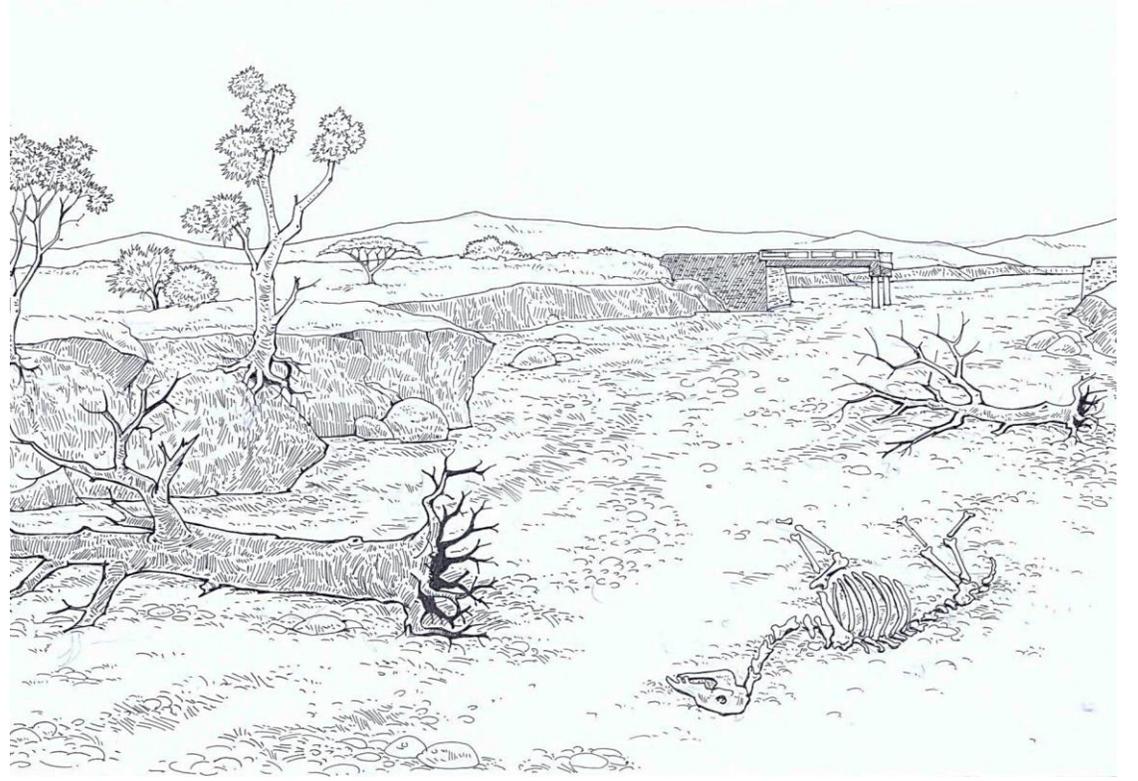
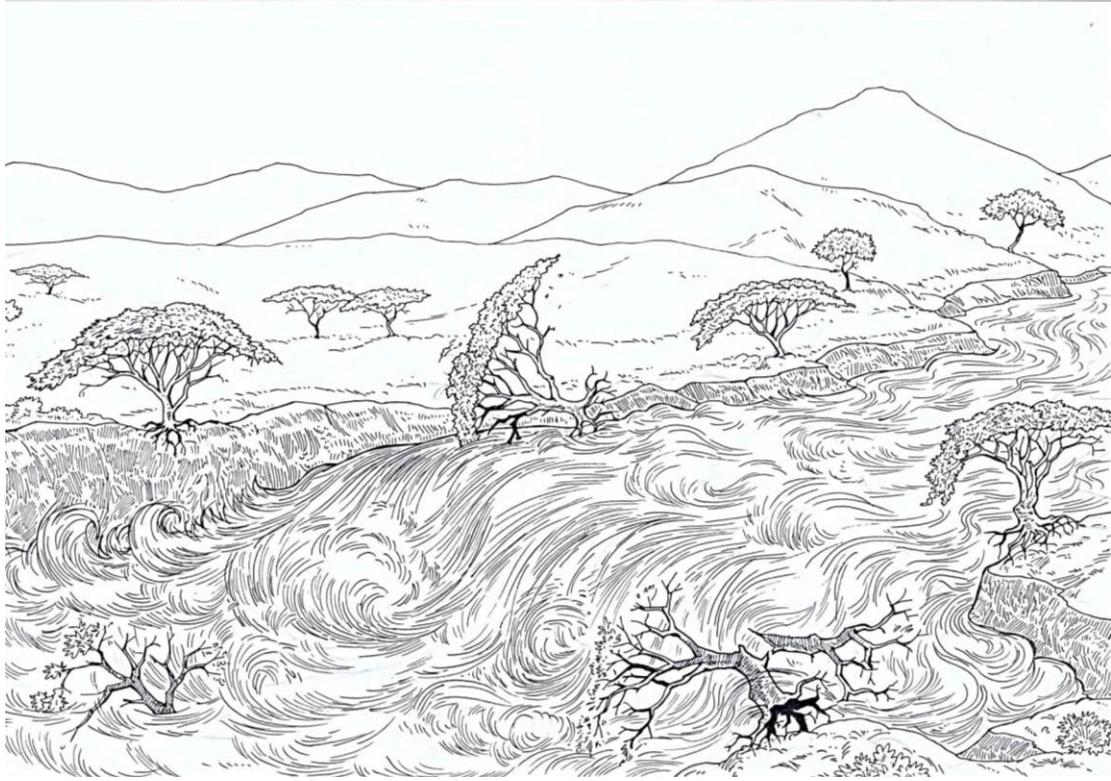
