



# Landscape restoration in drylands: What drives the transition from subsistence to sustainable economic development?

Rob Kelly, Sumera Jabeen, Assefa Tofu and Bernard Mulei

February 2020



# Overview

Background

Challenges facing drylands in Africa (RK)

Approach

Vision, objectives, methodology and target areas (RK)

Results

Changes through DryDev (SJ)

Reflections

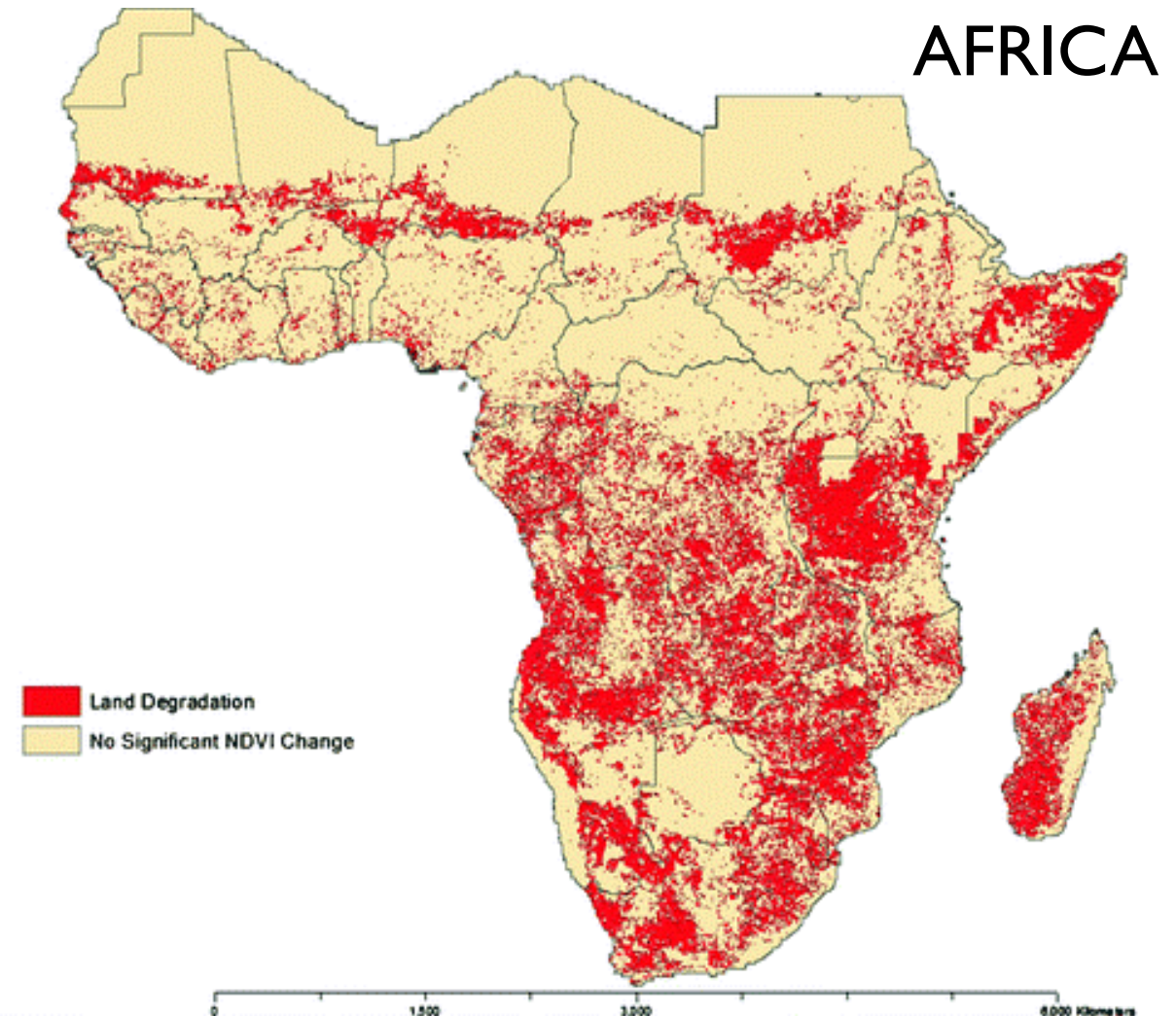
Enabling and hindering factors (SJ)





