

Desert Research Foundation  
of Namibia

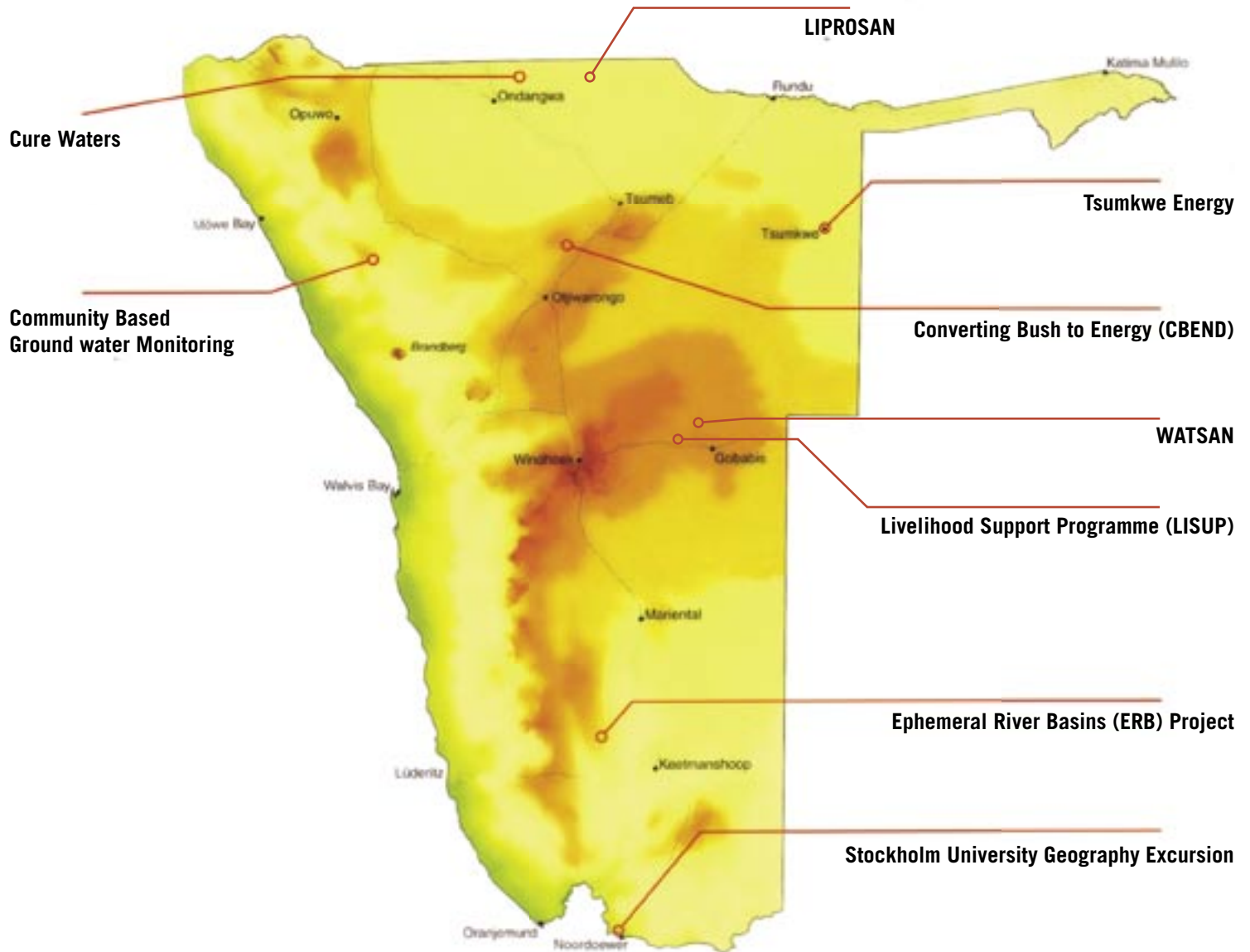


*Annual Report*

2008 / 2009



# A selection of DRFN's project across Namibia in 2008 - 2009



Review and update of National Circumstances Climate Changes

Wisions (Country wide)

Local Capacity Building (Hardap & Karas)

Review of the Water Supply and Sanitation Policy

IWRM Plan (National)

Assessment of Status of IWRM Implementation (National)

Installation of Digital Library (DUB)

## Message by the Chair of the DRFN's Board of Trustees

The year under review 2008 – 2009 witnessed major institutional developments. Firstly, the Executive Director, Dr. Detlof von Oertzen left the organization. Since his departure in December 2008, Mrs. Viviane Kinyaga has taken up the position of Acting Executive Director. Then, the DRFN formed strategic alliance with a sister NGO, the Namibia Nature Foundation (NNF). The strategic alliance led to the creation of the Namibia Institute for Sustainable Development (NISD).

For now, the DRFN and NNF continue to work in their individual capacities whilst the NISD will provide an umbrella mechanism for coordination and collaboration, open up new areas of work, rationalize areas of focus and achieve increased efficiency of service delivery.

