

## **TECHNICAL ASSISTANCE IN NIGERIA - DEVELOPING GEOSCIENCE SKILLS FOR TOMORROW**

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The World Bank funded *Nigerian Geochemical Mapping Technical Assistance Project* was started in 2008 within the Nigerian Ministry of Mines and Steel Development, and is now nearing completion. Staff from the Nigerian Geological Survey Agency (NGSA), the Nigerian academic community, British Geological Survey, and Geological Survey of Finland, have worked alongside one another in a comprehensive program of practical training and knowledge exchange. This program has enabled researchers from a range of backgrounds and experience in Africa and Europe to exchange knowledge and develop important geoscience skills. As part of this program key skills in many areas including; GIS, statistics, QC, data management, laboratory analysis, sampling methodologies, has developed the knowledge and skills base within the Nigerian geosciences community, and has maintained momentum for Nigeria's national geochemical mapping program.

An important objective of the Project is knowledge exchange during training of Nigerian geoscientists in conducting regional geochemical surveys as part of a long term mapping program across Nigeria. Practical training in methodologies for geochemical mapping formed the basis of a major field campaign in 2009, during which over 100 personnel were trained in geochemical mapping techniques. A similar number of personnel were involved in specialist training through a series of workshops and training courses in Nigeria and the UK. Two field areas were selected for the geochemical mapping training — one in central Nigeria (the 'Minna Cell') and one in south-western Nigeria (the 'South-western Cell') — covering a combined area of 52 000 km<sup>2</sup>. Key challenges involved the procurement of field equipment and consumables, and modernisation of sample preparation laboratories and archiving facilities at the National Geosciences Research Laboratory, Kaduna. New sample preparation and analytical equipment has been purchased and the laboratory staff have received training in the use of the new equipment. In the long-term it is envisaged that the analytical facilities will be developed further, and that all samples will be prepared, analysed and archived in Nigeria.

A national geochemical mapping programme involving multi-element analysis of stream sediment samples is used as a primary dataset in the exploration for new economic mineral deposits. Establishing a geochemical baseline is necessary in order to monitor the effects of anthropogenic activities e.g. contamination caused by industrial waste and mining activities, for environmental investigations and medical geology studies both in rural and in urban areas, as well as studies within the agricultural and forestry sectors.