geology of the planet as ice sheets progress and recede, as sea levels rise, as rain falls, and as rivers find new channels. Human things are small by comparison. We move and channel water, to be sure, and we must use it (carefully), but effective, sustainable utilization of water is really more a form of accommodation than a form of control. We are not always honest with ourselves about our dependency on water, and our sheer frailty in the face of it.

Different ways of conceptualizing what water is and how human beings should use it have different ethical implications. Understanding water supplies as commodities

to be bought and sold, and as property to be controlled unilaterally by certain individuals or groups, has different implications for fulfilling the ethical principles (such as human rights and social and environmental justice) than does understanding it as a fragile ecosystemic component of an ecosystemic commons upon which we all depend in myriad ways. Of particular interest in the chapter, therefore, will be the convergence between ecosystemic and public health perspectives, on the one hand, and the appropriate ethical use of water to sustain and promote human and ecosystemic health, on the other.

Taken together the ethical values of efficiency, equity, and stewardship can form a basis of a set of ethical principles that can normatively guide water management and public health policy. Additional principles of water ethics will be based on procedural and decision-making process values, such as democratic governance rights, active participation, transparency, accountability, and public-private collaboration and partnership. Implementing these ethical ideals and obligations in practice is shaped by a number of factors: Who participates in the decision-making process? Is participation active and involved in formulating options or is it passive and reactive to proposals that are already well-developed? What kind of information is open to the public? How do professionals interact with non-professionals? Is there respect for cultural diversity and traditional beliefs and practices? And finally, how is a balance determined between the needs of human development and the need to preserve our natural resources?

With these ethical orientations and practical considerations in mind, we offer the following principles of water ethics. In each case there is a meaningful application of the principle to the relationship between humans and water and the effects of the various technologies of water utilization (purification, sanitation, groundwater mining, agricultural irrigation, and the like). Similar principles have been formulated by the Waters of Wisconsin Project and by UNESCO's International Hydrology Programme (IHP), intercultural and interdisciplinary working group on the Ethics of the Uses of Fresh water and by the COMEST Sub-Commission on the Ethics of Fresh Water Use.

The principle of equal respect for human dignity

This principle calls for the meeting of basic needs and the promotion of human health and well-being. It incorporates the underlying notion behind the framework of universal human rights. This is a fundamental principle of public health ethics; when construed in relational terms, the concept of human dignity is not at odds with respect

for other creatures and for nature and thus is fundamental to environmental ethics as well.

The principle of equity and proportionality

Meeting the needs and promoting the health of all persons is important, but equity and proportionate response are required in the face of limited resources to give priority to the least well off, those most immediately at risk, and those who are made vulnerable by past discrimination, exclusion, and powerlessness.

The principle of solidarity

Respect and equity should be pursued with a recognition of the limits of each individual's ability to determine the conditions of their own lives and of our mutual interdependency, and reliance on outside support, care, and assistance. The notion of solidarity and interdependence applies in a social context, among human individuals and groups, but it applies with equal importance and resonance in an ecological context, between human and biotic communities. In water ethics, solidarity reminds us of what may be called our "upstream and downstream interdependence."

The principle of the common good

This principle calls for the recognition of situations in which the pursuit of rational self-interest by each individual

leads to outcomes that are irrational and harmful to the interests of all individuals involved. The human interests served by water and by the biodiversity water makes possible are often not well served by behavioral strategies of individual interest maximization such as those fostered by libertarian property rights. Water and the technologies of its utilization often present "tragedy of the commons" type scenarios, for which a conceptualization of water as a common resource and sustainable water utilization as a common good provides the ethically appropriate response.

The principle of right relationship or responsible stewardship

The principles of solidarity and the common good call for collective action in relationship to public health and water management. The principle of right relationship addresses the substantive content and effects of such collective action. The responsible course of action is closely tied with the actual properties and circumstances of what is being responded to. In the case of public health, for example, failure to correctly identify a pathogen and the administration of the incorrect vaccine or medication would constitute public health and medical malpractice; the right relationship between the physician and the pathogen and the biological facts of the patient had not been established. Similarly, the unsustainable use of an aquifer or the biological degradation of a watershed and

A Perspective on Water Management and Ethics

First, the ethics we require should be built on a sense of shared purpose and in harmony with nature. Second, ethics must be based on a balance between traditional human values regarding conservation and the use of new technological advances. Rarely have either worked alone and it is time to stop pitting one against the other. Third, ethics, even in our advanced technological age, should seek to find a new harmony between the sacred and utilitarian in water, between the rational and the emotional. Water resources managers need to understand the wisdom encoded in traditional religious and secular symbols and rituals surrounding water.

