



WATER ETHICS: PRINCIPLES AND GUIDELINES

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A) Introduction

Water is the precondition of all life. The right to water is a key human right for a life in dignity and a condition of all other human rights because without water and food, all other cannot be implemented (UN Human Rights Declaration 1948, Art 25; International Pact for Economic, Social, Cultural Rights, 1966, Art. 11; ECOCOC Commentary No 15, 2002, Art 1 et al Water for all is also at the core of the UN Sustainable Development Goals SDGs (goal number 6).

Globethics.net has its focus on Ethics in Higher Education. Water is a cross-disciplinary topic a) as drinking water for the life of students and all staff on a campus, b) as a teaching and research topic in many faculties, from agriculture to environment, from architecture/housing to urbanization, from anthropology and theology to economics and political science; c) the topic is already included in Globethics.net Academy online courses on sustainability and other topics as well as in the Globethics.net Library resources and among the volumes available in the Globethics.net Publications series.

The sustainable use of water resources at local, regional and global levels requires a differentiated and integrative responsibility on the part of all users: individuals, households, public authorities, private sector, as well as policy makers.

B) Current Water Issues: Cases and Challenges

1 Awareness by all kinds of users

Freshwater resources have always been limited, in some places insufficient, often unequally distributed and inequitable in access. An awareness of an overall limitation is emerging. More and more users are aware that drinking water limits as well as watercourse limits will soon be reached and that we cannot continue to believe or make believe that the resource is simply available to those who want to use it. This awareness affects users as different as individuals or families, local and regional authorities, watershed residents, farmers, industrialists and private sector actors, the States themselves and more generally the international community.

2. Global responsibility and solidarity

The use of water brings together residents of the same watershed, riparian residents of the same watercourse, users of the same well or the same source. It thus induces co-responsibility and requires geographical solidarity.

3. Historical evolution

The use of water has evolved over the course of history, particularly in the wake of droughts due to climate changes, and more recently industrialization, intensive agriculture and exponential urbanization. Instead of simply suffering the excessive phenomena: floods, droughts and lacks, we learned to better strengthen the protections and we managed to better regulate the flows through protective dikes and dams. Recent cataclysms, however, seem to indicate that such measures may be overwhelmed.

4. Differences in mentalities. Waste and ignorance

It is clear that some of the current problems are related to mentalities, insofar as they were forged in a rural context and are ill adapted to the current urban context. This is evidenced by the thriftless use of water available in urban networks, excessive irrigation in agriculture and some industries, as well as the low awareness that any use requires treatment, not to mention the persistence of age-old models attributing heavy tasks such as supply, cooking, washing to women while men sail, fish and irrigate.

5. Complexity and fragility. Exposure and vulnerability

The understanding that this is a very complex and relatively fragile system is surfacing. It is better understood that the water cycle should be considered, from upstream to downstream, from extraction of springs or groundwater to the treatment of wastewater and polluted water. The importance of water in the food chain and the dramatic consequences caused by pollution or simply by the transport of pathogens or the diffusion of micro-plastics are more clearly realized than in the past.

6. Overexploitation of the resource

The pressure on the resource due to urbanization and intensive agriculture as well as population growth, but also industrial, energy and other uses leads to a more distinct differentiation of the valuation of water according to its origin: arising out of sources, runoff and groundwater, drainage and even desalination, as well as water from rivers, lakes, swamps, seas and rain from weather technologies. And in terms of the use of resources, there is a tendency to specialize or even separate more clearly the specific uses of drinking water and bath water compared to the water used for cleaning, cooling, irrigating, heating, transporting, generating electricity.

7. Political and international dimension of water

The management of water resources has led in the past to many conflicts, both between families of the same village or bordering the same watercourse, and between rural areas and agglomerations, as well as at the level of regions or between states. The potential for conflict is high and some observers today predict that future conflicts will find their roots in the management of access to water resources. Already today, many areas in the world are affected by water conflict. This access thus has a political dimension at both local and national levels through the way in which priorities between users are established or left to the law of the strongest. It also has an international dimension in that many rivers and aquifers irrigate several countries and that pollution by one affects all the others, but also a multilateral dimension insofar as deforestation, marine pollution, global warming and the resulting ice melting exceed the responsibility of riparian countries and concern the entire international community.

