

greencorp



beyond  
expectations

MEET GREENCORP

**‘We don’t have  
to sacrifice a  
strong economy  
for a healthy  
environment.’**

**DENNIS WEAVER**

# Meet greencorp

The history of mining is replete with controversy, much of it relating to environmental damage and consequent community outrage. Over recent decades there has been increasing pressure to improve the environmental and social performance of mining operations, particularly in developing countries.

We had the privilege of participating in most mine developments in Indonesia over the past three decades. Some economically viable project proposals have been denied approval on environmental grounds, due to lack of community support, or for political reasons. This prompted us to start greencorp: to assist in minimising such cases.

While focused on the mining industry, we provide environmental and social consultancy services also to other industry sectors – mineral processing, oil & gas, and energy. We assist you

to integrate environmental and social assessment throughout your project lifecycle, and by doing so, to eliminate or minimise the negative impacts and to accentuate the positive impacts. Companies will gradually find themselves unable to operate anywhere if they are unable or reluctant to effectively combine economic, environmental and social goals in all locations where they do business.

This Company Profile captures our business philosophy and outlines our main services and experience. We invite you to ask us for a project-specific Statement of Qualification or Proposal.

## **Dr Karlheinz Spitz MBA**

Executive Director

## **Dr Wisnu Susetyo**

Director

# About Us

'We see greencorp as a consultancy that maximizes value, not profit.'

**greencorp** is an environmental boutique consultancy providing high-level consulting services, predominantly to the mining industry. Originally founded by John Trudinger in 1999 in Australia (as Trudinger Consulting), the company soon expanded its services to SE Asia and Indonesia in particular. This led to the establishment of PT Greencorp Konsultan Indonesia about 20 years later, after Karlheinz Spitz completed his management buyout of Greencap Asia, the company he founded in 2010.

In Indonesia, we enjoy the support of some of the best environmental and social professionals. Since the early 1990s environmental and social consulting services to the Indonesian extractive industry and to the energy sectors have centered

on a relatively small team of environmental professionals, originally, as John Trudinger and Karlheinz Spitz, working for Dames & Moore. These professionals now form the core team of greencorp.

**greencorp** is selective in its services and its projects. We do not believe in growing in size but in delivering services at high professional standards, a belief reflected in our tagline: *beyond expectations.*

Much of our work comes from client referrals and from repeat assignments. Clients stay with us because of the quality of our services and because of our long-standing working experience in the industry. Our continued involvement in the Martabe Gold Mine in Indonesia since 1998 is one example; our annual audits of the Chatree Gold Mine in Thailand over more than one decade are another.



# What We Believe

'Integrity is the essence of everything successful we need.'

George Burns

**greencorp** core values shape the culture and define the character of our company. We live the core values through individual behaviours. They serve as a foundation in how we act and make decisions.

## respect for the client

We act for our clients as advisors on strategy, legal and environmental issues, and as a manager and advocate for their project, guaranteeing clients full access to our expertise and our full attention.

## respect for the individual

We value diversity and unique contributions, fostering a trusting, open and inclusive environment and treating each person in a manner that reflects our values.

## best people

We strive to attract, develop and retain the best talent for our business, expecting technical expertise and personal integrity, and a 'can-do' attitude: *'we provide solutions where others see problems.'*

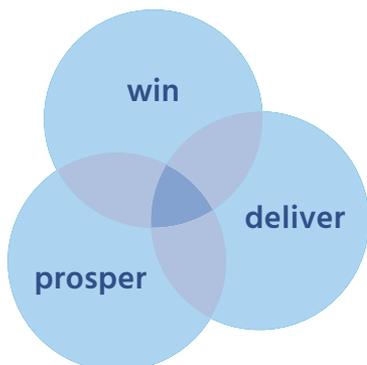
## local knowledge

We believe in the power of local insight, relationships, collaboration and learning to deliver exceptional service to our clients in Indonesia and wherever they do business.

# Our Business Priorities

'Our business is the delivery of quality advice that reflects the needs of our clients.'

