Trends: on the rise

Population: over 9 billion by 2050 (UN)

Food demand: 49% by 2050 (FAO)

Water demand: 50% by 2050 (OECD)

Demand-availability gap: %40 by 2030 (WRG2030)

Irrigation: 11% by 2050 (FAO)
Also on the rise: hunger

The number of people undernourished in the world has been on the rise since 2014, reaching an estimated 815 million in 2016.

NOTE: Prevalence and number of undernourished people in the world, 2000–2016. Figures for 2016 are projected estimates. SOURCE: FAO.
Also on the rise: obesity

Adult obesity is rising everywhere at an accelerated pace

A degraded resource base

One third of all soils have been degraded.

Half of the topsoil on the planet has been lost in last 150 years

The widespread insect biomass decline is alarming
Huge losses in food value chain

- Annual loss and waste along the food chain (occurring during harvest, post-harvest, distribution, processing and/or distribution)

- 40% - 50% Fruits and Vegetables, including roots and tubers
- 30% Cereal Products
- 20% Meat and Dairy
- 20% Oilseeds and pulses

Source: FAO
Greenhouse Gas Emissions from Food Loss and Waste Approach the Levels from Road Transport

- Aviation: 1.4%
- Iron and steel: 3.3%
- Food loss and waste: 8.2%
- Road transport: 10.0%
Environmental impact of food loss and waste

Food loss and waste is responsible for about 8% of global greenhouse gas (GHG) emissions.

Volume of water used to produce lost or wasted food is equivalent to three times the volume of Lake Geneva.

Nearly 30% of the world’s agricultural land is currently occupied to produce food that is ultimately never consumed.

If food use and distribution is better managed, 14% of all GHG emissions from agriculture could be avoided by 2050.
If Food Loss and Waste Were its own Country, it Would Be the Third-Largest Greenhouse Gas Emitter
Water and agriculture as part of the solution

70% of global withdrawals

24% GHG emissions

Strong mitigation and adaptation potential

Water linkages to crop production, livestock, aquaculture/fisheries, forestry

Opportunities in production, processing and consumption.
Reason for optimism

- Sustainable Development Goals
- Paris Climate Accord
- CoP (UNCCD, CBD...) and other commitments
GLOBAL FRAMEWORK ON WATER SCARCITY IN AGRICULTURE (WASAG)
November 2016

The Global Framework on Water Scarcity was officially launched during the UNCCC COP22 in Marrakesh, Morocco.

January 2017

Endorsed by 83 Ministers of Agriculture during the 9th Berlin Agriculture Ministers’ Conference at the Global Forum for Food and Agriculture (GFFA), and the G20 Agriculture Ministers’ Declaration 2017 in Bonn.

September 2017

Endorsed by the UNCCD COP 13 as a knowledge-sharing partnership to help countries develop their drought preparedness.
WASAG Working Groups

✓ Water and Migration
✓ Drought Management
✓ Financing Mechanisms
✓ New: Water and Nutrition
More than 150 projects going on

Work plan with 50+ project proposals

Engagement with different relevant sectors

International Seminar on Drought Preparedness: 19 June 2017, Rome

Presented at

WWW2017 Stockholm, August

UNCCD’s COP 13 Ordos, China, September

COP23, Bonn, November
WATER SCARCITY, AGRICULTURE, FOOD SYSTEMS AND CLIMATE CHANGE

Olcay Ünver
Land & Water Division
Food and Agriculture Organization – FAO