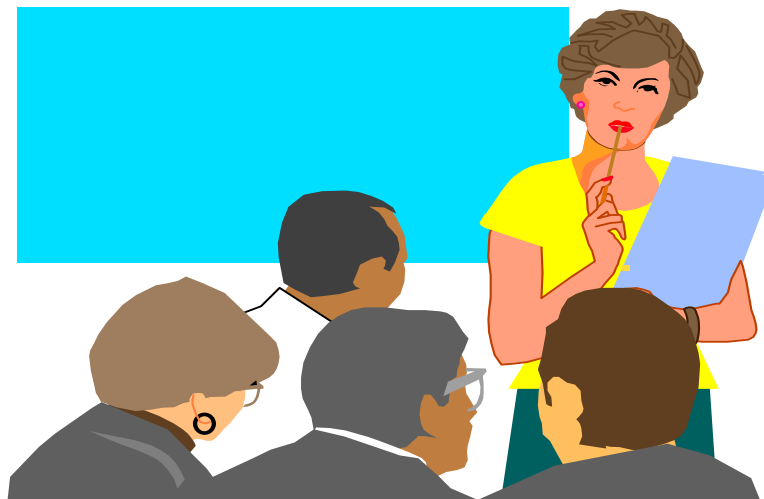


# NAMIBIA WATER RESOURCES MANAGEMENT REVIEW

## HUMAN REOURCES DEVELOPMENT THEME REPORT



WINDHOEK, MAY 2000

## **Acknowledgements**

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## **1. Introduction**

This is the theme report on Human Resource Development (HRD) in the water sector in Namibia, prepared by the Namibia Water Resources Management Review.

The Namibia Water Resources Management Review (the Review hereafter), was launched in March 1998 by President Sam Nujoma. Cabinet approved the establishment of a Task Force, involving all the main stakeholders, to guide the review, and the appointment of a Technical Team made up of Namibian specialists to undertake the detailed research and work of the review.

This theme of Review was designed with the following short-term as well as long-term objectives in mind:

- a. The work to be performed was to develop strategies and to propose immediate and long-term measures for the development of human resources capable and sufficient in numbers to implement the recommendations of the Water Resources Review.
- b. To create an information dissemination, training and capacity building programmes for the Review Taskforce members, Technical Team Members and other stakeholders, to enable them to play the role in the Review.
- c. To design and implement educational and training opportunities integrated with practical work for technical Team Members which will lead to academic qualifications and degrees in the topics they are assigned to work as team members.

### **1.1. HRD theme in relation to other themes of review**

The Review was charged with covering a wide range of cross-sectoral issues, but a central focus of the Review was to be on capacity building and human resource development. The other main themes of the review in addition to human resource development are:

- i. Institutional arrangements.
- ii. Legislation and regulation.
- iii. Economics and financing.
- iv. Strategic water assessment.
- v. Water conservation and reuse.
- vi. Shared Rivers.

The Review has enjoyed funding support from the World Bank, GTZ and the United Nations Development Programme.

The HRD theme of the review relates to the other themes of review named above. It is focused on ensuring there is both institutional and individual skill and knowledge capacity for the implementation of effective and sustainable water resource management.

## **1. 2. Agenda 21 in relation to Human Resources Development**

The importance of the reform process is not unique to Namibia. Indeed, much of the thinking which lies behind the review approach, can be traced to the 1992 Rio Summit on sustainable development<sup>1</sup>, and its resultant Agenda 21 which states:

*“Integrated water resources management is based on the perception of water as an integral part of the ecosystem, a natural resource and a social and economic good, whose quantity and quality determine the nature of its utilization. To this end, water resources have to be protected, taking into account the functioning of aquatic ecosystems and the perennial nature of the resource; in order to satisfy and reconcile needs for water in human activities. In developing and using water resources, priority has to be given to the satisfaction of basic needs and the safeguarding of ecosystems. Beyond these requirements, however, water users should be charged appropriately.*

*Integrated water resources management, including the integration of land- and water-related aspects, should be carried out at the level of the catchment basin or sub-basin. Four principal objectives should be pursued, as follows:*

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<sup>1</sup> *Agenda 21*:United Nations Conference on Environment and Development (UNCED, Rio De Janeiro, June 1992)

*To promote a dynamic, interactive, iterative and multi-sectoral approach to water resources management, including the identification and protection of potential sources of freshwater supply, that integrates technological, socio-economic, environmental and human health considerations;*

*To plan for the sustainable and rational utilization, protection, conservation and management of water resources based on community needs and priorities within the framework of national economic development policy;*

*To design, implement and evaluate projects and programs that are both economically efficient and socially appropriate within clearly defined strategies, based on an approach of full public participation, including that of women, youth, indigenous people and local communities in water management policy-making and decision-making;*

*To identify and strengthen or develop, as required, particularly in developing countries, the appropriate institutional, legal and financial mechanisms to ensure that water policy and its implementation are a catalyst for sustainable social progress and economic growth.”*

This agenda has to be understood in the Namibian context. Namibia has an extremely arid climate and its water resources are scarce. Social and economic circumstances have made particular demands upon the country's water resource base and environmental integrity.

As the principal resource for much of Namibia's productive activity, and a major constraint on economic development, water resources are likely to dominate the development options.

Furthermore, Namibia utilises a very wide range of technologies, ranging from traditional and relatively unsophisticated ones to the most modern, making this a more complex sector than in many other countries.

This context therefore raises issues which impact significantly on human resource development needs at all levels in Namibia.

### **1. 3. HRD theme report**

This paper builds upon the Key Issues Paper<sup>2</sup> published in April 1999. In particular this report develops the issues raised and concludes by outlining a policy framework

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<sup>2</sup> NWRMR, *Namibia Water Resources Management Review: Key Issues Paper*, Windhoek, 1999

for the development of human resources as well as suggesting HRD Institutional arrangements.

The report is therefore aimed at providing a comprehensive basis for the final round of consultation with all stakeholders.

At the outset, the report describes how the HRD review was conducted, and the national policy context, which was fully taken into account. An analysis of the current situation follows, and leads into an evaluation of a series of demonstration projects commissioned and managed by The Technical Team. The final sections of the report consider policy options and the need for a sustainable HRD strategy to support the water sector. The report is summarised in the form of a policy framework document, which seeks to integrate the analysis and discussions in the preceding sections.



## **2. The Review Process for Human Resources**

This chapter outlines how the HRD review was undertaken, and describes the role of particular groups in the process. It demonstrates that there has been widespread consultation, but in addition, the research methods used have focused on the articulation of best practice models appropriate to Namibia.

### **2. 1. The key groups involved**

The following groups have been involved in the process of reviewing Human Resources Development in the water sector.

#### ***2. 1. 1. The Task Force***

The Task Force, made up of over 30 stakeholders within the water sector in Namibia, agreed at the inaugural workshop in March 1998, that capacity building and human resource development were central to the review process.

Task Force members have been briefed throughout the period of the review on progress regarding the human resource development theme, and have been consulted on a series of consultant reports.

In addition, a sub-group focusing on human resources has been established and continues to provide advice to The Technical Team.

#### ***2. 1. 2. The Technical Team***

One member of the Technical Team is devoted entirely to human resource development issues. In addition, the Technical Team Leader has taken a particular interest in HRD matters, given its centrality to the whole review process.

The Technical Team has benefited greatly from additional funding from the World Bank, GTZ and UNDP for research into HRD needs in Namibia. This has allowed

the Technical Team to commission work from a range of specialist consultancies, and also to fund a number of demonstration projects which are outlined later in this report.

## **2. 2. Review Methodology**

The Technical Team has developed a methodology aimed at both researching needs and testing out policy options. Methods deployed have included:

- i. Desktop literature reviews.
- ii. Questionnaire surveys.
- iii. Focus groups.
- iv. Structured and semi-structured interviewing.
- v. Action research incorporating appreciative inquiry principles.

As was noted in an earlier report<sup>3</sup>, there are many weaknesses in terms of the availability of robust labour market and training data within Namibia. The Review has therefore had to construct for the first time an aggregate summary of the labour market and training needs of the water sector. This is reported on later.

The use of action research and of the principles of appreciative inquiry has been particularly important. Action research has been used to evaluate a number of demonstration projects, and the principles of appreciate inquiry have been used to articulate best practice within the projects.

## **2. 3. Demonstration projects**

A series of demonstration projects were launched to test out possible responses to market failures, which became evident as a result of detailed research. The demonstration project were devised with 5 basic aims in mind:

- i. To address recognised and agreed market failure.
- ii. To address needs within a Namibian policy framework

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<sup>3</sup> Inter-ed Ltd, *Human Resources Study*, 1998, page 15

- iii. To assess the applicability of international practice.
- iv. To test out policy initiatives aimed at addressing either institutional needs or individual skills development needs.
- v. To involve stakeholders in the design, development and evaluation of the projects.

#### **2. 4. Summary**

The HRD review has therefore been characterised by stakeholder consultation and participation, by the conduct of both primary and secondary research into market failure and needs, and by the conduct of demonstration projects.

### **3. The National Context for Human Resource Development**

Namibia has been developing a national approach to vocational training, and this has been fully considered in the conduct of this review. A range of institutions and legislation in the vocational training sphere are already in place. This chapter summarises the most important elements of this national framework.

#### **3.1. National Human Resource Development Plan 1998-2010<sup>4</sup>**

The National Human Resource Development Plan for Namibia describes significant training infrastructure weakness within Namibia, and forecasts a significant shortfall in supply in relation to demand for skills development. The report was, however, not specific about the water sector, and did not take account of policy initiatives such as the implementation of community based management. This only serves to illustrate that the need for skills development in the water sector is likely to be much greater than the current training infrastructure's capacity to meet such needs.

#### **3.2. Competence Based Training**

The Ministry of Higher Education, Vocational Training, Science and Technology (MHEVTST) is responsible for national vocational training policy in Namibia. It is in the process of changing existing vocational qualifications within Namibia, into a competence-based style. By the year 2000, new competence-based qualifications for existing trades will be piloted. Competence-based qualifications require the clear identification of occupational standards, and stress the importance of skills development.

In addition to training for the recognised trades, the Ministry has identified a need to develop skills training for all other occupations. This is recognised as a particular challenge in Namibia given current weaknesses in training infrastructure.

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<sup>4</sup> See draft *National Human Resource Development Plan 1998-2010*, prepared for the National Planning Commission by fundex NAMIBIA (Pty) Ltd.

The Hon. Nahas Angula (Minister for MHEVTST) has already called for the creation of “schools without walls”<sup>5</sup> to meet the large shortfall in capacity. It is recognised that this will require the development of competence based qualifications which can be flexibly delivered in a wide range of settings, including on employer premises and within communities.

The commitment to the identification of standards, and the development of competence based approaches to skills development, is reflected in two Acts which have been passed since independence, namely;

### ***3. 2. 1. Vocational Training Act (1994)***<sup>6</sup>

The Vocational Training Act makes provision for the establishment of a National Vocational Training Board, and of Trade Advisory Committees **for various trades**. The Board and Committees consists of representatives from the state, trade unions, and trade specialists.