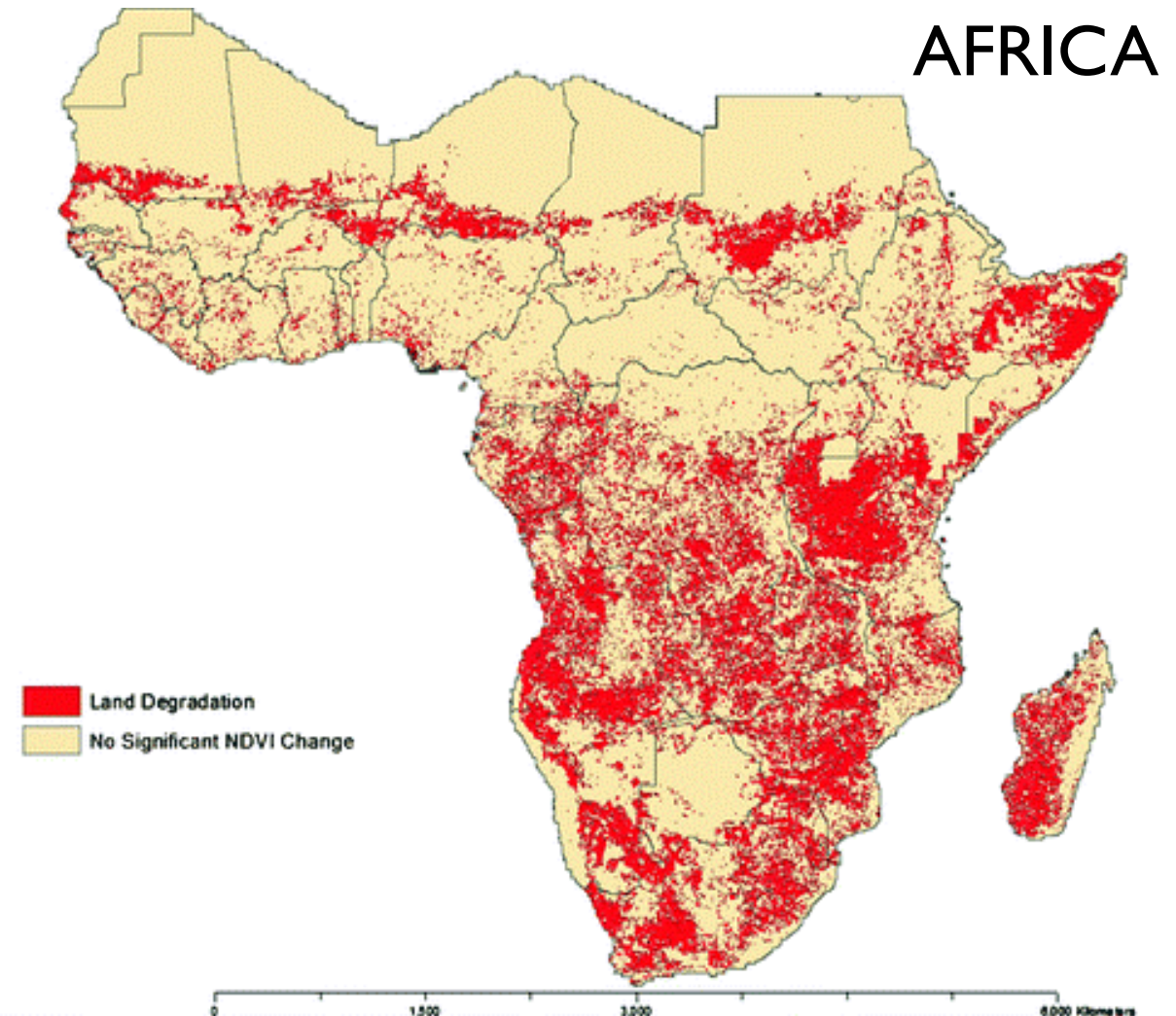
## Background: challenges facing drylands in Africa