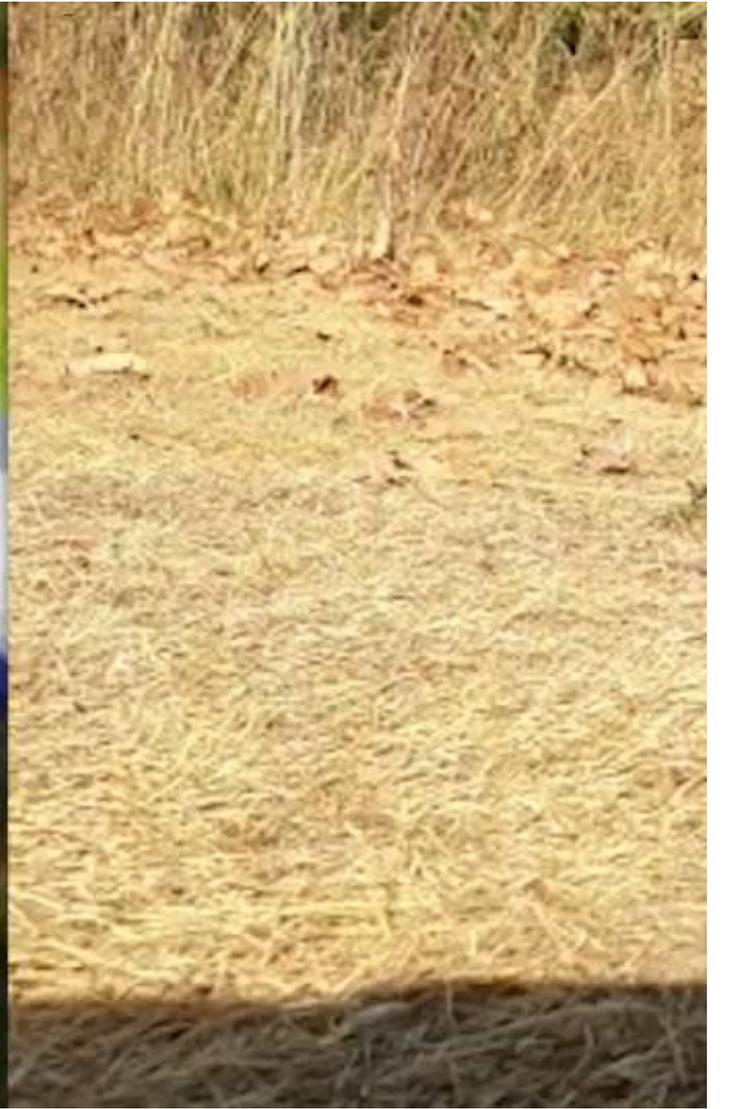