Trade Advisory Committees advise the Vocational Training Board on matters related to the setting of standards, training and development and assessment.

### ***3. 2. 2. Namibia Qualifications Authority (1996)***<sup>7</sup>

The Namibia Qualifications Authority (NQA) was also established by Act of parliament in 1996, and is the nation’s guardian of standards and qualifications **for all occupations**. The NQA advocates the establishment of National Standards Setting Bodies (NSSBs) for various industries, occupations and professions of which the composition should be made out of representatives of the state, employers, employees, education and training providers in the industry or occupation or professional bodies. In that sense it focused in part on the accreditation of competence-based qualifications for all occupations in Namibia.

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<sup>5</sup> Cited in *Mass Skills Training in Namibia - A Feasibility Study*, 1997, which argued for a competence base approach which would both enhance standards and be much more cost effective in the Namibian context.

<sup>6</sup> Vocational Training Act, 1994 (Act 18 of 1994)

It is clear those legislation points to Namibia choosing the competence-based approach to vocational training. However a need exist for the Ministry of Higher Education, Vocational Training, Science and Technology to clearly articulate the role of the Trade Advisory Committees versus the NSSBs under the NQA and if need be an amendment to the two Acts to compliment each other.

### **3. 3. Affirmative Action**

Affirmative action is related to training and development within Namibia<sup>8</sup>. To assist the affirmative action process it is particularly important to have all the necessary training and development opportunities made available to the previously disadvantaged Namibians regardless of race, colour, gender, religion or sexual orientation.

In the Namibian context, affirmative action goes hand in hand with the drive for increased efficiency and effectiveness, further emphasising the importance of human resource development. In addition, the Act calls for employers to,

*“Train a Namibian citizen as the understudy of every non-Namibian citizen employed by him or her or it.”*

Affirmative action and the drive for increased efficiency and effectiveness, are particularly important considerations where new agencies or organisations are being created, as is being proposed<sup>9</sup> in the water sector.

### **3. 4. Decentralisation policy**

The Government of Namibia has embarked upon a process of delegating many of its functions and powers to the regional and community levels. This policy<sup>10</sup> specifically

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<sup>7</sup> Namibia Qualifications Authority Act, 1996 (Act 29 of 1996)

<sup>8</sup> See *Affirmative Action (Employment) Act* no 24, September 1998

<sup>9</sup> See companion theme paper on Institutional Arrangements.

refers to the need to decentralise a large number of water sector functions to regional and community level. At the core of the decentralisation policy is the need to build and improve the capability of regional and local government, and rural communities. This policy clearly compliments the efforts on community based management in the water sector.

### **3. 5. Community Based Management**

At independence, Namibia inherited a governance system, which did not involve the majority of the people into decision making. After independence, the government embarked upon a reform that is aiming at engaging the people in governance by taking the government closer to the people through the policy of decentralisation.

At the same time, the Department of Water Affairs within the Ministry of Agriculture, Water and Rural Development, has effectively complemented the national policy on decentralisation, with the initiative of community based management strategy for the water sector. This strategy requires that the rural communities, namely, regions, constituencies and villages, gradually become responsible for the management of rural water supply as well as become user-owners of the infrastructure. This is also in line with principle 22 adopted at the United Nations Conference on the Environment and Development<sup>11</sup> which states,

*“Indigenous people and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.”*

In addition to establishing a community based management strategy, the Directorate of Rural Water Supply, within the Department of Water Affairs has also recognised the importance of human resource development by the creation of a five year training

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<sup>10</sup> Ministry of Regional Local Government and Housing, *Decentralization in Namibia: The Policy its development and Implementation*, (April 1998), pp28,31,32,33,35,36.

<sup>11</sup> UNCED *ibid*

plan<sup>12</sup> to support the development of community capacity. Furthermore, training features strongly in the draft decentralisation of rural water supply document<sup>13</sup>, which establishes a timetable for the transfer of authority from central government to local administration.

(Later in this report, we indicate how the general intentions of the Department of Water Affairs can be further supported by the Review's recommended strategy and policy framework.)

### **3. 6. Summary**

Namibia has established a coherent framework of legislation for vocational training. It calls for the development of competence-based approaches to training, and for the development of occupational standards across all occupations, regardless of level of employment.

This approach to developing qualifications for all occupations is particularly important for the implementation of effective affirmative action policies, which enhance the efficiency of organisations.

Such a focus on standards based training for skills competence, is particularly appropriate given the development of Community Based Management, where a clear need for capacity building has already been identified as a priority.

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<sup>12</sup> MAWRD Directorate of Rural Water Supply, *5 Year training Plan for support of community based management of rural water supply*, (1997).

<sup>13</sup> Department of Water Affairs, *Draft Decentralisation of Rural Water Supply*, (March 1999)



## 4. The Current Situation in the Water Sector

### 4.1. Scope of the sector

When community based management of the water sector is fully implemented, it has been estimated that a total of around 60,000 individuals<sup>14</sup> will be involved in it at any one time. About 80% of these will be based in rural communities, and involved in water point committee work and water point maintenance and management and the remaining 20% will be involved in policy and planning, management, and technical aspects amongst other.

The remaining 10,000 will be employed in important public sector (both national and local), parastatal and private sector organisations. The Department of Water Affairs alone employs over 1,000 people, as the following table reveals.

Table 1: Employment levels in the DWA<sup>15</sup>

Directorate	Approved Posts	Posts Vacant	Posts Filled
Rural Water Supply	943	105	838
Resource Management	228	49	179
<b>Department Totals</b>	<b>1171</b>	<b>154</b>	<b>1017</b>

However of greatest note is the fact that the Ministry has a very diverse structure of roles. The Directorate of Rural Water Supply within the Department of Water Affairs, has no less than 38 different designated posts, ranging from Director to four grades of extension workers. The Directorate of Resource Management has no less than 31 designated posts ranging from Director to Workhand.

The public sector at local level is in a period of significant change, but it is clear that there are hundreds of local authority employees working in the water sector at present, even before further decentralisation of powers takes place. One recent study<sup>16</sup> examined 22 local authorities, and identified 368 employees exclusively working in the water sector, although almost half were employed in The Municipality of Windhoek

<sup>14</sup> NWRMR *Namibia Water Resources Management Review: Key Issues Paper*, April 1999, p.34

<sup>15</sup> See DWA *Decentralisation of Rural Water Supply*, 4th draft 1999, for Rural Water Supply figures. Resource Management figures as supplied in June 1999 to The Technical Team.

<sup>16</sup> Inter-ed Ltd, *Human Resources Study*, 1998

**Table 2: Water sector employees in 22 local authorities.**

	Total employees	Averages		
		Mean	Median	Mode
All municipalities	368	16.7	8	6
All except Windhoek	190	9.1	8	6

Notwithstanding the fact that bulk water supply has been re-organised with the creation of the parastatal organisation NAMWATER, the numbers employed in the ministry and the municipalities remain significant. NAMWATER itself is a major employer with close on 1100 employees, but often forgotten is the importance of private sector organisations.

There are a wide range of companies who from time to time work under contract to the Department of Water Affairs. These cover a considerable range of operations as the following abbreviated list suggests:

- Consulting Engineers.
- Environmental Impact Consultants.
- Community Analysts (Sociologists, Social Anthropologists etc.)
- Training Companies.
- Drilling Companies.
- Equipment and materials suppliers.

In addition, many private sector companies are involved in supporting NAMWATER and the municipalities, and are likely to be involved in the future in supplying and supporting rural communities.

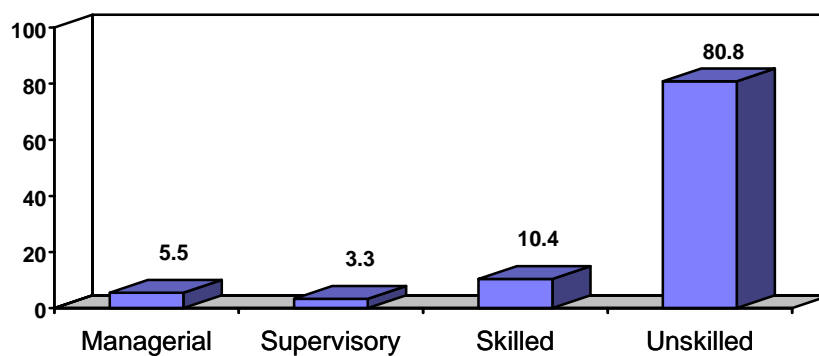
### **4. 3. Scale of need**

The scale of need for training in the water sector is extremely high. An anticipated 60,000 individuals with roles in the delivery of integrated water resource management obscures to some extent the scale of need. Few of these individuals under current plans will be the recipients of training, which will lead to recognised qualifications. This is true of all those individuals based in rural communities, all extension service

workers, and the vast majority of those employed in municipalities. There is training planned to support the introduction of community based management for water point committees, water point caretakers and the extension service<sup>17</sup>, but it is neither standards based, nor does any of the training lead to recognised qualifications. This will therefore do little to enable individual progression or access to recognised programmes of learning. It also raises serious questions about what the outcome of training will be if it is not standards based and does not involve accredited assessment of individuals.

In the municipalities, the picture also raises many concerns. The study mentioned earlier analysed the roles of those in 22 local authorities. The following chart reveals the situation

**Chart 1: Water sector employees in local authorities by level of occupation**



Over 80% of employees are unskilled with no accredited training programmes currently available.

Other evidence, for example from a report<sup>18</sup> into the Directorate of Rural Water Supply within the Department of Water Affairs, emphasises that there are very substantial management and technical needs in the wake of the decentralisation of rural water management reforms. The same report also emphasises the need for more effective training of extension workers.

<sup>17</sup> MAWRD Directorate of Rural Water Supply, *5 Year training Plan for support of community based management of rural water supply*, (1997).

<sup>18</sup> See *Training Needs Analysis*, Directorate of Management Services, March 1997. Surprisingly, although the appendix to this report uses UK developed competencies to summarise training needs, there is no recognition of the potential for accreditation via the Namibian Qualifications Authority, nor have the occupational standards specified been adjusted for the Namibian context.

Water however, is not merely a technical issue. For example, as part of its Poverty Alleviation Pilot Programme, UNDP<sup>19</sup> has identified water as one of the key areas, and communities themselves have identified a range of very practical skills they require to have. These critical skills in aspects such as repair of water points, drilling of boreholes, laying and maintaining pipelines, covering wells and constructing earth dams, preventative maintenance programmes and the like, call for effective development. If they are to contribute towards poverty alleviation, they must also providing a stepping stone to higher levels of education and training, thus implying some form of nationally recognised accreditation.

Other aspects of training needs have been highlighted in the five-year training plan<sup>20</sup> of the Directorate of Rural Water Supply. The matters identified are very much in tune with the skills listed by UNDP studies, but a crucial weakness is that current plans do not recognise the need for the accreditation of individuals.

