



Stakeholder Fora A

GlobeDrought stakeholder engagements and commercialization

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GRoW

WATER AS A GLOBAL RESOURCE



UNIVERSITÄT



For a world without hunger

1. Research

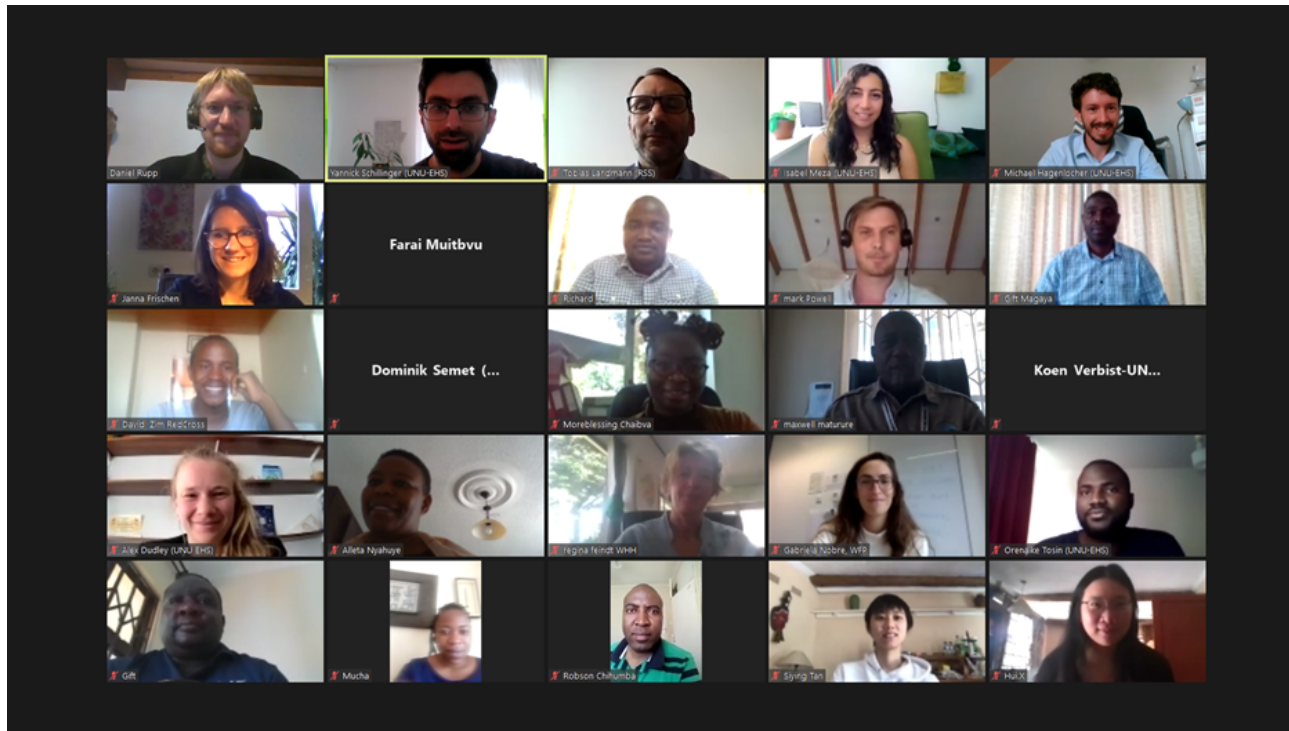
- Develop the DG portal as an **outreach product**
- **Enhance 'other' global drought information** systems with specific GD products

2. Commercial

- Use Public-Private Partnerships (commercial entities & Technology Transfer) **develop drought products for agricultural producers** (ongoing)
- Value add to insurance Industry (ongoing)

3. Cross-cutting

- Facilitate country-specific stakeholder engagements e.g. in regard to financed –based forecasting in ZW (access to humanitarian funding for early action)



Zimbabwe (ZW)
stakeholder
outreach meeting,
Sept. 2020

<http://map3d.remote-sensing-solutions.de/globedrought/GlobeDroughtPortal>



Past/Current Forecast

Spatial extent ⓘ

- Global
- Regional (South Africa)
- Regional (Zimbabwe)

Sector at Risk ⓘ

- Irrigated System
- Rainfed System
- Water Supply

Date ⓘ

January 2010

There is no data currently available for selected filters.

500 km

Transparency

Hydrological drought indicator from GRACE (Total Water Changes)

Spatial extent

- Global
- Regional (South Africa)
- Regional (Zimbabwe)

Sector at Risk

- Irrigated System
- Rainfed System
- Water Supply

Date

January 2010

Risk

Longterm Drought Risk (1986-2015)

Hazard

Drought Severity Index (DSI)

Accumulated Drought Severity Index (DSIA)

Drought hazard of rainfed agricultural systems (Pixel)

Drought hazard of rainfed agricultural systems (Country)

Vulnerability

Indicators for agricultural systems

Impact

Globe Drought

GRoW - GlobeDrought
Characterizing drought risk and impact

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Southern Zimbabwe

Accumulated Drought Severity Index (DSIA)

Year	DSIA Value
2005	1.4
2006	2.0
2007	0.1
2008	1.0
2009	0.3
2010	0.8
2011	0.2
2012	0.1
2013	-0.8
2014	0.9
2015	0.2