8. Religious dimension of water

Water is a key element for all world religions. Water is symbol of life, of renewal, of purification. It is used as symbol in religious acts such as baptism, ritual washing and it is to some extent seen as holy. [more to be added]

C) Ethical Values and Principles

Water use, distribution, management and recycling has to be led by values and principles. *Water Ethics* is a part of global ethics across cultures and religions as water is a common need for all human beings and all forms of life, including plants, animals and the atmosphere.

9. Ethical values

Water ethics has to be based on values such as *equality* (of affordable access to water. See the Globethics.net Text on equality and inequality), *freedom* (of access), *responsibility* (e.g. in use and recycling), *peace* (e.g. in distribution mechanisms), *community* (in sharing of limited water resources), *solidarity and sustainability* (in long term preservation of access to water) and others.

Water ethics is relevant across domains of ethics such as business ethics, political ethics, environmental ethics, bioethics, innovation ethics, ethics of technologies, cyber ethics etc.

10. Ethical principles

Water management must respect the ethical principles of sustainability, justice, equal rights to access, responsibility and solidarity. This respect is the only way to allow a peaceful conflict management, to promote a security perspective and to ensure equal rights between protagonists but also an economical and sober use of the resource. A key dimension of its implementation lies in the governance and the process of taking into account the needs of the various users

10.1 Principle of justice in access to a vital minimum

This respect invites the State to give priority to access to drinking water for communities in relation to other uses, and thus to better differentiate the water resource according to whether it is drinkable or not. It also calls on the Government to ensure that the price is not exorbitant and that minority groups are not discriminated against.

10.2 Principle of sustainability and responsibility to protect

Sustainability refers to the ability of the resource to regenerate and not reach depletion or pass a threshold of non-return to recovery. It promotes recycling and recovery or reuse initiatives and practices through dual-cascade of use and re-use or reverse osmosis technology.

10.3 Principle of equal rights to access to water and responsibility to protect

The question of the right to access to drinking water and sanitation arises not in terms of principle since this right was defined on 10 July 2010 by the United Nations General Assembly but in terms of implementation, including management arrangements and arbitration between users.

10.4 Principle of sobriety

Some sobriety in the use of water by individuals, families, households and institutions deserves to be encouraged. Water-hungry equipment must be taxable.

D) Innovation Ethics: Technical Solutions to Take into Account

11. The technical capacity to recycle polluted, spent, saline or brackish water has greatly improved in recent decades. Complemented by a more efficient separation between drinking and non-drinking water, technical solutions for environmentally sound rainmakers (weathertec) these technical capacities facilitate the solution to certain conflicts between users or even manage to solve them.

12. Genetically modified crops

For crops that need less water? Controversial, alternative technologies instead of GMO? [to be further developed]

E) Economic Ethics: Public Good and Economic Market Value

13. Free water and waste associated with it

Water is fundamentally a public good but also has an economic value due to its scarcity or the limits of available volumes. When the water is simply free, the door is opened to expensive uses - faucets that are allowed to flow, uncorrected losses - or is easily captured by the most powerful or influential users, who help themselves first without to reckon with the limits.

14. Cost of water

Water as such is priceless, but it has a real cost to be used, including investments related to extraction or collection, upstream filtering, pipeline routing, instruments for measuring quality and volumes consumed, equipment for waste reduction and wastewater recovery, treatment and recycling as well as costs related to the maintenance of the entire system and the administrative costs required for this management, be it carried out by public authorities or subcontracted by the latter to private operators or associations. All of this involves investments, maintenance and research and exploration expenses to expand or develop new modes of use and savings in consumption.

15. Calculation of the price of water

This price of water must be calculated in the most transparent way possible and by integrating all the costs involved: initial investments, operation and maintenance, new investments as well as research and development, so to show the profit margins realized by the operator if any. This "true" price can be accepted all the more easily as users realize the benefits of quality water, considering the savings made on the cost of treating waterborne diseases. This supposes that the volumes consumed can be measured and invoiced or the tariffs simply fixed.

16. Encouraging the economical use of water

The price of water established on the basis of the volume consumed can easily play an incentive role leading to an economical use of the water resource and finally a saving of energy. This is true in both publicly administered and informal jerry can water delivery systems.

17. Polluter pays principle

Costs related to depollution or at least the containment of pollution must be borne by those responsible for this pollution. In the event this responsibility cannot be established, public budgets are solicited.

18. Imperative subsidization for the poorest by the political decision-makers

It is up to the political decision-makers to define the limits of possible subsidies for disadvantaged groups as well as equalization systems making these subsidies possible and measurable. It is also responsible for defining the price modulation criteria according to the level of consumption, between large uses (industries, institutions, irrigation) and more modest uses of households and small businesses, while keeping in mind the principles of cost recovering within the overall water supply and treatment budget, as well as prioritizing the use of drinking water for individual users and encouraging consumption savings.

