

The Situation of Children and Women in Namibia

Notes on Rural Water
Supply and Sanitation

UNICEF
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1. Despite being attached for decades to the most powerful economy in the continent, Namibia at Independence found itself one of the region's poorest served nations as far as basic water supply and sanitation services are concerned. While virtually the whole developing world has striven during the 1980s, and into the 1990s, to reach the goal of clean water and good sanitation for all, as embodied in the aims and objectives of the UN supported International Drinking Water Supply and Sanitation Decade (IDWSSD), Namibia appears to have been left behind. Urgent steps are required if this gap is to be closed.

2. Inadequate access to clean water supplies and poor sanitation pose major health risks to the population of Namibia. This is particularly true in the non-commercial rural areas, where an estimated 66% of the population reside. During the 1980s, the World Health Organisation (WHO) estimated that as much as 80% of infectious disease incidence in the world is linked to contaminated water supplies and poor sanitation. Diarrhoeal disease, which is strongly associated with these factors, is known to be the biggest preventable cause of death among the under-fives in developing countries. In an important policy document (*The Policy of the Government of the Republic of Namibia on Children*, Windhoek, August 1990), the government has acknowledged the direct links between the lack of clean water, poor sanitation, and the death of Namibian children, especially in the rural areas. As well as having one of the poorest water and sanitation service levels in the region, Namibia also has one of the highest infant mortality rates, with 176 out of every 1000 children born failing to live to the age of five.

3. Prior to Independence in March 1990, basic service provision in the former South West Africa was strongly biased towards urban settlements and commercial farming areas, at the expense of the majority of the population who resided in very poorly served "homeland" areas. A change of government, however, and the establishment of the Republic of Namibia, has led to a major shift in priorities and the focussing of attention on the needs of the majority. The government of the Republic of Namibia recognises that access to clean water supply, and improved sanitation, are prerequisites for the better health of the nation and essential to the development process itself.

sandy soils to eke out meagre and murky water supplies also robs many Namibians of the dignity for which they have struggled for so long. This observation applies equally, if not more so, to the almost total absence of sanitary, and private, toilet facilities.

8. Estimates of service coverage only tell part of the story. At many water sources, where basic water quality is good, environmental hygiene conditions are such that the risk of contamination of water at the point of collection remains high. Outlets from piped water supplies in rural areas, for example, are often inadequately protected and poorly maintained, leading to the development of unsightly and insanitary surroundings caused by spillage and leakage. The inadequacy of supplies often leads to overcrowding of water points, with humans and livestock competing for the same source, and a consequent degradation of the surroundings and increased risks to health. To these factors must be added the subsequent risks to water quality during the journey home and as a result of unhygienic home storage and handling practices.
9. A UNICEF review of the village water supply situation in Eastern Caprivi underlines typical rural conditions:

"Poor environmental conditions characterized almost all of the water points visited, whether on the pipeline, or at boreholes or wells. No facilities have been provided to manage spillage from the water points, creating unsightly and unhealthy puddles around many of them. Standing water around water points also encourages encroachment by livestock, leading to faecal pollution and general degradation of the immediate environment." (P. Evans, *Report of a Consultancy Mission to Eastern Caprivi, Namibia, to Review UNICEF Support to Water Supply Development, and Related Issues*, Windhoek, September 1990).

10. The report makes equally depressing reading in respect of basic sanitation, noting that "Household latrines are so scarce in Eastern Caprivi that none were seen during three days of field trips".
11. The situation in many other parts of the country is rarely better, and sometimes worse. The problem is not only confined to the home, but is equally evident at schools and other institutions, as a UNICEF report from the Uukwaluudhi District in Western Ovambo illustrates:

"Conditions in the home are in general very poor, and are scarcely any better at schools. Apart from a very few schools which benefit from the pipeline, the majority

High priority has accordingly been given to the development of effective rural water supply and sanitation programmes.

4. A recent United Nations review of the water supply and sanitation situation in Namibia found that an estimated 70% of the rural population in the former homeland areas has no secure access to a clean water supply, while 90% have no adequate sanitation facilities (L.Laugeri et al, *Water Supply and Sanitation Sector Review*, WHO, Windhoek, August 1990). In Ovambo, which has the biggest concentration of the national population, the situation is probably the worst. According to UNICEF criteria, a person is considered to have access to potable water if he/she lives within one kilometre of a protected water point capable of delivering 20 litres per day for every person using it, with a quality of water conforming to WHO standards. By this reckoning, only about 20% of the population in Ovambo enjoy this level of service (see H.Spruitj, *Report of the UNICEF Assessment Mission for Water Supply Projects in the Ovambo Region, Northern Namibia*, Windhoek, February 1990).
5. Although conditions are somewhat better in commercial farming areas, and in urban and peri-urban centres, overall service provision remains woefully inadequate, particularly in middle and lower income areas. Striking differences in service provision reflect Namibia's colonial legacy. In Windhoek, for example, water consumption per plot in the "black" township of Katatura averages 95-170 litres per day, compared with 433-733 litres per plot per day in "white" areas. Figures for the country as a whole suggest that, out of an estimated total population of 1.8 millions, 954,000 (53%) have no secure access to clean water and 1,386,000 (77%) have inadequate sanitation facilities.
6. The health risks posed by this situation are self-evident, with children being a particularly vulnerable group. Poor access to water supply also places a considerable burden on women, who are usually responsible for the collection of domestic water supplies. A recent UNICEF study (B.Coghill and S.Kiugu, *Household Survey of Health and Nutrition*, UNICEF, Windhoek, September 1990) has shown that in Ovambo the average journey time to collect water was 1 hour 42 minutes, with some having to travel for as much as three hours per day to meet basic domestic water needs.
7. The loss of potentially productive time which such journeys represent is clearly a handicap to national development, and makes the need for improved water sources, closer to home, a matter of significant economic importance as well as an urgent issue of basic health and welfare. The sight of rural dwellers burrowing into rapidly collapsing dug-out wells in Namibia's

