



Building Capacity for Water Resources Management in Southern Africa

6th Progress Report Phase II: 2005-2009

January – June 2008



A strategic programme of the
SADC Water Sector

October 2008



Building Capacity for Water Resources Management in Southern Africa

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Phase II: 2005-2009

1 January 2008 - 30 June 2008

Table of Contents

1	Executive summary	1
2	Introduction	4
3	Programme targets.....	6
4	Achievements	10
5	Deviation from planned activities	45
6	Annexes	46

ANNEXES

Annex 1: WaterNet Unesco-ihe Memorandum of Understanding	47
Annex 2: Responses On The Dissolution Resolution Of The WaterNet Trust Registered In Zimbabwe	52
Annex 3: IWRM Students Dissertation Titles For The 2007-2008 Intake.....	54
Annex 4: Advertisement For The 2009-2010 Masters Programme	56
Annex 5: Participants Of The IWRM Masters Workshop	62
Annex 6: Participants And Brochure For The Water Resources Assessment Course.....	67
Annex 7: Participants Of The Workshop On Reviewing And Editing Manuscripts For Journals	71
Annex 8: WaterNet, Cap-Net, SIWI Water Integrity And Accountability Mapping Study In Southern Africa.....	79
Annex 9: Challenge Program PN17 No Cost Extension Letter.....	82
Annex 10: Challenge Program PN17 Research Outputs	83
Annex 11: SADC Multi-Stakeholder Water Dialogue	97
Annex 12: Organisers, Sponsors and Participant of the 3 rd SADC-EU Symposium On Meeting The Challenges Of Climate Change	98
Annex 13: Participants Of The Climate Change And IWRM Workshop In Geneva	101
Annex 14: WaterNet News Volume 4 Issue 1.....	102
Annex 15: 9 th WaterNet/WARFSA/GWP-SA Symposium Announcement And Call For Abstracts .	105

Highlights

3rd WaterNet Management Board Meeting

The meeting was held on 24-25 April 2008 in Gaborone, Botswana. The meeting discussed a range of issues focused mainly on the long-term sustainability of the network including fund-raising options though the introduction of membership fees.

Memorandum of Understanding between WaterNet and UNESCO-IHE

The MoU between the WaterNet Trust and UNESCO-IHE Institute for Water Education was signed during the reporting period. The MoU clearly defines the relationship between the WaterNet Trust and UNESCO-IHE and spells out areas of collaboration, expected joint activities whilst at the same time underscoring the sound historical relationship between WaterNet and UNESCO-IHE.

Relocation of WaterNet Secretariat

During the reporting period socio-political situation in Zimbabwe necessitated consideration of the hosting options available for the WaterNet Secretariat and the 3rd Management Board meeting. Such reconsideration should be carried out from time to time in order to ensure that the Secretariat is best situated to effectively and efficiently fulfil the objectives of the network and serve the needs of members. The like host will be University of Botswana in Gaborone.

Professional Financial Management

Following the appointment of KPMG as the preferred accounting firm to provide fund management services for the WaterNet Trust the WaterNet Secretariat presented two draft documents at the 3rd Management Board meeting enabling the achievement of professional financial management *viz.* Financial Management Procedures Manual and the Procurement Procedures Manual.

The WaterNet Trust opened three bank accounts (Euro, USD and Pula) during the reporting period with Stanbic Bank Botswana Limited, Fairgrounds Branch, Gaborone, in the name of WaterNet.

WaterNet SADC Subsidiary Institution Status

The law firm Molatlhegi and Associates were requested during the reporting period to drafted a Memorandum of Understanding (MoU) with SADC and a letter of application for SADC subsidiarity status addressed to the Executive Secretary of SADC. The documents will be finalised at the 4th Management Board Meeting scheduled for 27-28 October 2008 in Johannesburg, South Africa.

Masters Programme 2007 Intake

Of the forty four (44) students were enrolled for the IWRM 2007-2008 programme in February 2007 sixteen forty two (42) proceeded to do their dissertation work during the reporting period.

Masters Programme 2008 Intake

The programme for the 2008-2009 intake started on 11 February 2008. A total of thirty nine (39) students were enrolled, twenty four (24) registered at UDSM and fifteen (15) at UZ with WaterNet funding twenty nine (29) of the candidates and ten (10) being funded from elsewhere. A total of fifteen (15) of the registered students are female (38%).

Masters Programme 2009 Intake

The advert for the 2009-2010 intake was released as planned. The deadline for the submission of applications was set for 31 July 2008.

Review of the Masters Programme

Prof Graham Jewitt submitted a progress report during the reporting period which was presented at the 3rd Management Board meeting. The final report needs to be considered by the Board and the recommendations will require urgent attention by the various stakeholders, most importantly the Coordinators of the Masters programme, Professorial Chairs and the Board.

Workshop on Review of Global IWRM Masters Programmes

WaterNet participated in a workshop to review experiences with IWRM Masters Courses, held in South Africa 17-19 June 2008. The WaterNet Research Leader, Prof Jewitt and Mr Lewis Jonker (University of Western Cape) also participated and made presentations at the workshop. The workshop was attended by Cap-Net affiliated networks. The purpose of the workshop was to: Examine the demand for Masters level education in IWRM; Explore the approach and curriculum issues of what constitutes IWRM and whether this equips graduates with the skills/knowledge for practical implementation; Benefit from sharing experience on practical aspects of course management

Water Resources and Environmental Management Programme in Rwanda

The WaterNet Manager was invited to participate in the teaching and to be the external examiner of the Masters Degree Programme in Water Resources and Environmental Management (WREM) on 9-15 January 2008 at the National University of Rwanda (NUR) in Butare. This was worthwhile mission at an opportune moment since the Faculty of Applied Sciences at the University had been accepted as an Associate member of WaterNet during the 8th AGM in Lusaka. Besides teaching and being external examiner for the final year dissertations meetings were held with the Vice Rector, the Dean of the Faculty and a new group of WREM students.

WaterNet and Partners Present Regional Short Courses and Workshops

During the reporting period WaterNet and various partners organised, facilitated and participated in the following courses attended by over 100 participants from all over sub-Saharan Africa and beyond: Water Resources Assessment: Prediction in Ungauged and Data Scarce Basins, 21-25 January 2008, Dar es Salaam, Tanzania; Reviewing and Editing Manuscripts for Journals Workshop, 16-18 January 2008, Harare, Zimbabwe; Training Course on River Basin Organisation, 14-18 April 2008, Pretoria, South Africa; Groundwater Capacity Building Initiative (GWCB) in Africa Workshop, 21-22 July 2008, Pretoria, South Africa.

WaterNet Phase IIb (2008 to 2011)

It is expected that the revised project document would be reviewed and approved by the Cooperating Partners during the early part of the second half of 2008 and that a decision on funding would be made in time for the start of the project in July or August 2008. Meanwhile DGIS approved a no cost extension of the WaterNet Phase IIa Project to 30 June 2008.

Deviation from Planned Expenditure

During the reporting period WaterNet was granted its request to DGIS for a no objection to deviation in budget planning for the period 1 January to 30 June 2008 whereby all expenditures incurred will be supported through the DGIS subsidy to WaterNet.

Professorial Chairs

University of Dar es Salaam

Prof Mtalo effectively started his Professorial Chair duties as from 1 February 2008.

University of Zimbabwe

The candidate found suitable for the University of Zimbabwe (UZ) Chair was offered the position late last year but he turned down the offer during the reporting period.

Polytechnic of Namibia

The position and Polytechnic of Namibia was advertised with a closing date of 30 January 2008. Interviews for the position were held on 19 March 2008 and the position was offered to the best candidate but it was not clear at the end of the reporting period whether the candidate had accepted the offer.

University of Malawi

The advert for the position was released on 28 of June 2008 and the closing date of application was set on 25 July 2008.

University of the Western Cape

At the University of the Western Cape (UWC) was going to advertise the post in the second half of 2008.

WaterNet, Cap-Net, SIWI, Water Integrity and Accountability Mapping Study in Southern Africa

Last year SIWI, Cap-Net and WaterNet commissioned a study to map integrity and accountability in the water sector in SADC countries. The study was been undertaken during September through December 2007 and resulted in a consolidated assessment of practices and provisions in six Southern African countries. The study proposed recommendations regarding capacity to be built in water management institutions to be better prepared to ensure accountability and integrity in water management operations.

The Challenge Program on Water and Food

By the end of the period under review, 28 Masters students had completed their dissertations and graduated since the project started, including 7 female students, and 22 students from national agricultural or water management or research

institutes. Three students are currently engaged in fieldwork and one in coursework.

The project was invited to present project results to the Challenge Program on Water and Food Steering Committee (CPWF SC) in February 2008. The Research Coordinator made the presentation at the FAO offices in Rome, Italy; the only project presentation made.

Smallholder Systems Innovation in Watershed Management (SSI)

The SSI research team had their 5th annual scientific meeting in Same, Tanzania during the period 20-25 January 2008. The meeting discussed the researchers' progress; intensive fieldwork has led to a substantial data pool on on-farm water balances, ecosystem services, catchment scale hydrological processes and water allocation strategies. The outreach component also presented their progress in involving farmers in the research.

WaterNet PhD Programme

WaterNet intends to embark on the PhD programme involving 30 candidates drawn from the region and recruited over a space of four years i.e. 7 candidates each year from 2009 to 2012 with the last batch earmarked to complete their studies by 2017. WaterNet hopes to offer the fellowships as sandwich scholarships to the tune of a total of 3 Million Euro. Initial discussions with the Netherlands Organization for International Cooperation in Higher Education (Nuffic) indicate a possibility of funding the WaterNet PhD programme through a Multi-Year Agreement (MYA). Supplementary funding would be sought also from WARFSA.

9th WaterNet/WARFSA/GWP-SA Symposium

The 9th WaterNet/WARFSA/GWP-SA Symposium will be held in Johannesburg, South Africa from 28-31 October 2008. The venue of the symposium is Birchwood Hotel. The theme for this year's symposium is "*Water and Sustainable Development for Improved Livelihoods*".

The Symposium would be organised to include the biennial Symposium of the International Commission on Water Resources Systems (ICWRS) of the International Association on Hydrological Sciences (IAHS).

WaterNet News

During the reporting period one issue of the WaterNet newsletter (WaterNet News Volume 4 Issue 1) was produced and circulated.

Outreach

During the reporting period WaterNet participated in the following events: Knowledge on the Move: Research for Development in a Globalising World Conference (26-29 February 2008, The Hague); The SADC Multi-Stakeholder Water Dialogue (14-15 May, Maseru); 3rd SADC-EU International Scientific Symposium: "Towards Meeting the Challenges of Climate Change: Institutional Structures and Best Practices in Land and Water Management in Southern Africa (28-30 May 2008, Lusaka); Cap-Net Capacity Building for Climate Change Adaptation: Planning Meeting (17-19 March 2008, Geneva)

Dissolution of Trust Registered in Zimbabwe

After the last outstanding signature of Ms Lily Zondo one of the Trustees the dissolution resolution of the WaterNet Trust registered in Zimbabwe was sent to the Registrar of Deeds in Harare informing him of this eventuality. The Secretariat received responses from the Registrar of Deeds and the Law firm Coghlan Welsh and Guest which finally concluded the matter. The Trust was therefore deemed to have duly been dissolved.

Secretariat Staff

Mr David Love the Research Coordinator in the WaterNet Challenge Program for Water and Food research project PN17 (CPW&F PN17) relocated to the United Kingdom and The Netherlands as from 1 May 2008. Meanwhile the research project had a no-cost extension approved by the Managing Centre to 31 August 2009

Ms Joanna Fatch completed her 8 month Symposium Internship in March 2008. She has since enrolled in the WaterNet Masters programme in IWRM at the University of Zimbabwe core group.

1 EXECUTIVE SUMMARY

The summary of achievements and challenges encountered for the reporting period based on workplan and budget for year 2008 (as amended and approved at the 8th WaterNet Annual General Meeting, held in Lusaka, Zambia on 2 November 2007) are indicated in Table 1.1.

Table 1.1 Overview of achievements and challenges during the reporting period

Outputs	Activities	Progress (January-June 2008)
1. To forge a strong, demand driven and sustainable network	1.1 Establish WaterNet PCN23	On-going, progress satisfactory with four regional short courses and workshops being presented and attended by over 100 participants. Letter of application and Memorandum of Understanding for SADC subsidiary status were drafted and discussed at the 3 rd Management Board meeting.
	1.2 Promote member ownership	On-going, progress satisfactory. 3 members who have not been active for the last 3 years might lose their membership.
	1.3 Fully staffed WaterNet Secretariat	Achieved, Mr David Love the Research coordinator for the Challenge program on Water and Food relocated to the UK and the Netherlands. Ms Joanna Fatch completed her 8 Symposium internship.
	1.4 Professional financial management	On-going, progress satisfactory after the appointment of KPMG, Botswana as the Accounting firm to provide financial management backstopping services for WaterNet. Financial Management Procedures Manual and Procurement Procedures Manual of waternet discussed at the 3 rd management Board meeting. WaterNet opens its own bank accounts (Euro, USD and Pula denominated) at Stanbic bank in Gaborone, Botswana.
	1.5 WaterNet legal status	Target achieved, dissolution resolution for the WaterNet Trust registered in Zimbabwe accepted by the Registrar of deeds Office. See also item 1.1.
	1.6 Financial sustainability	On-going, revised WaterNet Phase IIb (2008-2011) project document was submitted to Sida and DGIS. Little progress with regard to income generation from the membership, products and services and from other regional organisations. A strategic planning meeting is scheduled for the second half of the year to address the latter.
	1.7 Monitoring, Evaluation	On-going, progress moderate. The delays in reporting experienced

Outputs	Activities	Progress (January-June 2008)
		in the previous reporting period have partially been mitigated on. The transition of WaterNet Phase IIa to IIb and the operating environment in Zimbabwe has presented problems for the Secretariat.
2. Deliver and strengthen the jointly owned WaterNet Master programme in IWRM.	2.1 Deliver Programme at 2 host institutions	Target achieved, on-going activity with 42 students enrolled in the 2007 intake working. The programme for 2008-2009 started on 11 February 2008 with 39 students enrolled of which 15 are female.
	2.2 Offer 6 specialisations	On-going activity, for 2008 its planned in the second half of the year.
	2.3 Fellowship Fund	Target achieved, 29 students 2008-2009 intake in 2.1 above funded through the WaterNet Fellowship Fund and 10 from other sources.
	2.4 Review procedure Masters programme	On-going, with progress report being submitted by Prof Graham Jewitt to the 3 rd Management Board meeting and also presentations made at a workshop in Pretoria south Africa. The final report is expected in the second half of 2008. The process has been long and cumbersome due to interaction with a number of Universities with different systems.
	2.5 Dissertation Research Fund	Ongoing activity, target achieved.
3. Professional training and education.	3.1 WaterNet professional training programme	Ongoing activity, four short courses were presented by WaterNet and partners and were attended by over 100 participants and facilitators from the region.
	3.2 WaterNet professional training officer	Deviated to Research Leader
	3.3 Catchment partnerships	On-going, process very slow as it requires engagement of catchment management agencies and GWP-SA.
	3.4 English for Water Managers	On-going, demand less than expected as only two candidates from non-Anglophone countries were enrolled for the 2008-2009 Masters programme. The students enrolled late and the course could not be offered to them. Early registration can avoid this next time.
4. Research capacity building	4.1 Research capacity building	On-going, collaboration with WARFSA outstanding as WARFSA still remains non-functional.
	4.2 WaterNet partner in IWRM research	On-going, progress good. Challenge Program on Water and Food (CPW&F) and the Small Systems Innovations Research Projects progressed well both projects granted a no cost extension due to delays in the star-up phase. WaterNet

Outputs	Activities	Progress (January-June 2008)
		CPW&F PN17 was invited to make a presentation at the global Steering committee at FAO offices in Rome, the only project to be invited. SSI research team held its 5 th annual scientific meeting in Same, Tanzania.
	4.3 Funding new research activities	On-going, slow progress, Waternet intends to embark on a PhD programme for the next 10 years with funding to be solicited from Nuffic, WARFSA and own funds.
	4.4 Appoint 5 WaterNet Professorial Chairs IWRM	On-going, slow progress due to intricacies in the host institutions in establishing the Chairs. Out of the 5 positions there has been 4 advertisements, 3 interviews, 3 offers and 1 appointment.
5. Raise awareness and understanding of IWRM	5.1 Develop and implement WaterNet Outreach activities	On-going, progress satisfactory. WaterNet participated in four international and regional meetings on IWRM and produced Volume 4 Issues 1 of its newsletter.
	5.2 Hold WaterNet/WARFSA Symposia	Target achieved, the 9 th Symposium will be held in Johannesburg, South Africa on 29-31 October 2008.

Budget and expenditure analysis is not incorporated in this report due to deviation in expenditure (Refer to **section 5**) and the subsequent closure of Phase IIa at different dates for the DGIS and Sida subsidy i.e. 30 June 2008 and 31 August 2008, respectively. The analysis will be incorporated in the final report for Phase IIa which is due in mid-November 2008 which will also incorporated the final audited expenditure.

This particularly report was delayed by two weeks after the lapse of the period indicated in the funding agreements of Sida and DGIS. Whilst it is an improvement from the delays in the submission of the previous report (5th Progress Report July to December 2008) the Secretariat realises and acknowledges that untimely reporting is detrimental to planning, monitoring and evaluation and of the entire programme.

2 INTRODUCTION

2.1 BASIC DATA

Country:	Southern Africa Development Community (SADC)
Project name:	WaterNet Strategy Phase II, 2005-2009: Building Capacity for Water Resources Management in Southern Africa
Sida contribution number	73000564
DGIS activity number:	11763/DMW0051164
Executing organisations	
Coordinating Institute:	UNESCO-IHE Institute for Water Education, Delft, The Netherlands
Host Institute:	University of Zimbabwe, Harare, Zimbabwe
Project period:	1 April 2005 - 31 March 2010
Progress Report No.:	6
Reporting period:	1 January 2008 – 30 June 2008

2.2 CONTEXT

This document is the sixth progress report of WaterNet Phase II (2005-2009) covering the period 1 January 2008 - 30 June 2000. The first report covered the period 1 April 2005 - 31 December 2005 and was submitted in March 2006, the second report covered the period 1 January 2006 – 30 June 2006 and was submitted in January 2007, the third report covered the period 1 July 2006 – 31 December 2006 and was submitted in July 2007, the fourth report covered the period 1 January 2007 – 30 June 2007 and was submitted in February 2008, whilst the fifth report covered the period 1 June 2007 – 31 December 2007 and was submitted in May 2008.

The sixth progress report represents the last report for WaterNet Phase IIa. The report is only narrative as expenditure reporting could not be finalised in time for the production of this report due to deviation from planning explained in **section 5** of this report. The final report is due for submission before end of the year in 2008.

WaterNet, a network of tertiary education and research institutions in Southern Africa, was established in year 2000. By the end of December 2007 WaterNet membership consisted of 56 institutions and five supporting members.

2.3 PROGRAMME OBJECTIVES

The vision of WaterNet is a future in which the SADC region has the institutional and human capacity to educate its own water managers, capable to contribute to the equitable sharing and sustainable utilisation of water resources for poverty alleviation, economic development (livelihood security) and environmental security.

The mission of WaterNet (long-term development objective) is to enhance institutional and human capacity in Southern Africa in the field of Integrated Water Resources Management (IWRM) through training, education, and research by harnessing the complementary strengths of institutions in the region. The enhanced capacity should enable the peoples of Southern Africa to manage their water resources in a more efficient, equitable and sustainable manner.

The immediate objectives of WaterNet are fivefold:

1. To forge a strong, demand driven and sustainable network of universities and research institutions in Southern Africa in the field of IWRM.
2. To deliver and strengthen the jointly owned regional Master degree programme in IWRM
3. To develop and deliver demand-driven training and education for practicing water sector professionals in Southern Africa.
4. To stimulate, regionalise and strengthen the research in the field of IWRM in Southern Africa.
5. To raise awareness and understanding of IWRM and its implementation at local, national and trans-boundary scale.

The immediate objectives are interlinked as they depend on each other and also benefit each other.

3 PROGRAMME TARGETS

3.1 PLANNED ACTIVITIES AND BUDGET JANUARY TO DECEMBER 2008

The following activities were planned to be addressed during the reporting period (as amended and approved at the 8th WaterNet Annual General Meeting, held in Lusaka, Zambia on 2 November 2007). The corresponding budget is shown in succeeding pages.

Work Plan January to December 2008

OUTPUT 1 To forge a strong, demand driven and sustainable network

- Activity 1.1 Establish WaterNet PCN 23: WaterNet to become the implementing agent for SADC's human capacity building priorities in IWRM. Develop a long-term (10 year) Strategy for WaterNet taking into cognisance the HIV/AIDS and Gender aspects in 1.7.
- Activity 1.2 Promote member ownership of Network: WaterNet will put a particular emphasis to invite members from Angola and Madagascar. Award at least 4 NSF, 4 SDF, and 25 SEF. Review membership guidelines.
- Activity 1.3 Fully staffed WaterNet Secretariat: maintain current staff positions. Revise staff contracts and define staff conditions of service and establish a performance evaluation system. Develop human resources procedures.
- Activity 1.4 Professional financial management achieved: Manage the WaterNet Funds in a professional and transparent manner. Establish, with support from an external accounting agency, an effective financial administration by the first quarter of 2008, able to receive and disburse external funds according to international auditing requirements. Develop, test and review detailed financial management procedures.
- Activity 1.5 WaterNet Legal Status established: Operationalise the WaterNet Trust by the first quarter of 2008. Define clear tasks and responsibilities within WaterNet Trust and WaterNet Secretariat. Harmonise AGM regulations and protocol, Management Board and Trust regulations. Normalise WaterNet's operations as per the "Guidelines Governing Relations between SADC and Organisations executing SADC Programmes and Projects Under the Principle of Subsidiarity".
- Activity 1.6 Financial sustainability through income generation and contributed funds: Generate contributed project funding and external income of up to at least 25 % of the overall WaterNet budget
- Activity 1.7 Monitoring, evaluation and reporting procedures in place: Harmonize and streamline reporting internally (e.g. trustees, management board, members) and externally (e.g. donors, SADC, collaborating partners, other stakeholders). Implement the recommendations from the Impact Assessment Report. Refine and implement WaterNet Gender and HIV/AIDS strategies

OUTPUT 2 To deliver and strengthen the jointly owned regional master degree programme in IWRM

- Activity 2.1 Deliver the masters programme at two core host institutions
- Activity 2.2 Offer 6 Specialisations in Water Resources Management, Water and Environment, Water for People, Hydrology, Water and Land and Water and Society
- Activity 2.3 Fellowship Fund established: The WaterNet Fellowship Fund to offer 40 fellowships for the Master programme for 2008 (30 from current funding and minimal 10 external funded fellowships)
- Activity 2.4 Establish Review procedure and quality control system for WaterNet Masters programme: Finalize comprehensive review of the curriculum of the Master Degree Programme, including a proposal for general Regulations, by the first quarter of 2008. Establish the WaterNet Alumni Association and complete the tracer survey.
- Activity 2.5 Establish with WARFSA the WaterNet MSc Dissertation Fund: The WaterNet MSc Dissertation Fund to offer 40 fellowships for the dissertation part of the Master programme for 2008 (30 from current funding and minimal 10 external funded fellowships)

OUTPUT 3 To develop and deliver demand driven training and education for practicing water sector professionals from the Southern African region

- Activity 3.1 Launch the WaterNet Professional Training programme: In collaboration with Global Water Partnership Southern Africa (GWP-SA) and SADC Directorate for Infrastructure and Services, Water Division, offer 5 regional professional and short courses in IWRM 2 of which will be funded through the EU-ACP Water Facility grant.
- Activity 3.2 Appoint on an ad-hoc basis if required the servicers of a Professional Training Officer(s) to coordinate the WaterNet professional training programme
- Activity 3.3 Establish catchment partnership for demonstration and learning on translating IWRM principles to management jointly with Global Water Partnership Southern Africa (GWP-SA) and through the Danida Regional Programme Support for Environmental Assistance to the Southern Africa Region on Integrated Water Resources Management.
- Activity 3.4 Offer the English for Water Managers Course targeting professionals from Democratic Republic of Congo, Madagascar, Mozambique, and Angola. Offer writing and communication skills training to IWRM Masters students.

OUTPUT 4 To stimulate, regionalise and strengthen research in the field of IWRM in the Southern Africa Region

- Activity 4.1 Research capacity building (training and mentoring) together with WARFSA
- Activity 4.2 WaterNet a partner in integrated IWRM research: Support and facilitate multi-disciplinary research initiatives among WaterNet member institutions (Challenge Program on Water and Food in the Limpopo Basin (PN 17), Smallholder Systems Innovation Research Project.
- Activity 4.3 Seek funding for new research activities, WaterNet facilitating role
- Activity 4.4 Have two WaterNet - SADC Professorial Chairs in IWRM in place and appoint two additional positions by the first quarter of 2008. Advertise the last

WaterNet - SADC Professorial Chairs in IWRM position by the second quarter of 2008.

OUTPUT 5 To raise awareness and understanding of IWRM and its implementation at catchments and trans-boundary scale

- Activity 5.1 Develop and implement WaterNet Outreach activities: Develop and implement WaterNet communication strategy. To consolidate the knowledge base of WaterNet from its post-graduate education programmes, its involvement in research advancement and the strengths of its members on IWRM carry out synthesis review of WaterNet member reports, conduct traces survey of graduated students and launch and actively support the WaterNet Alumni Association. Continue and finalize the synthesis review of the Physics and Chemistry of the Earth Journal papers so as to inform policy and IWRM on the ground.
- Activity 5.2 Hold the combined 9th WaterNet/WARFSA/GWP-SA and the International Commission of Water Resources Systems (ICWRS) of the International Association of Hydrological Sciences (IAHS) Symposium in Johannesburg, South Africa. Initiate planning for 10th WaterNet/WARFSA/GWP-SA.

