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## 4.11 Elements of care in water management – Gender dimensions for sustainable water use

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*SUMMARY: Water has always determined the social structures of rural communities. In many regions of the world, the meaning of water in daily-life is an enduring reflection of the deep spiritual and cultural embeddedness of water in a society. In developing countries, water is nowadays closely linked to the problems arising from changes in rural economies, rural population flight into cities and unequal distribution of land and water rights. These conditions of crises deeply affect women in their daily life and familial arrangements. A gender sensitive analysis of the discussion on sustainable water management shows the caring role of women designates them as the main procurer of the family's water supply. Because it is mostly done by female family members, the procuring of water represents an extremely gendered form of community work. It is mainly performed under conditions of poverty and where basic resources are severely limited. With this in view, national water politics and technology programs have to acknowledge and bolster the rights of women and their central role—especially in agriculture and household water management. They also have to consider the gender-specific differences in household and work organisation in the respective countries and societies. Therefore, the availability of land and the control of water for women is a necessary requirement; women must also be provided with more knowledge and information about programs and support, so that they are able to overcome hindrances and problems.*

One of the demands of the paradigm of sustainable development at the end of the 1980s in the Brundtland Report was the aim of using only as much resources as the Earth is able to replenish, which insures the availability of resources for future generations. Over the past 20 years, it has become obvious that trying to implement sustainability in societies requires more than technical and strategic measures; a careful analysis of the respective ideological backgrounds and challenges is equally important for sustainability to be successfully introduced. Critical research on sustainable development and gender equality questioned early on whether northern style technology and skills are globally adjustable to the requirements of different cultures and societies. On the regional level, women, in particular, in India, Africa and Latin America have fought against northern countries' exploitation of resources, the neglect of female landownership and discrimination against cultural and traditional knowledge. Therefore, sustainability and gender meet on the concrete material level of hegemonic distributions of essential goods such as nutrition, land, agricultural products, water, the distribution of resources and protection of biodiversity.

This article will take up the gender dimension as an analytical category, which helps to address quantitative, personal, monetary and material distributions in conflicts over natural resources. Another focus here are the ideological backgrounds of different environmental or developmental policies. The gender sensitive analysis of certain water conflicts is reflected against the background of specific societal and regional relationships to nature, which are considered to be negotiated and reproduced under hegemonic conditions of still unequal access to resources, knowledge, participation and decision-making.

### **Societal relationships to nature – The gender dimension in the use and management of water**

Critical feminist and gender theorists have pointed out that »nature« and »culture« are not two independent entities in a more or less sustainable relationship. On the contrary, both are constructions of dichotomised patterns of recognition, awareness and appreciation from people in their environments as a whole (HARAWY 1991). They represent specific societal relationships to nature created by hierarchy and power (BECKER & JAHN 2005), results of our social practices (RECKWITZ 2003), the societal and individual patterns of interpretation and activity. Blockades in the realisation of sustainable development are seen in dichotomised patterns of nature – culture, use – protection, public – private, centralised – decentralised and so on. »Hidden« potentials for sustainability are supposed to exist but remain invisible and excluded because of hierarchic structures.

Water infrastructure management represents such a form of societal organisation involving planning, provision and use of utility services as well as social demand on and for them. Water has always determined the social structures of rural communities tightly linked to region and soil and has represented a source for material and immaterial power. Historically, the meaning of water in daily-life reflects the deep spiritual and cultural embeddedness of water in a society. The introduction of new forms of technology in daily and domestic life and the industrial use of natural resources led to a fragmentation of the domestic, supply-bound sphere. In northern industrialised societies, water management nowadays lies hidden—under the Earth, under streets, under houses, under the places. It is hardly visible to citizens. Inhabitants of the industrial countries

are accustomed to a constant availability of water delivered by large-scale industrial systems. In many regions of the world, a general implementation of northern style technical and organisational solutions has often generated social incompatibilities and disharmonies, which create further dependencies on follow-ups in accompanying foreign consultancy measures. These processes have particularly affected women in their daily-life contexts under conditions of changes in rural economies, labour migration and unequal distribution of rights to land and water.