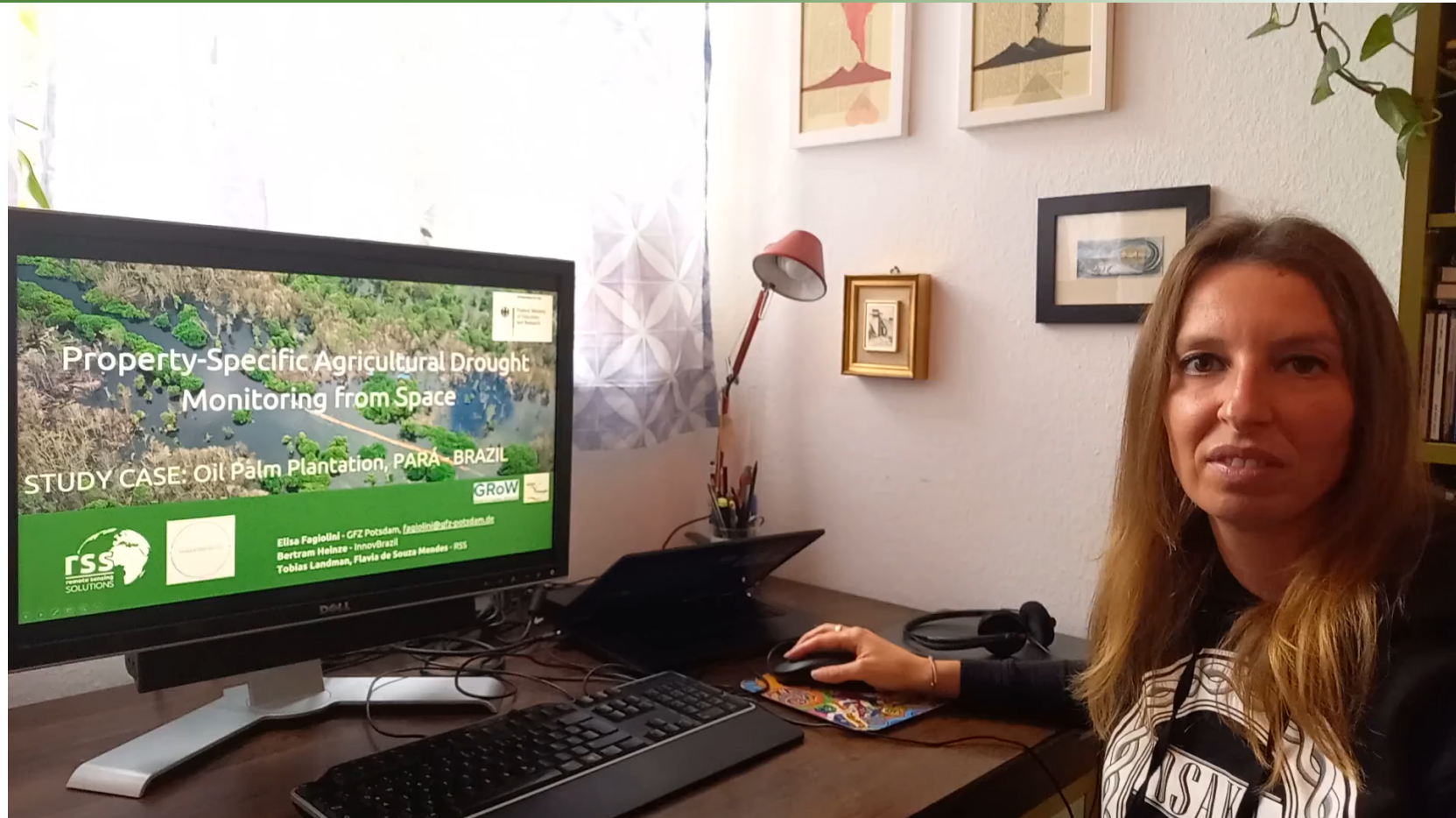
The DSIA (Accumulated Drought Severity Indicator) is a hydrological drought indicator developed by Gerdener et al. (2020) 1, which is based on accumulated total water storage changes (TWSC) provided by the GRACE satellite mission for a chosen period (e.g. 6 months). Accumulated TWSC for a specific time and location are reduced by the corresponding monthly mean for a specific month and divided by the standard deviation, resulting in values that are representing the DSIA. These values can be divided into five severity classes: • Abnormally dry, -0.8 to -0.5 • Moderate drought, -1.3 to -0.8 • Severe drought, -1.6 to -1.3 • Extreme drought, -2 to -1.6 • Exceptional drought, <= -2 References: 1 Gerdener, H., Engels, O., and Kusche, J.: A framework for deriving drought indicators from the Gravity Recovery and Climate Experiment (GRACE). Hydrol. Earth Syst. Sci., 24, 227–248. <https://doi.org/10.5194/hess-24-227-2020>

Legend:

- exceptional
- extreme
- severe
- moderate
- abnormal
- none

Transparency

UFZ/ Water Monitoring from Space/InnovBrazil - Technology Transfer International partnership to commercialize GD products



Thank you!



Bundesministerium
für Bildung
und Forschung



GRow - GlobeDrought
Characterizing drought risk and impact



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