

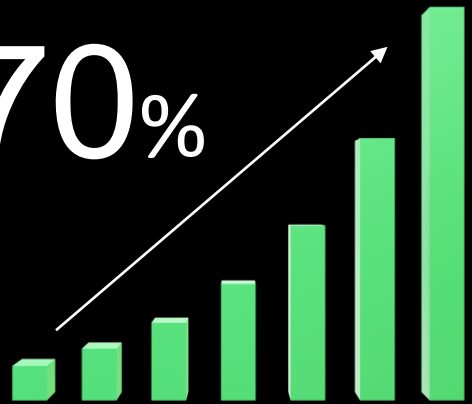
**Food losses and environmental impacts from the Greek
agricultural sector
and measures to reduce them**

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Circular Innovative Solutions**

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Estimated Food production needs by 2050

+70%



Agenda for 2030: Sustainable Development Goals (SDGs)

12: Responsible Production and Consumption

Target 12.3

“By 2030, halve per capita global Food Waste at the retail and consumer levels and reduce Food Losses along production and supply chains (SC), including post-harvest losses”





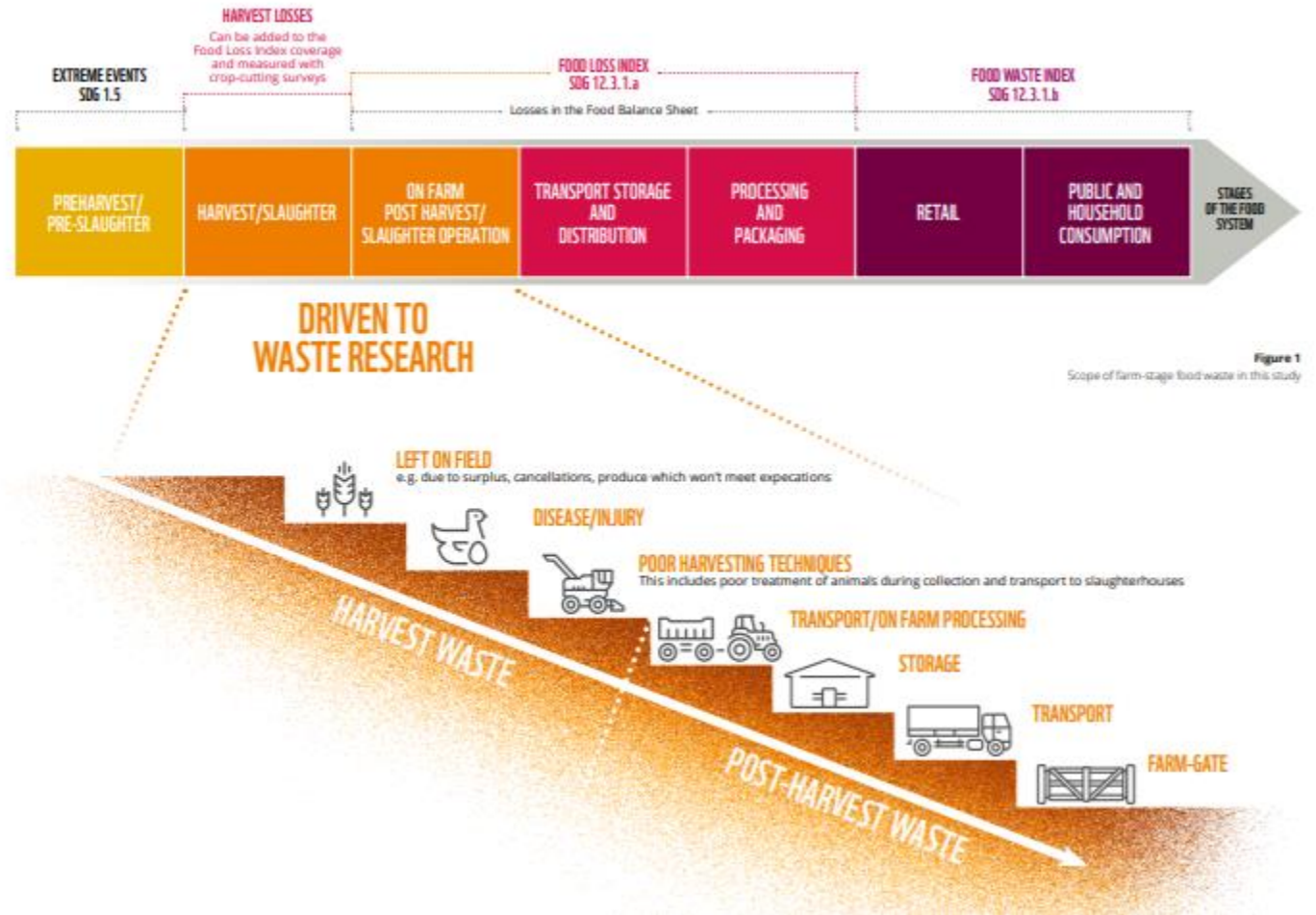
Study purpose

This study examines food losses and reduction measures in the Greek agricultural sector.

-> Agriculture in Greece has always been a reference point for economic and social life

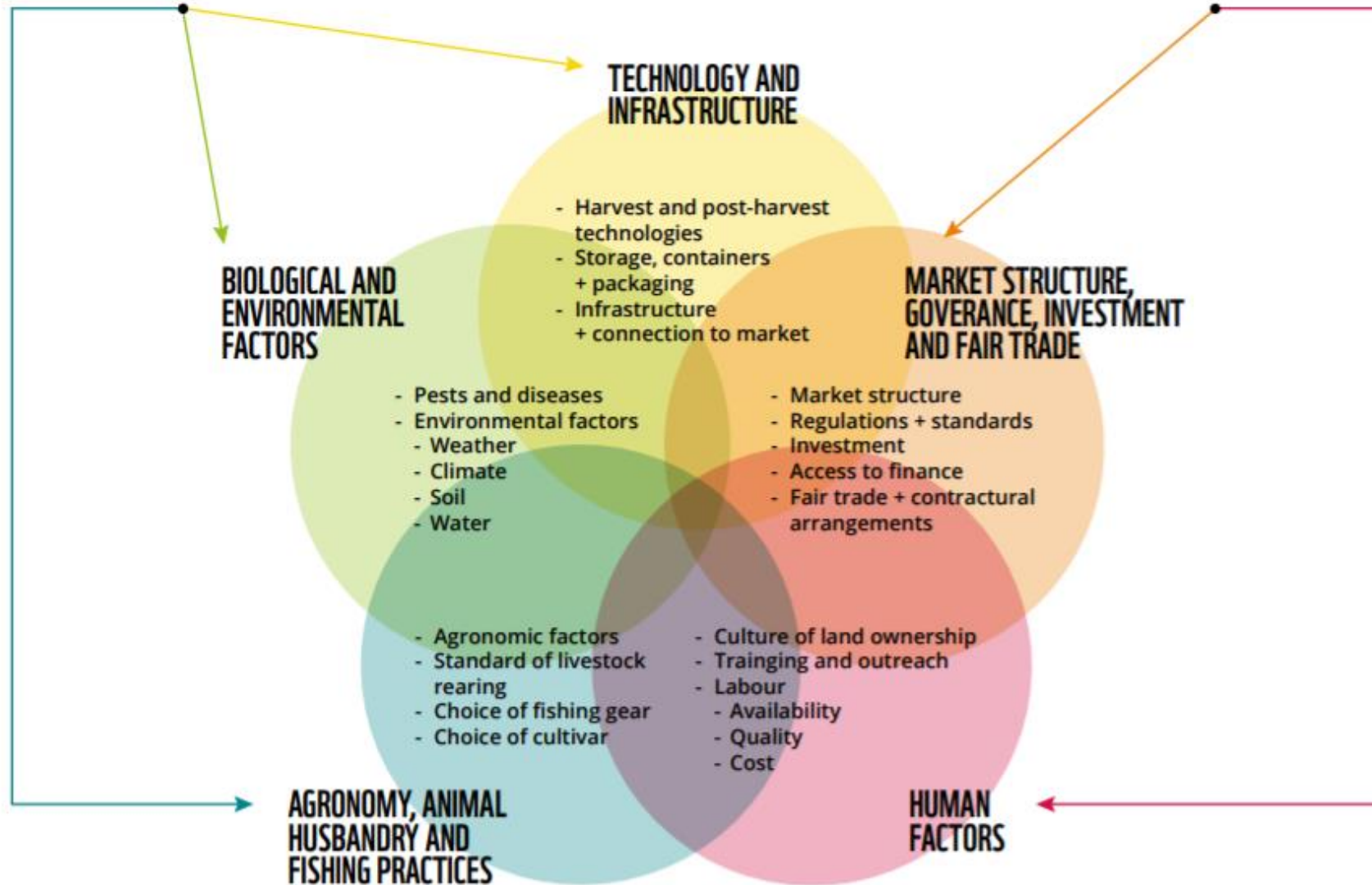
The food supply chain starts in the primary or agricultural sector