19. Water infrastructure: establishment, maintenance and renewal

[to be developed]

20. Innovation in agriculture for less water-intense crops

[e.g. millet needs 10 (?) times less water than rice. To be further developed]

F) Peace Ethics: Managing Conflicts of Interest and Conflicts between Users

21. Volumes of water available: when demand by many users exceeds offer

Conflicts of interest between types of use and conflicts between users are involved in any form of access to water by human groups. The family expects to be able to drink, cook their meals, wash themselves, evacuate their excrement. Farmers want to water their crops in a timely manner. Industries expect to be able to clean, cool or heat their production process. Fishermen want to ensure that streams are not diverted to the point of drying up. River boatmen and river carriers are concerned about low water levels preventing any transport or reducing the volumes of goods that can be loaded. The cities try to avoid epidemics caused by waterborne infections, to manage and supply residents, industries and public fountains without forgetting the cleaning of public roads. All of these expectations may not be met at the same time or in the expected volumes.

22. Pollution of surface water and aquifers (expectations not met)

Conflicts may arise not only about available water volumes and their distribution, but also about water quality, as can be seen in polluted rivers. They may concern surface water but also groundwater. The characteristic of water is indeed to facilitate a rapid diffusion of pollution, unlike soils for which pollution can be more easily isolated, circumscribed and controlled.

23. Water as a weapon

In some cases, water becomes even a weapon of pressure, blackmail, or threat from one group to another, especially groups living upstream on those living downstream or a group bordering a lake on others.

24. Arbitration to be found between different users

The main question is not about the possibility of avoiding conflicts, but about the optimal way to manage them. The management of water conflicts implies first of all that it is not denied that such conflicts exist and that a measure of available resources in the short, medium and long term is established between the parties concerned and communicated. It is important that an agreement be found to identify the most neutral authority possible - or the least subject to particular, vested interests - that can arbitrate disputes. Then convergence must be facilitated as to the main requirements to be satisfied, namely the taking into account of the interests and needs of the different stakeholders-users: families, industries, agriculture, communities, the prioritization between these needs, the search for an efficiency of management and accountability as transparent as possible, widening the room for maneuver in terms of flexible and seasonal adaptation by type of users. Trans border lake and river water agreements needed (e.g. Globethics.net study on the great lakes region).

25. Priority to be given to the assessment of available water volumes

The assessment to be made first and foremost concerns the volumes of drinking water available to be distinguished from the volumes of water that are not necessarily potable, as well as their seasonal variations.

26. Promote an open and informed debate

It is then essential that the main principles of water resources management are defined by public authorities and not by technocrats, and that the use of experts is limited to establishing water management procedures and evaluating consequences of choice made. The criteria for valuing and prioritizing the various needs must be the subject of an open and informed debate. Too often the power given to experts is excessive and opens the door to targeted corruption.

27. Scarcity of the resource and reasonable consumption

Paradoxically, it is the recognized scarcity of the resource that facilitates the process of prioritization and global distribution. As long as the resource seems unlimited, the need for prioritization looks like an artificial and even unnecessary exercise and no user seems willing to reduce its consumption.

G) Governance Ethics: Regulating and Managing Water

28. General debate on water

Regional or national political authorities have every interest in convening "General Debates on Water", inviting representatives of all users and stakeholders to sit around the same table to learn about current and future available resources regionally or nationally as well as quantities consumed or required by the various user groups: households and individuals, firms and industries, farmers, transporters and fishermen, public institutions. This state of play drawn up by this type of platform with multiple stakeholders must be as precise as possible and the most solidly documented. Seasonal variations as well as prospective trends are also considered.

29. Towards zero tolerance of corruption

Corruption related to water shares, water infrastructure projects, water legislation etc. not only entails serious breaches of equity and sustainability but also results into wastes of water and non-economical use of the resource. Consequently, local, regional and national authorities make it one duty to minimize impunity, impose serious sanctions on abuses; in other terms to tend to zero tolerance.

30. Mode of management debated and adopted according to a consensual alternative to a majority judgment

Then a series of essential criteria must be able to be identified and endorsed as such by the entire platform, which then gives them value in terms of importance for equal access, sustainability and recycling, production and growth, pollution impacts and the effects exacerbating climate disruptions, potential for anticipation and adaptation to change. Risks incurred due to shortages and breaks in supplies must be discussed and valued by the platform.

