

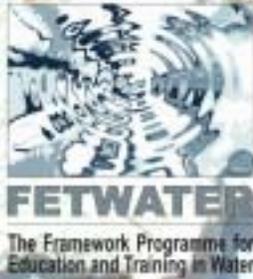
FETWATER

The Framework Programme
for Research Education and Training
in Water (FETWater)

FINAL PROGRESS REPORT
PHASE I 2002-2005

An initiative of:
Department of Water Affairs and Forestry
and
the Water Research Commission
In collaboration with
UNESCO
and
the Government of Flanders

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Glossary of Terms

WRC	Water Research Commission
DWAF	Department of water Affairs and Forestry
RDM	Resource Directed Measures
GRDM	Groundwater Resource Directed Measures
WEM	Water Environment Management
UNESCO	United Nations Education, Science and Culture Organisation
IWRM	Integrated Water Resource Management
WaterNet	WaterNet is Capacity Building Network in SADC
WARFSA	
SADC	Southern African Developing Communities

1. BACKGROUND

The Framework Programme for Research, Education and Training in Water (FETWater) is a programme for effective cooperation in research, education, training and capacity building initiatives to achieve integrated water resource management in South Africa.

FETWater is a programme that supports training and capacity building networks created to build capacity in integrated water resource management in the water sector. FETWater provides institutional support and financing in the form of seed funding to encourage the creation of training networks as a method for effective co-operation between universities, research institutions, and the public and private sectors in South Africa.

In 1996 the Department of Water Affairs and Forestry requested support from the United Nations Educational Scientific and Cultural Organisation (UNESCO) and the World Meteorological Organisation (WMO) to assess education and training needs in the water sector in South Africa. The assessment was conducted in 1998 at national, provincial and community levels.

The conclusions of the assessment stipulated that the Department of Water Affairs and Forestry should embark on a process of establishing a framework programme for effective cooperation for the provision of education, training and capacity building needs in the water sector in South Africa.

An agreement (Annexure A) was signed between UNESCO and the Department of Water Affairs and Forestry in March 2002 to start with the implementation of the proposed Framework Programme. The agreement included a work plan and financial contributions from the three main programme partners, namely the Flemish Government, UNESCO and the South African Government (Department of Water Affairs and Forestry).

2. ORGANISATIONAL STRUCTURES

Since the 1998 education and training needs assessment, various initiatives towards the establishment of FETWater took place. These included:

- Consultative meetings with South African academics, research institutions, private sector and senior officials in the Department of Water Affairs and Forestry took place in 2002 to discuss networks as capacity building tools and to develop a plan for implementation in South Africa.
- A workshop took place in July 2002 focussing on the development of a training and capacity building model for South Africa.
- In September 2002 the terms of reference for the framework programme were discussed with universities and technikons in South Africa who adopted the first programme, namely Water Environment Management. The meeting also agreed on the priority areas for FETWater.

2.1 In February 2002, the Department of Water Affairs and Forestry appointed Annette Wentzel (neè Hugo) as the Executive Coordinator for FETWater.

2.2 An Interim Management Committee was created in June 2002 to assist with the establishment of a broad framework programme, within the specific context of the South African circumstances. The members of the Interim Management Committee consisted of representatives from the Department of Water Affairs and Forestry, the Water Research Commission, the Council for Scientific and Industrial Research and consultants from the private sector.

The Interim Management Committee identified training and capacity needs in the water sector. They determined priorities and developed a programme in accordance with the priority areas. They agreed to support training and capacity building networks in the identified priority area.

The first focus areas and programme was the Water Environment Management (WEM) Programme with the emphasis on the environmental management of the water resource.

2.3 During 2003 the Interim Management Committee developed and finalised the Guideline document (Annexure B) for the establishment of the FETWater structures. The Guideline document included the rules for application to start a network details on the support to training networks. The Interim Management Committee held 4 formal work sessions in 2003. Discussions took place with the Manager of WaterNet, Mr Lewis Jonker to strengthening the relationship between FETWater and WaterNet. Discussions also took place with Prof Savenije from IHE UNESCO Delft that lead to a proposal formulation regarding IWRM training for managers in South Africa.