In order for institutional reform to be successful, human resources development should be at its core. The proposed institutional framework is calling for a change from the culture of providing service to a more dynamic culture which is customer and service-focussed. One of the key principles identified to be underlying the successful integrated water resources management is the fact that planning and management should be driven by knowledge.<sup>21</sup> This could be done through integrated data acquisition and management, and information generation. The Institutional arrangement proposed calls for the consolidation of the functions of collecting and management of water data network and this is likely to include:

- Consolidation and integration of surface water, groundwater and water quality information and incorporation of operational information.
- Decentralisation of data collection activities, with possible involvement of community stakeholders.

These drastic changes will require organisational capacity as well as technical capacity in specific areas, and therefore the need for training and development will increase.

Other areas that are likely to affect the training and development initiatives are, among others; policy development and planning, regional development planning and support functions.

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<sup>19</sup> See for example, *Ohangwena Region Participatory Rural Appraisal*, UNDP and UNAM (1996)

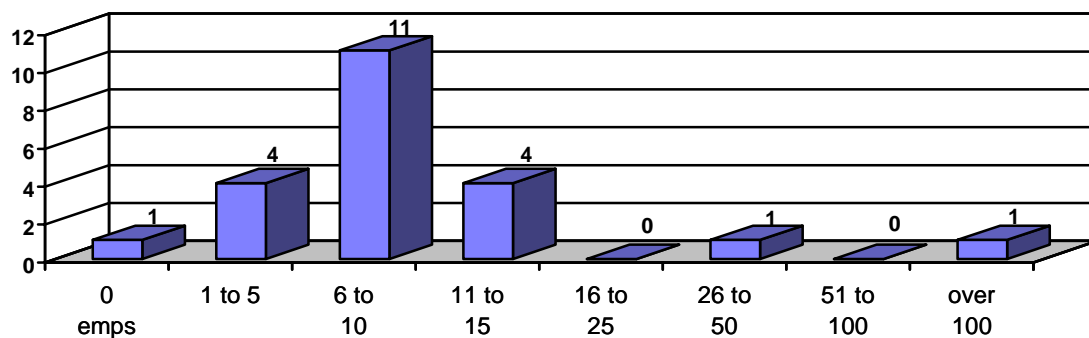
<sup>20</sup> 5 Year training Plan for support of community based management of rural water supply, MAWRD Directorate of Rural Water Supply (1997)

<sup>21</sup> Draft Theme Report for Institutions and Participation Theme, September 1999

#### 4. 4. Learning geography

The learning geography of the water sector presents additional complication. Training will be required among thousands of traditional rural villages spread across the vast Namibian landscape. In municipalities, as chart 2 demonstrates, few municipalities provide the kind of critical mass for traditional class based learning dedicated to individual organisations to be viable.

*Chart 2: Distribution of water sector employees among municipalities.*



The mode indicates an average of 6-10 employees per municipality, of whom 80% are unskilled. Typically therefore, municipalities have no more than 2 skilled workers to support the water sector. Windhoek is a dramatic exception to this general observation. This merely emphasises the scale of need in rural Namibia.

The Department of Water Affairs, NAMWATER and private sector companies are better placed in terms of skills levels, but even within such organisations, there is wide recognition of needs.

In terms of commonplace management skills, studies have revealed there is little evidence of , for example, performance management being effectively promoted<sup>22</sup> within the government sector. Furthermore, it is noted that the government's training

<sup>22</sup> See for example, *Emerging Findings and The Way Forward*, MCG, 1996

policy<sup>23</sup> does not specifically require a strategy which will enable internal progression by supporting standards based training, despite its own legislative framework for vocational training cited earlier.

In terms of the knowledge and skills required to implement a reform programme, there are widely agreed weaknesses<sup>24</sup> in areas such as water law, policy formulation, project management, managing change, integrated water resource management in addition to a need to strengthen a variety of technical specialists.

Indeed discussions with the leadership of organisations in the government, parastatal and private sectors strongly indicated that there were no areas where significant development needs did not exist, either in terms of technical specialists or management and leadership abilities.

#### **4. 5. Human Resources planning**

However, the above presents a static picture. In terms of human resources development planning, if the aim was to have trained, say, 54,000 occupants of posts over a period of 10 years, this will involve training many more than 54,000 individuals. For example, a figure of 54,000 takes no account of annual employment turnover. Second, it takes no account of multiple training routes (for example, an extension worker may go through 4 separate training programmes over the course of a few years), and third it takes no account of employment progression which brings in additional training demands. Taking these into account, it might be necessary to train 8,000-9,000 individuals per annum over ten years to arrive at a position of having 54,000 trained individual within the water sector. This takes no account of increasing demands due to technological and social change.

#### **4. 6. Supply side issues**

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<sup>23</sup> See *Training Policy of the Public Service of Namibia*, Office of the Prime Minister, (undated).

<sup>24</sup> Inter-ed Ltd, *Human Resources Study*, 1998

Given the scale of need is considerable, the issue arises as to how such a need can be met. There are currently three main avenues of supply for vocational education and training in Namibia.

First, traditional higher education academic awards, such as certificates, diplomas, and degrees awarded by Namibia's university, UNAM, and The Polytechnic of Namibia<sup>25</sup>.

Second, there exist other awards below the level of higher education which are nonetheless based on traditional forms of accreditation: craft awards from vocational training workshops and qualifications from approved private sector trainers would fall into this category.

Finally, there are competence-based awards, which are designed to fulfill specific job requirements and which are assessed using competence based assessment methods. These are in the very early stages of development.

Typically, solutions to the many skills gaps identified in the water sector would be sought in terms of traditional approaches, such as using vocational training centres, colleges and universities to supply the training required. This will not be possible in Namibia given the scale of the training infrastructure. The government sector supports 7 vocational training centres for the delivery of training in recognised trades. These have a maximum annual capacity of 1,479 trainees. In addition, there are 23 private sector registered centres with an estimated maximum capacity of 4,000 trainees. This totals 5,479 training places to service the needs of the whole country. The great majority of courses on offer are aimed at serving the needs of sectors other than water.

Studies for the Ministry of Higher Education, Vocational Training and Science and Technology, confirm that capacity in vocational training workshops and similar training bases, is vastly inadequate for the needs of Namibia, and to expand traditional forms of training to meet needs would be extremely expensive<sup>26</sup>.

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<sup>25</sup> See draft *National Human Resource Development Plan 1998-2010*, prepared for the National Planning Commission by fundex NAMIBIA (Pty) Ltd.

<sup>26</sup> See *Mission Statement and Investment Plan*, MHEVTST, 1995. When this document was published over three years ago, the then estimated cost of meeting needs via vocational training workshop expansion was N\$23,000 per full-time equivalent student.

A further problem has been lack of attention given to the water sector, despite its importance for Namibia's economic and social wellbeing. Until action by The Technical Team in 1999, there was no Trade Committee<sup>27</sup> formed to serve the needs of the water sector, and thus no vehicle for advising government and the relevant ministries on the requirements of the sector in terms of education and training qualifications and standards.

A similar problem exists in terms of higher level training and development. Namibia is in the process of developing its sole university and its sole polytechnic. Neither have the research base nor teaching staff to fully support the needs for professional development within the water sector at present. This creates a need to use foreign bases of expertise for some time to come.

#### **4. 7. Barriers to training**

In addition to training infrastructure weaknesses, there are also historical barriers, which remain within Namibia. It is surprising, for example, to note that Namibia has maintained historic barriers in the areas of craft training. A stress is put on input requirements to a remarkable degree. For example, for the small number of trades actually organised in Namibia (17), Grade 10 minimum is the entry level to vocational training workshops to receive the approved training. In many cases those entering may have achieved higher than this, with Grade 12 being not uncommon.

Such entry standards for craft training are higher than most western industrialised countries. Indeed many developed economies place no entry barriers at all for apprenticeships, but emphasise the quality of training and outputs from the system.

There is also little recognition of the need to create progression through all grades. Given the talent and motivation, it should be possible for an employee to enter at a basic grade and through recognised study within the job aspire to regular promotion. In reality this is not practical at present. If such ambition were to be realised, it would be necessary to leave employment and return to full-time study. This lack of progressive routes of employee development may be a legacy of the past, but it is not a sound strategy for preparing for a more effective future.

Given the general picture outlined thus far, it is understandable that The Hon. Nahas Angula has called for the creation of "schools without walls".

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<sup>27</sup> Trade Committees are a requirement of the vocational training act already alluded to.



#### **4. 8. Culture change and standards**

As was noted earlier, there is a weakness in performance management in Namibia. The historical legacy of Namibia has also created institutions, which continue to manage human resource development in isolation from managing change and from encouraging the creation of internal progression routes. If a cultural change is to be effected, and if real development of individuals is to take place, organisations themselves will have to significantly change their approach to human resource development.

This is recognised by the Office of the Prime Minister<sup>28</sup>. A major weakness is the lack of institutional standards for human resource development in Namibia. Although as is discussed later, Namibian organisations are becoming involved in quality assurance standards of various types, they are currently not pursuing quality assurance standards in the area of human resources despite the importance of human resources for organisational effectiveness.

A series of interviews with a range of senior staff in Namibian organisations, strongly suggested that organisational inefficiency is present in Namibia for two classic reasons: firstly, *technical inefficiency* and secondly, *allocative inefficiency*<sup>29</sup>. Technical inefficiency is where there is excessive input usage in any work process. Allocative inefficiency results from employing inputs that do not maximise the value of the output obtained. In both cases such types of inefficiency can arise from both lack of effective development of human resources and poor utilisation of human resources. Put somewhat dramatically, allocated high numbers of unskilled personnel to tasks, and poor utilisation of such skills that do exist, remain part of the culture of many organisations. This then is not a problem at the level of individual training, but a problem at the level of organisational management and leadership.

#### **4. 9. National policy and current legislative framework**

As the previous section of this report revealed, Namibia has put in place a range of policies and a legislative framework designed to support the development of vocational training in this country. Particularly notable has been the recent establishment of a Namibia Qualifications Authority under the Ministry of Higher Education, Vocational Training and Science and Technology.

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<sup>28</sup> The OPM have been regularly consulted on these matters, and is keen to be involved in developing institutional standards for Namibian organisations.

<sup>29</sup> See *Ethics and Resource Allocation: An Economists View*, A.McGuire, in *Professional Judgment*, J.Dowie and A.Elstein, Cambridge University Press, 1991, pp 492-507

However, to date few ministries have started to use the potential of the NQA, the Ministry of Agriculture, Water and Rural Development being no exception<sup>30</sup>. However, this does present the water sector with a real opportunity to develop and strengthen current plans by the use of an existing framework of legislation and policy.

#### **4. 10. Analysis of Vacancies within the Ministry of Agriculture Water and Rural Development (MAWRD)<sup>31</sup>**

The MAWRD has four directorates that are relevant to the Water and Sanitation Sector. Each Directorate will be briefly discussed.

##### ***4. 10. 1. Directorate of Rural Water Supply***

The Directorate of Rural Water Supply (DRWS) has three divisions, Division: Rural Water Supply North, Division: Rural Water Supply South, and Division: Development & Planning. These three divisions have a total staff contingent of 945 posts, of these posts 139 (15%) are vacant.

