

Curriculum Vitae: Belynda Petrie

Nationality	South African
Education	PhD Candidate, University of Cape Town (2017): ‘Toward Cooperative Governance for Water Security in Africa’ BA LLB (1986) University of Cape Town BA (Honours), Clinical Psychology (1992) University of South Africa
Languages	English (fluent), Afrikaans (fluent), French (fair)
Membership of professional bodies	<ul style="list-style-type: none"> • Chair (1 September 2017 – 31 August 2020) of the Scientific Programme Committee (SPC) for the World Water Week in Stockholm • United Nations Framework Convention on Climate Change (UNFCCC) • Advisory Group Member for the Global Water Partnership, Water, Climate and Development Programme • South African Wind Energy Association; Sustainable Energy Society South Africa • Forum for Sustainable Development; World Business Council for Sustainable Development; • Registered Mediator: Environmental Arbitration & Dispute Resolution Panel, SA.
Employment record	
2001 - Present	CEO and Co-founder OneWorld Sustainable Investments
1998 - 2000	Director, Strategy & Human Resources Datatec Ltd
1996 - 1998	Director, Human Resources Reunert Engineering Ltd
1994 - 1996	Human Resources Manager Malbak Motor Holdings
1990 - 1994	Director and Consultant, Change Management Syncronet
1987 – 1990	Industrial Relations Consultant Personnel Planning Group
Relevant professional experience	
July 2018 - current	<p>Elaboration of a “Sustainable Low-Income Energy Services” Study to The Benefit of The City of Cape Town</p> <p>Suez/Safege, under contract to Agence Française de Développement (AFD), for the City of Cape Town</p> <p>Project Lead; socio economic analysis</p> <p>Financial and economic study towards development of Cape Town’s Low-Income Energy Services programme, examining costs and benefits associated with different approaches/alternatives to delivering energy services to low income households in Cape Town. Responsibilities: Project lead, analysis of optimal energy services and resultant socio-economic co-benefits.</p>
Aug 2018 – May 2019	<p>“State of Preparedness of South African Cities in Addressing Climate Change Challenges and Building Climate Resilience”</p> <p>Department of Environmental Affairs, South Africa/ GIZ</p> <p>Project Lead; Climate adaptation expert</p>



Development of a resilience assessment tool and indicator framework for assessing urban climate resilience in South African cities, to monitor and evaluate city-level progress toward achieving urban resilience. Development and validation of a resilience indicator framework, workshop facilitation lead and participatory analysis across 15 pilot cities (8 metropolitan municipalities and 7 secondary cities); lead on the development of an investment plan for building cities resilience.

Jan 2018 – “Climate Change Hazard, Vulnerability and Risk Assessment” Study to the Benefit of the City of
Dec 2018 Cape Town

AFD, EU, SECO, with SAFEGE/Suez Consult, under CICLIA

Project lead

The aim of this study is to assess the nature and spatial location of hazards, vulnerabilities, and risks in Cape Town, given current climate change projections, to enable the City to make decisions not only on new investments, but also on how it should potentially adjust existing projects to ensure better climate proofing. Activities conducted: lead on participatory analysis process and fieldwork, validation process, e.g. of risk profiles and opportunity assessments. Identification of priority actions and investment projects. Development of a climate investment plan. Presentation and validation of findings with project members from the City and stakeholders.

January Climate Change Risk & Vulnerability Assessment in Luapula, Muchinga, Northern & Western
2018 – July Provinces, Zambia, under the Pilot Program for Climate Resilience (PPCR)
2018 Ministry of National Development Planning

Project Leader and Climate Response Expert

Project lead: Socioeconomic assessment, surface and groundwater resource assessment and climate risk and vulnerability assessment in order to identify responsive and feasible investments in climate resilience, enhanced water resource management and improved disaster risk reduction; lead on participatory analysis process and fieldwork, validation process e.g. of risk profiles and opportunity assessments. Identification of priority actions and investment projects, EWS and disaster risk reduction approaches. Development of concept notes for prioritised actions based on district/provincial prioritisation and hotspot analysis (GIS based spatial mapping). Integration of fieldwork, finalisation of risk profiles, economic impacts and potential projects for development, by district. Coordination and facilitation of workshops for the various districts to review identified gaps. Development of climate investment solutions. Presentation and validation of findings with stakeholders and PPCR team.