Three representatives, Dr Steve Mitchell, Mr Harrison Pienaar and Ms Annette Wentzel, from the Interim Management Committee attended the UNESCO Water Family meeting in Delft from 15 to 18 July 2003 in support of developing a strategy for the Decade of Education for Sustainable Development 2005 to 2015.

2.4 The permanent FETWater Executive Committee replaced the Interim Management Committee after the Annual meeting held in January 2004. The Executive Committee consists of three senior managers representing the Department of Water Affairs and two senior managers representing Forestry and the Water Research Commission. The Executive Committee serves as the implementation management body of FETWater.

Four meetings of the Executive Committee were held in 2004 and three meetings in 2005 in which various requests from existing networks were discussed and decisions made. In each meeting the progress of all existing networks was reviewed against reports and other deliverables such as training manuals. The Department of Water Affairs and Forestry and the Water Research Commission had financially contributed to the implementation of the FETWater agreement.

The Executive Committee oversees that the objectives of FETWater are being achieved, namely:

- to develop effective co-operative approaches to building human resource capacity related to integrated water resources management;
- to assist the transformation process in the water sector by building the capacity of previously disadvantaged groups and individuals;
- to provide and facilitate capacity building, training and education opportunities in the water sector;
- to financially support networks that reflect the general principles and priorities identified within FETWater;
- to strengthen national, sub-regional and international co-operation of academic and research institutions;
- to contribute to unity, understanding and mutual respect within the sub-region;
- to support and complement existing national and sub-regional initiatives, programmes and activities in line with the identified needs;
- to support innovative initiatives to address identified capacity building and training needs in the water sector.

FETWater capitalises on existing education, training and capacity building activities in the water sector, but also strives to bring about new activities that are characterised by:

- being priority and demand driven;
- integrated approaches to improve interdisciplinary practice;
- bringing together the service providers and the recipients of the intended knowledge transfer as well as the service providing institutions;
- strengthening the research and service capabilities of the knowledge generating and disseminating partners in different networks.

Recipients of FETWater's education, training and capacity building outputs are institutions such as the Department of Water Affairs and Forestry, the Water Research Commission, catchment management agencies, Water Boards, other government departments, professionals, higher education students and other water management institutions. Education, training and capacity building service providers include universities, research institutions, organisations in the public and private sector.

3. ANNUAL MEETINGS

3.1 The first FETWater Annual meeting took place on 21 and 22 January 2003 in Stellenbosch. Representatives from a wide range of stakeholders and potential partners including the Department of Water Affairs and Forestry, the Water Research Commission, Universities and Technicons, Professional Service Providers, CapNet, WaterNet, UNESCO and the Flemish Government attended the meeting. A total of 31 people attended the Annual meeting. Three academics from Belgium also attended the meeting, namely Prof Jos Odeurs (Physics), Prof Jean Berlamont (Hydraulics) and Prof Luc Brendonck (Research). The meeting agreed to the proposal of the establishment of the RDM Training Network. The proceedings of the meeting are presented in Annexure C.

3.2 The second FETWater Annual meeting took place from 26 to 29 January 2004 in Lamberts Bay. A total of 38 participants attended the meeting, including representatives from WaterNet, UNESCO, Flemish Government, and an academic from Leuven University, Belgium. FETWater reported to its stakeholders on progress with implementation of the FETWater programme and its established RDM Training Network and Groundwater RDM Training Network, which subsequently evolved into the Groundwater Training Network. A proposal for a third network on Beneficial Use of Water was received. The Annual meeting concluded with fieldtrips presented by the two networks on specific RDM and Groundwater related challenges that the water sector is confronted with in the Western Cape region. Both trips were very well prepared and proved to be most valuable as far as understanding of the problems are concerned. The trips were an ideal occasion to strengthen the contacts between the FETWater framework partners. The proceedings of the meeting are presented in Annexure D.

