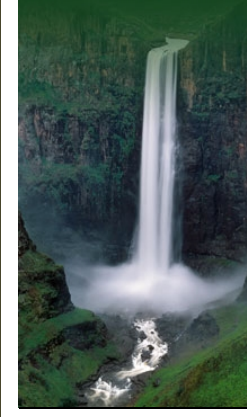




Orange-Senqu River Awareness Kit

People and the River

- Introduction
- History and Water Related Culture
 - Early History of the Basin
 - History of the Basin States
 - Water and Culture
 - Indigenous/Traditional Knowledge
- Stories
- Socio-economics in the Basin
- References



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→ History and Water Related Culture:
Indigenous / Traditional Knowledge
 Definitions and Concepts

Traditional knowledge is a precious resource that should not only be preserved as a component of a culture's identity or for tourists. It should also be utilized to meet challenges of modern life. Remembering traditional knowledge that helped a society/culture to survive for centuries under harshest circumstances, might also today give this society/culture the extra bit of strength needed to survive in present day.

The following material grants an insight into more general concepts of indigenous traditional knowledge. It is an important challenge to draw the right conclusions for our societies and our dealing with the resource of water.

Traditional knowledge is a cumulative body of knowledge, know-how, practices and representations maintained and developed by peoples with extended histories of interaction with the natural environment. These sophisticated set of understandings, interpretations and meanings are part and parcel of a cultural complex that encompasses language, naming and classification systems, resource use practices, spirituality and world-view.

Source: (ICSU 2002)

Box 1: Indigenous People's Kyoto Water Declaration

1. We, the Indigenous Peoples from all parts of the world assembled here, reaffirm our relationship to Mother Earth and responsibility to future generations to raise our voices in solidarity to speak for the protection of water. We were placed in a sacred manner on this earth, each in our own sacred and traditional lands and territories to care for all of creation and to care for water.
2. We recognise honor and respect water as sacred and sustains all life. Our traditional knowledge, laws and ways of life teach us to be responsible in caring for this sacred gift that connects all life.
3. Our relationship with our lands, territories and water is the fundamental physical cultural and spiritual basis for our existence. This relationship to our Mother Earth requires us to conserve our freshwaters and oceans for the survival of present and future generations. We assert our role as caretakers with rights and responsibilities to defend and ensure the protection, availability and purity of water. We stand united to follow and implement our knowledge and traditional laws and exercise our right of self-determination to preserve water, and to preserve life.

Source: Indigenous People's Kyoto Water Declaration presented at the Third World Water Forum in Kyoto, Japan, in March 2003. Appeared in "Indigenous Water Initiative" 2009

The term **Indigenous Knowledge** implies a connection to place and to indigenous or first/original people, whereas **Traditional Knowledge** emphasises the accumulation and transmission of knowledge through generations (ICSU 2002). Local knowledge is a broader term that refers to the knowledge of any people who have lived in an area for a long period of time.

Indigenous Knowledge is the information base for a society, which facilitates communication and decision-making. Indigenous information systems are dynamic, and are continually influenced by internal creativity and experimentation as well as by contact with external systems (Flavier *et al.* 1995).

Indigenous and traditional knowledge and practices are sets of understandings and interpretations that are embedded within a cultural context that includes language, naming and classification systems, practices, customs and worldview (UNESCO 2002). Indigenous and traditional knowledge about people, plants, animals and the environment contain spiritual, cultural and social aspects.

Knowledge systems are passed from generation to generation and are at risk of being eroded or lost as time passes and society changes. In Africa, indigenous and traditional knowledge is often passed through shared practice and storytelling and the lack of written record of this puts it at risk of extinction.

Box 2:

"When a knowledgeable old person dies, a whole library disappears."

source:- an African proverb (IDRC 2003).

As awareness of this potential loss of crucial knowledge spreads, innovative mechanisms are being sought by sociologists, anthropologists and development planners, to integrate indigenous and traditional knowledge systems into development planning and western science. Documenting the body of indigenous knowledge is integral to conserving this knowledge and ensuring that it continues to be passed on to future generations. Uses of local theater and songs for promoting ecological knowledge and resource management skills have been effective through-out Africa.

Interactive

Basin Map

Explore the sub-basins of the Orange-Senqu River

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Video Tour

Tour video scenes along the Orange-Senqu River related to People and the River

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Timeline

View a historical timeline of Orange-Senqu countries, including water agreements & infrastructure construction

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River Journey

Journey along the Orange-Senqu River through images and interviews

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San traditional healer.

Source: Garner 2009

(click to enlarge)

Inclusion of Indigenous and Traditional Knowledge in Water Resources Management

Incorporating indigenous knowledge into projects can contribute to local empowerment and development, increasing self-sufficiency and strengthening self-determination. Utilizing this knowledge during the implementation of projects gives it legitimacy and credibility in the eyes of both local people and outside stakeholders, increasing the sense of ownership and cultural pride and providing incentives to solve problems with local ingenuity and resources. The body of knowledge contained within indigenous and traditional knowledge systems can provide valuable input about the local environment and how to effectively manage natural resources.