**greencorp** is focused on three business priorities – *win*, *deliver*, and *prosper*.



## win

We win business because greencorp is client focused; proactive in business development; and we understand our market.

## deliver

We deliver projects because greencorp attracts and retains quality consultants; excels in project management; and we achieve consistent service excellence.

## prosper

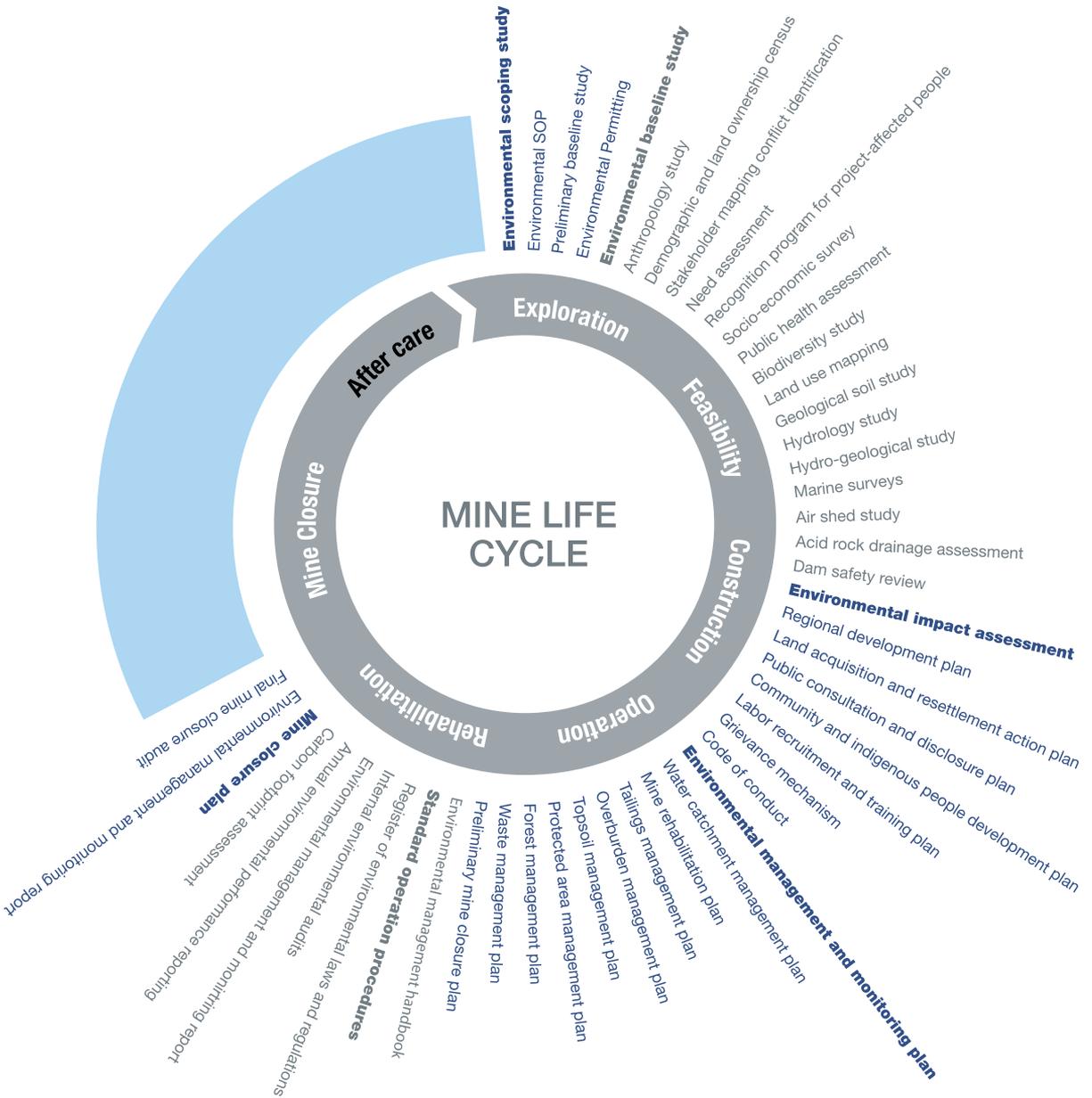
We prosper because greencorp minimizes business risks; manages cash successfully; and we maintain lean management.