3.3 The third Annual meeting was held in St Lucia, KwaZulu Natal from 24 to 28 January 2005, with 42 participants attending from various academic and research institutions as well as the WRC and Department of Water Affairs and Forestry. Two representatives from UNESCO, two representatives from the Flanders Government and two academics from Belgium attended the meeting. Ms Barbara Schreiner Senior Executive Manager: Policy and Regulations of the Department of Water Affairs and Forestry opened the meeting officially and attended the first day. Dr Rudy Herman, Senior Researcher of the Science and Innovation Administration of the Flemish Government and Dr Emmanuel Naah, Hydrologist from UNESCO regional office in Nairobi, Kenya also participated in the full meeting. One of the meeting's outputs was the formulation of the first draft of the FETWater Phase II (2005-2010) proposal. The fieldtrips were presented by the Network partners on aspects of the groundwater/surface water interaction and other socio-economic water related issues in the KwaZulu Natal region. The fieldtrip to the Eastern shores of Lake St Lucia showed the main water resource features of the lake and the dominating hydrological processes that play an important role in sustaining the ecological resilience of the system. The fieldtrip to the Africa Centre showed aspects of poverty, health, HIV/AIDS and water

supply schemes in rural communities. The fieldtrip to the Mhlathuze estuary and catchment showed the main water resources and their relation to the industrial activities and the fieldtrip to the Science Centre in Richards Bay showed different initiatives to bring young scholars in contact with different aspects of science. The proceedings of the meeting are presented in Annexure E.

4. NETWORKS

Each network is coordinated by a Network Coordinator, drawn from one of the members of the Network. The Executive Committee approved the appointment of the Network Coordinators.

The Network Co-ordinators were responsible for:

- the management , co-ordination and monitoring of the network activities;
- liaising with the Executive Coordinator;
- the co-ordination of network partners;
- the assessment of achieved outcomes of the network ;
- reporting on progress to the Executive Committee;
- dissemination of the outcome of the network and best practices in network management;
- financial management of the network funds.

The networks are formed within identified programmes of FETWater. Networks are the backbone for all other activities within FETWater. No other activities are eligible for co-funding if they are not proposed by a recognised network.

The philosophy behind networking remains:

- the sharing of resources, both human and financial;
- improving the level of common knowledge and skills;
- contributing to professional consensus; and
- sharing experiences.

FETWater Phase I has proved that co-operation through networking has been an effective tool to bring people with a common purpose together. It also showed that individual members of the networks added value to the network. Network partners also knew that their contributions will be visible and will be disseminated and rewarded.

4.1 RDM Training Network (Surface Water)

The Resource Directed Measures (RDM) Training Network was established in January 2003 at the occasion of the first annual meeting of FETWater. Mr Dana Grobler (Professional Service Provider) was requested by FETWater to act as the network coordinator. Ms Thokozani Mbhele (DWAF) acted as the assistant network coordinator.

The purpose of the RDM Training Network is to identify and assess capacity requirements related to water resource protection with a specific focus on the environmental water requirement component.

4.1.1 Partners

The RDM Training Network is composed of the following partners:

- Prof Bruce Kelbe, University of Zululand (Zululand – KwaZulu Natal);
- Prof Jay O’Keeffe and Dr Heather Davies-Coleman, University of Rhodes (Grahamstown);
- Prof Janine Adams, Nelson Mandela Metropolitan University (Port Elizabeth);
- Prof Jenny Day, University of Cape Town;
- Dr Cate Brown, Southern Waters Ecological Research and Consulting;
- Ms Laura Forster, Tidasa and
- Ms Delana Louw, Institute for Water Research (Source to Sea).

4.1.2 Capacity Audit

FETWater undertook a national audit of capacity for determination of Resource Directed Measures (RDM) for protection of water resource in South Africa in December 2002. All the universities and technikons in South Africa were approached to participate in the audit. The main outcome of the capacity audit indicated the need for capacity to integrate technical information collected by various disciplines during a RDM study. The National Audit of Capacity is presented as Annexure F.

The RDM network was constituted to address this need for capacity to implement water resources protection measures, including the need for capacity to implement Resource Directed Measures (RDM) prescribed by Chapter three of the National Water Act (Act 36 of 1998). The audit provided guidance in terms of the focus areas for the RDM network activities.

4.1.3 Work sessions and planning

The main aim of the work sessions was to develop course material for the training of RDM practitioners.

