



**JNAMUN 2026**

**FOOD AND AGRICULTURE  
ORGANISATION**

*FAO*

**AGENDA ITEM:**

**Exploring how new technologies in  
farming can make food  
production more sustainable**

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## TABLE OF CONTENTS

Letter from the Secretary General.....	2
1. Introduction to the Committee.....	3
2. Introduction to the Agenda Item.....	7
3. Keywords & Definitions.....	10
4. Historical Background.....	14
6. Questions to be Addressed.....	22
7. Bibliography.....	24



## Letter from the Secretary General

*Most honourable participants of Junior Nesibe Aydın Model United Nations 2026 (JNAMUN'26),*

*It is my great pleasure to welcome you all to JNAMUN'26, which is organized by the hardworking and talented middle school students of Nesibe Aydın Gölbaşı Campus. I extend my sincere thanks to our academic team, who have researched every detail with great care to ensure that you enjoy such a prestigious and diplomatic conference. I also offer my appreciation to our organisation team for planning activities that will allow you to build friendships and collaborate with fellow delegates while having an enjoyable and memorable experience.*

*As the JNAMUN'26 team, our mission is to support our delegates in every respect, to help you gain insight into diplomacy, to develop your public speaking abilities, and to strengthen your language skills. Another valued aspect of attending JNAMUN'26 is the opportunity to form lasting friendships and create memories that will stay with you. Both our academic and organisation teams have worked with dedication to offer you the most enriching Model United Nations experience possible.*

*This year in JNAMUN'26 we are hosting nine committees which are **UNHCR** (United Nations High Commissioner for Refugees), **FAO** (Food and Agriculture Organization), **WHO** (World Health Organization), **UNESCO** (United Nations Educational, Scientific and Cultural Organization), **CSW** (The Commission on the Status of Women), **UNICEF** (The United Nations International Children's Emergency Fund), **DISEC** (Disarmament & International Security Committee), **ECOSOC** (Economic and Social Council), and **SPECPOL** (Special Political and Decolonization Committee). The agenda items for each committee have been selected in line with the policies of their respective United Nations bodies.*

*We wish you an exceptional Junior Nesibe Aydın Model United Nations experience. As the JNAMUN'26 team, we look forward to meeting you and supporting you as you achieve your goals to the very best of your ability.*