### **Gender conflicts in water technology transfer and infrastructure management**

Water is a highly symbolic good world-wide. In the southern hemisphere, water is closely linked to the problems arising from changes in rural economies, rural population flight into cities and unequal distribution of land and water rights. Until the 1980s, the most agriculture in Latin America was considered to be under male management. But analysis of the irrigation agriculture of Ecuador and Peru in the early 1990s made clear that the role of the women in production is much more important than assumed. Many men in the region have left the villages in order to work in nearby cities. Women then adopted a high level of work in land- and water management. Despite their high level of responsibility in terms of water, however, the participation of women in the private water associations has remained low (VILLALOBOS et. al. 1993). In the civil war-regions of Latin America such as Guatemala, the amount of households and sole education of the children provided by women is very high because of the loss of men in armed conflicts and regional separations. Many widows who have lost their husbands in these conflicts live without any support from the government, institutions or other sponsors. Guatemala is one of the poorest countries of Latin America, and most inhabitants live in bitter poverty. Many women and children die from starvation and poor nutrition each year (TUYUC VELÁSQUEZ 2002).

Gender difference is a central category that determines the access to and control over resources. In many regions of Africa, this situation mainly is an outcome of past colonialism (SCHÄFER 2002). In Gambia, the water intensive cultivation of rice and millet secured the nutrition during colonialism. Work processes and the access to land were separated between the sexes, but distributed equally. The implementation of peanut production during the British colonial regime and the high taxation on peanut production forced male family members away from rice cultivation. Women took over their work on the rice fields as well as doing weed control and harvest services in peanut production. But they did not earn anything from the sale of the

peanuts, which they could have then spent on providing care for their families. After state independence, the installation of artificially watered rice fields received international support. The fields registered as »family-land« were transferred under the regime of men as the official family leaders and managers. Again, women were discriminated against economically in terms of agriculture and water management (SCHÄFER 2002, BRAIG 2001).

The loss of the traditional knowledge of women and the loss of biodiversity are closely connected on an economic level. Traditional models in agriculture were based on the utilisation and conservation of biodiversity. Irrigation policies for the cultivation of mono-cultures for marketable grain excluded the traditional variety of the cultivation of field fruits implemented by women. Crop rotations, which were adopted to the specific regional climatic and ecological conditions, disappeared in favour of a technologically intensive agriculture—mainly run by men. In tropical South-Ghana, the matrilineal societies were forced to grow cocoa by the British colonial government. The land was privatised and many women lost their landownership, and with it, their economic autonomy. Most of them were forced to work on the fields of their husbands and male relatives as agricultural workers. Because of the temporal overlap of working on the cocoa fields while growing their own vegetable crops, women were forced to cultivate more rapidly growing plant types. This pressure led to the gradual disappearance of a specific and complex cultivation system characterised by plant variety and an optimal adaptation to the regional ecology (SCHÄFER 2002).

Plans for cultivation and irrigation within the »modern« agricultural procedures were determined predominantly in exclusion of the traditional agricultural knowledge and economic issues of women. The consequences include the reduction of the diversity of field fruits as well as problems in dealing with unadjusted technology. For the operation and maintenance of technical equipment, e.g., water pumps, men were trained but not women. Furthermore, the equipment itself is gendered, often requiring a high level of force and strength. The differentiated experiences of women to produce agricultural goods under extreme water shortage conditions were completely ignored (WOMAN IN DEVELOPMENT SERVICE 2002).

In countries like Yemen, where extreme water shortage occurs, a maximum use of water is reached over varied strategies of multiple-utilisation. Women are very conscientious about not exploiting or poisoning precious water sources. However, the impairment of water use through faeces, pesticides from agriculture, water shortage or general mismanagement of the resources is often unavoidable. So, in order to assure the supply of water, women and girls have to walk increasing distances to the nearest water source. In Egypt for example, 30% of all women walk more

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than one hour every day in order to get water. In some regions of Africa, women and girls spend up to 8 hours per day solely devoted to this task (Ibid.).

