



16th SGA BIENNIAL MEETING KEYNOTE SPEAKER

In concurrent session:
Development geosciences and mineral resources for society



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The West African Exploration Initiative (WAXI): 15 years of research for development

The fifteen-year AMIRA Global Project P934 'West African Exploration Initiative' (WAXI), now heading to its fourth phase, has the dual aims of scientific research focused on increasing our understanding the tectonic and regolith settings of ore deposits, and the development of the research and training capacity of West African geological surveys and universities. We describe the drivers for the WAXI initiative, as well as key research and capacity building outcomes. The WAXI project is a public-private partnership that has brought together seventy of the principal stakeholders in the domain of minerals exploration in West Africa:

- The government surveys and departments of mines of eleven West African states (Burkina Faso, Ghana, Guinea, Ivory Coast, Liberia, Mali, Mauritania, Niger, Sierra Leone, Senegal and Togo)
- Seven West and South African universities (from Burkina Faso, Côte d'Ivoire, Ghana, Mali, Senegal and South Africa)
- Thirty-four international mining companies
- Researchers from twelve European and Australian research institutions
- AMIRA Global, an independent association of minerals companies that develops, brokers and facilitates collaborative research projects
- NGOs based in Burkina Faso, Ghana and Luxembourg
- A professional training centre based in Burkina Faso.
- National research and aid agencies in South Africa, France and Australia

This initiative demonstrates the significant research and development impacts that can be achieved when the different stakeholders in the minerals sector (industry, academia, government, and non-government organisations) work together to achieve their diverse goals.

The WAXI project in numbers:

- 12 countries
- 73 partners over 15 years
- 95 Postdoc, PhD, Masters and Honours Projects, two-thirds of them African
- 110 International Publications
- 650 GB exploration geoscience database
- 1800 person-days of technical training in West Africa
- 650,000 km² of geophysically constrained geological mapping



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Mark is a Professor and Western Australian Fellow at the Centre for Exploration Targeting at The University of Western Australia. His scientific interests revolve around microstructure studies (the Elle platform), integration of geology and geophysics in 3D (the Loop project), and the tectonics and metallogenesis of the West African and Guyanese Cratons (WAXI & SAXI). His recently completed Western Australian Fellowship is focused on improving the links between geological and geophysical data analysis in 3D via analysis of the geological and topological uncertainty. In 2013 he was awarded the Geological Society of Australia Hobbs Medal for major contributions in structural geology.