# What We Do

'We provide senior advice, not juniors measuring small turtles.'

**greencorp** provides practical approaches to manage issues ranging from environmental and

social impact assessment and technical aspects of acid rock drainage and mine closure, through land acquisition and resettlement or Indigenous Peoples issues, to a thorough analysis of ways and means of sharing project benefits with host communities so that these benefits are not transitory.



While being able to offer a wide range of services, our focus is on the following:

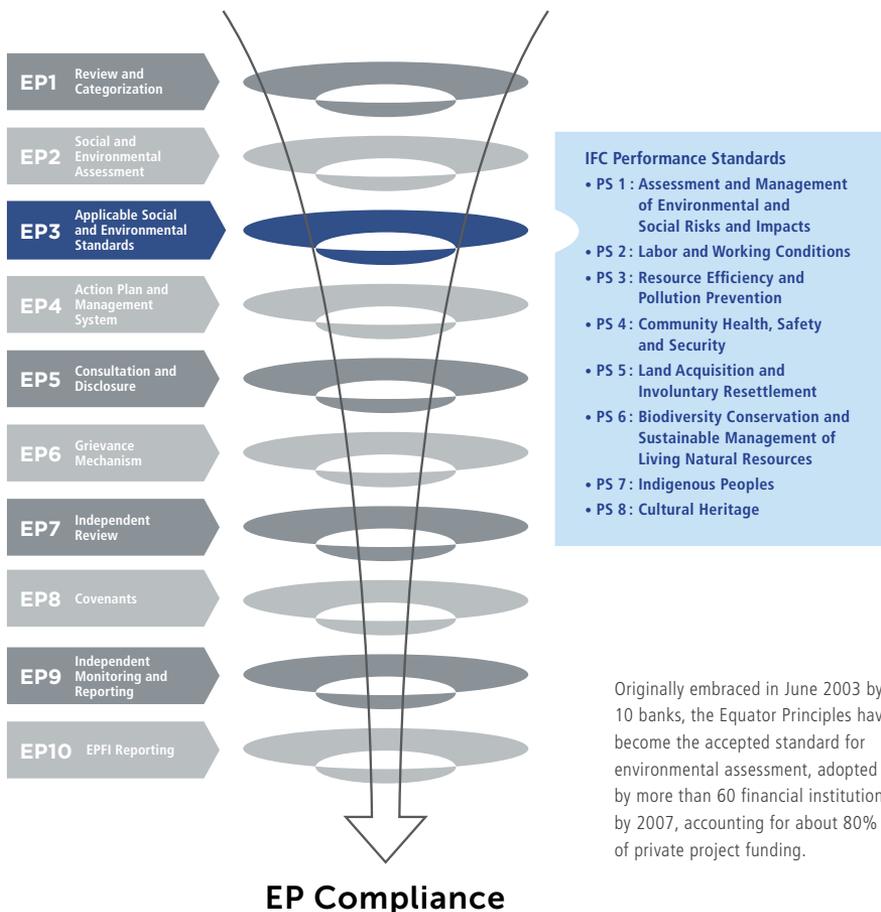
## greencorpassessment

Environmental assessment of capital investments is at the core of our services. Environmental assessment, a planning, decision-making and management process, spans the entire lifecycle of your project. The Environmental and Social Impact Assessment (ESIA) is one important part of the process, usually applied in the feasibility and design stage, or sometimes even in the conceptual project stage. A quality ESIA helps your project to manage risks by avoiding and minimizing impacts; it also helps your project to stay on schedule and budget.

Over the past two decades we have led a large number of ESIA's. We also assess ESIA conformance to the requirements stipulated in the IFC Performance Standards or, respectively, the Equator Principles.

## greencorpdue diligence

Our senior consultants offer a long track-record working with financial institutions, either to act as Lenders' Environmental and Social Consultant (LESC) or to assist Owners in developing and documenting the environmental assessment and the management system that conform to international statutes, standards, and guidance.