In the midst of these developments, I am pleased with what the organization has accomplished in the period under review. We continue to make considerable contributions to national strategic planning and development processes. In the last year, we reviewed the Water Supply and Sanitation Policy, we are part of a joint venture working on the development of an Integrated Water Resources Management Plan for Namibia and we continue to make contributions to the process that will lead to the compilation of Namibia's second report on Climate Change to the UNFCCC.

By now, those of you who usually read the DRFN annual reports know that I am passionate about capacity building. By capacity building we particularly mean developing **attitudes** to support **skills**, and focusing on **understanding** and **application** of knowledge gained. I am delighted to report that most of the DRFN's projects encompass this important component. We implement two Livelihood Support Programmes targeting group resettlement farms in the Omaheke and Khomas Regions (LISUP), as well as the Ohangwena Region (LIPROSAN) where the majority of the population is San. A key aspect of these projects is to strengthen communities' capacity in organisational and leadership skills so that local people can take more responsibility for development of the resettlement farms. The Ephemeral River Basins in SADC Project (ERB-SADC) facilitated several information sharing workshops in the Karas and Hardap



Mr. Tangeni Erkana

regions. To complement ERB, the DRFN secured funding from the Embassy of Finland for another capacity building project. This project, abbreviated as LA Cap, aims to strengthen the capacity of Local Authorities with respect to water, sanitation and waste management.

In the last year, we initiated two projects, which are aimed to support Small and Medium Business Enterprises. WISONS, promoting business opportunities in the off-grid regions of Namibia, using solar energy technologies. This will be done through the establishment of "Energy Shops". We started the process of identifying entrepreneurs who will be trained and equipped with solar business systems that offer electricity for cell phone charging, hair cutting, electric lantern charging and lighting for the shop. Similarly, the DRFN is investigating the option of using invasive river reeds in the Fish River for income generating opportunities in collaboration with the communities in Mariental.

Finally, I wish to report that our two energy projects, CBEND and Tsumkwe Energy are ongoing.

Cornelius Tangeni Erkana - Chairman, Right Hon Nahas Angula, Prime Minister of the Republic of Namibia - Honourary Trustee, Hanno Rumpf, Ambassador of the Republic of Namibia - Honourary Trustee, Hon Nangolo Mbumba, Minister of Education, Dr Mary Seely, Mrs Penny T Akwenye, Ms Rosalina V Namises, Eckart Pfeifer, Walter A Böttger.

## Message from the Acting Executive Director

The DRFN strives to enhance decision making for sustainable development. The opportunities for enhancing decision making in Namibia's land, water and energy sectors, i.e. the DRFN's focus areas, are abundant even though financial resources are scarce. Our core activities of research, training and consultancy are amongst the essential building blocks of a developing nation. If applied consistently and conscientiously, these activities will allow us to continue making positive contributions to Namibia's development and that is what the DRFN is all about.

In the last year, the DRFN initiated seven new projects and conducted several consultancies, in addition to the ongoing projects reported in last year's report. All these exciting projects are presented in this report. We are happy to see that all of our associates – that is our senior collaborators, have participated in most of these projects thereby adding their broad wealth of experience to the projects.

We also regard networking to be key in what we do because it creates new opportunities and allows us to share our experiences with partners, stakeholders and wider audiences. Hence, the



*Ms. Viviane Kinyaga*

DRFN is still the secretariat for the Namibia Water Partnership, participates in the Biofuel Task team spearheaded by the Ministry of Environment and Tourism and is a member of FANPRAN (Food, Agriculture and Natural Resources Policy Analysis Network).

We are looking forward to yet another productive year in which we will strive to further contribute to Namibia's development.

# Associates



**Bertus Kruger**

*Co-authored several projects with DRFN staff on forum for integrated resource management*



**Dudley Biggs**

*Ongoing support and contributions to ERB*



**Dr. Hartmut Krugmann**

*Review and update of national circumstances - Climate Change  
- Advise on Namibia Water Partnership*



**Dr. Mary Seely**

*DRFN Founding Member*

*IWRM Plan, CuveWaters, ERB, WASP*



**Dr. Wolfgang Werner**

*Contributed to ERB*



**Piet Heyns**

*IWRM Plan, WASP*

# The DRFN Staff



**Abraham Hangula**  
Energy Desk  
Project Coordinator



**Albertina Kisting**  
Finance & Admin  
Admin Coordinator



**Alex Moses**  
Land Desk  
Project Manager



**Ann van Wyk**  
Finance & Admin  
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Senior Accountant



**Bibiana Baptista**  
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**Clarence Mazambani**  
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**Di-Anna Grobler**  
PLMP Desk  
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**Erik Dirx**  
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Land Desk  
Field Facilitator



**Jimmy Iitamba**  
Energy Desk  
Field Facilitator



**Kenneth !Ganeb**  
Water Desk  
Field Facilitator

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**Leon !Hoebbe**  
Finance & Admin  
Garden Engineer