Slums at the margins of mega cities in Africa, India and Latin America are continually growing because of increasing population and bad governance. The colonisation of the smallest spaces—which are often not own private property, as in Bombay—is fiercely opposed by the government. Accordingly, there is low or zero willingness to supply the poorest of the poor with energy and water. In many cities, public and private water operators have refused to provide these areas with the bare minimum supply of water as long as the questions of property are not clarified. In cities where there is a general obligation to supply all inhabitants with sufficient water, reasons are put forward as to why the necessary facilities cannot be built. Either the land is declared to be uninhabitable, unapproachable or overpopulated, or it is suggested that the poor communities will not be able to pay into the facilities in the future (WaterAid 2003). The consequences of this abortive politics mostly affects women, who are responsible for the daily supply of water for the families well as for the hygiene and health of the children and all other family members. They are the ones who maintain the toilets or latrines, remove the garbage in the neighbourhood or complain about the stench in the air caused by the sewages on the streets. They are, for example in the slums of Addis Abeba in Ethiopia, also the ones who put the pressure on their husbands and the administration to take care of the installations for drinking water, taps and toilets (GENDER AND WATER DEVELOPMENT REPORT 2003).

### **Concluding remarks**

Water is the most important, basic resource needed to sustain human life. For millions of people in different continents, the lack of access to sufficient water or the lack of quality are part of an everyday fight to survive. Women bear the main responsibility for providing a hygienic environment in which to work and educate their children. They are the experts in matters of hygiene as it relates to the common water supply and sewage disposal structures. There is a tight connection between women and water on different levels. Procuring the family's water supply is a central activity in the daily life of women in the rural regions of poor countries. In most cases, they alone can guarantee it. Additionally, the relationship between women and water in various cultures has a mystic-spiritual symbolism, which is deeply rooted in their traditions. The household work and family care performed by women is not only pragmatic but part of an individual spiritual path. This has to be taken into account in »modernisation-processes« (MURCOTT 1998). The type of water technology and the forms of its implementation affect women in regard to their economical

household activities as well as their individual subjectivity and individuality. The caring role of women—automatically extended from the home to the community by society—reveals the extremely gendered nature of community work, especially under conditions of poverty and the lack of basic resources (LITTLE 2002). National water politics and technological programs therefore have to acknowledge and to further the rights of women and draw attention to their central role in agriculture. This means that changes in communities with respect to the shift in traditional gender relations and formerly accepted gender divisions of labour have to be acknowledged on a local level (Ibid.). The starting point for the empowerment of the role of the women in land and water management therefore must lie in the consideration of the gender-specific variation in household and work organisation in the respective countries and societies (KOPPEN 2002). Additionally, transnational support has to consider the gendered nature of technology and needs to find adequate responses to the rural, cultural and natural environments. In this sense, the right to the availability of land and the control of water for women is a necessary requirement, as well as the offering of more knowledge and information on programs and support, which will help women tackle problems they face on a daily basis.

*Looking ahead:* Regions are entities of different spaces (nature, society, economy). This acknowledgement demands far more than the bare addition of social, ecological, economic, cultural and political goals. A truly integrative perspective would entail, first of all, re-thinking the goals of environmental and social policies in a new way and to question which conceptions of a »good life« are promoted by the inhabitants of a specific region. In the performance of the concrete arrangement of water infrastructure, the specific demands of rural and urban households have to be the starting point to negotiate differentiated infrastructure models, because citizens regenerate and differentiate knowledge and competency for societal issues out of their activities in the reproductive interdependencies of their daily life experiences. This knowledge is highly relevant and useful for participation in supply infrastructure because it contributes embedded, culturally »situated« knowledge and expertise in societal services (BEHRENDT & KNOTHE 2005). This aspect is closely linked with the difficult aspect of how to handle the unknown and unpredictable in a constructive goal-orientated negotiation process (JIGGINS 2002).

Rural communities are not »containers« for the interplay between gender roles. It is essential to understand rural communities to be encapsulated in the practical workings and in the societal meanings which circulate through them (LITTLE 2002). They are a powerful set of values and assumptions about how women and men relate to each other and make sense of their lives ♦