

environmental and social impact assessment and management

Statement of qualifications



Provision of environmental and social services

For over 40 years, environmental and social management has been a core competency of the SRK Group. Our environmental and social skills have diversified to provide a wide range of services to meet the needs of a broad range of clients and address evolving international trends. With over a 100 major Environmental and Social Impact Assessments (ESIAs) completed, our experience allows us to adapt environmental and social studies to deal efficiently and effectively with the unique circumstances of each project and its associated decision-making processes.

SRK's expansive expertise in the natural resources, minerals, oil and gas, renewable energies and industry enables us to proficiently distinguish potential solutions for our clients. We understand that each project is unique in scope and can interact with client project teams with a common understanding of their specific needs.

Our multi-disciplinary teams comprise specialists in the fields of social and biological science, geohydrology, hydrology, geochemistry, engineering and design, sustainability, climate change, energy, economics, rehabilitation, and stakeholder engagement. We work alongside experts in geology, mining, metallurgy, geotechnical, mine-closure planning and geographic information systems (GIS) and are able to easily confer to enhance our holistic understanding of the project.

Apart from environmental and social services related to mining and industry, SRK also provides a wide range of other natural resource related services, including (amongst others):

- Mining project evaluation
- Petroleum
- Geology, resources and exploration
- Geotechnical engineering
- Tailings, heap leach and waste management
- Water
- Extractive metallurgy and mineral processing
- Mine reclamation and closure
- Feasibility studies
- Risk management and due diligence

Background to the SRK Group:

Formed in Johannesburg, South Africa in 1974, SRK Consulting (SRK) now employs more than 1500 professionals internationally in 50 permanent offices in over 20 countries on six continents. A broad range of internationally recognised associate consultants complements the core staff.

Through the talent, expertise and experience of its highly skilled staff, SRK works with its clients and provides specialist solutions to meet their needs. SRK prides itself on an impressive track record that spans more than 40 years.

The SRK's independence is ensured by the fact that it holds no equity in any project and that its ownership rests solely with its staff. This enables SRK to provide its clients with conflict-free and objective recommendations on crucial judgment issues.

SRK's mission is to provide expert advice and solutions for clients requiring specialised services, mainly in the fields of natural resources planning and assessment, environment management and development. SRK also provides additional services to niche sectors such as governments and donors.

SRK has extensive project expertise in natural, mining, oil and gas, infrastructure development, renewable energies and industry. We are adept at engaging with stakeholders from all sectors whether at a strategic or operational level. SRK understands that each project is unique in scope and strives to interact with client project teams with a common understanding.

SRK's African practices have over 60 skilled environmental and social professionals in 14 offices in South Africa, with further continental support from our offices in Angola, Cameroon, Democratic Republic of Congo, Ghana, and Zimbabwe. This immense wealth in regional knowledge results in project teams that are accomplished and capable in assisting clients with their projects.

For more information, please go to:

www.srk.co.za or www.srk.com

Our approach to ESIA

Environmental and social impact assessment (ESIA) is a core service provided by SRK Consulting

Partnering with clients

We like to partner with clients, without compromising our independence, during project planning and design. Early partnering helps avoid or minimise environmental and social impacts and identify effective management measures that can be included in the project design at an early stage.

Putting the best team forward

SRK believes in attracting, developing and retaining top talent resulting in a qualified and skilled ESIA team. Drawing in from our comprehensive expertise from our other national or international offices and supplemented by our extensive network of internationally recognised external specialists, ensures that the best project team is established for each project.

Experience in conducting international standard ESIA

SRK has worked with the World Bank, the International Finance Corporation (IFC) and numerous other financial institutions undertaking bankable reviews to determine whether projects meet the minimum requirements set out by the Equator Principles (EP) and IFC's Performance Standards (PS), and has worked extensively on projects that require compliance with in-country legal requirements and good international industry practice (GIIP) based on EP and PS.

Understanding host-country requirements

We ensure we have a good understanding of regulatory requirements in the countries we work in. We involve local environmental and social practitioners to access local knowledge that enhances our understanding of how the host country's legislation is interpreted by regulatory authorities. This ensures our process takes cognisance of local customs and is culturally appropriate.