Box 3: Sacred Aspects of Water Knowledge

"Indigenous peoples possess traditional knowledge and skills concerning the sensing/locating of water and protection of the source. Water sources on indigenous lands are often considered a sacred element, and indigenous women may be the holders of 'water knowledge'. Their traditional land management skills often provide the most effective method of water resource management in their settlement areas. However, indigenous peoples are seriously affected by their uncompensated and unsustainable loss of water to farming and other industries introduced from outside their communities. In the worst cases, governments have closed water sources in an effort to forcibly relocate indigenous peoples from their traditional territories. In other instances, indigenous peoples are not provided with clean safe drinking water to the same level as other nationals in a given country. Measures must be taken so the indigenous people can develop their capacities to achieve sustainable and equitable self-development."

Source: UN 2006

Indigenous people have managed the environments in which they have lived for generations, often without significantly damaging local ecologies. Attributes of indigenous and traditional knowledge which are relevant to conservation and sustainable development include the following (Dewalt 1994):

- **Locally appropriate:** Indigenous and traditional knowledge systems represent a way of life that has evolved with the nature, so it is specifically adapted to the requirements of local environmental and social conditions
- **Restraint in resource exploitation:** Production is for subsistence needs only, therefore, only what is needed for immediate survival is taken from the environment
- **Diversified production systems:** There is no overexploitation of a single resource; risk is often spread out by utilising a number of subsistence strategies
- **Respect for nature:** Knowledge systems contain a 'conservation ethic', whereby the land is considered sacred, humans is dependent on nature for survival, and all species are interconnected
- **Flexible:** Indigenous and traditional knowledge systems are continually changing and adapting to changing environmental conditions
- **Social responsibility:** There are strong family and community ties with inherent obligation and responsibility to preserve the land for future generations

Knowledge systems based on indigenous, traditional and/or local knowledge provide the basis for local-level decision-making in water use and conservation, agriculture, natural resource management, health care, food preparation, education, and many other activities. For over 80% of the world's population, traditional medicinal practices are the primary form of health care (WHO *et al.* 1993).

Examples of indigenous and traditional knowledge and practices relevant to the water sector include:

- Location, collection and storage of water
- Water resource management and irrigation methods
- Conservation strategies
- Natural forestry management
- Biodiversity science - like analyzing the properties of local flora and fauna and the identification of new species, and management
- Hunting, fishing and gathering
- Medicinal plants and medicinal practices
- Agricultural practices including: crop domestication, breeding and management; swidden agriculture; agro-ecology; agro-forestry; crop rotation; and pest and soil management

Box 4: Indigenous water Resource Management and Irrigation Systems

"Indigenous knowledge of water resource management and irrigation methods vary from canal, pond and well digging, khattara, open-surface irrigation, spate, under-surface and covered tunnel, buried clay pot, pitcher, wheel, wooden pivot methods, construction of bund around fields and cultivation of low moisture adaptive crops. Farmers' knowledge of plant-soil-moisture relationships and adaptive capability of domesticated plants also play a significant role in the evolution of indigenous irrigation and water resource management methods."

Source: Abu Muhammad Shajaat Ali 2006.

Challenges and Recommendations

Incorporating indigenous and traditional knowledge raises a number of complex issues, such as, land tenure rights, genetic resource ownership, intellectual property rights and benefit sharing. Despite the rationale for integrating these knowledge systems with western science, to date indigenous knowledge and understanding related to water are misunderstood and/or ignored in water projects. The causes of this are complex but can partly be traced to their lack of meaningful inclusion of these approaches in water policy and planning processes. Furthermore, customary access and rights to water is seldom recognised by the state authorities that now control indigenous areas and sources of water that are critical to cultural and physical wellbeing are being developed and impacted by outside forces beyond their control.

The International Council for Science (2006) has established recommendations for conserving and utilising indigenous and traditional knowledge:

- Ensure the full and equal participation of traditional knowledge holders during all stages of development plans, programs and policies.
- Acknowledge and respect the social and cultural bases within which traditional knowledge is embedded.
- Recognise the rights of traditional people to own, access and realise benefits of their knowledge resources and systems.
- Ensure that partnerships with traditional knowledge holders are only entered into with prior consent and that they are fully informed and understand the ramifications of partnerships.
- Promote models for environmental and sustainable governance that establish principles of effective and equal partnership between scientific and traditional knowledge.
- Promote training and capacity development programs to better equip scientists and traditional knowledge holders to conduct research on traditional knowledge.

Box 5: Traditional Water Harvesting Systems

A typical of the precipitation pattern in semi-arid and arid areas is that a large amount of the total annual rainfall is often received in one or a few high intensity storms. Therefore, people who often rely completely on rainwater for their survival have over the centuries developed local methods to secure and store rainwater until the next rainy season. Even though these traditional water harvesting systems can look precarious and casual in the eyes of modern technologists, they have been perfectly sustainable for centuries. The reason for this is that they are compatible with local lifestyles, local institutional patterns and local social systems. They represent a fund of solid experience gained through generations of observations, trials and errors, concerning soils, plants, animals, groundwater movements, runoff flow patterns and climate.

Source: Ferroukhi and Chokkakula 2006

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