- The first work session took place in February 2003 in Pretoria where the network partners initiated the process to develop a strategy and work plan.
- The second work session took place in Cape Town in May 2003 to accommodate the southern partners.

- In October 2003 a work session took place with the University of Zululand and University of Rhodes to discuss the development and need for a masters programme in Environmental Water Requirements.
- This was followed by a work session in Port Elizabeth in December 2003.
- A planning work session took place in Cape Town on 30 January 2004.
- A work session was held on 9 and 10 March 2004 to finalise the MSc programme material and module outlines for submission to the universities and the Department of National Education for approval.

4.1.4 Training

The RDM Training Network undertook and supported the development of course material and the presentation of training courses.

The following short courses and experiential training were presented:

Date	Name of course	Number of attendance	Venue of presentation
19 – 20 Jan 2004	RDM Introductory module training	14 DWAF staff	Pretoria Gauteng Province
21 - 22 Jan 2004	RDM Introductory module training	20 DWAF staff	Pretoria Gauteng Province
23 – 24 Feb 2004	RDM Introductory module training	22 regional staff	Cape Town Western Cape Province
8 - 9 March 2004	RDM Introductory module training	25 regional staff	Port Elizabeth Eastern Cape Province
17 - 18 March 2004	RDM Introductory module training	11 regional staff	Upington Northern Cape Province
3 – 4 May 2004	RDM Introductory module training	21 professionals	Polokwane Limpopo Province
5 – 6 May 2004	RDM Introductory module training	17 DWAF staff	Polokwane Limpopo Province
27 - 28 May 2004	RDM Introductory module training	26 Professionals	Nelspruit Mpumalanga Province

Date	Name of course	Number of attendance	Venue of presentation
16 - 17 Augustus 2004	RDM Introductory module training	20 Professionals	Bloemfontein Free State Province
26 - 27 Oct 2005	RDM Introductory module training	15 DWAF staff	North West Province
14 - 15 Nov 2005	RDM Introductory module training	15 DWAF staff	Pretoria Gauteng Province
20 - 23 Sept 2004	Advanced RDM training	18 professionals	Western Cape Province
4 – 6 Oct 2004	Advanced RDM Training	28 professionals	Mpumalanga Province
10 – 11 Oct 2005	RDM Introductory module training	10 DWAF professionals	National DWAF office
26 – 27 Oct 2005	RDM Introductory module training	12 DWAF professionals	North West Province
01 Nov 2005	RDM Introductory module training	12 DWAF professionals	Gauteng Province
14 – 15 Nov 2005	RDM Introductory module training	28 DWAF and other professionals	National DWAF office
13 – 26 Nov 2005	Orange/Senqu experiential training course	7 mid career professionals South Africa, Namibia and Lesotho	South Africa and Lesotho
Total: 18 training courses		321	8 provinces

4.1.5 Master programme in Environmental Water Requirements - Curriculum development

Curriculum development for a Masters programme in Environmental Water Requirements was initiated and a comprehensive outline was completed and prepared for acceptance by four participating tertiary institutions. See Annexure G. The DWAF is now funding the detailed development of each of the modules and the phased implementation of the master's programme. The four participating universities are:

- University of Zululand (Zululand – KwaZulu Natal);
- University of Rhodes (Grahamstown);
- Nelson Mandela Metropolitan University (Port Elizabeth);
- University of Cape Town.

4.1.6 RDM Symposium

A symposium was held in October 2004, which was attended by 70 people from various stakeholder groups from all over South Africa. This was also an opportunity for other related projects to present their project progress and findings that support the goals of the current FETWater networks. See Annexure H.

4.1.7 Orange/Senqu River Experiential Training

A joint initiative between the RDM network and the Desert Research Foundation of Namibia, lead to an experiential training session which took place from 13 to 26 November 2005. The aim of the activity was to establish a collaborative training opportunity between South Africa, Namibia and Lesotho, utilizing the Orange River as a case study for the implementation of environmental water requirements for resource protection measures. The training course provided a good case study to present similar training courses, utilising other shared water resources in the Southern African Development Community (SADC), e.g. Limpopo and Nkomati River systems. See report presented as Annexure I.

