

Water Ethics: Beyond Riparian Rights
WSSS Seminar 2/18/05

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5 Core Issues Pertaining to Environmental Ethics

- *Anthropocentrism vs. Non-Anthropocentrism*
- *Responsibility to Natural Systems*
- *Cross Cultural Environmental Equity*
- *Intergenerational Equity*
- *Social Risk Management*

I will apply these concepts to the issues of water supplies, quality and eco-systems.

Anthropocentrism vs. Non- Anthropocentrism

The issue here is whether all values we attribute to natural entities are derivative of human values; whether there are intrinsic values to certain natural systems. Do lakes, rivers or the oceans have a value in-and-of-themselves outside of human use.

The system of Riparian rights pertain to the community of Homosapiens.

Responsibility to Natural Systems

- Does it make sense to speak of a responsibility to a natural system; to protect it in some way for its uniqueness, its integrity, or its value to species other than humans?
- How would such responsibility be defined?
- Is there comparable to the “endangered species act” a need for an “endangered ecosystems act”?

Cross Cultural Environmental Equity

- What ethical considerations are at stake when water crosses national boundaries?
- What international treaties or agreements give consideration to cross-cultural needs and responsibilities of water systems?
- How do we protect water contamination across national boundaries?

Intergenerational Equity

What responsibility do we have to future generations for water source and quality protection?

- A. Make them better off (Family Values)
- B. Parity: Give them at least what we have (Sustainability)
- C. Build a scientific base so they can solve their own problems (Scientific Legacy).
- D. Consume at any rate we want (Generational Cornecopianism).
- E. How far into the future is our responsibility?

“Those who claim responsibility for the well being of future generations often do so out of a sense of “intergenerational equity.” They hold that for us to use the environment in a way that harms our descendants is unfair because it does not accord future humans the same rights and advantages we hold today.”

Eric Rosenbaum, Water Engineer, South Bay Water Recycling

Social Risk Management

- The ethical issues pertain to what is acceptable risk of water contamination; what evidence is sufficient to restrict contaminants in the water supply.
- The amount of health and ecological risk of water contamination is a scientific question; what constitutes acceptable risk is a value question.

**“You can never step into the same river twice”
Heraclitus**

- There are certain givens about water that set the context for any ethical analysis
- The amount of water on the earth is more or less conserved. It is a renewable resource.
- Water is fungible—as aggregates of molecules it doesn’t stay in one place. Water geography is defined by its ecosystems—the sources and sinks of water molecules; wetlands, lakes, falls, rivers, oceans.
- Humans can reduce the quality and availability of water by their transformation of land.

Entropy and Water

- Energy is neither created nor destroyed; the total energy is conserved. It is changed from usable to unusable forms. This is the principle of entropy in thermodynamics.
- Water, too, is not created nor destroyed; it is just put into a form which makes it unavailable, contaminated, salinated, and removed from aquifers.

Uneven Distribution of Water

- “Water, water every where,
and all the boards did shrink;
Water, water every where,
Nor any drop to drink.”

Rime of the Ancient Mariner, Samuel Coleridge

Water Scarcity

- The lack of availability of potable water is a growing problem and one that accelerates as the global population reaches 10 billion.
- The ethical dilemma is: how should we manage the scarcity? The autonomy of each individual and their family is based on the availability of potable water.

Water availability and human rights

- Should the availability of water be considered a human right?
- If so, then should the earth's water resources be managed in such a way that each person is allotted a basic entitlement of drinking water?
- Who insures that the rights are protected?

Water as an Ethical Issue

- *“The art and practice of equitable distribution of and access to fresh water for all people in the 21st century, as a fundamental human right and international obligation, is the mother of all ethical questions of all transboundary natural resources of a finite nature.”*

Thomas R. Odhiambo, Past President of the African Academy of Sciences

“All peoples...have the right to have access to drinking water in quantities and of a quality equal to their basic needs.”

Proclamation of the 1977 UN Water Conference

Water and Consumption

- The more we consume material products, the more water is used. Conservation of water doesn't only mean using low flow showers, it means reducing material consumption (material throughput). The production of a car uses 50 times as much water as its weight.

Contamination

- What principle should guide the permissible contamination of our water supplies?
- Protected from crossing a threshold of contamination for a selected group of primary pollutants—say a few dozen.
There are about 86,000 chemicals in industrial and commercial use.
- What does the Precautionary Principle tell us?

