
**Water supply in
the Central Namib
Region: A socio-
economic study**

Richard Moorsom

R 1997: 4

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Summary

This study provides an empirical report and analysis of the results of a June/July 1995 household sample survey of the four towns (Walvis Bay, Swakopmund, Arandis and Henties Bay) located in the central west coast region of Namibia. It also draws on other primary data sets, in particular 1991 census enumeration area returns and 1994/95 municipal account databases. Its aim is to establish the socioeconomic context of domestic and small business water supply for urban communities in a desert environment and a social structure deeply divided by racially based inequality. Key issues are the present rates and patterns of water consumption; water usage patterns in house and garden; watersaving practices, awareness and attitudes; and likely water consumption responses to increases in charges. The study also assesses respondent's views on policy questions of equity and payment, in particular price and non-price methods of reducing water consumption and how to assign the cost burden of additional bulk supply infrastructure.

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QUESTIONNAIRES

Survey Questionnaire: Households

Survey Questionnaire: Single Quarters

Survey Questionnaire: Businesses

PREFACE

This study was commissioned by GKW Consult from the Social Sciences Division (SSD), Multidisciplinary Research Centre, University of Namibia, as an input into the Central Namib Water Supply Feasibility Study for the Department of Water Affairs. SSD appointed Richard Moorsom as project leader under contract with Chr Michelsen Institute, Bergen. This document, a CMI/SSD co-publication, reproduces with only minor formatting changes the final report submitted to GKW Consult in May 1996.

The study provides a detailed empirical report on the results of a major household sample survey of the four central west coast towns, Walvis Bay, Swakopmund, Arandis and Henties Bay. The survey was undertaken during June/July 1995 and covered all residential suburbs, the single quarters in Walvis Bay and small- and medium-sized businesses in the Central Business Districts, suburban shopping centres and industrial zones of Swakopmund and Walvis Bay. Other data sets were also analysed to deepen the insights of the study, the principal databases being the 1991 Namibian and South African censuses covering the area and the 1994/95 monthly water meter readings from the municipal accounts.

The aim of the study is to establish the socioeconomic context of domestic and small business water supply. Key issues are the size, distribution and socioeconomic characteristics of the coastal communities, the present rates and patterns of water consumption; domestic water fixtures and water-using equipment; water usage patterns in house and garden; water-saving practices, awareness and attitudes; water consumption responses to possible future increases in charges; and opinion on policy questions of equity and payment, in particular price and non-price methods of reducing the propensity to consume and the assignment of the cost burden of additional bulk supply infrastructure.

The carrying out of this study relied heavily on extensive cooperation from people and institutions in the coastal towns. Such cooperation was readily given and has contributed materially to both extending the data coverage and a deeper understanding of the local contexts. Particular thanks are due to:

- Walvis Bay Town Council:
 - Town Engineer's Department (Mr Muller, Mr Brummer, Mr Stewart)
 - Housing Department (Mr de Smit)
 - Computing (Mr du Preez, Mr van Zijl)
 - Narraville Office (Ms Muller, Ms de Wee)
- Swakopmund Town Council:
 - Town Engineer's Department (Mr Lester, Mr Köllmann)
 - Finance Department (Mr Nel, Mr Witte)
 - Mondesa Office (Mr van Zyl)
- Arandis Town Council (Mr Mwapangasha, Mr McClune)
- Henties Bay Town Council (Mr Taljaard, Mr Armstrong)
- Namport (Mr Raw)
- Swakopmund Chamber of Commerce (Mr McDonald)
- RUL Housing Office, Arandis (Ms Menjono)
- Parish priests and pastors of Swakopmund and Walvis Bay
- City of Windhoek (Mr van der Merwe, Mr Brinkman)
- NCR, Windhoek (Ms Visser)
- Central Statistical Services, Pretoria
- Bicon, Swakopmund (Mr Dichtl)
- Parkman Namibia, Windhoek (Mr Cashman)

Many others assisted and this list by no means exhausts the extensive local assistance from which the team benefited. Our thanks above all are due to the residents and businesspersons of the coastal towns

for their patience and ready cooperation with the interviewers in supplying a detailed schedule of information. On that cooperation in large measure rests the quality of the data supporting the analysis presented in this study.