The term *'food loss'* is frequently used to refer to agricultural production that is lost unintentionally because of a variety of factors.



DIRECT DRIVERS

INDIRECT DRIVERS



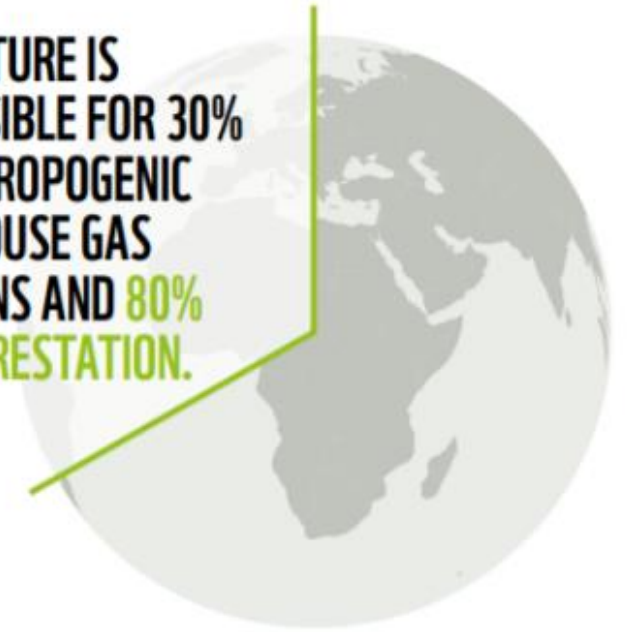
Environmental impacts


greenhouse
gas emissions

land and soil
degradation

pollution and
water usage

AGRICULTURE IS
RESPONSIBLE FOR 30%
OF ANTHROPOGENIC
GREENHOUSE GAS
EMISSIONS AND 80%
OF DEFORESTATION.