The difficulties these vacancies cause for the achievement of this Directorate's mission are being accepted while reforms in the water sector are developed.

These vacancies, however, indicate crucial gaps in the Directorate's workforce. These vacancies exist because the conditions of service in the Public Sector are not market-related and therefore not competitive. This means that staff are either not attracted to the public service or are not competitive in the private sector and thus wind up in the Public Sector as a last choice. Attrition also occurs because technical and engineering staff once trained in the Public Service are 'poached' by the private sector.

The Directorate has 941 posts of which 139 (15%) are vacant<sup>32</sup>.

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<sup>30</sup> In a report into ministry training needs entitled *Training Needs Analysis*, Directorate of Management Services, March 1997, no attempt was made to suggest how a proper structure of qualifications could be embedded into ministry training.

<sup>31</sup> HR Consulting: Human Resources Development I the Water Sector in Namibia, October 1999

100% of the Chief Engineer (3) posts are vacant.  
50% of Chief Engineering Technician (7) posts are vacant.  
64% of Training Officer (7) posts are vacant  
36% of Works Inspector (5) posts are vacant.  
36% Of Artisan Foreman (4) posts are vacant.  
29% of artisan (4) posts are vacant.  
27% of Chief Rural Water Extension Officer (6) posts are vacant.

While these are existing vacancies, staffing establishment is likely to change as more engineering and management tasks are delegated to the regions under Government of the Republic of Namibia's decentralisation policy. This policy will increase the demand for qualified staff in the regions whilst reducing it at Head Office. The result of the decentralisation policy will be that additional civil engineers, mechanical engineers, water planners and water managers will be required for each region. Recruitment of such staff by the regions is hampered by the lack of budget provisions from MAWRD in 1999.

The strategy of community based management will ensure over time, that the private sector in the communities will take part in the maintenance and repair work rather than staff from the DRWS. In the training process, a more significant effort needs to be made to prepare for privatisation of the sector. Current maintenance staff in DRWS could be trained to take part in this privatisation as was done with labour-based contractors in the road building and road maintenance sections of the Ministry of Works, Transport and Communication under a project called Ministry of Works Transport and Communication 2000.

#### ***4. 10. 2. Directorate of Resource Management***

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<sup>32</sup> Ministry of Agriculture, Water and Rural Development. Personnel Division Quarterly Report, January 1999 to 31 March 1999.

This directorate conducts the research necessary to evaluate the sustainability of surface water and ground water, and to make recommendations concerning the sustainable utilisation of such water.

Resource management has a total staff contingent of 234 people and has 63 vacancies (26%). These vacancies are found as follows:

- 100% of Chief Engineer (4 posts are vacant).
- 100% of Assistant Engineer (3 posts are vacant).
- 100% of Engineer Technician (2) posts are vacant)
- 100% of Chief Survey Officer (1 posts is vacant).
- 100% of Chief Development Planner (1 post is vacant).
- 86% of Drilling Foreman (6 posts are vacant).
- 63% of Chief Hydrologist (5 posts are vacant).
- 63% of Chief Hydrological Technician (5 posts are vacant).
- 50% of Development Planner (11 posts are vacant).
- 50% of Chief Clerk (21 posts are vacant).
- 46% of Hydrological Technician (7 posts are vacant).
- 33% of Handyman (4 posts are vacant).
- 32% of Assistant Hydrologist (8 posts are vacant).
- 29% of Artisan (4 posts are vacant).

The vacancies for engineers, hydrologists, assistant hydrologists, hydrological technicians, engineering technicians and development planners, workhands and chief clerks are significant.

Changes during recent years has resulted in less drilling being implemented by DRWS and more work being contracted out.

This Directorate is therefore facing challenges from a variety of reforming policies being implemented simultaneously. The team to address these challenges is expert but mainly equipped for administering the traditional operations of the Public Service. To

cope with the participatory changes underpinning the NWRMR's reforms, it is recommended that a programme for managing change be considered.

#### ***4. 10. 3. Directorate of Extension and Engineering Services in the Department of Agriculture***

The Directorate has 832 posts and 184 vacancies (25%).

The level of vacancies is high.

100% of the Chief Engineering Technician posts (2) are not filled,

75% of the Assistant Engineer posts (3) are not filled,

61% of the agricultural extension officer's posts (32) not filled,

50% of the Directors posts (2) are unfilled,

42% of the Chief Agricultural Extension Officer's post (6) are not filled

25% of the Labourers' posts (71) are not filled.

This Directorate, at present, has only peripheral relation with the Department of Water Affairs but the staff there has competencies needed by the water sector. How these competencies might be shared with water needs to be investigated.

Most significant for the water and sanitation sector is the shortage at the level of extension officer and chief engineering technician.

#### ***4. 10. 4. Directorate of Research and Training (Agriculture)***

Research and training has an approved staff contingent of 858 posts and has 162 vacancies, 19%. The main vacancies are at critical posts such as technical assistants and principal researchers. This is directly related with the availability in the labour market. Being an agricultural research and training directorate it has 50 trainers. The training efforts directed towards agriculture, water and sanitation is a peripheral issue because of the leading role of DRWS. This directorate has as yet few ties with the water and sanitation section, but this could also be increased as it could support the sector with valuable research information.

## **Summary**

From the analysis carried out in this section, it is becoming evident that there is a need at both lower skilled level as well as at the professional level. It was in recognition of this that The Technical Team sought to pilot some initiatives to test out possible options. There is also a need to investigate how the vacancies in various Directorates could be pulled together for effective utilisation of staff within the Ministry. The next section of this report reviews initiatives to be undertaken in order to address some of the needs identified thus far.

## **5. Initiatives and pilot projects**

### **5.1. Introductory comment**

Given the situation in Namibia as described in the preceding section, the Technical Team took the decision to use action research via a small number of demonstration projects to test out possible responses to the human resource development needs in the water sector.

### **Sub-themes**

Four major sub-themes were identified.

- i. The need to develop the corporate competence of institutions in dealing with human resource development.
- ii. The need to address the skills shortages among rural communities and the unskilled, which constitutes the largest grouping of people in need.
- iii. The need to develop the managerial and professional skills which will be essential to enact and support reform of the water sector.
- iv. The need to develop the participation and commitment of stakeholders in human resource issues.

Furthermore, it was recognised that developments should respect the chosen national options in terms of vocational training and labour market policies and should also take into consideration the ongoing developments in basic education.

Given the above, and given the analysis of needs identified earlier, a series of 13 fundamental principles were agreed to guide actions in respect of human resource development. These working principles were as follows.

## **5. 2. Principles guiding Human Resources Development**

- i. All individuals in the water sector have a right of access to training and development.
- ii. The right to training and development must be fulfilled so as to meet the needs of decentralisation and community based management.
- iii. Training should be designed to meet the needs of both organisations and individuals.
- iv. All organisations have an obligation to meet national standards in human resource development.
- v. Equal opportunities and affirmative action should be respected in all aspects of human resource development.
- vi. Every effort should be made to reduce entry barriers for training.
- vii. Competence-based training should be developed for all occupations in the water sector, in line with national policy.
- viii. Competence should be the key to progression within organisations.
- ix. Competence-based training should be designed to provide a platform for individual progression.
- x. Articulation arrangements should be developed for all qualifications, thus making it easy to move from one qualification to another.
- xi. Capacity building involves a continuous process of people development.
- xii. Inter and intra sector collaboration should be a key mechanism for the development of human resource strategies in the water sector.
- xiii. The development of an effective training infrastructure in Namibia will be essential for long-term capacity building.

### 5. 3. Institutional standards

The Technical Team recognised the need to develop the ability of organisations in the water sector to develop employees, and concluded that institutional standards were required.

The most common types of institutional standards, are quality standards seeking to regulate production or design **processes**. Examples would include the ISO 9000 standards, which seek to ensure quality of processes within organisations. Some Namibian organisations are involved in the use of such standards. For example, the fisheries sector in Namibia has had to meet European Union standards for fish processing to allow it to continue exporting fish to European Union countries.

In addition, Namibia entered into an agreement with the Republic of South Africa to use the South African Bureau of Standards in performing standardisation and related activities in the trade area, and is also a member of International Standards Organisation (ISO) and thus demonstrating its belief in establishing quality standards.

In the area of human resources, the trend has been towards creating **outcome**-based standards. South Africa, for example, has imported the UK's **Investor In People** standard which has been designed to accredit organisations who achieve high standards of development for their staff. This type of standard does not prescribe **HOW** the organisation should undertake tasks ranging from identifying training needs to evaluation the impact of training; but rather describes **WHAT** outcomes must be achieved regardless of the organisation's preferred processes.

This style of quality assurance standard is similar to the competence based model, where the key feature is assessing the **outcome**, and was therefore seen as the most appropriate approach for Namibia given its national legislative framework which recognises the desirability of competence-based approaches..

In Namibia, there are no human resource standards in operation as the previous section of this report revealed. The option of buying in foreign standards, as South



Africa is doing, would be very expensive and, arguably, of limited benefit as the standards would not be tailored to the conditions within Namibia (For example, they would not be able to take account of Namibia's affirmative action laws). It was considered less likely that commitment would be gained where standards were seen to be owned and imposed from overseas.

However, standards are extremely important to Namibia. The water sector in particular needs to skill-up large numbers of personnel if it is to meet the growing expectations of its citizens, and it is not feasible for the government to accept sole responsibility. Organisations in the public and private sectors have a significant part to play in their own capacity building.

Given the fact that the water sector will be served by organisations which will have a virtual monopoly in some areas of activity, it is even more important that standards are adequately articulated. If there were no monopoly and a competitive market operated, it might be argued that competition would force organisational effectiveness and therefore enable employee skills development: but such a scenario is not present in Namibia's water sector.

Therefore, if corporate effectiveness (corporate competence) is to be enhanced, some mechanism for attesting to and raising employee skill levels will be required. The most obvious mechanism is to establish outcome based Institutional Standards which address human resource needs, and which are tailored to the Namibian context.

The Technical Team of the NWRMR, in association with a range of bodies including the Office of the President, the Office of the Prime Minister, the Department of Water Affairs, the Municipality of Windhoek, the Namibia Qualifications Authority, the Desert Research Foundation of Namibia, NAMWATER and others developed a set of Institutional Standards for organisations in the water sector in late 1998.

The standards have received much positive comment, and the Technical Team has already received the commitment of a range of institutions willing to work towards

achieving these standards, including those named above who contributed to their development.

The standards are thus wholly owned by Namibia, and reflect Namibian needs, including legal aspects such as Affirmative Action laws.

One of the problems foreseen was the lack of an accrediting body for Institutional Standards. This has now been resolved, with the Namibia Qualifications Authority (NQA) agreeing to act as the external assessor and with The Technical Team being the guardian of the standards for the foreseeable future. NQA staff have been trained as institution assessors<sup>33</sup>, and the standards have been published by The Technical Team<sup>34</sup>.

The design and development work has therefore been largely completed by the Technical Team.

In countries such as the UK and South Africa it typically takes organisations 1.5 to 2 years to develop their approach to human resource development to the standards required. It is therefore expected that at least a two-year period of trial implementation will be required for water sector organisations.