Sep - Dec Northern Zambia: 1) Landscape Vulnerability Risk Assessment Baseline; and 2) Development of
2017 a Decision Support Tool

Zambian National Climate Change Secretariat (NCCS)/Zambian PPCR Implementation Unit in Ministry of National Development Planning / World Bank – TRALARD-Zam under the Pilot Program for Climate Resilience (PPCR)

Project Lead and Scenarios Development Expert; Participatory Rural Appraisal (PRA) Facilitator; Climate change and R&V response expert; Lead author

Risk and vulnerability mapping and baseline assessment; development of a climate vulnerability decision-support framework (tool).

Project lead and lead facilitator to co-develop and test a decision support framework (tool) through participatory analysis / PRA. Scenario analysis and identification of policy entry points for reducing vulnerability; Identification of prioritised adaptation and mitigation responses and land uses for increasing adaptive capacity.

Oct 2017 – The Just Transition to a Low Carbon Climate-Resilient Society
April 2019 National Planning Commission, managed by the Department of Planning, Monitoring & Evaluation, Government of South Africa; in partnership with Sustainable Energy Africa (SEA)



Senior Practitioner and Facilitator

Co-designed the project, currently underway: to include facilitating a series of cross-cutting social dialogues; aimed at implementing a just, equitable and sustainable, climate-resilient society in SA, considering a co-developed 2050 vision and pathways for achieving that. Design of dialogues, research and facilitation of visioning (scenario-building) to establish plausible pathways and a social compact for achieving Vision 2050. Lead on co-creation and modelling of pathways for change and validation through stakeholder engagement.

July 2017 – July 2018 Learning Partner for the Pilot Program on Climate Resilience (PPCR) in the Climate Investment Funds (CIF)

OneWorld, in association with Oxford Policy Management (OPM) / World Bank

Team lead, climate change adaptation, and knowledge exchange expert

Lead of the OneWorld/OPM team to evaluate, design and facilitate a global learning and knowledge platform for the PPCR/CIF to facilitate the sharing of lessons learned from CIF projects across the globe, to identify effective approaches to building climate resilience amongst PPCR and CIF countries. Establishment of learning networks and exchange platforms, facilitation of co-created research and learnings dissemination, development of an evidence-based knowledge and networking strategy, exchange and dialogue facilitation, development of co-created knowledge products published by the CIF.

April – June 2017; Discussion Paper on the Permanent Okavango River Basin Agreement (Angola, Botswana, Namibia)

June – August 2018 Permanent Okavango River Basin Water Commission (OKACOM)

Project lead and Water resources expert

With the objective of furthering transboundary water cooperation in the Cubango-Okavango River Basin (CORB), OKACOM commissioned a OneWorld team, led by Ms Petrie, to review the 1994 Permanent Okavango River Basin Agreement, and produce a Discussion Paper with its findings. The review analysed the consistency of the Agreement in guiding the scope of work and extending transboundary water cooperation in the CORB. The review thus aimed to support and inform local, national and regional decision making in the CORB, within a transboundary legal framework. In 2018, OKACOM commissioned an update to the Discussion Paper to incorporate further thinking that evolved from the initial paper and provide strategic recommendations in terms of the Agreement, towards further strengthening the Basin's security and development prospects.

March – June 2017 Renewable Energy Study for Value Chain Cluster Development in iLembe, KwaZulu Natal, South Africa

UNIDO/SECO

OneWorld is part of the multi-disciplinary team mobilised by UNIDO, to assess the renewable energy opportunities for stimulating the green economy within the sugar and timber value chains, in two urban local municipalities of iLembe District – Mandeni and KwaDukuza. Specifically, OneWorld is conducting a pre-feasibility study of the potential for renewable energy within the sugar sector value chain in the area. Under the primary objective of stimulating job creation and enterprise development, the research is exploring the feasibility of expanded cogeneration in the sugar mills, small and large-scale ethanol production, and grower cooperative level biogas energy projects in the area.

Jan – Feb 2017 Discussion Document on the Dynamics of Nuclear Energy in South Africa

Soul City Institute NPC

Project lead and energy expert

OneWorld was contracted by a South African social justice Not-for-Profit organisation to provide a neutral analysis of the status and necessity for the proposed, large scale Nuclear Energy investment programme for South Africa, in order to inform the NPO's investment strategy going



forward. The OneWorld team, led by Ms Petrie, carried out a literature review, interviewed a broad range of key experts in the energy sector locally and internationally and conducted a full energy sector and associated risk analysis. The resultant Discussion Document reviewed issues of cost and affordability in the envisaged future economic climate of South Africa, within the context of the key triple challenges facing South Africa, of inequity, poverty and unemployment, and a need for investment in the energy sector.