The field phase of this study was an intensive exercise involving three teams of interviewers covering all suburbs and the CBDs and industrial zones of the four towns. The enthusiasm and professionalism of the SSD interviewers was a key factor in the successful completion of a survey schedule which returned some 1100 completed and validated questionnaires over a three-week period. The members of the teams were:

- Supervisors:
 - George Eiseb
 - Plentina Kazapua
 - Kavee Hekemo²
 - Moses Isaaks
- Interviewers:
 - Kavee Hekemo
 - Irene Gowases
 - Patrick Keramin
 - Abraham Vatileni
 - Boleslaus Biwa
 - Charles Rooi
 - Bartholomew Kauahuma
 - Sonia Links
 - Sara Oarum
 - Fritz Shikesho
 - Bianca Katuuu
 - Petrina Mbome
 - Matti Nghikembua
 - Ghana Witbooi
 - Adnan Boois

Other members of SSD's professional staff played key roles at the mobilisation, fieldwork and analysis phases of the study:

- Ben Fuller, researcher and field coordinator
- Joepie Mouton, financial administrator
- Christa Schier and the data entry staff of the SSD Data Processing Unit

Finally, credit is due to the helpful advice and criticism received from the Department of Water Affairs at the design stage of the study (Mr Drews, Mr Harris, Mr Heyns), from participants at the consultative workshop on 27 July 1995 and from the GKW Consult project leader Mr Wilfried Rammler.

Richard Moorsom
Project leader

2. Stepped in when Ms Kazapua was taken ill and forced to withdraw.

ABBREVIATIONS

CBD	Central Business District
CSO	Central Statistics Office
CNWSFS	Central Namib Water Supply Feasibility Study
DWA	Department of Water Affairs
HIES	Household Income and Expenditure Survey
NHE	National Housing Enterprise
RUL	Rössing Uranium Ltd
SSD	Social Sciences Division, Multidisciplinary Research Centre, University of Namibia

