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The Ecological and Livelihood/Socio-economic Impacts of Community Based Watershed Management: The Case of Tana and Beles Integrated Watershed Management in the Eastern Nile

Paper at the NBDF7 Webinar

OCTOBER 2023

OUTLINE

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- Achievements
- Lesson Learned

Introduction

- IDEN has seven integrated components related to improved water resources management and use, one of the component is *Integrated Watershed Management Project (IWMP) which* was implemented under the umbrella of a larger development plan known as the Tana Beles Integrated Water Resources Development Project which is EN project.
- The objective of IWMP is improve development and management of land and water resources of the Tana and Beles sub-basins and contribute to socio-economic development through improved rural livelihoods in the Tana sub-basin.
- The integrated watershed project component of Tana Beles project was implemented in Jema, Gumera and Ribb watersheds within the Lake Tana Sub Basin for 5-year and carried out on 80,600ha of the watershed area.
- **It addressed biophysical and Socio-economical aspects**

Components/theme of the project

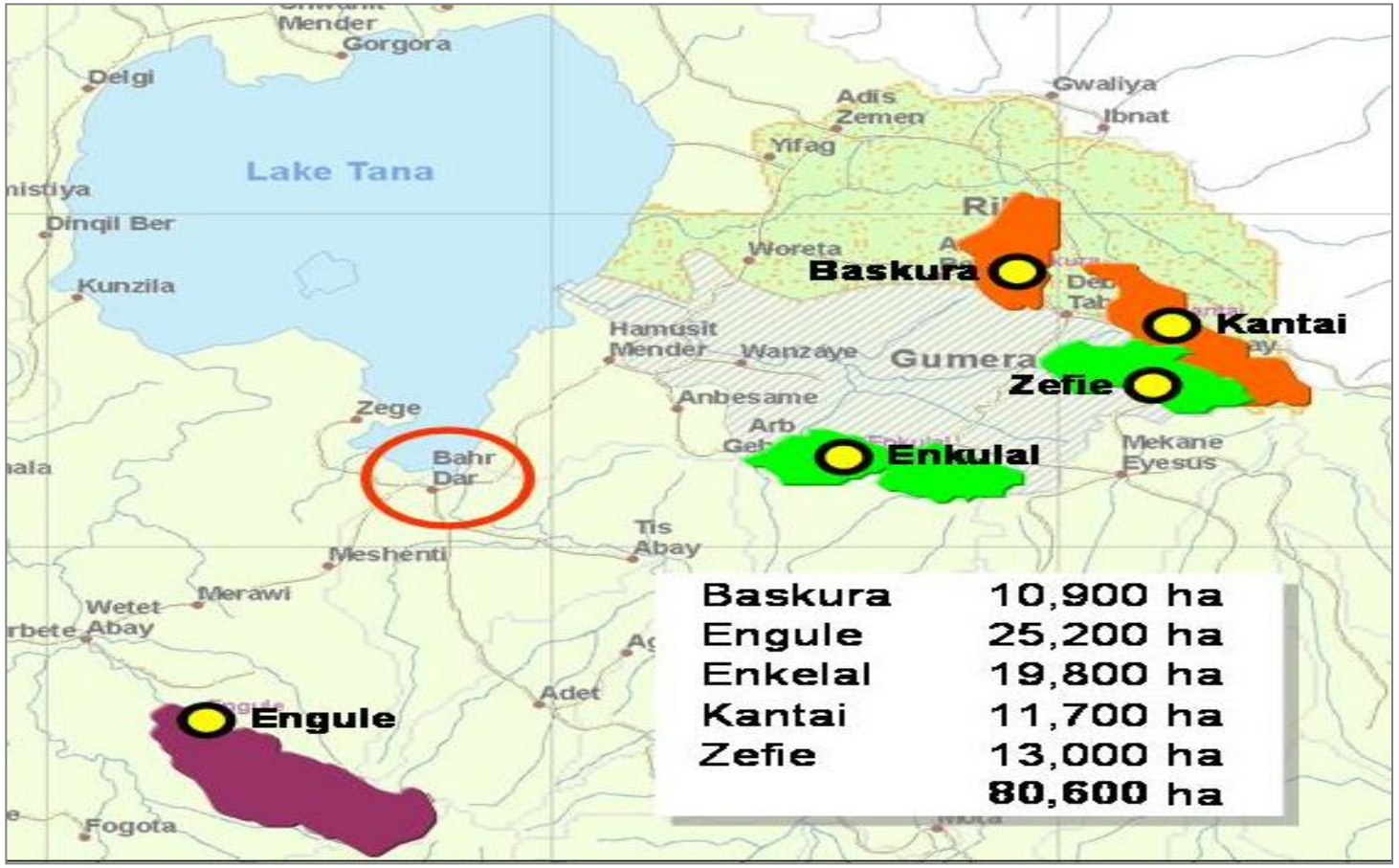
The project was arranged in three mutually supportive themes include:

- ✓ **Theme A (Livelihoods**) Community Entry points, crop production livestock,
- ➢ On- Farm and Off- Farm and Income Generation Activities :

1. **Theme B (Natural Resources)-SWC, WSS, Irrigation, Forestry and agro-forestry**
2. **Theme C (Capacity Building and Project Management)**

- ➢ **SWC-**Gully Prevention and rehabilitation interventions/measures; Forestry & agro-forestry interventions; Small scale irrigation interventions; Infrastructure component interventions.