Dry Valley Rehabilitation and Productive Use (DVRPU)

An integrated approach to rehabilitate degraded dry valleys for sustainable livelihoods

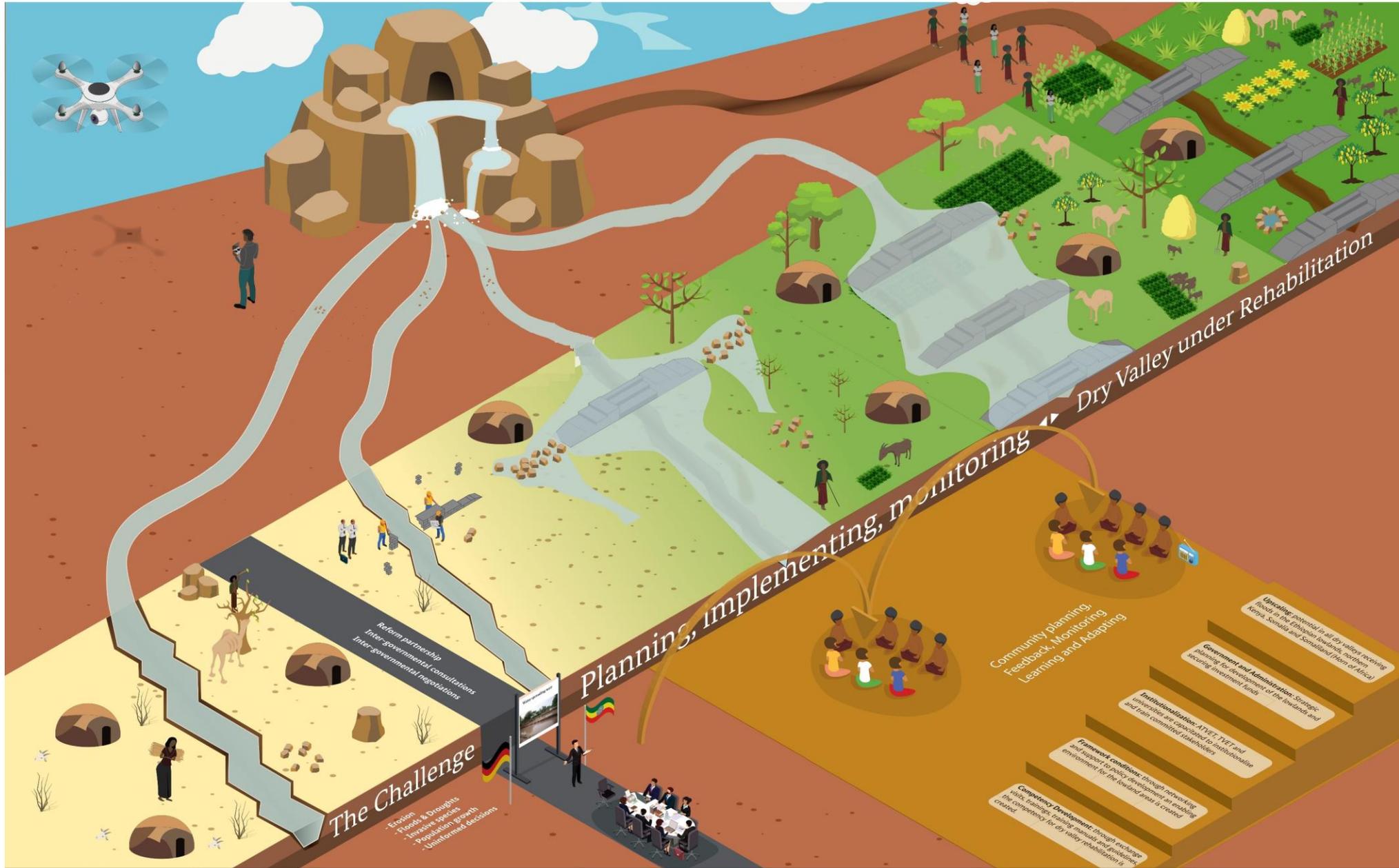




