

CURRICULUM VITAE

Company Name	TouchStone Resources
Nationality	Anthony Richard TURTON South African
Date of Birth	23/06/1954
Profession	Political Scientist (Hydropolitics)
Position	Strategic Advisor
Specialisation	Strategic planning, transboundary water resource management, policy and institutional issues, conflict resolution (mitigation), political risk assessment for large infrastructural projects, research program design
NRF Rating	B3 (Expired 31 December 2011)
Start date with TouchStone	1/1/2009

Key experience

A political scientist with 24 years of strategic-level experience, Anthony Turton specialises in **transboundary water resource management**. He has **published** widely and is a well known **professional speaker, trainer** and **facilitator**. One of his core skills is his capacity to engage with the **media** where he has a strong and positive profile. Currently he is focussing on **water and the mining industry** as a sub-national transboundary issue of strategic significance in a water-constrained region with a strong mining economy. In this regard he is focussing on the development of **mine closure strategy** that is benchmarked against the world's best performers. He has extensive experience in **strategic planning** and **thought leadership** in situations of inherent uncertainty. Linked with this is his ability to **reduce risk** by developing accurate strategic-level forecasting to guide decision-making under conditions of uncertainty. He has experience in the **management of change** including the development of **adaptive strategies**, understanding institutional dynamics and the inculcation of an appropriate **corporate culture**. He has served in various **leadership** positions both nationally and internationally, including those involving **fiduciary** responsibilities. He is a founding member of the Universities Partnership for Transboundary Waters (UPTW) and the former **President**. He was the alternative representative of the CSIR on the **Board of Governors** of the World Water Council (WWC); was an **Executive Director** of the International Water Resources Association (IWRA) (2007-2009) and is the current **Vice President** (2010-2012); served on the scientific committee of UNESCO IHP 6 and is a **Professor** at the University of Free State Centre for Environmental Management. He serves as an **Editor** of Water Policy (the official journal of the WWC); Water International (the official journal of the IWRA); and on the **Editorial Board** of the International Journal of Water Resources Development; Water Alternatives; and Springer-Verlag, a German-based text-book publisher; and the International Journal of Water Governance. He is the Founding **Trustee** of the Water Stewardship Council Trust and is the **Chairman** of the Camissa Trust.

Qualifications

Diploma in Horticulture: Chicago (USA), 1977
Diploma in Business Management: Damelin Business School, 1978
Bachelors Degree in Political Science, International Politics and African Politics (with Distinction) with minors in Law and Economics: University of South Africa, 1988

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Honours Bachelor Degree in International Politics (with International Law as a core subject): University of South Africa, 1995

Master's Degree in Political Science (International Politics) (Thesis on the hydro-politics of the Zambezi River Basin): University of South Africa, 1998

Doctor Philosophiae (International Politics) (Thesis on the political dynamics of institutional development in the South African water sector): University of Pretoria (submitted 31.05.2003 – awarded March 2004)

Member of the Water Institute of Southern Africa (WISA) Management and Institutional Affairs Division and past Chairman

Member of the Pugwash Society on Science and World Affairs

Trained in media relations (handling hostile interviews)

Editorial Board of International Journal of Water Resources Development

Editorial Board of the Water Resources Development and Management series at Springer-Verlag in Berlin, Germany

Editor: Africa of Water Policy, the official journal of the World Water Council

Editor: Water International

Past President and founding member of the Universities Partnership for Transboundary Waters

Vice President of the International Water Resources Association (IWRA)

Career summary

2009 to date

TouchStone Resources – Director

Responsible for the **strategic planning** underpinning the launch of a new company that will focus on natural resource management, specifically water and energy, in water constrained developing economies with a mining-base. The emphasis is on developing new approaches by bringing together **technology, capital** and **leadership**. This is based on work I have been deeply involved with called Transboundary Waters Opportunity (TWO) Analysis Methodology (see Phillips *et al.*, 2008 and Phillips *et al.*, 2006), that focuses on the need to develop “new” water when trying to grow an economy rapidly such as is needed in many parts of Africa and the developing world.

Core responsibilities include:

- Providing **specialist skills** for the development of strategic market, biophysical and social intelligence to a point where the viability of a new company can be assessed with a high level of accuracy
- Developing a **methodology** for the assessment of water and energy as a corporate risk for use in future marketing of TouchStone Resources as a solution provider
- **Integrating** a range of specialist networks, both national and international, that will give access to the technical, financial and human capital needs of the new company during start-up
- **Head-hunting** highly skilled specialists to provide leadership in key positions as the new company evolves
- **Linking** with government departments as appropriate in an effort to align corporate efforts with national developmental priorities
- **Advising** the finance and investment community (stock broking firms, analysts, fund managers and investment bankers) on water and energy as business risks
- **Professional speaking** to a range of paying clients
- Providing **thought leadership** at the highest corporate, social and political level
- Building **strategic relationships** with key clients including banks and large corporations (Investec Securities, Maquarrie South Securities, Rand Merchant Bank, JP Morgan, Chase Manhattan, Deutscher Bank, Exxaro, Bloem Water, Coal

