

# Spectrum of Services for the African Subcontinent

Solutions at the Nexus of Water, Environment, and Energy





# Overview

Today in Africa more than 350 million people lack access to clean water, leaving them at risk of deadly diseases. At the same time, many parts of the continent are “energy poor” — electricity service is either intermittent or non-existent. — *Earth Island Journal* 2015





# Problems to Solve and What We Provide

- 1 Expand Access to Water - Provide Safe & Clean Drinking Water - Water Treatment & Recycling
- 2 Environmental Planning, Protection and Remediation
- 3 Access to Renewable Energy Sources for Sustainable Development
- 4 Knowledge Transfer, Training and Capacity Building at Local & Regional Levels

A young child is shown drinking water from a public tap. The child's face is in focus, looking down at the water. The background is blurred, showing other people. The entire image has a blue overlay. The word "Water" is written in large white letters on the left side. Below it is a list of three bullet points in white text.

# Water

- Water Resource Development
- Water Testing & Compliance
- Wastewater Treatment & Recycling

# Water Resource Development

- UHL & Associates, Inc. implements Water Resource Development and Environmental Assessment projects in Africa, Asia, the Middle East and South America.
- The range of Water Resource Consultancy Services include:

- 01 | Water Supply Planning, Development and Management
- 02 | Regional Groundwater Analysis & Exploration
- 03 | Design of Large Capacity Production Wells
- 04 | Groundwater Modeling
- 05 | Wellfield Performance and Wellhead Protection



## COUNTRIES WE HAVE SERVED:

Angola | Botswana | Cameroon  
Ethiopia | Kenya | Liberia  
Nigeria | Mozambique | Senegal



# Drinking Water Testing

- Batta Technologies is a leading provider of Drinking Water Sampling and Laboratory Testing Capabilities.
- The Firm is focused on Lab Infrastructure, Process & Procedures, Sampling & Testing and Reporting to validate that Drinking Water is safe for human consumption.

- 01 | Laboratory Design and Engineering
- 02 | Equipment Procurement, Construction and Commissioning
- 03 | Drinking Water Sampling Procedures and Methods
- 04 | Drinking Water Testing and Reporting per WHO Guidelines
- 05 | Laboratory Operating Procedures, Management Plan and Quality Plan





# Wastewater Treatment & Recycling

- Providers of innovative products for Water and Wastewater Treatment.
- The range of products support local and regional efforts to capture, treat, reuse or recycle wastewater.

01 | Filters and Peat-based Absorbers for Oily Water Contamination

02 | **Mobile, Packaged** Wastewater Treatment Plants (WWTP)

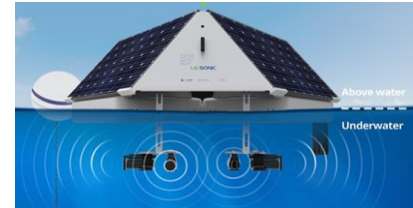
- Water Recycled for Irrigation

03 | **Mobile, Packaged** Sewage Treatment Plants (STP)

- Wastewater Recycled for:
  - Washings, Flushings, Irrigation, Recharge

04 | Sludge Management

05 | Lake and Pond Algae Control through Aeration and Ultrasonic Devices



# Environment



- Environmental Due Diligence
- Environmental Investigation and Remediation
- Air Pollution and Air Quality Management Plan
- Indoor Air Purification





# Environmental Due Diligence

- Batta Technologies provides Environmental Assessments, Environmental Impact Statements, Environmental Due Diligence, Planning and Review for a range of Development Projects.
- Environmental Studies are focused on identifying possible impacts and risks along with mitigation strategies to facilitate Development.

- 01 | Environmental Impact Assessments
- 02 | Environmental Master Planning Studies
- 03 | Environmental Site Assessment and Due Diligence
- 04 | Environmental Risk and Impact Strategy Mitigation
- 05 | Environmental Design and Construction





# Environmental Investigation and Remediation

- Batta Technologies provides Environmental Investigation, Remediation Planning and Design and Remediation Implementation to address contaminated soil and groundwater sites.
- The Team uses science and engineering discipline coupled with processes and products to tackle clean up of contaminated lands and waters.

- 01 | Environmental Site Investigations and Sampling
- 02 | Human Health and Ecological Risk Assessments
- 03 | Remediation Planning and Design
- 04 | Environmental Reclamation and Site Closure
- 05 | Turn-key Environmental Remediation Program Management





# Air Pollution and Air Quality Management Plan

- Batta Technologies and Partners provides studies and insights into a Region's Air Quality.
- Through Air Quality Modelling, the Team is able to conduct Air Pollution Apportionment and propose mitigation strategies for Air Pollution Control.
- Such studies can take place as part of Regional Planning or to study current Air Pollution concerns.

- 01 | Emissions Monitoring and Emissions Inventories
- 02 | Air Quality Modelling using US EPA Programs and Software
- 03 | Air Pollution Predictions to guide Construction and Development
- 04 | Source Apportionment Studies
- 05 | Air Pollution Mitigation Strategies, Benefits and Costs





# Indoor Air Purification

- Batta Technologies provides a range of unique Indoor Air Purification and Sanitization Devices.
- NASA-derived technology is used to clean Indoor Air Environments for a range of applications.
- Indoor Air Quality studies provide information on harmful pollutants and propose control strategies.

- 01 | Control of Pollutants in Food Warehouses and Cold Storage
- 02 | Elimination of Airborne Pathogens in Hospitals and Healthcare
- 03 | Promote Healthy Breathing Environments in Schools and Homes



# Energy

- Renewable Energy
- Energy Planning



# Renewable Energy Solutions

- Vista Energy provides worldwide knowledge, development and execution of projects in the energy sector:
  - Safe & Environmentally sound
  - Socially responsible
  - Innovative manner
- The range of services include:

- 01 | Project Feasibility Assessments
- 02 | Greenfield Power and Energy Planning
- 03 | Commercial and Financial Analysis
- 04 | Engineering Design and Project Management
- 05 | Commissioning and Start-Up Services and Procedures



## COUNTRIES WE HAVE SERVED:

Guatemala | Israel | Canada  
Peru | Madagascar | Romania  
Brazil | Nigeria | Chile





# Knowledge Transfer

- Commissioning
- Training
- Education





# Knowledge Transfer and Capacity Building

- Batta Technologies and Partners are firm believers in providing:
  - Knowledge Transfer
  - Capacity Building at Local and Regional Levels
- We support the training and education needs so communities can empower themselves.

01 | Process and Procedures Development

02 | Commissioning and Turnover

03 | Training and Education Seminars

04 | Transfer of Knowledge and Best Practices





# Thank you.

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