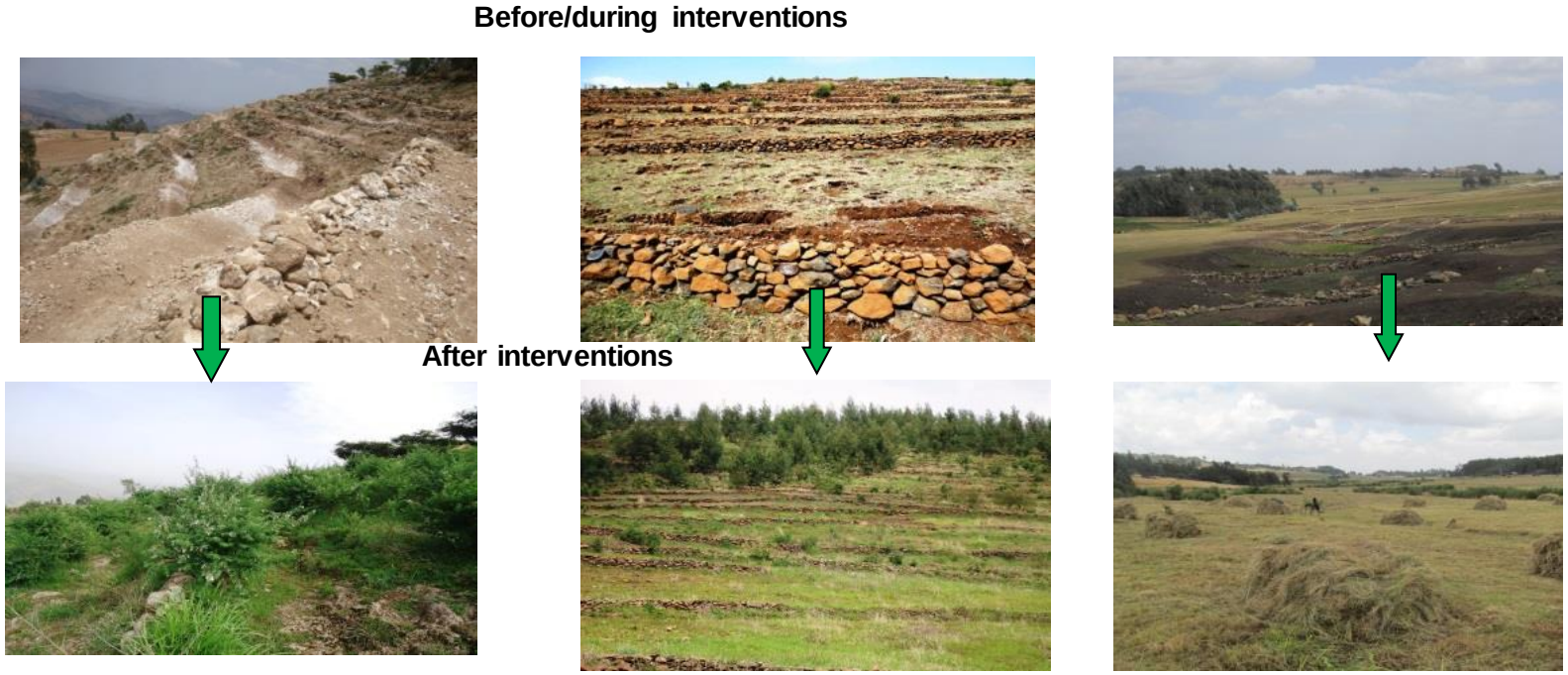
Location map and extent of intervention area



Source: ENTRO, Integrated Watershed Management (Ethiopia) Watershed Project, Project Implementation Plan, Volume 1 – Main Report, December 2007.