**Naftali Uirab**  
Land Desk  
Life Skills Technician



**Nicole Therone**  
Finance & Admin  
Driver & Logistical  
Support



**Patrik Klintenberg**  
Water Desk  
Research and Training  
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**Richard Kavari**  
Water Desk  
Junior Researcher



**Robert Schultz**  
Energy Desk  
Coordinator



**Ronald Kanguti**  
PLMP Desk  
Library Assistant



**Rosaria Lubanda**  
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FCEAR  
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**Stefan Nel**  
Finance & Admin  
Coordinator



**Theopoldine Lamek**  
Finance & Admin  
Coffee Bar Operator



**Vilho Mtuleni**  
BIOTA  
Project Manager



**Viviane Kinyaga**  
Water Desk  
Coordinator &  
Acting Executive Director



## The DRFN Land Desk: diversifying and strengthening land use options

The profile of the Land Desk has changed in the course of 2008 when a new Land Desk coordinator came on board. Given the degree of inequality in Namibian society it is most relevant to address the plight of vulnerable groups in Namibian society whilst working on safeguarding the management of natural resources.

So, whilst diversifying and strengthening land use management options remains our key area of interest, the desk in general intends to more strongly focus on poverty and vulnerability as cross-cutting matters. As a result in the last few months of 2008 the DRFN obtained two new contracts for support programmes

targeting vulnerable groups on resettlement farms. At the same time the desk remained involved with research on vulnerability and adaptation to climate change.

## Livelihood Support Programs to group Resettlement Farms in Omaheke and Khomas Regions (LISUP) and in the Ohangwena Region (LIPROSAN)

**Background**

In recent years awareness on the need to support vulnerable groups in society in order to address extreme poverty has increased. This is amongst others reflected in increasing attention for the position of the San in Namibian society, as well as for other groups that are considered marginalised such as the Himba. Moreover, in the debate about land reform in Southern Africa post-settlement support to farmers is considered critical for the sustainable development of the agrarian sector. As far as the Namibian agricultural sector is concerned, there also seems to be increased understanding that people who have been resettled in so-called “group resettlement projects” shortly after independence, belong to the most vulnerable in Namibian society, as the farms are characterised by badly maintained infrastructure whilst they are often overpopulated and overstocked. Against this background the DRFN implements two Livelihood Support Programmes targeting group resettlement farms in the Omaheke and Khomas Regions (LISUP), as well as the Ohangwena Region (LIPROSAN) where the majority of the population is San. The interventions are characterised by a participatory approach to development, poverty reduction and resource management.

### Partners and donors

Both programs are implemented in partnership with the Ministry of Lands and Resettlement (MLR) and funded by the Spanish

Agency for International Cooperation (AECID). LISUP is moreover implemented in collaboration with Foundation CEAR, a Spanish NGO that works in several African countries in the field of habitat and sustainable livelihoods.

### Approach

LISUP and LIPROSAN are characterised by a strong participatory approach. This not only means that DRFN involves beneficiaries in implementation of activities, but also in joint planning at local and regional level. In the process a fair amount of attention goes into clarifying roles and responsibilities for the development of the resettlement farms, especially underlining the contribution of beneficiaries in terms of time, energy, labour and money. Both programs involve three components: first of all capacity in community organisation and leadership skills is strengthened so that local people can take more responsibility for development of the resettlement farms; secondly, joint action planning with regional

stakeholders is organised through Forums for Integrated Resource Management (FIRMs) so that communication between communities and agencies is improved and service delivery to the resettlement projects is strengthened. A third component consists of support activities that aim at improving food security in the communities. This comprises support for rain fed and irrigated crop production, small stock development and income generating activities such as crafts and vegetable leather tanning.

#### LISUP Results

LISUP is currently in its third year of implementation and targets the communities of Skoonheid, Drimiopsis and Donkerbos/ Sonneblum in the Omaheke Region and #Arovley in the Khomas Region. Whilst participatory development is inherently influenced by the pace of decision making at local level, some interesting results have so far been observed. Whereas irrigated production in the recent past used to be organised in group projects, organising crop and vegetable production on a family basis by sub-dividing formerly communal gardens has proven effective in increasing individual responsibility for garden maintenance. It further enlarged areas under cultivation and increased harvests and/or agricultural income in several communities.

Through LISUP the DRFN's engagement with the diversification of rural income has also gained increasing attention. With support of OMBA Arts Trust efforts were undertaken to market beaded arts and crafts made by the San in our projects at outlets in Windhoek, Hosea Kutako International Airport and at galleries in South Africa, Scotland and New

York. This has resulted in a quadrupling of craft income in the San resettlement projects in which we are active.

In the final 18 months of the first phase of LISUP the DRFN and FCEAR intend to consolidate community efforts in agricultural development by improving organic cultivation practices, strengthening marketing channels and by gradually venturing into small stock development. We similarly intend to consolidate craft production and income in the resettlement projects by expanding the marketing options for crafts.