Phase II Contribution	Budget 2005-2009	Expenditure 2005	Expenditure 2006	Budget 2007	Phase IIa and IIb Budget 2008
DGIS					
Management Fund	1,934,000	127,734	320,938	459,000	446,800
International Backstopping	441,000	69,279	124,515	98,000	100,000
Nodal Strengthening Fund	150,000	12,501	33,421	37,500	25,000
Symposium Fund	352,500	96,371	98,558	62,500	90,000
Publications Fund	75,000	0	0	0	30,000
Fellowship Fund	238,750	0	0	0	0
MSc Dissertation Fund	190,000	0	0	0	0
Curriculum Development Fund	66,000	0	0	24,000	12,000
Staff Exchange Fund	406,000	18,891	40,955	87,000	72,500
Professorial Chair Fund	0	0	0	0	0
Catchment Partnership Fund	35,000	0	0	0	17,500
Professional Training Fund	578,000	0	0	135,500	115,000
Language Course fund	100,000	0	0	25,000	20,000
Staff Development Fund	137,750	18,637	28,656	35,000	30,000
Alumni Association Fund	0	0	0	0	14,000
Contingency (2%)	148,000	0	2,753	0	0
Sub Total	4,800,000	343,413	649,797	963,500	972,800
Sida					
Fellowship Fund	1,303,500	197,794	237,204	350,000	480,000
MSc Dissertation Fund	572,500	0	0	150,000	120,000
Professorial Chair Fund	672,000	0	0	168,000	174,000
Sub Total	2,600,000	197,794	237,204	668,000	774,000
Total	7,400,000	541,207	887,001	1,631,500	1,746,800

Contribution	Budget 2005-2009	Budget 2007	Budget 2008
Challenge Program			
Research Fund	1,300,000	410,000	410,000

Sub Total	1,300,000	410,000	410,000
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Contribution	Budget 2005-2009	Budget 2007	Budget 2008
EU-ACP Water Facility			
Management Fund	10,000	5,000	5,000
Publications Fund	50,000	10,000	20,000
Fellowship Fund	30,000	20,000	10,000
MSc Dissertation Fund	15,000	10,000	5,000
Curriculum Development Fund	60,000	20,000	20,000
Staff Exchange Fund	12,000	4,000	4,000
Professional Training Fund	123,000	40,000	40,000
Sub Total	300,000	109,000	104,000

Contribution	Budget 2005-2009	Budget 2007	Budget 2008
Grand Total			
DGIS	4,800,000	963,500	972,800
Sida	2,600,000	668,000	774,000
Challenge Program	1,300,000	410,000	410,000
EU-ACP Water Facility	300,000	109,000	104,000
Grand Total	9,000,000	2,150,500	2,260,800

4 ACHIEVEMENTS

The WaterNet Phase IIb Project (1 April 2008 to 30 March 2011) document was submitted to the Cooperating Partners on 18 December 2007 requesting for a total subsidy of **3.39 Million Euro**. The total budget for Phase IIb being **5.24 Million Euro**. The amount requested was based on the assumption that the balance of the Sida subsidy for WaterNet Phase II project (estimated at **1.85 Million Euro** as of December 2007) would be integral transferred from UNESCO-IHE to the WaterNet Trust in 2008.

The Cooperating Partners wrote to the Secretariat on 7 March 2008 seeking clarification on a number of issues including:

- Increase in the Management Fund budget
- Training and coaching of the Board of Trustees on financial management matters
- Honorarium for the Board of trustees and the justification for the levels
- WaterNet long-term objectives
- Harmonisation of WaterNet and WARFSA programmes

The Secretariat responded to the above issues on 20 March 2008. A second response letter was received on 18 April 2008 which indicated the following outcomes and key considerations for Phase IIb project:

- The Netherlands and Sida had decided to fund the project separately. The foreseen Delegated Cooperation where one of the two donors would take the lead and represent the other one was not going to take place. However, the two Cooperating Partners would continue to harmonise the reporting requirements.
- There would be no additional funding from Sida for the Phase IIb project. Their contribution would be limited to the remaining funds from the Phase IIa. However the Netherlands indicated a probability to increase its contribution to compensate for this.
- Until the present the financial feasibility and the sustainability of WaterNet has depended entirely on the continuation of the Netherlands and Sida financial support. Vigorous advances are important to find alternative funding. WaterNet needs a more explicit approach to become (in the longer term) a self-financing institution that adds more value than it costs. Diversification of funding and income sources will be crucial, but also costs should be kept at levels that warrant the sustainability perspective.
- WaterNet to include in the project document a provision (chapter) for the option that WaterNet would if required host WARFSA.

It is expected that the revised project document would be reviewed and approved by the Cooperating Partners during the early part of the second half of 2008 and that a decision would be made to in time for the start of the project in July or August 2008.

Meanwhile DGIS approved a no cost extension of the WaterNet Phase IIa Project to 30 June 2008.

WaterNet intends to embark on the development of its long-term strategy before the end of 2008. The progress towards this has been very slow mainly due to some critical events and strategic documents that have to take place or be concluded prior to the start of this process. These include:

- Commencement of WaterNet Phase IIb

- Full operationalisation of the WaterNet Trust
- Completion of the review of Masters in IWRM degree programme
- Completion of the Professional Training Strategy
- Resuscitation of the WARFSA programme
- Harmonisation of the WaterNet and WARFSA programmes
- Identification of a task team to work on the first draft

As part of the process of developing the long-term strategy there was a need for an urgent strategic planning workshop that will focus on financial sustainability, diversification of funding and the prospect of introducing fees for member institutions.

At its 3rd meeting the WaterNet Management Board resolved that a strategic planning workshop will be held towards the end of July 2008. Gaborone was suggested as the venue so that there could input from SADC and possibly KPMG, Botswana and WaterNet Lawyer but the venue could be decided later. Attendance should include private sector organisations, selected Board members, and WaterNet Alumni. A group of 12-13 carefully selected individuals was deemed to be adequate. The Board requested Dr Matete and Dr Kansiime to take the lead in the process and planning for the event.

The following of the planned activities were undertaken during the reporting period.

4.1 FORGING A STRONG, DEMAND DRIVEN AND SUSTAINABLE NETWORK

4.1.1 Establishing WaterNet PCN 23

During the reporting period WaterNet delivered on a number of activities through collaboration with other regional and international capacity building initiatives in-line with the objectives of WaterNet PCN23. The details are presented in **section 4.3**.

4.1.2 Promote member ownership of the network

The 3rd Management Board Meeting considered and noted that:

- The Centre for Conflict Resolution, University of Cape Town, South Africa withdrew from WaterNet Membership with Ms Rosaline Daniel, the new contact person only mentioning via email that their focus areas did not include water resources anymore.
- The School of Law, University of the Witwatersrand, Johannesburg and Centre for Southern African Studies, University of the Western Cape, from South Africa have remained inactive in WaterNet Activities for so many years. Efforts have been made to contact the institutions through given contacts in their membership application forms and through other active members on the same institutions.
 - Prof Lisa Thompson reported that the Centre for Southern African Studies officially does not exist anymore and has been replaced by the African Centre on Citizenship and Democracy (ACCEDE). However she was still doing research related to water, and so was interested, even though she seldom gets to look at the Southern African perspective anymore. She was sure that other affiliates of the Centre would be interested in ACCEDE staying as part of WaterNet, and possibly someone could take up some of the correspondence at some stage. She said she would be grateful if the institution would remain somewhat a dormant member for the meanwhile whilst decisions are being made.
 - Prof Skeen the lead contact for the School of Law, University of the Witwatersrand, Johannesburg is said to have passed away in 2006 as per feedback through Prof Akpofure Taigbenu of the School of Civil and Environmental Engineering. The School of Law has not yet responded to his enquiry on their WaterNet Membership.

The Board accepted the withdrawal of membership of the Centre for Conflict Resolution, University of Cape Town, South Africa and this would be announced at the 9th AGM scheduled for 30 October 2008 in Johannesburg. The case of The School of Law, University of the Witwatersrand, Johannesburg and Centre for Southern African Studies, University of the Western Cape, from South Africa would be dealt with through the 'Revised Guidelines for WaterNet Membership' adopted at the 8th WaterNet AGM the after a number of changes were suggested.

At its 2nd Meeting held in Lusaka, Zambia the Management Board resolved that the application of membership for Total Landcare Malawi be left in abeyance until a revised application had been re-submitted clearly articulating their strengths in terms of training. The Secretariat wrote to the institution last year and did not receive any response. It was concluded at the 3rd Management Board meeting that the institution was probably no longer interested.

One application for WaterNet Membership was considered during the reporting period from the Department of Geology, Eduardo Mondlane University Maputo, Mozambique. The application was however incomplete and the Secretariat wrote the applicant to provide more information as per the requirements for membership application. There was no response in time for the 3rd WaterNet Management Board Meeting.

The Secretariat reminded all Members during the reporting period to submit that the 2nd annual report covering the period 1 July 2007 to 30 June 2008. The deadline for receipt was set for 31 July 2008.

The following funds were disbursed during the reporting period.

Nodal Strengthening Fund (NSF): National University of Lesotho, Department of Agricultural Economics and Extension was awarded USD 10 000.00 for the purchase of 10 computers and a printer. The department submitted a sustainability plan (maintenance and replacement plan) as per the resolution made by the WaterNet Management Board at its 2nd Meeting.

Nodal Strengthening Fund (NSF): Polytechnic of Namibia, Faculty of Engineering and Information Technology was awarded USD 9 781.67 for the purchase of a calorimeter, pH conductivity meter, turbidity meter, stirrer and paddle and a laptop to support the Water for People specialisation they are hosting. The faculty submitted a sustainability plan (maintenance and replacement plan) as per the resolution made by the WaterNet Management Board at its 2nd Meeting.

Staff Development Fund (SDF): During the reporting period Mr Fungai Makoni from the Institute of Water and Sanitation Development was granted USD 10 750 under the SDF for data collection and thesis finalisation for his PhD studies. The funds were disbursed after re-submission of the application as per the resolution made by the WaterNet Management Board at its 2nd Meeting.

Mr Golden Msilimba of Mzuzu University, Department of Geography in Malawi wrote the Secretariat that he had completed his studies for a PhD studies conducted at the University of Free State, South Africa. WaterNet partially funded his studies through a grant from the WaterNet Staff Development Fund amounting to USD 13 940. Mr Msilimba expressed gratitude for the support from WaterNet.

4.1.3 Fully staffed WaterNet Secretariat

Mr David Love the Research Coordinator in the WaterNet Challenge Program for Water and Food research project PN17 (CPW&F PN17) relocated to the United Kingdom and The Netherlands as from 1 May 2008. Meanwhile the research project had a no-cost extension approved by the Managing Centre to 31 August 2009. Mr Love's part-time contract as a Research Coordinator was designed in such a way that it would be terminated at the conclusion of the project. Mr Love has been employed to spend two days in a week on the project and has performed creditably even during the times when he is out-of-station since he is also a PhD candidate at UNESCO-IHE. Mr Love has indicated that he would like to continue with his duties until 31 August 2009.

Based on the resolution and comments made by the WaterNet Management Board at its 3rd Meeting Mr Love's contract was maintained with a some amendments. The amendments considered Mr Love's skills and capabilities that could be irreplaceable within a short period of time, and considerable knowledge and history of the Project.

The following arrangements regarding his contract and appointment were agreed upon:

- That he gradually reduced his workload within the Project to 50% over a 5 months period (with effect from 1 June 2008 till 31 October 2008), handing over most of the workload to Dr Bongani Ncube the Research Leader.
- That his contract will be duly amended automatically after 31 October 2008 to reflect the 50% reduction in his time input to CPW&F PN17 until the end of the Project on 31 August 2009.

Ms Joanna Fatch completed her 8 month Symposium Internship in March 2008. She has since enrolled in the WaterNet Masters programme in IWRM at the University of Zimbabwe core group. There has not been any decision to engage a Symposium Intern for the 9th Symposium by the regional collaborating partners.

During the reporting period the WaterNet Secretariat requested for the services of Ms Jeltsje Kemerink from the UNESCO-IHE Project Office from 7-18 January 2008 to assist and advise the Manager and Secretariat on the following:

- Review of Procurement Procedures Manual and harmonise it with procurement procedures of the donors, adding internal procurement procedures
- Finalise criteria and procedures for WaterNet fund allocations
- Assist and advice on communication to SADC on subsidiary status of WaterNet
- Liaise with KPMG Botswana on required documents for tax exemption in Botswana
- Map and harmonise WaterNet external and internal reporting
- Draft terms of reference for human resources consultant in discussion with WaterNet Secretariat staff, UNESCO-IHE and KPMG Botswana
- Draft authorisation table for signatories on behalf of the WaterNet Trust
- Finalise MoU between WaterNet Trust and UNESCO-IHE
- Draft agreement between University of Zimbabwe and WaterNet Trust on hosting WaterNet Secretariat during Phase IIb

At the 2nd WaterNet Management Board meeting it was agreed that the Secretariat should prepare terms of reference for hiring a human resources consultant domiciled in Botswana to assess and develop the employment contracts, to advice on the most suitable staff evaluation system for the WaterNet Trust and to support the Trust with the development of human resources policies. The Secretariat would develop the terms of reference for the consultant and also seek advice from the Accounting Firm (KPMG, Botswana) and the WaterNet Lawyers (Molatlhegi and Associates).

During the reporting period the Secretariat developed draft terms of reference for the consultant which were commented on by KPMG, Botswana and later asked to submit a quotation in the event that the WaterNet Trust would seek their services.

KPMG, Botswana submitted a quote for Pula 196 200.00 (approximately Euro 20 000.00). This prompted WaterNet to revisit the idea of engaging a human resources consultant and to carefully define the scope of the terms of reference. It was agreed at the 3rd WaterNet

Management Board Meeting that the Secretariat will liaise with GWP-SA as they had gone through a similar exercise. It was recommended that the Secretariat should attempt to generate most of the base documents internally before engaging external consultants. It was further recommended that a much simpler solution would suit WaterNet.

During the reporting period socio-political situation in Zimbabwe necessitated consideration of the hosting options available for the WaterNet Secretariat. Such reconsideration should be carried out from time to time in order to ensure that the Secretariat is best situated to effectively and efficiently fulfil the objectives of the network and serve the needs of members.

The socio-political and economic-financial environment severely deteriorated during this period negatively impacting WaterNet directly and indirectly. With the ongoing problems with infrastructure and power supply and difficulties in local procurement of inputs, Zimbabwe represents a challenging operating environment. This has necessitated large expenditures of staff-time and external procurement of basic office necessities, increasing operating costs. The banking regimes became more restrictive and complicated compared to other countries in the Southern African Development Community (SADC).

When this is considered alongside the difficulties resulting from an unrealistic official exchange rate or the so called negotiated exchange rate, financial management (particularly with regard to Zimbabwean dollar expenditures) in became very challenging. Meeting the transparency and accountability requirements of Cooperating Partners, Management Board and Members is essential. In recent times the financial environment has substantially taken more staff-time than necessary to ensure the smooth running of the programme. Indirectly, WaterNet is affected by the impact of the Zimbabwean environment. International perceptions, whether right or wrong, make it unattractive for members and Cooperating partners to visit the Secretariat on business. The difficult socio-economic environment also negatively impacts current Secretariat staff, decreasing their work productivity.

At the same time, there are disadvantages in relocating the Secretariat. Firstly, the costs of relocation, in terms of time and funds, would be very high and are currently unbudgeted for in the Phase II or proposed Phase IIb project. Secondly, relocation of the Secretariat would be likely to have a severe negative impact on the running of the Masters programme in Integrated Water Resources Management (IWRM) at the core host institution of the University of Zimbabwe, Department of Civil Engineering. The Secretariat occasionally provides some back-up support to the Department in terms of communication (electrical power in cases of black-outs, transport, internet and telephone services for both staff and Masters students). The presence of the Secretariat in Harare is a form of morale booster for the staff and students and offers some kind of hope that the situation might improve. The closely intertwined relationship of the Secretariat's location and Masters programme (the most important activity or flagship of the WaterNet programme) presents a very sensitive and intractable problem. Finally in contemplating a possible relocation the Secretariat envisages, increased costs, particularly with regard to the Management Fund.

In considering relocation, it is important to arrive at an optimum hosting arrangement. The host institution and city should offer good accessibility by air, medium to low operating costs, good infrastructure, straight-forward banking and procurement arrangements, a stable socio-economic environment and simple immigration. An optimum host institution should be an active WaterNet member, and offer attractive office and parking space, good communications

and information technology, library access and presence of a critical mass of water professionals who could be consulted fairly easily for advice or performing WaterNet duties.

With the current host the WaterNet Secretariat has had access and enjoyed some of these of these facilities since inception in 1999 which include among others:

- About 200m² of office space with 90% of furniture provided for free (no expenditure in terms of office rentals, water and electricity when it available)
- A fair amount of freedom in modifying the office space and adding fittings and fitments
- Dedicated parking space
- Access to the library and other University facilities just like ordinary University academic and non-academic staff
- Providing employment contracts for two of the staff members
- Presence of a critical mass and easy access to water professionals within the University dedicated to the WaterNet programme
- Political support from the University administration

It is clear therefore that the macro socio-political and economic-financial situation in Zimbabwe is the main driver to consider a possible relocation as opposed to the hosting by the University of Zimbabwe.

At the 3rd Management Board meeting a confidential report was presented by the WaterNet Secretariat. The report provided a basis to assess options for the hosting of the WaterNet Secretariat, which were discussed under several criteria which included:

- Accessibility
- Cost of operations and living
- Infrastructure and procurement
- Banking and financial management
- Socio-political environment
- Mobilisation and penetration of support
- Work, resident permits and visas

Out of the seven locations considered in the report and after discussions at the 3rd Management Board meeting it was recommended that it would be natural for the Secretariat to move to Gaborone since the Trust was already registered in Botswana and financial management systems had already been set-up there.

The Board resolved that efforts to relocate to Gaborone should be given top priority and the Secretariat to continually update the Board of developments.

4.1.4 Professional financial management achieved

At the 3rd Management Board meeting the WaterNet Secretariat presented two draft documents enabling the achievement of professional financial management *viz.* Financial Management Procedures Manual and the Procurement Procedures Manual.

The draft 'Financial Management Procedures Manual' has been compiled by the WaterNet Secretariat based on the experience of managing the network funds in the last nine years.

The objective of this manual is to set out the financial policies of the Waternet Trust. It is intended that this will provide, the WaterNet Board of Trustees, WaterNet Members and WaterNet Secretariat employees with general information about procedures, and will explain what is expected of them. This Manual places the responsibility for sound financial management and its accounting and reporting on the WaterNet Trust as dictated by the WaterNet Notarial Deed of Trust.

This manual is intended as a general guideline which explains general policies. Although it is fairly comprehensive, it cannot cover every specific situation. Management has the authority to use their discretion in deciding how to act, provided that the objectives of the WaterNet Trust are always the prime consideration.

The manual also maps out the financial reporting schedule which is designed in such a way that it coincides with the financial year and the regular meetings of the Board of Trustees, Management Board and AGM. The financial reporting and narrative or technical reporting schedules are in tandem and are shown in **Figures 4.1 and 4.2**.

The existence and adoption of the Manual is of utmost importance. Its adoption has to be preceded by its interrogation by the Management Board, Cooperating Partners and KPMG Botswana. The latter have a short-term contract during the transition phase to ensure that this Manual is sound and workable and also to determine some form of training and coaching to ensure compliance among the relevant parties and individuals.

The draft 'Procurement Procedures Manual' has been compiled by the WaterNet Secretariat based on studying the DGIS, Sida, EU and World Bank procedures. The Manual therefore is a culmination of what is deemed to be reasonable internationally whilst at the same time dovetailing into the WaterNet practices and activities.

The procurement policies are applicable for contracts covering goods, works and services. WaterNet endeavours to apply open and fair regulations as a foundation for good procurement practice.

As a network organisation WaterNet implements its main activities through the member institutions. This implies that on a regular basis services from WaterNet members will be contracted in line with the WaterNet Strategy. The Manual is intended to enhance transparency among the WaterNet members and to encourage economic and strategic utilisation of the WaterNet funds.

In some cases WaterNet will also require external (consultant) services and in addition goods will be externally purchased with funding from WaterNet either by the WaterNet Trust itself or by the member institutions. For external procurement decisions are based on commercial grounds only to ensure economy and efficiency of the WaterNet funds. These procedures address procurement issues as well define the relevant procurement policy framework and the specific provisions to be applied for the procurement contracts in line with the procurement guidelines of the donor organisations.

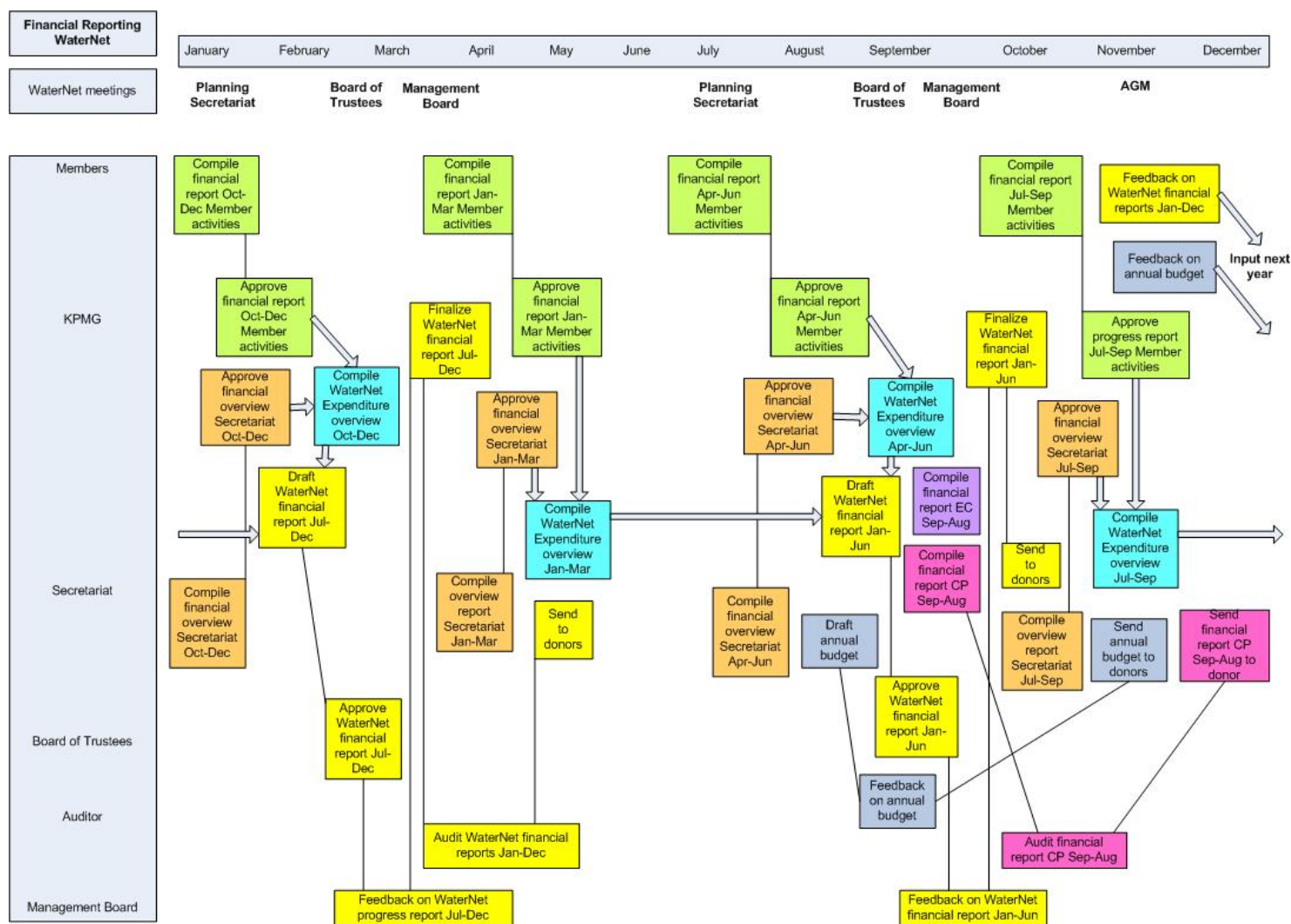


Figure 4.1 WaterNet Financial Reporting Schedule

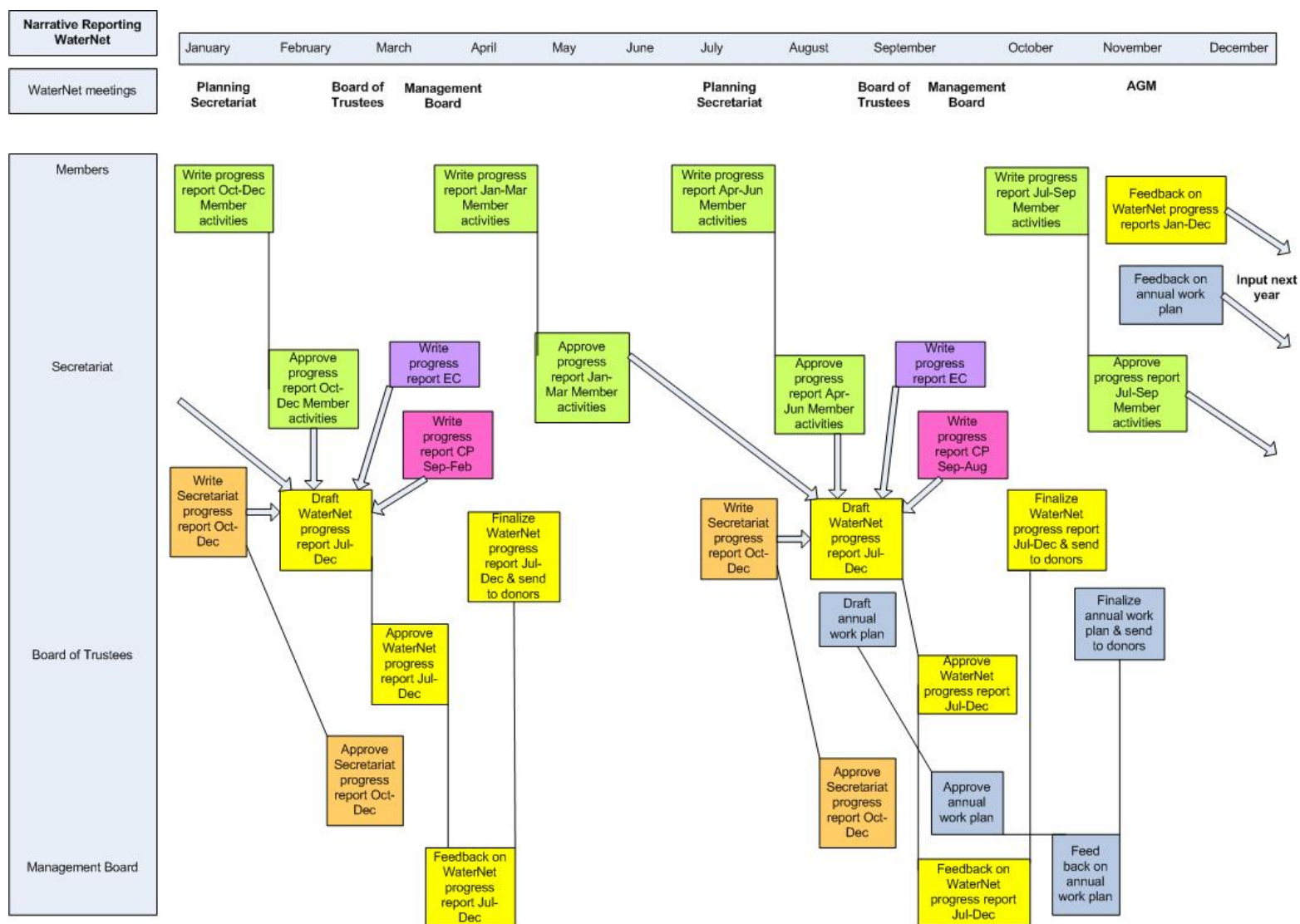


Figure 4.2 WaterNet Narrative Reporting Schedule

The WaterNet Trust opened three bank accounts during the reporting period as indicated below with Stanbic Bank Botswana Limited, Fairgrounds Branch, Gaborone, in the name of **WaterNet**. The authorised signatories are also indicated below as per the resolution made at the 2nd Management Board and 2nd Board of Trustees meetings held last year.