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of Africa (Ltd), Nedbank) with a view to assisting them in solution-seeking to water risk embedded in their business processes

Other responsibilities include:

- Commissioned by Accenture (an international firm of corporate consultants) to assist them with a **strategic engagement** between ESKOM and the Government for the purpose of securing access to future water supplies in the context of the revised National Water Resource Strategy.
- Commissioned by CABRI to advise on **water as a regional public good** in the context of Lake Victoria Basin (a sub-set of the Nile River Basin).
- **Founding Trustee** of the Water Stewardship Council Trust designed to raise funds for behaviour change in the corporate sector with respect to water.
- Commissioned by One World (NGO) to **speak** at a regional climate change workshop designed to develop a regional approach prior to COP 17.
- Commissioned by the International Institute for Research (IIR BV) to facilitate a **training program on mine closure** (26/9/2011) and be keynote speaker at the 2nd Annual Mine Water Conference held at Wanderers on 27/9/2011.
- Commissioned by the Managing Director of JoJo Tanks to engage with senior executives in support of a **new business strategy** designed to position the company in the water harvesting and recycling space.
- Commissioned by Coal of Africa (Ltd) to draft the Mine Closure chapter of the **Definitive Feasibility Study** for the Makhado Colliery.
- Engaged by Anglo American Corporation (London) on **media challenges** they are experiencing in a planned gold mining project in Alaska.
- Commissioned by the International Institute of Impact Assessors (IAIA) as **keynote speaker** to address the issue of the economics of water in the context of mining.
- Commissioned by the organizers of the Green Building Conference and Exhibition to address the issue of **water as an element of architecture** in water constrained environments (13/7/2011).
- Commissioned by Coal of Africa (Ltd) (CoAL) as their **Water Resource Strategist**. Working to establish a Mine Closure Strategy at Group level that will become the design philosophy for all future coal mines owned by the group. The company mines in areas that are water-constrained with potentially high social and ecological sensitivity and has experienced a high level of media and social hostility.
- Commissioned to **facilitate** a technical workshop on hydraulic fracturing ("Fracking") for shale gas in the Karoo.
- Commissioned by the Body Corporate at The Coves Estate to **advise** on water-related risks to the development of an upmarket housing estate on the banks of the Hartebeespoort Dam.
- Commissioned by Van Der Meer & Schoonbee Attorneys to **advise** on water-related risks associated with the development of a large housing estate near Daveyton known as New Canada Developments.
- Commissioned by Future Publishing to **address** an event on the topic of "Water – the elephant in the room".
- Commissioned by ABS International as **keynote speaker** on the topic "Making sense of it all – understanding the business case for acid mine drainage treatment" (10/6/2011).
- Commissioned by JP Morgan and Chase Manhattan to **facilitate** a strategic session designed to assist the managers of large financial portfolios to understand the emerging issue of water as a corporate risk.
- Commissioned by Nedbank to **brief** executive management on water as a business risk and opportunity.
- In negotiations with Clover SA to **advise** the Board on water-related risk arising from Acid Mine Drainage as it might impact on their production processes.
- Commissioned by EXXARO to **engage** with their executive management on the issue of water as a corporate risk in the mining sector (20/4/2011).