*Best of luck,*

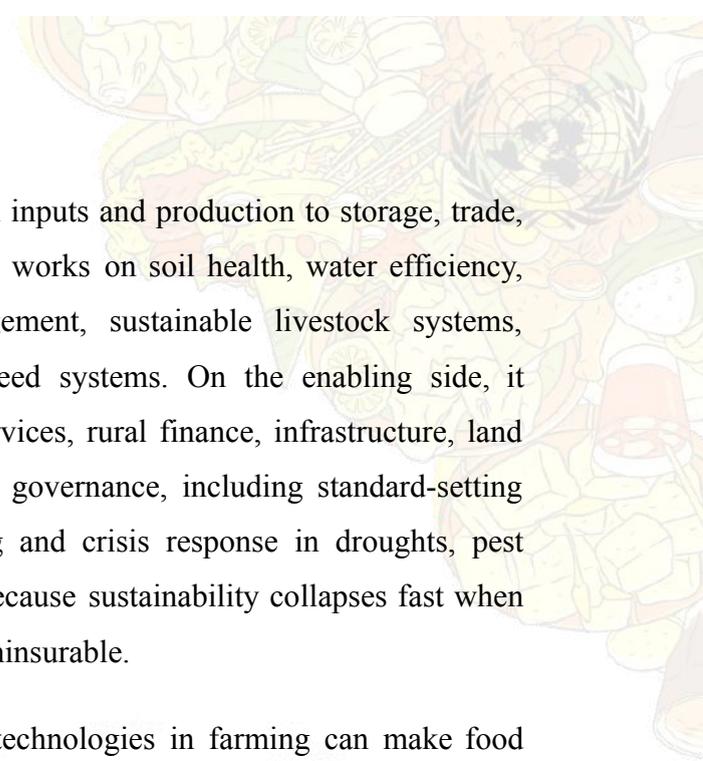
**Mustafa COŞKUN**

**Secretary General of JNAMUN'26**

# 1. Introduction to the Committee

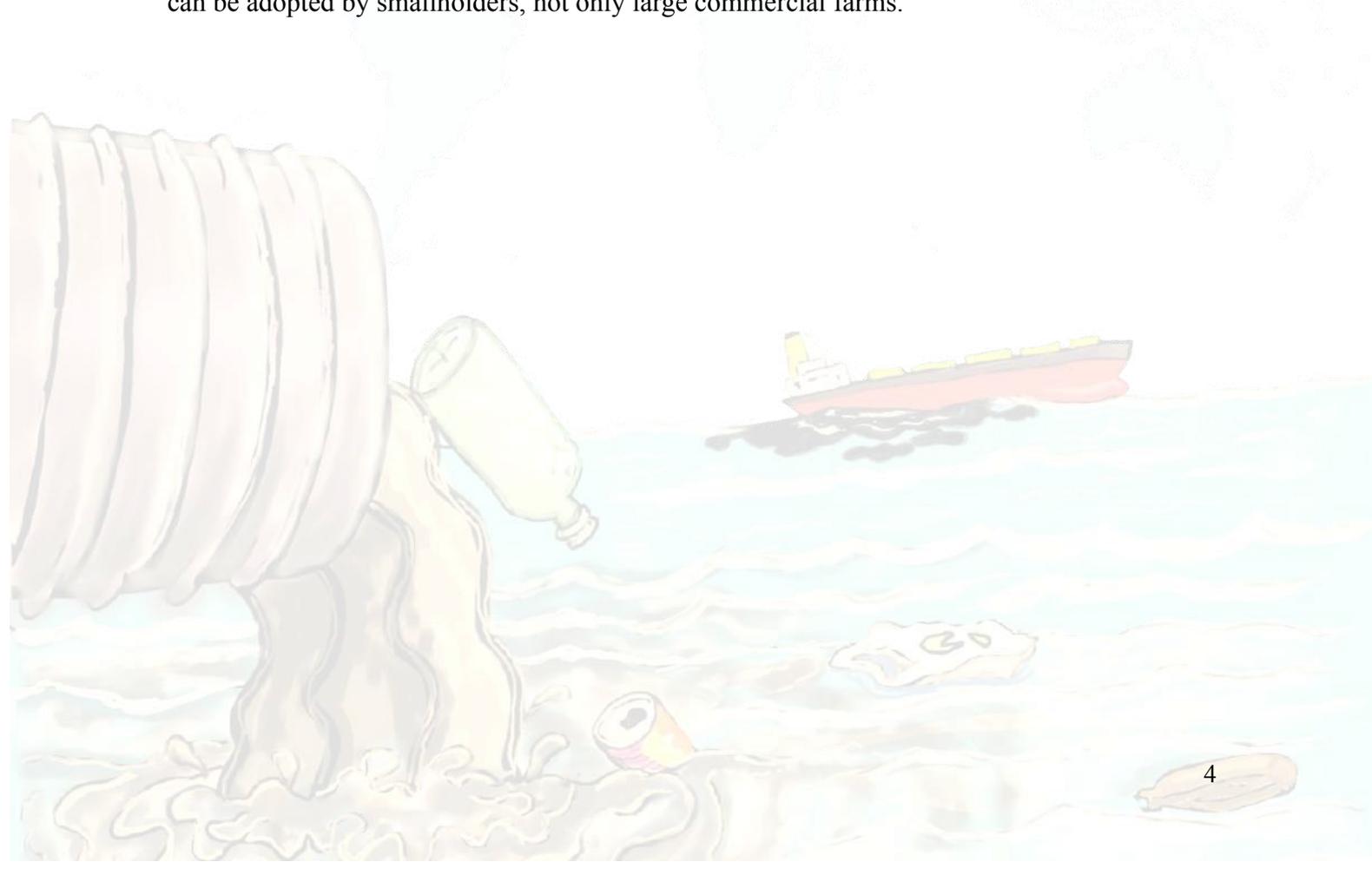
The Food and Agriculture Organization of the United Nations (FAO) is the UN's specialized agency leading international efforts to end hunger, improve nutrition, and make agriculture, forestry, and fisheries more productive and sustainable. Founded in 1945, FAO's core idea is blunt: food security is not a charity problem, it is a systems problem. It depends on how countries manage land, water, seeds, labor, markets, risk, and environmental limits, and on whether smallholders and rural workers can adopt better practices without being priced out or pushed off their land. FAO supports Member States by setting technical standards and guidance, producing global data and analysis, building capacity through field programs, coordinating international cooperation during food and agriculture crises, and helping governments turn science into policies that actually work at farm and landscape level.