Nov 2016 – Dec 2017 Water Law Equivalence Assessment and Options Paper for the Zambezi River Basin
Zambezi Watercourse Commission (ZAMCOM), funded by the World Bank; with ENSafrica

Project Lead

Designed the methodology and conceptual framework for the assessment conducted across eight southern African countries. Led the assessment of ~400 water laws, policies and regulations (surface and ground water) in accordance with six identified dimensions of water security; equitable access, planned development, regional integration, benefit sharing, dispute resolution and climate change planning. Led the participatory analysis and validation process through a series of ZAMCOM workshops, interviews and selected in-country workshops. Led the development of an Options Paper for ZAMCOM suggesting evidence-based pathways for harmonisation in priority areas such as planned development, improved information for water resource management and development, and equitable access.

Nov-Dec 2016 Support to & Formulation of DEA Energy Partnership Programme, Phase 2 (2017-2020)
Danish Energy Agency (DEA)/Greg Moran & Assoc.

South African energy expert

Ms Petrie provided local South African expert input towards formulation of Phase 2 of this bilateral cooperation programme in South Africa. The DEA Energy Partnership Programme supports emerging economies (China, South Africa, Vietnam and Mexico) in their low carbon transition. This phase of the programme aims to work with the Dept. of Energy and the local power utility to address energy planning and integration of renewables, for which Ms Petrie provided an institutional analysis, conducted wide stakeholder interviews and developed the programme risk assessment.

April – September 2016 Strengthening Climate Resilience in the Kafue Sub-Basin Project (SCRKA)
Government of Zambia: National Climate Change Secretariat (NCCS) in Ministry for Development. USAID

Project director, water and climate finance expert

Project lead: comprehensive risk and vulnerability assessment for the sub-basin; Lead on participatory analysis process and field work; identification of resilience-building interventions and projects for investment; capacitation of stakeholders to integrate climate risks into district and provincial development planning; drafting climate-development policy objectives for the 7th National Development Plan. Delivery of a Training of the Trainers for 60 district, provincial and NCCS officials and NGOs and developed a Training Manual for the ToT, covering climate R&V, economic impacts and costing of adaptation benefits, GIS tools, integrating CC into development planning and developing and financing successful projects. Lead author on the final project report.

2014-2015 Political Economic Analysis of the Renewable Energy Industry in South Africa
IDS/University of Cape Town

Advisory on the analysis of the key constraints and opportunities to renewable energy investments (wind and solar); analysis of the political and regulatory environment that enables developments and investments.

July 2012- May 2017 Resilience in the Limpopo River Basin Programme (RESILIM)



USAID/ Chemonics

Programme lead for Climate Change and Water Resilience

Led the analysis of risk and vulnerability in the Limpopo River Basin, conducted a political economy analysis of water resource management in the Basin, led the climate resilient adaptation strategy development and developed an Investment Strategy for Climate Resilience in the Basin. Designed six training and capacity building interventions and led the training material development, capacity building and training of Basin country stakeholders; reviewed basin level institutional arrangements and made recommendations for change; co- authored and led the development of three policy briefs.

2016 - 2017 Study on Urban Climate Finance for ‘Cities Fit for Climate Change’: South Africa: eThekweni (Durban)

GIZ for German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMUB) / adelphi

Project lead and climate finance specialist

The project aimed to improve municipalities’ access to funding for climate change activities and to integrate climate change into local planning processes. Desktop review; interviews with key experts; and a case study, to assess urban climate finance readiness for accessing the GCF (development of indicators); Building capacities to develop bankable projects that meet GCF criteria within the municipality; Making recommendations for institutional strengthening for climate and development to improve municipal access to climate finance, and improve integration of climate change into local planning. See publications, below. Available online: <https://www.adelphi.de/en/publication/challenges-and-opportunities-urban-climate-finance>

2016 Country Strategy Paper-III (2017-2021)

Governments of Flanders and South Africa

Project lead and Climate Finance Expert

Project lead on the development of a theory of change and strategy for the next 5-year 100% climate finance bilateral programme (starting in 2017) focusing on the green economy, climate change and job creation. Developed a strategy around the pillars of innovate, test, learn and consolidate so as to inform practical and policy developments in the sphere of enterprise development as a result of a climate change-driven green economy in the water sector of South Africa. Identified pilot projects and conducted participatory analysis with key stakeholders to underpin the strategy development.