Environmental impacts

Table 1: Environmental impacts from food losses in the agricultural sector

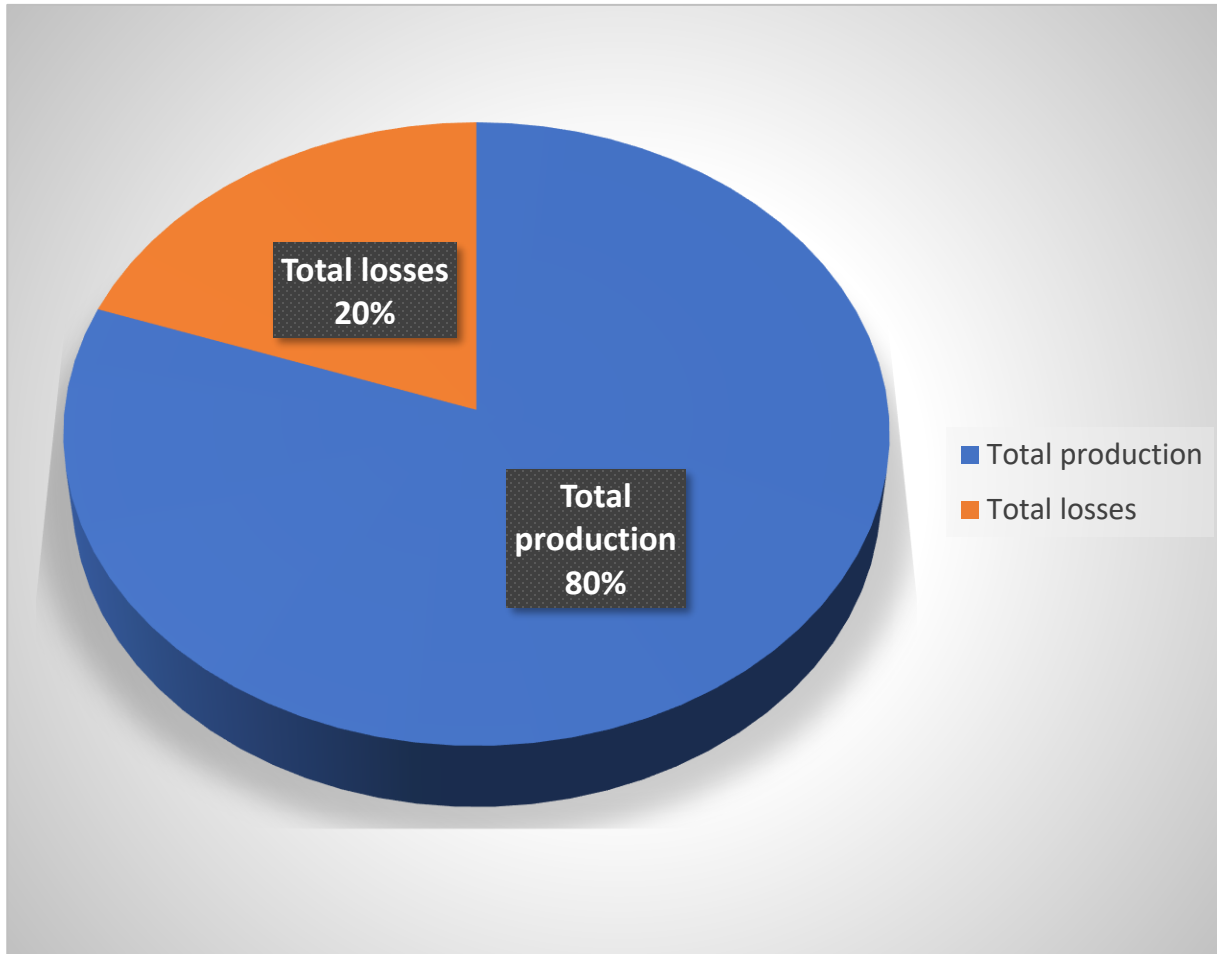
Greenhouse gases (Kg CO₂eq)	3.5 million tons / year
Eutrophication(KgPeq)	330 tons / year
Ozone depletion (mgCFCEq)	130 000 tons / year
Photochemical oxidation (KgNMVOC)	20130 tons / year
Acidification (Kg SO₂eq)	33 000 tons / year
Water consumption (L)	30 million l / year



Results

- estimates were made based on the data given by HSA
- the produced quantities of agricultural products are 11980 tons per year
- losses are estimated to be 600 tons per year, representing the 5% of the total production
- Waste that could be generated by rinds and shells is 1670 tons per year.
- In total, the losses of the above are 2270 tons per year, representing the 20% of the production