- Drylands make up 43% of total land area in Africa
- 325 million people
- Susceptible to degradation: overgrazing, over-cutting → erosion, nutrient loss, lack of organic matter
- Climate change → unsustainable practices → migration



## Background: challenges facing drylands in Africa

- Land degradation is usually human-induced; a result of unsustainable practices, eg overgrazing.
- This eventually leads to erosion, gullies, scalding, bare ground, landslides, the spread of noxious weeds and ultimately a change in environment.
- Eventually the area becomes totally unproductive or even a desert.
- Africa is home to around 30% of the total degraded area in the planet – a massive issue – much of this in dryland environments.













# Approach

**VISION: to contribute towards the transition of smallholder farmers in dryland areas from subsistence farming and emergency aid to sustainable rural development**

Donors	Ministry of Foreign Affairs (DGIS), Netherlands World Vision Australia
Implementing agency (Fund manager)	The World Agroforestry Centre – ICRAF
Focal countries	<u>East Africa = Ethiopia, Kenya</u> West Africa = Mali, Niger, Burkina Faso
Duration	6 years (Inception Phase = CY14; Implementation Phase = CY15-19)
Programme budget	USD 50 million
Overall target	<b>227,000 farmers</b> (50% women)

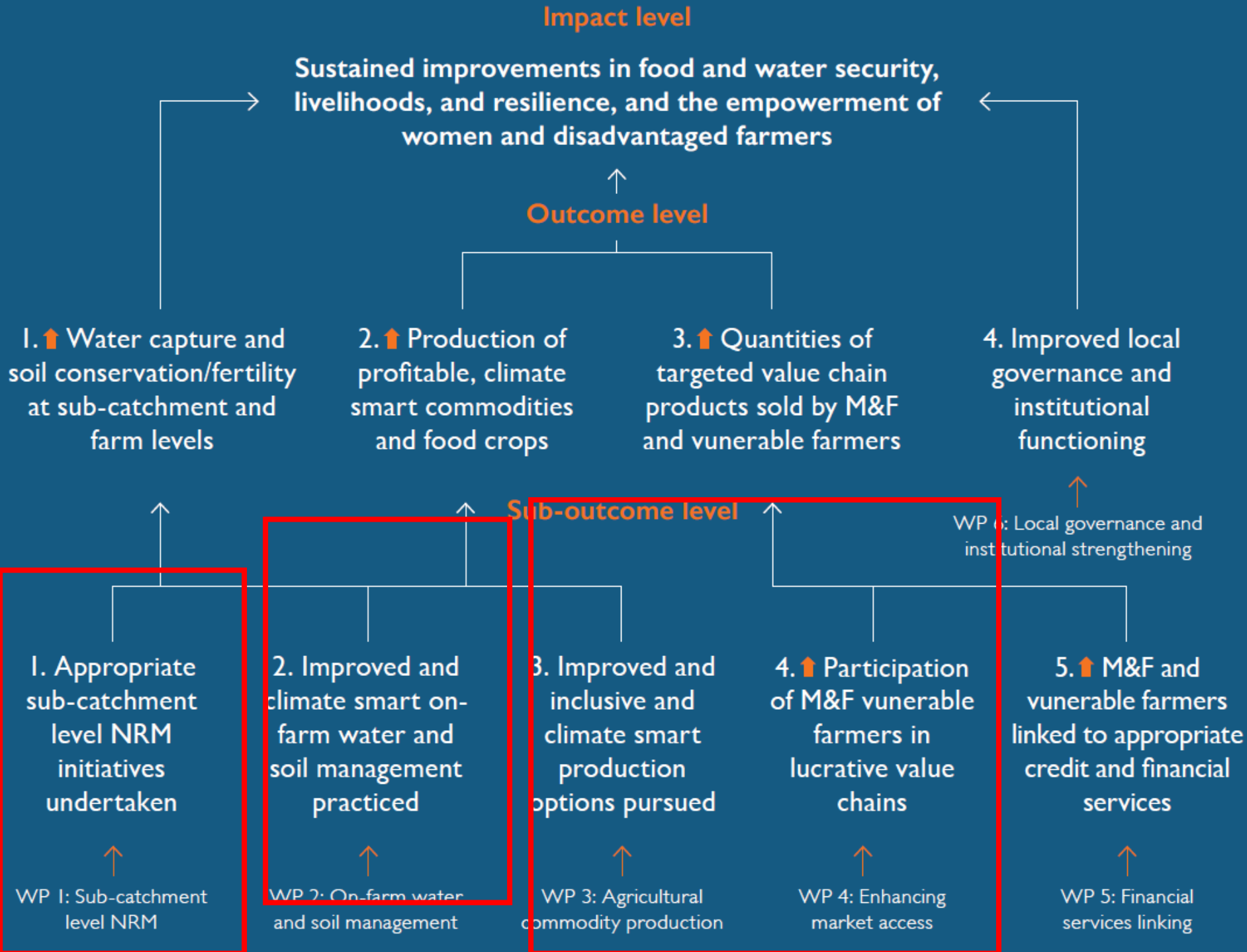


# Approach

- Large-scale: USD \$30m programme
- 80k+ beneficiaries
- Complex: multi-country, multi-partner, multi-sectors, 120+ indicators
- “How to do rural development”: landscape restoration / FMNR / RVH / small-scale irrigation / CSA / SEED / MSD / policy influencing
- Process-heavy: action-learning, iterative, consultative, farmer-led