Understanding international standards and requirements of development financiers

As many of our clients are either investors or companies seeking funding, we carry out our work to meet international lender requirements as represented by the Equator Principles. The Equator Principles require observance of the International Finance Corporation (IFC) Performance Standards and the World Bank Group Environmental, Health and Safety (EHS) Guidelines. SRK is well-respected by the investment community and this credibility is of benefit to our clients.

Working with local experts

We encourage working with consultancies and local experts in the countries in which we work. This cooperation with local experts results in mutual benefits through knowledge transfer and capacity building, ensuring that the ESIA team is fully apprised of local environmental and social contexts. This aligns with SRK's Sustainability policy to ensure that long lasting capacity is developed in the countries in which we work.

Useful and user-friendly outputs

We believe information and outputs provided by SRK must meet client and stakeholder needs for planning, decision making and implementation and therefore can be fully integrated. We recognise that outputs may be used by a range of stakeholders: client's project design team, operational management team, board or senior management and shareholders; regulatory authorities; investors; and local communities. We can and have communicated in a variety of unique and innovative formats, levels and languages to ensure that the needs of the recipient are met.

Stakeholder engagement

SRK has specialist skills and experience to undertake stakeholder engagement adapted to country-specific cultural and political demands. Through our specialist stakeholder engagement team, we can provide expert guidance on stakeholder engagement throughout the project development life cycle from design, through construction and operation to closure. This can extend beyond the ESIA stakeholder engagement process to a grievance mechanism for resolution of communities issues and to the maintenance of a relationship of trust and credibility with stakeholders (social licence).

Managing multi-disciplinary teams

SRK is a consultancy with multi-disciplinary and accomplished environmental and social professionals. The team is led by numerous experienced experts with notable international standing. This experience results in the successful coordination and management of this capable team to deliver outputs that go beyond the clients' expectations.

Specialist studies

Specialist studies required to complete an ESIA for any project generally include baseline studies and investigations aimed at defining and evaluating specific impacts. The specialists who undertake these studies are appointed based on their qualifications and experience. These may be SRK's in-house experts, established SRK associates or locally identified specialists (particularly where knowledge of local conditions is vital). Where local specialists are used, mutual

benefits are exchanged, through capacity building and more importantly for the project team, local knowledge is shared. We ensure studies comply with international requirements and are appropriately focused on the specific issues of the project.

Effective environmental and social management

As part of the ESIA process, SRK assists the client to develop an environmental and social management framework that includes:

- An integrated implementation plan for the management system covering organisational capacity and accountability; reporting, financial resources and training requirements
- A management programme with measures for addressing identified impacts
- Action plans for the implementation of management measures that are complex and/or address high risk impacts
- Suitably detailed monitoring programmes
- Effective stakeholder engagement, integrated reporting requirements; and rehabilitation and closure planning, management and costs.

Quality System

SRK South Africa is ISO 9001:2008 certified and is committed to a planned and organised Quality Management Programme. This programme is aimed at ensuring that all ESIA's provide quality in terms of our: service to satisfy our clients' timing and budget requirements; products targeted to meet what is needed; professional presentation of documentation; and our office systems that are maintained in a logical and careful manner.

Our energy project experience in Africa

SRK has undertaken a multitude of large-scale environmental and social projects throughout Africa.

Large scale ESIA's for mining, resources, oil and gas, industrial and renewable related projects

SRK has extensive experience of both the management and provision of technical expertise for environmental and social issues for an African context. This experience has been gained predominantly through the completion of over 100 large ESIA's throughout Africa. Many of the studies conducted in the past ten years have complied with host country requirements, national and international best practice, including the Equator Principles and International Finance Corporation (IFC) Performance Standards. SRK has managed the assessment and management processes as well as contributed to specialist investigations often in partnership with local counterparts. In many of these projects, detailed environmental and social action plans have been developed such as (but not limited to):

- Resettlement plans
- Artisanal mining strategies
- Stakeholder engagement plans
- Human resources plans
- Community development plans
- Occupational health and safety
- Integrated waste management
- Emergency preparedness and response
- Community health and safety
- Integrated water management plans
- Rehabilitation and closure plans
- Greenhouse gas and energy management