May 2015 – International Climate Initiative (ICI) Vertical integration and learning for low-emission
Dec 2019 development (V-LED) in Africa and Southeast Asia

adelphi/German Federal Ministry for Environment, Nature Conservation & Nuclear Safety (BMUB)

Project Lead for South Africa and Kenya

Responsible for management and implementation of selected activities in the two countries: Planning and advising key government representatives at national and subnational level (selected municipality representatives); Development of a training programme including a Train-the-Trainer component (ToT) and organisation of training seminars for government representatives in subnational administrations on ecological approaches to water management; Conceptualisation and organisation of a good practice exchange series on climate-resilient and low-carbon development aspects for local government in South Africa municipalities; design of an of an issue-specific study tour to Kenya by selected South African government representatives (national and subnational level; government representatives), for a moderated learning exchange with relevant South African stakeholders (national and municipal government representatives and other stakeholders); Development of a research paper on the adaptation/mitigation nexus in Africa, focusing on Kenya and South Africa as case studies.



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- Oct 2015 - March 2016 Economic Report for Africa (ERA) 2016: Greening Africa's Industrialisation
UN Economic Commission for Africa (UNECA)
- Co-author for the ERA 2016 and lead author ERA 2016 Chapter 5 – 'Business as usual or a green agenda?'** Chapter development required modelling and analysis of two separate development scenarios, a Business as Usual (BAU) and a Green Growth Agenda Scenario. These scenarios focused on water, energy, agriculture, employment, urbanisation and poverty alleviation for Africa, following a BAU and a Green Growth agenda. Ms Petrie conducted sector-specific analysis of different development scenario outcomes for chapter 5, formulated policy recommendations for the full report, contributed case studies from the continent to the full report and developed the conceptual framework for the report. The report was launched to African finance and economic development ministers in Addis Ababa in May 2016.
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- 2015 Bangladesh Country Programme
DANIDA
- Climate change and climate finance advisor** in the development of the Bangladesh Country Programme, which includes agriculture, governance, textile and clothing industry development with climate change and finance as cross cutting elements. Co-Authored the country programme design document and conducted in depth, in country fieldwork as part of the analytical framework. Advised on redesigning the institutional arrangements of the country's water and sanitation institution to ensure that it is climate finance ready and compliant with international and national regulatory standards.
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- 2015 Political Economy of Climate-Relevant Change Policies: The Case of Renewable Energy in South Africa (IDS Evidence Report 128)
Policy Research in International Services and Manufacturing (PRISM) / Institute of Development Studies (IDS)
- Part of the IDS programme on Strengthening Evidence-based Policy. Investigating power dimensions and struggles between various interests within the energy sector in South Africa. The report provides insight into how the political economy environment has impacted the unfolding of South Africa's climate change policy, with a specific focus on the deployment of private sector-driven renewable energies – through the Renewable Energy Independent Power Producer Procurement Programme (RE IPPPP). Belynda provided valuable comments on the report, based on her extensive knowledge of the political context of the energy sector in South Africa.
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- 2014 - 2018 Practitioners' Dialogue on Climate Investments (PDCI)
German Federal Ministry for Economic Cooperation & Development/ GIZ
- PDCI is a global platform to facilitate and support private investment in climate change adaptation measures, energy efficiency and renewable energy projects ([see http://www.practitioners-dialogue.de/en/](http://www.practitioners-dialogue.de/en/)). PDCI facilitates dialogue between senior policy-makers in developing countries, and professionals in business and the financial sector, to help secure participation of the private and financial sectors in climate-resilient and low-emission development. Activities provided: Regular input role in international PDCI meetings on climate finance, policy, green procurement and entrepreneur approaches and the green economy. Specifically, appointed as an **Advisor on business model/idea development and policy solutions for enabling climate finance measures** needed to trigger and increase private investments in low-emission and climate-resilient business in developing countries and emerging economies. Facilitative role in connecting public sector decision-makers with representatives from finance sector, industry, consulting bodies and academia.
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- 2013- 2014 Climate Finance Readiness (CFR) Project in Southern and Eastern Africa
United Nations Development Program (UNDP)
- Project lead and climate finance expert**
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Conducted six in depth country case studies across Southern and Eastern Africa. Facilitated high level Round Table Discussions in each case study country and facilitated a cross learning knowledge platform between the six countries for the duration of the project. Made recommendations for enhancing readiness, aligned with the Green Climate Fund and the global climate finance architecture requirements; developed project policy briefs; and built capacity of stakeholders and practitioners in the six project countries. Presented the study findings to UNDP Head Quarters team in New York and at COP 20 in Lima.