A range of organisations operating in the Water Sector have already volunteered to pilot the standards. Thus, already put in place by the Technical Team are the following:

- i. Namibian designed Institutional Standards<sup>35</sup>.
- ii. Piloting organisations.
- iii. External Institutional Assessors based with the NQA and the Review.

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<sup>33</sup> This has included the development of a Namibian competence based assessor qualification.

<sup>34</sup> NWRMR, *Human Resource Development Standards For The Namibian Water Sector*, 1998.

- iv. Competence based qualifications for Institutional Assessors.
- v. Programmes of training and assessment for Institutional Assessors.

### ***Incentives and benefits***

At present there are no incentives to organisations for their attainment of these standards. In reality, there are three possible approaches in the long run to encouraging the participation of organisations. These are:

1. A legal requirement is established to meet the standards. This would require legislation.
2. The Government and major agencies build in to their tendering procedures a requirement for organisations to meet the standards.
3. A voluntary code is established throughout the water sector, clearly establishing the desirability of meeting the standards.

The Technical Team believes that a full testing of the standards and their evaluation are required before a decision is taken on how to proceed regarding making a choice between the above three options.

The benefits to organisations are generally recognised by international bodies such as the ILO and the Organisation for Economic Co-operation and Development to be both economic and social in nature. Economically, good standards in human resource development are strongly correlated with improved productivity and quality of output. Social benefits include greater staff commitment and motivation, as well as the enhancement of the individual's capability. These benefits contribute to creating a "learning organisation". In the Namibian context, standards are also likely to contribute towards the creation of a work environment, which provides new opportunities for otherwise disadvantaged sections of the Namibian population, and an improvement to customer service.

### ***Reflections on progress***

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<sup>35</sup> *ibid.*

Since the training of assessors for these standards, modest progress has been made in implementing the standards within the piloting organisations. The prime problem is that the Technical Team does not currently have the resources to assist organisations with implementation, and there is no other body in Namibia with the expertise and resources to provide such support.

#### **5. 4. Competence-based training**

Throughout this report reference has been made to competence-based training. Competence-based training is enshrined as a government policy within legislation<sup>36</sup>, but it also has a significant contribution to make in raising standards throughout the water sector.

Competence could be defined as the ability to carry out activities to the standard specified, and this includes the requirement to possess underpinning knowledge in order to carry out practical activity, ability to transfer skills and knowledge to new situations and the ability to interact effectively with others.<sup>37</sup> Competence-based training system can be structured as follows and the water sector within the Review' initiatives is in the process of developing such a system.

##### ***5. 4. 1. Career Structure in the water sector***

An important part of competence-based system, which falls under the auspices of the NQA, is the requirement to develop occupational and curriculum standards in relation to appropriate career structure.<sup>38</sup>

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<sup>36</sup> See *Vocational Training Act* and *Namibia Qualifications Authority Act*, 1996

<sup>37</sup> Scottish Qualifications Authority, Handouts from the workshop of the MHEVTST, 1999

<sup>38</sup> Draft Report on career structure in the water sector, by HR Consulting, September 1999

In 1995 the Wages and Salary Commission (WASCOM) made recommendations which affected the promotion measures for public servants. Whereas in the earlier performance appraisal system, a person was automatic promoted to the next rank on an occupational ladder upon obtaining satisfactory performance over three years. The WASCOM introduced a competitive system where promotion only became possible upon successful applying for an advertised post.

The career structure that is proposed for the water sector (Appendix II), ties in well with the NQA principles of portraying occupational classes in terms of the National Qualifications Framework (NQF). The proposed career structure is made out of NQF levels, a set of accredited modules of training, and /or specified work related competencies, and /or requirements specified by the relevant statutory body and a system of Recognition of Prior Learning.

If an individual achieve the competencies outlined in the specifications mentioned above, then they are equipped for progress up the promotional ladder in or outside their organisations, depending on the availability of vacancy and individual choice.

#### ***5. 4. 2. Occupational standards***

Competence-based training is based on the clear articulation of work standards for all significant tasks within an occupational area. These are organised in units of competence, a unit simply containing all the tasks in a particular aspect of an occupation. For example, one of the areas for which caretakers may be responsible is joining, repairs and maintenance of water pipes, another might be general maintenance of water point. Each of these areas would constitute a unit<sup>39</sup>, and within them a clear articulation of all tasks, and the standards which must be met as a result of carrying out each task, are specified. Thus it describes the outcomes which workers must be able to achieve.

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<sup>39</sup> An example of a unit of competence is included as an appendix II

These units (also known as modules) can be the basis of certification and sometimes grouped together into a qualification. Credit value may also be assigned to units, based on the content and notional time to complete the units, although competence-based training system does not necessarily require any time limit.

#### ***5. 4. 3. Legal requirements***

There are legal requirements, which must be fulfilled for the approval of standards, which are specified in the Vocational Training Act and the Namibia Qualifications Authority Act. Once approved by the Ministry of Higher Education, Vocational Training and Science and Technology, and by the Namibia Qualifications Authority, units become the basis for the award of nationally recognised qualifications.

##### ***5. 4. 3.1. National Standard Setting Body (NSSB)***

The Technical Team recognised that one of the major flaws in the existing system was the fact that no NSSB or Trade Advisory Committee existed for the water sector. According to the NQA policy on standard setting for qualifications in Namibia<sup>40</sup> the development of national standards is the responsibility of the industry or occupation. In conjunction with the NQA, industries are therefore required to set up NSSBs. NSSBs which consists of representatives from employers, employees, education and training providers in the industry/occupation/professional bodies and Government, are expected to ensure that standards developed meet their purpose and will be acceptable and of use in the industry or occupation concerned.

A committee which is intended to expand and be officially recognised as an NSSB for the water sector, has been established and has embarked on the work of creating agreed standards for the water sector. This represents a major step forward in organising water sector stakeholders.

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<sup>40</sup> Namibia Qualifications Authority: *Provisional Policy on the Setting of Standards for Qualifications in Namibia, July 1999.*

#### ***5. 4. 3. 2. Assessment***

As competence based qualifications are based on measuring performance (skill) outcomes, the type of assessment used is very different from traditional exams. Exams test knowledge, but can rarely be a comprehensive test of knowledge nor can they effectively test skills and behaviours. Competence based assessment involves observation of individuals undertaking tasks, the examination of any products from the conduct of tasks, and the questioning of individuals to make sure they understand why tasks are carried out in a particular way. Individuals must demonstrate competence to the standards required in the conduct of every task in every unit (area) of competence before they can be awarded a competence-based qualification.

Competence-based training and assessment is therefore particularly concerned about outcomes, and does not require to set high entry requirements as are often required for more academic approaches.

#### ***5. 4. 3. 3. Skills acquisition and certification***

Competence-based systems require skilled trainers and skilled assessors. It is likely that the best location for training will be on-the-job rather than in the artificial setting of a classroom or training workshop. Given the assessment is very much task and outcome focused, individuals who are highly skilled, but who may lack the benefits of a good educational background, can be certificated so long as they can meet the necessary occupational standards. It is therefore necessary for a system, which removes unnecessary barriers to training, while emphasising the importance of outcome standards.

#### ***5. 4. 3. 4. Quality assurance***

Given the importance of outcome based standards, it is necessary to have an effective system of quality assurance. This involves:

- Nationally recognised standards;

- Well trained trainers and assessors;
- A well organised system for documenting individual achievements; and
- A system of verification ( whether internal and/or external) which involves training experts reviewing the practices of trainers and assessors, and ensuring that all assessments are based on sound and verifiable evidence. Thus the system is heavily evidence based.

## **5. 5. SCHOOLS WITHOUT WALLS**

The Hon. Nahas Angula of the MHEVTST has recognised the great potential of competence-based qualifications to be involved in the creation of his “schools without walls” which was cited earlier in this report. It is a type of training, which can be undertaken for as few as a single individual within a community, to unlimited numbers nationally, assuming a delivery mechanism can be put in place. It is a type of training, which is not dependent upon having dedicated classrooms or training workshops. It is possible to deliver the training and the assessment on-the-job, hence realising the dream of “schools without walls”. And it is training which can raise standards of actual performance in work, thus enhancing the output and quality of work, assuming that the training and assessment can itself be guaranteed to be of a good standard.

The attractions of competence-based training to Namibia are therefore obvious. The issue to be addressed is how it could be delivered given the training infrastructure within Namibia.

### **5. 5. 1. AN INTERNATIONAL MODEL: FAST-TRAC SYSTEM**

The MHEVTST had already been considering the applicability of one model of delivery which seemed to meet the requirement for “schools without walls”, but which also emphasised high standards. Based in Fife, Scotland, UK, FAST-TRAC had been created specifically to tackle the issue of low skilled workers in a part of the UK with high levels of deprivation. A team from FAST-TRAC had already



completed a feasibility study in northern Namibia at the invitation of The Hon. Nahas Angula, which has been commented upon earlier.

The FAST-TRAC system creates the means to deliver competence based qualifications without resort to traditional education institutions.

A Fast-Trac system in Namibia would be the lead vehicle for the identification of training needs, the design of personal training agreements with individuals and organisations, the monitoring of training and assessment, and the quality assurance of qualification delivery.

The FAST-TRAC system enables training to be delivered in employer premises, in communities, in training centres, colleges or any other suitable location. It is not based on replacing what already exists, but in maximising the contribution from all available locations for training.

FAST-TRAC Namibia, would be based on a system of constructing agreed programmes of training for each relevant individual. It would assist in identifying the most appropriate trainers and assessors given the training required. Thereafter, it would monitor the progress of individuals, and monitor the performance of trainers and assessors at regular intervals. This would happen at least four times per year. Fast-Trac training executives would act as external verifiers, and liaise with the NQA for accreditation purposes. It would report regularly to government and donors on progress, advising on programme developments and progress.

In other words, it would act as the key agent, bonding together individuals, their training needs, the needs of their organisations and the water sector, and the requirements for the effective delivery of competence-based training to recognised national standards. It would engage in regular monitoring of all aspects of the system and provide independent reports on progress.

### ***5. 5. 2. Pilot***

The Technical Team chose to undertake a pilot programme in 1998, funded by UNDP, to test out whether key features of the Fast-Trac system could be credibly developed and delivered in Namibia.

In addition to the involvement of the MHEVTST, the Namibia Qualifications Authority (NQA) was also closely involved in the development of this approach. In particular, the NQA has been involved in establishing the qualification requirements, and working with the Technical Team in mapping out accreditation arrangements.

Finally, The Technical Team has worked with a range of bodies to identify where competence based approaches will be most purposeful. These have included municipalities, the Department of Water Affairs, in particular the extension workers and a range of government ministries. It was agreed that the key focus for FAST-TRAC should be to address the low-skilled sector, and fill the gap in provision identified earlier in this report.

In addition to identified training programmes for the Community Committees and water point caretaker, other areas identified for piloting purposes are: Rural Water extension officers, Hydrology Technical Assistant, Technical Trainer, Operative Waste Water Treatment, Project Leader Zone A, Chlorination Team Leader and Water scheme operators.