The assessment of all these values and risks is then carried out, if not by consensus, at least by a qualified majority of participants, or a majority judgment. The framework of a management system can thus be assumed and owned by all the protagonists.

Such a hierarchy makes it possible to face situations of scarcity and exacerbated competition between users, according to the seasons or changes of context. It is not a miracle cure but provides guidance to absorb shocks, prevent overly destructive conflicts and punish offenders. It has the advantage of being dynamic, flexible, adaptive and innovative.

31. Fair and credible system to settle divergences

The Government has to represent the interest of the whole human population of the own country/legal entity and the environment. But it also has to value the interests of neighbouring human being and its environment. In addition, the State acts as a neutral arbiter by inviting the protagonists in an inclusive, non-exclusive way, then encouraging everyone to be realistic and respectful of other needs. He highlights the interdependencies between different uses and user groups to provide a foundation for solidarity to be strengthened. It ensures methodical rigor and ensures the quality of everyone's listening. Then he points out the terms of the arbitrations and weighs the interest. It thus engages its responsibility as a decision-maker, capitalizing as much as possible on convergences and the understanding of interests in competition. He recalls that

corruption favoring the claims of a particular group ruins the trust required for the implementation of the process and commits to aim for zero-tolerance.

32. Decisions taken to be implemented under penalty of punishment

States ensure that a legal frame is established, within which offenders are severely punished through an as impartial as possible judiciary set up, so that all stakeholders can develop a solid trust towards the judiciary and see the risks of violent antagonisms being minimized.

33. Holistic and interdisciplinary approach to be promoted at the local level

The State also ensures that the different dimensions of water management: technical, social, legal, ecological can be part of a holistic approach and that its interdisciplinarity be ensured by the help of various specialists and community representatives. . It avoids an exclusively technical approach and avoids asking questions of use and distribution in purely technocratic terms.

34. Holistic and interdisciplinary approach to be promoted at the international level

A similar approach in its aspiration can be implemented in cases of water management in an international setting. The role of arbitrator must then be devolved to a continental body (European Union, African Union, etc.) or to the United Nations

H) Religious Ethics: Spiritual and Religious Traditions and Beliefs

35. Symbolic significance of water

The great religious and spiritual traditions have all recognized the symbolic importance of water in particular by its effect vis-à-vis the purification and renewal but also by its cosmic importance. This is evidenced by many rituals of purification in ancestral religions, Hindu bathing practices in the Ganges, Christian baptism and ablutions prior to Muslim prayer.

36. References to world religions (Abrahamic and Dharmic religions)

They spoke of the gift of water to water the earth, allow it to bear fruit and regenerate it (Bible: Job 11:14, Job 5: 10, Koran, Surah Al-Hajj 22, verse 63) See references in Ecumenical Water Declaration of 2006. (Add Taoism, Buddhism, Hinduism, Jain, Sikh)

37. Duty to water the thirsty

Abrahamic and Dharmic religions regularly stressed the duty to water the thirsty (Mt 5: 8). The refusal to give drink to the thirsty nowhere finds a justification. Even the enemy cannot be weaned of water (Prov 25:21 and Rom 12:20) so that all blackmail with thirst is disqualified.

38. Lack of attention to the "socius"

They have generally highlighted the dimension of water as a public good and have emphasized the duty to give drink to the next thirsty. On the other hand, they have remained more discreet in the "objective" solidarities with others that one never meets but who live in the same watershed, on the edge of the same lake or river. (To repeat Paul Ricoeur's distinction between "next" and "socius", they explained the first more than the second.)

39. Lack of attention to the economic market value of water

While stressing the direct link to the thirsty neighbor, spiritual and religious traditions have found some hardship in addressing the economic value of water. Reference to the even market or purely utilitarian value of water has been less clearly underscored. The importance of reaching a fair market value of water was downsized and that could pave the avenue for overexploitation or pollution following a logic of force.

40. Conclusion

Both states and local authorities, as well as religious, academic, associative and private sector voices must call for a responsible, respectful and sustainable use of water, join hand or challenge each other to improve a sustainable, equitable and effective water sharing.

Decision by Globethics.net Board: Globethics.net Consultation

The Board takes note of the Water Ethics: Principles and Guidelines and asks the Executive Committee to integrate the feedback from the Network/Consortium and to submit it to the Board for final approval by postal/email ballot.