Table 1: Selected environmental assignments carried out for energy projects

Project:	840 MW Molteno Wind Energy Project	South Africa
Client:	Afri-Coast Energy	
Scope:	ESIA of the construction and operation of a wind energy project in the Eastern Cape Province	
Project:	500 MW PV Plant	South Africa
Client:	Sato Energy (Pty) Ltd	
Scope:	ESIA of the construction and operation of a PV plant situated nears Aggeneys in the Northern Cape Province	
Project:	EBS Heavy Fuel Oil (HFO) Power Plant	Suriname
Client:	Paramaribo	
Scope:	ESIA for the construction of a new 84 MW EBS HFO Power Plant in Saramaccastraat	
Project:	CCGT plant	South Africa
Client:	Coega Development Corporation	
Scope:	Environmental assessment for a combined cycle gas turbine power plant in the Coega area, Western Cape	
Project:	Candover-Mbazwana-Gesiza	KwaZulu-Natal
Client:	Eskom Holdings Limited	
Scope:	EIA for the proposed Candover-Mbazwana-Gesiza 132kV Powerline and Mbazwana and Gesiza 132/22kV substations, Makhatini flats, KwaZulu-Natal.	

Table 2: Selected environmental assignments carried out for linear infrastructure projects

Project:	Liberia Iron Ore Export	Liberia
Client:	West Africa Exploration	
Scope:	ESIA for the construction of the road/ rail for export purposes of Iron ore to the harbour.	
Project:	Sonangol Offshore Optical Cable (SOOC) – Terrestrial	Angola
Client:	Conshelf / Sonangol	
Scope:	EIA for the construction of an off-shore optical cable for Sonangol in Angola.	
Project:	Hermanus Bypass Road	South Africa
Client:	Provincial Government Western Cape	
Scope:	EIA for the Hermanus Bypass Road	
Project:	FibreCo Amendment	
Client:	FibreCo Telecommunications (Pty) Ltd	
Scope:	Addendum to the environmental authorisations for the fibre optic data cable routes between Cape Town and Durban issued by Department of Environmental Affairs (DEA)	

Table 3: Selected environmental assignments carried out for mining projects

Project:	Kisanfu Copper Cobalt Mine	Democratic Republic of Congo
Client:	Phelps Dodge Congo SPRL/ Freeport-McMoran Incorporated	
Scope:	Baseline studies and guidance and advice to the in-country ESIA to ensure compliance with Equator Principles	
Project:	Limpopo West Project	South Africa
Client:	Sasol	
Scope:	Conducting the EIA for a large coal mine, which includes baseline investigations and impact assessments as well as a comprehensive stakeholder engagement process	
Project:	Mongbwalu Gold Mine	Democratic Republic of Congo
Client:	Anglo Gold Ashanti	
Scope:	ESHIA and ESMP to satisfy in-country and international good practice requirements	
Project:	Zulti South	South Africa
Client:	Richards Bay Minerals	
Scope:	Integrated environmental assessment process for RBM's proposed mining in the Zulti South Area	
Project:	Bakhuis Bauxite Project	Suriname
Client:	BHP Billiton	
Scope:	Environmental and social assessment and management planning	

Table 4: Selected environmental assignments carried out for agricultural projects

Project:	Environmental impact assessment	South Africa
Client:	Matzikama Municipality	
Scope:	EIA for aquaculture farms in Doringbaai, Western Cape	
Project:	TERRA Agricultural Project	DRC
Client:	TERRA S.P.R.L	
Scope:	ESIA and Social Management System for the Terra Industrial Farming Complex	
Project:	Woodlands Dairy Environmental Impact Assessment	South Africa
Client:	Woodlands Dairy (Pty) Ltd	
Scope:	Environmental Impact Assessment and associated waste license application of the Woodlands Dairy in Humansdorp	
Project:	Forestry Development in Tanzania	Tanzania
Client:	Oji Paper Company Limited	
Scope:	ESIA for the development of 50 000 ha forestry plantations in Tanzania for creating wood chips for export to Japan	