l	litre
l/p/d	litres per person per day
m³	cubic metre

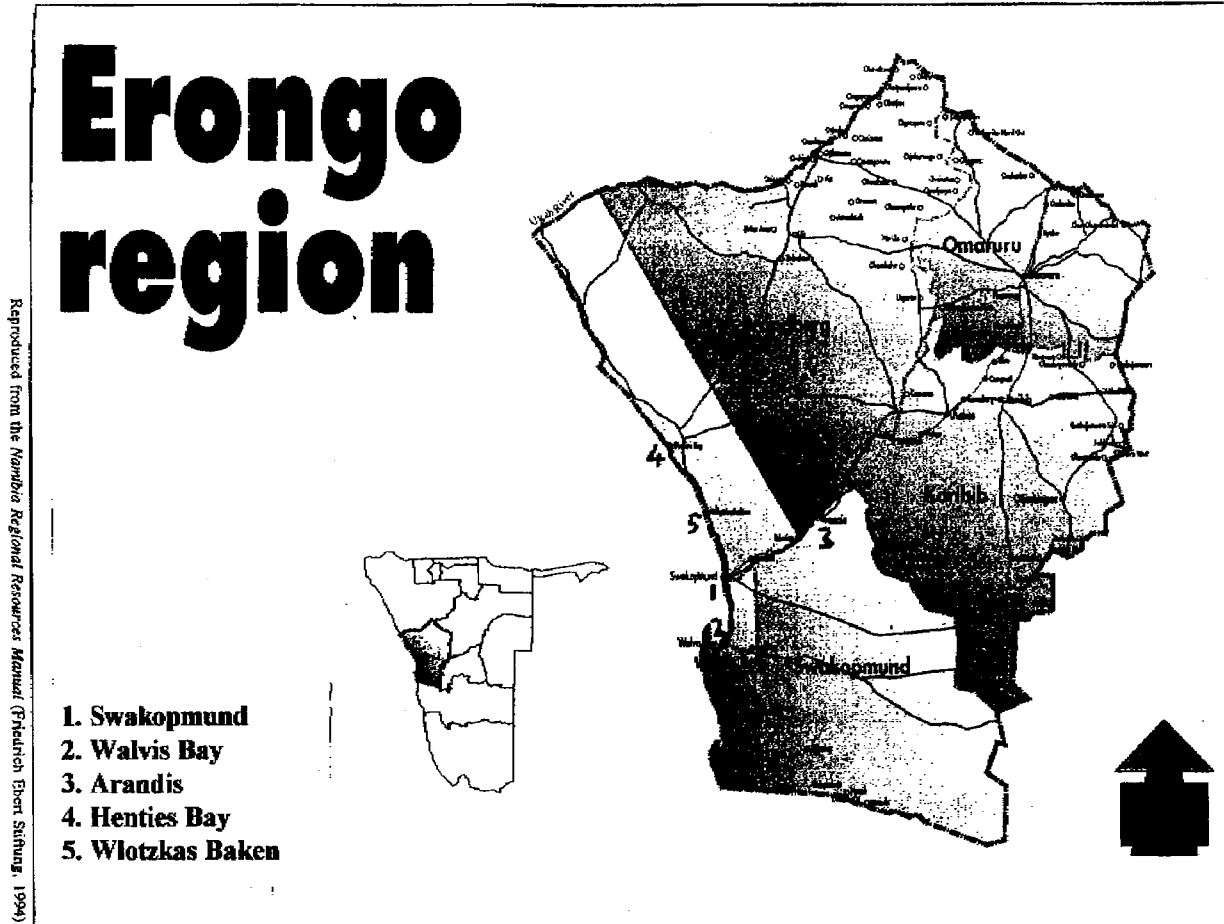
Boundaries of Major Areas and Suburbs

Area & Suburb	Code	Description
<i>Swakopmund</i>		
Mondesa:	1	
Central	11	5th St - 11th St - 12th St - 3rd St
East	12	1st St - 7th Ave - 3rd St - 5th St - 10th Ave E
Jabulani	13	12th Ave - 13th St - 12th St - boundary
Mahetago	14	12th Ave - 10th St - boundary
Single quarters	15	3rd St - 7th Ave - boundary
Tamariskia:	2	
North	21	North of Silwer Laan
South	22	South of Silwer Laan
Town:	3	
Vineta north *	31	Dr Schwietering St - Fischreier St - midway Turmalin/Flamingo Sts - coast
Vineta coast *	32	'V' survey area: Flamingo/Turmalin - S. Frieda/Seeadler - Hajo Brauer/2nd - Dr Boss St
Vineta east	33	Fischreier - Dr Schwietering - Main - Dr Boss - boundary of 'V' survey area
Central	34	Dr Boss - Main - Nordring - Südring - boundary - coast (excluding CBD)
Kramersdorf	35	Südring - Kaiser Wilhelm - boundary
CBD	36	Approx.: Rhode - Moltke - Brücken - Otavi - Bahnhof - Schlosser - Garnison - coast
Industrial zone	37	Nordring - Knoblauch - Kolonnen - Winter - Schlosser - railway
<i>Walvis Bay</i>		
Kuisebmond:	4	
Central	41	Kabeljou - Dune - Sardyn - Khomas Hochland - Agaat
South	42	Boundary - Marlyn - Kabeljou - 20th Ave - Kuiseb - Agaat - Khomas Hochland - Sardyn
West	43	20th Ave - Dune - 16th Ave - single/quarters/compound - Springbuck - 14th Ave - Kuiseb
North	44	Agaat - northern boundary
Single quarters	45	Old and new sections
Compound	46	Walled area
Narraville:	5	
Central	51	Namib - Strand - Kruis
East	52	Namib - Kruis - Tamarisk - Dolphin/boundary
West	53	Kruis - Neptune/boundary - Tamarisk
Town:	6	
Meersig	61	Esplanade - boundary
South	62	Esplanade - 5th Rd - Diaz
Central	63	5th Rd - 10th St - CBD - harbour boundary
North	64	18th Rd - 11th St E - CBD - harbour boundary; area 1st St E - 3rd St E
East	65	18th Rd - 11th St E - 13 Rd - 12th St - 11th Rd - 10th St - 5th Rd - Union St
CBD	66	Approx.: 15th Rd - 8th St - 13th Rd - 10th St - 14th Rd - 11th/10th St - 10th Rd - 6th St
Industrial zone	67	Harbour - railway - 18th Rd - Swakopmund road - Kuisebmond boundary - Bluefin - coast
Langstrand	68	Settlement area excluding caravan park
<i>Arandis</i>		
Arandis:	7	
Houses	71	All except single quarters
Single quarters	72	Individual blocks
Rössing mine	73	Mine area
<i>Henties Bay</i>		
Henties Bay:	8	
Omdel	81	Township including reception area
North	82	North of Duineweg/golf course
South	83	South of Duineweg/golf course
Wlotzkas Baken	84	Settlement area
<i>Rural</i>		
Kuiseb Valley	91	River valley from Walvis Bay boundary to boundary of Namib/Naukluft Park
Rooskop	92	Military base and airport
Camp sites & facilities	93	All sites outside municipal areas plus Langstrand caravan park
Farms & smallholdings	94	Mainly along the Swakop River
Mines	95	All mine sites except Rössing

