

Summary of the Ethiopia dossier

Irrigation water, climate, fertilisers and crops. The essentials of the 30-page dossier and its regional studies.

Key figures

Figure	What it means
135.5 M	Inhabitants in 2025 (World Bank). Agriculture provides 33% of GDP and 60% of jobs.
9.7 km³	Water withdrawn each year for agriculture, 92% of withdrawals (World Bank).
858,160 ha	Area equipped for irrigation (FAOSTAT, 2023), for an estimated potential of 5.3 million hectares (IWMI).
1.46 km³	Water saved per year in the central scenario, 15% of agricultural water. Range from 0.73 to 2.92 km³.
129,201 ha	Extra hectares irrigable with the water saved, at today's average use (11,288 m³ per hectare).
547,262 t	Mineral nitrogen used in 2023, almost all imported through Djibouti. Minimum spending: $630 M (FAOSTAT, World Bank).
$2.65 bn	Coffee exports in 2024/25, a record (coffee and tea authority).

M = million · bn = billion · km³ = billion m³ · t = tonnes.

Our products

Green Solutions develops products for water, fertilisation and crop protection. Four families concern this dossier.

Product	Claimed use	Published evidence (level)
EVERGREEN® (water retainer)	Holds rain or irrigation water as a gel, close to the roots.	Trials on maize, potato, watermelon, date palm and soybean. Level B to C.
ECOSORB® (water retainer based on maize starch)	Same use; effect lasts 2 to 3 years according to the website.	Soybean trial (China); laboratory acrylamide analysis. Level B to C.
ECOFERT® (fertiliser)	Fertiliser certified by SOHISCERT and EU Organic.	Published certificate; potato trial combined with EVERGREEN®. Level A (certificate), C (results).
Paulownia ALTIFOLIA®	Fast-growing tree for agroforestry.	Website figures; no trial in Ethiopia. Level C.
Water Vital®, NAPEMA®	Outside the scope of this dossier.	No independent source in the documents consulted.

Key points

- **A rain-fed granary.** Smallholders harvested 32.8 million tonnes of grain in 2021/22, excluding Tigray. Oromia and Amhara produce 88% of it.
- **Opposite climates.** From 149 mm of rain a year at Semera (Afar) to 2,745 mm at Bonga (South West), 1991-2020 mean (ERA5).
- **The lowlands are warming.** At Semera, +0.33 °C per decade since 1981. The 2020-2023 drought killed about 6.85 million head of livestock (OCHA).

- **Irrigation on small plots.** 1,228,082 smallholders irrigate 165,111 ha in the main season, mainly maize, khat, onion and banana (ESS).
- **Costly, imported fertilisers.** Minimum spending reached $950 M in 2022. A urea plant of 3 million tonnes a year was announced at Gode in 2025.
- **Maize and tubers carry the result.** Maize and the onion, garlic and potato group give 50% of the central saving.

How to read the figures

Every figure refers to a source with a confidence level. A: Official statistics or international database (ESS, FAO, World Bank). B: Research institute, United Nations agency or recognised climate model. C: Manufacturer statement, official statement reported by the press, or estimate. The sources are listed in Annex A of the dossier.

Water saved by crop group (central scenario)

Six groups give 1,361 million m³ a year, 93% of the central saving.

Crop group	Irrigated area (ha)	Water (Mm³/yr)	Saved (Mm³/yr)
Maize	189,237	2,136	417
Onion, garlic, potato	104,970	1,185	308
Khat, coffee, gesho	207,160	2,338	234
Other cereals (sorghum, teff, wheat)	162,483	1,834	183
Vegetables (tomato, pepper, cabbage)	42,528	480	145
Fruit (banana, mango, citrus, avocado)	65,400	738	74

By region

Region	Population 2024 (M)	Rain / ET0 (mm)	Irrigated 2021/22 (ha)	Saved (Mm³/yr)
Oromia	41.79	354 / 1,872	73,762	652
Amhara	23.55	1,702 / 1,578	45,966	406
South (former SNNP)	22.44	1,017 / 1,454	28,682	253
Somali	6.81	367 / 1,638	6,658	59
Harari	0.29	678 / 1,522	4,326	38
Afar	2.12	149 / 2,453	3,765	33
Dire Dawa	0.57	812 / 1,845	869	8

Population: ESS 2024 projection. Irrigation: smallholders, main season 2021/22 (ESS). Climate: ERA5, 1991-2020, at the capital (South: Hawassa). Details in sections 6, 8 and 11.

External trade

- **Coffee first.** Agricultural exports: $2.26 bn in 2023, including $1.22 bn of coffee (FAOSTAT). Horticulture earned $565 M in 2024/25.
- **Djibouti, the gateway.** The ports of Djibouti handled 96.7% of Ethiopia's external freight in 2025/26: Imported fertilisers, wheat, sugar and oils arrive through this corridor.

Full dossier: 30 pages, with a study of each region, the sources (Annex A) and the calculation method (Annex B). Green Solutions · contact@green-solutions-group.com · green-solutions-group.com