FAO's mandate covers the full food system, from inputs and production to storage, trade, and nutrition outcomes. On the production side, it works on soil health, water efficiency, plant and animal health, integrated pest management, sustainable livestock systems, agroforestry, fisheries governance, and resilient seed systems. On the enabling side, it supports agricultural extension, digital advisory services, rural finance, infrastructure, land tenure, value chain development, and food safety governance, including standard-setting work with partners. FAO also runs early warning and crisis response in droughts, pest outbreaks, and conflict driven food emergencies, because sustainability collapses fast when farmers lose assets, markets fail, and risk becomes uninsurable.

This committee's agenda, "Exploring how new technologies in farming can make food production more sustainable (SDG 2)," sits directly in FAO's operational sweet spot. New technologies are not only shiny equipment. They include precision agriculture tools that cut fertilizer and water waste, remote sensing and geospatial analytics that improve planning, AI-based advisory systems that tailor recommendations, improved seed breeding including drought and heat tolerant varieties, protected cultivation, low emission livestock innovations, biofertilizers, biological pest control, on-farm renewable energy, and post-harvest technologies that reduce loss. The sustainability test is whether these tools improve yields and incomes while reducing pressure on soil, water, biodiversity, and climate, and whether they can be adopted by smallholders, not only large commercial farms.





FAO's role is to help countries choose technology pathways that are scientifically sound, economically realistic, and socially fair. That means evaluating tradeoffs and second-order effects, like whether a new irrigation system depletes aquifers, whether digital platforms create farmer lock-in through proprietary data, whether mechanization displaces labor without alternative livelihoods, or whether input-efficient systems reduce pollution but require skills and maintenance capacity that extension services cannot yet provide. It also means building governance around innovation: data standards, farmer data protection, responsible use of AI and remote sensing, biosafety and seed regulation, incentives that reward sustainability outcomes, and financing models that let farmers invest without taking on debt they cannot survive.

In this committee, delegates will treat agricultural technology as a policy design challenge rather than a shopping list. Your task is to craft approaches that scale adoption, protect farmers and ecosystems, and deliver measurable progress toward SDG 2 by increasing productivity and resilience while lowering environmental impact. If your resolution makes a technology sound heroic but ignores training, maintenance, affordability, market access, and governance, it will fail in the field. If it connects innovation to incentives, capacity, and accountability, it can shift food systems from extractive to regenerative without sacrificing food supply.

## 2. Introduction to the Agenda Item

“Exploring how new technologies in farming can make food production more sustainable (SDG 2)” focuses on a hard reality: agriculture has to produce more nutritious food for a growing population while using less water, fewer chemicals, less land conversion, and fewer greenhouse gas emissions, all under worsening climate volatility. Sustainability here is not a vague “green” label. It means maintaining or improving yields and farmer incomes without degrading soil, draining aquifers, polluting waterways, collapsing biodiversity, or locking food systems into fragile input dependence that breaks during shocks. Technology can help, but only when it is treated as part of a whole system that includes agronomy, markets, governance, and equity.