### ***5. 5. 3. Fast-Trac Namibia : Progress To Date***

The Fast-Trac system of delivering and quality assuring competence based training has been particularly effective in enabling otherwise disadvantaged groups in society to attain meaningful qualifications and access employment. It has done so via a sophisticated system of funding, design of training, quality assurance and evaluation.

It has not been the intention in Namibia to replicate all aspects of the system, but to attempt to tailor-make a Namibian version taking account of Namibia's needs and Namibian policy. In particular, strategically important components of the system had to be tested out in the Namibian context.

UNDP funded a pilot programme to test out whether it would be possible to develop a Fast-Trac Namibia system. A team of four specialists spent 5 weeks in Namibia working with key personnel in different areas of the water sector. A 350 page report<sup>41</sup> has summarised the results. The results of this pilot exercise exceeded expectations, and give strong grounds for believing this approach has the potential to play a major part in the skilling of the Namibian labour force.

#### **5. 5. 4. Key elements**

A number of matters have now been brought together by the Technical Team thus far and need further development includes:

- i. Working with the MHEVTST and NQA to identify good practice and
- ii. Namibian requirements in the development of competence based qualifications.
- iii. Assessment of the training needs of some low-skilled areas in the water sector.
- iv. Working with key organisations in the water sector to identify where competence based approaches will be most appropriate.
- v. Piloting key features of the Fast-Trac system of delivery.

#### **5. 5. 5. Key questions**

The key questions, which had to be answered in the affirmative for a Fast-Trac Namibia to be possible, were as follows.

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<sup>41</sup> Mullin, Thomson, Henry and Callan, *FAST-TRAC Namibia: Supporting Communities*, 1998.

1. Did Namibia have the capacity to develop a full range of competence based qualifications to international standards?
2. Could such qualifications be developed effectively and speedily by Namibians ?
3. Could key workers, such as those in the extension service and skilled operatives in organisations such as municipalities be effectively trained to act as assessors?
4. Could a management and administrative system be developed which would meet appropriate standards both for Namibia and for an effective Fast-Trac system?
5. Could a cadre of Training Executives be identified and developed? (Training Executives are the key professionals under the Fast-Trac system, responsible for training programme design and monitoring at the level of the individual participant in training.)
6. Could the system be developed to the satisfaction of the MHEVTST and NQA?

As the report demonstrates, all questions can be answered in the affirmative. Indeed, in many areas the extent to which Namibia has shown herself more than capable of developing the means to deliver competence based training via a “schools without walls” concept, has surprised many.

#### ***5. 5. 6. Achievements***

For example, DWA staff, extension workers, municipal workers, NAMWATER workers and others all demonstrated a high degree of ability in competence based assessment after only four days of intensive training.

Extension workers, working with consultants, were able to develop more than 6 times the number of competence based qualifications targeted by the project.

Staff of the MHEVTST and UNDP working alongside consultants were able to design a management and administrative system for Namibia during the pilot period: a task which at the start of the project was not considered realistic.

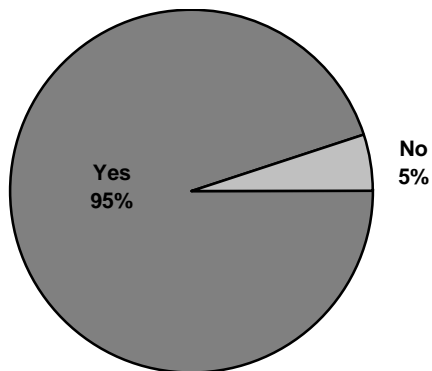
The reason for this very strong performance, has been explained primarily in terms of the motivation of the Namibian participants. Once they understood the potential of this approach to training, their commitment was very considerable indeed.

### ***5. 5. 7. Support for implementation***

The project has demonstrated that with effective leadership, all the developments necessary to facilitate a Fast-Trac system can be put in place. Furthermore, evaluations by key stakeholders<sup>42</sup> have suggested there is very strong support for the implementation of the system within Namibia.

For example, when 22 local authorities were asked if they supported the introduction of competence based training in the water sector for the 80% of their employees who were unskilled, the results were very telling as chart 3 below displays.

***Chart 3: Respondents who supported (yes) and who did not support (no) the introduction of competence based training for local authority staff.***



Yes = support competence based training.

No = do not support competence based training.

The Ministry of Higher Education, Vocational Training and Science and Technology had earlier undertaken research into the acceptability of the FAST-TRAC system itself in conjunction with competence based training among employers in four regions of Namibia. The results gave remarkable levels of support to the proposal as the following table indicates.

**Table 3: Support levels for competence based training<sup>43</sup>**

Regional Centres of Operation	Support for competence based vocational qualifications		Support for FAST-TRAC style of programme management	
	Number	% of regional respondents	Number	% of regional respondents
Ondangwa	12	100.00	11	91.67
Oshakati	37	97.37	36	94.74
Walvis bay	14	93.33	12	80.00
Windhoek	18	94.74	14	73.68

Therefore, not only is there a logic to the case, not only does it embrace the government's legislative priorities and policy aims, and not only is their proof that Namibians have the skills to develop an effective system: there is also strong evidence that it is actually wanted.

#### **5. 5. 8. Lead organisation**

The establishment of a FAST-TRAC Namibia would fill a major void: the lack of an institution with a concern to frive up occupational standards and drive forward training within the water sector. In this respect FAST-TRAC Namibia holds the potential to become the lead organisation for the development and promotion of good practice in vocational training in the water sector.

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<sup>42</sup> See, Mullin et.al. op.cit.

<sup>43</sup> *Mass Skills Training in Namibia - A Feasibility Study*, 1997, p.10 table 5.

## **5. 6. MANAGERIAL AND PROFESSIONAL DEVELOPMENT**

Although quantitatively the greatest level of need is with lower skilled employees, from a qualitative point of view the greatest challenge of all is empowering the professional and managerial elite with the knowledge and competence required to lead the many changes outlined in the companion theme reports to this one.

Early studies recognised this as a key issue, and there are many factors that will influence the planning and implementation of managerial and professional development, among others, current staff shortages, the general level and limitation of basic education, and interest into the water sector profession by the graduates. The Review have therefore sought to strengthen professional provision in a number of key areas.

### ***5. 6. 1. Water law and policy***

The complex organisational, environmental and legal frameworks within which the water sector must be managed creates considerable demands on policy makers. In seeking to reform laws and policies in particular, a significant need for developing the knowledge base of sector leaders was identified. This has been taken further. In concert with the World Bank, leading international practitioners in water law and policy have been identified, and workshops arranged for Namibia.

However, in recognition of the need assure progression and learning, a special feature of the programme will be accreditation of participants on the basis of producing topic papers for assessment at Masters level. This is entirely in line with good practice as identified by the Institutional Standards, which have been developed by the Technical Team.

### ***5. 6. 2. Project Management***

Another vital need is the enhancement of project management and change management skills for senior managers. For example, Ministry personnel will require to develop high level project identification, management and evaluation skills.

As other agencies and companies take on more of the front line work, and the Ministry becomes a more strategic body, the role of its management will change. Project management skills will inevitably become more important. Similarly other agencies will be expected to lead and develop water projects in the future.

Project management however needs to be set in the context of change management, and the ability to implement and lead change in the water sector.

The Technical Team has identified this as a key competence required by managers in the water sector, and have laid plans for the development and delivery of high level project and change management skills with an international management school. The programme will involve the assessment of individuals for both knowledge and skills competence.

The areas of Water Law and Policy, and Project and Change Management are not a comprehensive listing of needs. Other needs have been identified in earlier reports. However, they represent needs for which the Technical Team have made arrangements, and which model a capacity building approach in line with the other projects which have been piloted.



## **6. A PROPOSED STRATEGY AND POLICY FRAMEWORK FOR HUMAN RESOURCE DEVELOPMENT IN THE WATER SECTOR**

### **6. 1. Summary of the proposed strategy**

The proposed strategy for human resource development can be summarised as follows.

**Aim** to establish the means to develop the knowledge and skills of every organisation, community and Namibian working in the water sector to agreed standards of performance.

This general aim will be met by achieving the following objectives.

- i. To establish good practice within all organisations in terms of the development of the knowledge and skills of employees.
- ii. To support community based management by the development and delivery of standards based training.
- iii. To support individuals by the development of competence-based qualifications which will provide opportunities for further progression and development.
- iv. To develop a cadre of leaders fully equipped with policy development, management and leadership skills to drive forward reform in the water sector.
- v. To build technical/professional and infrastructure capacity in Namibia capable to respond to the needs of the water sector.

#### **Context**

- i. To build upon the positive aspects of the ongoing initiatives and draw synergy from the existing facilities and Human Resources
- ii. To undertake all developments within the legal and policy framework established by the Government of Namibia.
- iii. To be evidence based in the development of initiatives, and in particular by establishing the means for continuous identification of training and

development needs. This is essential for the long run sustainability of capacity building measures.

- iv. To respect the thirteen HRD principles articulated earlier within this report.

In response to the above strategic intentions, The Review proposes the following specific initiatives be given priority in the medium to long-term future.

### **Proposal 1:**

#### **Institutional Standards in Human Resource Development**

To implement the Institutional Standards in Human Resource Development among the identified pilot organisations. The implementation pilot should run from January 2000 until December 2001.

To provide appropriate support to the piloting organisations throughout the implementation phase.

To provide further training and support for institutional assessors.

### **Explanation**

To implement the standards, which have been developed, will require the following forms of support.

1. Further training of institutional assessors.
2. To conduct workshops for those within the pilot organisations who will have responsibility for implementing the standards. This will be part of a marketing strategy to encourage institutional participation.
3. To provide regular trial assessments for the organisations. This will contribute to benchmarking progress, and will also contribute to a process of formative evaluation.
4. To provide technical advice to organisations on the practical implementation of the standards.

5. To undertake a summative evaluation of the project. The evaluation should include recommendations on how this initiative should be taken forward, and in particular advise on what forms of incentives should be used to encourage a high take up of the standards among all organisations.

### **Estimated support costs**

It is estimated that the provision of the above support will cost US\$ 80,000 in year 1 and US\$60,000 in year 2 of the pilot programme.

### **Proposal 2:**

#### **Competence-Based Training and FAST-TRAC Namibia**

To develop a systems of skills training which will maximise access for individuals, and particularly those Namibians effectively excluded from entering the traditional skills training institutions such as training workshops.

To establish clear skills standards across the full range of water sector activities.

To establish and operationalise the National Standard Setting Body for the Water Sector.

To create nationally recognised qualifications for all water sector occupations.

To develop training delivery systems which are less dependent upon the traditional education and training network of institutions in Namibia.

To develop and pilot initiatives related to these objectives over a three-year period commencing January 2000.

### **Explanation**

This will involve the creation and development of a FAST-TRAC Namibia organisation, building upon the UNDP pilot discussed earlier.

This will also involve an exercise in developing hundreds of competence based units.

The setting up of the NSSB is a requirement for the units of competencies to be recognised by the NQA.