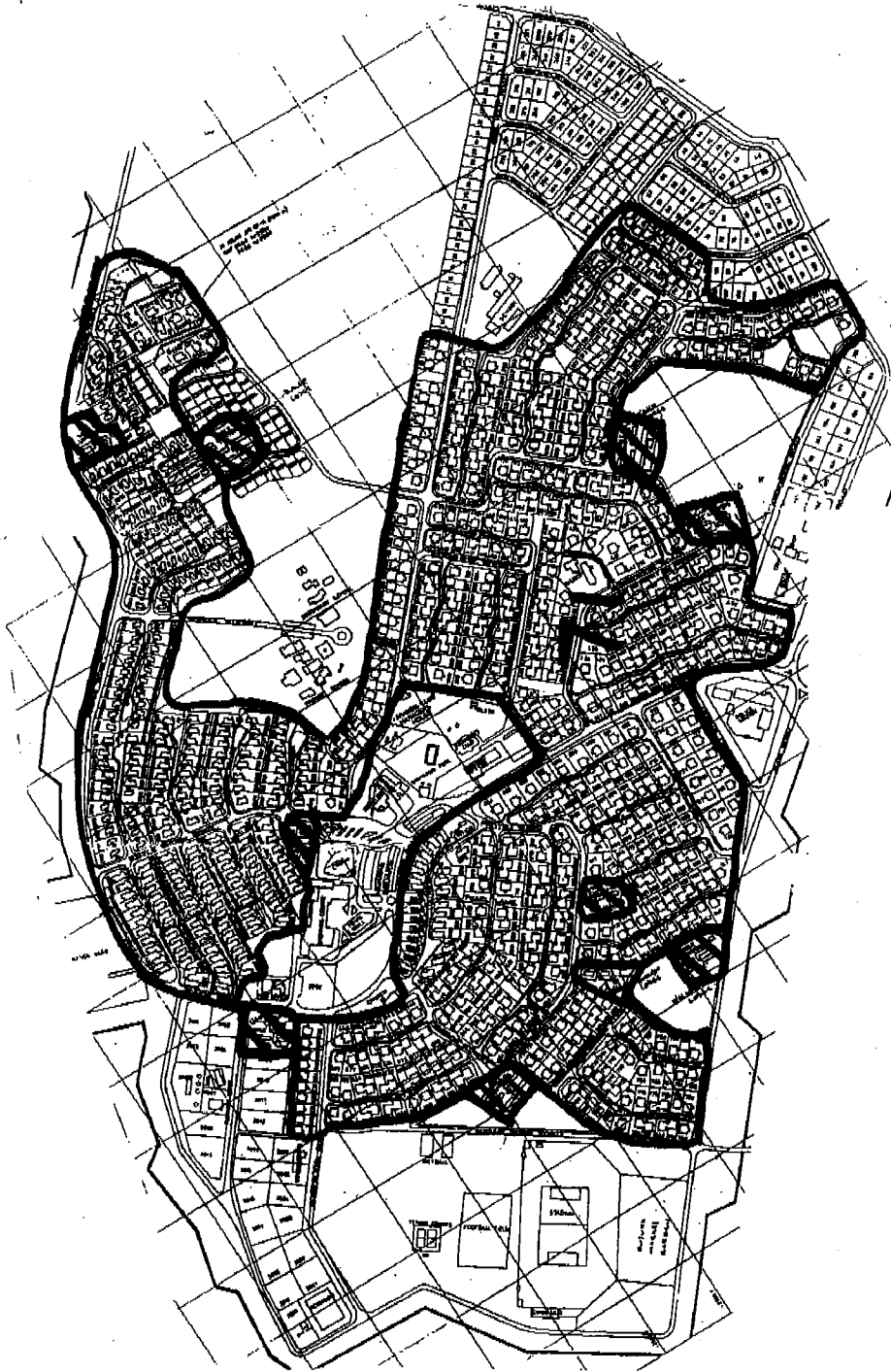
* Results combined as 'Vineta west' because there were too few returns from Vineta north for separate analysis.