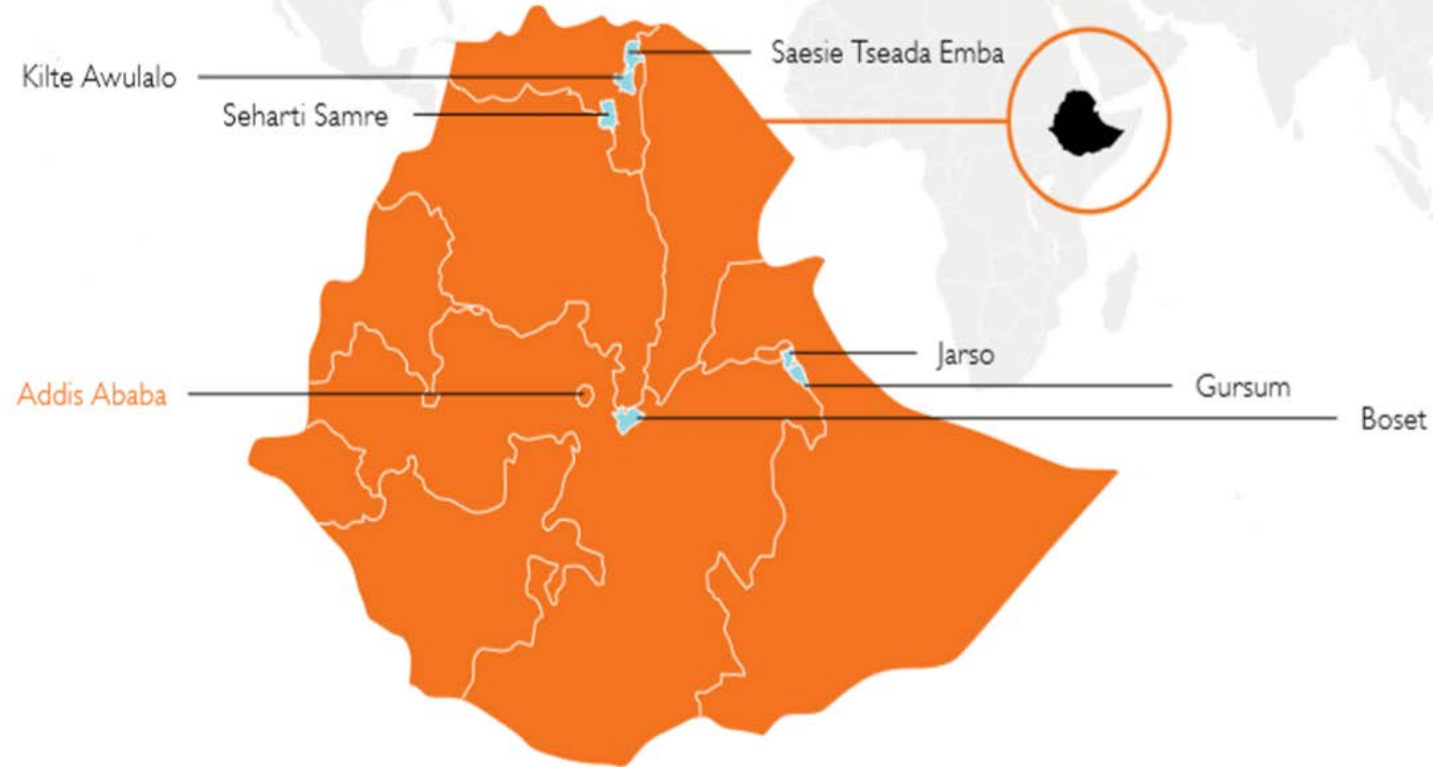








# Ethiopia



29 sub-catchments in 6 districts:

- Oromia: Boset, Jarso, Gursum
- Tigray: Ts/Emba, K/Awulalao, Samre