This programme will be able to be integrated with the Department of Water Affairs' five year training plan discussed earlier. This is essential for two reasons. First, to avoid duplication of effort, and second to maximise outputs attained from the available resources.

Details of the proposed programme have been written up in a separate document<sup>44</sup>.

## **Costs**

There are three major cost components to this project.

First, Namibia staff and accommodation for the FAST-TRAC operation as spelled out in the document referred to above and in footnote 37. This should be the contribution on the Government of Namibia in the form of secondments and government facilities.

Second, costs of training programmes. This is assumed to come from two sources. First from participating organisations with existing budgets for the development of their own staff, such as NAMWATER and the municipalities. Second from the existing five year training plan budget of the Department of Water Affairs discussed earlier.

Third, setting up of the NSSB, special support and establishment costs associated with creating the independent FAST-TRAC Namibia organisation, and related competence-based qualification development work and staff development programmes.

Over a three-year period this third element is estimated to cost US\$ 530,000 - US\$ 540,000 each year, for which donor support will be necessary.

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<sup>44</sup> See *FAST-TRAC Namibia: Project Proposal*, 1999, available from the Technical Team.

### **Proposal 3:**

#### **Professional Development Programmes**

The development of new institutions as part of the water sector reform under the Review will require more emphasis on training for the leadership and management of the proposed institutions as well as for the technical operations.

The objectives of this proposal will be:

To implement a professional development programme for leaders within the water sector.

To prioritise water law and policy, project and change management, and specialist programmes to support reform proposal made in companion theme reports. Water law and policy, and project and change management programmes should be completed by the end of year 2000.

To encourage the transfer of learning to the workplace by using appropriate systems of assessment, including competence-based ones.

To encourage the development of professional development programmes via the University of Namibia. Where appropriate this may involve establishing international partnerships with expert institutions.

To develop and implement the professional development programme plan over the period 2000-2004 with a particular focus on supporting the reform programme.

#### **Explanation**

This will involve:

Synchronisation of the training needs into a Professional development programme plan;

Development and implementation of the upgrading/bridging courses for prospects candidates, this is more important in order to allow more people entrance into professional programmes.

Development of database for training efforts in the sector at national, regional and international level;

Development of a proposal regarding professional development programme in Namibia;

Planning and implementation of exchange programmes to other countries.

A professional development programme for the leadership cadre is vital to support the reform process.

## **Costs**

Among other activities outlined above, a mixture of short courses in country and out of country, exchange programmes and a small number of scholarships, will require a budget of around US\$ 350,000 per annum over the next four years.

## **Summary**

It is important to note that there are two main forms of needs to be addressed. Firstly, in technical specialisms and secondly in management. These will require to be established on a long-term basis. Therefore, Human Resources Development is not a 'Quick Fix' solution, but a process of development that could happen according to the following developmental stages<sup>45</sup>, which in some cases are in parallel with each other:

**Formative stage:** During this stage a need for intervention is accepted by all. It is a stage where time is spent on consultation, discussions, strategic and operational planning.

**Construction stage:** During this stage visions and targets are realised. A lot of construction in terms of Human and infrastructure will happen. Money is spent and progress and failure is identified.

**Consolidation stage:** This is stage of maintaining and improving programmes and infrastructure.

The following section describes the above intervention in the context of a policy matrix.

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<sup>45</sup> Ibid.

## 7. POLICY MARTIX

Policy Focus	Policy detail
<b>Market Failures</b>	<ol style="list-style-type: none"> <li>1. No institutional standards in human resources being used by water sector organisations.</li> <li>2. No skill standards developed for the vast majority of occupations in the water sector</li> <li>3. No mechanisms for identifying, developing and implementing standards based training in the water sector.</li> <li>4. Current training approaches ad-hoc, not based on recognised qualifications in the majority of cases, and not being undertaken within the Namibian Government's framework for human resource development.</li> </ol>
<b>Policy Initiatives</b>	<ol style="list-style-type: none"> <li>1. Establish recognised human resource development standards for all organisations. These standards to be externally assessed by the Namibia Qualifications Authority. Organisations meeting standards to receive a national award for a period of three years, entitling them to approved organisation status. All public sector bodies expected to achieve standards within 18 months, and all private sector organisations within 24 months of their launch.</li> <li>2. FAST-TRAC pilot and professional development programmes. Developing the work of the water sector Trade Committee.</li> <li>3. FAST-TRAC pilot programme.</li> <li>4. All of the above.</li> </ol>
<b>Implications and consequences</b>	<ol style="list-style-type: none"> <li>1. Organisations will require to be supported in the implementation of standards, and a robust evaluation phase will be essential. Key consequences will include a raising of corporate competence in human resource management.</li> <li>2. Development of hundreds of units of competence to cover all occupations and all levels of employment. These</li> </ol>

<p><b>Linkage to other policies and sectors</b></p>	<p>to be used for the creation of competence-based qualifications which will fill current gaps in provision. Will introduce training not dependent upon entry qualifications, and enabling equal opportunities and affirmative action to be professionally supported.</p> <p>3. The creation of an independent body for the identification of needs, establishment of training delivery mechanisms, quality assurance and liaising with qualifications agencies.</p> <p>4. All of the above.</p> <p>1. Institutional Standards must reflect affirmative action, and equal opportunities legislation. It links with initiatives underway via The Office of The Prime Minister and Ministry of Labour.</p> <p>2. Links to affirmative action, equal opportunities, vocational training and Namibia Qualifications Authority legislation. Also links to the work of MAWRD, MHEVTST and Ministry of Labour.</p> <p>3. Links to 2. above.</p> <p>4. All of the above.</p>
<p><b>Stakeholders</b></p>	<p>1. All organisations operating in the water sector, also The Office of The Prime Minister, MHEVTST, The Ministry of Labour, Trade Advisory Committees, Trade Unions.</p> <p>2. As above.</p> <p>3. As above.</p> <p>4. As above.</p>
<p><b>Resources</b></p>	<p>1. Supporting experts plus briefing workshops and specialist training for the implementation phase. Independent summative evaluation to be commissioned at the end of the pilot period.</p> <p>2. Supporting experts plus specialist development workshops and training programmes.</p> <p>3. Supporting experts, accommodation, staff, consumables</p>



**Legislative  
implications**

etc, as described earlier.

4. All of the above.

1. Dependent upon evaluation. None foreseen at present.

2. None.

3. None, but Cabinet support required.

4. As above.

## **8. Institutional Strategy for Human Resources Development**

It has been widely expressed and accepted that the water sector reform exercise will be futile if not supported by strong and effective capacity building programmes.

It is also a known fact that the educational and training system of Namibia is in a developing process, thus does not yet guarantee to bring about candidates with necessary subjects to enter institutions of higher learning as well as bring about informed and literate citizens. Therefore, at the beginning of the water sector reform, there is a need to have a strong co-ordination mechanism of human resources development initiatives. This is more important until such a time that the system is well developed and capacity has been built.

The structure for HRD in the water sector will be divided in two sections namely, policy making level and operational level.

### **8. 1. POLICY AND STRATEGIC LEVEL**

The main aim at this level is to oversee the policy development and implementation of proposed strategies

#### **National Standards Setting Body**

According to the Namibia Qualifications Authority, policy on standard setting for qualifications in Namibia, the development of national standards is the responsibility of the industry or occupation. In conjunction with the NQA, industries are therefore required to set up NSSBs.

NSSBs will consists of representatives from employers, employees, education and training providers in the industry/occupation/professional bodies and Government, are expected to ensure that standards developed meet their purpose and will be acceptable and of use in the industry or

#### **Ministry of Higher Education, Vocational Training, Science and Technology**

This Ministry has the responsibilities of proposing and developing professional programmes at tertiary levels, in conjunction with the tertiary institutions. The Minister of Agriculture and other stakeholders, in collaboration with The Ministry of Higher Education and Tertiary institutions, will Co-ordinate the development of professional programmes for the water sector. An example could be that the Minister of Agriculture through the Policy and Strategy Unit could propose a course or programme to be offered at the University of Namibia or at the Polytechnic of Namibia. This proposal will then be discussed among the mentioned stakeholders before it is materialised.

### **Other high level committees (as proposed in the Institutional theme report)**

The Human Resources Development issues will be discussed with other related issues in the Cabinet Committee on Water Resources and Standing Committee on Water Resources as proposed in the Institutional theme report.

## **8. 2. OPERATIONAL LEVEL**

The main aim at this level is to coordinate the implementation of the proposed policies and strategies.

### **Three options could be considered at this level:**

- a. A separate unit for example FAST-TRAC Namibia could be established for this responsibility among others.
- b. Implementation Team (Namibia Water Resources Management Review Project) could be strengthened to co-ordinate the pilot projects and thereafter this function could be outsourced.

The Review with the revised terms of references will be responsible among other for co-ordinating the piloting of the strategies proposed in the Theme report. This will include among others:

- ❑ Co-ordinating the piloting of institutional standards.
- ❑ Co-ordinating the development of the training system.

- ❑ To be the lead vehicle for the identification of training needs, the design of personal training agreements with individuals and organisations, the monitoring of training and assessment, and the quality assurance of qualification delivery.
  - ❑ Co-ordination of training of competence-based trainers, assessors and training executives. The aim is to build a core group of people in those areas that will be able to train others.
  - ❑ Review organisations that are willing to participate in the pilot exercise, which include Health and Safety arrangement, training resources, and occupational competence of staff.
  - ❑ Approve organisations and lay out obligations in a contract document.
  - ❑ Co-ordinate the establishment of Personal Training Plan.
  - ❑ Carry out regular reviews of trainees, host organisations and trainer/assessors.
  - ❑ Facilitate improvements in training, maintain detailed records of training progress and ensure assessors are maintaining effective achievement records.
  - ❑ Liases with the Namibia Qualification Authority for accreditation purposes.
  - ❑ Monitor the performance of trainers and assessors at regular intervals.
- Serve as an information and advice resource for all organisations and individuals involved in training.
- ❑ Developing and maintaining database for HRD
  - ❑ Advising on programme developments and progress.

After the piloting phase, **these functions could be organised and outsourced to the commercial contractors.**

c. Due to the fact that the Department of Water Affairs is involved in implementing community based management strategy, it is expected that they take the lead to coordinate these projects and eventually implement it fully. The Review as being the initiator of this project, it is expected to provide technical assistance and play a coordinating role, if extended to become an implementation Team.

### **Implementers of strategies**

Various organisations in the water sector e. g. suggested Rural Water Supply Project Team, Resource Management Agency, NAMWATER, Municipalities etc. will be the

implementers of the proposed HRD strategies. During the piloting phase, organisations in collaboration with the coordinating institution and the Review Implementation Team members will be responsible for:

- ❑ Implementation of institutional standards.
- ❑ Identification of trainers, trainees and assessors.
- ❑ Further development of training standards
- ❑ Development of training materials and assessment materials
- ❑ Facilitating of training programmes and continuous assessment of candidates
- ❑ Maintaining of training and assessment records.

After the piloting phase, each and every organisation has the liberty to implement the strategies within their organisations structural framework. Organisations can seek the assistance of the private companies that are well equipped in implementing these strategies.

