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Preservation of humanity through clean water

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Abstract

On a global level, water has become a commodity that can no longer be taken for granted. There are indications that within 15 years, clean water shortages will negatively affect two thirds of the world's population. This can lead to increased disease, as well as the likely possibility of armed conflict between countries and between neighbors. Whether it is due to determining the rights to water, or determining the channeling of water with dams to create reservoirs for clean water consumption, water violence has become a reality. Providing clean water is the toughest challenge many countries are facing today. Significant contention has developed between users of water for agriculture, industry, and households. Such environmental conflict situations tend to be both challenging and convoluted. These situations are affected by the difference in priorities of the stakeholders and resource management decisions. As a result, solutions can be quite complicated and difficult to resolve. Much of the problem can be remedied with the installation of wells, the building of aqueducts, and the creation of water purification facilities to provide access to clean water.

Keywords: water wars, clean water shortage, world peace, water purification

Throughout the world, people need clean water in order to survive. Only 1% of the earth's water is drinkable and usable for the feeding of animals and the irrigation of crops. In many countries, this clean water is not easily available. The only water that is available may be from polluted rivers or other sources, or underground. Whether it is due to determining the rights to water, or determining the channeling of water with dams to create reservoirs for consumption, the occurrence of water violence has become a reality. Significant contention has developed between users of water for agriculture, industry, and households. Besides using clean water for drinking, people need water for irrigation, so that crops may be grown and agriculture may flourish. Humanity requires clean water in order to survive.

The degradation of this natural resource is the basis for a present powerful and volatile social problem. There is an existing ethnocentric attitude, where many countries having fresh water feel it is their entitlement. A number of corporations would make water a commodity to be bought and sold and denied, as they do now. Problems occur when all parties act as if they are independent of each other. They must act for the common good instead of for personal rewards. The "Tragedy of the Commons" dynamic develops when common resources are overused and activity depletes the resources (Senge, Kleiner, Roberts, Ross, & Smith, 1994). Water is not to be treated as the responsibility of only a single entity; it is the responsibility of all mankind. Survival of the world will require ecological democracy. Rights to water require sharing. Collaboration among nations is necessary for a sustainable water future (Marcy, 2011). There is a need for emotional intelligence to be used along with systems thinking, to design a shared vision of water for all (Senge, et al., 1994). There should be a disciplined and creative thought process, with anticipated outcomes. World leaders must work together to identify the undesirable outcomes, and then identify fundamental solutions. In order to have world peace, there must be an environmental policy respected by all countries; effective natural resources management; and sustainable development situations. Sustainable groundwater management requires collaboration between water consumers and government authorities. There must be an agreement on a sustainable level of extraction, coordination of efforts, collaboration among users, and a monitoring and controlling of the systems (Ross, 2010).

Climate issues and environmental shifting have caused dramatic changes in the availability of clean water in many areas of the world. Commerce and population development have radically affected the rivers and their pollution. Many people obtain water from these rivers or wells, which are easily reduced or contaminated by environmental changes. However, the quality of these water resources can be remedied with financial aid, which can enable the creation of wells, aqueducts, and water purification facilities, all of which can improve and facilitate access to clean water (Dunn, 2013). In addition to scientific water purification methods, other, natural methods have been developed which are found to be effective. As an example, the King of Thailand had his scientists develop a system of purification using water hyacinths in ponds. The hyacinths absorb the metals and impurities in the water.

Hydrogeology is a relatively new science which deals with the study of water in underground aquifers. It is not to be confused with hydrology, which focuses on the study of surface water (Remington, 2011). Rather than arbitrarily drilling wells in dry areas, this science strives to maintain the integrity of aquifers. An aquifer is a body of permeable rock that can contain or transmit groundwater. Oftentimes, with natural springs, the water that drains into furrows is contaminated by human and animal refuse and feces. It is important to protect some of these springs to bring clean water to the population, yet leave some of the water for animals and irrigation. In the developing world, women are the bearers of water, and often have to go

great distances to obtain and then carry clean water for others. Installing wells and sanitary irrigation systems would enable women to be freed from this arduous task, and radically improve their chances for betterment (Remington, 2011).

Engaging constructively in communications regarding conflicts about water or any aspect of the environment requires effective communication. The stakeholders must be appraised of the risks and rewards involved. Effective communication cannot occur unless negotiating partners choose to communicate in constructive ways. "Disagreements may signal the emergence of innovative, novel concepts as yet unrealized" (Flanagan & Runde, 2009). Conflict can actually become an advantage if issues are carefully examined and each party is open to considering new approaches and opportunities.

Environmental conflict situations tend to be both challenging and convoluted. Walker, Daniels, and Emborg (2008) suggest Collaborative Learning as a means of effectively communicating and resolving conflict. Collaborative Learning integrates aspects of systems thinking, negotiation, experiential learning, and interpersonal communication. Conflict situations involving the environment are affected by the difference in priorities of stakeholders and resource management decisions (Walker, Daniels, & Emborg, 2008). As a result, solutions can be quite complicated and difficult to resolve. Collaborative Learning works on three levels: philosophy, framework, and techniques. Effective interpersonal communication is what makes the process work. "As a philosophy, framework, and set of tactics [techniques], the Collaborative Learning methodology may be useful in a variety of environmental policy, natural resource management, and sustainable development situations" (Walker, Daniels, & Emborg, 2008). Whatever the process used, it is important to foster interpersonal communication between disputing parties, maintain a balance of advocacy and inquiry, and work toward collaboration for the good of all involved. Considering the seriousness of the degradation of natural resources in today's society, the lack of water wars serves as a tribute to the power of the forces of peace in the modern world (Dunn, 2013).

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