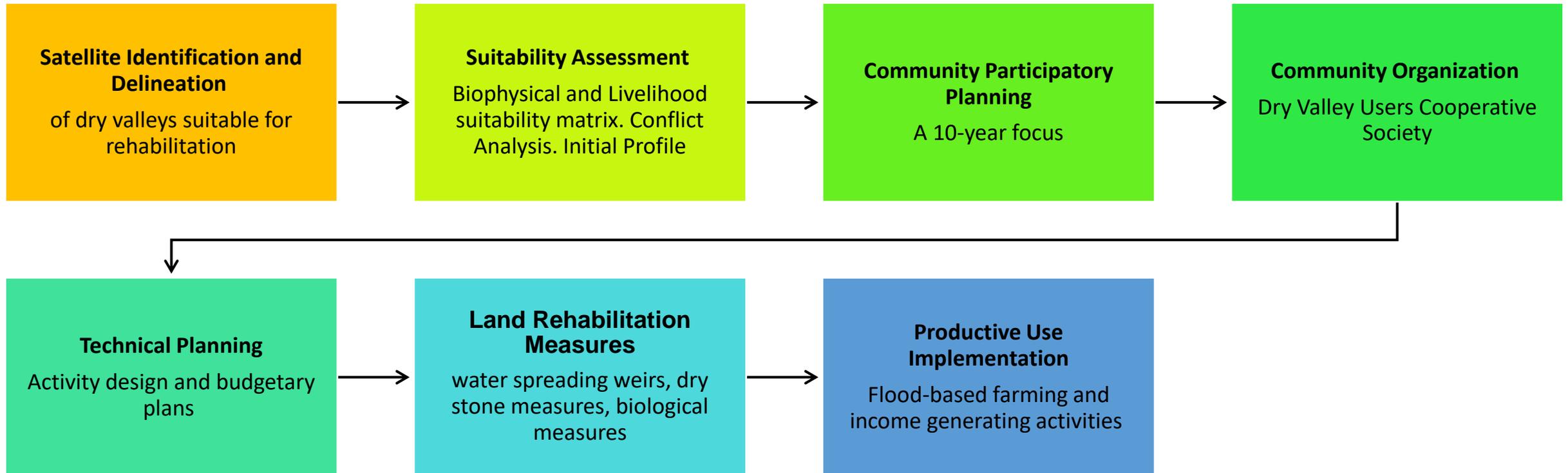


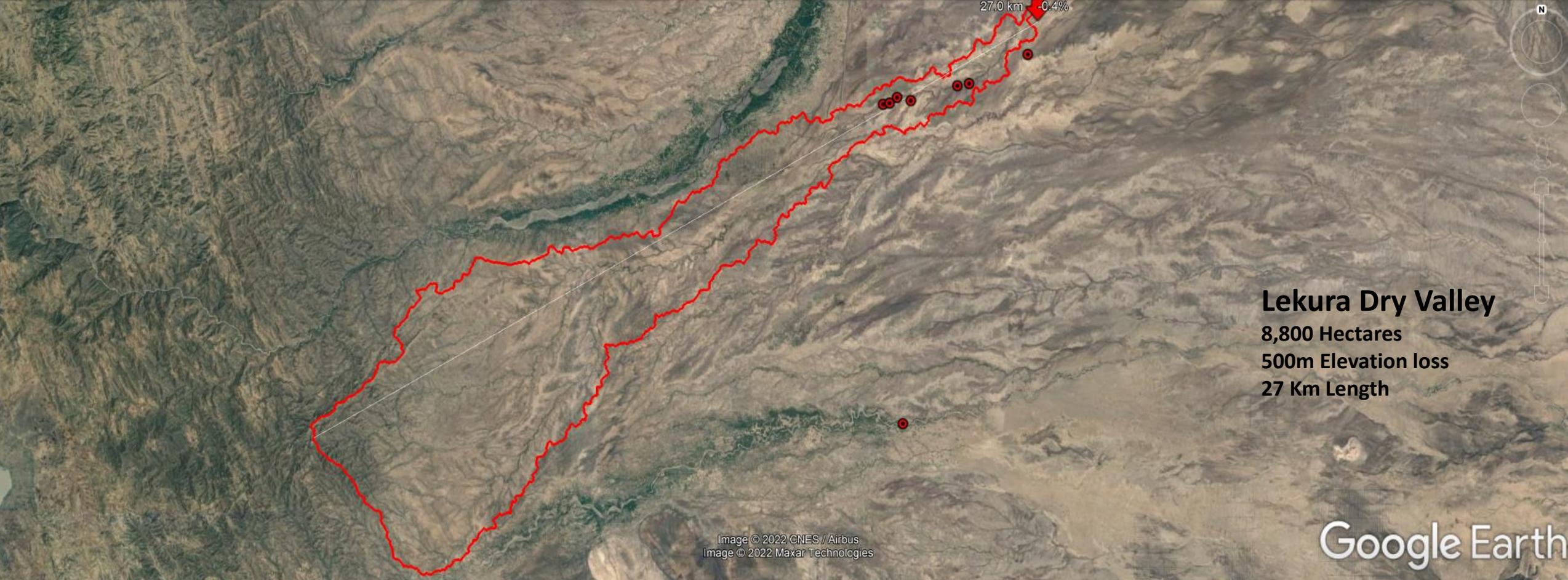
A ten year journey

Strengthening Drought Resilience



Steps in the DVRPU Approach: from