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- Commissioned by NEDBANK to **engage** with their executive management on the issue of water and radioactivity from mining as a banking sector risk (28/3/2011).
- **Professional facilitator** in a public participation engagement (with a known hostile audience) on the topic of mine residues as a component of the GDARD MRA Policy (11/3/2011). The outcome was convergence in views between the mining industry, government and the NGO community on the need for a viable policy on the management of mine residues around Johannesburg. The major breakthrough was acceptance by the NGO community that mega tailings dams were a necessary element of any future policy on MRA's provided that certain engineering and regulatory criteria are met. (Prior to this the NGO's were firmly opposed to mega tailing dams and were obstructing all efforts in this direction).
- **Founding member** of the South African Water and Energy Forum (SAWEF) that we hope will become the start of a new platform where industry, government and science can meet to negotiate a new dispensation in the water/food/energy nexus. In this process I participated in negotiations that brought in Nedbank, Exxaro, Eskom and the US Embassy as partners for this initiative.
- **Invited speaker** to the Water Research Commission Mine Water Division tasked to present a future vision for the reclamation of mine water in South Africa (25 November, 2010).
- **Professional facilitator** to the Mine Water 2010 event held on 22 November, responsible for a workshop on water as a business risk.
- **Professional facilitator** to the Executive Group Network (EGN) CEO Discussion on water as a business risk held on 19 November 2010.
- Appointed by the Gauteng Department of Agriculture and Rural Development (GDARD) to **develop a policy** for the reclamation of mine residue areas (MRA's).
- Commissioned by the Swedish Embassy to present a talk on the need to change **energy policy** in SA, held on 11 November 2010.
- **Invited speaker** to the Sustainable Energy Seminar held at the CSIR on 6 October 2010 with a presentation on the water/energy/food nexus.
- Commissioned by Investec to **brief** their portfolio managers and analysts on the risk associated with Acid Mine Drainage (4 – 5 October, 2010).
- Commissioned by the South African Pipe Manufacturers Association (SAPPMA) to **speak** at their annual conference on the future of water in South Africa (17 September, 2010)
- Commissioned by African Explosives Limited to **advise** on the future of the mining industry from a water perspective and how AEL might change its business accordingly (7 September, 2010).
- Commissioned by Exxaro to address the 11th Experts Forum on the topic of water as an **offset trade** for the coal mining industry (26 August, 2010).
- Commissioned by the agricultural Co-op Senwes to **advise** on water-related risk to the agricultural sector as the board was grappling with a decision to relocate part of its business out of South Africa (3 August, 2010).
- Commissioned to **address** the South African Bottled Water Industry on the future of the water sector from a risk perspective (26 July 2010).
- Commissioned by Bloem Water (a regional bulk water provider) to **facilitate** a strategic management intervention for Sedibeng Water on instruction from the Minister of Water Affairs (23-24 July 2010).
- Commissioned by Bloem Water to do a follow up intervention at Board level on the **strategic plan** developed in 2009 (18-19 June, 2010).
- Commissioned by RMB Asset Managers to **brief** their traders and analysts on water as a risk to food commodities (12 May 2010).
- **Briefing** for the World Bank Inspection Panel on the viability of Medupi power station (ESKOM) in view of the fact that insufficient water exists (13 May 2010).
- Commissioned by Bloem Water (a regional bulk water services provider) to assist the newly appointed Board (2009) to **develop a strategic plan** that integrates existing water initiatives being rolled out by multiple stakeholders (local municipalities, national Department of Water, the Office of the President and the Office of the Premier). This is a **turnaround strategy** for Bloem Water, which was approaching institutional collapse at the time of my appointment, and it involves

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issues like quantification of the resource, quantification of future demand and then developing a viable strategy for balancing demand with supply in an arid region that is highly water constrained with a resource that has been closed out. The issue of future technology provision is key given the fact that the resource is now closed. Bloem Water has stabilized to the extent that it has been instructed by the Minister to render assistance to Sedibeng Water Board, which is in a state of institutional collapse, so my responsibility is to work closely with the Chairman of the Board to develop an appropriate strategic action plan to integrate Sedibeng management functions into those of Bloem Water. This is an ongoing task involving **diplomatic-type engagement** in a **highly politicized atmosphere** involving **multiple stakeholders**.

- Commissioned by Premier Milling to **advise** them at the strategic level about water as a corporate risk.
- Commissioned by Rand Merchant Bank to **advise** them on water as a risk to the South African economy with specific emphasis on agriculture and mining.
- Invited VIP guest to the opening of the Trekkopje Desalination Plant in Swakopmund on 16 April 2010.
- Invited by EXXARO to address their **strategic management** group on 6 May 2010 with a talk entitled "Water-related Risks and Opportunities for the Coal Mining Industry".
- Commissioned by The Times to write three Op-ed's entitled, "Why AMD is a solution rather than a problem", "Why the Sulphur Cycle is more important than the Carbon Cycle", and "The Double 'S' Curve Model for Macroeconomic Growth".
- Developing a **strategic relationship** with the Parliamentary office in Cape Town, with an invited presentation facilitated by the Catholic Parliamentary Liaison Office on 30 March 2010 entitled "From an Extractive to a Beneficiation Economy: The Role of Water".
- Commissioned by Investec Securities to do a series of **presentations** to their clients on Water as a Corporate Risk.
- Commissioned by Maquarrie South Securities to do a **presentation** to selected clients on Water as a Corporate Risk.
- Paid **professional speaker** to the National Chamber of Milling and Baking, at their 2010 Annual General Meeting, with a talk entitled "The Impact of Water Availability and Quality on Food Security".
- Paid **professional speaker** at the Water Investment World Conference hosted by Terrapinn in Johannesburg on 3 November 2009, with a talk entitled "Is Water the new Oil?"
- Paid **professional speaker** at the MENSA monthly meeting held in Johannesburg on 17 September 2009, with a talk entitled "Understanding Water".
- Commissioned by Alive2green to **write** a chapter in their Sustainable Water Resources Handbook entitled "Sustainability Approach to Water".
- Commissioned by BloemWater to **facilitate** a strategic planning session for the newly appointed Board, on 1-2 September 2009. The objective was to align the priorities and objectives of BloemWater as a bulk water supplier with the priorities and objectives of the Department of Water Affairs, the Free State Provincial Government and the National Government.