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15. The best water points in Namibia are often to be found in areas where they have a primarily economic function as stock watering facilities. In areas where livestock are numerous, such as the Herero Region, relatively sophisticated water points are to be found. These typically consist of a fenced enclosure containing a motorized borehole, with the engine kept in a shed, a large storage tank (of up to 50,000 litres capacity), and a stock watering trough. Although local residents are able to obtain clean water from these sources, the benefits they obtain are as a spin-off from resources which have been developed in the first place to meet the needs of cattle, and only as a secondary purpose to meet the needs of people (see P.Evans, *Review of Water Supply Situation and Associated Issues in Herero Region, Namibia*, Windhoek, September 1990).
16. The general neglect of the needs of the majority in the water and sanitation sector follows what appears to have been the general rule during the colonial period. Recent studies of health care facilities in Namibia have revealed an almost total neglect of community-based preventive health services, commonplace in many other African countries, and a very poorly developed rural health care network. At Independence, the Ovambo Region, for example, had only two Health Inspectors to service the needs of more than half a million people. Given this situation, it is no surprise to learn that there has never been a concerted environmental health and sanitation campaign in this region.
17. The concept of community participation, and the positive encouragement of self-help efforts, seem to have played no part in the thinking of the colonial regime. This has not only led to woefully inadequate levels of service but has also, ironically, stimulated the growth of a dependency syndrome among large sections of the rural population, who now look to the new government to deliver all the answers to the nation's problems. Stimulating the much needed spirit of self-reliance to tackle vital problems of health and welfare will be made all the more difficult as a result of this.
18. The neglect of community-based preventive health care is particularly significant in relation to water supply and sanitation. It is now well established that improved technologies alone are unlikely to lead to health improvement unless accompanied by substantial modifications in behavioural patterns. The absence in the past of any serious health and hygiene education work has denied rural people access to essential information which will empower them to protect themselves from the hazards presented by contaminated water supplies and poor environmental sanitation conditions. Although health and hygiene education are included in school

have no water supply and very few have pit latrines of any description." (P.Evans, *The Development of Sanitation and Hygiene Education Components for the Uukwaluudhi Integrated Area Based Project (IABP), Western Ovambo, Namibia, Windhoek, August 1990*).

12. It is evident that, until Independence, little or no thought was given to the basic welfare of the majority of the population in the development of water supplies. Where water points have been established, along pipelines or by the drilling of boreholes and sinking of wells, development has usually stopped short of ensuring good hygiene, and the service needs of rural dwellers rarely seem to have played a major role in the planning of water programmes. In Eastern Caprivi, for example, many residents draw water from shallow wells of up to 10 metres or so in depth. These are provided with strong concrete linings, but have been left open and unprotected at the top creating a high potential for water pollution, as well as presenting a danger to children and livestock who risk falling in. The provision of simple concrete covers for these wells would have cost very little extra, and could literally mean the difference between life and death for many young Caprivians. Similarly, many people in Ovambo draw water from open canals with no technical or educational inputs having been made to protect them from the health threat posed by the high levels of pollution in these untreated surface sources.
13. The absolute insufficiency of water points has led to the considerable overloading of available supplies, with consequent frequent breakdowns and interruptions in service. In some cases, the water supply situation is so acute that expensive tanker delivery services have been required to provide rural dwellers with basic needs during periods of drought. The general lack of readily available protected sources means that during the rainy season many rural people resort to drawing water from highly polluted temporary surface sources, caused by flooding.
14. In the past, little or no community participation was encouraged in the development of water or other resources. Where community management systems for water resources are found, these have usually developed as a result of the community's own efforts. Attention to issues of operation and maintenance and the long-term sustainability of water supply systems, with the exception of piped supplies primarily directed towards urban settlements, has been very limited. A great deal of investment, particularly in boreholes, has been squandered by lack of maintenance, albeit in an environment where highly corrosive soil types lead to the rapid decay of underground pumping equipment.

curricula, the approach adopted and materials used are often highly inappropriate to an African rural environment. For example, the standard textbook series currently used in Namibian schools (L.V.Mohr and F.J.Schreuder, *Health Education for All, Vols.1-4*, Maskow Miller Ltd., South Africa, 1980) is lavishly illustrated with drawings and photographs taken from a white, urban South African setting, making it very difficult for black students in rural areas to relate to the messages the volumes contain.