4.1.8 WaterNet/ WARFSA Conference

Mr Dana Grobler, presented a poster at the WaterNet/WARFSA Conference in December 2004 in Namibia on the RDM Training Network and its activities within the FETWater framework. See poster presented as Annexure J.

4.2 Groundwater Training Network

The Groundwater Network was established in July 2003. The Executive Committee approved Mr Roger Parsons, (Professional Service Provider), as the network coordinator. Mr Lloyd Flanagan (Parsons and Associates) acted as the assistant network coordinator. Mr Parsons resigned as network coordinator at the end of March 2005 and Mr Johan Wentzel, Department of Water Affairs and Forestry took over the responsibility as network coordinator.

The purpose of the network is to ensure training in Groundwater related programmes.

With the establishment of the Groundwater network no user-friendly groundwater training manual and software existed that could be utilized by practitioners. The development of groundwater

training material was also not addressed by the RDM Training Network. The first focus of the network was therefore the development of a groundwater RDM (GRDM) training manual aimed at higher education training. The second phase of the network was then to address groundwater training needs in South Africa in general.

4.2.1 Partners:

The Groundwater Network is composed of the following partners:

- Dr Shafik Adams, University of Western Cape
- Dr Kevin Pietersen, Water Research Commission
- Prof Akpofure Taigbenu, University of Wits
- Mr Danie Vermeulen, University of the Free State
- Mr Brian Rawlins, University of Zululand
- Mr John Odiyo, University of Venda
- Dr Kai Withüser, University of Pretoria

4.2.2 Work sessions

The first work session of the network took place on 31 August 2003 to get buy in from the potential network partners and their strategic inputs regarding the content and format of the groundwater RDM Training manual and accompanying software.

A work session took place from 24 to 26 February 2004 to complete the training manual and software.

After the first round of training sessions another network meeting took place to give feedback to the network partners on the outcome of the training sessions. Based on the experience gained during training (feedback from participants), it was decided to enhance the software capabilities and to update the manual.

The index of the Groundwater Training Manual is presented as Annexure K.

4.2.3 Training:

The first version of the manual and software was finalised in July 2004. The manual were used for the following training sessions:

Date	Name of course	Number of attendance	Venue of presentation
21- 22 Sept 2004	The role of groundwater in the determination of Resource Directed Measures	21 professionals/ DWAF staff	Cape Town Western Cape Province
6- 7 Oct 2004	The role of groundwater in the determination of Resource Directed Measures	13 professionals/ DWAF staff	Port Elizabeth Eastern Cape Province
19- 20 Oct 2004	The role of groundwater in the determination of Resource Directed Measures	18 professionals/ DWAF staff	Pretoria Gauteng Province
8- 9 Nov 2004	The role of groundwater in the determination of Resource Directed Measures	12 professionals/ DWAF staff	Bloemfontein Free State Province
11- 12 Nov 2004	The role of groundwater in the determination of Resource Directed Measures	8 professionals/ DWAF staff	Durban KwaZulu/Natal Province
TOTAL: 5 Courses		72 professionals/ DWAF staff	5 provinces

Approximately half of the participants were from the private sector and the remainder from DWAF.

After the five training sessions the professional trainers then evaluated the manual based on their experiences and feedback from the trainees and decided to amend the manual. The software that accompanied the manual was expanded to include more tools for the practitioners and to include the latest groundwater data sets that has since become

available from the GRAIL project. The final version of the software is currently being evaluated and should be ready for a second round of training starting in February 2006

4.2.4 Student tours

In December 2004 the Network organised a student tour in the Western Cape Province. Twelve students, from 6 universities, attended the student tour. These students remained involved in and assisted with follow up activities of the Network. The report is presented as Annexure K.

In December 2005 a second student tour was organised between University of Pretoria and University of Venda with nine students attending the tour. The purpose of this student tour was to get better cooperation and to exchange groundwater related knowledge between the two universities. The report is presented as Annexure M.

At the end of the tours the students could identify and solve problems by using critical and creative thinking as well as understand the environment as an integrated system by recognising that problem-solving contexts do not exist in isolation.