Bank account details

Euro Call Account Number - 7022020180000

United States Dollar Call Account Number - 02220201800/00

Pula Current Account Number - 01400201800/00

Branch code - 064967

Address of Bank - Plot 50672, Stanbic House Off Machel Drive, Fairgrounds

Telephone - +267-3618264

Swift code - SBICBWGX

IBAN and BIC - N/A

Authorised signatories

Dr. Bekithemba Gumbo	-WaterNet Secretariat
Mrs. Martha Hondo	-WaterNet Secretariat
Eng. Wilson Rufaro Nyemba	-WaterNet Trust
Mr. Nigel Dixon-Warren	-KPMG
Mr. Gerard Devlin	-KPMG

The opening of the bank accounts is a major milestone event in the transition period of WaterNet becoming a fully fledged, autonomous regional organisation. The Euro denominated Call account which will eventually act as the main WaterNet account receiving WaterNet Trust Funds during Phase IIb. A Euro denominated Call account will simplify accounting since request for funding and budgets have been constructed and quoted in Euro terms.

The United States Dollar call account has been activated and Pula current account will be activated shortly. WaterNet has since began the testing of the financial management system via KPMG Botswana as per the Amended Memorandum of Agreement entered between UNESCO-IHE Institute for Water Education and the WaterNet Trust for the transition period.

4.1.5 WaterNet legal status established

The WaterNet Deed of Trust was lodged at the Botswana Deeds Office and was duly registered on 29 December 2006 under number MA810/2006.

One of the post-registration activities following registration has been for WaterNet to become a SADC Institution within the subsidiarity principles defined by SADC at the Windhoek, Namibia Summit in 2002. The registration as a Trust has facilitated the recognition of WaterNet as an organisation executing SADC programmes and generally the Notarial Deed of Trust meets the requirements of the SADC “Guidelines Governing Relations between SADC and Organisations Executing SADC Programmes and Projects”.

The law firm Molatlhegi and Associates were requested during the reporting period to draw up a Memorandum of Understanding (MoU) with SADC and a letter of application for SADC subsidiarity status addressed to the Executive Secretary of SADC Dr Tomaz Salomao.

At the 3rd Management Board Meeting the draft letter which was edited by the WaterNet Secretariat was discussed. The following comments were made with regard to the application letter:

- The letter was well structured and provided a good starting document
- There was a need to show that WaterNet was not new and to highlight important events that are related to its history e.g. that SADC Council of Ministers would put the document into context and that the idea of capacity building had already been raised by the Conference on Ministers.
- There was need to disaggregate the membership and to include the issue of Angola and Madagascar
- There was also a need to be explicit in the letter that WaterNet subscribes to the decisions that are made within the region

The Lawyer was further requested during the reporting period to proceed and draft the MoU pending lodging of the application letter. The draft MoU was submitted to the WaterNet Secretariat during the reporting period and will be discussed at the 4th Management Board Meeting scheduled for 27-28 October 2008 in Johannesburg, South Africa.

The MoU between the WaterNet Trust and UNESCO-IHE Institute for Water Education was signed during the reporting period (**Annex 1**). The MoU clearly defines the relationship between the WaterNet Trust and UNESCO-IHE and spells out areas of collaboration, expected joint activities whilst at the same time underscoring the sound historical relationship between WaterNet and UNESCO-IHE. The MoU is also aligned to the new status of WaterNet.

The MoU would also be instrumental in avoiding cumbersome procurement procedures involving tendering for the scientific backstopping in instances where some urgent backstopping was required by WaterNet from UNESCO-IHE. There was a need however to include a section in the WaterNet Procurement Procedures Manual that UNESCO-IHE had a special relationship with WaterNet to avoid following tendering procedures.

The Management Board at its 3rd meeting also considered the revised draft existing Memorandum of Agreement (MoA) between WaterNet and the University of Zimbabwe (UZ) for the hosting of the WaterNet Secretariat. The agreement needed to be revised to align it with the new status of WaterNet. The MoA is required to be entered into as soon as WaterNet Phase IIb commences.

The Board resolved that a Minister or Permanent Secretary of water and representative from SADC should be involved in the signing of the hosting agreement.

After establishing the contacts of Ms Lily Zondo the outstanding Trustee to sign the dissolution resolution of the WaterNet Trust registered in Zimbabwe, the Secretariat wrote to the Registrar of Deeds in Harare informing him of this decision. The correspondence was also copied to Hon. Hans Heinsbroek, the Founder of the Trust and former Ambassador at the Royal Netherlands Embassy in Harare and to Mr David John Lewis the Lawyer formerly with Coghlán, Welsh and Guest who developed the Deed of Trust document.

The Secretariat received responses from the Registrar of Deeds and the Law firm (**Annex 2**) which finally concluded the matter.

4.1.6 Financial sustainability through income generation and contributed funds

Refer to the beginning of **section 3** of this report.

4.1.7 Monitoring, evaluation and reporting procedures in place

WaterNet continually strives to improve its reporting, monitoring and evaluation procedures to enable assessments on the impacts and sustainability of the programme to be made in an objective and informed fashion.

During the reporting period comments were received from the Cooperating Partners on improving the progress reports. The following issues were raised as needing further elaboration in the report:

- Include an executive summary, with estimate of achievements against plans
- Integrate narrative and financial reporting
- Information in the main report on why some funds is highly used than the other
- Analysis of under-used budget lines, justifying the real need for such funds in the future
- Give more attention to difficulties encountered, with an analysis of consequences and mitigating action

The above comments were captured in additional reports as addendums to the 4th and 5th progress reports.

This progress report however does not contain the financial details due to deviation in expenditure (Refer also to **section 5** of this report). The final report for the Phase IIa project will provide the integrative analysis of the financial and narrative report.

Refer also to **section 4.1.4** of this report.

4.2 DELIVER AND STRENGTHEN THE REGIONAL MASTERS PROGRAMME

4.2.1 Deliver the masters programme at two host institutions

Forty four (44) students were enrolled for the IWRM 2007-2008 programme in February 2007 sixteen (16) enrolled at the University of Zimbabwe (UZ) and twenty eight (28) at the University of Dar es Salaam (UDSM). Thirty one (31) of the students funded through WaterNet whilst thirteen (13) students registered at UDSM were funded from other sources.

One student (Renee Mbanguka, Male, Tanzanian/Burundi, Hydrology Specialisation), registered at the UZ did not return following his specialisation (July-Sept 2007) at UDSM, and is presumed to have voluntarily withdrawn from the programme with effect from October 2007.

Three (3) of the fifteen (15) students enrolled at UZ in the 2007-2008 academic year did not successfully complete all the required eleven (11) modules of the taught part of the programme, although all fifteen (15) students were allowed to proceed to their dissertations.

The titles of the students dissertation for the 2007-2008 intake are listed in **Annex 3**.

The programme for the 2008-2009 intake started on 11 February 2008 and the final list of the students selected is shown in **Table 4.1**. A total of thirty nine (39) students were enrolled, twenty four (24) registered at UDSM and fifteen (15) at UZ with WaterNet funding twenty nine (29) of the candidates and ten (10) being funded from elsewhere. A total of fifteen (15) of the registered students are female (38%).

At the start of the programme there was a major concern about the skewed distribution of students per each specialisation with the majority of students opting for the water and environment specialisation, while the water and land and water and society specialisations had a few takers. This was partly caused by the last-minute drop outs of the students originally offered places. The problem was solved for the two specialisations but the result was that the water resources management specialisation remained with the least number of students.

To rectify this problem there was need to do the selection well before the programme began in February of each year such that by end of November each year the selected candidates would be have been notified.

4.2.2 Offer six specialisations

As per the approved 2008 Workplan, WaterNet intends to offer the six specialisations for the 2008-2009 intake during the second half of the 2008 hosted as follows:

- Water Resources Management, University of Zimbabwe
- Water for People, Polytechnic of Namibia
- Water and society, University of the Western Cape
- Water and Environment, University of Malawi
- Hydrology, University of Dar es Salaam
- Water and Land, University of Botswana

Table 4.1 List of IWRM students for the 2008-2009 intake

Surname	First name	Gender	Nationality	Specialization
<i>University of Zimbabwe, Department of Civil Engineering</i>				
1 Chipwala	Jessy A.	F	Malawi	WfP
2 Dladla	Boniswa W.	M	Swaziland	W&E
3 Dlamini	Vuyisile K.	F	Swaziland	W&E
4 Fatch	Joanna	F	Malawi	W&S
5 Fobo	Limpho B	F	Lesotho	W&L
6 Kalua	Richman J	M	Malawi	WfP
7 Kambuku	Dwight D	M	Malawi	W&S
8 Kangootui	Samuel R	M	Namibia	WRM
9 Kushe	James F	M	Malawi	WRM
10 Lusuva	Elina	F	Tanzania	W&S
11 Mpembe	Ngwisa W	M	Tanzania	Hyd
12 Msipa	Memory	F	Zimbabwe	W&E
13 Musara	Joseph P	M	Zimbabwe	W&S
14 Ndhlovu	Nobuhle	F	Zimbabwe	W&L
15 Vushe	Andrea	M	Zimbabwe	WfP
<i>University of Dar es Salaam, Department of Water Resources Engineering</i>				
1 Neelo	John	M	Botswana	W&L
2 Mubwebwe	Bisimwa	M	DRC	W&S
3 Ochieng	Willis O	M	Kenya	Hyd
4 Moshi	Philipina	F	Tanzania	W&S
5 Tatafasa	Carles Olivier	M	Madagascar	W&E
6 Chaonamwene	Gloria	F	Malawi	WfP
7 Pallangyo	Emmanuel	M	Tanzania	W&E
8 Hengari	Gideon	M	Namibia	WfP
9 Chambo	Vivian	F	Tanzania	Hyd
10 Sanga	Jesca	F	Tanzania	Hyd
11 Aharikundira	Margaret	F	Uganda	WfP
12 Bukirwa	Faridah	F	Uganda	W&E
13 Natumanya	Ezrah	M	Uganda	WRM
14 Chinamaranga	Patrick	M	Zimbabwe	W&L
<i>University of Dar es Salaam, Externally Funded</i>				
1 Nihubona	Alexis	M	Burundi	WfP
2 Kavishe	Rose	F	Tanzania	Hyd
3 Dihirajura	Ascension	M	Burundi	W&E
4 Baradumbwa	Alexis	M	Burundi	W&E
5 Nyayong Jubek	Simon	M	Sudan	Hyd
6 Otaung Awijak	Simon	M	Sudan	Hyd
7 Jeremiah Odok	Jiben	F	Sudan	Hyd
8 Zakaria	Onesmo	M	Tanzania	Hyd
9 Mutayoba	Edmund	M	Tanzania	Hyd
10 Mayombo Albert	Fidelis	M	Tanzania	Hyd

Specialisation Key:

W&E Water and Environment

WfP Water for People

WRM Water Resources Management

Hyd Hydrology

The advert for the 2009-2010 intake was released as planned (**Annex 4**). The deadline for the submission of applications was set for 31 July 2008. Applications have been received both electronically and hard copy formats.

4.2.3 Fellowship Fund established

The 8th AGM approved granting of 30 fellowships from the Fellowship Fund to deserving candidates as per the Work plan of 2008.

4.2.4 Establish review procedure and quality control system for the Masters programme

The review process of the Masters programme which is being led by Prof Graham Jewitt of the University of KwaZulu Natal Department of Bio-resources Engineering and Environmental Hydrology. The process is envisaged to be complete in the second half of 2008. The process has been slow due to the complex nature of the review and the surveys that had to be carried out.

Meanwhile Prof Jewitt submitted a progress report during the reporting period which was presented at the 3rd Management Board meeting. The final report needs to be considered by the Board and the recommendations will require urgent attention by the various stakeholders, most importantly the Coordinators of the Masters programme, Professorial Chairs and the Board. It envisaged that the Professorial Chairs will be in place sooner than later so as to ensure that the recommendations are implemented at the shortest possible time. Immediate concern of concern included modules in the specialisations and electives.

The WaterNet Research Leader made two presentations on behalf of WaterNet at a workshop to review experiences with IWRM Masters Courses, held in South Africa 17-19 June 2008. Prof Jewitt and Mr Lewis Jonker (University of Western Cape) also participated and made presentations at the workshop. The workshop was attended by Cap-Net affiliated networks (see **Annex 5**). The purpose of the workshop was to:

- Examine the demand for Masters level education in IWRM
- Explore the approach and curriculum issues of what constitutes IWRM and whether this equips graduates with the skills/ knowledge for practical implementation
- Benefit from sharing experience on practical aspects of course management

At the end of the workshop the group developed a work plan with the following components:

Outputs

- Updated database of IWRM post-graduate programmes
- Group operational with regular knowledge exchange
- IWRM Curricula strengthened through materials, staff and research exchange
- Inter-sectoral academic collaboration supported and strengthened
- Improved service delivery in terms of curriculum, research and resources

Outcomes

- Improved co-operation amongst IWRM Masters programmes
- Strengthening IWRM curricula through knowledge exchange
- Master's Programmes reviewed

- New Masters' programmes supported by knowledge network
- Improved quality graduates

The group agreed on a way forward which included the endorsement of the work plan through consultation with regional networks by October 2008. This would then be followed by the implementation of the activities and periodic review of the work-plan. Monitoring and evaluation, and adjustment of the initiatives will occur on an ongoing basis.

The WaterNet Manager was invited to participate in the teaching and to be the external examiner of the Masters Degree Programme in Water Resources and Environmental Management (WREM) on 9-15 January 2008 at the National University of Rwanda (NUR) in Butare.

This was worthwhile mission at an opportune moment since the Faculty of Applied Sciences at the University had been accepted as an Associate member of WaterNet during the 8th AGM in Lusaka. Besides teaching and being external examiner for the final year dissertations meetings were held with the Vice Rector, the Dean of the Faculty and a new group of WREM students.

The University expected a lot of assistance and collaboration with WaterNet membership including interaction between WaterNet IWRM students and NUR WREM students. Although a large part of the students are from Franco-phone Africa the programme is conducted in English.

The Faculty made the following specific request to WaterNet:

- Participation of WaterNet in a research workshop in Butare on 'Building regional capacity for the sustainable use and management of wetlands in the Lake Victoria' basin, East Africa on 26 and 27 March 2008 of which Dr Frank Kansime attended also on behalf of WaterNet.
- A request for WaterNet to fund through the Staff Exchange Fund 3 teaching and research missions from active members of WaterNet.
- Cooperation in running a two-week training course for lab technicians in May 2008 involving one person from UNESCO-IHE and someone from WaterNet membership in the region to assist with facilitation.
- WaterNet to assist one staff member from the Faculty of Applied Sciences to attend the training course on 'Water resources assessment in Sub-Saharan Africa: Prediction in ungauged and data scarce basins' held in Dar es Salaam, Tanzania on 21-25 January 2008. Dr Umaru Garba Wali attended the short course through the EU-ACP Water Facility funding (Refer to **section 4.4**).

The Board at its 3rd meeting agreed that for the outstanding requests, the institution should be advised to submit their application through partnering with a core member as per guidelines for WaterNet membership and the Board would then consider the application.

4.2.5 Establish with WARFSA the WaterNet MSc Dissertation Fund

Refer to **section 4.4.1**.

4.3 DEVELOP AND DELIVER PROFESSIONAL TRAINING

4.3.1 Launch WaterNet professional training programme

A first draft of the Professional Training Strategy was circulated at the 8th Symposium and presented at the 8th AGM. Ms Linda Chonco of Tidasa made a presentation on behalf of the members tasked to put together the strategy paper. The Secretariat submitted comments to the task team but none were received from Members. A workshop with the task team and key partners (SADC Secretariat, GWP-SA, Cap-Net and some members) is planned for May 2008 to finalise the document.

During the reporting period WaterNet and various partners organised, facilitated and participated in the following courses:

Water Resources Assessment: Prediction in Ungauged and Data Scarce Basins, 21-25 January 2008, Dar es Salaam, Tanzania

The course was convened in collaboration the University of Dar es Salaam, University of Botswana, UNESCO-IHE, Delft University of Technology and Cap-Net (**Annex 6**). A total of 29 participants from 11 countries attended the training course as indicated in the list below. The representation of the participants by country was as follows: Burundi (1), Kenya (2), Lesotho (1), Malawi (1), Mozambique (3), Rwanda (2), Swaziland (1), Tanzania (10), Uganda (2), Zambia (4) and Zimbabwe (2).

One setback observed was that all participants from the 11 countries with the exception of Tanzania were men. The major objective of the course was to develop a training module to equip water resource managers and planners with the necessary skills and understanding of water resources assessment in case of ungauged or data scarce environments within sub-Saharan Africa. The course covered the following topics: the problems of lack of reliable data; methods to cope with the data shortage such as transferring knowledge between gauged and ungauged basins; and the potential of satellite derived information for hydrological practice.

Feedback from the participants highlighted that the lessons learned could be applied for improved water allocation where no data existed. They also noted the need for a follow up course on specific topics as the course was too intensive. A course manual and report were produced from the course. Some requests have been received for the course manual and proceedings which the Secretariat has distributed in CD form through UNESCO-IHE and Cap-Net.

Reviewing and Editing Manuscripts for Journals Workshop, 16–18 January 2008, Harare, Zimbabwe

The purpose of the workshop was to serve as training and preparation for the production of the 2008 WaterNet/WARFSA/GWP-SA special issue of the Journal of Physics and Chemistry of the Earth (JPCE). A total of 15 reviewers attended the course of which 4 were female. It covered both Guest Editing and Reviewing Articles.

The Editor in Chief Prof Huub Savenije facilitated topics on Knowledge evaluation and Quality control in scholarly publishing. The plan for this year's reviews process was finalised. During the workshop, Dr Dominic Mazvimavi accepted the nomination

to take over from Dr Washington Nyabeze as Guest Editor. The list of participants is presented in **Annex 7**.

Training Course on River Basin Organisation, 14-18 April 2008, Pretoria, South Africa

The course was convened and funded by Cap-Net as a follow up to some case studies on river basin organisations (RBOs) in Mexico, Kenya, Sri Lanka and Malaysia. The cases documented uncertainties about the role and functions of RBOs when it comes to the implementation of the IWRM approach to water resources management. The purpose of the course therefore was to conduct a training of trainer's course on RBOs and at the same time preparing a draft training materials on the subject.

WaterNet was represented by Dr Franziska Steinbruch of the Gorongosa National Park and the WaterNet Programme Officer Nicholas Tandi. Following this workshop, UNESCO-IHE, Cap-Net and WaterNet have submitted a proposal to the Partnership for Research Fund (UPaRF) for MSc studies on the performance of RBOs.

WaterNet, Cap-Net, SIWI Water Integrity and Accountability Mapping Study in Southern Africa

Last year SIWI, Cap-Net and WaterNet commissioned a study to map integrity and accountability in the water sector in SADC countries. The study was been undertaken during September through December 2007 and resulted in a consolidated assessment of practices and provisions in six Southern African countries (**Annex 8**). The study proposed recommendations regarding capacity to be built in water management institutions to be better prepared to ensure accountability and integrity in water management operations.

A follow up workshop on planning of capacity building was held in, Cape Town, 29 – 30 April 2008 at the University of the Western Cape to assess the results of the study and draw conclusions for capacity building activities in the SADC region as well as in other regions in the world.

The purpose of the workshop was:

- Assess the conclusions and recommendations of the said study report
- Query the content of the document and the implications for capacity building in water integrity and accountability
- Produce regional capacity building plans by the networks present and the establishment of a consolidated capacity building programme
- Assess how proposed activities be integrated in existing programmes (such as the WaterNet Masters programme).

Following this meeting, a regional two day short course on Integrity and Accountability in the Water Sector is planned for top and middle management in the water sector in November 2008 at the University of the Western Cape.

Groundwater Capacity Building Initiative (GWCB) in Africa Workshop, 21-22 July 2008, Pretoria, South Africa.

From the outcomes of the WaterNet/BGR/Cap-Net study on Capacity Building Needs on Groundwater in the West and Southern Africa regions (http://cap-net.org/sites/cap-net.org/files/GWCB_final_report.pdf), WaterNet proposed that a group of specialists could be

well paced to address challenges identified in the said study. Cap-Net (through its Africa networks), Global Water Partnership Southern Africa and the UN - Water Decade Programme on Capacity Development (UNW-DPC) supported and facilitated the realisation of WaterNet's proposal by bring together groundwater specialists from the African region to plan for a common programme for capacity building on groundwater.

At the workshop it was formally agreed that the African Groundwater Network (AGW-NET) was established on 22 July 2008 and founded by the members attending the workshop. The group is led by a WaterNet representative, Dr Richard Owen who volunteered to act as the Coordinator. The workshop prioritised some perceived problems in groundwater management. These were classified into: Regulation and Monitoring; Training; Institutional Capacity Building; Information Systems and other Technical Aspects and; Education and Awareness Raising. The group also proposed some short courses shown in **Table 4.2** for which concept notes will be developed by the end of August.

Table 4.2 List of proposed short courses in groundwater

Theme	Region	Implementer	Target Group
Assessment tools for Groundwater (GW) management at basin level linked to IWRM.	Regional/ national	Dr Mirghani (Nile IWRM-Net)	Water Managers
Monitoring for Groundwater Management (Quantity and quality)	Regional/ national	Dr Owen-University of Zimbabwe; Dr Adams-Water Research Commission; Dr Katjimune-Namibia Government	General Water Professionals
Drilling & Well Design, Documentation, Borehole Logging, Pumping Test	Separate regions	Dr Eduvie -National Water Resources Institute , Nigeria	Water Managers in National Institutions
Gender and sustainable finance for maintenance of groundwater infrastructure in rural settings	National level	Dr Anornu-Kumasi National University of Science and Technology Ghana	local communities
Refresher courses on pump test analysis, hydrochemistry and GW exploration.	Regional	Dr Nkotagu-University of Dar es Salaam; Dr Abiye -WITS University; Dr Alemaw - University of Botswana	Water practitioners and managers

Training manual and operational guide on “Legal and Regulatory Framework for the Implementation of IWRM

WaterNet in collaboration with Cap-Net are developing a training manual and operational guide on “Legal and Regulatory Framework for the Implementation of IWRM”. The training package aims to support capacity building in legal and regulatory aspects of integrated water resources management. To this purpose a training manual and operational guide for a 5-day course will be developed. The material views water legislation and regulation as part of the IWRM framework.

Contents of the manual are based in the 5-day Training of Trainers course held in 2004 in Brasilia, Brazil. The Cap-Net course counted with facilitation support from specialists representing relevant organisations with worldwide experience: UNB, ANA, GWP, LA-WETnet, Streams of Knowledge, and WALIR.

WaterNet requested Mr Daniel Malzbender of African Centre for Water Research, Cape Town, South Africa to lead the process on behalf of WaterNet for the development of training material, for the course. The task will be done in consultation with other Cap-Net affiliated partners. The individual deliverables expected from WaterNet will be two chapters on:

- Chapter 6: water laws, regulations and privatization, foreign investment and international arbitration
- Chapter 7: implications for water governance and institutions

4.3.2 WaterNet Professional Training Officer

A decision was made at the 7th AGM to employ a WaterNet Research Leader in lieu of the Network Professional Training Officer.

4.3.3 Catchment partnership on translating IWRM principles to management

This activity is on-going in collaboration with GWP-SA. WaterNet will continue to focus on those catchments where there is active research e.g. Limpopo Basin for the Challenge Program on Water and Food and the Thukela and Pangani Basins for the SSI project.

4.3.4 English for water managers course

Two (2) candidates from of non-Anglophone countries were admitted to IWRM Masters programme for the 2008-2009 intake (from DRC and Madagascar, **refer to Table 4.1**) enrolled at UDSM. However due to the late admissions it was not possible to offer the preparatory course. It was also decided that it would be uneconomic to run the full three week course for two participants.

Since UDSM had four (4) other students from Burundi who are funded externally and who are taking extra English language lessons at the British council Offices in Dar es Salaam it was agreed that the two WaterNet funded students should also participate in the British Council offered courses with the externally funded group.

4.4 REGIONALISE AND STRENGTHEN RESEARCH IN IWRM

4.4.1 Research capacity building

This is an ongoing activity which executed jointly through WARFSA and WaterNet. Regrettably during the reporting period WaterNet and other collaborating partners were informed that the management agreement between Sida and IWSD regarding WARFSA had been terminated as of Friday the 29th of June 2007. This meant that IWSD had ceased to act as the Managing Agency for the WARFSA.

Following discussions on revival of WARFSA at the 2nd WaterNet Management Board Meeting and the 8th WaterNet AGM the WaterNet Secretariat (with the approval of the Board) invited Dr Kevin Pietersen the Chairman of the WARFSA Scientific Research Board (SRB) to the 3rd WaterNet Management Board meeting so as to try and find a speedy solution.

