

Statement of Qualifications



Experts in geospatial technologies in Southern Africa

Hatfield Consultants Africa (HCA) was established in 2010 in Gaborone, Botswana, and specializes in providing geographic information systems (GIS) and remote sensing services for the infrastructure, government, natural resources management, and mining sectors.

HCA is local **owner-operated company** focused on providing high-quality geospatial consulting and information services. Our team is highly motivated and committed to client satisfaction and value.

We are recognized for our **scientific expertise and experience** in GIS and remote sensing data analytics. Our teams provides clients with high-quality, tailored solutions to address **base mapping, monitoring, and reporting needs** for clients in a variety of sectors including road and rail infrastructure, mining, government mapping, security, and census, and natural resources management, such water resources, forests, and rangeland.

We support our clients' environmental and social objectives through our experience and a commitment to integrating technology and community needs. HCA staff have master's or bachelor's degrees in GIS and remote sensing and decades of experience in GIS services for across Botswana and the region. The depth of HCA's knowledge means we are a trusted advisor to governments and the private sector on the appropriate use of these technologies.

Areas of Expertise

Remote Sensing

- Maxar Geospatial Platform Pro
- Planet Insights Platform
- Very high resolution satellite image archive & acquisition
- Satellite-derived precision elevation models
- Land cover and land use mapping
- Settlement and building footprint mapping

GIS and Mapping

- Geospatial database design
- Data capture and cleaning
- Topographic map production
- Infrastructure feature capture
- GIS and CAD drawing conversion
- Esri ArcGIS training

Featured Experience



Within Botswana and the Southern African Development Community (SADC) region, HCA provides remote sensing imagery, GIS, and mapping services for clients in the infrastructure, mining, natural resources management, and government sectors.

HCA works closely with local partners, engineering firms, international satellite imagery and intelligence companies, multi-lateral funding agencies, and non-government organizations. The following projects demonstrate HCA's experience, and illustrate a range of project sizes, locations, sectors, and our role in innovative application of geospatial technologies.

Road, Rail & Water Infrastructure

- **Mmamabule-Lephalele Rail Line Digital Terrain Model.** Delivered a quality-assured 5 m terrain model for engineering design. **Bergstan Africa**
- **Sanitation and Water Project, Katembe, Mozambique.** Delivered high-resolution imagery, terrain model, and extracted update-to-date infrastructure and hydrological features. **Bergstan Africa**

Government

- **Maxar Securewatch & Vivid Mosaic Image Services.** Provided access to Maxar 30-50 cm imagery to support maintaining the National Spatial Data Infrastructure. **Namibia Statistics Agency**
- **Maxar Basemap Image Services.** Provided multiple departments with access to Maxar 30-50 cm imagery to support government priorities. **Government of Botswana**

International Development & Space Agencies

- **Strengthening Resilience of Communities for Cyclone in Southern Africa:** Completed a case study of the impact of Cyclone Idai on Buzi, Pungwe, and Save River basins in Mozambique. **USAID Resilient Waters Programme**
- **South Africa Drought Monitoring – Africa National Incubators (ANIN).** Developed policy analysis, user needs, and user training and impact assessment for satellite drought monitoring project. **GMV (Spain) for the European Space Agency**

- **Tree Cover Density Mapping for Malawi.** Supported the development of a machine learning model to estimate tree cover density for Malawi for 2019-2022. **Hatfield (Canada) for the European Space Agency**

Topographic Mapping

- **Topographic Mapping for Ngamiland and Ghanzi, Botswana.** Updated 120 map sheets covering parts of two districts. Included road infrastructure and adding road classifications and surface types. **Botswana Department of Surveys and Mapping**
- **Shashe and Letsibogo Dams Tourism Plan: Mapping Support.** Developed a geodatabase with land use, land cover, and topography for the project area. Filled gaps by extracting features from very high resolution (WorldView) and medium resolution (Sentinel-2) imagery. Features included hydrology, roads, and buildings, which were field verified. Provided detailed topographic maps. **Botswana Tourism Organisation**

Mining

- **Survey Database and Map Production.** Updated the Jwaneng mine geodatabase based on Lidar survey datasets. Base data capture included roads, conveyor belts, and buildings, identifying and documenting data gaps, providing guidelines and best practices for mapping and symbolizing mine infrastructure and producing, printing, and delivering a series of maps. **Debswana Diamond Company (Jwaneng Mine)**

At a Glance



HCA is well-known as a leader in geospatial technologies in the Southern African Development Community region and is committed to providing state of the art mapping and geospatial solutions to its clients, appropriate to the market dynamics across region. Our team is passionate and hard-working and focused on helping clients achieve their objectives cost-efficiently and effectively. We bring a tailored, client-centered approach to all of our projects, and strive to develop professional, trusted, and respectful relationships. We pride ourselves on our culture of strong ethics and social responsibility.

MAXAR

HCA is the primary partner with Maxar for providing very high-resolution imagery, elevation models, and geospatial features services in Botswana, Namibia, Zimbabwe, and Zambia.



HCA is the primary partner with Planet in Botswana for providing access to daily imagery, national mosaics, and very high-resolution imagery.

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Years of Operations

Maintaining a truly local, long-term presence in the region is a key factor in HCA's success, providing deep knowledge and experience to support clients.

Key

Team Members

Sibonile Sibanda, MSc., Managing Director

More than 18-years of experience in remote sensing, GIS, and Surveying. Sibonile manages HCA mapping projects with experience across southern Africa in support of international development, census delivery, conservation, utilities mapping, and infrastructure. Sibonile is a trained Land Surveyor, certified Maxar partner, and experienced ArcGIS professional and trainer.

Mpolokang Muzila, BSc., GIS and Remote Sensing Expert

More than 10 years of experience in the field GIS and Remote Sensing. Mr. Mpolokang holds a BSc in Environmental Science from the University of Botswana. Participated in remote sensing, GIS, and mapping projects across Botswana, including field surveys.

Unami Phatshwane, BA, GIS and Remote Sensing Expert

More than 8 years of experience in the field GIS and Remote Sensing. Ms. Phatshwane holds a BA in Environmental Science from the University of Botswana. Participated in remote sensing, GIS, and mapping projects across Botswana.

Awards

DigitalGlobe ENGAGE Awards recognizing exceptional value delivery to customers.

Basemap Service to the Botswana Department of Surveys and Mapping (2017)

Basemap service to the Debswana Jwaneng Mine (2018)

Multi-disciplinary use of image services in Botswana (2019)



Our Approach

HCA is a locally incorporated office of Hatfield Consultants (Canada). HCA is committed to employing local experts and associating with high-quality and experienced local, regional, and international specialists.

This approach strengthens our work in Botswana and across Southern Africa, which we typically implement and manage using local teams augmented by international technical and managerial support from our offices in Canada and Indonesia, when required. Local ownership of HCA includes our Managing Director who is actively involved in corporate management and technical leadership at HCA.

Health and Safety

Safety is a priority during the planning and execution of all HCA activities. We have a well-developed Occupational Health and Safety Management Program.

Quality Management

We follow the ISO9001:2015 quality management system developed by our parent company, Hatfield Consultants (Canada).

Environmental and Corporate Social Responsibility

We strive to ensure that our activities have minimal impact on the environment, and support sustainable decisions and solutions in all areas of our business.



Contact us:

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