Analysis results/Achievements…

- Degraded land development changes comparing before & after intervention



Analysis results/Achievements…

- Percentage Distribution of Households practicing conservation structures and Soil Fertility Management Technologies

Types of technological practices	Project Survey Year		
	2009	2013	2016
Soil/stone bund	73.5	87.8	92.8
Check dam	15.7	34.5	44.6
Fanyajju	0.0	2.8	17.9
Plantation on structure	0.0	0.0	51.8
Cut off drain	0.0	0.9	29.3
water ways	0.0	0.6	26.3
alley cropping	0.0	1.2	19.1
Farm boundary plantation	0.0	0.0	44.6
Chemical Fertilizers	66.2	70.9	93.2
Compost	61.3	76.7	83.7
animal manure	0.0	0.0	55.0

Analysis results/Achievements…

- Summary of Land use land cover since 2010 to 2016 as the result of WSM interventions

Land use land cover class	Overall LULCC	
	2010 (Area in Ha)	2016 (Area in Ha)
Bare land	18,439.83	1861.04
Forest land	10,345.50	11668.59
Grass land	17,279.55	5770.53
Settlement	444.96	2266.56
Farmland	38,513.34	63456.39

Analysis Results/Achievements...

➢Change in productivity of some crops

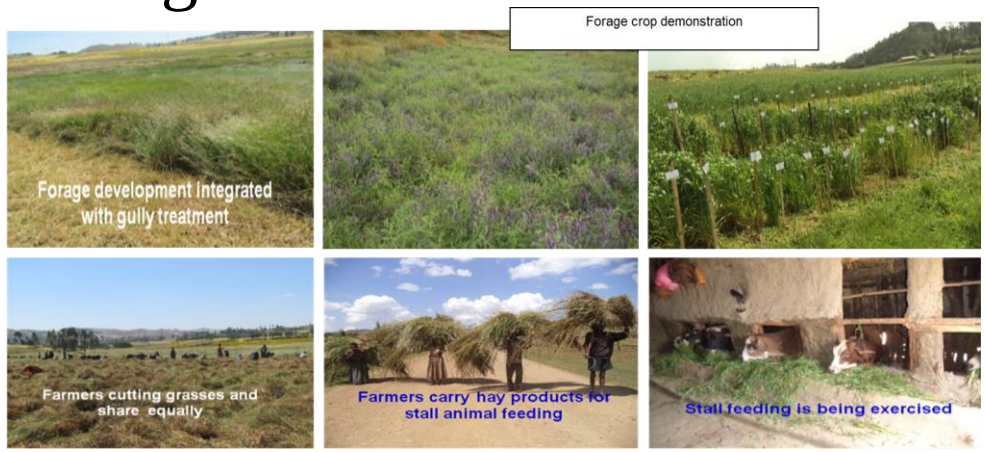
No	Crop type	Productivity		
		2009/2010(qtl/ha)	2015/2016(qtl/ha)	Increase in %
1	Teff	13.12	15.9	21.5
2	Barely	16.43	20	21.7
3	Maize	26.1	31	18.9
4	Wheat	21.8	28	28.5
5	Finger millet	16.3	20.8	27.6
6	Potato	106.3	200.3	88.4

Increase in production is due conducting demonstrations on different crop varieties and agronomic practices, and providing continuous extension services to the watershed community

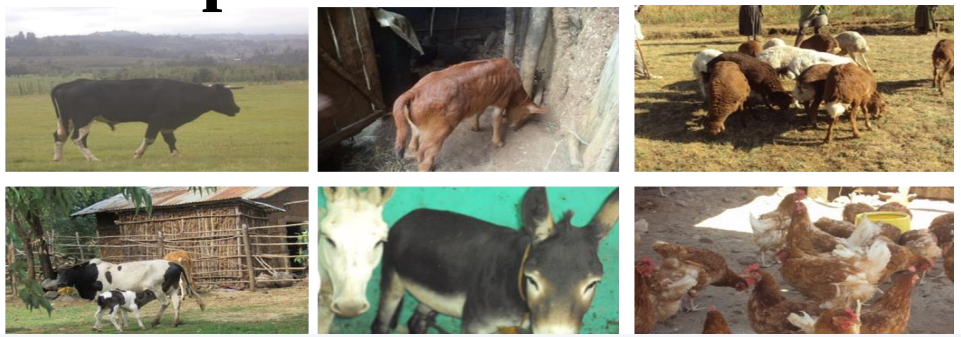
Analysis Results/Achievements...

- Changes in Livestock Production and Productivity
- ✓Improved animal health facilities and services,
- ✓improved livestock breeds,
- ✓forage development, demonstrations,
- ✓capacity building, and
- ✓adoption of enhanced livestock management systems.

- Forage



- **Improved** livestock breeds



Lesson Learned …..

- The synergistic effect of area closure at hillsides, physical and biological soil and water conservation measures in the enclosed areas, in cultivated lands, and the integrated gully treatment resulted in increased availability of surface and groundwater resources particularly in downstream parts of the sub watersheds.
- The exit strategy and the subsequent exit plans prepared with the active participation of the community and implementing partners at the Woreda level should enable the sustainability of results and creation of long-term impacts in the watersheds and resident communities.

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THANK YOU!