4.2.5 Equipment

In the Groundwater Training Network identified the need to develop a groundwater test site for the use of the University of Venda and the University of Pretoria. Such a groundwater test sites would enable their students to gain practical experience in geohydrology. The Pienaars River was identified as a potential joint site that could be developed as part of the network activities. In this joint venture it was obvious that the students of the University of Venda did not have the necessary access to groundwater-related equipment and computers. The Groundwater Network identified a need to make groundwater equipment available to previously disadvantaged universities to promote the study and understanding of groundwater. The following equipment has been bought and will be made available to the Network partners, once the contractual requirements are met.

Product	Quantity
Lattitude D510 laptop	1
Optiplex 170L Desktop	2
Laserprinter	1
Solinst Dip Meter (100 meters)	1
Solinst Dip Meter (150 meters)	1

WTW Multi meter	1
GPS V	1

4.3 Beneficial Use of Water Network

The network was established in 2004 after a proposal was made at the annual meeting in January 2004. The Executive Committee approved Ms Retha Stassen, a Professional Service Provider, as the network coordinator. Ms Erika Espach is the assistant network coordinator.

The purpose of the network is to link water resource managers, academics and major stakeholders through open forums in order to develop a common approach to education and training in the concept and principles underlying the most beneficial or optimal use of water resources and their integration into water allocation policy and practice.

4.3.1 Partners:

The Beneficial Use Network is composed of the following partners:

- Mr Anton Earle, Centre for International Political Studies, University of Pretoria
- Dr Stefano Farolfi, Centre for Environmental Economics and Policy in Africa, University of Pretoria
- Mr Brian Rawlins, University of Zululand
- STATS SA
- DWAF:
 - Ms Nxolo Ncapayi, Directorate Water Allocation,
 - Ms Nanga Breakfast, Directorate Water Use Efficiency
 - Mr Niel van Wyk, Directorate Integrated Water Resource Planning.

4.3.2 Work sessions:

An initial work session took place in September 2004 to get consensus on what the network wants to achieve and who should be consulted. Representatives from DWAF, WRC, University of Zululand and Professional Service Providers attended the meeting.

A follow-up work session took place in December 2004 with a broader audience to discuss the concepts and definitions of beneficial use of water. A plan of action was

discussed for implementation in 2005. Representatives from University of Zululand, Centre for International Political Science, the Directorate RDM, the Directorate Water Allocation, the Directorate Integrated Water Resource Planning and Directorate Water Use Efficiency attended this work session.

Due to limited funding the next work session was only held on 14 October 2005. A final decision was taken on the proposed capacity audit to provide an understanding of the expertise and courses available for beneficial use.

4.3.3 Capacity Audit:

The capacity audit was conducted during November and December 2005. The main recommendations for short-term capacity and training needs were highlighted as:

- The understanding of the policy framework and the requirements of the National Water Act in relation to the implementation of the beneficial use concept;
- The shortage of process related skills, including negotiation, conflict management, dispute resolution skills; stakeholder involvement and public speaking skills.

5. MOBILITY

5.1 The first mobility that was undertaken under the auspices of FETWater, was the training of the Executive Coordinator, Ms Annette Wentzel, which took place from end of April to beginning of June 2002 for seven weeks. She received training in Belgium, France, The Netherlands, Poland and Russia in the use of networks as a method of knowledge transfer in training and capacity building. The training was based on European experiences and lessons learned with the establishment and successful operation of networks. The report is presented as Annexure N.

5.2 In 2003 three academics from Belgium visited South Africa, namely Prof Luc Brendonck, Prof Jos Odeurs and Prof Jean Berlamont to attend and participate in the first annual meeting.

5.3 In 2004 two network coordinators and one assistant network coordinator attended training in networking principles in Europe from 24 May to 4 June 2004. They were the network coordinators for the RDM and Groundwater networks as well as the assistant network coordinator for the Groundwater Network. The report is presented as Annexure O.

5.4 One representative from the Flemish Government as well as a representative from UNESCO were able to attend the second annual FETWater meeting in 2004. One academic from the University of Leuven, Belgium also attended the meeting. They actively participated in all the discussions including the development of a proposal for continuation of support by the Flemish

government for FETWater Phase II. A decision was also taken in this year to move the financial management of the Flemish Trust Fund to the UNESCO Windhoek Cluster Office.