2013 - 2014 Pilot Programme for Climate Resilience (PPCR) in Mozambique: An Assessment of Climate Resilient Livelihood Options in Drought Prone Areas

Mozambique Ministry for Development Planning (República De Moçambique Ministério Da Planificação E Desenvolvimento); and the World Bank

Project lead and water resource expert

Conducted a risk and vulnerability assessment, desktop and participatory assessments and fieldwork to identify feasible resilience building investments, especially in response to the high risk and incidence of drought in southern Mozambique. Activities included: Mapping risk and vulnerability to climate change in the six districts, using spatial mapping analysis; Fieldwork to interview farmers, citizens, government, civil society and the private sector with a view to establishing needs and feasible investments; Facilitating stakeholder workshops in the province of Gaza, including all districts concerned to assess R&V and to identify priority solutions; Synthesis and analysis and investment reports for the ministry, provincial stakeholders and the World Bank.

March 2013 – May 2013 Analysis of Projected Climate Change and Livelihoods: A Pilot Study in the Botswana Access Livestock and the Mozambique Coastal Zambezia Livelihood Zones (SADC RVAA Programme)

SADC Regional Vulnerability Assessment and Analysis (RVAA) Programme

Activities performed: compiled data, information and information system prerequisites for the climate change analysis (through GIS mapping); provided Climate R&V and Scenario Analysis; identified key hazards; provided GIS mapping, Participatory analysis with stakeholders, and Climate Change and Livelihood Scenario Simulation. for the Development of a Climate Change Response Strategy

2013 Nile Basin Initiative: Review of all Environmental policies and strategy; Development of the Nile Basin Climate Change Strategy

GIZ, through Adelphi consult

Technical Advisor and Facilitator on developing the Nile Basin Climate Change Strategy, conducting a technical review of the NBSF, the Wetland Strategy, the ENSAP and the Water Policy; institutional analysis and review of capacity and mandate of the NBI; facilitation of NBI and Technical Committee review meetings in Uganda and Ethiopia.

2013 Renewable Energy Programme for South Africa

DANIDA

Advisor for the evaluation and review of the DANIDA funded Renewable Energy Programme for South Africa. Evaluated the programme design and efficacy, with recommendations for the formulation of the remainder of the programme. Subsequently appointed as **Project Manager** on the implementation of the programme, including facilitating the programme's legal agreement between the key beneficiary institutions (Department of Energy, ESKOM and the South African National Energy Development Institute (SANEDI). Provided advisory to all 3 institutions and the Danish Embassy on programme implementation design and on the institutional arrangements for ongoing programme management and governance.

2013 Appraisal Renewable Energy Programme for South Africa



Danish Foreign Ministry (MFA) / the Danish Ministry for Climate Change, Energy and the Built Environment

Mid-term review/appraisal of the programme in South Africa, including a mission. Review of direct access financial arrangements for the programme through National Treasury; review of governance structures with all programme beneficiaries; review of all programme documentation; meetings with stakeholders, beneficiaries and the funders; review of related donor programmes and alignment issues. Drafting of the Appraisal Aide Memoire and presentation to the client.

2012-2014 CHOICES: Sustainable Energy Access for Improved Rural Livelihoods, South Africa
Renewable Energy and Energy Efficiency Partnership (REEEP) and International Institute for Environment and Development (IIED)

Project Manager and Advisor on the CHOICES programme in South Africa, facilitating alternative energy choices and enhanced access for South African communities. The project established a stronger link between communities and South Africa's energy policy makers as well as energy investors. A household energy survey provided a baseline of community energy knowledge and influence. Community awareness raising and capacity building; and matchmaking between energy technology developers, energy investors and target communities were subsequently facilitated to empower communities and local authorities on local energy developments.