Today, our technology tells us that there is enough water—if we co-operate. One of the most important elements for co-operation is something that experts in negotiation call 'superordinate values', meaning those that are beyond immediate utilitarian benefits and to which competing parties can subscribe. Rekindling the sense of the sacred in water, unquestionably a superordinate value, is one way to move the debate to higher levels and thus bear on the capacity to manage conflict and reach agreement. This balancing is not new—it is what humans have been doing throughout history as they constantly learn how to deal with environmental uncertainty. Talking of such a balance means to appreciate the intrinsic and profound value of water that is not captured in the traditional utilitarian calculus of transactions. It is to recognize that water is not only a means to other goals, it is essential as an end in itself.

— Lord John Selborne, Chair of the Commission on the Ethics of Scientific Knowledge and Technology (COMEST), Sub-Commission on the Ethics of Fresh Water.

Quotation from: "The Ethics of Freshwater Use: A Survey," p. 9 (2000).

Available at: <http://unesdoc.unesco.org/images/0012/001220/122049e.pdf>

its dependent ecosystems are forms of environmental malpractice. They do not establish right relationships between the human beings who use and affect water with artificial construction and technology, on the one hand, and the specific biological, chemical, and physical realities of water, on the other.

The principle of inclusive and deliberative participation

Just as the principle of right relationship and responsible stewardship addresses a substantive ethical standard for the content of public health and water management policies, so the principle of participation addresses the values inherent in the process of policymaking and decision making. Often the mechanisms and institutions of democratic governance are selective and rely on bargaining and interest maximization strategies by powerful, well-organized, and well-represented groups. This type of governance and decision making may not be well suited to the protection, conservation, and equitable distribution of common goods. More adequate governance mechanisms, from an ethical point of view, involve a deliberative and participatory process marked by transparency, universal access to information, inclusiveness, and individual and community empowerment so that all may take advantage of the open information and the participatory opportunities.

Ecologically informed and ethically responsible water management are essential for public health and are necessary to secure these resources for future generations of all life forms. Erring on the side of conservation is necessary in the face of our uncertainty regarding the regional impacts of global warming and many other factors in modern life. How do we assure that we consider our ecosystemic and intergenerational responsibilities adequately?

Perhaps a good place to start is for each of us to admit the following truth: "I am utterly dependent upon nature including its astonishing ability to provide fresh water. This is a dependence so deep that it maintains my life and that of every other living creature, not ultimately, but moment to moment, breath to breath, and in the case of water from sip to sip. This recognition of dependence leads to a second truth, namely that I am utterly responsible for maintaining that nature which so bountifully provides for life." This recognition entails a very strong ethical commitment.

Responsible behavior requires, at a fundamental level, acknowledgement that it is the diverse complexity (even seeming redundancy) of nature that provides for thriving and abundance and includes all living things and their landscapes, i.e., watersheds and water bodies. All water

cannot be considered ours for human uses. This conclusion rests on ethical principles, particularly the principle of right relationship and responsible stewardship, but it also rests on creating the proper social and political motivation to produce ethical policy and practice.

Here we pose the question of the relationship between the motivations and commitments that lead a democratic society to support a public health system and to support a system of ecological conservation and protection. Are not appeals to security, safety and shared interests analogous in the two cases? To support a public health system each individual must value not only their own health, but the health of others—it is more rewarding and fulfilling to live in a healthy society than an unhealthy one. Similarly, to support a system of environmental sustainability and conservation each individual must value not only their own comfort and convenience, but also the flourishing, diversity, and beauty of nature. To live in healthy ecosystems is more rewarding and fulfilling than to live in unhealthy ones.



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