#### LIPROSAN progress

DRFN intends to build on the lessons learnt with LISUP for its support to four San Resettlement Projects around Okongo in Ohangwena Region, where DRFN implements a similar program in partnership with MLR since March 2009. Living standards in the communities of Onamatadiva, Eendombe, Oshanashiwa and Ekoka appear more difficult than in the Omaheke region, as the resettlement projects are small in size with little land for beneficiary families, resulting in the San being more dependent on external support from government or on odd jobs from neighbouring farmers. So far a start has been made with family based mahangu cultivation and chicken production. Preparations for improving water infrastructure in the communities and craft production are underway. Furthermore, a partnership with Acacia Grassroots Development Network (AGDN), COSDEF and MYNSSC is envisaged to establish a vocational training centre for vulnerable groups in the Ohangwena Region.

**“Post-settlement support is a critical, yet often neglected part of the process of agrarian reform that could further address extreme poverty in Namibian society.”**



# Water and Sanitation Technology for Food Security (WATSAN) in the Resettlement Projects of Drimiopsis and Skoonheid, Omaheke Region

**B**ackground  
During the first two years of the implementation of LISUP, severe constraints in sustainable water supply were experienced in Drimiopsis and Skoonheid. Since Independence the MLR has been responsible for maintenance of water and sanitation infrastructure in the group resettlement farms, and it has also footed the bill of pumping water. In practice it means that farmers in group resettlement farms rely on government planning procedures for supply of diesel and electricity and for maintenance of basic infrastructure. As such they are faced with irregular supply of energy or water and with backlogs in maintenance, which constrains ongoing efforts (such as LISUP) to enhance food security in the communities by means of e.g. irrigated gardening or livestock development.

Against this background LISUP's technical team identified a need for expanding its support activities geared towards improving

food security with the introduction of appropriate water recycling technology and water demand management practices. Hence, mid 2008 the DRFN, in partnership with Spanish NGO FCEAR, formulated a project proposal for a food security tender by the Spanish Cooperation Agency in Spain. The bid was approved by the end of 2008.

## Partners and donors

WATSAN is a 2-year project, which started in March 2009, and will be implemented by the DRFN and Foundation CEAR in collaboration with the Ministry of Lands and Resettlement (MLR). Funding is provided by the Spanish Agency for International Cooperation (AECID).

## Approach

This project builds on the approach of LISUP and LIPROSAN, with a strong focus on involving beneficiaries in the implementation of project activities, and on joint planning at local and regional level. The main difference

is that the project has relatively more capital for rehabilitation of infrastructure on resettlement farms.

WATSAN aims to improve food security in the communities of Skoonheid and Drimiopsis through the introduction of improved water recycling and sanitation technologies, and by capacity building in water demand management. As such WATSAN deals with building local capacity for sustainable and affordable water supply for crop and livestock production on the two resettlement farms. At the same time, water supply may be sustainably enhanced through the introduction of renewable energy systems that can complement conventional pumps and engines, such as wind and solar energy. Depending on the prioritisation of local needs and the feasibility of various technological options for water recycling in the two locations, alternative sanitation options may also be considered.



# Vulnerability and Adaptation Assessment to Climate Change in Namibia's Agriculture and Water Sectors

Aridity and variability in climate have edged land and resource stewards in Namibia to ever more marginal livelihoods. The threat of climate change poses the next big challenge to already multi-stressed systems in the agricultural and water sectors. The DRFN Land Desk carried out the national vulnerability and adaptation assessment to climate change for the MET and UNDP, in preparation of the Second National Communication in meeting GRN's obligations to the UNFCCC.

Vulnerability and adaptation assessments, particularly at the local level, face limited knowledge about exactly what to adapt to. Namibia's natural variability only exacerbates the shortcomings of global and regional climate models which allow only for broad statements of change, and as such a first Namibia-specific modeling of climate change for the middle of the 21<sup>st</sup> century was undertaken. It is predicted with a high degree of certainty that Namibia will become hotter throughout the year (with a predicted increase in temperatures of between 1°C and 3.5°C in summer and 1°C to 4°C in winter in the period 2046 - 2065). Maximum temperatures have been getting hotter over the past 40 years, as observed

in the frequency of days exceeding 35°C. Equally, the frequencies of days with temperatures below 5°C have been getting less, suggesting an overall warming.

Detecting trends in rainfall is typically more difficult, especially in highly variable arid climates such as Namibia. Considerable spatial heterogeneity in the trends has been observed, but it appears as if the northern and central regions of Namibia are experiencing a later onset and earlier cessation of rains, resulting in shorter seasons in most vicinities. There has been a statistically significant decrease in the number of consecutive wet days in various locations, and increases in measures of rainfall intensity could be observed. As far as predictions for the future are concerned, it is not obvious whether Namibian rainfall will be reduced, although intensity is likely to be increased.

