# Market Assessment

The product we are offering is a web base drought monitoring system tailored for farmers, policymakers, and other stakeholders in South Africa to track drought conditions. It is distinguished using AI algorithms to process and analyses gathered data and employing AI machine learning models to interpret both sensor-based and remote sensing data. This enables the system to monitor and forecast agricultural land fertility and productivity effectively.

## Competitors

The competitors identified where African Drought Monitoring and Advisory (ADMA), African Flood and Drought Monitoring (AFDM) and ICPAC.

* ADMA is a near-real-time system that uses Earth Observation and Weather information to monitor drought condition in Africa (African Drought Monitoring and Advisory, 2024).
* AFDM is a sophisticated system developed by the Princeton Climate Institute (PCI) in collaboration with the University of Southampton and Princeton University. It aims to provide early warning for flood and drought conditions across Africa. The system utilizes a combination of ground observations, satellite data, and modelled datasets to generate real-time hydrological assessments and forecasts (African Flood and Drought Monitor, 2024).
* IPAC - is a service that provides climate services to easter Africa (ICPAC, 2024).

We identified the competitor’s partners and target market, they are grouped as follows: farmers, researchers and institutions, policymakers, governments, banks, and world health unions. Some partners of the competitors are members of high authority and wealth such as banks and governments. These members require drought monitoring systems to predict accurate weather forecasts to ensure the safety of their community. This statement reaffirms the value of proposing a drought monitoring system.

## Opportunities

By evaluating the competitor’s systems, we identified a market opportunity. The competitor’s systems have a feature that is underserved and not being met. The feature of incorporating AI into their drought monitoring systems. By incorporating AI into our system, we exploit the following opportunities:

* Improved monitoring
* Improved forecast

Other opportunities are:

* Growing concern for drought monitoring: our competitors have governments and banks as partners, because they want to ensure the safety of their community. South Africa faces recurring droughts, making drought monitoring crucial.
* Technological advancements such as AI and remote sensing ensure more advance drought monitoring systems.

## Threats

The following market threats where identified:

* New competitors: New competitors or old ones can incorporate advanced technologies such as AI into their systems.
* Data privacy and security: Handling sensitive agricultural and environmental data requires strong privacy and security measures.
* Resistance to Technology adoption: Some farmers or stakeholders may be resistant to adopting new technologies.

# References:

African Drought Monitoring and Advisory. 2024. Drought Situation in Africa. <https://ada.acmad.org/home#:~:text=ADMA%20is%20a%20near%2Dreal,monitor%20drought%20conditions%20in%20Africa>. Date of access: 27 April. 2024.

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