New farming technologies fall into several practical categories. Precision agriculture tools, such as sensors, variable rate application, satellite imagery, and decision support software, aim to reduce waste by applying water, fertilizer, and pesticides only where and when needed. Climate-smart genetics and breeding, including drought, heat, flood, and salt tolerant varieties, aim to protect yields as weather becomes less predictable. Biological and ecological innovations, such as biopesticides, biofertilizers, integrated pest management, and soil microbiome approaches, aim to lower chemical load while keeping pest and nutrient cycles under control. Mechanization and robotics can reduce labor bottlenecks and improve timeliness of planting and harvesting, which matters as climate windows tighten, but they can also disrupt rural employment if policy does not manage the transition. Controlled environment systems, like greenhouses, hydroponics, and vertical farming, can cut water use

and reduce land pressure, but they may shift the sustainability burden onto energy demand if power systems are fossil based.



The sustainability promise is real, but so are the failure modes. Many technologies shift costs and risks rather than removing them. Data driven tools can improve decisions, but they also create questions about data ownership, privacy, and farmer dependence on proprietary platforms. High efficiency irrigation can increase yields, yet still accelerate groundwater depletion if total irrigated area expands or if water rights are weak. New seed varieties can improve resilience, but if markets become dominated by a few suppliers, farmers may face higher input costs and reduced seed sovereignty. Digital advisory systems can reach millions quickly, but poor connectivity, low literacy, language gaps, and biased training data can exclude the very farmers most vulnerable to climate shocks. Even environmentally positive tools can fail if maintenance, spare parts, and training are missing, because broken technology is just expensive scrap metal.

This agenda is also about scale and inclusion. Most of the world's farms are smallholder operations that work with thin margins and high exposure to weather, price swings, and pests. A technology that looks excellent on a pilot plot can collapse in real adoption if it requires

upfront capital, stable internet, complex calibration, or uninterrupted energy supply. Sustainable intensification therefore needs policy design that lowers adoption barriers: extension services that can actually teach and troubleshoot, blended finance and risk sharing instruments, farmer cooperatives that make equipment sharing and bulk purchasing possible, and infrastructure like cold chains and storage that prevent post-harvest loss, which is one of the fastest sustainability wins available.

Delegates should treat technology as a lever that must be aligned with incentives and guardrails. If subsidies reward fertilizer volume rather than efficiency, precision tools will underperform. If water is effectively free and unmetered, irrigation upgrades may increase extraction, not reduce it. If carbon and biodiversity outcomes are not measured, “sustainable tech” becomes marketing. Strong approaches link innovation to measurable outcomes such as water productivity, nutrient use efficiency, soil organic matter, pesticide risk reduction, emissions intensity per kilogram of output, and reductions in food loss. The point of this agenda is to design pathways where new technologies raise productivity and resilience while shrinking environmental harm, and where adoption is broad enough to move SDG 2 at national and regional scale, not just in showcase farms.



### 3. Keywords & Definitions

#### 1. Sustainable Agriculture

Farming that maintains or increases food production while protecting soil, water, biodiversity, and long-term productivity, without shifting damage to other parts of the system.

#### 2. Food Security

When all people, at all times, have physical and economic access to sufficient, safe, nutritious food that meets dietary needs for an active, healthy life.

#### 3. SDG 2 (Zero Hunger)

The UN goal to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture, including targets on productivity, resilience, and access.

#### 4. Sustainable Intensification

Increasing yields and farm income on existing land while reducing environmental impacts per unit of food, avoiding expansion into forests or fragile ecosystems.

#### 5. Climate-Smart Agriculture (CSA)

An approach that aims to increase productivity, build resilience to climate shocks, and reduce or remove greenhouse gas emissions where possible.

#### 6. Agroecology

Applying ecological principles to farming, emphasizing diversity, soil health, nutrient cycling, local knowledge, and reduced dependence on synthetic inputs.

#### 7. Regenerative Agriculture

Practices aimed at restoring soil function and carbon, improving biodiversity, and strengthening water retention, often through cover crops, reduced tillage, and rotations.

#### 8. Precision Agriculture

Using data and technology to manage fields more accurately, applying water, fertilizer, and pesticides at the right time, rate, and location.