“There is yet no ethic dealing with man’s relation to land and to the animals and plants which grow upon it.....The land-relation is still strictly economic, entailing privileges but not obligations.”

Aldo Leopold, “The Land Ethic” in *A Sand County Almanac*

The Eco-ethics of Water

- Conservation ethics would include what ever water systems exist in the bioregion
- The protection of land includes the water systems: “The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively the land.” A, Leopold. “The Land Ethic.”

Protected Regions

- What does the concept of protecting rivers, lakes and oceans mean in terms of human use?
- Humans create artificial lakes.
- Dam rivers
- Redirect the flows of streams and rivers
- Flood enormous land areas

What ethical restrictions, if any, should be imposed on natural waterways. Are there water systems of such unique value that they should be protected beyond all human economic value. The law has made that choice for certain endangered species, but not for water systems—unless the species require it.

DAMS

- *“Rivers, watersheds and aquatic ecosystems are the biological engines of the planet. They are the basis for life and the livelihoods of local communities. Dams transform landscapes and create risks of irreversible impacts. Understanding, protecting and restoring ecosystems at river basin level is essential to foster equitable human development and the welfare of all species.”*

World Commission on Dams

Ethics of DAMS

There has been a change in how we view dams and their impact on the ecosystem.

The Trouble With Dams

Some 100,000 dams regulate America's rivers and creeks, often at the expense of ecosystems--and of taxpayers, who are subsidizing handouts to a large number of farmers, floodplain occupants, hydro-electricity users, and river-transportation interests

by Robert S. Devine

August 1995

Dam burst in Pakistan leaves 400 missing

Declan Walsh in Karachi

Saturday February 12, 2005

[The Guardian](#)

At least 54 people were killed and hundreds remained missing last night after a dam burst following a week of torrential rain across Pakistan. The collapse of the 150-metre-long Shadikor dam swept away five villages along the Arabian Sea coast of the south-western province of Baluchistan.

Water Contamination

- What ethical responsibility do we have for what goes into the water systems?
- Transgenic fish
- Industrial Contaminants
- What standards are used to determine whether water is an appropriate sink for industrial chemicals.

Region's drinking water at risk from petroleum spills

by The Associated Press. Feb. 15, 2005

SPOKANE, Wash. (AP) -- An aquifer that supplies drinking water to 400,000 people in two states is threatened by millions of gallons of stored petroleum products and leaks from car motors, experts say.

A leak in December at a Burlington Northern and Santa Fe Railway Co. refueling depot near Hauser, Idaho, raised awareness of the Rathdrum Prairie-Spokane Valley Aquifer.

What is more troubling is the amount of petroleum stored in aging tanks and dripping motor oil and gasoline that runs off parking lots and streets into the aquifer.

Lord Selborne on the ethics of freshwater

- In his report to the UNESCO sub-commission on the ethics of freshwater, Lord Selborne begins his 50 page report with a compelling analysis of water as an ethical issue laying out the justification and principles behind the centrality of ethics.

“While we all have a need for water, this does not give us the right to have access to as much water as we choose. Society must first insure that appropriate prioritization of water access to be put in place which allows humanity’s essential needs to be met as well as those of our ecosystems.”

Lord Selborne, (2000) *The Ethics of Freshwater Use: A Survey*
UNESCO

Ethical Principles behind the Rights to Freshwater

- **Principle of human dignity:** no life without water; those to whom it is denied are denied life.
- **Principle of Participation:** the poor must be involved in water planning and management.
- **Principle of Solidarity:** upstream-downstream inter-dependency calls for integrated water management.
- **Principle of Human Equality:** rendering to all persons their due
- **Principle of the Common Good:** water is a common good.
- **Principle of Stewardship:** finding an ethical balance among using, changing, and preserving water resources and land.

- **Water** has been incorporated into the human rights agenda through the United Nations. The challenge is to insure that rights are protected: rights to access; rights to quality drinking water. No one disputes the fundamental right of every person to have water to live and survive.
- **There is less consensus** on the rights of water ecosystems and their protection against re-configuring the landscape of the planet. Here, utilitarian ethics dominates—balancing protection with human needs. Water contamination is framed almost entirely in human terms. We don't ask: "Is it good for the river," to use it as a septic system. The protection of sensitive and ecologically unique areas is emerging as an area of environmental ethics.