site selection, planning to implementation

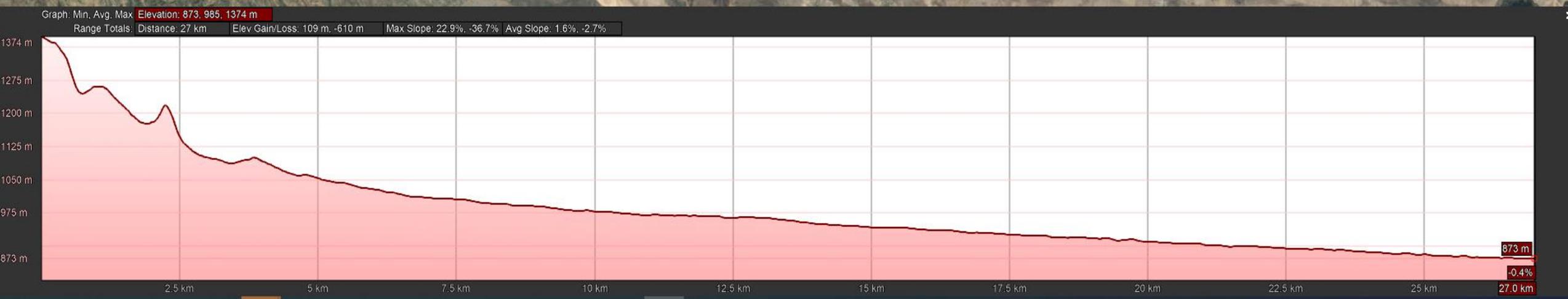




Lekura Dry Valley
8,800 Hectares
500m Elevation loss
27 Km Length

Image © 2022 CNES / Airbus