Further views and discussions were presented at the meeting and they included the following:

- From WARFSA SRB it had been a difficult time and they had requested Sida to shorten the time as much as possible so that WARFSA activities could be normalised again.
- There was need to identify a new management agency to run the functions of WARFSA. The current situation was that IWSD had been asked to pay back certain funds to Sida. The way forward had so far not been clarified.
- Relevance of WARFSA was never questioned. With the need to resuscitate WARFSA there was also need to consider issues such as donor dependency and sustainability.
- The issue of WARFSA had been a long process. SADC, DANIDA and Sida had met on the issue and they had discussed the alternative hosting of WARFSA, but this had to be done after a final audit. They had agreed that after that they could go ahead and see what could be done, discussion so far being that Sida and Netherlands government were considering having WARFSA under the same ownership as WaterNet.
- The management hosting had to be done through a procurement process.
- SADC had to terminate its contract with IWSD
- The ownership of WARFSA and execution of duties had to be looked at as two separate hurdles.
- There was a need to be careful in making these decisions as the same old problems might arise. There was already a huge contribution from institutions to put WARFSA back.
- The memory of WARFSA still remained at IWSD. It was not easy to start afresh and therefore there was need to salvage what is at IWSD.
- There was need to have the institutional document of WARFSA first as a starting point. Institutional memory would be difficult to get and therefore there was need for fresh blood into the system
- The whole issue at IWSD was about financial governance which was not properly managed.
- There was need to consider certain issues, e.g. changing the whole design which could mean changing the procurement process for hosting WARFSA.

After lengthy deliberations the Board finally resolved that WaterNet (Board Chairman and Manager) will work with Dr Kevin Pietersen to come up with a proposal that would be discussed and sent to SADC and the Cooperating Partners. To avoid losing goodwill in terms

of researchers a time frame of end of October 2008 the time for the Symposium was agreed upon.

4.4.2 IWRM research

WaterNet is involved in two collaborative research programmes *viz.* the Challenge Program on Water and Food, where WaterNet is coordinating an IWRM research programme in the Limpopo Basin with 19 partner institutions and the Smallholder System Innovation Watershed Management (SSI Programme) which involves 5 partners (4 WaterNet members) who conduct research in river basins in Tanzania (Pangani) and South Africa (Thukela).

The WaterNet Challenge Program on Water and Food (CPWF) Project Number 17 (PN17) is a trans-institutional inter-disciplinary project within the Consultative Group on International Agricultural Research (CGIAR). The project goal is to contribute to improved rural livelihoods of poor smallholder farmers through the development of an IWRM framework for increased productive use of green and blue water flows and risk management for drought and dry-spell mitigation at all scales in the Limpopo basin.

The Project was supposed to officially end on 31 August 2008. However, CPWF management has approved a no-cost extension of one year to the project, and a letter confirming the extension has been received (**Annex 9**). The extension was necessitated by the slow start of the Project and the need to complete field work, policy briefs and guidelines.

The major highlight of the reporting period was the second part of the 2007-2008 field season (**Table 4.3**).

By the end of the period under review, 28 Masters students had completed their dissertations and graduated since the project started, including 7 female students, and 22 students from national agricultural or water management or research institutes (**Figure 4.3**). Three students are currently engaged in fieldwork and one in coursework.

A particular benefit of the project is the development of trans-disciplinary scientific teams for the supervision of students and the guiding of community training. This is made possible by the broad nature of the PN17 partnership, backed up by the wider WaterNet membership (**Figure 4.4**). Institutional affiliation shows the extent to which local scientists had ownership of Masters students supervision. There is a good balance between disciplines of supervisors, making for good trans-disciplinary teamwork.

There are 7 PhD fellows: 5 fellowships from the project proposal and 2 additional PhD candidates who were identified by project partners who have allocated project research funding to the new projects. All of the fellows are busy with fieldwork and analyses, and three of them should complete within the next year (see **Annex 10**).

Table 4.3 Research highlights, CPWF Project Number 17 (January – June 2008)

River Basin	Research Activities	Recent Publications*
Mzingwane (Zimbabwe)	Conservation agriculture	1 article published 1 working paper published 4 abstracts accepted
	Hydrology / Climatology	1 article under review 5 abstracts accepted
	Hydrogeology	1 article published 3 abstracts accepted
	Management and institutions	3 abstracts accepted
	Siltation	1 abstract accepted
	River basin modelling	3 abstracts accepted
Chókwè / Lower Limpopo (Mozambique)	Conservation agriculture	1 abstract accepted
	Irrigation water management	1 abstract accepted
	River basin modelling	1 abstract accepted
	Water quality	1 article published
Olifants (South Africa)	Conservation agriculture	3 abstracts accepted
	Farming systems modelling	1 article published 2 abstracts accepted
	Hydrology / Climatology	1 article under review 1 research report published
	Management and institutions	2 articles published 1 abstract accepted
Limpopo	Synthesis activities	2 articles published 2 abstracts accepted

*Abstracts (for conferences) and articles (for peer-reviewed journals) submitted or under review during this reporting period.

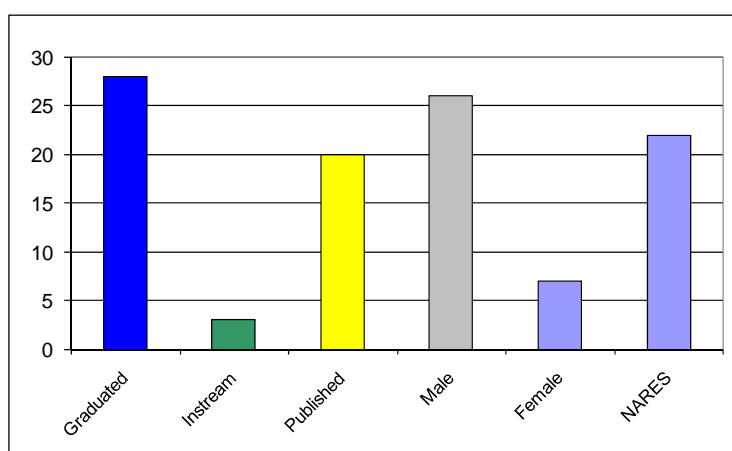


Figure 4.3 Profile of Masters students supported through Challenge Program PN17

Project outputs achieved to date (see **Annex 10**) include 42 project activity reports (14 draft final reports), 19 journal articles, 9 institutional working papers, 77 conference papers, 28 Masters dissertations and 12 bachelors dissertations. Later this year, researchers and students from the project would present 20 papers at the WaterNet/WARFSA/GWP-SA 9th Symposium in Johannesburg, South Africa, 10 papers at the 2nd CGIAR International Forum on Water and Food in Addis Ababa, Ethiopia and 3 papers at the Challenge Program on Water and Food Workshop on Rain-fed Agriculture in Tamale, Ghana.

The Research Leader and one of the PhD students attended the Smallholder Systems Innovations in Integrated Watershed Management (SSI) project meeting in Tanzania in

January 2008. Major highlights of the meeting included presentations of results by PhD students and site visits. Plans for a second phase of the project were also discussed.

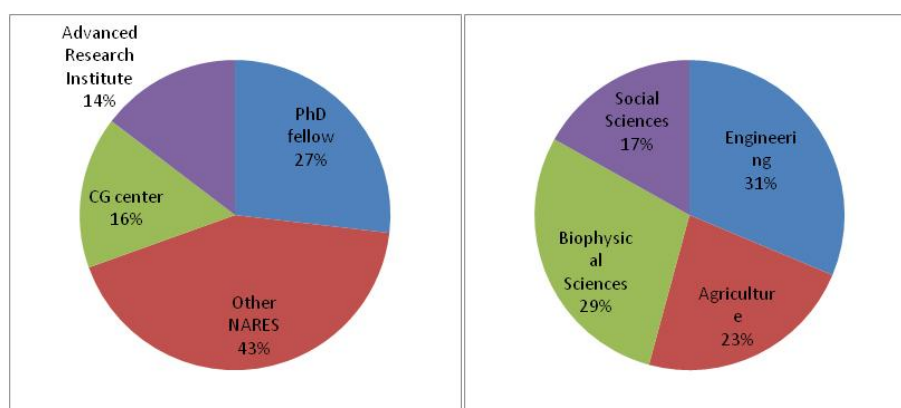


Figure 4.4 Affiliations (left) and disciplines (right) of supervisors of Masters students.

Most students had two or three supervisors. NARES = national agricultural (or water) research and extension services. PhD fellows who are also NARES staff are only recorded as PhD fellows.

The project was invited to present project results to the Challenge Program on Water and Food Steering Committee (CPWF SC) in February 2008. The Research Coordinator made the presentation at the FAO offices in Rome, Italy; the only project presentation made.

In March 2008, a workshop on payment for environmental services and training in the ECOSAUT model was held in Zimbabwe. This was funded by Challenge Program on Water and Food Theme 2 and several project researchers participated. ECOSAUT, a spreadsheet-based model, is very useful for the design and exploration of technological alternatives, where the best educated alternative to address environmental and socio-economic goals is required. The training was fruitful in that the model shall be applied in at least one, possibly two project study areas.

Plans are advanced for the Annual Project Scientific Workshop, to be held in Johannesburg, South Africa, in September 2008. A total of 31 researchers and students are expected, as well as representatives from the CPWF Management Team.

During the period under review, the project was allocated to a new CPWF Theme Leader (to which WaterNet reports), Dr Elizabeth Humphreys of the International Rice Research Institute. In her recent review of the latest project progress report (which was approved), she said that *“I am extremely impressed with what I have seen and read to date – the breadth and quality of the work, the data you have collected, the modelling approaches you are developing and/or applying, the large number of students who have graduated and their supervisory/mentoring arrangements, your well organized compilation of publications and the cross referencing to them in your Annual Report.”*

The audit for the 2006-7 financial year was completed with no anomalies. **Table 4.4** shows the status of the accounts at the end of the reporting period.

Table 4.4 Status of CP17 accounts as of 30 June 2008

Accounts	
Total project budget	\$1,678,436
Funds received to date	\$1,153,720
Total expenditure to date	\$1,006,800
Balance of funds received remaining	\$ 146,920
Balance of project budget remaining	\$ 479,541

The SSI research team had their 5th annual scientific meeting in Same, Tanzania during the period 20-25 January 2008. The meeting discussed the researchers' progress; intensive fieldwork has led to a substantial data pool on on-farm water balances, ecosystem services, catchment scale hydrological processes and water allocation strategies. The outreach component also presented their progress in involving farmers in the research.

A field day showed the ongoing activities in the Makanya catchment, Pangani Basin. Several research farmers showed their experiments and the local researchers explained the experimental setup. As this was the last workshop for the SSI (1) programme, a synthesis peer-reviewed journal edition was discussed and an outline of the content was agreed upon, with abstracts developed for the individual papers. A budget neutral extension was granted until December 2008, during which PhD students can finalise their theses. Handling of the transition period was discussed as well as opportunities for starting up a second phase of the SSI research.

At the moment 5 PhD researchers are writing up their theses (or have recently finished). The PhD researcher for project 1 has postponed his research for at least a year. The researchers who started in 2007 are continuing with data collection and writing papers. The SSI research team is currently finalising the papers for the special journal issue of Agricultural Water Management. One part of the SSI-phase 2 has been granted funding, which allows for 2 PhD students in the Pangani Basin and 2 Post Doctoral researchers at University of KwaZulu Natal and University of Dar es Salaam, focussing on large scale aspects of SSI.

Find more on: www.unesco-ihe.org/ssi.

4.4.3 Funding for new research activities

At the end of February 2008 the WaterNet Manager participated in a Conference entitled "Knowledge on the move: research for development in a globalizing world" in The Hague, The Netherlands. The conference came as a result of the realization that there was need to take stock of past experiences in research and lessons learned from past research and to reflect on the changing context of research and international cooperation particularly involving the Government of The Netherlands.

The main objectives of the workshop were to explore new ways of promoting science for development. The conference looked at the relations between the changing landscapes of the field of development cooperation and the field of international research cooperation. The conference was structured along three issues. The first issue was research arenas, which focused on international research partnerships in the context of development cooperation. The second issue dealt with research practices that dealt with potential tension between social relevance and academic excellence. Lastly the conference focused on research capacity which focused on capacity building for relevant research. The importance of research in the

global knowledge society and the implications thereof for developing countries and for research for development in particular were noted.

Some of the immediate outcomes of the conference included the creation of research partnerships between Netherlands institutions and institutions from developing countries. Some institutions made renewed commitment to sponsor research in developing countries.

One such discussion was between WaterNet and the Netherlands Organization for International Cooperation in Higher Education (Nuffic). The discussion centred on the possibility of funding a WaterNet PhD program through a Multi-Year Agreement (MYA). This led to the development of a concept note which was presented at the 3rd Management Board meeting.

WaterNet intends to embark on the PhD programme involving 30 candidates drawn from the region and recruited over a space of four years i.e. 7 candidates each year from 2009 to 2012 with the last batch earmarked to complete their studies by 2017. WaterNet hopes to offer the fellowships as sandwich scholarships to the tune of a total of **3 Million Euro**.

Experience has shown that sandwich PhD programmes, although costly, are more attractive and provide a modality which fosters efficient south-north cooperation of experts (PhD candidates, supervisors and stronger institutional links involving shell-to-shell and core-to-core interactions or partnerships), whilst at the same providing an environment where the graduates return to their organizations and countries within the region thereby avoiding the debilitating south-north brain-drain problems.

The idea was welcomed by the Board and the WaterNet Secretariat was encouraged to submit the concept at the earliest opportune time. The following comments were made at the Board which needed to be considered in the proposal:

- The idea would allow each Professorial Chair to have at least one PhD per year
- To make the proposal more attractive there was need to show WaterNet's ability to raise at least 25% of the funding. Additional funds could be mobilised from WARFSA and WaterNet's through the Staff Development Fund and Professorial Chair Fund
- The proposals presented an opportunity for WaterNet and WARFSA to link and create a strong partnership.
- The approach in developing the skills would target capacity building of both institutions and individuals and candidates should be from the region and fairly spread among the member states and identified research themes.

4.4.4 WaterNet-SADC Professorial Chairs in IWRM

University of Dar es Salaam

The University of Dar es Salaam (UDSM) appointed Prof Felix Mtalo as the Chair Holder with effect from 1 December 2007. The Chair holder met the WaterNet Manager and Chairman of the Board at the end of April 2008 to discuss his work plan and functions. Concerns which had been raised within the work plan were discussed and ways of addressing the issues were agreed. Prof Mtalo effectively started his Professorial Chair duties as from 1 February 2008.

University of Zimbabwe

The candidate found suitable for the University of Zimbabwe (UZ) Chair was offered the position late last year but he turned down the offer. UZ in liaison with the WaterNet Secretariat will make a decision on whether to re-advertise.

Polytechnic of Namibia

The position and Polytechnic of Namibia was advertised with a closing date of 30 January 2008. Interviews for the position were held on 19 March 2008 and the position was offered to the successful candidate but it was not clear at the end of the reporting period whether the candidate had accepted the offer.

University of Malawi

The process of appointing the Professional Chair for the University of Malawi is underway. The advert for the position was released on the 28th of June 2008 and the closing date of application was set on the 25th July 2008. The summary of the recruitment procedure suggested by the University of Malawi (UNIMA) is as follows:

- UNIMA will do the preliminary short listing and then send the names to WaterNet of all the shortlisted candidates.
- UNIMA will then send out invitations and arrange for interviews to be conducted in Zomba, Malawi.
- The interviewing panel will consist of representatives from University of Malawi, WaterNet and SADC Water Division.
- Candidates will be assessed on the basis of their performance during interviews as well as supporting documentation they will have submitted.
- The interview panel will make recommendations to the University Council about the suitable candidate.
- The University Council will make the final decision as the appointing body UNIMA.

University of the Western Cape

At the University of the Western Cape (UWC) there is an unfortunate position like other candidate institutions of not having an existing post that can be allocated to the SADC-WaterNet Professorial Chair. So this will be a completely new post. As soon as this is the case the proposal has to be scrutinised very closely by the University Administration to try and understand exactly what the University will be committing itself to.

The procedure suggested by UWC is as follows:

- A proposal is written and submitted to the Dean of Science and if convinced, it then passes to the Faculty Appointments Committee. There the proposal gets dissected and if the Faculty Appointments Committee approves, because it is a Professorship

position, it will have to go to the Senate Appointments Committee and then to Council. Normally if the Senate Committee gives its approval, Council does not overrule.

- After the Committees have agreed to the creation of the post, the Finance Department will investigate whether there are sufficient funds to pay for the post.
- The application for the post is currently with the Faculty Appointments Committee.

Issues that have been raised at the Faculty Appointments Committee include:

- Two year duration of the appointment was regarded as too short
- Guarantee of the WaterNet funding

4.5 RAISE AWARENESS AND UNDERSTANDING IN IWRM

4.5.1 WaterNet outreach activities

Raising awareness of IWRM has up to the present primarily been pursued through the annual WaterNet/WARFSA/GWP-SA Symposium and participation in other regional and international fora and meetings.

During the reporting period WaterNet participated in the following events:

Knowledge on the Move: Research for Development in a Globalising World Conference (26-29 February 2008, The Hague)

The Conference was held on 26-29 February 2008 at the Institute of Social Studies (ISS) in The Hague. The Conference was organised by a consortium consisting of the following institutions:

- ISS
- Nuffic
- NWO/WOTRO

For many years, the Netherlands played a prominent role in the international debate on the role of science and technology in development; its approach was characterised by a strong demand-driven orientation and a focus on local ownership. Its policies were inspired by an advisory council (RAWOO) in which experts from developing countries were strongly represented. Therefore, Southern perspectives played a relatively large role in the Dutch approach.

The recent evaluation of this approach by the Policy and Operations Evaluation Department (IOB) highlights some of its merits, but also some of its shortcomings. Some of the main conclusions refer to the unaltered importance of research capacity development, to the need for a renewed reflection on the principles of local ownership and demand orientation, and to the potential tension between academic excellence and development relevance of research.

As the IOB acknowledges, the Dutch approach to research for development is shifting, as is the case with many other donors. For a number of years now, the experience of the gap between policy and science, both in developing and donor countries, has once again led to rethinking how policy issues can inspire research and how research can inform policymaking. Research continues to focus on development priorities, but the interaction between researchers, practitioners and policymakers is given more attention. The arena for demand articulation and knowledge development is broadened, covering the knowledge needs of policymakers as well. Moreover, there is a widely felt need to mobilise other branches of science, hitherto not involved in development issues, for purposes of global development and to ensure attainment of the Millennium Goals.

The international conference brought together experts from developing countries, the Netherlands and other donor countries to reflect on research for development.

The following *themes* were identified:

1. Trade and development

2. Climate, energy and environmental care
3. Science, technology and innovation, with attention for food security and sustainable agriculture
4. Health systems and health contexts
5. Peace, security and governance
6. Migration in an urbanizing and globalizing world
7. Human rights, including women's rights
8. Research communication

Eight parallel *workshops* addressed the cross-cutting issues from the point of view of the experiences and insights with regard to these specific themes. On 28 February, the outcomes of the eight thematic workshops were restructured in three parallel sessions and brought to a synthesis in terms of the three cross-cutting issues. Conclusions were systemised at a plenary working session. Finally, a more public plenary session followed, attended by a wider audience and the press. The programme allowed for presentations from and a public discussion with high-level resource persons and politicians.

The SADC Multi-Stakeholder Water Dialogue (14-15 May, Maseru)

The Dialogue is an activity under the IWRM Awareness Creation Component of the SADC–DANIDA Regional Water Sector Programme (**Annex 11**). The aim of the activity is to improve participation in IWRM by policy makers from water influencing sectors and the media. The theme was “Watering development in SADC: Rising above the Climate Change threat towards Security”. Key presentations were made by: Ms Belynda Petrie and Dr. Stephanie Midgley based on a DFID Regional Climate Change Study. Mr. Phera Ramoeli (SADC Water Division) and Mr. Len Abrams (World Bank) presented on developing and financing water infrastructure for climate change adaptation

Some of the conclusions made at the dialogue, which may inform future capacity development and research ideas at WaterNet include the following:

- The need for the region to have a better understanding of the water-energy nexus and linkages of climate change with water resources and the impact on key sectors such as energy, agriculture and health.
- Funding opportunities exist for infrastructural development. These have not been taken up in the SADC region partly due capacity deficiencies for writing funding proposals. Climatic variability (and a lack of knowledge of how to integrate it in planning) adds on to the risk for those seeking loan funding.
- The region needs to develop its capacities to effectively participate in global climate negotiations (through for example the Kyoto Protocol and related processes) by strengthening its regional voice.

The WaterNet Programme Officer attended the sessions and manned a WaterNet exhibition. Discussions were held on the SADC Communication Strategy. Following these discussions, SADC-DANIDA agreed to work with WaterNet to come up with a list of papers presented at the WaterNet/WARFSA/GWP-SA Symposium classified in a way more accessible to the media.

3rd SADC-EU International Scientific Symposium: “Towards Meeting the Challenges of Climate Change: Institutional Structures and Best Practices in Land and Water Management in Southern Africa (28-30 May 2008, Lusaka)

The main objectives of the 3rd SADC-EU International Scientific Symposium were to promote interaction and knowledge sharing among policymakers, academics, practitioners and all those involved in Land and Water Management as well as key cooperating partners in identifying regional issues, gaps and priorities that require further research and support. Participants from various institutes took part in the symposium (**Annex 12**)

Papers were presented under the following 4 thematic areas:

- The impact of climate change on land and water management – a Southern African perspective
- Best practice in land and water management to improve and secure livelihoods
- Linking land and water management to socio-economic development and food security
- The role of national and regional institutions in technology development and dissemination

The WaterNet Research Leader presented a paper entitled ‘*Integrated water resource management (IWRM) research for mitigating drought and improving livelihoods within the Limpopo Basin.*’ This paper is a preliminary synthesis of the Challenge Program on water and Food PN17 project. The paper will be revised and updated and it will form the basis of the final report of the project. The paper received valuable feedback from the symposium.

The symposium noted that there were ongoing efforts by governments to assist the agricultural sector, but it was also recognized that the measures could not bear fruit unless the governments responded to several challenges. These challenges were identified as shown in **Table 4.5**.

Table 4.5 Challenges identified by the Symposium on Climate Change

Area	Challenges
Impact of climate change	<ul style="list-style-type: none"> • less predictable weather patterns (extreme weather conditions) • Shift in agro-ecological zones (poses challenges in application and up-scaling of technologies) • Loss and shift in biodiversity • Widening band of disease occurrence
Best practices	<ul style="list-style-type: none"> • Inherently low soil fertility • Scarcity of agricultural water • Escalating input prices
Linking to socio-economics	<ul style="list-style-type: none"> • Low adoption rates of technologies • Communication of agricultural information • Escalating food prices • Weak extension services
Strengthening institutions	<ul style="list-style-type: none"> • Weak participatory research and developments approaches • No clear policies to address climate change issues

The symposium proposed that there was a need to make progress and that global and local approaches were needed to offer solutions. The workshop therefore concluded with 4 recommendations:

1. Promote technologies to mitigate and adapt to climate change
2. Strengthen technology generation
3. Improve training, information sharing, networks and communication with emphasis on farmer extension
4. Increase efforts for resource mobilisation

WaterNet will remain active and take part in the implementation of some of these recommendations.

Cap-Net Capacity Building for Climate Change Adaptation: Planning Meeting (17-19 March 2008, Geneva)

A three day workshop was held by Cap-Net and regional networks at the World Meteorological Organization's (WMO) offices in Geneva Switzerland from 17 to 19 March 2008. The main objectives of the workshop were to plan for the first global training-of-trainers (ToT) on climate change and water resources. The first training will be held in Panama in August 2008. Representatives from six Cap-Net affiliated networks were present – Agua Jaring, Awarenet, NileIWRMnet, REDICA, Cap-Net Brasil/Rhama, and WaterNet – along with members from WMO's Associate Program for Flood Management (APFM) (**Annex 13**).

The workshop agenda included presentations from WMO and the represented networks also gave updates on their training plans in the near future. The workshop came up with a detailed workplan for the Panama training workshop, including identification of the trainers and participants, and developing the agenda.

WaterNet will use ideas and linkages gained from this workshop to further develop the Climate Change research and training agenda within the network. WaterNet will host the Southern Africa Region training of trainers workshop from 26-30 January 2009. Some of the trainers from WMO and the regional networks will be invited to facilitate in some of WaterNet's professional training courses on climate change.

During the reporting period one issue of the WaterNet newsletter (WaterNet News Volume 4 Issue 1) was produced and circulated (**Annex 14**). The newsletter has been useful as a quick method of sharing information on WaterNet activities and also on other information relevant to members and collaborative partners.

4.5.2 WaterNet/ WARFSA/ GWP-SA Symposium

The 9th WaterNet/WARFSA/GWP-SA Symposium will be held in Johannesburg, South Africa from 28-31 October 2008. The venue of the symposium is Birchwood Hotel. The theme for this year's symposium is "*Water and Sustainable Development for Improved Livelihoods*".

The Symposium would be organised to include the biennial Symposium of the International Commission on Water Resources Systems (ICWRS) of the International Association on Hydrological Sciences (IAHS). This means that the Symposium would be global in nature and having a regional flavour with participants drawn from all continents

The Local Organising Committee (LOC) was constituted during the reporting period and has 18 Members shown in the **Table 4.6**. They decided to have all their meetings virtually to save time and money. The minutes of their meetings are periodic summaries of the discussions and resolutions made.

