



Katharina Lorenz

GIS and Remote Sensing Specialist

Profession: Cartographer

Current Position: GIS and Remote Sensing Specialist

Nationality: German

Qualifications: Diplom--Ingenieur (graduate engineer, equivalent to a MSc) in Cartography

Professional Associations: Member, Association for Geographic Information; Member, German Cartographic Society

Profile: Katharina Lorenz has 5 years experience in Cartography, specialising in the field of Geographical Information Systems (GIS), thematic cartography and Remote Sensing.

She has particular experience in the design of spatial databases and in applying GIS and Remote Sensing techniques to the solution of spatial problems.

Recent work has involved developing and managing spatial databases and map products derived from GIS in support of environmental impact assessments for mining and oil and gas developments in Africa. The work has involved collaboration and support of specialists to create products supporting the environmental and social disciplines needed for ESIA.

Key Experience

- 5 years experience in the application of GIS solving spatial problems.
- Experienced in spatial database design, spatial data management including metadata documentation.
- Experienced in remote sensing using active and passive sensors and in photogrammetry.
- Experienced in deriving ortho-photos and digital elevation models from satellite and aerial imagery, watershed and stream network modelling, terrain analysis, line of sight and visual influence
- Experienced in GPS data collection and integration into GIS, soils and geology mapping, socio-cultural mapping including tenure and agriculture, community infrastructure.
- Experienced in working with a wide range of staff to deliver successful project outcomes.

Selected Experience

GIS and Remote Sensing Specialist *Palmer Station Environmental GIS*, (2011 ongoing) design and build environmental GIS to support environmental planning, including oil spill contingency, building of ortho-photos.

Client: *National Science Foundation, Government of the United States of America.*

GIS and Remote Sensing Specialist *Lake Albert oil field*, (2010-11) Design and construction of GIS database to support EIA including data capture, data analysis, data quality analysis, spatial modelling; Remote sensing: conduction of supervised and unsupervised landcover classification, analysis of vegetation indices.

Client: *Tullow Oil.*

GIS and Mapping Specialist *Nimba Regional Resource Atlas, Fauna & Flora International* (2009 ongoing). Design and construction of GIS database and maps for an atlas to support environmental planning in the region, working with a range of NGOs and companies to assemble and present relevant data, including the Mano River Union. Client: *Fauna and Flora International*

GIS Specialist *Nimba Iron Ore Deposits Liberia* (2009) Strategic Environmental Study and full EIA. Construction of GIS database to support EIA. Client: *Arcelor Mittal*

GIS Specialist *McMurdo Dry Valleys maps* (2009 ongoing): Analysis of available mapping and spatial data including remote sensing / aerial photography. Conducting of differential GPS data processing, building of ortho-photos, data capture, data analysis, data quality analysis. Client: *National Science Foundation,*

Government of the United States of America.

GIS Specialist *Important Bird Areas in Antarctica (2009 – 11):*

Application of spatial analysis techniques in GIS to define methodology for determination of location and spatial extend of Important Bird Areas. Client: *Birdlife International.*

Mapping Specialist *Union Glacier Map Series (2010 ongoing):* Development of a GIS database and design of a map series. Integration of glaciological, topographic and GPS data. Client: *Antarctic Logistics & Expeditions, USA.*

GIS Specialist *South Pole Antarctic Specially Managed Area Maps (2009 ongoing):* Preparation of mapping using GIS to support management plan. Inclusion of spatial data on zoning, scientific study areas, and AutoCAD data on infrastructure. Client: *National Science Foundation, Government of the United States of America.*

GIS Specialist *Carbon Opportunity GIS (2009):*

Data analysis and mapping to support Carbon Opportunity Assessment Project for mining sites in South Africa and Madagascar. Client: *Fauna and Flora International.*

Mapping Specialist *Olympics Equestrian and Beach Volleyball (2009-10):*

Preparation of mapping to support EIA using Adobe Illustrator. Client: *LOCOQ.*

Languages: German – mother tongue; English – fluent, Spanish – basic