Partners: WVE, REST, EOC

Target: 40,000 farmers (50% women)



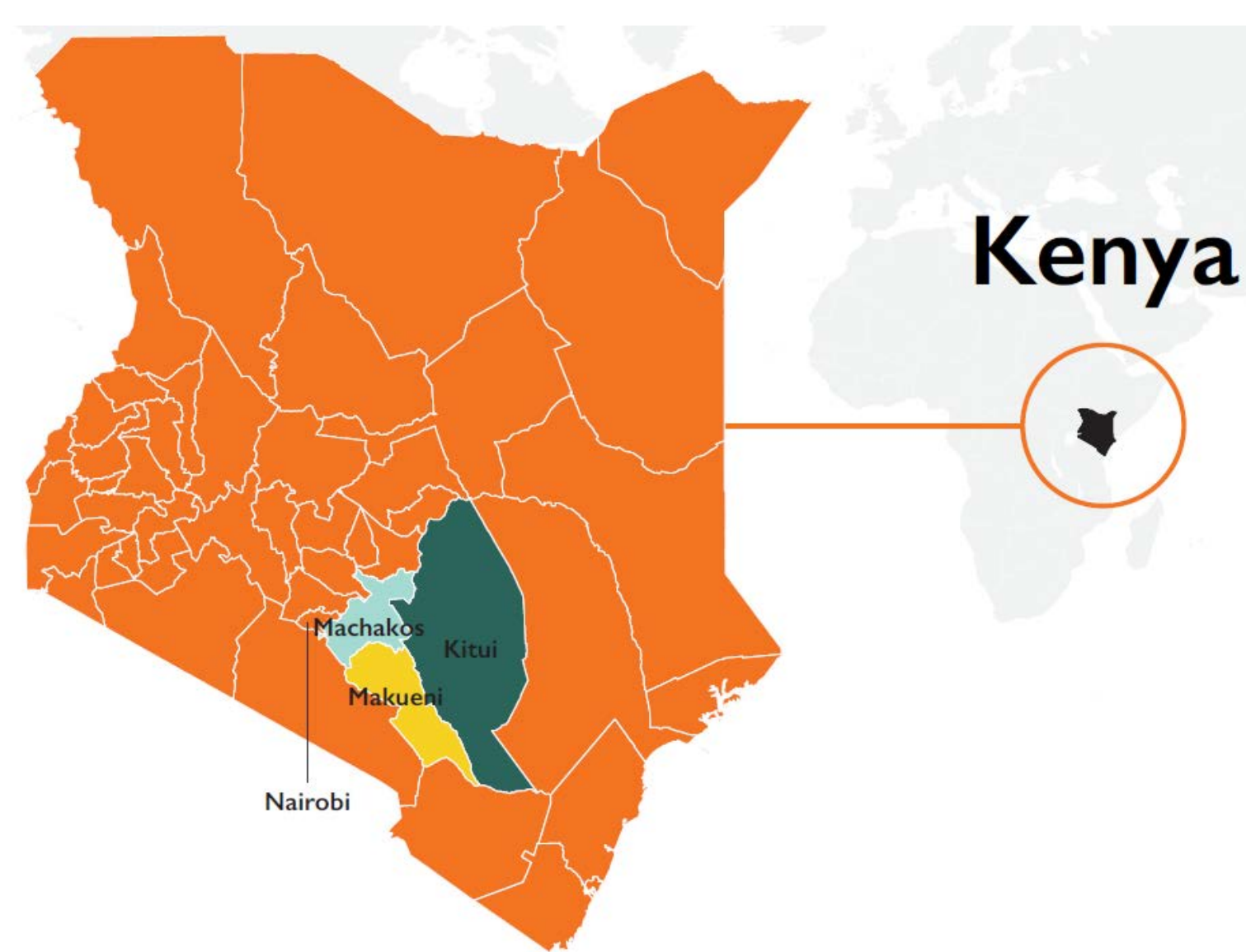
Ministry of Foreign Affairs of the  
Netherlands