The impact of these trends and predicted changes was assessed, both from a biophysical and a socio-economic perspective, in the agricultural and water sectors of Namibia. The DRFN will continue its active participation in national initiatives of climate proofing rural and urban communities, and intends to strengthen its capacity in this important field.



## The DRFN Energy Desk

The DRFN's Energy Desk is dedicated to the promotion of renewable energy technologies and energy efficiency measures in Namibia. In the light of Namibia's high dependence on foreign energy sources, the desk is strategically placed to be at the forefront of a Namibian energy renaissance.

### Solar for San City

In March 2008, the Energy Desk signed the grant contract with the European Union Delegation to Namibia for the Tsumkwe Energy Project. The project proposal was submitted in 2006 directly to the EU – ACP Energy Facility in Brussels, along with over 300 proposals across the world. With the signing of the draft contract, Tsumkwe Energy was one of 70 projects accepted by the Energy Facility. There was a sense of elation within the DRFN at this achievement, not only because EU project proposal requirements are exceedingly complex, but also because co-funding for 25% of the contract's total N\$ 26 million budget was secured from local sources. NamPower and the Otjozondjupa Regional Council each pledged contributions of 14% and 11% respectively.

Since then, this elation has oscillated between frustration at intricate procedures, worry about the sheer magnitude of the project, excitement at the challenge and pride at establishing one of the largest solar energy projects in Africa.

According to Namibia's Rural Electricity Distribution Master Plan (2000), Tsumkwe is not earmarked for grid electrification within the next 20 years and would have had to rely on its diesel operated mini-grid for a long time to come. The Otjozondjupa Regional Council, which operates the current diesel system, consequently incurs substantial monthly losses due to high diesel prices. Conservative estimates calculated a monthly deficit of at least N\$60,000 on diesel fuel alone and electricity production costs over N\$6 per kWh. Tsumkwe is 300 km away from the closest suitable grid connection

point and estimates from NamPower indicate that the cost to grid electrify Tsumkwe is not less than N\$100million.

Tsumkwe comprises about 200 households, of which close to half receive access to diesel electricity, and supports a range of public infrastructure that provide vital basic services to the resident and surrounding community. These include a police station, a clinic, a senior secondary school with hostel, Namibia Broadcasting Corporation studios, water supply infrastructure and number of other government and non-governmental organization facilities. All those connected to the diesel electricity supply are frustrated by daily power interruptions and fluctuations, which routinely destroy electrical appliances. The unreliable electricity supply is, according to the community, the main impediment to the settlement's economic development.

The Tsumkwe Energy Project will establish a 100 to 150 kWp solar PV array with 1,500 to 2,000 kWh battery storage capacity in order to minimise the operation of the current diesel electricity generators and ensure uninterrupted and stable power supply. Furthermore the project will repair, up-grade and expand the current 11 kV mini-grid and initiate mechanisms for access to alternative thermal fuels (such as LPGas) and energy efficient appliances. Tsumkwe Energy will not only implement technical improvements, but also investigate what additional economic opportunities can be pursued under improved energy supply conditions. This is a vital strategy to ensure that Tsumkwe can reach a level of economic prosperity that will support the financial sustainability of the hybrid system. For this



*Clean up campaign in Tsumkwe.*

reason a sustained social behaviour change component is being implemented.

Tsumkwe Energy comprises a full-time project manager and field facilitator, supported by a project coordinator and project assistant on a part-time basis. It should be mentioned at this point that NamPower does not only co-fund this project, but has dedicated their own project manager from their Renewable Energy Section. NamPower's support has been exemplary and their expertise, active involvement and efficient service have formed part of this project's backbone. NamPower should be commended for its commitment and vision. Should we say something about the ORC as well?

### Electric bush

In mid 2008, with the departure of the previous Land Desk Coordinator, DRFN management assessed the fate of the CBEND Project (Combating Bush Encroachment for Namibia's Development). The CBEND Project (Combating Bush Encroachment for Namibia's Development) will install a 250 kW bush-to-electricity power plant on a commercial farm in Namibia, which will be fuelled with invader bush and feed electricity directly into the national grid. This proof-of-concept project will determine the financial feasibility of this approach, assess the technical robustness of the technology and establish Namibia's first Independent Power Producer. Therefore a relocation of this

project, with a budget of about N\$14million provided through the Rural Poverty Reduction Programme, from the Land Desk to the Energy Desk was a logical choice. The programme is administered via the National Planning Commission Secretariat with funds received from the European Commission. CBEND is thus another EC project implemented by the Energy Desk.

Concerning the bush-to-energy value chains, Namibia's commercial farming areas in the North Central regions are faced with a bush encroachment problem, which has contributed to the reduction of the commercial livestock herd by 60% over the past 50 years and reportedly costs the Namibian economy N\$ 700 million per annum in loss of revenue. The bush encroached area covers over 20 million hectares and the problem has captured much attention with relevant authorities such as the Ministry of Agriculture Water and Forestry, the Meat Board of Namibia, the Namibia Agronomic Board and the Namibia Agricultural Union, but to date a concerted and effective effort in combating bush encroachment could not be identified.