Table 4.6 List of members of the LOC for the 9th Symposium

Name	Institution	Email Address
Akpofure E. Taigbenu (Chair)	University of the Witwatersrand	akpofure.taigbenu@wits.ac.za
Linda Chonco	Training and Instructional Design Academy of South Africa	linda.chonco@tidasa.co.za
Annemarie Oldewage	University of Johannesburg	aoldewage@uj.ac.za
Graham Jewitt	University of KwaZulu-Natal	JewittG@ukzn.ac.za
Bhekis Mamba	University of Johannesburg	bmamba@uj.ac.za
Mutsa Masiyandima	International Water Management Institute-South Africa	M.Masiyandima@cgiar.org
Washington Nyabeze	Makgaleng Projects	washy@wrnyabeze.com
Mike Marler	Development Bank of Southern Africa	MikeM@dbsa.org
Shafick Adams	Water Research Commission	shaficka@wrc.org.za]
Lewis Jonker	University of the Western Cape	ljonker@uwc.ac.za
Jaqui Goldin	University of Pretoria, South Africa-Country Water Partnership	jagoldin@sybaweb.co.za
Ruhiza Jean Boroto	Source Strategic Focus	jboroto@wol.co.za
John Ndiritu	University of the Witwatersrand	john.ndiritu@wits.ac.za
Lubica Korac (Secretary)	University of the Witwatersrand	lubica.korac@wits.ac.za
Daniel Malzbender	African Centre for Water Research	dbmalzbender@acwr.co.za
Hamanth Kasan	Scientific Services, Rand Water	hkasan@randwater.co.za
Matlala Moloko	Department of Water Affairs & Forestry	Matlalam@dwaf.gov.za
Chris Moseki	Department of Water Affairs & Forestry	IKA@dawf.gov.za

The following milestones have so far been achieved in the organisation of the symposium:

- Payment of a deposit to Birchwood Hotel and thereby securing the venue
- Fundraising of a total of R 40 000 by the LOC. The funding came from Water Research Commission of South Africa (WRC) and the International Water Management Institute (IWMI) – Pretoria Office.
- Completion of the review of abstracts as indicated in **Table 4.7**. After the second and final call for submission of abstracts (**Annex 15**).

Table 4.7 Outcome of the review of abstracts submitted for the 9th Symposium

Sub-theme	Accepted Abstracts		Rejected Abstracts	Total Abstracts Submitted
	Oral	Poster		
Hydrology	14	13	0	27
Water and Environment	15	18	2	35
Water and Land	20	17	2	39
Water for People	16	13	7	36
Water and Society	14	17	6	37
Water Resources Management	10	11	4	25
Total	89	89	21	199

The following activities are currently on going:

- Registration has a new deadline of 15 August moved up from 31 July 2008
- Submission of full papers has a new deadline of 15 August moved up from 31 July 2008
- Production of the programme which will be finalised by 31 August 2008
- Printing of the volume of abstracts which will be completed by 31 August 2008

4.5.3 Alumni Association

Following the Launch of the Alumni Association at the 8th Symposium, a Steering Committee was constituted to spearhead the work of the association. The Steering Committee consulted with rest of the Alumni and came up with revised association statutes and a strategic action plan for 2008-2009. The Steering Committee have since motivated for a meeting with the WaterNet Secretariat with the following expected outputs:

- Finalise the WaterNet Alumni Association Statutes document
- Explore funding mechanisms for the Association
- Finalise the Strategic Action Plan for the Association

The meeting is expected to take place early in the second half of 2008.

5 DEVIATION FROM PLANNED ACTIVITIES

During the reporting period WaterNet wrote to DGIS on 13 June 2008 kindly requesting for a no objection to deviation in budget planning for the period 1 January to 30 June 2008 whereby all expenditures incurred will be supported through the DGIS subsidy to WaterNet.

The WaterNet budget and workplan for 2008 was adopted at the 8th AGM in Lusaka, Zambia and was included in the 5th Progress report submitted to you in May 2008 and also presented in this report (Refer to **section 3**). In the budget plan, WaterNet had indicated that the Fellowship and MSc Dissertation Funds and the Professorial Chair Fund will be supported through the Sida subsidy to WaterNet. This has always been the case since the inception of the Phase II project.

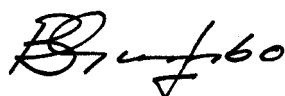
The motivation for this request was based on the following realisation and the need to have a smooth transfer from Phase IIa and IIb projects at the end of the reporting period:

1. As of the end of December 2007 (submitted Audit report) WaterNet has a balance of approximately 0.6 Million Euro of the DGIS subsidy for Phase IIa and 1.71 Million Euro of the Sida subsidy for the full duration of Phase II.
2. The DGIS Phase IIa funding will be brought to a closure on 30 June 2008 as per your letter authorising a no cost extension until this time.
3. It is anticipated that the DGIS Phase IIb funding via the Maputo Embassy could have a slight delay and hence there is a need to continue the operations on the Sida contribution i.e. using the Sida subsidy to bridge the Phase IIa and Phase IIb projects.
4. WaterNet also anticipates that Sida's contract with UNESCO-IHE for WaterNet Phase II will be terminated as soon as possible after the necessary requirements for closure have been agreed upon.
5. WaterNet hopes that Sida will sign a contract with the WaterNet Trust for the remaining part of WaterNet Phase I to ensure the full transition as planned at the beginning of the project.

The request being made also had an advantage in that the closing audits for the two subsidies were off-set and provided flexibility whilst Phase IIb began without a sudden workload that could arise from the simultaneous closures. Based on estimates the remaining balance of the DGIS subsidy it would suffice to cover the costs that will be incurred during the first half of 2008.

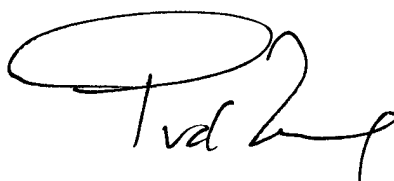
The request of WaterNet was granted with the exception that the DGIS subsidy should not support the Professorial Chair Fund.

Harare, October 2008



Bekithemba Gumbo, PhD, MSc
WaterNet Manager

Delft, October 2008



Pieter van der Zaag, PhD, MSc
WaterNet Project Director, UNESCO-IHE

6 ANNEXES

Annex 1: WaterNet Unesco-ihe Memorandum of Understanding	47
Annex 2: Responses On The Dissolution Resolution Of The WaterNet Trust Registered In Zimbabwe.....	52
Annex 3: IWRM Students Dissertation Titles For The 2007-2008 Intake	54
Annex 4: Advertisement For The 2009-2010 Masters Programme	56
Annex 5: Participants Of The IWRM Masters Workshop	62
Annex 6: Participants And Brochure For The Water Resources Assessment Course	67
Annex 7: Participants Of The Workshop On Reviewing And Editing Manuscripts For Journals.....	71
Annex 8: WaterNet, Cap-Net, SIWI Water Integrity And Accountability Mapping Study In Southern Africa	79
Annex 9: Challenge Program PN17 No Cost Extension Letter	82
Annex 10: Challenge Program PN17 Research Outputs.....	83
Annex 11: SADC Multi-Stakeholder Water Dialogue.....	97
Annex 12: Organisers, Sponsors and Participant of the 3 rd SADC-EU Symposium On Meeting The Challenges Of Climate Change.....	98
Annex 13: Participants Of The Climate Change And IWRM Workshop In Geneva	101
Annex 14: WaterNet News Volume 4 Issue 1	102
Annex 15: 9 th WaterNet/WARFSA/GWP-SA Symposium Announcement And Call For Abstracts.....	105

ANNEX 1: WATERNET UNESCO-IHE MEMORANDUM OF UNDERSTANDING

ANNEX 2: RESPONSES ON THE DISSOLUTION RESOLUTION OF THE WATERNET TRUST REGISTERED IN ZIMBABWE

Executive Chambers
16 George Silundika Avenue
P.O. Box 53, 495 or 2093
Harare
Zimbabwe

Tel: 758472-9 / 759750-3
726154
Fax: 756268 / 738909
E-mail: mail@cwg.co.zw
sturow@mweb.co.zw
Web: www.cwg.co.zw

Coghlan, Welsh & Guest
Established 1907
Incorporating
Stumbles & Rowe
Established 1928
Legal Practitioners

Attorneys, Notaries & Conveyancers • Executors and Administrators of Estates • Patent and Trade Mark Agents • Parliamentary Agents

Your Reference:

In reply please quote
Our Reference:

dllm/cjl

3 April 2008


The Manager
Waternet
P O Box MP 600
Harare

Dear Sir

re: DISSOLUTION OF THE TRUST

I thank you for your letter of the 28th March addressed to the Registrar of Deeds advising of the dissolution of the Waternet Trust, copied to our Mr D J Lewis who retired some two or three years ago. I have uplifted the Protocol copy of the Trust from Mr Lewis's Protocol documents and note that in terms of Section 14 of the Trust Deed the Trustees are entitled by unanimous resolution to dissolve the Trust subject to the approval of the Commissioner of Taxes and Registrar of Private Voluntary Organisations if there are any assets for distribution. If, however, the Trust was never registered with the Registrar of Private Voluntary Organisations, the approval of the Registrar does not appear necessary.

Yours faithfully


D L L MORGAN
COGHLAN WELSH AND GUEST
INCORPORATING STUMBLES AND ROWE

PARTNERS: DLL MORGAN BCOMM LLB(CAPE) BA(OXON) • JB MEYBURGH BA LLB (RHODES) • ANB MASTERSON BA LLB (CAPE) • LA DONNELLY JP BL (RHOD)
CC SEDDON ICD FCI ARB • FA EDKINS BL(HONS) LLB (RHOD) • TC MAZINGI BL (HONS) LLB (ZIM) MBA • KJ ARNOTT BPROC (CAPE)
BW ELLIOT LLB (GLASGOW) • BG CARR BA LLB MBA (CAPE) • N MOYO LLBS (ZIM) • ML TAYLOR BPROC (SA) • DCD DHUMBURA LLBS (ZIM)
CONSULTANT: RA STUMBLES BA (RHODES) MA (OXON)



ZIMBABWE

MINISTRY OF JUSTICE
LEGAL & PARLIAMENTARY AFFAIRS

Please address correspondence to-----
Chief Registrar or The Controller"

Telegraphic Address: "DEEDS HARARE"

Telephone Lines:

775544/6 or 777373- Deeds

775602 – Companies, Patents

P O Box CY 177, Causeway

Trade Marks & Industrial Designs

Fax: 263-4-777372

Our ref:

Your ref:

Office of the Chief Registrar of Deeds
and Companies

Controller of Patents, Trade Marks
and Industrial Designs

Century House East

38 N. Mandela Avenue, Harare

ZIMBABWE

10 April, 2008

Waternet

P O Box MP 600

Mount Pleasant

HARARE

Dear Sir

**Ref: APPLICATION FOR DISSOLUTION OF WATERNET TRUST NUMBER
NA 000471/2003.**

Reference is made to your letter dated 28 March 2008, where you enclosed a resolution to dissolve Waternet Trust. This office does not remove the name of the Trust from our records, but only file the resolution with the Trust Deed.

Yours faithfully

A Magwere

ASSISTANT REGISTRAR OF DEEDS



ANNEX 3: IWRM STUDENTS DISSERTATION TITLES FOR THE 2007-2008 INTAKE

Name	Gender	Country	Dissertation Title
CHIMPANTHENGHA Mavuto	M	Malawi	Development of appropriate tools that will guide on the management of leakages in an effort to reduce UFW in Blantyre Water Supply area.
CHIORESO Rennie	F	Zimbabwe	Water Scarcity in Urban Areas: A case study of Harare
CHISANGA Siwale	M	Zambia	Evaluation of Agricultural Water Demand for Commercial Farming in Chalimbana Catchment, Zambia
DIAS Jacqueline	F	Malawi	Assessment of Water Quality of Mulunguzi River and Dam and its Effects on Water Treatment Capacity
KAMTUKULE Sydney	M	Malawi	Assessing the Extent and Impacts of Sedimentation in Small Reservoirs in Malawi: A Case Study of Chamakala Dam
KIMEY Victor	M	Tanzania	Benchmarking in the Water Supply and Sanitation Sector
MASVOPO Taurai	M	Zimbabwe	Assessment of the Mtetengwe Alluvial Aquifer, Lower Mzingwane River Catchment, Zimbabwe
MATSEBULA Tenele	F	Swaziland	Evaluation of the Fractional Allocation System in the Komati Catchment
MLOWOKA Chimango	F	Malawi	Investigation on Extent of Stream Bank Cultivation and its Contribution to Siltation along Selected Streams in Central Malawi
MPANDE Hazel	F	Zambia	Investigating the Suitability of Bio-monitoring in Zambia - Case of the Ngwerere River
NKULI Grace	F	Tanzania	Investigating the quality of mine effluent and surface water at Bulyanhulu Gold Mining - Tanzania
PAWARINGIRA Regina	F	Zimbabwe	Flood Hazard and Mitigation using GIS Remote Sensing and Hydrological Modelling Techniques in the Low Lying Areas of Tsholotsho District, Zimbabwe
SHUUYA Matheus	M	Namibia	Assessing the impacts of pollution on the intended water uses and its cost of treatment. Case study of Calveque-Oshakati Open Canal, Namibia
TLALI Mahlalele	F	Lesotho	An Assessment of the Management of Rural Water Supply Schemes by Local Communities in Lesotho: A case study of Likhoele Community Council in Mafeteng District, Lesotho
TSIKO Callister	F	Zimbabwe	Measuring Forest Floor Interception in a Savannah Climate. A case of Harare, Zimbabwe
MASAKA Tebogo	M	Botswana	Water Accounts in the Face of Water Scarcity in the Limpopo Basin of Botswana: A GIS Approach
MPINGI Abdallah	M	Tanzania	Study of Nitrogen and Heavy Metals Contamination in Geita District and Possible Mitigation Measures: A Case of Mtakuja and Mabubi Rivers.
ALBINA John	F	Tanzania	Assessment of Environmental Impact Assessment (EIA) Status and its Implementation for Selected Projects in Tanzania: the Construction of Waste Water Treatment Plant for TBL, Fish Processing Factory in Mikocheni Industrial Area, Shelly's Pharmaceuticals Plant and East Kilimanjaro Water Supply.
BABOLOKI Autlwetse	M	Botswana	Modelling Phosphorus Removal in a Constructed Wetland: Case Study for the Department of Water Affairs Constructed Wetland, Botswana.
ENDALE Bewketu	M	Ethiopia	The Study of Sediment Problem in the Reservoir and Possible Mitigation Measures Case Study: Koka Reservoir, Ethiopia.
SIMOM Byera	F	Tanzania	Assessment of Water Service Delivery for the Urban Poor in Tanzania: the Case of Buguruni in Dar es Salaam City and Tanga Municipality

Name	Gender	Country	Dissertation Title
CHIMUNHU Tendayi	M	Zimbabwe	Addressing Agricultural Water Scarcity Under Various Scenarios Before 2025: Case of Save River Catchment
NDUWIMANA Dieudonne	M	Burundi	Droughts Analysis, A Case Study of Eastern Burundi
GONDWE Douglas	M	Malawi	Constraints and Benefits of a Participatory approach to Water Resources Management: the Case of Wovwe Rice Irrigation Scheme Wua in Karonga, Malawi.
CHIMPOPO Mukalula	M	Zambia	Assessment of Independence of Regulatory Bodies: A Case of the National Water Supply and Sanitation Council of Zambia (NWASCO)
ENOCK Emmanuel	M	Tanzania	Water Demand Assessment and Problems due to Water Utilisation in Same District
BUSINGYE Evelynne	F	Uganda	Correlation analysis between the Physical Catchment Descriptors (PCD'S) and the Ihacres Rainfall Runoff Model Parameters.
GOBRY Josephine	F	Tanzania	GIS based soil Moisture Accounting Using Global data: Case of Pangani river Basin
KHUMBO Kalulu	M	Malawi	Community Based Water and Environmental sanitation Management: The Case of Mulanje District in Malawi.
LUBANG Benedict	M	Uganda	Groundwater Exploration in Semi Arid and Mountains Terrain - analysis and Interpretation Strategy. A Case of North-eastern Uganda (Karamoja Region)
MAGOMA Deusdedth	M	Tanzania	Hydrological Modelling Using SWAT Model in the Data Poor Catchments, A Case of Rugezi Watershed in Rwanda
KAYITESI Marcelline	F	Rwanda	Improving Sanitation System: "Technical and Socioeconomic Perspectives" A Case of Kigali City, Rwanda.
WERANSARI Moses	M	Tanzania	Assessment of Sedimentation Problem in Water Intakes: Case Study, Kigoma Urban Water
HUSSEIN Nasra	F	Tanzania	Assessment of Water Demand Management Practices in the Selected Water and Sewerage Authorities: Case of Moshi and Mbeya Urban Water and Sewerage Authorities.
MDALANGWILA Peter	M	Tanzania	Assessment of Groundwater Reserves in Arusha city Aquifer Using A Groundwater Potential Model
TEKLU Sisay	M	Ethiopia	Application of the Pitman and Smar Rainfall-Runoff Hydrological Models for Wami River Basin of Tanzania
MADOBI Rejoice	F	Zimbabwe	The Impact of Water Access on Poverty in Zimbabwe. The Case of Runde Catchment
SAKURINGWA Saniso	F	Botswana	An Assessment of the Public Health Hazard Potential of Wastewater Reuse for Crop Production: A Case Study of Gaborone, Botswana
STEPHANO Bulili	M	Tanzania	Assessment of Effectiveness of Water User Groups (WUGS) in Managing Water Wells and Rain Water Harvesting Tanks: A Case of Bukombe District WUGS-Tanzania
UMUBYEYI Naila	F	Rwanda	Assessment of Environmental Impact of Abattoir Facilities on Receiving Water Bodies Case Study of Nyabugogo Abattoir Facility in Kigali City, Rwanda.
KANYIGINYA Violet	F	Uganda	Assessment of Nutrient Retention Capacity of A Wetland
KILUNGU Halima	F	Tanzania	Allocation to Sustain Ecological Functions: Case of Mara River Basin

ANNEX 4: ADVERTISEMENT FOR THE 2009-2010 MASTERS PROGRAMME



Building Capacity for Water Resources
Management in Southern Africa

REGIONAL MASTER DEGREE PROGRAMME IN INTEGRATED WATER RESOURCES MANAGEMENT 2009

Applications are herewith invited for admission to the regional Master Programme in Integrated Water Resources Management (IWRM) to be hosted by six universities in the region.

Structure of the Programme

The programme comprises a compulsory core (consisting of 6 modules), followed by a specialisation (consisting of three modules) and 2 electives. A preparation module is also available to strengthen English skills especially for applicants from non-English speaking countries.



CORE MODULES (6 MODULES)

UNIVERSITY OF ZIMBABWE
UNIVERSITY OF DAR ES SALAAM

Principles of IWRM
Principles of Hydrology
Socio-Economics and Environmental Resources
Aquatic Ecology and Environmental Management
Policies, Laws and Institutions
Project

PREPARATION MODULE

English for Water Managers

ELECTIVES (2 MODULES)

Depending on Availability

DISSERTATION RESEARCH PROJECT

SPECIALISATIONS (3 MODULES)

UNIVERSITY OF
ZIMBABWE



Water Resources
Management

Conflict Resolution

Hydrogeology

Water Resources
Modelling

UNIVERSITY OF
MALAWI



Water and
Environment

Environmental
Impact Assessment

Water Quality
Management

Environmental Water
Requirements

UNIVERSITY OF
DAR ES SALAAM



Hydrology

Hydrogeology

Remote Sensing
and GIS

River Engineering

POLYTECHNIC OF
NAMIBIA



Water for People

Water Supply
and Sanitation

Water Utility
Management

Waste Water
Management

UNIVERSITY OF
THE WESTERN CAPE



Water and Society

Water and
Security

Environmental
Education

Water and
Development

UNIVERSITY OF
BOTSWANA



Water and Land

Agricultural
Water Management

Wetlands Ecology
and Management

Catchment
Management



Building Capacity for Water Resources
Management in Southern Africa

REGIONAL MASTER DEGREE PROGRAMME IN INTEGRATED WATER RESOURCES MANAGEMENT 2009



FURTHER INFORMATION

Entry requirements

Participants are required to have at least a good first degree at Bachelor level (BA or BSc). The candidate should be able to show an orientation of his/her field of study to water related issues. Professional experience in relevant fields is an added advantage. The language of instruction is English. Candidates must therefore have a good command of the language.

Start of Programme

Programme starts in February 2009 at the two core host institutions.

Financial Assistance

WaterNet offers a limited number of scholarships on a competitive basis for SADC nationals plus those of Uganda and Kenya.

How to Apply

Complete the application form (attached and also available on the WaterNet website) in full in English. Applicants should also provide all documents requested on the form in English.

Submit the application in electronic form to iwrm-masters@waternetonline.org or in hardcopy to

WaterNet
PO Box MP600
Mt Pleasant
Harare
Zimbabwe

Applications should reach WaterNet by 31 July 2008

Only the successful applicants will be contacted.

If you have not been contacted by 31 December 2008 please consider your application unsuccessful.

For any further information, please contact the WaterNet Secretariat

T: (+263-4) 333248 / 336725 / 2917028 -30
F: (+263-4) 336740 / 334051
E: iwrm-masters@waternetonline.org
I: www.waternetonline.org



A Strategic Programme of the
SADC Water Sector



Building Capacity for Water Resources
Management in Southern Africa

PROGRAMME RÉGIONAL DE MAÎTRISE DANS LA GESTION GÉNÉRALE DES RESSOURCES HYDRAULIQUES POUR 2009

Les demandes ci-jointes sont invitées pour admission au Programme Régional Waternet de Maîtrise dans la Gestion Générale des Ressources Hydrauliques qui est accueilli par les six universités de la région.

Structure du Programme

Le programme comprend une partie principale obligatoire (composée de six modules), suivi d'une spécialisation (composée de trois modules) et de deux modules facultatifs. Un module de préparation est également disponible afin de renforcer les compétences en anglais chez les candidats venant de pays non anglophones.



MODULES PRINCIPAUX (6 MODULES)

UNIVERSITY OF ZIMBABWE
UNIVERSITY OF DAR ES SALAAM

Principes de l'IWRM
Principes de la science hydraulique
Ressources Socio-Economiques et Environnementales
Écologie Aquatique et Gestion Environnementale
Politiques, Lois et Institutions
Projet

MODULE DE PRÉPARATION

Anglais pour les Gestionnaires des Eaux

COURS FACULTATIFS (2 MODULES)

Selon la disponibilité

PROJET DE DISSERTATION DE RECHERCHE

SPÉCIALISATIONS (3 MODULES)

UNIVERSITY OF ZIMBABWE	UNIVERSITY OF MALAWI	UNIVERSITY OF DAR ES SALAAM	POLYTECHNIC OF NAMIBIA	UNIVERSITY OF THE WESTERN CAPE	UNIVERSITY OF BOTSWANA
Gestion des ressources hydrauliques	Eaux et Environnement	Science Hydraulique	De l'eau pour la population	De l'eau et la société	L'eau et la terre
Résolution de Conflit	Evaluation de l'Impact Environnemental	Géologie des Eaux	Approvisionnement en eau et hygiène publique	L'eau et la Sécurité	Gestion des Eaux Agricoles
Géologie des Eaux	Gestion de la Qualité des eaux	Senseur télécommandé et GIS	Gestion du Services des Eaux	Éducation environnementale	Marécages, Ecologie et Gestion
Modélisation des Ressources en Eau	Conditions Environnementales préalables des eaux	Ingénierie fluviale	Gestion des eaux usagées	Eaux et développement	Gestion de bassin hydraulique



Building Capacity for Water Resources
Management in Southern Africa

PROGRAMME RÉGIONAL DE MAÎTRISE DANS LA GESTION GÉNÉRALE DES RESSOURCES HYDRAULIQUES POUR 2009



PLUSIEURS RENSEIGNEMENTS

Conditions d'inscription

Les participants doivent être au moins titulaires d'un premier diplôme de niveau Licence (Licence d'Arts ou de Sciences). Le/la candidat/e devra être capable de montrer une orientation de son domaine d'études dans les questions relatives aux eaux. Une expérience professionnelle dans les domaines pertinents est un avantage supplémentaire. Des lettres de soutien provenant de l'employeur sont également requises. La langue d'instruction est l'anglais. Les candidats doivent avoir une bonne maîtrise de la langue.

Début du Programme

Le programme WaterNet IWRM commencera en février 2009 aux deux institutions principales d'accueil.

Assistance financière

WaterNet offre quelques bourses sur une base compétitive pour les ressortissants de la SADC y compris l'Ouganda et le Kenya.

Comment s'inscrire

Veuillez remplir le formulaire de demande en anglais, (www.waternetonline.org). Les candidats devront également fournir tous les documents mentionnés sur le formulaire en anglais.

Veuillez soumettre votre demande sous forme électronique à iwrm-masters@waternetonline.org ou envoyez une copie à

WaterNet
PO Box MP 600
Mt Pleasant
Harare
Zimbabwe

La demande complétée devra parvenir au Secrétariat de WaterNet le ou avant le 31 Juillet 2008.

Seuls les candidats sélectionnés seront contactés. Si vous n'êtes pas contactés d'ici la fin du mois de 31 Décembre 2008, veuillez considérer votre demande comme rejetée.

Pour tous renseignements supplémentaires, Veuillez contacter le Secrétariat de WaterNet

T: (+263-4) 333248 / 336725 / 2917028 -30
F: (+263-4) 336740 / 334051
E: iwrm-masters@waternetonline.org
I: www.waternetonline.org



A Strategic Programme of the
SADC Water Sector



Building Capacity for Water Resources
Management in Southern Africa

PROGRAMA REGIONAL DE MESTRADO EM GESTÃO INTEGRADA DOS RECURSOS HÍDRICOS PARA O ANO 2009

Torna-se aberto o processo de candidatura ao Programa Regional de Mestrado em Gestão Integrada dos Recursos Hídricos para o ano 2009, o qual será hospedado por seis universidades da região.

Estrutura do Programa

O programa consistirá num curso obrigatório (de 6 módulos), seguido por um curso de especialização (de três módulos) e dois cursos opcionais. Será oferecido, ainda, um módulo preparatório com vista a reforçar as competências em inglês dos candidatos, sobretudo os oriundos dos países não-anglófonos.