World Vision







28 sub-catchments in 3 counties:

- Machakos
- Makueni
- Kitui

Partners: WVK, ADRA, Caritas, SNV

Target: 34,500 farmers (50% women)





Landcare methods  
restore hydrological  
balance and improve  
access to water

Farmers are assisted in  
converting water into increased  
production, improving soil  
fertility on farm lands

Food security and  
market-derived  
income increased



**Policy influencing**

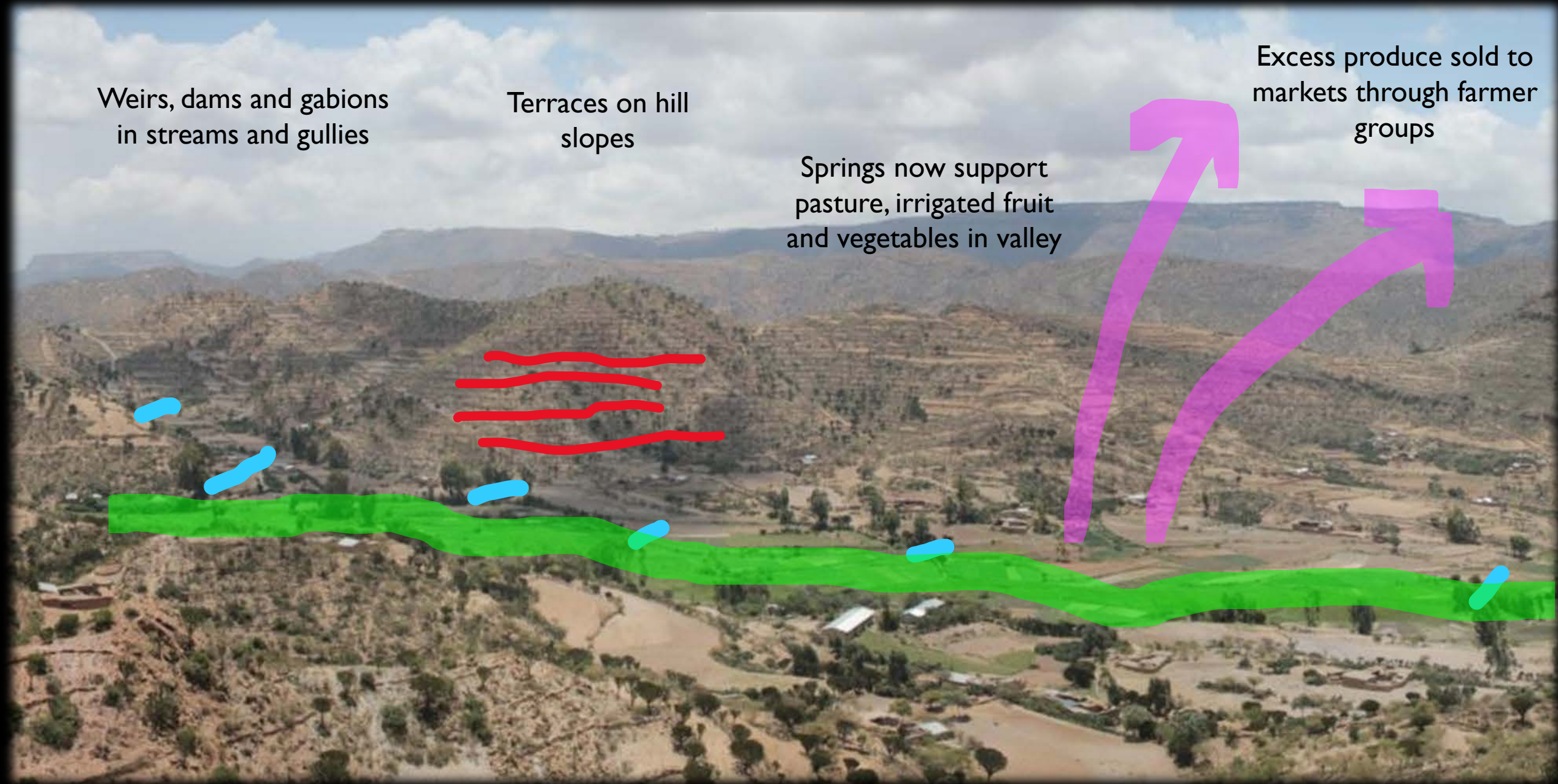


Weirs, dams and gabions  
in streams and gullies

Terraces on hill  
slopes

Springs now support  
pasture, irrigated fruit  
and vegetables in valley

Excess produce sold to  
markets through farmer  
groups





# Methodology

- DryDev as the engine-room of rural development in dryland areas
- “How to restore degraded landscapes” = resilience-building, restoration of natural resources, enhanced productivity and efficiencies = increased income
- Theory of change and how we needed to learn and re-learn the approach
- Impact: (1) former migrants now returning with hope; (2) local govt bring others to see the changes, a model watershed; (3) international visitors including Germans and Dutch “seeing is believing”
- DryDev sought to enhance both ecosystem AND socio-economic resilience using a landscape approach









Enabling factor: (I) community-led landscape restoration efforts at the catchment and farm levels → more water available for human / animals and for small-scale irrigation



# Results





Springs have recovered, irrigation water is now sufficient and biodiversity has increased – wetland areas have emerged in previously dry areas. The valleys are retaining moisture for longer. Farm productivity has increased, boosting sales to the local markets and supporting the rural economy.