### **8. 3. An example of a specific institution: HRD structure within the RWS Project Team**

:

There could be a small team at the central level dealing with HRD issues as a support to community based management. This team should consist of trainers and assessors. Versions of such a team should be formed at the regional offices. This regional team should be organised in such a way as to integrate with other trainers and assessors from non-governmental organisations, Municipalities, relevant Ministries and communities.

These teams will be working in collaboration with the Implementation Team to establish a system of employer-based training.

## **9. CONCLUSION**

The current education and training system in Namibia does not provide for the adequate acquisition of practical skills; hence a need exists to:

- move towards a system that will address the requirement for more skilled labour as demanded by the changing Namibian economy;
- build professional and infrastructure capacity for the country.

In view of the proposed reform of the water sector, much remains to be done after the proposed institutions and other recommendations from companion theme papers have been accepted by Cabinet. These will be in the areas of:

- synchronisation of training needs into a Plan for Professional development,
- development of management structures for the sector i. e. job descriptions at all levels, staffing and Human Resources Management strategies in terms of recruitment and retaining of staff with special consideration to the regional structures;
- streamlining and merging of related activities inter-divisional and inter-ministerial.

On the other hand, the management of human resources needs to be supported by an information management database. The initial work started should serve as a basis for continuing developing the database through the implementation stage.

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## APPENDIX I

# Namibia Vocational Qualifications

CA	Community caretaker:	Pipelines
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Element 1	Joining Pipes
Element 2	Making repairs in Pipes
Element 3	Maintenance and repair of Taps

Element 1	Joining Pipes
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### *Performance Criteria*

- 1.1 Identifies the type of pipe to be used
- 1.2 Identifies the correct method of jointing
- 1.3 Prepares the pipe end for jointing
- 1.4 Prepares the joint for jointing
- 1.5 Presents the pipe ends and joints for jointing
- 1.6 Makes joint
- 1.7 Tests joint

### *Range*

Polyethylene , PVC, Galvanised steel pipes

### Evidence Requirements

Practical completion of all the performance criteria listed above recorded by checklist

### Knowledge evidence

Accurate answers to the following questions

- (i) How can you identify different types of pipe?
- (ii) Why must you prepare the pipe ends for jointing?
- (iii) What would you do if the test failed?

## Namibia Vocational Qualifications

### Element 2                      Making Repairs in Pipes

#### *Performance Criteria*

- 2.1      Identifies the pipe to be repaired
- 2.2      Identifies the type of pipe to be repaired
- 2.3      Cuts out the section of broken pipe
- 2.4      Prepares a replacement pipe
- 2.5      Makes joints suitable to pipe type
- 2.6      Tests repair

#### *Range*

Polyethylent, PVC, Galvanised steel pipes

#### Evidence Requirements

Practical Completion of all the performance criteria listed above recorded by checklist

#### Knowledge evidence

Accurate answers to the following questions

- (i)      What are the signs of a broken pipe?
- (ii)     Why is it important to repair the broken pipe?
- (iii)    What care should be taken when digging a trench for pipe repair?

## Namibia Vocational Qualifications

Element 3                      Maintenance and Repair of Taps

### *Performance Criteria*

- 3.1 Identifies tap for maintenance
- 3.2 Dismantles tap
- 3.3 Cleans and lubricates spindle
- 3.4 Replaces rubber washer
- 3.5 Replaces packing gland
- 3.6 Inspects valve seating for defects
- 3.7 Reassembles tap

### *Range*

Water point taps, lubrication, washers, packing gland.

### *Evidence Requirements*

Practical completion of the performance criteria listed above recorded by checklist

### Knowledge evidence

Accurate answers to the following questions

- (i) What would happen to the tap if regular maintenance was not carried out?
- (ii) How often should you inspect your water point taps?
- (iii) Why is it important that the tap is not allowed to continually drip?

## Namibia Vocational Qualifications

CA0004 Community Caretaker: Water Point Components

Element 1 Water Points Storage Provision  
Element 2 Water Point Cleaning and Maintenance Scheduling

Element 1 Water Point Storage Provision

### Performance Criteria

1. Identifies a secure storage point
2. Maintains a clean storage point
3. Updates tool provisions
4. Updates spare part provisions

### *Range*

Storage facility, storage facility maintenance schedule

### Evidence Requirements

Practical completion of all the performance criteria listed above recorded by checklist

### Knowledge evidence

Accurate answers to the following questions

1. Why is it important to have a secure storage point?
2. Why is it important to keep your storage point clean?
3. What would happen if you did not update your spare parts provisions?

## Namibia Vocational Qualifications

Element 2                      Water Point Cleaning and Maintenance Scheduling

### Performance Criteria

- 2.1      Cleaning debris and rubbish from around the water point.
- 2.2      Disposes of rubbish and debris with care.
- 2.3      Identifies maintenance requirement for ground work.
- 2.4      Renders ground suitable for purpose

### *Range*

Cleaning equipment to include brushes, shovels and disposable bags, ground repair techniques to include stonework, earthwork, and cement work.

### Evidence Requirements

Practical completion of all the performance criteria listed above recoded by checklist

### Knowledge evidence

Accurate answers to the following questions

- (i)      What would happen if rubbish was not cleared for a long period of time?
- (ii)     Why is it important to maintain the groundwork around the water points animal troughs?

## APPENDIX II

### CAREER STRUCTURE FOR THE WATER SECTOR SHOWING POSSIBLE QUALIFICATIONS AND INDICATIVE OCCUPATIONS

NQA Level	Qualification Required to Proceed to the Next Level	Administrative Cadre	Professional <sup>46</sup> Cadre	Sc
8	<p><b>Doctoral Degree</b> Courses and research units as prescribed by the accredited provider plus On-the-Job training as required by the relevant statutory body and the appropriate Unit Standard.</p> <p>NB: Full or Partial Equivalents of these qualifications may be determined using the Recognition of Prior Learning procedure.</p>	<p>Chief Executive Officer<sup>48</sup> Managing Director General Manager</p>	<p>Chief Executive Officer Managing Director General Manager</p>	<p>Chief Ex Managin General M</p>
7	<p><b>Masters Degree</b> 8 modules or equivalent research units as per the accredited Masters curriculum plus On-the-Job Training/Study modules as required by the relevant statutory body and the appropriate Unit Standard.</p> <p>NB: Full or Partial Equivalents of these qualifications may be determined using the Recognition of Prior Learning procedure.</p>	<p>Senior Administration Manager Town Clerk</p>	<p>Specialist Professional Manager Architect</p>	<p>Specialist Manager Mechanic Chief Eng Town En Civil Eng Chief Hy Chief Co Metallurg Chief Eng Geohydro Environm Control C Chief De Chief Sur</p>
6	<p><b>Bachelor Degree: Honours</b> 8 modules or equivalent research units as per the accredited Honours curriculum plus On-the-Job Training/Study Modules as required by the relevant statutory body and the appropriate Unit Standard.</p> <p>NB: Full or Partial Equivalents of these qualifications may be determined using the Recognition of Prior Learning procedure.</p>	<p>Senior Middle Manager</p>	<p>Independent Professional</p>	<p>Independ Technolo</p>

<sup>46</sup> Professional refers to those occupations whose controlling body has a professional constitution.

<sup>47</sup> This cadre includes professional science and technology persons.

<sup>48</sup> The full list of occupational classes in the career structure can only be finalized once the Unit Standards have been completed.



<p>5</p>	<p><b>5 Bachelor Degree</b> 24 or 32 modules as specified in the accredited degree curriculum plus On-the-Job Training/Study Modules as required by the relevant statutory body and the appropriate Unit Standard.</p> <p>NB: Full or Partial Equivalent of these qualifications may be determined using the Recognition of Prior Learning procedure.</p>	<p>Middle Manager: Administration Area Manager Chief Program Administrator Chief Control Officer Assistant Town Clerk</p>	<p>Supervised Professional</p>	<p>Supervisor Technician Technical Chief Hy Control E Assistant Assistant Survey O Assistant Deputy T</p>
<p>4</p>	<p><b>4a. Diploma</b> 28 modules including underpinning knowledge, practicals and On-the-Job requirements to meet Unit Standard and Requirements of relevant statutory body.</p> <p><b>4b. Master Artisan</b> Competencies as specified by the relevant statutory body and the appropriate Unit Standard. Optional: 4 Study Skills Modules</p> <p>NB: Full or Partial Equivalent of these qualifications may be determined using the Recognition of Prior Learning procedure.</p>	<p>Supervisor: Administration Superintendent Control Works Inspector Accountant Regional Councillor Senior Administration Officer</p> <p>Supervisor: Artisan Works Inspector Building Inspector</p>	<p>Professional Technician Chief Health Inspector Development Planner</p>	<p>Research Hydrolog Technicia Chief Tec Chemical Water Te Operator Chief Eng Superinte Sewerage Superinte Engineeri</p>
<p>3</p>	<p><b>Certificate: Level 3</b> 24 modules in accordance with Unit Standard for the occupational class including underpinning knowledge, practicals and On-the-Job requirements. Optional: 4 Study Skills Modules</p> <p>NB: Full or Partial Equivalent of these qualifications may be determined using the Recognition of Prior Learning procedure.</p>	<p>Chief Clerk: Administration</p>	<p>Chief Accountant (Public Service)</p>	<p>Artisan F Artisan Welder Electricia Control D Drilling F Chief Tec Mechanic Assistant Fitter Sewerage Foreman Foreman Foreman Foreman Foreman Maintena Plumber Painter Carpenter Bricklaye</p>

<sup>49</sup> Difference in rank may be recognized by different Conditions of Service rather than changing the NQA Level of the occupational class.

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2	<p><b>Certificate: Level 2<sup>50</sup></b>              8 modules: Work Related Fields of Study              Optional: 4 Study Skills Modules</p> <p>NB: Full or Partial Equivalents of these qualifications may be determined using the Recognition of Prior Learning Procedure.</p>	<p>Senior Clerk              Clerk              Water Point Committee Members              Accountant              Clerical Assistant              Assistant Accountant              Cashier              Security Officer              Watchman              Stores Officer              Typist              Assistant Typist              Secretary              Receptionist              Storeman              Assistant Storeman</p>	<p>Water Point Committee Treasurer              Environmental Health Assistant</p>	<p>Handyman              Leader              Water Point              Technician              Senior Worker              Operator              Handyman              Senior Worker              Water Worker              Water Worker              Operator              Operator              Leading              Handyman              Mechanic              Tarman              Driver              Shiftman              Messenger</p>
1	<p><b>Certificate: Level 1</b>              4 modules: Work Related.              4 modules: Literacy, Numeracy.              Optional: 4 Study Skills Modules</p> <p>NB: Full or Partial Equivalents of these qualifications may be determined using the Recognition of Prior Learning procedure.</p>			<p>Workman              Labourer              Cleaner              Factotum              General              Ganger</p>

<sup>50</sup> Certificate: Level 1 and Certificate: Level 2 and the modules listed under them are proposals only and do not exist at this point in time. All modules once written would have to be accredited by the NQA.