Awards have included:

- **Habitat Council Award 2009** in recognition of work done in the public interest in the field of water resource management
- Nominated as a finalist in the **Best Professional Speaker of the Year Award** (12 May 2010)
- Recipient of the **Nick Steele Memorial Award for Environmentalist of the Year (2010)** given by SA Breweries

2009 to date **University of Free State** – Professor in the Centre for Environmental Management

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Responsible for the **positioning** of the Water Cluster within the national research environment. This position cannot be allocated a permanent post with a salary and benefits because of “Transformation Targets” that have been set using racially defined criteria. My **National Research Foundation (NRF) rating** was allowed to lapse because of the absence of permanence and incentives to maintain it. In spite of these constraints, core responsibilities continue to include:

- Building **media profile** for the Centre for Environmental Management and the Water Cluster
- **Post-graduate training** (MSc in Environmental Management)
- **Networking** the University with national and global actors
- Building **research capacity** capable of meeting the national and continental needs
- Assisting with **strategic partnerships** such as Bloem Water

Other responsibilities include:

- **Editor** for the journal Water Policy responsible for Africa.
- **Editorial board** for the journal Water International.
- **Consulting** to UNESCO for the final drafting of specific elements of the World Water Assessment Program (WWAP).
- **Invited speaker** to a symposium in Stockholm in honour of Prof. Malin Falkenmark’s lifetime achievement in October 2011.
- **Advisor** to a PhD student (Anja Du Plessis) on her research into national water quality, national food security and national energy security.
- **Advisor** to a PhD student (Abdullah Elmi) in his comparative study of various transboundary river basins in Africa.
- **Invited speaker** to the Stockholm International Water Symposium in August 2011 to speak on the acid mine drainage problem facing South Africa as an example of a slow onset disaster.
- Interviewed on national **prime time TV** station “E-News” on the Green Drop Report (4/7/2011).
- Engaged by Talk Radio 702 on 4/7/2011 to participate in a **live debate** on Acid Mine Drainage (AMD) as a national concern.
- Commissioned by Monash University in Australia to **write a chapter** for a text book entitled “Managing Water: The Role of Water Accounting”, with a contribution entitled “Water and Risk”.
- **Judge** at the Young Water Professional Symposium held at the CSIR International Convention Centre (4/7/2011 – 5/7/2011).
- **Invited speaker** at a hydrological workshop hosted by the Danish Hydrological Institute on 22/6/2011 on the topic of regional integration in the water sector.
- **After dinner speaker** at the Orange River Symposium on the topic “Opening the can of worms – understanding liabilities and assets in the context of AMD” (9/6/2011).
- **Invited speaker** in a debate arranged by the National Press Club on the topic of hydraulic fracturing (“Fracking”) for shale gas in the Karoo (25/5/2011).
- **Invited speaker** in a prime time business talk show (Classic Business) to talk on the future of mining (19/5/2011). Present on the panel was the Chairman of Coal of Africa (Ltd), the Chief Economist from the Chamber of Mines and a representative from an environmental NGO (Earthlife Africa). Arising from this event was my subsequent appointment to Coal of Africa (Ltd) as their **Water Resource Strategist**.
- **Invited speaker** to the prime time business talk show (Classic Business) on the topic of mining and the environment (16/5/2011).
- Delivered the **Inaugural Jonathan Rands Memorial Lecture** on “Environment and Sustainability” (17/5/2011).
- **Invited speaker** to the national TV program 50/50 on the televised update on the acid mine drainage situation (9/5/2011).

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- Commissioned by the SABC program 50/50 to **lead a national water program** that will be part of a future season. Associated with this will be a fund raising exercise designed to finance research that government is currently suppressing. This gave rise to the establishment of the **Water Stewardship Council Trust**.
- Invited **after dinner speaker** at the Rand Club on the topic of “Water in the context of contemporary South Africa” (12/4/2011). This is an exclusive club in Johannesburg for corporate executives and closely associated with the mining industry.
- **Invited speaker** to Rotary Club on 29/3/2011.
- **Invited speaker** to TED-x Cape Town (26/3/2011) with a talk entitled “Reinventing Uncivilization”. (http://www.youtube.com/watch?v=g5_DSKF-AMl)
- **Invited speaker** at the launch of the University of Stellenbosch Water Institute (22/3/2011).
- Invited by the World Bank to **engage** in The CEO Panel discussion at the World Water Week in Cape Town (21/3/2011).
- **Invited speaker** to launch the SIEMENS entry into the South African water market (16/3/2011).
- **Invited speaker** to the CNBC business TV program on “The AMD Report” (9/3/2011).
- Interviewed by the **TV documentary** program “Project Aardwolf” in their series on hazardous mine water and radioactive mine residues screened nationwide during February and March 2011.
- **Invited speaker** to the Talking Heads event held in Johannesburg on 24/2/2011.
- **Invited speaker** to the prime time business talk show (Classic Business) on the topic of environmental risks to the business sector (19/1/2011).
- Interviewed by **Creamers Media TV** on the launch of my latest book “Shaking Hands with Billy” (18/1/2011). (http://www.youtube.com/watch?v=v_Dlu-WB3PU).
- Invited **guest lecturer** to the Sorbonne University in Paris in December 2010, where I delivered a lecture on water and risk.
- **External examiner** to the PhD dissertation of Agathe Maupin, awarded by the University of La Rochelle in France on 10 December 2010.