**Before**



Gully in Maago sub-watershed, 2014

**After**



Restoration in Maago sub-watershed, 2018



Enabling factors: (2) sequencing of these interventions and integration between NRM and agriculture (FS) and markets / income generation (or livelihoods)









Demonstrations of low-cost technology to show cost-benefit analysis; distribute through cooperatives or FO's













# Achievements - Reach and Results

## Ethiopia

## Kenya

**Farmers reached**

58,429 (22,441 W) - (46%)

35,566 (23,590 W) – (66%)

**Land rehabilitated**

43,678 ha

20,095 ha

**% practicing soil and water management**

84%

80%

**% practicing climate smart agriculture**

92%

42%

**Value chain participation**

21,602 (9,221 W)

11,459 (6,880 W)

**Savings and access to finances**

US\$32 to US\$76

US\$34 to US\$97

**Farmer organisations**

281

241

# Achievements: Impact in Ethiopia



Household Dietary Diversity  
1.89 → 5.07



Hungry Months  
3.41 → 1.6  
93% reported no hunger



Income and expenditure  
*Nearly doubled*





# Achievements: Impact in Ethiopia

- The number of hungry months reduced from 3.87 to 1.55
- The Household Dietary Diversity Scores increased from 4 to 9 out of a possible maximum of 12
- Households where children ate less during hungry month decreased by 95%
- Reliance on various food shortage coping strategies such as borrowing, skipping a meal or eating less decreased
- The household assets index score increased by 35% indicating improved economic capacity of the participating households