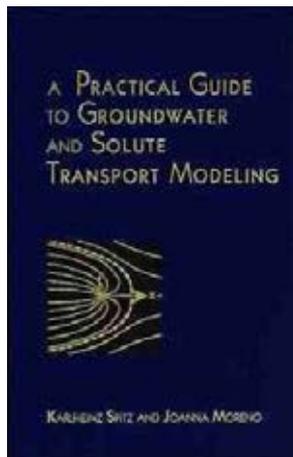


Originally embraced in June 2003 by 10 banks, the Equator Principles have become the accepted standard for environmental assessment, adopted by more than 60 financial institutions by 2007, accounting for about 80% of private project funding.

## greencorpmodelling

We use quantitative assessment for evaluating physical-chemical change, for example, for modelling of airborne pollutants transport or of groundwater abstraction. Our models range from relatively simple models, considering only

one aspect of the environment, to complex models predicting natural system responses. Our environmental modelling practice is led by Karlheinz Spitz, lead author of the text book 'A Practical Guide to Groundwater and Solute Transport Modelling'.

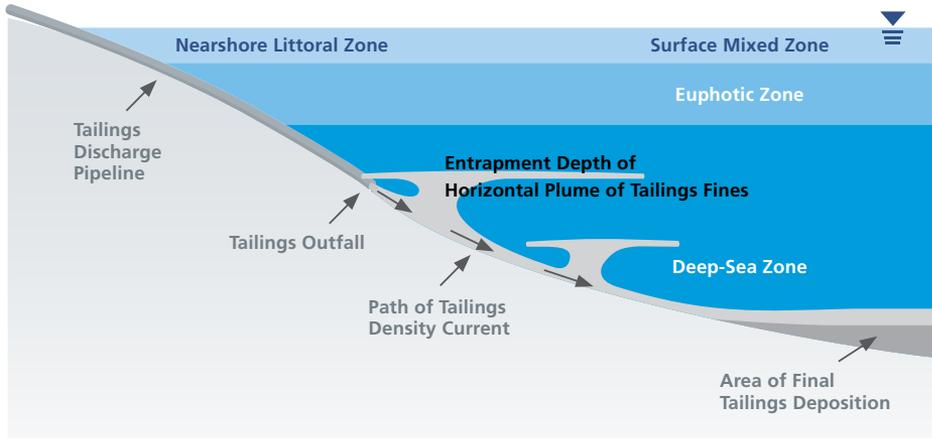


## greencorpplanning

Mine closure planning is the term applied to the activities undertaken after completion of mining and mineral processing. It includes decommissioning, dismantling and removal of plant and equipment, and the rehabilitation of areas disturbed by mining and associated activities. We prepare mine closure plans to conform to regulatory requirements and to Good International Industry Practice.

Mining operations produce a wide range of waste streams, dominated in quantity and importance by waste rock and tailings. Disposal of such large quantities of mine wastes poses enormous challenges for the mining industry, with significant environmental impacts that are difficult if not impossible to avoid. We are recognized as a leading environmental consultant for Deep Sea Tailings Disposal schemes.

## Deep Sea Tailings Disposal Illustrated

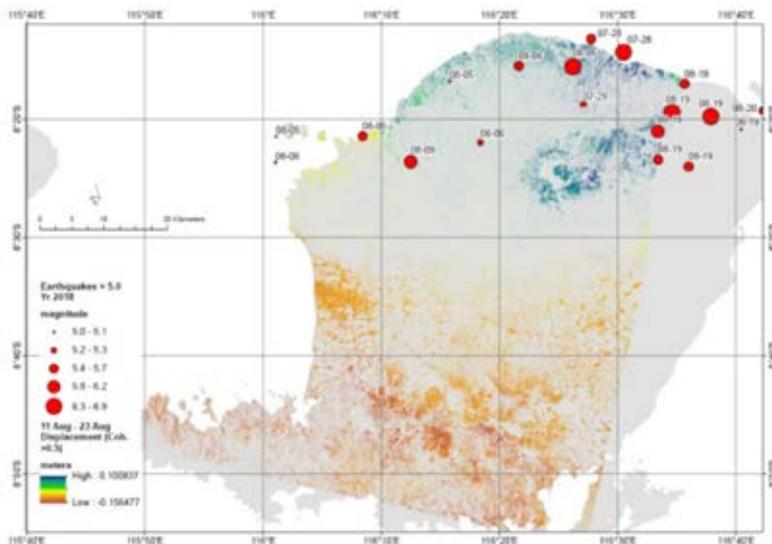


The risk associated with DSTP depends on the discharge depth, and are determined by three distinct layers that characterize the ocean.