CBEND comprises a whole range of intricate and inter-related challenges and risks, but holds great potential and benefits for the entire economy, should it be successful. Such a power plant would require about 200 hectares of bush encroached land per year (at

50% bush clearance) and employ about 15 persons. This might not seem impressive, but there is scope for at least 240 of such plants in Namibia. That boosts numbers to over 40,000 hectares of range land restored per annum and a total employment potential of over 3,000 people. This does not include the benefits of increased agricultural production and improved ground water recharge.

Unlike Tsumkwe Energy, CBEND does not have the benefit of a larger team and is only implemented by a part-time project coordinator and project assistant.

### Solar income

Despite capacities within the Energy Desk being stretched to the limit, we could not resist initiating one further project, called WISIONS, this 1-year project will promote business opportunities in the off-grid regions of Namibia, using solar energy technologies. The established basic "Energy Shops" will provide basic energy services and foster renewable energy technologies.

Ten suitable entrepreneurs, who already operate a small cuca-shop, will be identified, trained and equipped with solar business systems that offer electricity for cell phone charging, hair cutting, electric lantern charging and lighting for the shop. In addition the businesses will be provided with solar and energy efficient stoves for baking and catering. The Energy Desk will assess the financial feasibility and sustainability of the small Energy Shops, through collecting data on the income generated. In cooperation with other institutions, such as the Ministry of Mines and Energy (MME) and the Renewable Energy and Energy Efficiency Institute (REEEI), WISIONS will provide feedback to a national roll-out plan in Namibia as formulated in Namibia's Off-Grid Energisation Master Plan, 2006.

Funding for this project was obtained from the Wuppertal Institute for Climate, Environment and Energy, Germany, and is jointly implemented by all five members of the Energy Desk.



*Energy Desk's Abraham Hangula during a CBEND site visit to a Namibian charcoal producer. Namibia's bush encroachment problem offers substantial potential as a renewable energy resource.*

## Ephemeral River Basins in Southern Africa (ERB-SADC)

The Water Desk contributes to the country's vision of integrated water resources management through research, training, consultancy and capacity building. The desk enhances coordination and information-sharing of activities addressing water-related issues in Namibia.

While the basin management approach is accepted globally and promoted regionally, the process has not been widely implemented in southern Africa, especially in ephemeral river basins. The overall purpose of the ERB (Ephemeral River Basins in Southern Africa) Project is to explore the potential and options for basin management in these systems of temporary flood waters to provide a comparative analysis for wider application. The project is testing the approach in three ephemeral basin areas in southern Africa which have different legislative, institutional, biophysical and socio-economic conditions and characteristics governing them – the Boteti in Botswana, the Buffels in South Africa and the Orange-Fish River basin in Namibia. DRFN co-ordinates the project overall and implements activities in the Orange-Fish River Basin.

One of the main objectives of the project is to promote the principles of integrated water resources management – sustainable, equitable and efficient utilisation of water and other resources – to stakeholders in these three areas using a participatory approach. As with any participatory process, the key to basin management is guiding the process to capture

and hold the interest of our stakeholders. This has been most successfully done by addressing issues that they identify with. In an area as diverse as the Orange-Fish River Basin – especially with respect to economic activities and economies of scale – issues range from specific knowledge gaps – such as those on the characteristics of ground water resources and establishing pro-poor tariff structures – to over-arching issues, such as limited capacity and poor communication. While it has taken time and effort to engage stakeholders in this complex basin, over the past year stakeholders started to realise the benefits of the process when their issues were addressed through information-sharing and the initiation of new projects (see REEDS and LA Cap). They have, in turn, responded with more active engagement in our activities with noticeably richer discussions at workshops and more



active participation in new initiatives.

The generation and sharing of information and knowledge is crucial to the participatory process empowering stakeholders to make informed decisions. During the past year, the ERB team in the three countries jointly drafted 20 technical reports on subjects ranging from geology to livelihood strategies and proposed implementation frameworks for basin management, published two peer-reviewed papers and an academic book chapter, and produced a number of newsletters, fact sheets, posters and workshop proceedings for a variety of audiences.

As we enter our final year of the project, much of our efforts centre around compilation and consolidation of information gathered and lessons learnt. This involves working closely

with our colleagues in Botswana and South Africa. One of the main products of the project will be a detailed analysis on the conditions and characteristics that promote and hinder the implementation of the basin management approach from our experiences in the three basins – summarising lessons learnt and recommendations for wider application.

Experience gained through the ERB Project has given the DRFN's Water Desk a good understanding of the basin management approach - in theory and practice - and of the Orange-Fish River Basin and its stakeholders. This capacity and knowledge is recognised and being sought by outside organisations on the implementation of basin management in general, as well as giving voice to our stakeholders regarding the management of the greater Orange-Senqu River Basin of which the basin forms a part.