Image © 2022 Maxar Technologies

Google Earth









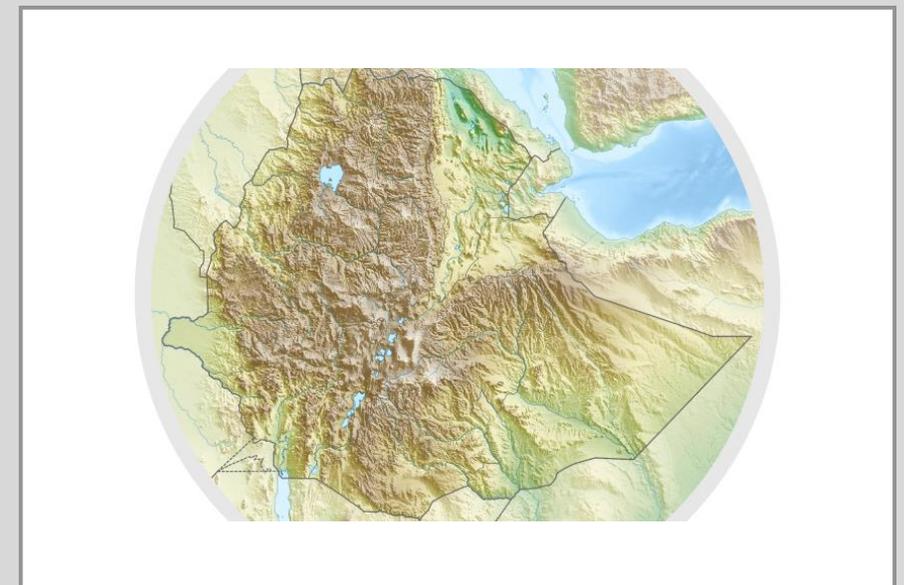
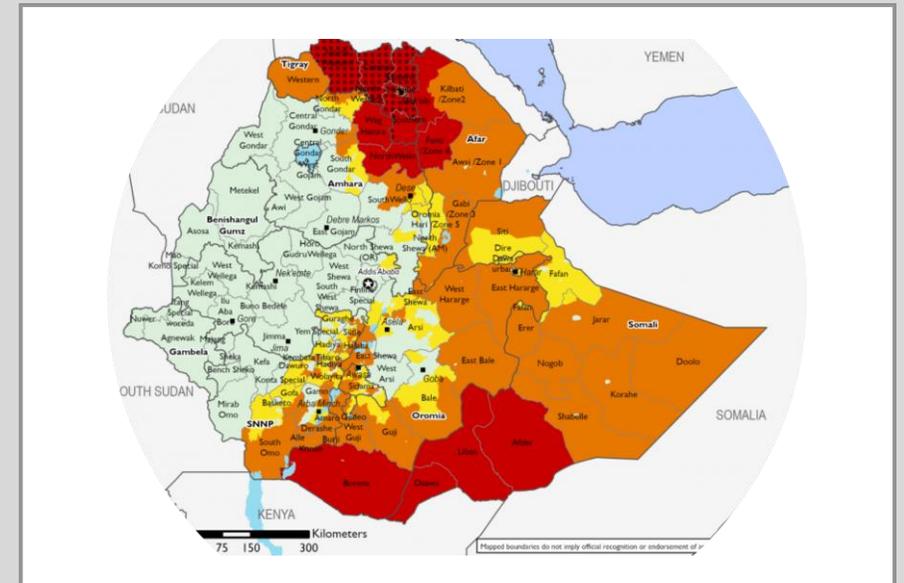
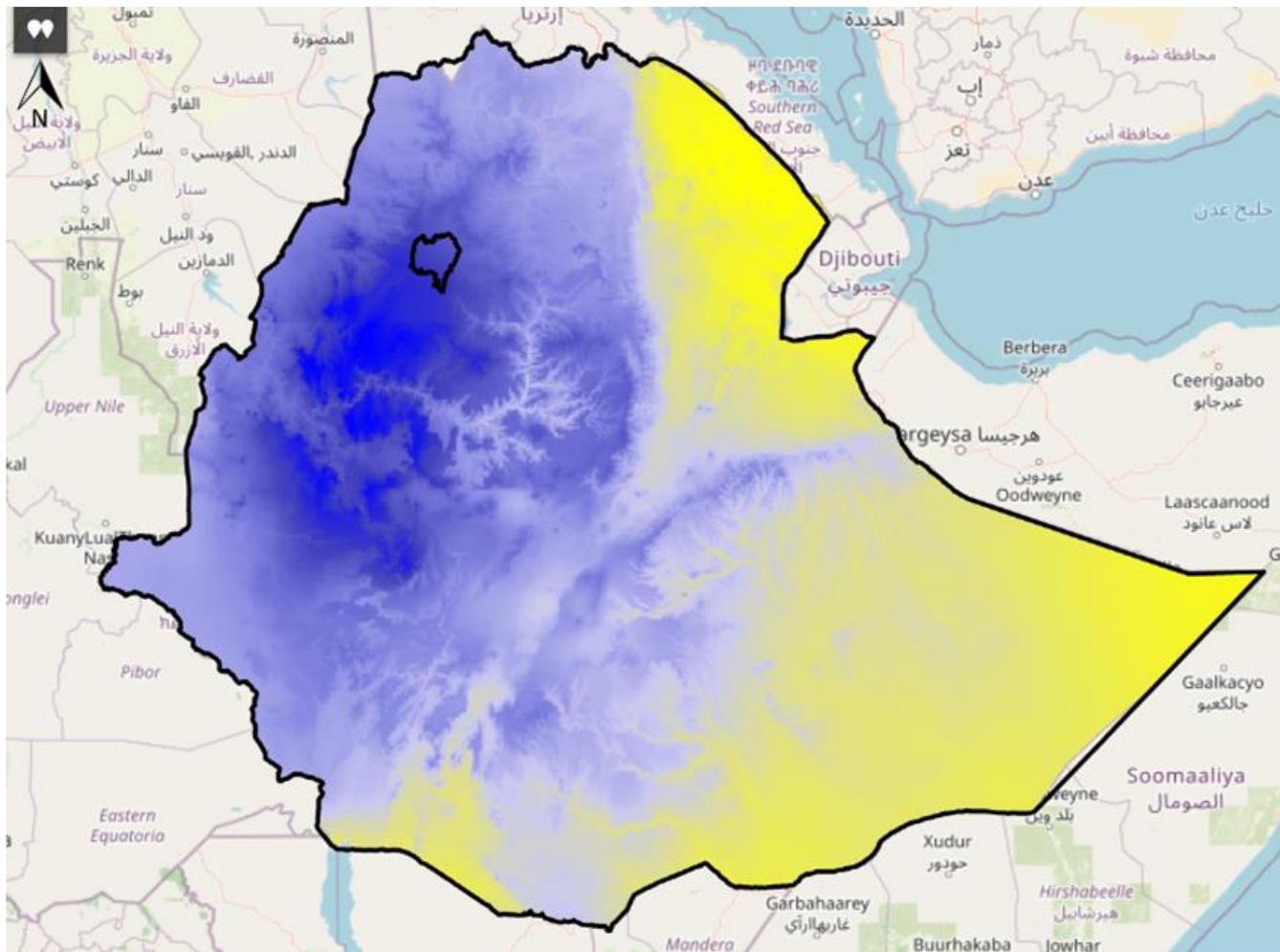




