SASSCAL WeatherNet – Regional climate observation for climate service provision in Southern Africa

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SASSCAL Southern African

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Introduction

Considering projected climate and socio-economic development for Southern Africa, a major challenge in southern Africa is to find mechanisms to adapt to climate change and to secure water at sufficient quality and monitoring efforts by operating the SASSCAL WeatherNet which provides a consistent and freely accessible data set at regional scale.



quantity for both, human well-being and the stability of ecosystem functions and services. Many countries of southern Africa face inadequate monitoring networks to provide reliable data for the development of efficient management strategies for sustainable water and land resources management, drought and flood risk analyses and forecasts, but also climate change impact assessments. The Southern African Science Service Centre for Climate Change and Adaptive Land Management (SASSCAL; www.sasscal.org) addresses this deficiency and complements the national

SASSCAL WeatherNet: Station network



WeatherNet website: www.sasscalweathernet.org

- station overview with up-to-date rainfall/temperature (a)
- station information sheet incl. position, google earth link, sensor setup, installation date (b)
- e-mail-based daily weather report, 70 users (c)
- near real-time data (hourly) (d)
- daily and ten days rainfall summaries (d)
- export functions (e,f)
- various statistics for selected variables like e.g.
- diagrams for selected variables (e,f)





- More than 140 weather stations installed since 2010
- Recording rainfall, air temp, solar radiation, pressure, relative humidity, wind speed/direction, soil temperature (+ optional parameters)
- Resolution: 15-mins, hourly, daily, monthly

All Countries	Angola	🚍 Botswana 🛛 🔀 Namibia 🔤	Zambia Switch North to Sou	th Block view: All Countrie	Your selection: All Stations in	alphabetical order		
All stations in	n Google Earth			la Datawana Manaiki				
Alex Murar	nda Livestock Centre	Welcome to the wea	ther stations of Ango	la, Botswana, Namibi	a and Zambia			
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Station name [North-South direction]	Rain (sum) [mm]	Amb. Temp (min) [°⊂]	Am Ten (ma [°C]			
🔹 <u>Damba</u> (AO)	0.0	16.8	28.4	21.8	-	
Cacuso (AO)	0.0	11.5	29.3	19.8	-	
Alto Dondo (AO)	0.0	21.1	34.4	26.5	-	
Kibala (Catofe) (AO)	0.0	12.9	27.4	,	-	
< <u>Chianga (Huambo)</u> (AO)	0.0	6.3	24.7	- aille	-	
Ganda (AO)	0.0	13.6	2	et.	-	
Gambos (AO)	0.0	2.1	" net	14.3	-	
Mahenene (NA)	0.0		و.	15.4	-	
Kalimbeza (NA)	0	and the	23.7	14.7	-	
Maga (NA)	<u>ه</u> آ	.8	27.2	13.0	-	
MA)	N.O.L	4.6	26.1	14.7	-	
Shaambelo (NA)	J.0	-1.6	26.7	11.7	-	
Mashare (NA)	0.0	-2.9	26.2	11.2	-	
Mgoma (NA)	0.0	3.2	25.7	14.8	-	
Bagani (NA)	0.0	2.3	27.6	14.0	-	
Alex Muranda Livestock 🗸 💦 Centre (NA)	0.0	-3.9	25.0	10.8	-	
Shakawe (BW)	0.0	17.1	23.7	19.0	-	
⊠ <u>Okashana</u> (NA)	0.0	2.0	27.7	15.2	-	
Pandamatr Nor	0.0	14.5	22.4	17.0	-	
Sonor	0.0	-5.8	25.2	11.0	-	
M	0.0	2.5	25.5	12.1	-	
r Reeding Station (NA)	0.0	-4.7	25.3	10.2	-	
<u>Pandeni</u> (NA)	0.0	2.0	23.3	11.0	-	
Avaterberg (NA)	0.0	2.9	22.5	12.0	1	
<mark>∕ Omatjenne</mark> (NA)	0.0	-4.7	24.8	9.6	1	



Data transmission/access

Transmission via GSM/GPRS or Motoosat (7 systems)



AL VVEALHEINEL

Delivery: GSM – mobile

Users and stakeholders

Scientific applications (among others)

process research (e.g. hydro, biodiv, agric)



- Meteosat (7 systems)
- Temporal resolution of data: 15 min, hourly
- Near real-time data availability
- Automatic checks
- Data repositories and backups at each national weather service and SASSCAL
- Open Access to data



climate modelling and forecast
fog studies, yield forecast

Operational applications

- FEWSNET/CHG/USGS
- WMO
- Ministries (MAWF Nambia)
- weather forecast, flood warning

Public users

• radio channels, farmers, lodge owners

Funded by

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