

A regional application of systems analysis

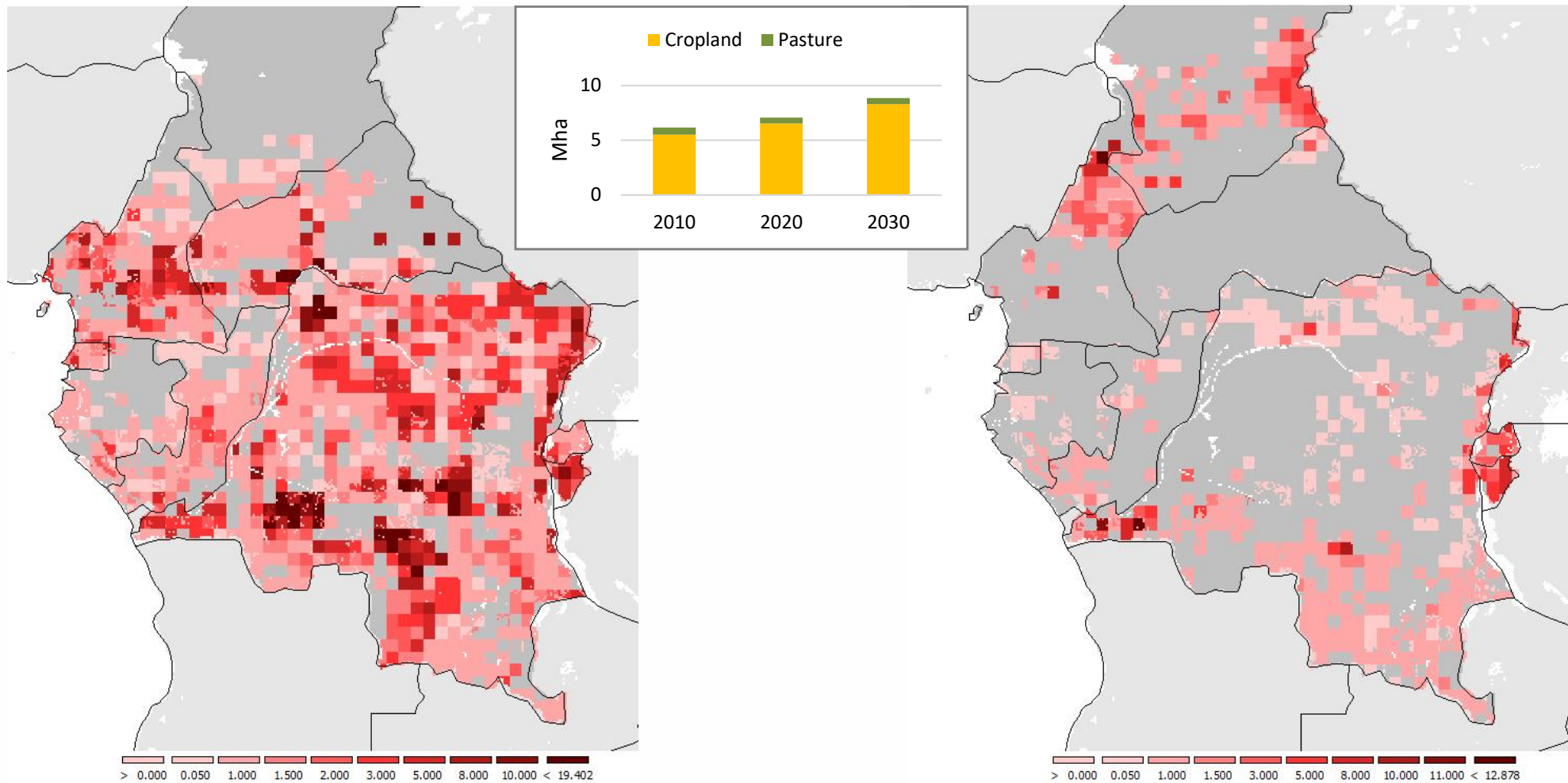
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Program