2006 to 2008 **Council for Scientific and Industrial Research (CSIR)** – Strategic Research Leadership: Water Resource Management

Responsible for the linkage of key research projects and their elevation to **strategic programme** level within the Water Resource Competency Area of the NRE.

Core responsibilities included:

- Providing institutional **leadership** by developing a specialist capability within the NRE at the CSIR with respect to governance and policy in the water sector – the science / policy interface.
- Growing the CSIR by developing **strategic relationships** with stakeholders, both local and international.
- Providing **leadership** by developing research programmes that have a strategic focus.
- Providing national leadership as the **media spokesperson** on water for the CSIR.
- Supporting the **post-graduate program** in IWRM in keeping with the Beyond 60 mandate of the CSIR.
- Providing technical **leadership** by assisting with the development of capacity in River Basin Commissions in the field of IWRM.
- Development of core skills needed to service the emerging **strategic programmes**.
- Sourcing of **funding** for strategic-level programmes.
- Alternate Chairperson of the NRE Research Advisory Panel (RAP) (1 April 2007 to 30 March 2010) and hence part of the **NRE Management Team**.

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- Providing strategic direction for NRE SET Leadership as a **Unit Fellow** and as Vice Chairman of the Research Advisory Panel (RAP).
- Providing international **leadership** via the Research Advisory Group (RAG) at the UNESCO Centre for Water Law, Policy and Science based at the University of Dundee, Scotland.
- Providing international **leadership** as a member of the Program Committee preparing the contents of the 5th World Water Forum to be held in Istanbul in March 2009.
- Providing national **leadership** as a formal member of the Water Sector Leadership Group within the Department of Water Affairs and Forestry, representing the CSIR.

Other responsibilities have included:

- **Keynote speaker** at the CSIR Conference “Science Real and Relevant: A Clean South Africa”, on 18 November 2008.
- **Specialist trainer** for the SIDA-funded transboundary water resource management program for the Great Lakes Region of Africa, Kigali, Rwanda, 10 – 21 November, 2008.
- **Facilitator** at the evidence-based policymaking workshop, Pretoria, 19 – 20 November 2008.
- **Invited specialist** to the internal planning session on 11/9/2008 to advise SASOL on their investment strategy in various energy projects, locally and globally.
- Specialist member of a multinational and transdisciplinary **consulting** team tasked with developing tools to enable River Basin Organizations (RBOs) in the SADC region, August 2008 – February 2010.
- **Project specialist** commissioned by the United Nations Economic Commission on Africa (UNECA) tasked with doing an assessment of transboundary rivers in the Southern African region, 2008.
- **Invited speaker** to the 13th IWRA World Water Congress, Montpellier, France, with an input into the Workshop on Transboundary Aquifers, 2 September 2008.
- **Co-convenor** of the EU FP7 workshop on Climate Change and Cyanobacteria, 13th IWRA World Water Congress, Montpellier, France, 2 September 2008, aimed at fostering RSA – French collaborative research.
- **Invited speaker** to the internal planning session on 13/8/2008 to advise DFID’s development partnership with South Africa for the period 2009 – 2011, responsible for advising on three key challenges along with an appropriate donor response to each.
- **Consultant** to the SADC Secretariat on GTZ Contact No. 026/08 responsible for conceptualizing a new approach to policy harmonization in the water sector across the whole SADC region.
- **Facilitator** to the DWAF Legotla, Bakgatla Lodge, Pilansberg Park, North West Province, 17 July 2008, responsible for the review of the South African water sector and DWAF’s role in it.
- **Advisor** to the Department of Water Affairs and Forestry (DWAF) on their bid to host the 6th World Water Forum in 2012.
- **Facilitator** for the 3rd Abu Dhabi Dialogue and Keynote Speaker – “Moving Toward Cooperation on Water: The Respective Roles of Government, Knowledge Institutions and Civil Society” – contracted by the International Centre for Integrated Mountain Development (ICIMOD) and the World Bank, Singapore, 25-27 June 2008.
- Extraordinary Professor at the University of Pretoria Water Institute, supporting the CSIR commitment to the **development of human capacity**.
- **Advisor** to the GTZ / SASOL initiative on Business and Water Sustainability in South Africa, responsible for drafting a policy brief entitled “The State of Water Resources in Southern Africa: What the Beverage Industry Needs to Know”, presented at SASOL, Rosebank, 2 June 2008.