MAPS

1. Central Namib Area and Locations of Urban Areas



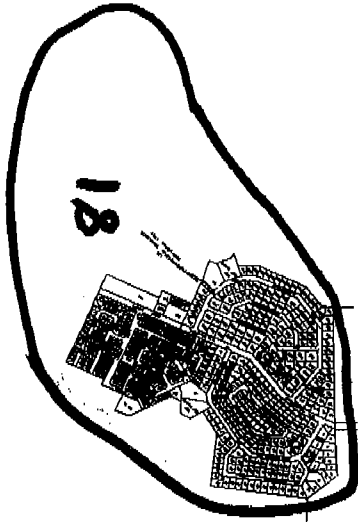
2. Arandis



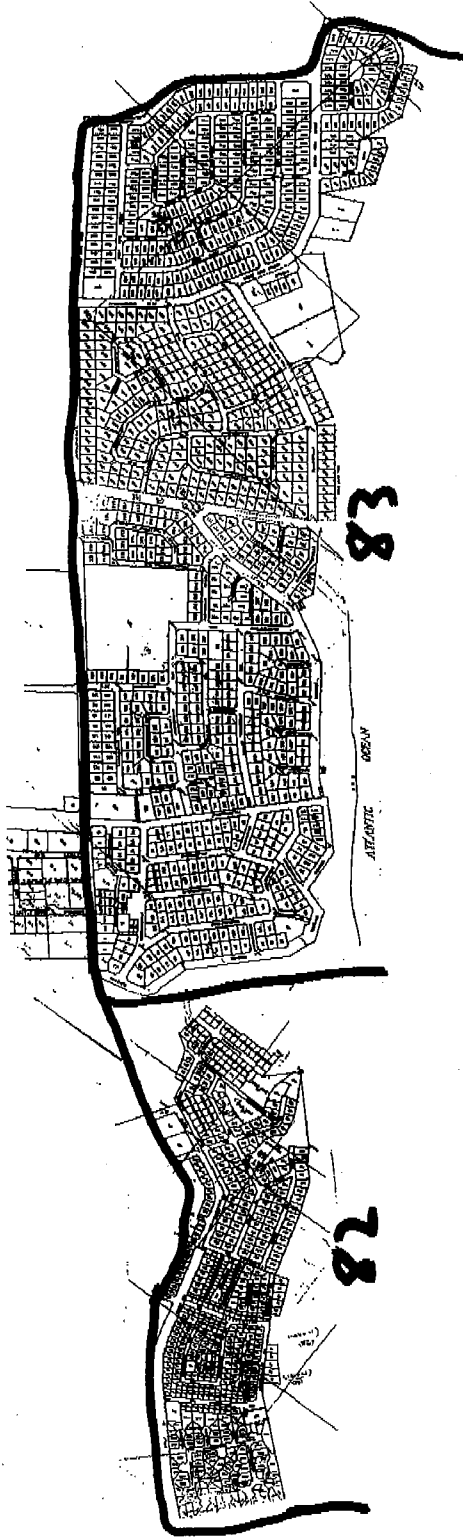
ARANDIS

72 = 72. Single quarters

3. *Henties Bay*



HENTIES BAY



4. Swakopmund

SWAKOPMUND