2012 COP17 (Durban) Legacy Project: 'Thato ya Batho – Women adapt to Climate Change'
South African Minister for the Dept. for International Relations & Cooperation (DIRCO)

Project Director and lead-author of the COP 17 Legacy Book, 'Thato ya Batho – Women Adapt to Climate Change'. The book was commissioned by the South African Government as a legacy project of the UNFCCC COP 17 held in Durban, South Africa (2011). Ms Petrie led on synthesizing 34 country case studies and analysing lessons and motivations for investing in women-led adaptation in the developing world.

2011-2014; 2017 Water Climate & Development Programme (WACDEP); and Evaluation of WACDEP Africa (2011-2016)

Global Water Partnership (GWP) and African Ministerial Council for Water (AMCOW)

Project lead; lead author; Reference Group (RG) Member

Lead the evaluation of the WACDEP Africa programme (2011-2016), including a review of all programmes and projects, with broad stakeholder engagement and participatory analysis to validate the findings. Advisor in the RG to the development of the Strategic Framework for the water security and Climate Resilient Development of Africa Programme and on developing and implementing water and development investments in Africa. Regular advisory services on in-country, river basin-wide and continental water investment programmes and policy development. Assessment of feasible water investments needed to maintain and/or stimulate foreign and local investment in Africa's economic development.

Advisory on various programme-country climate and water strategies and investments; advisor on climate finance for these investments.

2011-2016 Zambezi River Basin Risk and Vulnerability Analysis and Validation, & Zambezi Hydropower Investment Risk Assessment

Climate and Development Knowledge Network (CDKN); and the World Bank

Project Director and Strategic Advisor

Led the development of: i) spatial analysis of climate risk and vulnerability to Zambezi water resources; ii) Zambezi hydropower investment risk assessment against a set of scenarios for the climate and development future of the Basin, using International Futures modelling and LEAP

and WEAP models; iii) stakeholder workshops for participatory analysis and validation (of the risk assessments); iv) training and capacity building of the Southern African Power Pool (SAPP).

2011 - 2014	<p>Support to the Africa Group of Negotiators (AGN)</p> <p>Climate and Development Knowledge Network (CDKN); Norwegian Embassy, South Africa</p> <p>Strategic and technical advisor to the Chair and Lead negotiators of the Africa Group of Negotiators on climate change to the UNFCCC – Development of key elements of the African Common Position on Climate Change (adaptation, climate finance and the Durban Platform). Development of a Negotiator’s Index (series of publications to support African negotiators); Lead on design and implementation of regional capacity building interventions for development of successful climate-financed adaptation proposals, focused on training intermediary institutions and trainers as well as climate negotiators: SADC Parliamentary Forum; Southern African Faith-based Communities for Environmental Change – SAFCEI; Lead negotiators and technical advisors from African countries (training and capacity building programme over 5 years). Further development of key elements of the African Common Position on Climate Change (adaptation, agriculture, climate finance and the Durban Platform). Led the strategic and technical advisory to the AGN on negotiating positions and strategies; technical backstopping at the UNFCCC negotiation platforms.</p>
2010-2012	<p>Strengthening Climate Finance Absorptive Capacity in Mozambique, through the Regional Climate Change Programme (RCCP) of Southern Africa</p> <p>Government of Mozambique Ministry for Environment & Coordination; Disaster Risk Management Agency; financed by DFID</p> <p>Programme Director; Technical advisor on Investment strategies & Climate finance. Initially under the RCCP, the project involved analysis of the necessary institutional, governance arrangements and project development capacities: Analysing and recommending institutional and governance arrangements; Facilitating the identification of priority adaptation responses; Establishing national priorities in the context of shared river basins (e.g. Zambezi, Limpopo); Building project proposal development capacities across 6 sectors in Mozambique; Evaluating and enhancing government-/sector-developed adaptation project proposals; Policy advisory and governance support in establishing institutional capacities and arrangements for the NIE; Facilitation of training workshops, development of a Training Manual; Advisory to the MICOA Permanent Secretary and climate change and finance team; Project management.</p>
2010-2011; 2015; July – Sept. 2017	<p>‘Green Skills in Emerging Economies: South Africa Report’; Synthesis Report; Capacity building; Updated South Africa Report/Country Study</p> <p>International Labour Organisation (ILO)</p> <p>Lead consultant for the South African and subsequent country synthesis report (2010-2011) on Green Skills in Emerging Economies for the ILO: synthesised lessons from ten countries; completed research gaps; made recommendations. Analysed green skills potential in South Africa and Kenya in the context of green economy opportunities and national industrial development and growth policies; drafting and finalisation of the final global participant countries synthesis report. Updated the SA country analysis in 2015 and participated in South African policy dialogues on green skills development with the Department of Labour, the Development Bank of South Africa and the Expanded Public Works Programme between February and July 2015. Updated the South African Country Study (2017).</p> <p>2010 Country study available: http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_142475.pdf</p>
2010	<p>Tsumkwe Energy Business Plan Development</p> <p>Desert Research Foundation of Namibia (DRFN) / Tsumkwe Municipality (Namibia)</p> <p>Developed a business plan for the efficient and effective establishment and running of the Tsumkwe Energy Hybrid System implemented by the Municipality. Delivered a tightly packaged ownership and management model, including an indicative tariff structure for the</p>