Table 5: Selected environmental assignments carried out for gas, petroleum and cement projects

Project:	Project: Air Separation Facility EIA	South Africa
Client:	Client: Air Liquide	
Scope:	Scope: Environmental and social assessment and management planning	
Project:	Project: Liquid Natural Gas Construction Housing Development	Angola
Client:	Client: Petromar	
Scope:	Scope: Environmental and social assessment and management planning	
Project:	Project: Environmental and social impact assessment for the PPC Barnet cement project	Democratic Republic of Congo
Client:	Client: PPC	
Scope:	Scope: Update to in-country compliant EIA to meet international lender requirements for ESIA	
Project:	Petroline Petroleum Pipeline	South Africa
Client:	Petroline (Pty) Ltd	
Scope:	ESIA for the construction and operation of a 450km pipeline and related infrastructure between Mozambique and South Africa	

Full project list available on request



Complementing pre- and post-ESIA experience

Our impact assessment experience is complemented by environmental and social monitoring, auditing and due diligence studies, input into designs, prefeasibility and feasibility studies, environmental management frameworks, strategic environmental assessments and a complete stakeholder engagement experience. This broader perspective and understanding provides invaluable insight on the actual impacts of projects. SRK often serves an independent environmental control function during the construction and operation phase of mining, industrial and linear projects. SRK also offers expert engineering and programme management for all aspects of infrastructure rail projects. We have the capability to take projects from initial feasibility to on-going maintenance

SRK has undertaken several environmental and social reviews of proposed projects and existing mining operations in Africa on behalf of financial institutions considering investment in these projects/operations. As an independent consultancy SRK also provides technical and environmental advice to African governments, international non-governmental organizations and donors. (For further information, please view our other information booklets available for download on our website www.srk.co.za)



Our clients

SRK's clients are as varied and widespread as the projects in which we have been involved in. These include donor organisations and international development agencies, government departments, investors and financiers, a range of industry sectors in business (mining, oil and gas, renewable energy, linear infrastructure, forestry, ICT, property and petrochemicals), and non-governmental organisations.

Donor organisations including

- DANIDA
- DFID
- EU
- GIZ
- Japanese International Cooperation Agency
- USAid
- World Bank

Government departments including

- Cameroon Government
- Energy (South Africa)
- Environmental Affairs (South Africa)
- Minerals Resources (South Africa)
- National Treasury (South Africa)
- Provincial and Local Governments
- Southern African Development Community
- Trade and Industry (South Africa)
- Water Affairs (South Africa)
- Zambian Environmental Management Agency

National and International Financial Institutions

- ABSA
- Africa Bank
- BOE Private and Merchant Bank
- Development Bank of Southern Africa
- HSBC
- Industrial Development Corporation
- International Finance Corporation
- Nedbank Capital
- Nedcor
- Rand Merchant Bank
- Societe Generale
- Standard Bank
- Standard Chartered

Business including international mining and energy houses

- African Barrick Gold
- AngloAmerican Coal
- AngloAmerican Platinum
- Anglo Gold Ashanti
- Aurora Power Solutions
- Barrick Gold Corporation
- BHP Billiton
- CIC Energy
- Eskom
- Exxaro
- Fibreco
- Freeport Phelps Dodge
- Mondi
- Oji Paper
- Oromin
- Petroline
- Richards Bay Minerals
- Rio Tinto
- Rockgate Capital
- Sasol
- Sato Energy
- Sierra Rutile
- Shell
- Vale
- Vodacom

Non-Government Organisations (NGOs)

- Group for Environmental Monitoring (GEM)
- The Global Environmental Forum (GEF)
- the Mvula Trust
- Worldwide Fund for Nature(WWF)
- Endangered Wildlife Trust

Our offices and where we work



Principal environmental and social practitioners

A comprehensive list and CVs of staff are available on request

The list of key team members involved with ESIA is provided below.

