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Can tradition help to overcome current problems?

Indigenous water resources management and water-utilisation in northern Namibia (former Ovamboland)

This paper is the summary of the author's Ph.D. thesis „Wassernutzung, ihre Traditionen und deren Verwendbarkeit im Norden Namibias (ehemaliges Ovamboland)“, submitted at the Faculty of Earth Science at the University of Wuerzburg, Germany, in October 1999. The thesis will soon be published by the „Institut für Afrika-Kunde“ in Hamburg, Germany, in their „Hamburger Beiträge zur Afrika-Kunde“. The publication („Wasserversorgung – Wasserverwendung. Nutzungstraditionen als Grundlage eines nachhaltigen Ressourcenverbrauches im ehemaligen Ovamboland, Namibia“) can then be obtained from the

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This project of applied geography deals with the problem of water scarcity and with potential methods of overcoming this situation. The investigation focuses especially on the search for possibilities of maintaining specific traditions of water utilisation in order to purposely include and implement them in a modern water policy. Thus, by regulating and limiting the total consumption of water, potential causes of conflicts

could be reduced and a long-term de-escalation of the severe water scarcity could consequently be achieved. The project investigates water supply and water utilisation in the most densely populated region in the most arid country in sub-Saharan Africa, the former “Ovamboland” in northern Namibia.

In the ecologically fragile area between the Kunene river in the west, the Kavango river in the east and the Etosha pan in the south, settlement and way of life have for centuries been determined by the access to water. Formerly the Ovambo relied on precipitation and the annual flow in the seasonal rivers of the Cuvelai delta inundating huge parts of the territory. Both of them, however, only occur during the rainy season, seep away or evaporate within a few weeks or months afterwards and therefore can contribute to a the water supply for the population to a very restricted degree only. This also applies to the groundwater being very saline in many parts of the area.

Political and infrastructural changes as well as an enormous increase in the population have restricted this way of life and thus required the acquisition of new water sources to satisfy the people’s demands. Beginning in the sixties and seventies, the “Ovambo water scheme”, a pipeline and canal system, has been built to transport water from the Kunene river in southern Angola to central Ovamboland. This resulted in a change from traditional use of local water resources to the modern pipeline and canal system which was even enforced by the erection of additional infrastructure. Sufficient available water for the population in the central part of this region has become totally dependent on water brought artificially from the neighbouring country, thus the development of the most populated region of Namibia is now dependent on Angolan-Namibian contracts of co-operation in the use of the Kunene river. This dependency on international co-operation emphasises the importance of reducing current or expected problems of water supply, through measures which can be taken within the region itself and adapted to its specific water conditions. Investigating potential possibilities of combining traditional and modern forms of water supply and water utilisation, attention is specifically put upon the question whether it is possible to make use of traditions of regarding water as a scarce resource in modern water saving policies.

In its first part the thesis investigates the natural conditions as well as the historic development in the area (generally socially and specifically water-related) and focuses especially on the reciprocal influence of different factors in the existing

situation. This is being done on the basis of intensive studies and analyses of written sources. Among others, special focus is put upon the population development in the investigated area since the acquisition of national independence in 1990. Analysing the annual statistics of the *Evangelical Lutheran Churches of Namibia* (ELCIN) and thus projecting the data of the most numerous church in northern Namibia, the study reveals that the population in the investigated area has increased at an average rate of 3.8 % annually during the years 1990 – 1996. After nearly one decade with official estimations assuming an increased rate of northern Namibia's population of only a little more than 3 %, this part of the investigation offers for the first time a short-term available demographic basis for future planning in northern Namibia.

The recognition of difficulties and possibilities of the water supply in past and present by people of different generations and different status/function in society is the focus in the second part of the empirical investigation. It uses participant observation in people's everyday-life and water-utilisation in selected areas as well as varying forms of in-depth interviews with a multitude of persons as the main research tools. These methods of qualitative research are used in an open research approach to analyse whether traditional and water-saving elements within the water utilisation of the inhabitants do currently still exist and whether they might be suitable to control and reduce the dependency on external factors (see above). The described dualism in the selection of applied methods assures that the issue of interest becomes investigated both from an external perspective (interpretation of written sources, participant observation) as well as and an internal perspective (open interviews with people in the investigated area).