5.5 In January 2005, two Flemish Government representatives Dr Rudy Herman and Prof Ronny Verhoeven, two representatives from UNESCO Dr Emmanuel Naah and Dr Alex Makarigakis as well as two academics from Belgium Prof Patrick Meire and Prof Luc Brendonck were able to attend the third annual FETWater meeting. Their inputs were invaluable for the finalisation of the proposed continuation of financial support to FETWater Phase II for the period 2006 to 2010 from the Flanders Government and UNESCO. This proposal is presented as Annexure P.

5.6 Mr Siyabonga Buthelezi (Cape Nature Conservation) and Mr Greg Shaw (Nelson Mandela Metropolitan University) attended the 5th River 21 Training Programme on IWRM held in Belgium, France and The Netherlands from 13 to 25 March 2005. The report is presented as Annexure P.

5.7 Dr Wynand Vlok visited Belgium and Poland from 22 May to 5 June 2005. He visited several wetland sites in both countries and received training in the European experience of networking. Dr Vlok is working on a joint project between the Limpopo Province Department of Health, the Kruger National Park, the University of Limpopo, the University of Ghent, the University of Antwerpen and the Flemish Government as the funding agency. One of the important aspects of the initiative is the exchange of staff and students between South Africa and Belgium. The full report is presented as Annexure R.

6. BUDGET (2002-2005)

The total budget agreed was as follows:

Flemish Trust Fund: US\$207 900

UNESCO: US\$ 44 800

DWAF: US\$274 500

Total programme costs: US\$527 200

In 2002 DWAF contributed \$42 400 instead of the agreed \$23 500.

In 2003 DWAF contributed US\$85 000 instead of the agreed \$63 500.

In 2004 DWAF contributed US\$221 600 instead of the agreed \$93 000.

In 2005 DWAF contributed \$31 000 instead of the agreed \$94 500.

DWAF also paid 20% of the salary of the Executive Coordinator until January 2005.

The Flemish Trust Fund provided the budget for the mobility of South African network coordinators to Europe as well as the mobility of Flemish Government representatives, UNESCO representatives and Belgian academics to South Africa during the implementation of the programme. After approval from the Flemish government, funding from the Flemish Trust Fund was utilized in 2005 for various activities such as professional fees, equipment and student tour related expenses, etc.

7. CHALLENGES

The high value which was put on the FETWater framework by the South African government and the Water Research Commission was shown by the substantial increase of the financial support during the first three years of the programme.

Bearing in mind the huge efforts made to get the FETWater framework on track, to make it successful and the enormous tasks awaiting for the water managers in South Africa, a firm commitment is required from the South African government to supply the necessary infrastructure to enable the implementation of FETWater Phase II before Phase II can commence.

8. CONCLUSIONS

Seven South Africans received training in Europe to strengthen international co-operation and to develop effective co-operative approaches to building human resource capacity related to integrated water resources management and to learn from the European experiences in training and capacity building through the use of networks.

In the reporting period, three networks that reflect the general principles and priorities of FETWater were identified, established and received financial support.

Two capacity audits were conducted to support and complement existing national initiatives, programmes and activities.

An innovative Groundwater manual and accompanying software was developed to address identified capacity building and training needs in the sector.

In our efforts to provide and facilitate capacity building, training and education opportunities in the water sector a total of 391 professionals and DWAF staff, including two scientists from Namibia, along with 23 students were trained throughout the nine provinces in South Africa. The latter training contributed to the transformation process in the water sector by building the capacity of previously disadvantaged groups and individuals.

Effective cooperation has been achieved through active participation of partners from 10 Universities, various Professional Service Providers, the Water Research Commission as well as the Department of Water Affairs.

In conclusion it can be said that the Framework for Research, Education and Training Programme Phase I gained momentum and established a platform for supporting and initiating networks in the South African water sector. The FETWater Phase I programme stimulated interest within universities, institutes and other beneficiaries that contributed to the FETWater framework and to the implementation of the ideas represented in the National Water Act of South Africa.