ESIA and stakeholder engagement practitioners	
<p>DARRYLL KILIAN MA (UCT), CEAPSA is a Partner of SRK and Principal Consultant with over 20 years' experience, primarily in South Africa, Southern Africa and East and West Africa. Darryll has worked on a wide range of projects, notably in the transport (including rail and ports), industrial, forestry and government sectors. He has participated in Environmental and Social Impact Assessments (ESIAs) and provided high level review of Equator Principles compliant ESIAs. Darryll also has a depth of experience in sustainable development practice gained through his work on Country Strategy Development, Strategic Environmental Assessments and State of Environment Reporting. He holds a MA in Environmental and Geographical Science from the University of Cape Town and is a Certified Environmental Practitioner of South Africa (CEAPSA).</p>	<p>VASSIE MAHARAJ BSc (UDW), IAP2 is a Partner of SRK and has been involved in the field of public participation, stakeholder engagement and communication for over 15 years. She has led numerous stakeholder and government consultation processes for ESIAs in Africa, including several years in the DRC for Freeport-McMoRan for a new copper mining and processing project in a rural area. Vassie has also conducted consultation and stakeholder education programmes for projects by Anglo Coal, Anglo American Platinum, Impala Platinum, Aquarius Platinum and many other clients in South Africa, SADC countries (Zambia, Botswana, Namibia), Zanzibar, and Indonesia; across cultural and language boundaries, using culturally appropriate methods, and innovative techniques. Vassie is a founding member of the International Association of Public Participation</p>
<p>WARRICK STEWART BSc (Hons) MSc PrSciNat is a Principal Environmental Scientist with over 15 years' experience. Warrick has been responsible for the management of numerous environmental and social assessment processes in the mining, energy, infrastructure, agricultural, industrial, commercial, residential and tourism sectors. Warrick also provides environmental, biodiversity, coastal management and land use planning specialist input into ESIAs. His project experience has been gained in South Africa, the Democratic Republic of Congo, Greece, Romania, Sierra Leone, Suriname, Turkey and Zimbabwe and have included projects to meet Equator Principles and international lender requirements. Warrick has particular expertise in the field of biodiversity management holds a Bachelor of Science Honours degree in Ecology and Environmental Management and a Master's Degree in Conservation Planning (Botany).</p>	<p>ANITA BRON BA (Hons) MA Research Psychology is a principal social scientist based in Johannesburg, South Africa. She has 17 years' experience in this field and heads up SRK's social team in the Johannesburg office, SA. With her research background in the design of data collection and social research processes and interpretation of social data, she specialises in social risk and impact assessment, management and monitoring/evaluation. Anita also undertakes evaluation, planning, execution, assessment and interpretation of social research. Key sectors in which she has experience include mining, energy and infrastructure. Her responsibilities include development and implementation of integrated social assessments and management plans, from the concept phase to the execution of projects. Anita's experience serves her well when conducting independent due diligence social assessments on behalf of lenders.</p>