Example 1: Analysis in the Congo Basin

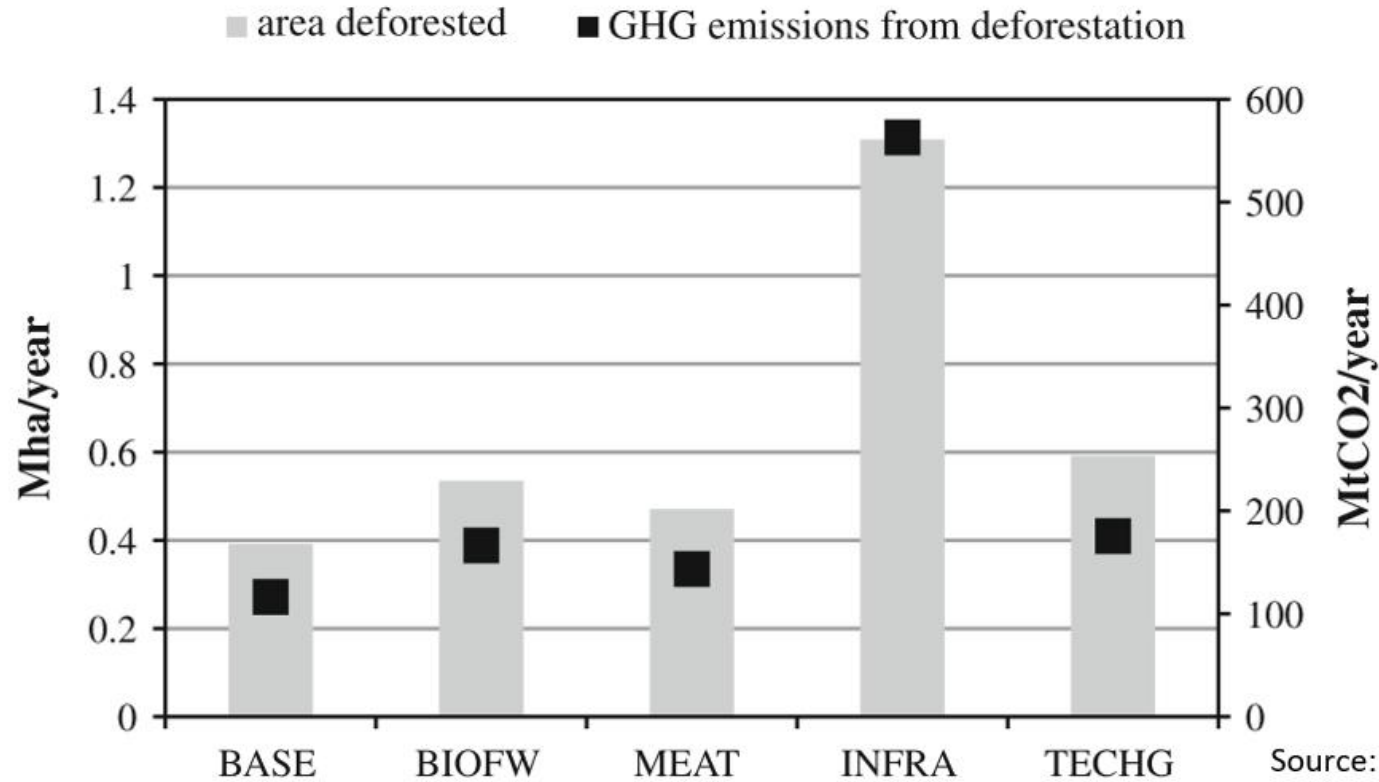
- Localization of deforestation over 2010-2030

Due to cropland

Due to pasture



Example 1: Analysis in the Congo Basin



Business as usual Economic development Increased fuel wood demand Increased meat consumption New infrastructure development Increased land productivity