MÓDULOS OBRIGATÓRIOS (6 MÓDULOS)

UNIVERSITY OF ZIMBABWE
UNIVERSITY OF DAR ES SALAAM

Princípios de Gestão Integrada dos Recursos Hídricos (IWRM)
Princípios da Hidrologia
Recursos Socio-económicos e Ambientais
Ecologia Aquática e Gestão Ambiental
Políticas, Legislação e Instituições
Projecto de Investigação

MÓDULO PREPARATÓRIO

Inglês para Gestores de Água

MÓDULOS OPCIONAIS (2 MÓDULOS)

Segundo a disponibilidade

PROJECTO DE INVESTIGAÇÃO EM DISSERTAÇÃO

MÓDULOS DE ESPECIALIZAÇÃO (3 MÓDULOS)

UNIVERSITY OF ZIMBABWE	UNIVERSITY OF MALAWI	UNIVERSITY OF DAR ES SALAAM	POLYTECHNIC OF NAMIBIA	UNIVERSITY OF THE WESTERN CAPE	UNIVERSITY OF BOTSWANA
Gestão dos Recursos Hídricos	Água e Ambiente	Hidrologia	Água para Populações	Água e Sociedade	Água e Terra
Resolução de Conflitos	Avaliação do Impacto Ambiental	Hidrogeologia	Abastecimento e Saneamento da Água	Água e Segurança	Gestão da Água para a Produção Agrícola
Hidrogeologia	Gestão da Qualidade da Água	Sensoriamento Remoto e SIG	Gestão das Utilidades	Educação Ambiental	Zonas Húmidas, Ecologia e Gestão
Modelação de Recursos Hídricos	Requisitos Ambientais em Água	Engenharia dos Rios	Gestão da Água de Esgotos	Água e Desenvolvimento	Gestão das Captações de Água



Building Capacity for Water Resources
Management in Southern Africa

PROGRAMA REGIONAL DE MESTRADO EM GESTÃO INTEGRADA DOS RECURSOS HÍDRICOS PARA O ANO 2009



MAIS INFORMAÇÃO

Condições exigidas

Os candidatos devem ser detentores de um grau de licenciatura em Letras ou Ciências, com boa classificação. O candidato deverá mostrar-se orientado/a no seu campo de estudo relativo à área dos recursos hídricos. Será vantajosa qualquer experiência profissional que tenha nos campos pertinentes. A língua de instrução é o inglês. Os candidatos devem portanto apresentar bom comando da língua.

Início do Programa

O início do programa está previsto para Fevereiro de 2009 nas duas principais instituições hospedeiras.

Apoio Financeiro

O programa WaterNet concederá, mediante concurso, um número limitado de bolsas de estudo aos candidatos oriundos dos países-membros da SADC e aos provenientes de Uganda e do Quênia.

Processo de Candidatura

Preencher devidamente o formulário de candidatura, juntando todos os documentos indicados no formulário redigidos, (www.waternetonline.org). As candidaturas incompletas não serão consideradas.

Enviar as candidaturas em versão electrónica a iwrm-masters@waternetonline.org e as em versão impressa a

WaterNet
PO Box MP 600
Mt Pleasant
Harare
Zimbabwe

As candidaturas deverão ser entregues a WaterNet até ou antes do dia 31 de Julho de 2008.

Serão contactados apenas os candidatos aprovados. Se não receber contacto até ao fim de 31 Dezembro de 2008, considere, por favor, a sua candidatura não aceite.

Se precisar de informações suplementares, favor de contactar o Secretariado de WaterNet em:

T: (+263-4) 333248 / 336725 / 2917028 -30
F: (+263-4) 336740 / 334051
E: iwrm-masters@waternetonline.org
I: www.waternetonline.org



A Strategic Programme of the
SADC Water Sector

ANNEX 5: PARTICIPANTS OF THE IWRM MASTERS WORKSHOP

Name	Organisation and Address	Email/Website	Network
Azofeifa Vargas Ingrid (Ms)	Escuela Centroamericana de Geología, Campus Rodrigo Facio, Universidad de Costa Rica, 214-2060 UCR, San Pedro, Montes de Oca, Costa Rica	iazofeifa@geologia.ucr.ac.cr	Central American Water Resource Management Network (CARA)
Babel Mukand S. (Dr)	School of Engineering and Technology (SET, Asian Institute of Technology (AIT), P. O. Box 4 Klong Luang Pathumthani 12120, Thailand	msbabel@ait.ac.th, http://www.ait.ac.th	
Bagayoko Fafré (Mr.)	Institut International d'Ingénierie de l'Eau et de l'Environnement (2iE), Manager du Réseau WA-NET, 01 BP 594 Ouagadougou 01, Burkina Faso	fafre.bagayoko@2ie-edu.org	WA-Net
Bongani Ncube (Dr)	Department of Civil Engineering, University of Zimbabwe Campus, Mt Pleasant, Harare	bncube@waternetonline.org www.waternetonline.org	WaterNet
Cashman Adrian (Dr)	Centre for Resource Management and Environmental Studies, The University of the West Indies, Cave Hill, Barbados	www.cavehill.uwi.edu/	Caribbean Waternet
El-Sadek Alaa (Dr)	College of Graduate Studies Arabian Gulf University P.O. Box 26671 Manama, Bahrain	alaasa@agu.edu.bh	AWARENET
Fayyad Manar (Dr)	University of Jordan, Amman-Jordan P.O. Box 13797 Amman 11942, Jordan	m.fayyad@ju.edu.jo	AWARENET
Jewitt Graham (Dr)	School of Bioresources Engineering and Environmental Hydrology, 206, Rabie Saunders, Private Bag X01 Scottsville 3209, South Africa	jewittg@ukzn.ac.za	WaterNet
Lewis Jonker (Mr.)	IWRM Masters Programme, 2nd Level, A-Block, Education Building, P/Bag X 17, Bellville, 7535	Ljonker@uwc.ac.za	WaterNet
Mokhtar Mazlin B. (Prof)	institute for Environment and Development (LESTARI), University of Kabangsaan, Malaysia, 43600, UKM BANGI, Selangor, Malaysia	mazlinmokhtar@yahoo.com, mazlin@ukm.my	My-Cap-Net
Mowjood MIM (Dr)	Dept. of Agric. Engineering Faculty of Agriculture University of Peradeniya Peradeniya Sri Lanka	mmowjood@pdn.ac.lk www.pdn.ac.lk	Cap-Net Lanka
Noemdoe Simone (Ms)	Marumati Building 491 - 18th Avenue Rietfontein, 0048	Simone.noemdoe@cap-net.org www.cap-net.org	Cap-Net
Paris Marta (Mag Ing)	Santa Fé, Argentina.	martaparis@ciudad.com.ar	Arg-Cap-Net

ANNEX 6: PARTICIPANTS AND BROCHURE FOR THE WATER RESOURCES ASSESSMENT COURSE

Name	Sex	Country	Organisation	Email
Nzeyimana Jean Chrysostome	M	Burundi	Department of Water IGEBU	Jch.nzeyi@yahoo.fr .
Lawrence W. Thooko	M	Kenya	Water Resources Management Authority	lthooko@yahoo.com
Peter Mirara Macharia	M	Kenya	Kenya Meteorological Department	Macharia10@yahoo.com .
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Misford Wedson Mikuwa	M	Malawi	Ministry of Irrigation and Water Development	misfordmikuwa@yahoo.com .
Angelo Pereira	M	Mozambique	ARA-Centro Water Administration of Mozambique Centre	angelopereirabio@yahoo.com.br
Mario Chilundo	M	Mozambique	Eduardo Mondlane University	mchilundo@uem.mz mchilundo@yahoo.com.br
Ronaldo Inguane	M	Mozambique	National Directorate of Water	ringuane@dnaguas.gov.mz .
Dr. Umaru Garba Wali	M	Rwanda	National University of Rwanda	ugwas@yahoo.com
Mukiza Odillo	M	Rwanda	Ministry of Lands, Environment, Forestry, Water and Mines	odilonrw@yahoo.com .
Sakhiwe Nkomo	M	Swaziland	Department of Water Affairs	msaaksz@gmail.com .
Mashingia, F.A.J.		Tanzania	University of Dar es Salaam	fmashingia@yahoo.com .
Martha Kabuzya	F	Tanzania	University of Dar es Salaam	kabuzyam@yahoo.co.uk .
Dr. Kimaro, T.A.	M	Tanzania	University of Dar es Salaam Water resources Engineering	Kimaro@wrep.udsm.ac.tz
Mwalimu R. Sudi		Tanzania	Department of Water Resources Engineering University of Dar es Salaam	ramadhanimwalimu@yahoo.co.uk .
Diana Kimbute	F	Tanzania	Ministry of Water	mwakedi@yahoo.com .
Philipo Patrick	M	Tanzania	Pangani Basin Water Office (PBWO)	pmwakabengele@panganibasin.com
Grace Chitanda	F	Tanzania	Rufiji Basin	chitanda@gmail.com .
Pamella Temu	F	Tanzania	Ministry of Water (Rufiji Basin)	vanpatt2002@yahoo.co.uk .
Neema Khamisi	F	Tanzania	Department of Water Resources Engineering University of Dar es Salaam	neema_kh@yahoo.com
Subira Munishi-Kongo		Tanzania	Department of Water Resources Engineering University of Dar es Salaam/ University of Kwazulu Natal	evasubira@yahoo.com
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Twinomuhangi B. Maximo	M	Uganda	Directorate of Water Resources Management	twinomuhangi.wrmd@dwd.co.ug mtwinomuhangi@yahoo.com

Name	Sex	Country	Organisation	Email
Whiteson Simbeye	M	Zambia	Ministry of Agriculture & Cooperative. Department of Agriculture	simbeyewhite@yahoo.com
Boniface Mbewe	M	Zambia	Meteorological Department	bs_mbewe@yahoo.com
Ngosa Howard Mpamba	M	Zambia	Department of Water Affairs	mpambanh@hotmail.com
Kenneth Nyundu	M	Zambia	Department of Water Affairs	Kapalu69@yahoo.com .
Farai Maxwell Marumbwa	M	Zimbabwe	Zimbabwe National Water authority	maxmarumbwa@yahoo.com .
Farai Tererai	M	Zimbabwe	Zimbabwe National Water Authority	faraitererai@yahoo.com .
Facilitators and Organisers				
Dr. Thom Bogaard	M	Netherlands	UNESCO-IHE, Delft University Technology	t.a.bogaard@tudelft.nl.
Dr. Simon H. Mkhandi	M	Tanzania	Department of Water Resources Engineering University of Dar es Salaam	s_mkhandi@yahoo.com .
Prof Parida	M	Botswana	University of Botswana	paridab@mopipi.ub.bw
Ir. Hessel Winsemius	M	Netherlands	Delft University Technology	h.c.winsemius@tudelft.nl
Dr Bekithemba Gumbo	M	Zimbabwe	WaterNet	bgumbo@waternetonline.org
Nicholas Tandi	M	Zimbabwe	WaterNet	ntandi@waternetonline.org

Training Course Water Resources Assessment in Sub-Saharan Africa: Prediction in Ungauged and Data Scarce Basins

21 — 25 January 2008, Dar es Salaam, Tanzania



in collaboration with



UNESCO-IHE
Institute for Water Education



TU Delft
Delft University of Technology



Preamble

Sub-Saharan countries have limited finances, human and technical resources, for developing and maintaining hydrometric networks that can provide data for sustainable water resources assessment (required for planning, design and management). Whereas the needs for hydrological information are increasing, the number of meteorological stations in Africa have been declining during the last 30 years. The continuing problems arising from lack of data may impede the effective cooperation on management shared trans-boundary water resources and drought and flood management with major social, economic and environmental tragedies. It is for these reasons that the conveners developed this training course focusing on hydrological prediction in ungauged, poorly gauged or data scarce environments within southern Africa.

Course Objective

To develop a training module to equip water resource managers and planners with the necessary skills and understanding of water resources assessment in case of ungauged or data scarce environments within sub-Saharan Africa. It is also aimed to highlight the problems of lack of reliable data as well as presenting methods to cope with the data shortage such as transferring knowledge between gauged and ungauged basins and the potential of satellite derived information for the hydrological practice.

Course outcome

The participants will have increased capacity to handle and analyse (short series of) hydrological data. They will be aware of readily available data sources and their possibilities and limitations. The participants will also have increased awareness of methodologies to gain insight in hydrological behaviour of a catchment using short periods of data collection.

Target Group

Water resource planners, managers, hydrologist and hydrogeologists from government departments and consulting firms within the sub-continent. Participants are expected to have a basic hydrological background.

Methods

The course will use adult learning tools, focusing on participants' knowledge and experience. There will be a combination of short lectures (50%) and practical exercises (50%) including experience in collecting freely available data sources on internet.

Facilitation

Dr. Thom Bogaard is an expert in hillslope & catchment hydrology and landslide occurrence at Delft University of Technology and Unesco-IHE. He has a 15 year record in field based hydrology, hydrochemistry, tracer application and geotechnics. His expertise and interest is the interaction between water and environmental processes.

Prof. Bhagabat P. Parida is an expert in the area of hydrology and water resources at the University of Botswana. He has a total experience of over 35 years, which includes 11 years in the field (Dept. of Water Affairs). His interests are in the area of hydrology of extremes, stochastic hydrology and modelling environmental changes. In 1999 he coordinated the UNESCO course on Low Flow Studies under the Himalayan Hindu-Kush -FRIEND Project.

Dr Mkhandi is a senior lecturer at the University of Dar es Salaam. He is a hydrologist with more than 25 years of experience in water resources planning, hydrologic and hydraulic design of drainage structures and undertaking of hydrological studies. Dr Mkhandi is an author of several local and international technical publications, research and study reports.

Ir. Hessel Winsemius is a junior researcher in hydrology of the Delft University of Technology. He is an expert in the use of modern satellite information and global data sources, which can be used in hydrological evaluations and modelling. He has hands-on experience in GIS applications. Furthermore, he has substantial field experience with data gathering.

Financial Support

The organizers will provide full financial support to a limited number of participants
For further information and to apply please contact:

UNESCO-IHE: Thom Bogaard
T.A.Bogaard@tudelft.nl

WaterNet: Bekithemba Gumbo
waternet@waternetonline.org

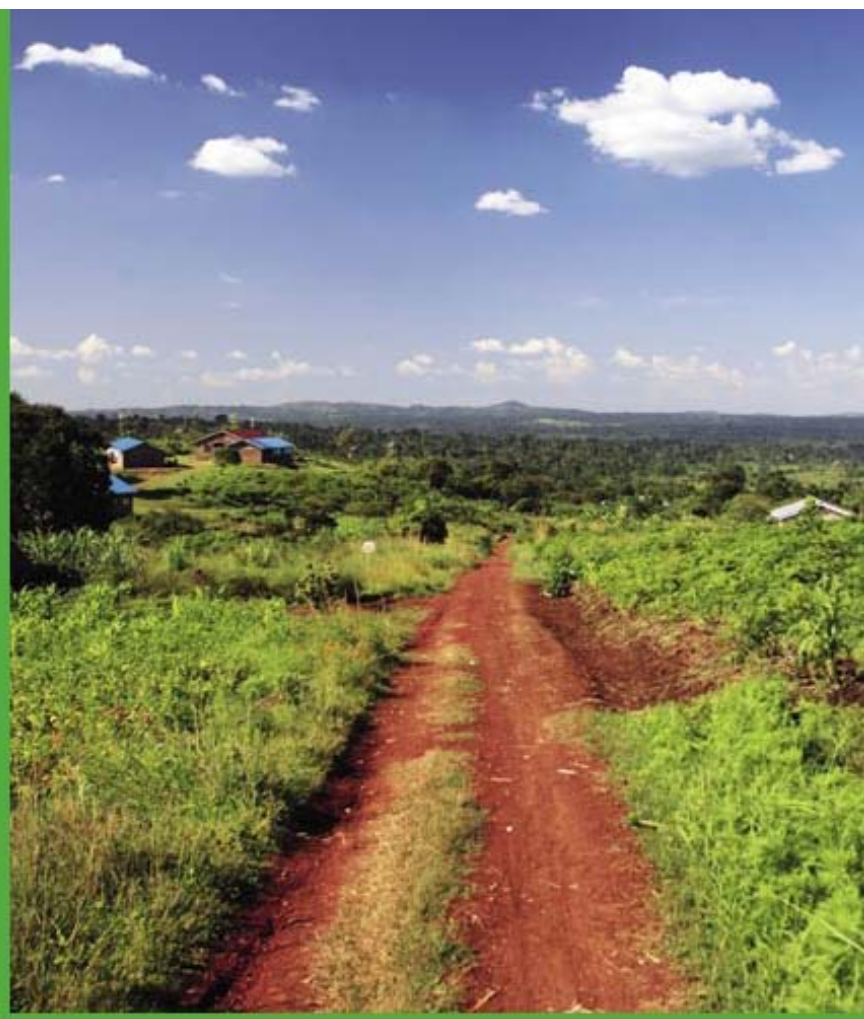
Cap-Net: Paul Taylor
info@cap-net.org



ANNEX 7: PARTICIPANTS OF THE WORKSHOP ON REVIEWING AND EDITING MANUSCRIPTS FOR JOURNALS

Name	Sex	Country	Organisation	email
Hoko, Zvikomborero	M	Zimbabwe	Department of Civil Engineering, University of Zimbabwe	hoko@eng.uz.ac.zw z_hoko@yahoo.com
Juizo, Dinis	M	Mozambique	UEM-Faculdade de Engenharia,	juizo@hotmail.com
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Mwakalila, Shadrack	M	Tanzania	Department of Geography, University of Dar es Salaam	smwakalila@yahoo.com
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Opere, Alfred	M	Kenya	Department of Meteorology, University of Nairobi	aopere@uonbi.ac.ke
Savenije, Hubert	M	Holland	Department of Water Resources, Delft University of Technology	H.H.G.Savenije@tudelft.nl
Senzanje, Aidan	M	South Africa	School of Bioresources Engineering & Environmental Hydrology, University of Kwazulu-Natal	Senzanjea@ukzn.ac.za
Tapela, Barbara	F	South Africa	Programme for Land and Agrarian Studies (PLAAS) University of the Western Cape	btapela@uwc.ac.za
Twomlow, Steve	M	Zimbabwe	International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)	S.Twomlow@cgiar.org ; twomlowtravel@yahoo.com

ANNEX 8: WATERNET, CAP-NET, SIWI WATER INTEGRITY AND ACCOUNTABILITY MAPPING STUDY IN SOUTHERN AFRICA



MAPPING OF INTEGRITY AND ACCOUNTABILITY IN WATER ACTIVITIES AND RELEVANT CAPACITIES IN THE SADC-REGION

By Anton Earle, Goodwell Lungu and Daniel Malzbender

*Report commissioned by
UNDP Water Governance Facility at SIWI, WaterNet and Cap-Net*



PAPER 12

STOCKHOLM, APRIL 2008

ANNEX 9: CHALLENGE PROGRAM PN17 NO COST EXTENSION LETTER



February 15, 2008

Dr. Themba Gumbo
WATERnet
PO Box MP600
Mount Pleasant
Harare
Zimbabwe

Dear Dr. Gumbo,

**CPWF PN 17 - "IWRM for Improved Rural Livelihoods"
Revision One to the Letter of Agreement:
No cost extension of the project**

This is to confirm our agreement to a no cost extension of the above mentioned project to 31st August 2009, as recommended by the Theme 2 leader.

The extension is to complete the following activities:

1. To complete delayed field work due to circumstances beyond project control.
2. To complete synthesis activities based on the above mentioned field work.
3. To complete the preparation of policy briefs and guidelines.

A revised work plan, milestones and outputs and delivery schedule for the project extended period has been provided and now form part of the contract documentation.

Yours sincerely,

A handwritten signature in black ink, appearing to read "P. George", written over a horizontal line.

Pamela George
Program Manager
Challenge Program on Water and Food

Cc: Themba Gumbo, Project Leader PN 17
Nancy Johnson, Theme 2 Leader

Mailing Address: P.O. Box 2075
Colombo, Sri Lanka

Location: 127, Sunil Mawatha
Pelawatta, Battaramulla, Sri Lanka

Tel: 94-11-2880000
Fax: 94-11-2784083 (Direct)
Fax: 94-11-2786854 (General)

Email: cpsecretariat@cgiar.org
Website: www.waterandfood.org

ANNEX 10: CHALLENGE PROGRAM PN17 RESEARCH OUTPUTS

Annexe 3 WaterNet Challenge Programme Masters Students, as at 28 February 2008

Diss. No.	Year	Fellow	Gender, Nationality	Partner, University	Funding	Catchment	Topic	Link to PhD Fellow	Project Status	Conference Paper	Journal Article	Email
D01	2003-2004	<u>Kileshye Onema, Jean-Marie</u>	M, DRC	Univ. Zim. Civil Eng.	CP PN17/ WaterNet	Mzingwane	A hydrological assessment of land use changes and human's effects on water resources in semi-arid Zimbabwe: the case of the Insiza sub-catchment.	Love	Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA 2005	Published in Physics and Chemistry of the Earth, vol.31 (2006), 870-875	kileshyej@ebe.pg.wits.ac.za
D02	2003-2004	<u>Maisiri, Norman</u>	M, Zimbabwe	Univ. Zim. Civil Eng.	CP PN17	Mzingwane	An on-farm evaluation of the effects of low cost drip irrigation on water and crop productivity, compared to conventional surface irrigation system	Love, Mupangwa	Dissertation accepted		Published in Physics and Chemistry of the Earth, vol.30 (2005), 783-791	
D03	2003-2004	<u>Mwenge Kahinda, Jean-Marc</u>	M, DRC	Univ. Zim. Civil Eng.	CP PN17/ WaterNet	Mzingwane	Water productivity and yield gap analysis of water harvesting systems in the semi-arid Mzingwane catchment, Zimbabwe	Mupangwa, Love	Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA 2006	Published in Physics and Chemistry of the Earth, vol.32 (2007), 1068-1073	Jean-Marc.MwengeKahinda@students.wits.ac.za
D04	2003-2004	<u>Murata, Rosemary</u>	F, Zimbabwe	Univ. Zim. Civil Eng.	CP PN17/ WaterNet	Mzingwane	Access to water for Improved Rural Livelihoods: An investigation of the perspectives, experiences and strategies of orphans and other vulnerable children: a case study of Insiza District Mzingwane		Dissertation accepted			
D05	2004-2005	<u>Moyo, Bekithemba</u>	M, Zimbabwe	Univ. Zim. Civil Eng.	CP PN17/RELMA	Mzingwane	Impact And Adaptation Of Climate Variability On Water Supply Reservoir yields For The City Of Bulawayo. (Mzingwane Catchment)	Love	Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA 2005		bekitembamoyo@yahoo.com
D06	2004-2005	<u>Moyo, Richard</u>	M, Zimbabwe	Univ. Zim. Civil Eng.	CP PN17/ RELMA	Mzingwane	Impact and sustainability of low cost drip kits, in the semi-arid lower Mzingwane subcatchment, Limpopo Basin, Zimbabwe	Love, Mupangwa	Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA 2005	Published in Physics and Chemistry of the Earth, vol.31 (2006), 885-892	moyor@msu.ac.zw
D07	2004-2005	<u>Munamati, Muchaneta</u>	F, Zimbabwe	Univ. Zim. Civil Eng.	CP PN17/ RELMA	Mzingwane	Cultivating livelihoods: an assessment of water allocation and management practices in small-scale irrigation schemes -case studies in mzingwane catchment	Sithole	Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA 2005	In preparation	muchiemunamati@yahoo.com
D08	2004-2005	Ntsheme, Osten	M, Botswana	Univ. Wits. Civil & Env. Eng.	CP PN17	Olifants	A survey of the current on farm agricultural land and water management practices in the Olifants catchment	Magombeyi	Dissertation accepted			
D09	2004-2005	Woltering, Lennart	M, Netherlands	UNESCO-IHE / TU Delft	CP PN17/ RELMA / Lamminga	Mzingwane	Estimating the influence of on-farm Conservation Practices on the Water Balance, Case of the Mzinyathini Catchment in Zimbabwe	Love	Dissertation accepted			l.woltering@cqiir.org
D10	2003-2004	<u>Nare, Lerato</u>	M, Zimbabwe	Univ. Zim. Civil Eng.	CP PN17/ WaterNet	Mzingwane	Involvement of stakeholders in the water quality monitoring and surveillance system: the case of Mzingwane Catchment		Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA Symposium 2005	Published in Physics and Chemistry of the Earth, vol.31 (2006), 707-712	leratonare@yahoo.com
D11	2005-2006	Panesar, Jespal	F, Canada	IWMI / Univ. Guelph	CP PN17	Olifants	The nexus between formal organizations and informal networks from a gender perspective: a case study from South Africa	Sithole	Dissertation accepted			
D12	2005-2006	<u>Dhliwayo, Clever</u>	M, Zimbabwe	Univ. Zim. Civil Eng./ ICRISAT	CP PN17	Mzingwane	On farm evaluation of the influence of different conservation agriculture practices on infiltration in rainfed agriculture, compared to conventional farming	Mupangwa, Love	Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA 2006	In preparation	cleverdhlwayo@yahoo.co.uk
D13	2005-2006	<u>Moyo, Liberty</u>	M, Zimbabwe	Univ. Zim. Civil Eng./ ICRISAT/ Univ. Zim. Soil Sci. & Agric. Eng.	CP PN17	Mzingwane	Assessment of the soil water management practices for increased seasonal rain water productivity to mitigate against climatic risks	Mupangwa	Dissertation accepted			libertiemoyo@yahoo.com
D14	2005-2006	Ngwenya, Thobhekile	F, South Africa	Univ. Zim. Civil Eng./ ICRISAT	CP PN17	Mzingwane	Effect of soil degradation from grazing pressure on rangeland soil hydrology	Love	Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA 2006	In preparation	