Tsumkwe Energy Hybrid System based on a comprehensive financial model, which assists in the improvement in the state of affairs in Tsumkwe and can be replicated elsewhere in Namibia and beyond.

2008 –
2012

Uganda Water resources sector: Vulnerability Assessment to climate change and Adaptation strategy

Government of Uganda - Department of Water Resource Management (DWRM), Ministry of Water and Environment

Project Director and Technical Advisor for the Development of a Climate Change Response Strategy for the Department for Water Resources, Uganda: Water and infrastructure Climate Change Risk and Vulnerability Impacts Assessment; development of a package of response and related policy options and institutional arrangements; assessed the vulnerability of the different components of the water resources sector to on-going and projected climate changes - supported and validated through extensive stakeholder engagement to build appropriate response strategies. Lead on design and implementation of capacity building; managed the process to develop and agree the sector's climate response strategy with Government and other stakeholders; quantified the related costs of priority adaptations; design and facilitation of five workshops (for 250 officials) with DWRM and related departments (e.g. Agriculture and Energy); stakeholder-approved strategic response to climate change for the water and related sectors.

2008-2009

Facilitation, Strategic Advisor and Technical Assistance for the SADC Multi-Stakeholder Water Dialogues

UK Department for International Development (DFID) (as part of the RCCP)

Co-facilitator of the second, third and fourth Multi-Stakeholder Dialogues, hosted by SADC Water Division.

2007-2012

Regional Climate Change Programme (RCCP) - Southern Africa

UK Department for International Development (DFID); Swedish International Development Agency (SIDA)

Programme Director

The 5-year RCCP had the purpose of *enabling transboundary adaptation to climate change, with equitable access to finance, in southern Africa*. Led the feasibility study, for design and implementation of the RCCP in the Southern Africa Development Community (SADC) region, which resulted in the four programme outputs: i) A scientific evidence base for change in southern Africa; ii) Programmatic adaptation strategies for energy, water, health and food security in southern Africa; iii) Climate Finance solutions for southern Africa, and; iv) transboundary networks for strengthening Africa's voice in relevant multilateral platforms. Under outputs i and ii), the RCCP produced numerous research papers and briefs (transboundary water, climate change and energy, climate change and human health and food security), a Knowledge for Adaptation Series, a series of briefs for Policy Makers and training and capacity building materials. Output iii) included an in-depth paper on climate finance for southern Africa, capacity building of government stakeholders in developing successful project proposals for the multilateral climate funds, and investment solutions for climate compatible water and energy investments. Under output iv), the African Common Position on Climate Change was developed through support to the Africa Group of Negotiators (AGN) in negotiations under the UNFCCC, and climate change was brought into the SADC regional agenda for water, through SADC Water and in partnership with the Global Water Partnership, Southern Africa.

2007-2011

George Mobility Strategy

Ninham Shand/Aurecon

Project lead on the socio-economic survey and social impact assessment



The project analysed the potential socio-economic impacts of a proposed improved public transport system in George, South Africa, and developed a diversified skills development plan that could be enabled through improved transport logistics in the area. Activities: design and implementation of a household level survey in the George area and analysis of survey outcomes; analysis of the socio-economic impacts of the proposed improved public transport systems and skills development centre in George; development of a diversified skills development plan that could be enabled through improved transport logistics in the area and a social impact assessment of the potential impacts of improved transport and skills development in the area.