8 DECENT WORK AND ECONOMIC GROWTH



7 AFFORDABLE AND CLEAN ENERGY



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



2 ZERO HUNGER



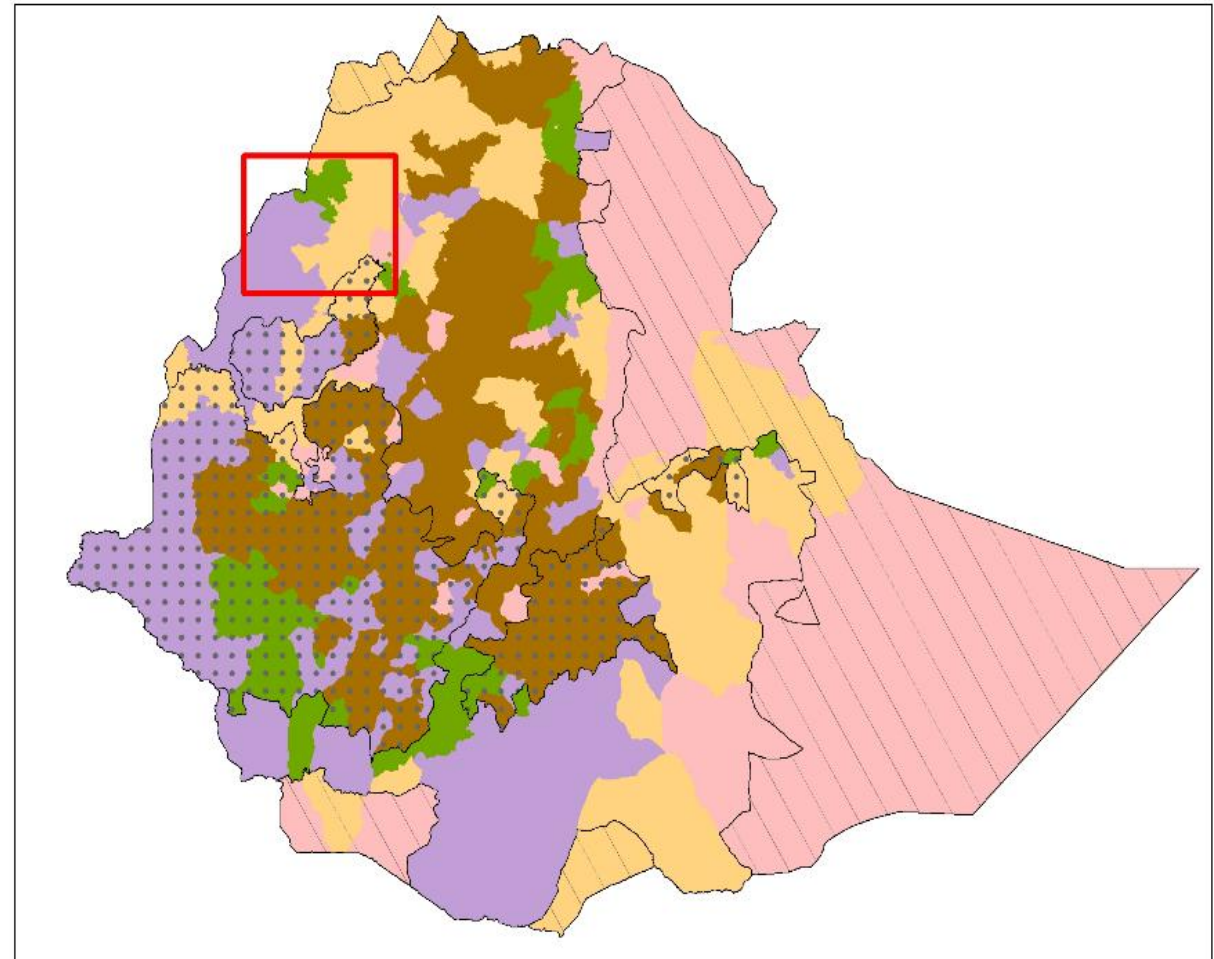
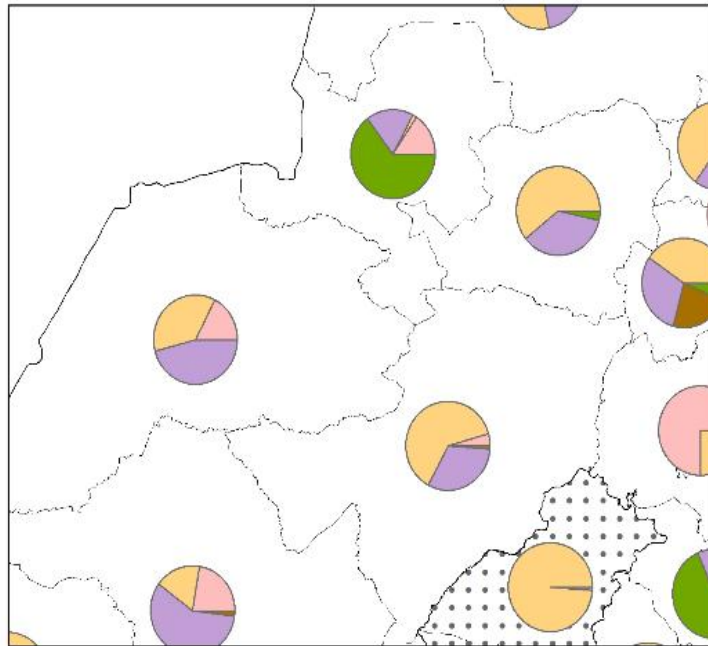
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