DVRPU Potential – A cost benefit analysis of one Dry Valley

- **Data sources**
- *1. GIZSDR, Average costs of Water Spreading Weirs in Yalo and Ewa Woredas
- *2. Kohling M and Holter P, unique GmbH (2022). Final Report: Methodology to Quantify Areas Under Rehabilitation Based on Earth Observation Data. A feasibility study as part of the GIZ SDR program in the Afar region, Ethiopia
- *3. Getnet M, et al. (2020). Water spreading weirs altering flood, nutrient distribution and crop productivity in upstream–downstream settings in dry lowlands of Afar, Ethiopia.
- *4. FEWS NET: Ethiopia Price Bulletin, May 31, 2022. https://fews.net/sites/default/files/documents/reports/PB_ET_202205.pdf
- *5. Food and Nutrition Needs in Emergencies. UNHCR, UNICEF, WFP and WHO. (2004) <https://www.unhcr.org/45fa745b2.pdf> (accessed: July 2022)

DESCRIPTION	UNIT	EURO
Implementing DVRPU 7 steps concept	Euro	100,000
Cascade of 8 weirs	Euro	200,000
Total rehabilitated area per cascade *2	Hectares	218
80% of maximum average maize yield *3	Kg/Hectare	4,000
Total maize yield	Kg	872,000
Market price of maize. April 2022 *4	Euro/Kg	0.43
Total market value	Euro	374,960
Grain security (400gm/person/day)(146Kg/person/year) *5	Persons/year	5,900
Economic Cost: Benefit Ratio per year		1 : 1.25



DVRPU Potential – A sustainable way towards food security

DESCRIPTION	
Food insecure population Ethiopia (OCHA, May 2022)	10-15 million people
Estimated fund flow towards the lowlands	300 million EUR/year
Estimated time to fully develop a dry valley	10 years
Estimated costs for rehabilitation of a dry valley	300.000 EUR
Estimated costs for rehabilitation of 1000 dry valleys	300 million EUR

Utilizing 10% of estimated annual fund flow for 10 years:

6 million people food secure

220.000 hectares in production