#### 9. Variable Rate Application (VRA)

Technology that adjusts input application across a field based on soil, crop, or sensor data, reducing waste and over-application.

## 10. Decision Support System (DSS)

Software tools that combine data, models, and forecasts to help farmers choose actions like irrigation timing, fertilization rates, or pest control.

## 11. Remote Sensing

Collecting information about crops or land using satellites, drones, or aircraft, often used to monitor crop health, moisture, and stress.

## 12. Geospatial Data

Location-based data used for mapping soils, yields, water use, and risks, supporting planning and targeting of interventions.

## 13. Internet of Things (IoT) in Agriculture

Networks of sensors and devices that measure variables like soil moisture, temperature, and animal health and transmit data for management decisions.

## 14. Smart Irrigation

Irrigation systems using sensors, weather data, and automation to deliver water efficiently, such as drip irrigation combined with scheduling algorithms.

## 15. Water Productivity

The amount of crop output produced per unit of water used. Higher water productivity means less water is needed for the same food output.

## 16. Soil Health

The capacity of soil to function as a living system that supports plants, stores water, cycles nutrients, and resists erosion and degradation.

## 17. Soil Organic Matter (SOM)

Decomposed plant and animal material in soil that improves fertility, structure, and water retention and supports microbial life.

## 18. Nutrient Use Efficiency (NUE)

How effectively a crop converts applied nutrients into yield. Higher NUE reduces runoff, pollution, and unnecessary fertilizer use.

## 19. Integrated Pest Management (IPM)

A strategy that combines monitoring, biological controls, resistant varieties, and targeted chemical use to control pests with minimal harm.

## 20. Biopesticide

Pest control products derived from natural materials such as microbes, plant extracts, or minerals, often lower toxicity than many synthetics.

## 21. **Biofertilizer**

Products containing living microorganisms that improve nutrient availability to plants, such as nitrogen-fixing bacteria or phosphate-solubilizing microbes.

## 22. **Precision Livestock Farming**

Using sensors and analytics to monitor animal health, feeding, and welfare, improving productivity and reducing disease and waste.

## 23. **Methane Mitigation**

Practices and technologies that reduce methane emissions, especially from rice cultivation and ruminant livestock, through feed, manure, or water management.

## 24. **Alternate Wetting and Drying (AWD)**

A rice irrigation method that periodically drains fields instead of continuous flooding, saving water and reducing methane emissions if applied correctly.

## 25. **Controlled Environment Agriculture (CEA)**

Producing crops in managed environments like greenhouses, hydroponics, or vertical farms to control water, nutrients, and pests.

## 26. **Hydroponics**

Growing plants without soil using nutrient-rich water solutions, often reducing water use but requiring energy and careful management.

## 27. **Vertical Farming**

Indoor stacked cultivation using artificial lighting and controlled conditions, potentially reducing land use but often energy intensive.

## 28. **Post-Harvest Loss**

Food quantity or quality loss after harvest during handling, storage, transport, and processing, reducing available food without increasing production.

## 29. **Cold Chain**

Refrigerated storage and transport systems that preserve perishable foods, reducing loss and improving food safety and market value.

## 30. **Digital Extension**

Using mobile phones, platforms, or call centers to deliver farm advice, weather alerts, and market information at scale.

## 31. **Farmer Data Rights**

Rules defining who owns, controls, and benefits from farm data generated by sensors, platforms, and transactions.

### 32. **Interoperability**

The ability of different devices and software systems to share and use data consistently, reducing vendor lock-in.

### 33. **Vendor Lock-In**

Dependence on one company's technology or platform due to proprietary data formats, subscriptions, or equipment compatibility.