## greencorpspatialanalysis

We are a leader in Geographic Information System analysis to define baseline conditions and to identify the geographic extent of impacts, including identifying where cumulative impacts and impact interactions may occur. Easy access to our in-house geo-database allows us to rapidly and efficiently scope potential environmental impacts, identify data gaps, and use sophisticated spatially based methods for designing cost-effective baseline surveys (see topographical change mapping of Lombok due to the earthquakes in August 2018 as one example).

We have the expertise to access and download arcane and highly specialized data formats, such as NETCDF that are normally restricted to the scientific research community. This allows us to access the burgeoning open source software and global environmental spatial data sets now becoming available on the Internet. We have developed a comprehensive environmental and social database for entire Indonesia which is arguably unparalleled in Indonesia today.



## greencorptraining

Our principal consultants provide regular training courses to examine the needs of society and companies engaged in mining. Our courses aim to provide mine professionals with a good understanding of the underpinnings of sustainable development and how this concept is viewed in mining operations; with a good grounding in the applications of this concept to mining and the contributions that mining makes to sustainable

development; and the necessary understanding to apply the concept at project, mine and corporate levels. Recent training courses include training on mine closure to government officials of Malaysia, on environmental aspects of mining to government officials of New Guinea, and on mine waste management to mining professionals in Indonesia – *'training for professionals by professionals.'*



# How We Lead

'Management is doing things right;  
leadership is doing the right things.'

Peter Drucker

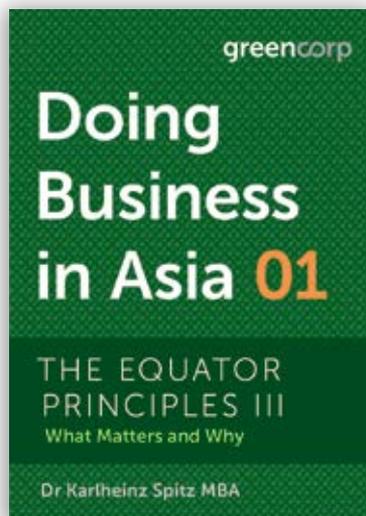
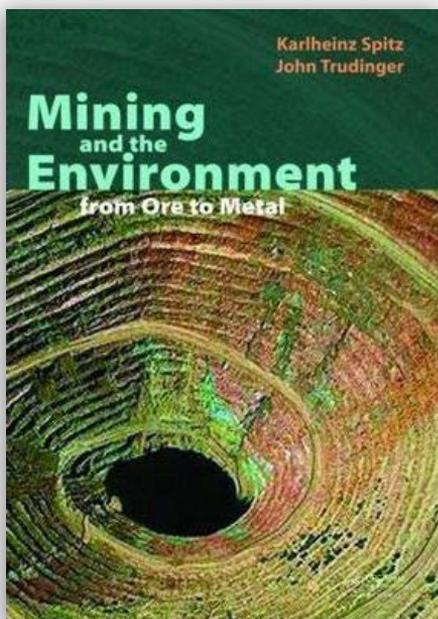
**greencorp** maintains a small number of partners, supported on a project-to-project basis by sub-consultants drawn from our extensive network

of environmental specialists with whom we have worked, including many sole practitioners who are leaders in their fields, and who can be readily accessed as appropriate. Examples include oceanographers, marine ecologists, biodiversity experts, remote sensing specialists, and toxicologists. Our principal consultants follow:

## Dr Karlheinz Spitz MBA

Executive Director and Founding Partner holding dual degrees in civil engineering and business administration, is a consultant of international repute with working experience in Canada, Europe, SE Asia, South America, and Australia. Karlheinz is arguably one of the best recognized environmental consultants in Indonesia, and lead author of three text books, including '*Mining and the Environmental – From Ore to Metal*' published by Taylor & Francis in 2009. Based in Indonesia for more than 20 years

he has directed environmental and social impacts assessment studies for practically all large mine developments since 1994, covering a wide range of minerals and diverse spectrum of social and environmental setting. Karlheinz is fully familiar with international standards for conducting environmental assessments such as the 2012 IFC Environmental and Social Performance Standards, and the Equator Principles III.



## Dr Wisnu Susetyo

Director and Founding Partner, provides leadership in and advice on Quality, Occupational Health and Safety, and Environmental (QHSE) management. His expertise also includes ecological and health risk assessment, emergency preparedness, and crisis management. Working for Freeport Indonesia he led the ecological risk assessment to support the riverine tailings disposal scheme, arguably the largest study of its kind undertaking in Indonesia until today.

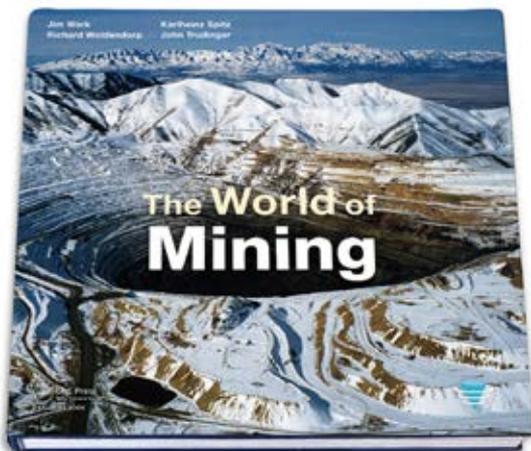
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He has developed and established Environmental and Social Management Systems for several large organizations. Prior to joining greencorp Wisnu worked with large-scale mining operations with > 20,000 employees and >1 million tons per day material movement, including senior positions with Freeport Indonesia and Adaro. Wisnu offers a solid understanding of the Indonesian legislative and regulatory environment, and of coal mining.

## John Trudinger

is a mining specialist with more than 50 years of experience, spanning the entire environmental era, working in Australia, North America, and Asia. Since the mid-1980s, he has been involved in many mining developments in SE Asia, including the Kaltim Prima Coal Project, Freeport's Grasberg Copper and Gold Project, Batu Hijau Copper and Gold Project, and the Chatree Gold Mine, together with many other resource development and infrastructure projects. John has worked

on numerous subsea-tailings disposal schemes (including both marine tailings disposal schemes in Indonesia), and is a well-recognized expert on acid mine drainage. He is co-author of 'Mining and the Environmental – From Ore to Metal' published by Taylor & Francis in 2009, and 'The World of Mining' published in 2012. He is arguably one of the best known environmental consultants to the mining industry.



# Our Projects

'We don't believe in promising our superstars and then sending in the rookies.'

We have traditionally focused our business predominantly to the foreign private sector. Within the foreign private sector we focus on the

mining sector with opportunistic assignments in the oil & gas and energy sectors. Selected project experiences follow.

## MINING



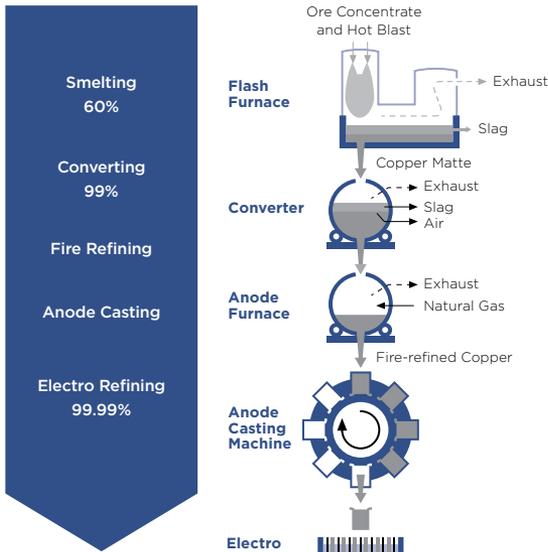
We have provided environmental consultancy services to the mining industry in a wide range of geographic settings, from the highlands of Papua to the deep sea. We worked on Freeport's Grasberg mine close to the Carstenz Glacier, one of the few equatorial glaciers on Earth, on numerous coal