Annexe 3 WaterNet Challenge Programme Masters Students, as at 28 February 2008

Diss. No.	Year	Fellow	Gender, Nationality	Partner, University	Funding	Catchment	Topic	Link to PhD Fellow	Project Status	Conference Paper	Journal Article	Email
D15	2005-2006	<u>Vilanculos, Agostino</u>	M, Mozambique	Univ. Zim. Civil Eng./ Univ. Eduardo Mondlane FAEF	CP PN17	Chokwe	Towards improving flood forecasting and early warning systems through integrated technology in the Limpopo basin		Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA 2006. To be presented at 2nd Int. Forum on Water and Food, 2008		avilankulos@yahoo.com.br
D16	2006-2007	<u>Tunhuma, Nevin</u>	M, Zimbabwe	WaterNet, UNESCO-IHE	CP PN17 / UNESCO-IHE	Mzingwane	Environmental Impacts of Small-Scale Natural Resource Exploitation, Implications on Water Resources and Rural Livelihoods	Love	Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA 2007	In preparation	nevinmt79@yahoo.com
D17	2006-2007	<u>Svubure, Oniward</u>	M, Zimbabwe	WaterNet, UNESCO-IHE	CP PN17 / UNESCO-IHE	Mzingwane	A seat at the table: which table and at what costs? Participation and Institutional Reform in the Water Sector in Zimbabwe: Case of the Mzingwane Catchment	Mabiza	Dissertation accepted			osvub@yahoo.com
D18	2006-2007	De Hamer, Wouter	M, Netherlands	WaterNet, Twente	CP PN17/ U Twente	Mzingwane	Groundwater – surface water relations in an alluvial aquifer, Bengu, Thuli Basin, Zimbabwe	Love	Doing write-up	Presented at WaterNet/WARFSA/ GWP-SA 2007	Published in Physics and Chemistry of the Earth, vol.33 (2008)	w.dehamer@alumnus.utwente.nl
D19	2006-2007	Khosa, Sangwani	M, Malawi	Univ. Zim. Civil Eng./ ICRISAT	CP PN17	Mzingwane	Evaluating the effect of water demand scenarios on downstream water availability in Thuli river basin, Zimbabwe	Love	Dissertation accepted	To be presented at WaterNet/WARFSA/ GWP-SA 2008.		sangwanik@yahoo.co.uk
D20	2006-2007	Chibulu, Brenda	F, Zambia	Univ. Zim. Civil Eng./ ICRISAT	CP PN17	Mzingwane	Effect of rainfall variability and options for adaptation on household food security under semi-arid conditions at sub-catchment level	Mupangwa, Mhizha	Dissertation accepted			brendamwamba@yahoo.co.uk
D21	2006-2007	<u>Dondofema, Farai</u>	M, Zimbabwe	Univ. Zim. Civil Eng./ ICRISAT	CP PN17	Mzingwane	Mapping vegetation, soil and gully erosion changes in Insiza sub-catchment using remote sensing and GIS	Mhizha	Dissertation accepted	To be presented at WaterNet/WARFSA/ GWP-SA 2008.		chinomukutu@gmail.com
D22	2004-2006	Ncube, Mtokozi	M, Zimbabwe	Univ. Wits. Civil & Env. Eng.	CP PN17	Olifants	The impact of land cover and land use on hydrological response in the Olifants Catchment	Magombeyi	Thesis being examined	Presented at WaterNet/WARFSA/ GWP-SA 2007	Under review for <i>Physics and Chemistry of the Earth</i>	mthoko@makproi.co.za
D23	2005-2006	Rasiuba, Thabo	M, South Africa	Univ. Wits. Civil & Env. Eng.	CP PN17	Olifants	Water budget allocation, water use efficiency in agriculture in Olifants basin	Magombeyi	Thesis being examined	To be presented at CPWF Workshop on rainfed agriculture, 2008.		
D24	2006-2007	Arranz, R	M	IWMI	CP PN17	Olifants	Application of the Water Evaluation And Planning (WEAP) model to assess future water demands and resources in the Olifants Catchment, South Africa		Dissertation accepted		IWMI Working Paper 116 and Research Report	
D25	2006-2007	Liebrand, Jan-Willem	M, Netherlands	IWMI / Wageningen	CP PN17	Olifants	Securing Water through Land: field findings on water reform and water re-allocation in South Africa: Trichardsdal, Ofcolaco and Leydsdorp	Sithole	Dissertation accepted			
D26	2006-2007	<u>Chilundo, Mario</u>	M, Mozambique	UNESCO-IHE/ Univ. Eduardo Mondlane FAEF	CP PN17	Chokwe	Design of a water quality monitoring network for the Limpopo River Basin in Mozambique	Munguambe	Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA 2007	Published in Physics and Chemistry of the Earth, vol.33 (2008)	
D27	2004-2005	Mandivengerei, Stephen	M, Zimbabwe	Univ. Western Cape PLAAS / Univ. Zim. CASS	CP PN17	Mzingwane	Smallholder participation in water resources management after the land and water sector reforms in Zimbabwe: a case study of the	Sithole	Dissertation accepted			

Annexe 3 WaterNet Challenge Programme Masters Students, as at 28 February 2008

Diss. No.	Year	Fellow	Gender, Nationality	Partner, University	Funding	Catchment	Topic	Link to PhD Fellow	Project Status	Conference Paper	Journal Article	Email
D28	2007-8	<u>Masvopo, Taurai</u>	M, Zimbabwe	Univ. Zim. Civil Eng.	CP PN17	Mzingwane	Characterisation of the Mtetengwe alluvial aquifer, Lower Mzingwane river	Love	Dissertation accepted	To be presented at WaterNet/WARFSA/ GWP-SA 2008.		masvopo@yahoo.co.uk
i	2004-2006	<u>Chinoda, Grecious</u>	M, Zimbabwe	Univ. Zim. MRC	CP PN17	Mzingwane	The Limpopo Mobile Belt: Basin Structure and Potential for Groundwater Occurrence		Student has dropped out	Presented at WaterNet/WARFSA/ GWP-SA Symposium 2005		gchinoda@yahoo.ca
ii	2004-	<u>Moyce, William</u>	M, Zimbabwe	Univ. Zim. MRC	CP PN17 / Res. Council Zim.	Mzingwane	Hydrochemistry of alluvial aquifers, Mzingwane Catchment, Limpopo Basin, Zimbabwe	Love	Unknown	Presented at WaterNet/WARFSA/ GWP-SA Symposium 2005	Published in Physics and Chemistry of the Earth, vol.31 (2006), 988-994. Won award.	moyce2001@yahoo.com
iii	2005-2006	<u>Nyalungu, Lucky</u>	F, South Africa	IWMI / Univ. Limpopo	CP PN17	Olifants	Socio-economic conditions and water management as determinants of food security in smallholder irrigation schemes in Limpopo	Sithole	Unknown	Presented at Water Research Showcase, 2005 Johannesburg		
iv	2006-2007	<u>Dos Mucudos, Erasmo</u>	M, Mozambique	Univ. Eduardo Mondlane FAEF	CP PN17	Chokwe	Rainfed Agriculture Strategies	Munguambe	Fieldwork in progress			
v	2006-2007	<u>Ibraimo, Nadia</u>	F, Mozambican	Univeristy of Pretoria, Univ. E. Mondlane, FAEF	CP PN17	Chokwe	Rainwater harvesting	Munguambe	Doing coursework			nadiaalcinaibraimo@yahoo.com.br
LD01	2004-2005	Busane Basima, Lefranc	M, DRC	Univ. Zim. Soil Sci. & Agric. Eng.	CP PN46	Mzingwane	Biological aspects of small dams		Dissertation accepted		Published in Physics and Chemistry of the Earth, vol.31 (2006), 821-831	
LD02	2004-2005	Mpho, Tiego	M, Botswana	Univ. Zim. Soil Sci. & Agric. Eng.	CP PN47	Motloutsi	Indigenous WRM practices in Botswana		Dissertation accepted			
LD03	2004-2005	<u>Saunyama, Tendai</u>	M, Zimbabwe	Univ. Zim. Soil Sci. & Agric. Eng.	CP PN46	Mzingwane	Estimation of small reservoir storage capacities in limpopo basin using gis and remotely sensed surface areas		Dissertation accepted	Presented at WaterNet/WARFSA/ GWP-SA Symposium 2005	Published in Physics and Chemistry of the Earth, vol.31 (2006), 935-943	tintosawuz@yahoo.com
LD04	2004-2005	Tsvikirize, Doris	F, Kenya	Univ. Zim. Soil Sci. & Agric. Eng.	CP PN47	Mzingwane	An assessment of indigenous water management practices and their implication for effective water governance; a case study of different ethnic groups in the Limpopo Basin, Zimbabwe		Dissertation accepted		Published in Physics and Chemistry of the Earth, vol.31 (2006), 935-943	
LD05	2005	Sarron, Corralie	F, France	IWMI / Ecole Nat. Sup. Ag. Rennes	CP PN30	Olifants	Effects of wetland degradation on the hydrological regime of a quaternary catchment. Mohlapitse River, GaMampa valley, Limpopo Province, South Africa		Dissertation accepted			
LD06	2005-2006	Lefebvre, Marie	F, France	IWMI / Ecole Nat. Sup. Ag. Rennes	CP PN28	Olifants	Institutional framework, water pricing structures and costs of domestic water services in rural poor areas		Dissertation accepted			
LD07	2005-2006	Malatji, Sylvia	F, South Africa	IWMI / Univ. Limpopo	CP PN28	Olifants	Economic instrument to address equity of water allocation and sustainability of small-scale irrigation schemes		Dissertation accepted			
LD08	2005-2006	<u>Rukuni, Sam</u>	M, Zimbabwe	Univ. Zim. Civil Eng./ Univ. Zim. Soil Sci. & Agric. Eng.	CP PN46	Mzingwane	Hydrological modelling for the estimation of a cascade of reservoir storages: application of WEAP		Dissertation accepted			

Annexe 3 WaterNet Challenge Programme Masters Students, as at 28 February 2008

Diss. No.	Year	Fellow	Gender, Nationality	Partner, University	Funding	Catchment	Topic	Link to PhD Fellow	Project Status	Conference Paper	Journal Article	Email
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Column	Notes
Diss. No.	Dissertations numbers are given once dissertation accepted D# denotes masters projects funded primarily through CP PN17 LD# denotes masters projects funded primarily through other projects, but linked to PN17 Roman numerals refer to masters projects in progress
Fellow	<u>Underline</u> indicates NARES staff

WaterNet Challenge Programme Doctoral Students, as at 30 June 2008

Key Publications (excluding those with MScs)				
David Love	Partner budget: UNESCO-IHE	Registration: UNESCO-IHE Department of Water Engineering	Hosts: WaterNet and ICRISAT	Love, D, Twomlow, S, Mupangwa, W, van der Zaag, P, Gumbo, B. 2006. Implementing the millennium development food security goals – Challenges of the southern African context. <i>Physics and Chemistry of the Earth</i> , 31 , 731-737.
Project title	Land/water/livelihood strategies and water resource availability		Promoters & Supervisors	Stefan Uhlenbrook, Pieter van der Zaag and Ann van Griensven, UNESCO-IHE; Richard Owen, Univ. Zimbabwe; Steve Twomlow, ICRISAT
Progress	Proposal approved, modelling and write-up in progress. To submit early 2009.			Love, D., Uhlenbrook, S., Twomlow, S. and van der Zaag, P. Changing rainfall and discharge patterns in the northern Limpopo Basin, Zimbabwe. Submitted to <i>Journal of Hydrology</i>
				Love, D., Owen, R.J.S., Uhlenbrook, S. and van der Zaag, P. The lower Mzingwane alluvial aquifer: modelling a groundwater – surface water system governed by large dam management. 9th WaterNet/WARFSA/GWP-SA Symposium, Johannesburg, South Africa
				Love, D., Owen, R.J.S., Uhlenbrook, S. and van der Zaag, P. The Mushawe meso-alluvial aquifer, Limpopo Basin, Zimbabwe. 9th WaterNet/WARFSA/GWP-SA Symposium, Johannesburg, South Africa
				Love, D., Uhlenbrook, S., van Griensven, A. and van der Zaag, P. Application of the SWAT model in the Mzingwane and associated river basins, Zimbabwe. 9th WaterNet/WARFSA/GWP-SA Symposium, Johannesburg, South Africa
				Love, D., Khosa, S., Mul, M., Uhlenbrook, S. and van der Zaag, P. Modelling upstream-downstream interactions using a spreadsheet-based water balance model: two case studies from the Limpopo basin. 2nd CGIAR International Forum on Water and Food, Addis Ababa, Ethiopia, November 2008
				Love, D., Love, F., Owen, R.J.S., Uhlenbrook, S. and van der Zaag, P. Impact of the Zhovhe Dam on the lower Mzingwane River channel. 2nd CGIAR International Forum on Water and Food, Addis Ababa, Ethiopia, November 2008

WaterNet Challenge Programme Doctoral Students, as at 30 June 2008

Key Publications (excluding those with MScs)				
Walter Mupangwa	Partner budget: ICRISAT PhD	Registration: University of the Free State Dept of Soil, Crop & Climate Sciences	Host: ICRISAT	Mupangwa, W, Love, D, Twomlow, S. Soil-water conservation and rainwater harvesting strategies in the semi-arid Mzingwane Catchment, Limpopo Basin, Zimbabwe. <i>Physics and Chemistry of the Earth</i> , 31 , 83-90
Project title	Water and nitrogen management for risk mitigation in semi-arid cropping systems		Promoters & Sue Walker, Univ. Free State; Steve Supervisors Twomlow, ICRISAT	Love, D, Twomlow, S, Mupangwa, W, van der Zaag, P, Gumbo, B. 2006. Implementing the millennium development food security goals – Challenges of the southern African context. <i>Physics and Chemistry of the Earth</i> , 31 , 731-737.
Progress	Proposal approved, modelling and write-up in progress. To submit late 2008.			Mupangwa, W, Twomlow, S, Hove, L, Walker, S. 2007. Effect of mulching and minimum tillage on maize (<i>Zea mays</i> L.) yield and water content of clayey and sandy soils. <i>Physics and Chemistry of the Earth</i> , 32 , 1127-1134
				Mupangwa, W, Twomlow, S, Hove, L, Walker, S. Conservation tillage for soil water management in the Semi Arid southern Zimbabwe. <i>Physics and Chemistry of the Earth</i> , 33
				Mupangwa, W, Twomlow, S, Hove, L, Walker, S. Cowpea (<i>Vigna unguiculata</i> L) yield and soil water responses to minimum tillage and mulching. 9th WaterNet/WARFSA/GWP-SA Symposium, Johannesburg, South Africa
				Mupangwa, W, Twomlow, S, Hove, L, Walker, S. Characterisation of rainfall pattern for improved rainfed crop production in semi-arid southern Zimbabwe. 9th WaterNet/WARFSA/GWP-SA Symposium, Johannesburg, South Africa

WaterNet Challenge Programme Doctoral Students, as at 30 June 2008

Key Publications (excluding those with MScs)				
Paiva Munguambe	Partner budget: Univ. Eduardo Mondlane FAEF	Registration: University of Pretoria Department of Plant Production and Soil Science	Host: Univ. Eduardo Mondlane FAEF	Munguambe, P. 2007. The Art of Irrigation on Salt-Affected Soils in the Chókwè Irrigation Scheme, Mozambique. 8th WaterNet/WARFSA/ GWP-SA Symposium, Lusaka, Zambia.
Project title	Water and nitrogen management for risk mitigation in semi-arid cropping systems		Promoters & Supervisors J.G. Annandale & J.M. Steyn, Univ. Pretoria; Rui Brito, Univ. Eduardo Mondlane FAEF	Munguambe, P, Chilundo, M. Managing Salinity: an Adaptive Approach to Balance Salts and Nitrogen Leaching. 9th WaterNet/WARFSA/GWP-SA Symposium, Johannesburg, South Africa
Progress	Proposal approved, fieldwork and analyses in progress			Munguambe, P, Chilundo, M, Tamele, C, Brito, R. In situ rainwater harvesting for improved maize production under semi-arid conditions: Case study of Chókwè, Mozambique. 9th WaterNet/WARFSA/GWP-SA Symposium, Johannesburg, South Africa
Manuel Magombeyi	Partner budget: Univ. Wits. Civil & Env. Eng.	Registration: Univ. Wits. Civil & Env. Eng. Science	Host: Univ. Wits. Civil & Env. Eng.	Magombeyi, MS, Taigbenu, AE, Rollin, D. 2006. Integrating hydrological and socio-economic aspects for sustainable catchment management: needs and opportunities. 7th WaterNet/WARFSA/ GWP-SA Annual Symposium, Lilongwe, Malawi.
Project title	Innovative coupling of Hydrological modelling for IWRM: Linking catchment functioning with socio-economic conditions in the Olifants River Basin		Promoters & Supervisors Akpofure Taigbenu, Univ. Wits. Civil & Env. Eng.	Magombeyi, MS, Rollin, D, Lankford, B. 2008. The River Basin Game as a tool for collective water management at community level in South Africa. <i>Physics and Chemistry of the Earth</i> , 33
Progress	Proposal approved, final season's fieldwork and modelling in progress.			Magombeyi, MS, Taigbenu, AE. 2008. Crop yield risk analysis and mitigation of smallholder farmers at quaternary catchment level: Case study of B72A in Olifants river basin, South Africa. <i>Physics and Chemistry of the Earth</i> , 33
				Magombeyi, MS, Taigbenu, AE and Rasiuba, T. Maize yields under supplementary irrigation in the Olifants river basin, South Africa. CGIAR Challenge Program on Water and Food Workshop on rainfed agriculture, Ghana
				Magombeyi, MS, Taigbenu, AE. Simulation of farming systems in the Olifants river basin, South Africa. 9th WaterNet/WARFSA/GWP-SA Symposium, Johannesburg,

WaterNet Challenge Programme Doctoral Students, as at 30 June 2008

Key Publications (excluding those with MScs)

Collin Mabiza	Partner budget: Univ. Zim. Civil Eng. / IHE PhD	Registration: UNESCO-IHE Dept Management and Institutions	Host: Univ. Zim. Civil Eng.	Mabiza, C, van der Zaag, P, Manzungu, E, Ahlers, R. 2005. Linkages between the water resources and institutional sustainability: experiences from the Mzingwane catchment. 7th WaterNet/WARFSA/ GWP-SA Annual Symposium, Lilongwe, Malawi.
Project title	Linkages between the environment, innovations and institutions and their impacts on livelihoods: Cases from the Mzingwane Catchment		Promotors & Supervisors Pieter van der Zaag & R. Ahlers, UNESCO-IHE; Emmanuel Manzungu, University of Zimbabwe	Mabiza, C, van der Zaag, P, Manzungu, E, Ahlers, R. 2006. Community-based water resource management institutions: perspectives from the Mzingwane catchment, Zimbabwe. 7th WaterNet/WARFSA/GWP-SA Annual Symposium, Lilongwe, Malawi.
Progress	Proposal approved, fieldwork and analyses in progress			Mabiza, C, van der Zaag, P, Manzungu, E, Ahlers, R. 2007. Experiences in participatory catchment planning processes in Zimbabwe: the case of the Mzingwane Catchment Area. 8th WaterNet/ WARFSA/GWP-SA Symposium, Lusaka, Zambia.
				Mabiza, C, van der Zaag, P, Manzungu, E, Ahlers, R. The political nature of water resources management: insights from Bulawayo and the Mzingwane Catchment Area, Zimbabwe. 9th WaterNet/WARFSA/GWP-SA Symposium, Johannesburg, South Africa
Pinimidzai Sithole (not in PN17 project proposal)	Partner budget: IWMI	Registration: Univ. Western Cape Programme for Land and Agrarian Studies	Host: IWMI	Sithole, P. 2006. Mitigating risk, building social capital and crafting livelihoods strategies in Gwanda (Mzingwane, Zimbabwe): a synopsis on water, gender and institutions. 7th WaterNet/WARFSA/GWP-SA Annual Symposium, Lilongwe, Malawi.
Project title	Property Rights, Gender and Livelihoods in the Shadow of Reforms: An Institutional Analysis of Women's and Men's Access and Use of Land and Water In Sekororo (Olifants, South Africa) and Gwanda (Mzingwane, Zimbabwe) - A Comparative Study		Promotors & Supervisors Frank Matose Univ. Western Cape PLAAS; Barbara van Koppen, IWMI	Sithole, P, van Koppen, B. Understanding hydraulic property rights creation, re-Creation and de-creation: A case study of Lorraine and Fumukwe villages, Limpopo basin. 2nd CGIAR International Forum on Water and Food, Addis Ababa, Ethiopia

WaterNet Challenge Programme Doctoral Students, as at 30 June 2008

				Key Publications (excluding those with MScs)
Progress		Proposal approved, fieldwork and analyses in progress		
Alexander Mhizha (not in PN17 project proposal)	Partner budget: Univ. Zim. Civil Eng. / Wits PhD	Registration: Univ. Wits. Civil & Env. Eng. Science	Host: Univ. Zim. Civil Eng.	Mhizha, A, Ndiritu, J. A review of design methods for contour ridges in semi arid areas. 9th WaterNet/WARFSA/GWP-SA Symposium, Johannesburg, South Africa
Project title			Promoters & John Ndiritu, Univ. Wits. Civil & Env. Supervisors Eng.	Mhizha, A. Water availability deficit in rain fed farming for semi arid Mzingwane Catchment, Zimbabwe. 2nd CGIAR International Forum on Water and Food, Addis Ababa, Ethiopia
Progress		Proposal approved, field sites identified, literature review in progress		

Challenge Program on Water and Food

NEW PROJECT PUBLICATIONS
Published January to June 2008
(excludes those published before 2008)

1 PROJECT PROFILE (this information will appear once only as a header sheet to your reports when they are electronic)

PROJECT NO.: 17	PROJECT TITLE: The Challenge of Integrated Water Resource Management for Improved Rural Livelihoods: Managing Risk, Mitigating Drought and Improving Water Productivity in the Water Scarce Limpopo Basin
LEAD CPWF THEME: 2	LEAD CPWF BENCHMARK BASIN(S): Limpopo
SECONDARY CPWF THEME(S): 1,4	SECONDARY RIVER BASIN(S): none
MANAGING CENTER: CIAT	PROJECT DURATION: 4 years

Type/title* PUBLICATIONS	Activity Number	Date	Publisher	Authors	Template completed? †
<i>Journal Articles:</i> These are international peer-reviewed journals.					
A10. DRAFT Changing rainfall and discharge patterns in the northern Limpopo Basin, Zimbabwe	2.1	May 2008	Article submitted to <i>Journal of Hydrology</i>	D Love, S Uhlenbrook, S Twomlow, P van der Zaag	No
A11. Potential water supply of a small reservoir and alluvial aquifer system in southern Zimbabwe	1.3.2	July 2008	<i>Physics and Chemistry of the Earth</i> , 33 , doi:10.1016/j.pce.2008.06.056	W. de Hamer, D. Love, R. Owen, M.J. Booij, A.Y. Hoekstra	No
A12. DRAFT Application of the SWAT model to assess the impact of land cover and land use on the hydrologic response in the Olifants Catchment	2.1	July 2008	Article submitted to <i>Physics and Chemistry of the Earth</i>	M Ncube, AE Taigbenu	No
A13. The nexus between Integrated Natural Resources Management and Integrated Water Resources Management in Southern Africa	Synthesis	July 2008	<i>Physics and Chemistry of the Earth</i> , 33 , doi:10.1016/j.pce.2008.06.044	S Twomlow, D Love, S Walker	Yes
A14. Design of a water quality monitoring network for the Limpopo River Basin in Mozambique	1.3.4	July 2008	<i>Physics and Chemistry of the Earth</i> , 33 , doi:10.1016/j.pce.2008.06.055	M Chilundo, P Kelderman, JHO O'Keeffe	No
A15. The influence of conservation tillage methods on soil water regimes in semi-arid southern Zimbabwe	2.2	July 2008	<i>Physics and Chemistry of the Earth</i> , 33 , doi:10.1016/j.pce.2008.06.049	W Mupangwa, S Twomlow, S Walker	No
A16. Building adaptive capacity to cope with increasing vulnerability due to climatic change in Africa– a new approach	Synthesis	July 2008	<i>Physics and Chemistry of the Earth</i> , 33 , doi:10.1016/j.pce.2008.06.048	S Twomlow, FT Mugabe, M Mwale, R Delve, D Nanja, P Carberry, M Howden	Yes
A17. Redressing inequities from the past from a historical perspective: the case of the Olifants Basin, South Africa	3.1	April 2008	Article accepted for <i>Water SA</i>	B van Koppen	No
A18. Crop yield risk analysis and mitigation of smallholder farmers at quaternary catchment level: Case study of B72A in Olifants river basin, South Africa	2.2	July 2008	<i>Physics and Chemistry of the Earth</i> , 33 , doi:10.1016/j.pce.2008.06.050	MS Magombeyi, AE Taigbenu	No

* The code given (e.g. "A02") refers to the designation of a document as an official output of the project, and is also included in the document's file name.

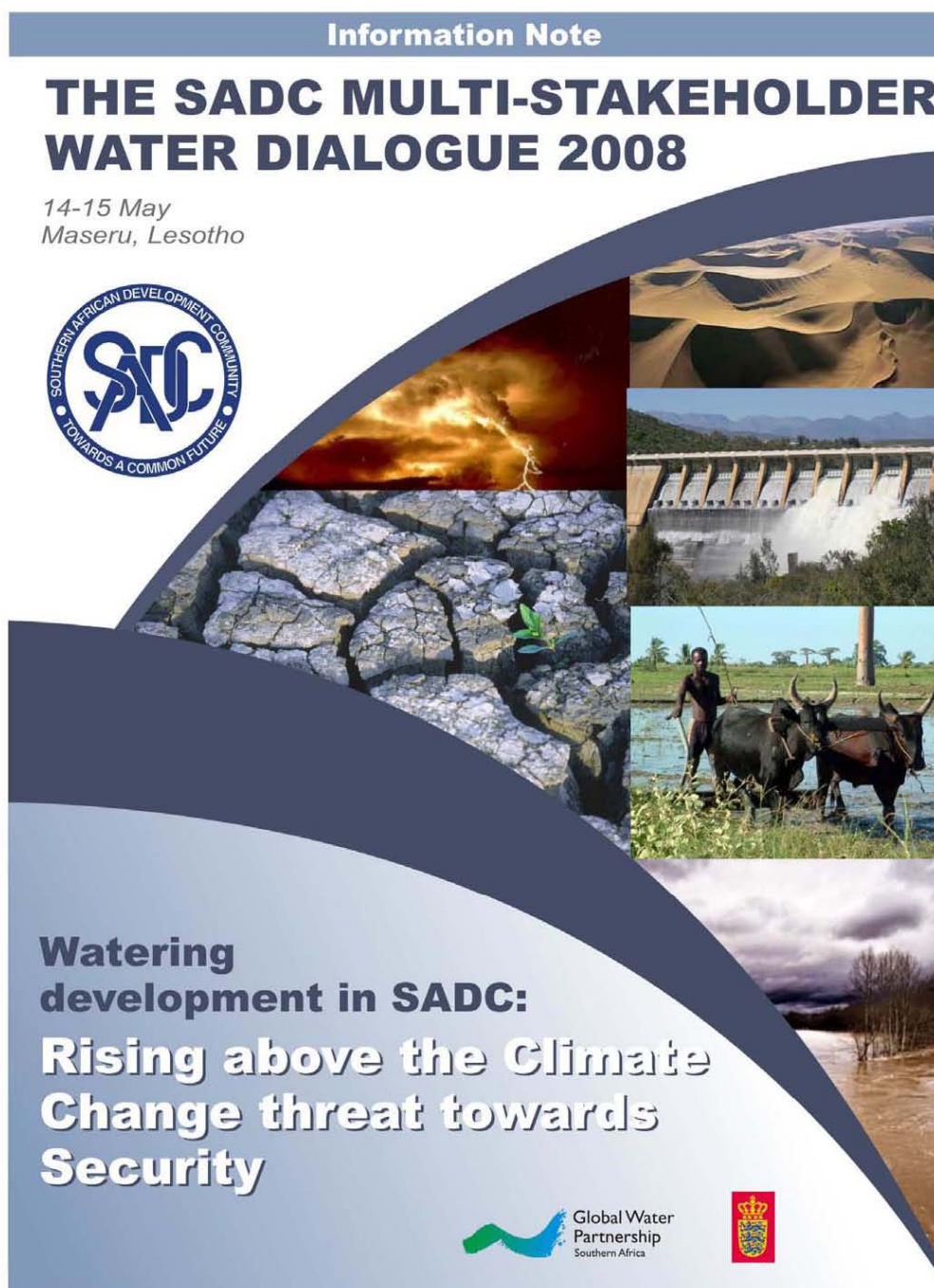
† This refers to the research summary template. Where templates have not been completed, partners are required to do so.

