



Africa RiskView
ARC's Weather Risk Modelling Tool

What is Africa RiskView?

The *Africa RiskView* software is the technical engine of the African Risk Capacity (ARC). It uses satellite-based rainfall information to model the progression of agricultural and rangeland seasons across the continent, quantify the potential impact of drought on vulnerable populations, and estimate the cost of responding to a drought event. Work to add flood and tropical cyclone risk to the tool is ongoing.

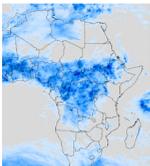
Africa RiskView underpins ARC's insurance model

Africa RiskView's primary purpose is to estimate the number of people affected by a drought event during a rainfall season, and the financial amount necessary to respond to these affected people in a timely manner. This allows ARC Member States to define their participation in the ARC Risk Pool based on objective and transparent criteria.

Africa RiskView as an Early Warning tool

In addition to providing 'hard' triggers for ARC's insurance mechanism, *Africa RiskView* also allows to monitor and analyse rainfall throughout the continent in near-real time and estimate the impact of weather developments on vulnerable populations in-season, thus providing ARC Member States and Partners with an innovative Early Warning tool.

How Africa RiskView works



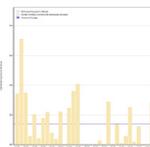
Rainfall:

Africa RiskView uses satellite rainfall data to monitor the progression of rainfall seasons across the continent.



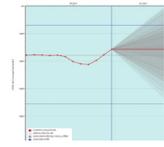
Drought:

Based on these satellite rainfall estimates, *Africa RiskView* uses a water balance model called the *Water Requirements Satisfaction Index* (WRSI) to calculate whether crops are getting the amount of water they need at different stages of their development.



Affected Populations:

By overlaying the WRSI with vulnerability data at the sub-national level, *Africa RiskView* estimates how many people are likely to be affected by a drought event.



Response Costs:

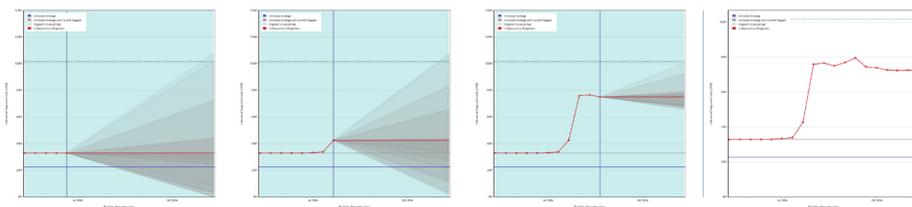
Finally, the number of affected people is converted into response cost using a per-capita response cost multiplier. These response costs are the underlying basis of the insurance policies.

Customisation of *Africa RiskView* to the national context

In order to minimise basis risk – the technical term used to describe the potential mismatch between *Africa RiskView*'s response cost estimates and the country's actual needs – the ARC Secretariat engages each potential participating country and its in-country partners in a year-long customisation process.

The goal is to tailor *Africa RiskView* to the national context, using local expert knowledge to adjust settings in a way that the model accurately reflects both the extent of the drought and its impact in the country. The process is carried out by national technical working groups and supported by the ARC Secretariat before joining the ARC Risk Pool and before each policy renewal.

Africa RiskView provides estimates of ranges for the disaster response cost over the course of a season



Africa RiskView is a powerful software tool that is at the core of the ARC insurance mechanism and can enhance drought early warning systems across Africa. By bringing together four well-established disciplines – crop monitoring and early warning, vulnerability assessment and mapping, operational response, and financial planning and risk management – and providing the necessary data analysis, it enables ARC to trigger insurance payouts to Member States quickly, and allows for the constant monitoring of crop performance and drought conditions. This allows ARC to achieve its fundamental objective: to make drought interventions to affected communities more timely and effective.



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