### 34. **Life Cycle Assessment (LCA)**

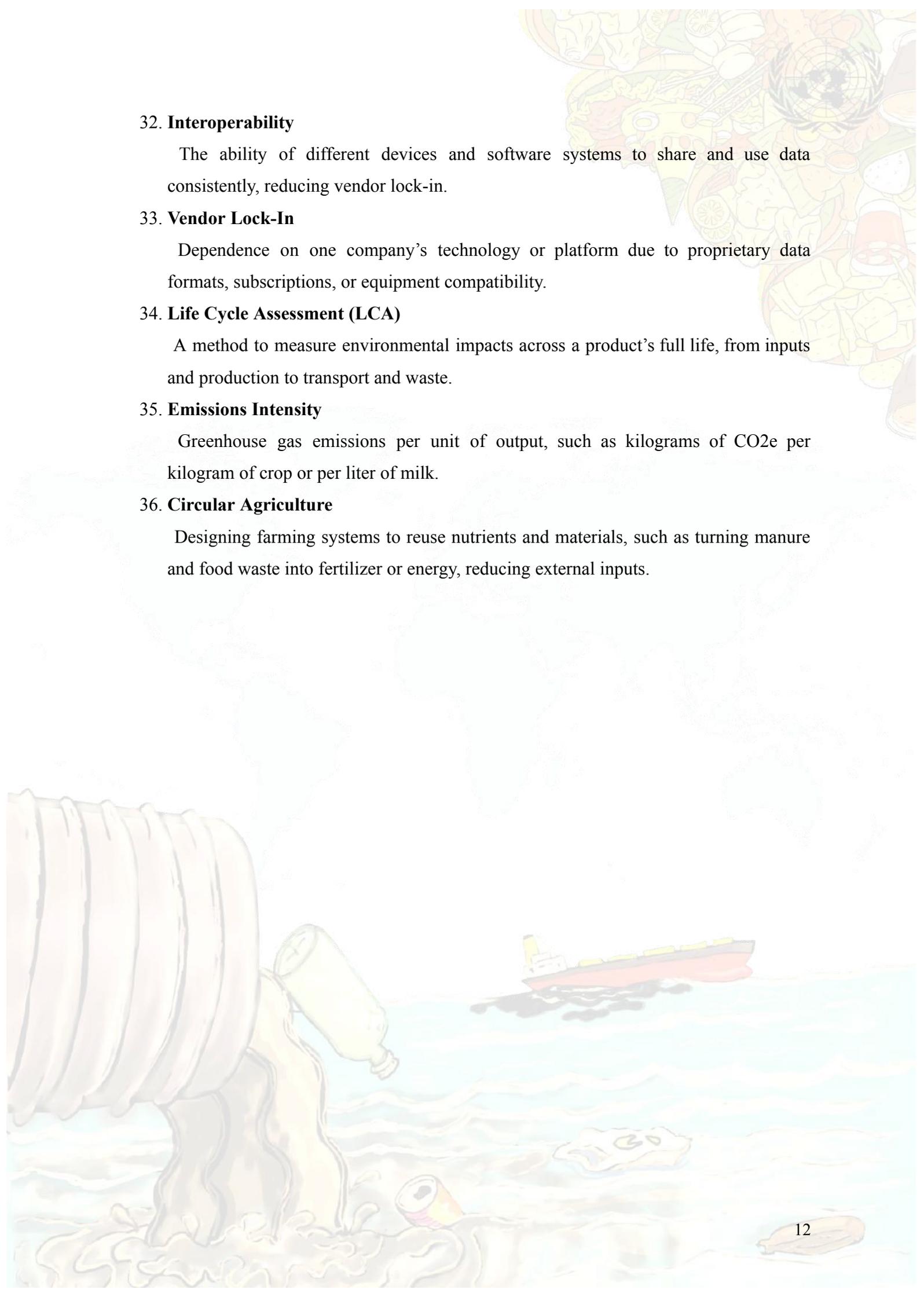
A method to measure environmental impacts across a product's full life, from inputs and production to transport and waste.

### 35. **Emissions Intensity**

Greenhouse gas emissions per unit of output, such as kilograms of CO<sub>2</sub>e per kilogram of crop or per liter of milk.

### 36. **Circular Agriculture**

Designing farming systems to reuse nutrients and materials, such as turning manure and food waste into fertilizer or energy, reducing external inputs.