2007-2010 Majeng Land Restitution Process Business Plan; 2010 Community Strengthening Programme
South African Department of Land Affairs

Project lead on the development of the Majeng Land Restitution Process Business and Land-use Plan and Community Strengthening Programme in the Northern Cape, South Africa, for the Department of Land Affairs. The project included a household survey to assess community socio-economic and livelihood needs, land surveys to define boundaries of the land restored to the Majeng Community, establishment and capacity building of the Majeng Community Property Association, commissioning a minerals assessment of the land, a feasibility study on economic viability of various land uses, analysing water security for land uses identified and a human settlement plan.

2007 - 2008 Green energy plant, KwaZulu-Natal, South Africa (CDM Project)
Associated Energy Services (AES)

Conducted the CDM component of the plant, developing the methodology, quantifying carbon credits, analysing and communicating community and local economic development co-benefits, and registering the project with South Africa's Designated Operating Entity and the UNFCCC.

2006 - 2008 Western Cape Climate Change Strategy and Action Plan
Department of Environmental Affairs & Development Planning (Western Cape)

Project director & strategy advisor in conducting the multi-disciplinary research for, and development of, a comprehensive climate change strategy for the Western Cape through desk research, participatory analysis, economic assessments, scientific and legal assessments. Developed climate finance projects and proposals with stakeholders and identified the key areas of climate vulnerability in the Western Cape. Presented the strategy as keynote speaker at a Climate Change Conference in Cape Town in 2008 and facilitated the process of Western Cape Cabinet approval of the strategy and action plan.

2005 - 2008 Integrated Southern Africa Business Advisory (INSABA): Renewable Energy for Productive Use in Southern Africa
European Commission/ INWENT (GIZ)

Project lead. Identified entrepreneurs, supported them in developing their business plans, conducted their feasibility studies and conducted pilots in reaching the project goals. The work further entailed identifying business opportunities, doing feasibility and market analyses, energy finance and project development. Capacity development was at the heart of this project.

2005 - 2006 Solar water heating market and finance study
InWent / City of Cape Town / German Federal Government

Establishing a SWH working group for region with key stakeholder inclusion. Devising and implementing a communications strategy and plan for public awareness and education purposes. Conducting a market survey of the installed base of SWH systems in the Western Cape to establish technical and support issues, public perception and finance issues. Assessing appropriate finance mechanisms and devising an incentive scheme. Designing financing schemes in conjunction with the commercial and development financial services industry, among others.

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- 2004 - 2006 Blue Crane Integrated Energy Assessment and Planning
Blue Crane Development Agency, Eastern Cape, South Africa
Developed of an integrated energy development strategy and action plan for the region. Participated in the pre-feasibility on the biodiesel potential in the region with BCDA's involvement and introduced the concept and project to the BCDA.
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- 2003 - 2004 South African Wind Energy Programme (SAWEP)
UNDP (GEF funded)
Programme to assess barriers to establishing a wind energy industry in Southern Africa and identifying institutional & policy framework to remove these barriers. Investigated the role for green funding to provide some of the incremental costs of supplying electricity supplied from renewable energy sources. Analysis of the green energy market, with specific attention to understanding the financial issues and mechanisms of the industry within the South African context.
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- 2003 - present Ibhubesi Natural Gas Development Project
SunBird Energy Ltd and Forest Oil International
Project lead
Provision of ongoing socioeconomic development and analysis support to the development of the Ibhubesi gas fields located off the west coast of South Africa. Conducted market and feasibility analysis (market uptake and competitive energy price analysis); conducted three socio-economic analyses and detailed social impact assessments across project affected areas in the Northern and Western Cape, including household level surveys within communities to ascertain energy and community development needs and potential impacts of enhanced energy service delivery; developed the Socio-Economic Development Plan, and the Labour, Skills and Employment Equity Plans for the gas field project; managed the process of ensuring compliance of the exploration companies with South African business laws and international regulations.
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- Petrie, B., Ellis, C., Pengelly, C., Petrik, D., Martin, L. (2014). 'Readiness for Climate Finance - Experiences from Eastern and Southern Africa' for UNDP Regional Service Centre Africa. OneWorld Sustainable Investments, Cape Town, South Africa.

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- Petrie, B. (2017). 'Cooperative Water Governance for Climate Resilience: Are Institutional Arrangements in Southern Africa fit for purpose?' Occasional Paper 268. South African Institute of International Affairs (SAIIA), Johannesburg, South Africa. Available from: <http://www.saiia.org.za/occasional-papers/1236-cooperative-water-governance-for-climate-resilience-are-institutional-arrangements-in-southern-africa-fit-for-purpose> © SAIIA, July 2017
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