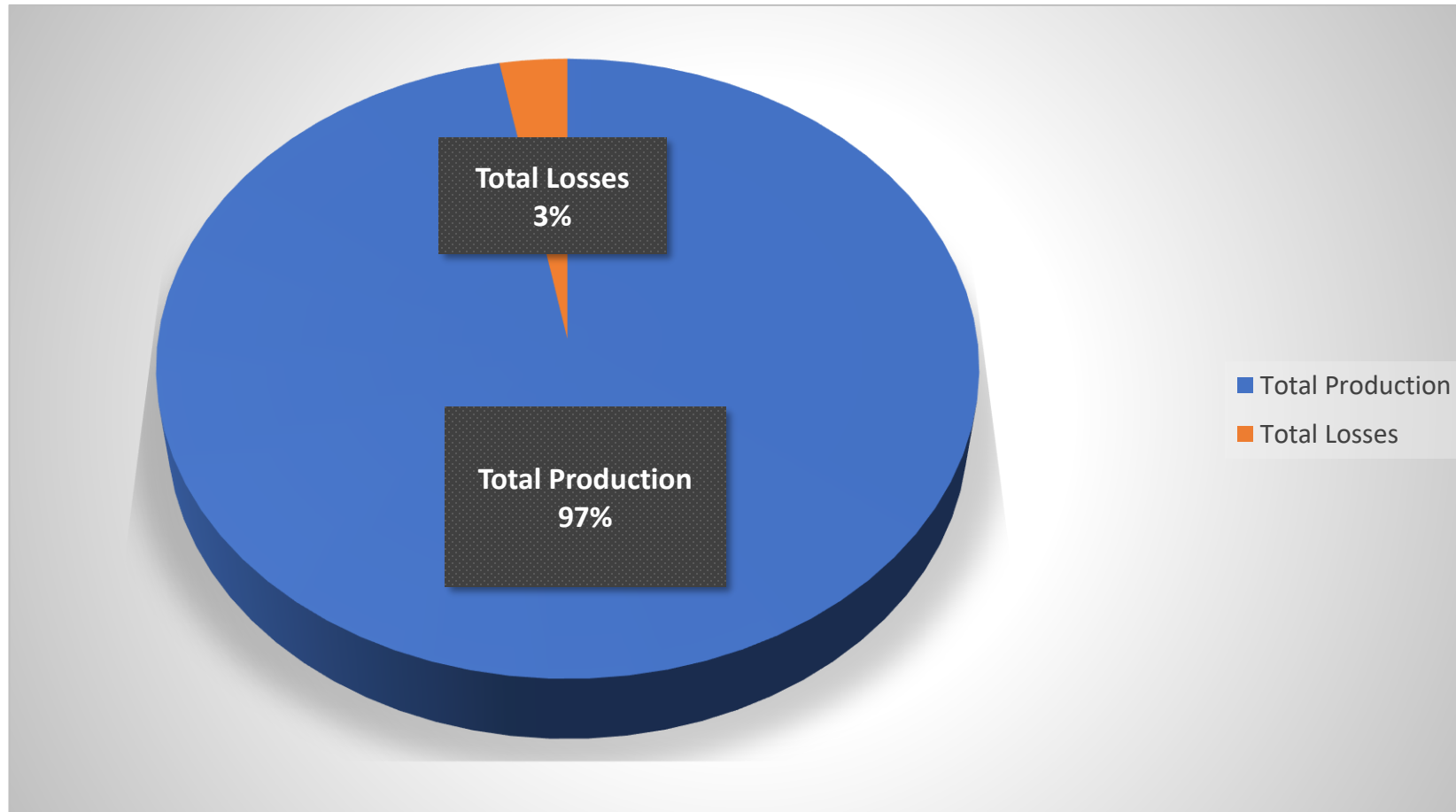
Food loss in numbers



Before the prevention

Products	Product losses (tons/year)	Rind and shell losses (tons/year)
Crop production (crops,barley,rice,corn)	72,3	822

Food loss in numbers



After the prevention

Solutions



Use of Technology (IOT systems)



Advanced storage facilities



Development of Knowledge and Skills



Development and Management of Collaborative Relationships



Donations



Utilization (composting or energy production)

Conclusions

- Agro-stage interventions can no longer be focused on technology alone
- Developing ambitious targets for pre-retail food loss and waste and more granular reporting of food losses
- Developing region- and culture-specific ground-level interventions to target the direct drivers of farm-stage food loss
- Communication, coordination, cooperation between producers and cooperatives can significantly reduce food loss levels
- Donations - Sharing is caring





**THANK YOU FOR
YOUR ATTENTION!!!**