mines in the coastal lowlands of Kalimantan, and we reviewed the environmental management and monitoring plans for the first deep sea mining venture on Earth in the Bismarck Straits in PNG.

Our John Trudinger led the environmental permitting efforts for the only two subsea-tailings disposal schemes in Indonesia. The Government of Indonesia congratulated the Batu Hijau mine operation and its subsea-tailings disposal scheme for its excellent environmental performance by awarding high ranking in the Governments' PROPER audit scheme. The Deep Sea Tailings Placement requirements of the Batu Hijau mine have been furthermore incorporated in the Government Regulation No 101 of 2014 regarding Hazardous and Toxic Waste Management.



## MINERAL PROCESSING AND REFINING



We have worked on a variety of mineral processing facilities in Indonesia – copper, nickel, aluminium, tin, lead, zinc, steel, and gold - and as such we offer a thorough understanding of environmental issues related to metal smelting in general and copper smelting in particular. Karlheinz Spitz managed the environmental permitting of the first copper smelter in 1996, as well as for the recently proposed copper smelters by Freeport and Amin in Gresik and, respectively, in Benete.

Our involvement in the Vale nickel operations in Indonesia, including a Comparative Impact Study to support the planning and implementation of sulphur dioxide control strategies at the nickel smelter at Sorowako, led to an industry-specific emission standard for the nickel smelter operation.

Atmospheric and heat dispersion modelling was a key component of the environmental impact assessments for the above-mentioned smelters. Our atmospheric modelling considered stack as well as fugitive emissions. Oceanographic modelling considered heat and pollutant transport in the coastal seas influenced by currents generated by tides, wind and waves.

## OIL & GAS



Our Karlheinz Spitz supported Reverse Engineering Services Limited in preparing the decommissioning plan for Total's BK platform located in the Bekapai field in East Balikpapan.

Onshore waste disposal routes and an alternative Rig-to-Reef option were evaluated as part of the work scope. We conducted the environmental assessment of the PSC Block A in Aceh as part of transferring the PSC from Premier Oil to Medco; we also prepared the environmental assessment for the Coastal Block in Sumatra prior to its handover to the Government of Indonesia.

Karlheinz is a well-known specialist on soil and groundwater contamination, and has provided contaminated site-related consultancy services to a number of oil & gas companies, including Caltex in Sumatra and Kalimantan, and Shell in Brunei.

More recently our consultants were selected as Lenders' Environmental and Social Consultant to review the compliance of the BP Tangguh LNG development Trains 3 and 4 to IFC PS and

ADB SPS requirements, and as ESIA consultants for developing the environmental assessment of INPEX's Adabi OLNG project.

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## RENEWABLE ENERGY



Our consultants led the preparation of the Tolo I Project ESIA, and provided assistance during lender's discussions. Tolo I includes 20 turbines, 14 km of roads, a Pooling Substation, O & M facilities, an underground collector system connecting the turbines, and a 3.5 km overhead transmission line. We also led the preparation of

the APDP wind energy project in West Timur, and reviewed the environmental assessment of UPC's wind energy projects in Indonesia.

Our involvement in geothermal energy projects dates back over more than 20 years; we have been involved in the development of Darajat Units I and II, Wayan Windu, Sarulla, and in both geothermal projects developed by Supreme Energy in Sumatra. More recently, our consultants provided advisory services throughout the exploration phase of the Baturraden Geothermal Energy Project, from preparing the ESIA over providing expert advice on potential impacts on groundwater and surface water to developing a high-level site restoration plan.

'The most  
important thing  
in communication  
is hearing what  
isn't said.'

PETER DRUCKER

## Contacts

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