19. As a corollary to this, the past failure to involve user populations in the development, maintenance, and control of water resources has created a mystique around what are essentially simple technologies, and encouraged a feeling of dependence on outside agencies to provide basic services. To this factor can be added the considerably heightened expectations following national independence which further undermine the drive towards self-reliance. Though rural populations have demonstrated a capacity for self-help (as locally-built schools classrooms which are a common feature in rural Ovambo demonstrate) post-Independence expectations may contribute to a strategic bias in community action away from highly valued basic resources (such as water supply) which it is felt the government should provide. An informal subjective needs assessment exercise conducted in the Uukwaluudhi District, Western Ovambo, indicated that though improved water supply was the most highly valued of expressed basic service needs it was also one of the services which the population felt least motivated to provide for themselves (P.Evans, *The Development of Sanitation and Hygiene Education Components for the Uukwaluudhi Integrated Area Based Project (IABP), Western Ovambo, Namibia*, Windhoek, August 1990).
20. In overall terms, absolute availability of water in Namibia is very limited, with groundwater being scarce and difficult to locate, and high salinity making a significant proportion of available supplies unsuitable for human consumption. The only permanent sources of surface water are found in the river systems on the country's northern and southern borders. Services to Namibia's northern towns are typically provided by the expensive piping of supplies from the Cunene, Kavango, and Zambezi rivers, with rural populations along the pipelines obtaining limited services from these systems as a spin-off benefit. The inherent instability of Namibia's typically sandy soil makes the development of boreholes and wells more than usually difficult. With a mean annual rainfall of only 250 mm, and the annual increase in demand for water currently outstripping population growth, the development of this vital resource presents a major challenge. Current national water consumption, estimated at 250Mm³ per annum, is expected to rise to 400 Mm³ per annum by 2005 (see L.Laugeri et al, *Water*

Supply and Sanitation Sector Review, WHO, Windhoek, August 1990). Determined and imaginative efforts will be required to meet the nation's needs, with the highest priority being given to the development of this most basic of resources.

21. Such technical problems are exacerbated by the country's limited institutional capacity to deliver adequate supplies to the population, particularly in the former homeland areas. Expertise in the delivery of water through sophisticated, high technology piping and water treatment systems is available, but experience in the development of lower cost technologies appropriate for village-level use, and the management of such systems, is extremely limited. In the past, village-level provision appears to have been addressed by the former ethnically-based homeland administrations in an extremely *ad hoc* and improvisational manner without adequate thought being given to issues of community participation and long-term sustainability.
22. Responsibility for the development of rural water supplies has since Independence been given to the newly-formed Directorate of Rural Development in the Ministry of Agriculture, Fisheries, Water and Rural Development. This Directorate, working through its Division of Rural Supportive Services, with back-up from UNICEF, is in the process of seeking to establish a Rural Water Supply Section to take the leading role in tackling the village water supply problem. In the medium term, this Section, working in close collaboration with the Ministry's Directorate of Water Affairs and the Ministry of Health, will have the prime responsibility for ensuring that all Namibians have access to clean water supplies and adequate sanitation. A major collaborative effort will be required to achieve these goals, with government departments, external support agencies, non-governmental organisations (NGOs), and communities, all playing a vital role.
23. The challenge for Namibia in the years ahead is to develop an effective, sustainable development programme, with strong elements of community participation and health and hygiene education, to ensure that all Namibians have access to a clean, accessible water supply and adequate sanitation. Given the country's relatively low starting point, and the very poor natural endowment with water resources, this is likely to be a long, hard struggle, but one which will be essential if national development is to have real meaning.
24. A modest start has already been made, with initiatives including the establishment of the UNICEF/CCN Integrated Area Based Project (IABP) at Uukwaluudhi, Western Ovambo, and UNICEF assistance to the rehabilitation of water points in Eastern Caprivi and Herero. UNICEF also plans to support the

Ministry of Agriculture in the establishment of a Rural Water Supply Section in its Department of Rural Development. Sanitation improvement will be an important feature of the development of the Ministry of Health Primary Health Care programme, currently under development with UNICEF assistance. The Uukwaluudhi IABP, in particular, should provide a valuable laboratory for the testing of new approaches to water and sanitation provision in Namibia, with the introduction of low-cost water supply technologies (protected wells, rainwater harvesting systems, ground storage dams, simple sand filtration technologies, etc.) and a pilot programme to introduce the ventilated improved pit (VIP) latrine. These experiments may serve as models for the future development of a national programme.

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