15 LIFE ON LAND



Example 2: Integrated farming systems in Ethiopia

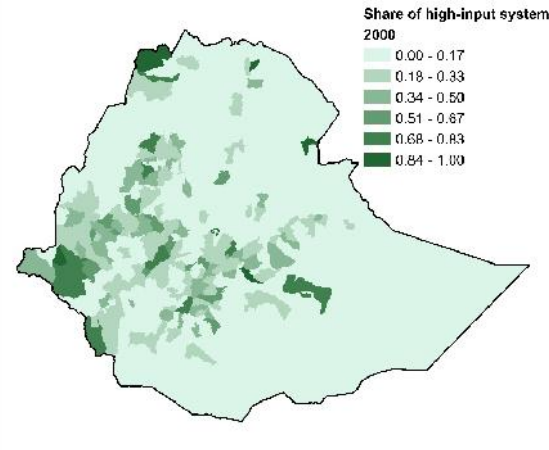


Example 2: Integrated farming systems in Ethiopia

We applied scenarios to test the impact of:

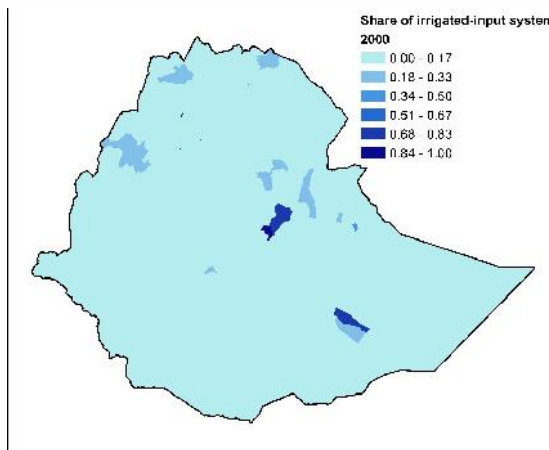
- (1) Increased irrigation, (2) Fertilizer subsidies, (3) Combination of irrigation, fertilizer subsidies and infrastructure improvement

Share of irrigated land by woreda

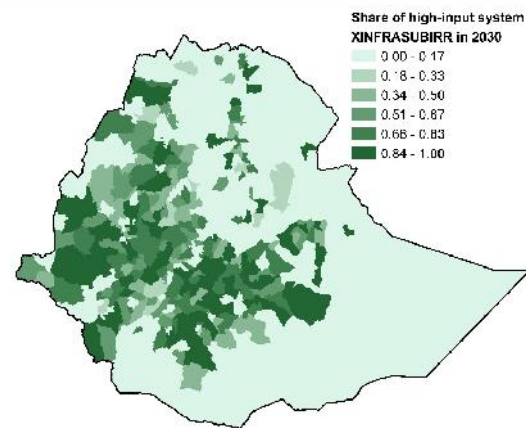


Base scenario

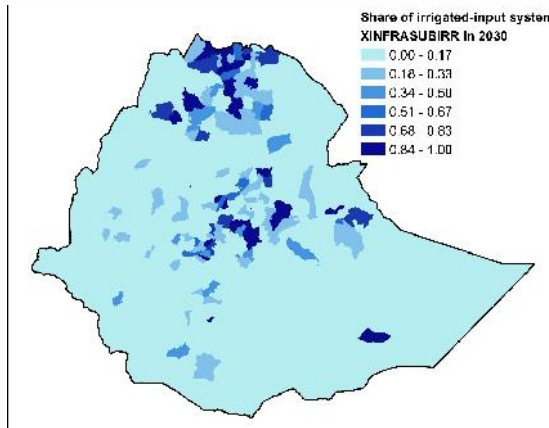
Share of high-input land by woreda



Base scenario



Combined scenario



Combined scenario

	Irrigation	Fertilizer subsidy	Combined
Farm management	Highest management change: Mostly towards irrigated land (14% irrigated, 14% intensified in 2030)	Largest share for medium and high input use (22% intensified, 3% irrigated in 2030)	Most intensification: Towards high input and irrigated land (20% intensified, 8% irrigated)
Natural resources	Smallest uptake of cropland (2.6 Mln ha 2000-2030)	Large uptake in cropland (3.9 Mln ha 2000-2030): at the cost of forest land	Medium uptake in cropland (3.1 Mln ha 2000-2030): at the cost of forest land
Food security	Increase in food security (2161 kcal per day in 2030)	Increase in food security (2246 kcal per day in 2030)	Largest increase in kcal consumed and produced (2317 kcal per day in 2030)
Price change	Smaller decrease in prices (price index 2030: 96.4)	Large decrease in prices (price index 2030: 93.5)	Large decrease in prices (price index 2030: 93.3)