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- **Invited speaker** to the National Business Initiative (NBI) CEO Global Water Compact in Africa, addressing “The State of Water and the CEO Water Mandate”, Anglo-Gold Ashanti, Johannesburg, 10 April, 2008.
- **Invited speaker** to the 10th Africa Day Conference, 30 May 2008, UNISA, Pretoria, addressing the issue of “The Protection of Africa’s Transboundary Water Resources – Security and Political Implications”.
- **Invited speaker** to the Transitions in Water Management Symposium hosted by the Institute for Environmental Studies, Vrije Universiteit, Amsterdam, supported by the Netherlands Royal Academy of Sciences, 3-4 July, 2008.
- **Advisor** to the **Independent Television Service (ITVS)** 1H20 (One Water) Project Leadership Summit, Balalaika Hotel, Sandown, 9 May 2008 as part of the CSIR media outreach program.
- **Negotiating** with the Tunisian Government on proposed collaborative links between Tunisia and South Africa in the field of science, engineering and technology in both the water and energy sectors.
- **Invited speaker** to the AMCOW and African Development Bank sponsored First African Water Week held in Tunis, Tunisia on 26 – 28 March 2008. The invited paper was on a benefit-sharing paradigm for transboundary waters. This is a build-up to the 5th World Water Forum to be held in Istanbul in March 2009.
- **Executive Editor** of a special edition of the International Journal of Water Resource Management entitled Reflections on Water in South(ern) Africa responsible for the conceptualization of the idea and negotiation with the publishers through to final finish of the product.
- **Guest Editor** of a special edition of the journal water Policy entitled Ecosystem Governance in Africa (Volume 9 Supplement 2) responsible for the conceptualization of the idea and negotiation with the publishers through to final finish of the product.
- Appointed as an **Editor** of Water International, the official journal of the IWRA, at the Board Meeting held in Montpellier, 22 October, 2007.
- Invited member of the **Editorial Board** of a newly-established journal called Water Alternatives.
- Transboundary waters **specialist** on the DFID funded program in SADC on adaptation strategies to global climate change.
- **Invited speaker** to the Sixth Petersberg Round Table on Transboundary Water Cooperation held in Bonn/Petersberg, Germany, 24 – 26 September 2007.
- **Invited speaker** for the Des Midgley Memorial Address at the SANCIAS Conference in Cape Town 6 September, 2007.
- **Keynote speaker** at the Transboundary Groundwater Seminar held at the World Water Week in Stockholm on 16 August, 2007.
- **Invited speaker** to the programme Going Green - Sustainability Imperatives for Business, hosted by the Gordon Institute of Business Science (University of Pretoria) on 19 July 2007, with a presentation on “Water Availability and Implications for Business”.
- **Invited speaker** to a strategic think tank of the water division of Stewart Scott International (SSI) held at the Zebra Country Lodge in Pretoria on 8 June, 2007. Responsible for a presentation on strategic trends in the water sector to inform the strategic management plan of SSI.
- **Specialist trainer** to the Executive National Security Programme (Colonels to Brigadier-General qualification course for all security force formations across Africa) held at the National Defence College in April and October 2007, responsible for water resources as a strategic-level national security issue in Africa.
- Invited **keynote speaker** to IASTED International Conference on Environmentally Sound Technology in Water Resource Management, Botswana, September 11-13, 2006.
- Invited to **serve** on the scientific committee of UNESCO IHP 6.
- Alternative **representative** of the CSIR to the Board of Governors of the World Water Council.

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- **Invited specialist** to develop guidelines for AMCOW and the African Union on policy for inter-basin water transfers in Africa, Accra, Ghana, 25-29 September 2006.
- **Invited speaker** to the International Experts Meeting on Water Management in 2020 and Beyond, at the launch of the Ministry of Environment International Centre for Water, Government of Aragon, Zaragossa, Spain, 8-10 November 2006, with a presentation entitled, "HIV/Aids as a Strategic Water Issue in the Developing World: An African Example".
- **Facilitator** to the Start-up Meeting of the Transboundary Water Resource Management training program for Lake Victoria, Kigali, Rwanda, 12-20 October, 2006.
- **Specialist trainer** to the International Transboundary Water Resource Management Middle East North Africa (MENA) programme, Amman, Jordan, November, 2006 and again in October, 2007.
- **Specialist trainer** to the Transboundary Water Resource Management program for Lake Victoria, Nairobi, 20 November, 2006; and again in September 2007.
- Invited **lead author** for a special thematic volume on water and development, Society for International Development (Sidint), 2006.
- **Technical advisor** to Trade Conferences International for their conference on water allocation (November, 2006).

Awards have included:

- **National Science and Technology Forum (NTSF) Finalist** in the category Best Contribution by an Individual, May 2008.
- **CSIR Career Achievement Award**, 22 November 2007.
- **CSIR Outstanding Contribution by a Team Award**, August, 2006.

2003 to 2006 **ARCUS GIBB** – Director (Water Division)

Responsible for the **management** of the strategic alliance with the Southern Education and Research Alliance (SERA) consisting of the CSIR NRE and the University of Pretoria. This includes the development of the newly-created GIBB-SERA Chair in Integrated Water Resource Management (IWRM) that is based at the CSIR but working into ARCUS GIBB, the CSIR, the University of Pretoria and the Universities Partnership for Transboundary Waters (UPTW).