## Local Authorities capacity project (LA Capacity)

This project is funded by the Finnish Government and aims at strengthening the capacity of local authorities in the Karas and Hardap Regions to manage their water and sanitation services. The project is a spin-off from the Ephemeral River Basins in SADC (ERB-SADC) project and particularly the findings presented by the Worcester Polytechnic Institute students that conducted a first assessment of the state of the water and sanitation sector in local authorities in the Orange-Fish River Basin.

The role of the project is to assist local authorities to identify challenges with respect to the management of water and sanitation, facilitate sharing of experiences and lessons learnt, identify solutions and demonstrate some of the proposed solutions. The first

step of the LA project was to develop a checklist of management challenges in the water and sanitation sectors based on findings from the ERB project. The checklist was then expanded on based on inputs from local authorities and it formed the basis for discussions at the first stakeholders workshop held in November 2008. At the workshop, challenges related to water infrastructure, cost recovery and tariffs, and sanitation and waste management were prominent. These challenges include sewage ponds being too small, issues of debt to local authorities and NamWater, tariff increases, limited human resources, and lack of law enforcement. Various solutions to these challenges were proposed, of which direct infrastructure development, training of staff, improved monitoring and information sharing were rated of high priority.



To increase understanding of the identified challenges and to assist in the selection of local authorities to be visited during the expert inventories, an extended questionnaire was developed and shared with all local authorities in the basin. The expert inventories, i.e. visits by an expert,

who will work with the local authorities and jointly discuss solutions and demonstrate some of the solutions, will take place in the coming months. Issues and solutions will then be compiled into an expandable manual, which will be made available to all local authorities in the two regions.

This will be a dynamic document, which should be added to and expanded as soon as new solutions to common problems are developed. Another component of the project aims to enhance the communication among local authorities and experts. Various methods of communication are presently being investigated.



## Stockholm University Geography Excursion (SUGE 7)

This year, the DRFN arranged the eighth Stockholm University Geography Excursion (SUGE) in close co-operation with the Geography Department at Stockholm University. This was the third course that investigated various environmental and social aspects in the southern regions of Namibia. The course was attended by a group of 16 geography students who investigated a diverse selection of issues, ranging from water and sanitation in urban settlements, electrification, impacts of rural land uses on the environment, game farming to the diamond industry along the coast. Most of the field work was conducted in and around Gibeon in Hardap and Aus in Karas regions.

The students were accompanied by Prof Carl Christiansson, a prominent physical geographer with vast academic experiences from southern Africa, Silje Wessel Petersen, Lucky Ganeb and Patrik Klintonberg from the DRFN. The findings of the study shows that there are several issues related to access and quality of water in the two settlements, in particular Aus where water shortage is threatening the development of the settlement. An assessment of the impacts of increasing livestock numbers in the Aus town land concluded that it was possible to identify a decrease in vegetation in the area over the period 1991-2008, but it was not possible to determine if the decrease is caused by increasing livestock pressure or if

it is an effect of natural fluctuations in rainfall. Findings from the group investigating attitudes towards different types of toilets and sanitation systems concluded that the inhabitants of both Gibeon and Aus would prefer traditional water born sewage instead of dry sanitation systems. The focus on water born sewage systems has to be thoroughly investigated to ensure sustainable water utilisation, not only now but for future demands as well. The results for this field study will mainly contribute to the Local Authorities Capacity Project, but also to the Ephemeral River Basins in SADC (ERB-SADC) Project, both implemented by the DRFN.

# Renewable Energy and Ecological Development Solution (REEDS)

River reeds in the Fish River, below the Hardap dam are believed to be contributing to the flooding of Mariental and surrounding areas. The REEDS project is investigating opportunities of using these river reeds for income generation and biogas production.

The project initiated assessments to understand the resource base because that will influence the products that can be made from the reeds. The assessment includes aspects such as the extent of the reeds' occurrence, reed characteristics and causes of reed growth. It was determined that there are two reed types, a thinner one which is *Phragmites australis* and a thicker one which is *Arundo donax*. Further work on the natural resource base is ongoing.

The project also carried out a study for about

2 months on the potential uses of reeds for income generation activities, which can be incorporated into the local economy to help increase the rate of employment and, most importantly, to determine whether such initiatives are of interest to Mariental residents. The study indicates that the reeds in the Fish River are suitable for various products and that the residents of Mariental are interested in harvesting them to make fences, mats, shades and use for housing material. Government representatives that were interviewed are also interested in assisting with materials, training, funding and transportation to help start up a reeds business initiative. The irrigation farmers living along the Fish River are also willing to cooperate with a reeds-based business initiative, as long as certain guidelines are followed when reeds are harvested near their property. The study further shows

that the market potential for reed products in Mariental is limited. There is much greater market potential in Windhoek through the craft and accommodation sectors, as long as the products can be transported there.

Based on this research, it was determined that a business initiative using the reeds has potential to succeed in Mariental, but there are still various aspects that would require further research in order to determine the viability of such a business initiative. These include the effects of spraying the reeds as is currently being done through the Mariental Flood Task Force and ecological impacts of removing the reeds.