<p>ADEL MALEBANA <i>BA BEd MSc (Development Planning)</i> is a social scientist with 13 years' experience, prior to which she was a teacher. She began her career as a consultant, with a special focus on baseline social surveys, social impact assessments, resettlement planning and implementation, multi-stakeholder engagement and facilitation. Adel has worked extensively in the mining sector in South Africa and undertaken several assignments including social impact assessments, planning for household and grave resettlement, community meeting facilitation and stakeholder engagement. Adel obtained an MSc in Development Planning (MSc) from the University of Witwatersrand in 2001.</p>	<p>TIM HART <i>MA TTHD</i> is a corporate consultant with more than 40 years' experience in the field of social and development consulting. Areas of expertise include social assessment, social and development planning, resettlement planning, organisational assessment, stakeholder engagement and relationship building, mediation and conflict resolution and corporate social investment. Tim has led and contributed to projects in the natural resources sector (predominantly related to mining and water), located in southern, western and eastern Africa. He also has experience on the continents of South America and Asia. Key clients with which Tim has worked include financiers, donors, mining companies, regional development agencies and government departments charged with resource management and regulation.</p>
<p>ANSU ELS <i>MA Member GISSa</i> is a GIS Specialist. Ansu Els has been in the field of GIS for 7 years. Her expertise includes spatial data analysis, advanced data quality assurance and control. She has advanced skills in geodatabases, data processing and remote sensing. Ansu has proven her strong problem solving skills in the course of her work. She has been involved in environmental sensitivity mapping projects for national, provincial and local government.</p>	
<p>Water, waste, air and mine closure specialists</p>	
<p>PETER SHEPHERD <i>BSc (Hons) PrSciNat</i> is a Partner and Principal Scientist and has been involved in the field of hydrology for over 20 years. His expertise includes development of a water specialist studies for environmental studies, water expert for court cases, water risk assessments, industrial water management, floodlines and flood control of certified floodlines for proposed and existing developments. Peter has undertaken extensive hydrological investigations throughout Africa for various mines. Peter obtained a BSc Hydrology (Honours) degree from the University of Natal. He is a professionally registered Environmental Scientist with the South African Council for Natural Scientific Professionals.</p>	<p>DR ANDREW WOOD <i>PhD MWISA CMIBiol</i> is a Partner and Principal Scientist and has been involved in the field of pollution control, waste, water and environmental management for over 30 years. His expertise includes environmental protection, due-diligence, and risk and liabilities assessment. He also advises on waste and water quality management, contaminated land and water resources protection and utilisation, with specific reference to industrial and mine waste management systems. He has served as the Chief Research Officer in the water technology division at the Council for Scientific and Industrial Research (CSIR), responsible for wastewater treatment and resource recovery research. Andrew holds a PhD from the University of Manchester with a focus on pollution control and has published more than 45 local and international research publications.</p>

JAMES LAKE *MSc PrSciNat*, is a geochemical and mine closure specialist with over 16 years' experience. He is an Associate Partner and Principal Environmental Scientist with SRK. James has wide experience in geochemical assessments and soil and waste characterisation for a variety of commodities, including gold, coal, zinc, nickel, copper and cobalt. Over the last 10 years James has developed expertise in closure planning and has assisted numerous operations in South Africa and internationally with the development of closure liability assessments and mine closure plans. He has been involved in environmental auditing and environmental due diligence assessments. James holds degrees in Botany and Zoology from the University of Witwatersrand and a Masters in Geochemistry from the University of Cape Town. He is a professionally registered Environmental Scientist with the South African Council for Natural Scientific Professionals.

FRANCISKA LAKE *BSc (Hons) PrSciNat* has been involved in water and environmental management for the last 15 years. Her expertise includes water use licensing for mines and industry, as well as general environmental management. Fran also has strong experience in

Environmental impact assessment, as well as environmental management planning, particularly as this relates to the water environment. Her experience has been gained in South Africa primarily in the platinum industry. Her knowledge of the sector has been honed through completing of numerous audits against environmental management plan requirements. Fran has in-depth understanding of the environmental legislation in South Africa, including the new environmental assessment regulations released in late 2014.

DHIREN NAIDOO *BSc (Hons)* is a specialist in the field of air quality management. His expertise includes conducting of air dispersion modelling and assisting clients with obtaining air emissions licenses. Dhiren is experienced in the development of air quality impact assessments and management plans. These he has conducted on projects across Africa. In this regard he has designed and implemented isokinetic (stack) and ambient air quality sampling, as well as passive and volatile organic compound (VOC) sampling surveys. Dust fallout and dust watch monitoring also forms a standard part of the sampling undertaken where relevant. He has been responsible for the establishment and running of numerous air monitoring networks and also has a background in vehicle emissions testing. Dhiren studied environmental monitoring and modelling through the University of South Africa.



Contact us

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If you are interested in our other environmental and social services please request other brochures:

Statements of qualification:

- Environmental and social impact assessment and management in the mining sector
- Environmental and social impact assessment and management in the energy sector
- Biodiversity and ecosystem goods and services
- Environmental and social due diligence and auditing
- Policy, planning and governance
- Social and socio-economic services
- Stakeholder engagement

Service Leaflets

- Economics and resource economics
- Remediation of contaminated sites
- Risk assessment and management
- Visual impact assessment
- Marine and coastal
- Climate change
- GIS and remote sensing



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Johannesburg office