Core responsibilities included:

- Developing a **specialist capability** within ENVIRONMENTEK (now known as NRE) at the CSIR with respect to governance and policy in the water sector
- Membership of the ENVIRONMENTEK **Research Advisory Panel (RAP)**
- Supporting the **post-graduate program** in IWRM at the University of Pretoria so as to create capacity in the South African water sector and beyond
- **Developing** the Universities Partnership for Transboundary Waters (UPTW) in an African context and mainstreaming these activities into the CSIR, the University of Pretoria and ARCUS GIBB
- Assisting with the development of a **strategic planning** capability in the ARCUS GIBB Water Division
- Supporting **capacity building** in River Basin Commissions in the field of IWRM.

Other responsibilities have included:

- **Invited speaker** to the Mekong River Commission – International Forum on Integrated Water Resources Management of the Mekong River Basin, Chiang Rai, Thailand, 28-29 November 2005. Title "Desecuritization as a Foundation for Benefit Sharing: Lessons from the Okavango River Basin".
- **Consulting** for the Southern African Development Community (SADC) Secretariat on the Mid-Term Review of the Regional Strategic Action Plan for Water.

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- Specialist **consultant** for the Expert Group in Development Issues (EGDI) of the Swedish Foreign Ministry in a project entitled “Transboundary Water Cooperation as a Tool for Conflict Prevention and Broader Benefit Sharing”.
- Serving in a **policy think tank** in Washington DC that develops options in the field of development assistance for consideration by various branches of the US Administration.
- **Leading** a multi-disciplinary consulting team responsible for the Comprehensive Reserve Determination of the Elands River in Mpumalanga.
- Subject specialist in a multidisciplinary **consulting** team tasked to develop the National Water Resource Classification System called for in the National Water Act.
- **Project Leader** of the Water Research Commission Project K5/1564: Implications of South Africa’s Trade Policies for Water Policy and Water Resources Management.
- **Specialist researcher** in the Water Research Commission Project K5/1515: Compilation of all the International Freshwater Agreements entered into by South Africa with other States.
- **Specialist researcher** in a UNEP Project: Hydropolitical Vulnerability and Resilience along International Waters: Africa.
- Invited guest of the former US Secretary for Defence (William Cohen) to a **strategic policy think-tank** session entitled “Oil & Water – Energy Security and National Security” (19-20 November 2005).
- **Advisor** to the World Water Council on the role of politics in water resource management.

2002 to 2005 **Turton & Associates (Pty) Ltd** – Director

Responsible for the **development of business** in the institutional and policy field of the water sector.

Core responsibilities included:

- **Consulting** support to the International Union for the Conservation of Nature (IUCN) with regard to their SADC Water Demand Management project including a position in the IUCN SADC WDM Regional Technical Core Team
- **Consulting** work for the World Bank as part of a CSIR team (Eastern Nile Technical Regional Office - ENTRO)

1999 to date **African Water Issues Research Unit (AWIRU)** – Founding Member, Head, Advisor

Responsible for **establishing** AWIRU and developing a specialist research and **consulting** capability in the water sector focussing specifically on social, political, institutional and policy-related aspects in the African water sector. Once established and viable this was handed over to a new Director (Dr. Jacqui Goldin) in 2005 and I have been retained as an Advisor.

Core responsibilities included:

- Developing sustainable access to **funding** agencies
- Developing a **network of specialists** at the local, regional and global level
- Development of a multidisciplinary or **cross-disciplinary capability** in the Southern African water sector
- Developing **methodologies** that are appropriate to the Southern African water sector, specifically with regard to the political, institutional and policy aspects
- Developing trust and **access** to the various River Basin Organizations (RBOs) and other key role-players in the Southern African water sector

Other responsibilities have included:

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- **Consulting** work for Shell (London) as a specialist in the development of the Africa Scenarios that form the basis of their investment strategy on the continent over the next 25 years
- **Consulting** work for the South African Department of Water Affairs and Forestry (DWAF) on the hydropolitical impacts of the Thukela Water Project and the National Water Resource Management Strategy
- **Consulting** work for Green Cross International in support of the National Sovereignty and International Watercourses Panel at the 2nd World Water Forum (the Hague)
- **Consulting** work for Green Cross International in support of the Permanent Okavango River Basin Water Commission (OKACOM) and the Water for Peace Program at the 3rd World Water Forum (Kyoto)
- **Consulting** work for the BBC on two TV programs related to water and conflict.
- **Consulting** work for the World Commission on Dams (WCD) regarding the management of transboundary river basins
- Development of **training** capacity for Inwent in the various River Basin Commissions in Southern Africa with initial work with ORASECOM

1998 to 2005 **Water Issues Study Group and Overseas Development Institute (ODI) (London) – Associate**

Responsible as an associate of both these organizations for **research** and **consultancy** work as appropriate and as called for

Core activities have included:

- **Publishing** of various scientific papers through the Water Issues Study Group
- Completing of a **consultancy** for the Swedish Foreign Ministry on policy options vis-à-vis the management of international water as a public good through the ODI in 2001. This proposed the establishment of an International Shared Water Facility (ISWF), which was adopted under a slightly changed name (Water Cooperation Facility) during the 3rd World Water Forum in Kyoto
- Completing of a **research** project for the ODI on policy options for water-stressed states in 2003. This identified the need to develop a decision support model that was dubbed FoRWaRD (Food Requirements and Water Resources Development)