Compared with, for instance, the highly elaborated water-laws and traditional technologies for transfer and storage of water, which are well-known from the oases in northern Africa or in the Middle East, the findings concerning existing remnants of a traditional "water-culture" in northern Namibia are poorly developed. However, there are some valuable results which could be used in order to achieve a de-escalation of the water scarcity in northern Namibia.

In the Ovambo's traditional way of life, which has been dominated by agricultural subsistence farming (cattle and goat breeding as well as millet cultivation), water was only used for human consumption (cooking, washing, ...) and for the cattle. Despite the alternating periods of floods and of drought there has not been any traditional use of irrigation. Current efforts to implement irrigation in

Ovamboland are hindered by the resulting lack of experience in irrigation, the unsuitable soil for irrigation and the risks associated with an increased off-take of water from the Kunene river.

Regulation of the water demand at the pipeline scheme must be seen as an important point where measures should be taken in order to reduce the risks in the current water situation. However, instead of using any potential opportunity to achieve this, the water consumption is even being raised in two ways: On the one hand, continuously more and more areas get connected to the pipeline scheme, on the other hand local water resources in these areas are abandoned, and even water for lower quality use is being taken from the pipeline system. On health grounds it must be a positive step when areas with insufficient local water resources get connected to the pipeline grid*. However, the consequences of not using local resources anymore results in an unnecessary aggravation of the situation:

Caused by the respective deficiencies of the various traditional water sources (irregular precipitation, merely temporarily existing surface-water, saline groundwater) the traditional Ovambo culture had evolved a sound and solid awareness of using water from different sources with different quality for different purposes. The modern policy of connecting Ovamboland to Kunene water and satisfying any demand in a flat rate manner with water from one single source not only relinquishes making use of this culture - it, more than that, actually destroys it. Following the connecting of regions to the pipeline scheme, awareness campaigns for the saving of water are often implemented in order to regulate the population's water consumption. These expensive campaigns would promise to be much more beneficial if they promoted the maintenance and use of traditional water resources. Complaints of many (mainly older) inhabitants in various conducted interviews and the information obtained from interviews with school classes reveal that only small remnants of the traditional awareness about water utilisation still exist. Thus, an opportunity to integrate this traditional awareness into the modern water supply is unlikely to continue for longer than a few years more, if at all. The distilled forms of

* In order to avoid any misunderstandings, it should be emphasised that the investigation does not suggest halting the abstraction of water from the Kunene river for the Ovamboland population. As long as it is based on safe inter-governmental regulations, this type of water supply is definitely a very sensible one. However, in order to reduce the consumption of pipeline water and the dependency on Angolan politics, it should be accompanied by specific measures supporting the maintenance of traditional local water resources.

traditional water utilisation offer the opportunity to tread new paths in water supply policies by making use of “handed-down behaviours”. Combined with a sound international co-operation (avoiding external problems) this can be an important contribution to defuse the region’s water crisis internally.

Although within the search for African traditions and their suitability for modern water policy the investigation at hand concentrates on the most densely populated area in the most arid country in sub-Saharan Africa, some major key results can be transferred to other regions that face similar risks of an actual or potential water scarcity. This not only applies to the question about the implementation of irrigation schemes to be conditional on an adequate availability of local water resources, it also applies to the requirement to likewise include local, traditional and indigenous features of water supply and water utilisation into modern water policy. The continuous use of any suitable water resource (meaning the use of local water resources with inferior quality for respective purposes in northern Namibia), i.e. the encouragement of mixing of water sources, even in those regions where modern installations seem to secure future water supply, will enable the control of water consumption. Many regions in Africa and many Third World countries are facing risks of water scarcity. This investigation proposes that it is imperative to pursue the idea of using traditional methods and knowledge of water resources management in order to make an important contribution to the prevention of conflicts.