



# Environmental Planning and Management

The input of environmental expertise during the planning stage for major projects can often prevent costly and difficult problems in later phases of development. Earth Systems has been providing specialist environmental management and planning expertise for major mining, infrastructure and utility projects for over 20 years, with a focus on leading practice approaches to managing environmental and socio-economic risks.

The management of project risk is a multi-faceted and complex task that requires specialist expertise in each of its component areas. Most projects focus on rigorous assessment of economic, geo-technical and engineering risks in the planning process. However, environmental risk and the potential for long-term impacts, with associated rehabilitation costs and economic liabilities, can be equally, if not more important to project feasibility.

Earth Systems recognises that without the introduction of appropriate environmental policies, management systems, and training and awareness programs at the planning stage, the short- and long-term viability of a project can be profoundly impaired. Earth Systems' team of experts specialise in not only identifying potential environmental and socio-economic risks based on all aspects of project development, but also developing cost-effective and practical risk management strategies in close coordination with project planners and site personnel.

## SERVICES PROVIDED

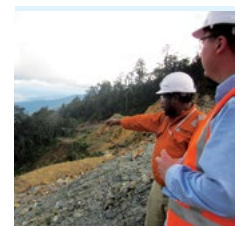
- Environmental risk assessment and management.
- Development of corporate and site environmental management systems (EMSs).
- Design, documentation and implementation of environmental and socio-economic management plans (EMPs) and standard operating procedures (SOPs).
- Auditing and due diligence assessment.
- Development of leading practice environmental management guidelines, programs and procedures.
- Design, documentation and implementation of environmental and socio-economic monitoring programs and protocols.
- Environmental GIS development.
- Rehabilitation and closure planning.
- Environmental and socio-economic training workshops for managers, supervisors, operators and regulators.
- Capacity building and institutional strengthening.



## PROJECT EXPERIENCE

Recent relevant project experience includes:

- Preparation of EMPs, ESMPs, and environmental and social monitoring programs for major infrastructure, mining and hydropower projects, and landfill sites in all states of Australia and numerous countries throughout the Asia-Pacific and Africa.
- Cleaner Production in the Ganga River Basin – Tannery Waste Management Program, including a rapid technical, environmental and social assessment of the Jajmau tannery cluster, consultations with key stakeholders and the development of a Roadmap for Sustainable Waste Management of the Cluster
- Comprehensive review of domestic and wastewater treatment across the Lake Tai basin and the development of governance mechanisms for environmental restoration of Lake Tai in China.
- Provision of all aspects of environmental planning and management for the Nam Theun 2 hydroelectric project in Lao PDR.
- Development and presentation of training courses for the management of hazardous waste landfills (for AusAID in India) and for environmental and community management of a mining project (for the World Bank in Lao PDR).
- Feasibility-stage integrated environmental engineering for a major prospective iron project in a sensitive environment of southeastern Australia, including geochemical engineering and regulator engagement.



### AUSTRALIA

[earthsystems.com.au](http://earthsystems.com.au)

#### MELBOURNE

14 Church St  
Hawthorn, 3122  
Victoria  
+61 3 9810 7500

#### PERTH

Suite 5  
1200 Hay Street  
West Perth, 6005  
Western Australia  
+61 8 6161 4194

#### BRISBANE

PO Box 541  
Lutwyche, 4030  
Queensland  
+61 7 3129 6075

#### DARWIN

PO Box 1228  
Nightcliff, 0810  
Northern Territory  
+61 423 618 124

### AFRICA

[earthsystemsafrika.com](http://earthsystemsafrika.com)

#### DAKAR

3ème étage  
Route de l'aéroport  
Ngor, Dakar  
Senegal  
+221 3386 83023

#### KIGALI

25 Benjamina St  
(KG412),  
Gacuriro, Kigali  
Rwanda  
+250 787 807 499

### ASIA

[earthsystemsasia.com](http://earthsystemsasia.com)

#### VIENTIANE

Suite 502, 23 Singha  
Road, Ban Nongbone,  
Xaysetha, Vientiane.  
Lao PDR  
+85 621 454 434

### CHINA

[earthsystems.com.cn](http://earthsystems.com.cn)

#### SHANGHAI

19F World Plaza  
855 Pudong South Rd  
Shanghai, 200120  
China  
+86 216 887 2968

### EUROPE

[earthsystemseurope.com](http://earthsystemseurope.com)

#### BRISTOL

Suite 104, CityPoint  
Temple Gate  
Bristol, BS1 6PL  
United Kingdom  
+44 117 373 6153