1996 -1998 **Gempex (Pty) Ltd – Policy Analyst**

Responsible for developing a **policy analysis** capability that was appropriate to South Africa as it emerged from international isolation in the immediate post-Apartheid era

Core responsibilities included:

- An **assessment** of the strategic implications for South Africa had it won the bid to host the Olympic Games
- The establishment of a techno-economic **assessment** and competitive intelligence capability

1987 - 1995 **National Intelligence Service (NIS) – Strategic Analyst and Operational Manager**

Responsible for the **planning, leading, implementation** and **management** of five strategic operational activities, which were of national importance at that time and all of which centred on the de-escalation of conflict and the normalization of political processes in Southern Africa that was possible because of the ending of the Cold War. Details have been captured in the book “Shaking Hands with Billy” (see list of publications) (http://www.youtube.com/watch?v=v_Dlu-WB3PU).

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- **Assessment** of the **political risk** associated with the withdrawal of South African and Cuban forces from Angola, including the technical support to the negotiating team as required
- **Assessment** of the **political risk** associated with the implementation of UN Resolution 435, including the technical support to the Office of the President with respect to decision-making regarding the withdrawal of South African forces, specifically when the process was almost derailed due to the rapid deployment of Peoples Liberation Army of Namibia (PLAN) forces in contravention of the agreements then in place
- **Assessment** of the **political risk** associated with the release of Nelson Mandela and others from prison, the unbanning of the various Liberation Movements, the testing of public opinion in this regard, the establishment of the Convention for a Democratic South Africa (CODESA), the protection of that process from derailment by extreme elements on the right and left wings of the political spectrum, and the planning for the subsequent normalization of the South African political process
- **Assessment** of the **political risk** to the normalisation of the South African political process associated with the inconclusive and then ongoing civil war in Mozambique, specifically aimed at assessing the operational capabilities of the rebel movement RENAMO with the stated objective of bringing them to the negotiating table and keeping them there in order to develop a viable chance for sustainable peace in Southern Africa
- Development and implementation of a **management plan** to successfully integrate previously hostile forces into a new, non-partisan professional Intelligence Service capable of meeting the strategic needs of the democratic South Africa, accountable to the respective parliamentary oversight structures, and functioning within the ambit of the South African Constitution that was negotiated during CODESA

Core responsibilities included:

- Development of a **strategic assessment** capability that could function reliably under conditions of great uncertainty and high political and economic risk
- Development of strategies specifically designed to **promote trust** between hostile forces with a view to bringing them to the negotiating table and keeping them there
- Development of **methodologies** for the capturing of appropriate strategic information, the processing of that information in near-real time, and the final dissemination of that information as an accurate intelligence product that could be acted upon with a high degree of reliability and could be clearly understood by the designated client[s]
- Monitoring of **scenario planning** capabilities found in the corporate sector and the subsequent development of those methodologies into a process that was appropriate to strategic planning, political risk assessment and decision-making as it was being practiced during that period in historic time
- Development of “out-of-the-box” **lateral thinking** processes designed to solve complex political, social and economic problems
- Development of a **strategy** and capability to manage the process of integrating previously hostile forces from both the statutory and non-statutory components of the security force community
- Development of **standard operational procedures** to align the intelligence process with the South African Constitution and other relevant pieces of legislation
- **Founding Member** of the South African Secret Service (SASS), the first democratic intelligence structure responsible for the collection of strategic foreign intelligence, responsible for developing collection and analytical processes that comply with oversight requirements and meet the needs of the client

1978 – 1987 **Hlabisa Farms (Pty) Ltd** – Technical Director

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Responsible for the **planning, development and implementation** of all the technical and **engineering-related aspects** associated with the production of high-grade floricultural products in a controlled climate

Core responsibilities included:

- **Design, planning and construction** of controlled climate **greenhouses** appropriate to the production of high-grade floricultural crops
- **Design, planning, construction** and maintenance of **boiler plant** needed to provide sterilization and central heating services in a controlled climate
- **Design, planning, construction** and maintenance of **electrical reticulation** systems including stand-by generating plant needed to support the controlled climate production on a year-round basis
- **Design, planning, construction** and maintenance of **water reticulation systems** including storage dams, pump stations, pipelines, fertilizer injectors, irrigation systems, evaporative cooling systems, **groundwater development** and **effluent treatment** facilities needed to support the controlled climate production on a year-round basis
- **Negotiation** of what would be called a Catchment Management Agency (CMA) today capable of regulating the abstraction of water from an over-allocated river in which many riparian's were not interested in cooperation by virtue of their privileged access to water as upstream users

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Language capability

	Speaking	Reading	Writing
English	Excellent	Excellent	Excellent
Afrikaans	Good	Good	Fair
French	Fair but unpractised	Deteriorating	Poor

Signature

Date