The project is also examining the technical and economic feasibility of using reeds for biogas production. Preliminary results on this is available.





## Review of the Water Supply and Sanitation Policy

Last year, the Water Desk finalized the review of the Water Supply and Sanitation Policy, which was in the same year adopted by cabinet. The main policy changes being:

- The establishment of a Directorate of Water Supply and Sanitation Coordination. This new directorate will encompass the national component of the Directorate of Rural Water Supply and integrate a complementary sanitation component. It will serve to coordinate water supply and sanitation services in rural and urban areas. It has been given the internal functions to: coordinate, facilitate and control technical and outsourced implementation; review and update policy; generate knowledge; facilitate independent evaluation and feasibility studies; raise awareness; provide guidance; and facilitate capacity creation and strengthening.
- The establishment of a water regulator, in line with the Water Act. The regulator will harmonize the expectations of consumers, policy makers and service providers, evaluate performance of service providers, evaluate coverage of service and contribute to financial viability of service providers
- Introduction of ecological sanitation as it provides additional benefits from safely decomposing and making profitable economic use of residues.
- Evaluation of water demand management as part of any new water supply and sanitation development

# Formulation of an Integrated Water Resources Management Plan for Namibia

The Water Desk is part of a Joint Venture that is working on the development of an Integrated Water Resources Management (IWRM) Plan for Namibia. The project started off with an inception phase which was completed in February 2009. Final completion of the work is expected in June 2010.

The project will involve a review and assessment of the existing water management situation; an assessment of the potential of water resources and development needs; and the formulation of a strategy and guidelines to reduce water demand. This all will lead to the formulation of a draft National Water Development Strategy and Action Plan. This draft plan will

be taken to the regions for consultation.

Formulation of Information and Knowledge Systems, Development of a Long-Term Monitoring and Evaluation Framework, Development of Integrated Framework for Institutional Development and Human Resources Capacity Building, Strategy for Funding the implementation of the IWRM Plan, and an Awareness Creation Plan. At this stage all the regions will be visited, some for a second time, to consult and gain approval for the draft IWRM Plan. The final step will be the consolidation of the IWRM Plan for Vision 2030. The key element of the entire IWRM Plan will be the consultation and involvement of users and managers of the plan into the future.

## Assessment of status of IWRM implementation in Namibia

Many countries in Southern Africa have adopted the principles of IWRM; are at very different stages of implementing IWRM, and have different experiences in this regard. The Global Water Partnership Southern Africa facilitated a study to review the process and to examine opportunities for improved IWRM implementation in the various countries in SADC. The DRFN's Water Desk assessed the status of IWRM implementation in Namibia and made recommendations for the way forward as a contribution to the regional (SADC) report.

The review shows that Namibia has made considerable progress with respect to the implementation of IWRM. The basic policy framework incorporating IWRM is well established but the associated legislation and regulations lag behind. Although originally accepted by decision makers, aspects of the policies are later queried thereby impeding implementation, e.g. cost recovery. This experience points to the need of providing a dynamic platform for broad information exchange and awareness and involving decision makers at all levels on an on-going basis.



## Publications, Library, Marketing and Publicity Desk

This desk puts information into the public domain to enhance decision-making for sustainable development.



**D**igitising of the DRFN Library  
 The DRFN has long envisioned incorporating the principles of knowledge management into its existing and future activities. The aim is to unlock some of the DRFN's sources of knowledge, to enable and empower DRFN staff and the organization's many collaborating institutions and partners to more readily tap into and share such resources.

Now, with the generous financial assistance of the GTZ, the DRFN's library is finally moving into the 21<sup>st</sup> century! In order for the DRFN to make its resources more appropriate and available to the needs of the organization, our partners and associates and the general public, the Digital Library (DLib) Project was borne. This project will see the entire content of the DRFN's library, excluding published books, scanned and made available digitally to DRFN staff, collaborators and the broader public.

It also facilitates our research and development activities to be continuously available on-line. The DRFN's digital library concept, i.e. D-Lib, is likely to be finalized by mid 2010, and will see the electronic integration of the majority of the DRFN's library holdings currently housed in our Windhoek and Gobabeb libraries into our website.

### Marketing and publicity

Marketing and publicity is a component of all our projects – we endeavour to inform decision-making at all levels, and in all the sectors where we are active. Apart from the day-to-day interactions with our development partners, we have had an enormous rise in publicity due to our projects and the interest they generate. The media attended the launch of our Tsumkwe Energy project, the CBEND workshop and various other information sessions and social events.

The PLMP Desk also assisted in disseminating information on the various projects that the DRFN is involved in, through fact sheets, newsletters and brochures. Additional publicity was generated and visibility ensured through the production of banners and posters.

The DRFN empowers decision-makers at all levels through its research, training and consultancy activities in Namibia's land, water and energy sectors, thereby fostering the country's sustainable development.



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