# Achievements: Impact in Kenya



Household Dietary  
Diversity →  
4.4 → 9



Hungry Months  
3.87 → 1.55  
95% decrease in children eating less



HH asset score  
*Increased by 35%*





# Achievements - External Evidence - Ethiopia

*The initiatives...have contributed to increased resources, crop and livestock production and access to inputs, markets and credits, with DryDev beneficiaries indicating their livelihoods and incomes have increased. **Men and women are both increasingly acting like commercial farmers.***



*The prog. has significantly contributed towards women's empowerment, particularly with value-chain commodities such as dairy and shoat fattening. Women have reported improved status and are investing in income generating activities, such as poultry and fruit trees*



## Achievements - External Evidence - Kenya



***The community attitude has changed*** from that of desperation to hope. The community no longer expects free food aid from the government but asks for investment in interventions that will help them become self-reliant for food and water at the community and household level.

*The prog. has helped to improve living standards in targeted communities by enabling farmers to increase their incomes by participating in DryDev selected value chains. Their level of dependency on food aid has been reduced and in some places the reviewers observed that farmers no longer need food aid but do need support to produce their own food. This has given the farmers a sense of confidence and strong belief that they can work towards achieving food security without relying on aid.*



# Challenges

- Getting everyone pointed in the same direction



Ministry of Foreign Affairs of the  
Netherlands





# Challenges

- Encouraging reflection + learning to translate into action



Community monitoring and  
evaluation



Staff reflection events and  
experience-sharing



# Challenges

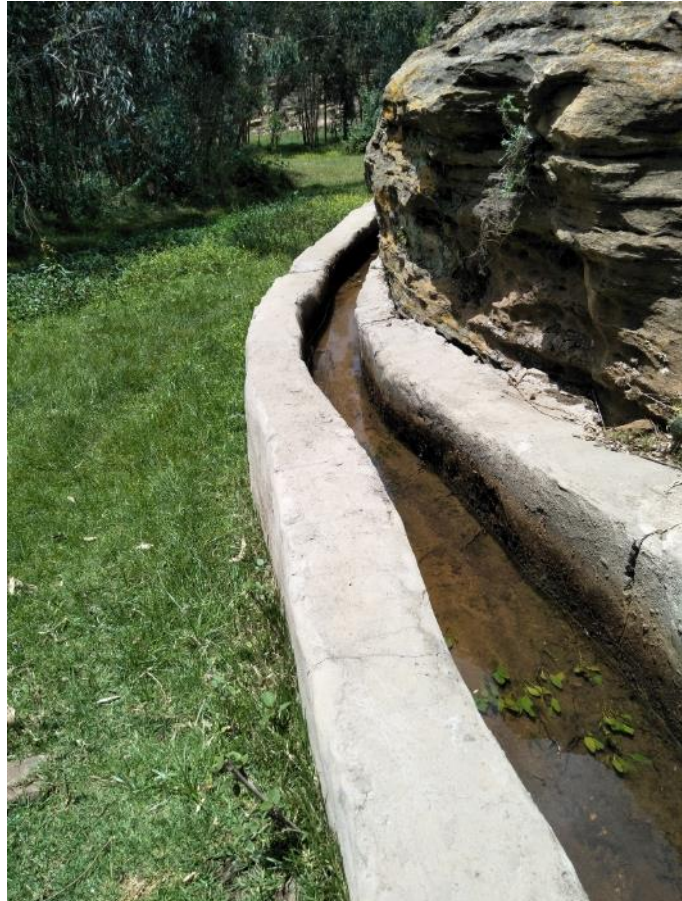
- Context matters: balancing plans with adaptation + flexibility





# Challenges

- Trying to do too much





# Success Factors and Lessons Learnt

## **The programme approach**

- Bottom-up planning with flexibility to choose - OXC
- Integration
- Joint Quality Monitoring
- Cross-learning

## **The structure**

- The country consortium was a success-why

## **Programme alignment with government policies**

## **Leveraging available government mechanisms and resources**

## **Utilise exiting institutions or structures**



# Thank you!