Type/title* PUBLICATIONS	Activity Number	Date	Publisher	Authors	Template completed? †
A19. The River Basin Game as a tool for collective water management at community level in South Africa	5	July 2008	<i>Physics and Chemistry of the Earth</i> , 33 , doi:10.1016/j.pce.2008.06.045	MS Magombeyi, D Rollin, B Lankford	No
<i>Research Reports:</i> These are institutional literature; quality control lies with the publishing institution and an external review process					
RR01. Application of the Water Evaluation And Planning (WEAP) Model to Assess Future Water Demands and Resources in the Olifants Catchment, South Africa	1.6	May 2008	IWMI Research Report X	R Arranz and M McCartney	No
<i>Working Papers:</i> These are institutional literature; quality control lies with the publishing institution					
WP09. An assessment of the sustainable uptake of conservation farming in Zimbabwe	2.2	March 2008	ICRISAT GTAE Report 39	Mazvimavi K, Twomlow S, Belder P, and Hove L	Yes
Type/title PAPERS	Activity Number	Date	Publisher	Authors	Template completed?
<i>Papers for international seminar/ conference /workshop</i> These are reviewed by the conference organisers. In the case of the WaterNet/WARFSA/GWP-SA Annual Symposia, this includes WaterNet					
P47. Quantifying water productivity in rain-fed cropping systems in Limpopo Province, RSA	2.2	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	J Dimes, C Kgonyane, P du Toit, J Odhiambo, I Mariga	No
P48. Applications of GIS and Remote sensing techniques in gully identification and assessment in the Zhulube Meso-catchment, Zimbabwe: Implications to Water Resources Management	2.1	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	F Dondofema	No
P49. Evaluation of the effects of different water demand scenarios on downstream water availability: The case of Thuli river basin	2.8	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	S Khosa, D Love, M Mul	No
P50. The lower Mzingwane alluvial aquifer: modelling a groundwater – surface water system governed by large dam management	1.3.2	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	D Love, R Owen, S Uhlenbrook, P van der Zaag	No
P51. The Mushawe meso-alluvial aquifer, Limpopo Basin, Zimbabwe	1.3.2	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	D Love, R Owen, S Uhlenbrook, P van der Zaag	No
P52. Application of the SWAT model in the Mzingwane and associated river basins, Zimbabwe	2.8	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	D Love, S Uhlenbrook, A van Griensven, P van der Zaag, S Twomlow	No
P53. Impact of the Zhovhe Dam on the lower Mzingwane River channel	2.1	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	D Love, F Love, R Owen, S Uhlenbrook, P van der Zaag	No
P54. The political nature of water resources management: insights from Bulawayo and the Mzingwane Catchment Area, Zimbabwe	3.3	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	C Mabiza, E Manzungu, P van der Zaag, R Ahlers	No
P55. Simulation of farming systems in the Olifants river basin, South Africa	2.2	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	M Magombeyi, A Taigbenu	No
P56. Rainfall variability impacts on farmers' management strategies and crop yields	2.2	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	E Masvaya, W Mupangwa, S Twomlow	No
P57. Evaluation of the groundwater potential of the Malala Alluvial Aquifer, Lower Mzingwane River, Zimbabwe	1.3.2	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	T Masvopo, D Love, H Makurira	No
P58. Improving the design of contour ridges for water conservation	1.6	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	A Mhizha, J Ndiritu	No
P59. Managing Salinity: an Adaptive Approach to Balance Salts and Nitrogen Leaching	2.2	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	P Mungumbe, M Chilundo	No
P60. In situ rainwater harvesting for improved maize production under	2.2	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	P Mungumbe, M Chilundo, C Tamele, R	No

Type/title PAPERS	Activity Number	Date	Publisher	Authors	Template completed?
semi-arid conditions: Case study of Chókwè, Mozambique			South Africa	Brito	
P61. Cowpea (<i>Vigna unguiculata</i> L.) yield and soil water responses to minimum tillage and mulching	2.2	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	W Mupangwa, S Twomlow, S Walker	Yse
P62. Characterisation of rainfall pattern for improved rainfed crop production in semi-arid southern Zimbabwe	2.1	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	W Mupangwa, S Twomlow, S Walker	Yes
P63. Integrated water resource management (IWRM) research for mitigating drought and improving livelihoods within the Limpopo Basin	Synthesis	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	B Ncube, D Love, B Gumbo	No
P64. Precision Conservation Agriculture for Vulnerable Farmers in Low-potential Zones	2.2	October 2008	WaterNet/WARFSA/GWP-SA Annual Symposium, South Africa	S Twomlow	No
P65. Quantifying water productivity in rain-fed cropping systems in Limpopo Province, RSA	2.2	November 2008	2nd International Forum on Water and Food, Ethiopia	J Dimes, C Kgonyane, P du Toit, J Odhiambo, I Mariga	No
P66. Modelling upstream-downstream interactions using a spreadsheet-based water balance model: two case studies from the Limpopo basin	2.8	November 2008	2nd International Forum on Water and Food, Ethiopia	D Love, S Khosa, M Mul, S Uhlenbrook, P van der Zaag	No
P67. Impact of the Zhovhe Dam on the lower Mzingwane River channel	2.1	November 2008	2nd International Forum on Water and Food, Ethiopia	D Love, F Love, R Owen, S Uhlenbrook, P van der Zaag	No
P68. Rainfall variability and risk in the northern Limpopo Basin, Zimbabwe	2.1	November 2008	2nd International Forum on Water and Food, Ethiopia	D Love, E Masvaya, W Mupangwa, S Twomlow, S Uhlenbrook, P van der Zaag, S Walker	No
P69. Mainstreaming capacity building in food and water research in the Limpopo Basin: linking across scales and across disciplines	5	November 2008	2nd International Forum on Water and Food, Ethiopia	D Love, B Ncube, B Gumbo	No
P70. Towards improving flood forecasting and early warning systems through integrated technology in the Limpopo Basin	2.1 2.8	November 2008	2nd International Forum on Water and Food, Ethiopia	A Vilanculos	No
P73. Understanding hydraulic property rights creation, re-creation and de-creation: A case study of Lorraine and Fumukwe villages, Limpopo basin	3.1	November 2008	2nd International Forum on Water and Food, Ethiopia	P Sithole, B van Koppen	No
P76. Early evidence of improved soil quality with conservation farming under smallholder farming conditions in Zimbabwe	2.2	November 2007	ICID Conference, Johannesburg, South Africa	P Belder, S Twomlow, L Hove	Yes
P77. Assessing payment for environmental services (PES) potential in soil and water management in Mzingwane Catchment, Limpopo Basin-Zimbabwe	2.1	November 2008	2nd International Forum on Water and Food, Ethiopia	B Nyamukure, D Love	No
P78. Climate change impact on crop productivity in the semi-arid tropics of Limpopo Basin in the 21st century	2.2	September 2008	CGIAR Challenge Program on Water and Food Workshop on rainfed agriculture, Ghana	J Dimes, C Kgonyane, P du Toit, J Odhiambo, I Mariga	No
P79. Maize yields under supplementary irrigation in the Olifants river basin, South Africa	2.2	September 2008	CGIAR Challenge Program on Water and Food Workshop on rainfed agriculture, Ghana	MS Magombeyi, T Rasiuba, AE Taigbenu	No
P80. Water availability deficit in rain fed farming for semi arid Mzingwane Catchment, Zimbabwe	2.1	November 2008	2nd International Forum on Water and Food, Ethiopia	A Mhizha	No
P81. Scale and institutional considerations for optimizing livelihoods in a semi-arid catchment	3	November 2008	2nd International Forum on Water and Food, Ethiopia	A Chereni	No
Type/title DISSERTATIONS AND THESES	Activity Number	Date	Publisher	Authors	Template completed?

Type/title DISSERTATIONS AND THESES	Activity Number	Date	Publisher	Authors	Template completed?
<i>MSc Dissertations (funded through PN17):</i> Quality control by awarding institution					
D24. Application of the Water Evaluation And Planning (WEAP) model to assess future water demands and resources in the Olifants Catchment, South Africa	1.3	May 2007	IWMI	Arranz, R	Yes
D25. Securing Water through Land; field findings on water reform and water re-allocation in South Africa: Trichardsdal, Ofcolaco and Leydsdorp	3.1	May 2007	Wageningen University	Liebrandt, J.	Yes
D26. Design of a water quality monitoring network for the Limpopo River Basin in Mozambique	1.3 2.1	April 2007	UNESCO-IHE	Chilundo, M.N.G.	No
D28. Evaluation of the groundwater potential of the Malala alluvial aquifer, lower Mzingwane river, Zimbabwe	2.2	July 2008	University of Zimbabwe, Department of Civil Engineering, M.Sc. Integrated Water Resources Management	Masvopo, T.H.	No
Type/title PROJECT ACTIVITY REPORTS	Activity Number	Date	Publisher	Authors	Template completed?
AR10. DRAFT Report on Socio-Economic Surveys, Lower Limpopo, Mozambique	1.5	March 2006	Eduardo Mondlane University	R. Brito, P. Munguambe, C. Juliaia, A. Nhamatate	No
AR11. DRAFT Report on Socio-Economic Surveys, Upper Limpopo, Mozambique	1.5	March 2006	Eduardo Mondlane University	R. Brito, P. Munguambe, N. Ibraimo, C. Juliaia, A. Nhamatate	No
AR12. DRAFT Report on the Socio-Economic Survey, carried out in the Mzingwane Catchment	1.5	February 2008	CASS	CASS	Yes
AR13. DRAFT Report on the Limpopo Basin Population Database	1.2	April 2008	CASS	CASS	Yes
AR14. DRAFT Socio-economic conditions and agricultural water management practices of smallholders in Quaternary Catchment B72A, Olifants River Basin, South Africa	1.2	May 2008	IWMI	E Mapedza, S Moradet, C Cheron, M Magombeyi	No
IR26. Soil physics characterization of agricultural wetlands	2.2	December 2006	IIAM	M.R. Marques, M. Vilanculos, J. Mafalacusser	No
IR27. Review of Water Harvesting Techniques	1.6	October 2006	Eduardo Mondlane University	C Niquice	No
IR28. Institutional arrangements in the promotion of conservational agriculture: a case study of the Mzingwane Catchment Area	3.1	May 2008	UNESCO-IHE	C Mabiza, P van der Zaag, E Manzungu, R Ahlers	No

ANNEX 11: SADC MULTI-STAKEHOLDER WATER DIALOGUE



ANNEX 12: ORGANISERS, SPONSORS AND PARTICIPANT OF THE 3RD SADC-EU SYMPOSIUM ON MEETING THE CHALLENGES OF CLIMATE CHANGE



3rd SADC-EU INTERNATIONAL SCIENTIFIC SYMPOSIUM

**“TOWARDS MEETING THE CHALLENGES OF
CLIMATE CHANGE”**

**INSTITUTIONAL STRUCTURES AND BEST
PRACTICES IN LAND AND WATER MANAGEMENT IN
SOUTHERN AFRICA**

CONFIRMED VENUE

**Mulungushi International Conference Centre, Lusaka,
Zambia**

SYMPOSIUM CONFIRMED DATES

26 – 31 May, 2008

EXTENDED CALL FOR ABSTRACTS

Up to: 14 March 2008

CALL FOR FULL PAPERS

Up to: 18 April 2008

SYMPOSIUM REGISTRATION

28 April – 15 May 2008

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WATERNET NEWS Volume 4 Issue 1 April, 2008

SADC-WaterNet Professorial Chair

We welcome the first SADC-WaterNet Professorial Chair Professor Felix Mtalo based at the University of Dar es Salaam (UDSM). He is a full Professor in Water Resources Engineering and Management at UDSM and holds a Doctor of Engineering degree from the Technical University Munich-Germany. He has published more than 67 articles in the area of Water Resources Management and Water Resources Engineering in different journals, conferences and reports.

Prof Mtalo's areas of specialisation include, Hydraulic Physical Modelling, Water Supply Systems Management, River Engineering and Fluvial Mechanics. He has held several positions including:

- Dean of the Faculty of Civil Engineering and the Built Environment University of Dar es Salaam,
- Chairman of the Technical Advisory Committee (TAC) for the Ministry for Water and Irrigation Development Tanzania and,
- Coordinator: Rainfall/Runoff research group in the Nile FRIEND research group of the Nile basin countries.



Professor Felix Mtalo

The Professorial Chairs are meant to provide IWRM academic leadership and quality assurance for education, training, research and outreach activities of WaterNet and the Universities where they are based. Four other chairs will be appointed at the University of the Western Cape, Polytechnic of Namibia, University of Malawi and University of Zimbabwe.

Masters Programme Update

The 2008-9 intake started class on 11 February. There are 7 female and 8 male students at the University of Zimbabwe-UZ (total of 15) and 8 females and 16 males at the University of Dar es Salaam -UDSM (total of 24).

The 2007-8 class is currently in the field collecting data for their theses research and have been holding progress seminars at their host universities.

The Review of the Master's Programme by Prof Graham Jewitt will be completed this month. Inputs from members, alumni, current students, and partners are welcome. Graham can be contacted at jewittg@ukzn.ac.za.



The 2008-9 UZ Class with lecturer Eng Evans Kasheke

WATERnet
Building Capacity for Water Resources
Management in Southern Africa

Inside This Issue:	SADC-WaterNet Professorial Chair	1
	Masters Programme Update	1
	Research Update	2
	WASH Courses @ University of Malawi	2
	Journal of Physics and Chemistry of the Earth (JPCE)	2
	9th Symposium	3
	Announcements	3

Research Update

The 5th Smallholder System Innovations (SSI) Scientific Workshop was held in Same, Tanzania, from 21-25 January 2008. Participants met with farmers and water users associations who shared their experiences regarding the impact of the farming and water harvesting techniques which were introduced by the research.



Transpiration measurements in Mkombozi, Pangani Basin Tanzania

Some of the interesting presentations, conclusions and questions coming out of the PhD and MSc research include the following;

- Work on rainwater harvesting systems by Job Rotich Kosgei showed that there is no significant difference in yields between conventionally tilled crops and those cultivated under conservation tillage.
- Ms Elin Enfors presented on building resilience in agricultural systems, where it emerged that interventions can become outdated before they are implemented, yet large investments would have been made to upgrade smallholder farmers. It was concluded that there is need to focus on innovation capacity rather than on particular interventions.
- Hans Komakech presented work on agent-based modelling for collaborative catchment management in the Pangani River Basin. The study emphasises the need to understand the interface between formal and informal institutions; the driving mechanisms behind cooperation and how hydrosolidarity can be up-scaled.

More information on SSI is available at <http://www.unesco-ihe.org/ssi/intro.htm>

WASH Courses @ University of Malawi

The Centre for Water, Sanitation, Health and Appropriate Technology Development (WASHTED), a Centre of Excellence at the University of Malawi-The Polytechnic is pleased to make a preliminary announcement of the following five (5) short courses that the Centre will run this year :

- Water Quality Management
- Water Demand Management

- Waste Management (Excreta, Liquid and Solid Waste)
- Ecological Sanitation
- Mainstreaming IWRM in the Public and Private Sector

For more information forward your enquiries to vchipofya@poly.ac.mw

Journal of Physics and Chemistry of the Earth (JPCE)



Some JPCE reviewers attended a training workshop on *Reviewing and Editing Manuscripts for Journals* in Harare from 16 - 18 January 2008. It covered both Guest Editing and Reviewing Articles. The workshop also planned for this year's review process and assigned manuscripts to reviewers.

Dr Dominic Mazvimavi accepted the nomination to

take over from Dr Washington Nyabeze as Guest Editor. We thank Dr Nyabeze for the excellent work done as Guest Editor of previous issues of the journal.

It is important for authors to note that from next issue onwards, the submission and review process will be fully electronic and administered through the Elsevier website.

9th Symposium

The 9th WaterNet/WARFSA/GWP-SA Symposium -in association with the International Commission on Water Resources Systems (ICWRS) of the International Association of Hydrological Sciences (IAHS) will be held from 29-31 October 2008 at Birchwood Hotel in Johannesburg, South Africa. The theme of the symposium is "Water and Sustainable development for Improved Livelihoods".

Abstracts are currently under review and authors will be notified of the outcome on the 18th of April.

Other important dates and deadlines for this year's symposium remain as follows:

- 31 July 2008: deadline for submission of full papers
- 31 August 2008: deadline for registration
- 28 October 2008: participants arrive
- 1 November 2008: participants depart



Comments, questions announcements ?

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About WaterNet

WaterNet is a regional network on capacity building in Integrated Water Resources Management (IWRM). Currently it has a membership of 52 institutions in southern and east Africa.

Vision

A future in which the Southern African Development Community (SADC) has the institutional and human capacity to educate and train its own water managers, capable to contribute to the equitable sharing and sustainable utilisation of water resources for poverty alleviation, economic development (livelihood security) and environmental security.

Mission

To build the regional institutional and human capacity in Integrated Water Resources Management (IWRM) through training, education, research and outreach by harnessing the complementary strengths of member institutions in the region and elsewhere.



A strategic programme of the
SADC Water Sector

Announcements

- We sadly announce the death of a WaterNet Alumnus Ms Nokuthula Faith Dlamini who died on 28 December 2007. She graduated with a Master degree in IWRM from the University of Dar es Salaam, Tanzania in 2006 and was employed by Swaziland Water & Agricultural Development Enterprise as an Environment Consultant.
- International Conference on Implementing Environmental Water Allocations. 23 - 26 February 2009. Feather market convention centre, Port Elizabeth, South Africa. Convened by the Water Research Commission (WRC), and the Department Of Water Affairs & Forestry (DWAF), South Africa. For more information contact: confplan@iafrica.com <http://ewa.innercirdestudios.co.za>
- Meeting of the WaterNet Alumni Steering Committee. 11 May. School of Civil and Environmental Engineering, University of Witwatersrand, Johannesburg. All alumni are invited.
- Congratulations to WaterNet Board of Trustees member Dinis Juizo on successfully defending his PhD.
- 4th International Symposium on Transboundary Waters Management- "Transboundary Surface Waters and Shared Aquifers" 15th - 18th October 2008. Thessaloniki, Greece. Convened by Aristotle University of Thessaloniki, UNESCO Chair INWEB, UNESCO-IHP, SAHRA. For more information contact Prof. Jacques Ganoulis (jeanoulis@civil.auth.gr) http://www.inweb.gr/index.php?option=com_content&task=view&id=2418&Itemid=146

ANNEX 15: 9TH WATERNET/WARFSA/GWP-SA SYMPOSIUM ANNOUNCEMENT AND CALL FOR ABSTRACTS



The poster features a blue and white color scheme with a background image of a city skyline at sunset. The title '9th WaterNet/WARFSA/GWP-SA symposium' is prominently displayed at the top in a large, bold, sans-serif font. Below the title, the text 'in association with the International Commission on Water Resources Systems (ICWRS)' is written in a smaller font. A central box contains the text 'First Announcement and call for Abstracts'. To the right, the main theme 'Water and Sustainable Development for Improved Livelihoods' is highlighted in a large, bold font, followed by the dates and location '29 – 31 October 2008. Johannesburg, South Africa'. The poster is divided into several sections: 'Background', 'Main Theme', 'Sub-themes', and three sub-theme boxes: 'Water and Environment', 'Water and Land', and 'Water and Society'. Each section contains detailed text about the symposium's purpose, themes, and sub-themes.

9th WaterNet/WARFSA/GWP-SA symposium
in association with the International Commission on Water Resources Systems (ICWRS)

First Announcement and call for Abstracts

Water and Sustainable Development for Improved Livelihoods
29 – 31 October 2008. Johannesburg, South Africa

Background

The WaterNet/WARFSA/GWP-SA Symposia have been held annually in the Southern Africa region for the past eight years. This 9th Symposium will be held from 29 – 31 October 2008 in association with the International Commission on Water Resources Systems (ICWRS) of the International Association of Hydrological Sciences (IAHS) in Johannesburg, South Africa. The purpose of this year's Symposium takes a broader meaning of facilitating the sharing and dissemination of research results in Integrated Water Resources Management (IWRM) within the context of sustainable development for the achievement of enhanced livelihoods. The Symposium promotes interaction among policymakers, academics, practitioners and ultimately all those involved in the water sector as well as key cooperating partners in identifying regional issues, gaps and priorities that require further research and support. Great emphasis is placed on integration of knowledge, particularly involving scholars from the natural, medical and social sciences. The University of the Witwatersrand in Johannesburg will host the 9th Symposium.

Main Theme

The main theme for the 9th WaterNet/WARFSA/GWP-SA Symposium is *Water and Sustainable development for Improved Livelihoods*. Interested participants should submit abstracts on water resources management and sustainable development that are relevant to the main but specifically targeting sub-themes below.

Sub-themes

Hydrology

It is important to improve understanding of different components of the hydrological cycle and the spatial and temporal distribution of water now and in the future so as to improve the planning, engineering, management and operation of natural water resources. However water balance dynamics are highly complex and require integration of information from multiple domains at different scales. Furthermore in Southern Africa there is limited reliable data available for application of conventional prediction tools. This sub-theme therefore focuses on papers addressing innovations and models that enhance not only our understanding of the water cycle's response to natural and man made changes at different scales, but also how these changes can be managed in a sustainable manner.

Water and Environment

The natural environment is now well acknowledged as a legitimate and important user of water. It is increasingly realised that greater investment is needed to protect aquatic ecosystems from the impact of human developments. The challenge remains to strike the right balance between allocating water for direct human use (agriculture, power generation, domestic purposes and industry) and indirect use (sustenance of ecosystem goods and services). The papers in this sub-theme illustrate recent advances and best practices in environmental impact assessment, determining environmental water requirements and the inclusion of the environment in catchment planning and management.

Water and Land

Agriculture is a major livelihood strategy in Southern Africa. It is also the greatest user of water and constitutes the major land use. Owing to a growing population, persistent droughts, erratic rainfall and extreme weather events, food production and the exploitation of forest products and biodiversity have been on the increase, thus risking the resilience and stability of the interaction between surface and ground water resources including wetland ecosystems. This sub-theme pulls together papers that demonstrate the impact of water management practices and policies on water and land productivity, livelihood security and wetlands ecology and management.

Water and Society

When available water is limited in quantity or quality or its distribution is uneven, it can be both a source of cooperation and/or contestation among its different users. Water access and benefit sharing of it, are a source of power. Any governance system should therefore tackle the issue of resource access and benefit sharing. This sub-theme addresses human development and socio-political aspects of water including conflict management and resolution, resource governance, HIV and AIDS, gender, education and communication.

Water for People

Globally water-borne related diseases kill an estimated 5 million people- mostly children. At the start of the water supply and sanitation decade an estimated 1 billion people lacked access to safe water while 2.2 billion lacked access to adequate sanitation. Lack of a sustainable approach to the provision of water and sanitation has resulted in decreased coverage in terms of percentage of the population with

9th WaterNet/WARFSA/GWP-SA Symposium

2008

access to safe water and adequate sanitation, thus necessitating the need for appropriate and sustainable water and sanitation systems. This sub-theme contains papers addressing sustainable water supply and sanitation.

Water Resources Management

Progress in developing and implementing Integrated Water Resources Management and Water Efficiency (WE) plans have so far been varied across countries in Southern Africa. The theme will demonstrate practical experiences of the opportunities and constraints to the implementation of IWRM by countries at different stages in the process. Papers in the sub-theme include any innovations and experiences in water resources planning and management and catchment management at different institutional and spatial scales.

Guidelines for Submission of Abstracts

Abstracts should be a maximum of 350 words. The format for all text (title, authors, abstract and key words) should be font size 12, Times New Roman and single-spaced. The title should be no more than 16 words in title case. Authors names should be written in such that the initials appear first followed by the last name. The author names should indicate one corresponding author (with an asterisk*) and the email of the corresponding author. The affiliations of authors will be shown through letter superscripts (such as a, b, c) with only one affiliation per author. Five (5) keywords should be included in alphabetical order. Authors should consult the Author Guidelines and sample abstract provided for further information. Submissions should indicate the target sub-theme and also whether it is submitted for poster or oral presentation. Authors should note that the method of presentation whether oral or poster, does not necessarily reflect the quality of the papers. Due to the short duration of the Symposium, poster presentations are encouraged. All abstracts should be sent electronically as word documents to the WaterNet Secretariat symposium09@waternetonline.org.

Journal of Physics and Chemistry of the Earth

Papers reviewed and accepted for presentation at the Symposium are

Special Sessions

All partner organisations interested in convening a special session at the 9th WaterNet/WARFSA/GPW-SA Symposium should send their expression of interest to the WaterNet at symposium09@waternetonline.org by 31 August 2008.

compiled as part of conference proceedings. However; in the last five years the best papers have been selected for review and publication in the Journal of Physics and Chemistry of the Earth.

For Further Information

Details on the Symposium will be uploaded and updated at the websites indicated as they become available.
<http://www.waternetonline.org> <http://www.gwpsa.org>

Key Dates

Second announcement and Final call for Abstracts	15 February 2008
Deadline for Submission of Abstracts:	14 March 2008
Notification of Acceptance of Abstracts:	18 April 2008
Deadline for Submission of Full Papers:	31 July 2008
Deadline for Registration:	31 August 2008
Delegates Arrival:	28 October 2008
Delegates Departure:	01 November 2008



For Further Information

Details on the Symposium will be uploaded and updated at the websites indicated as they become available.

<http://www.wits.co.za>

<http://www.waternetonline.org>

<http://www.gwpsa.org>

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