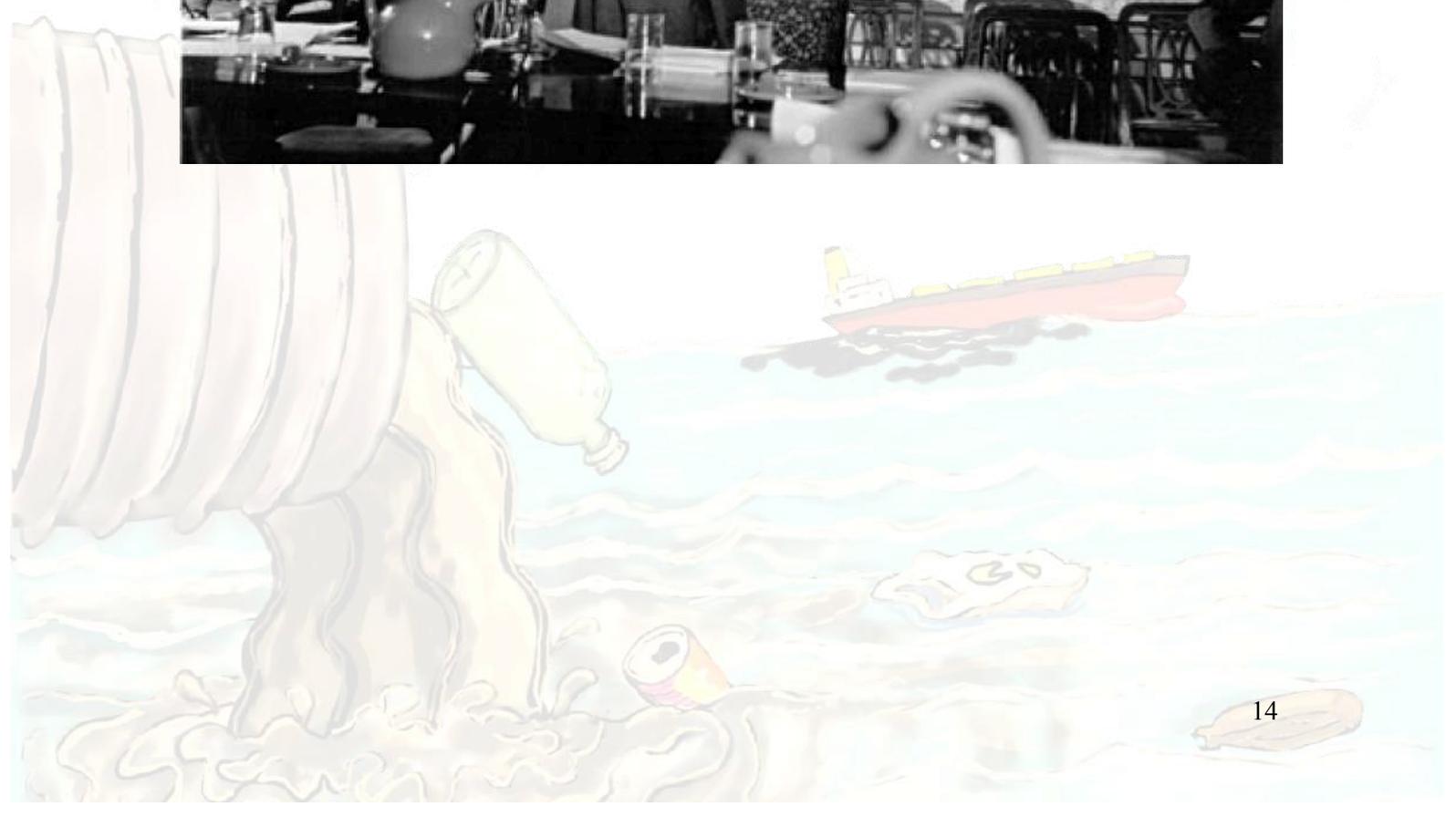
## 4. Historical Background

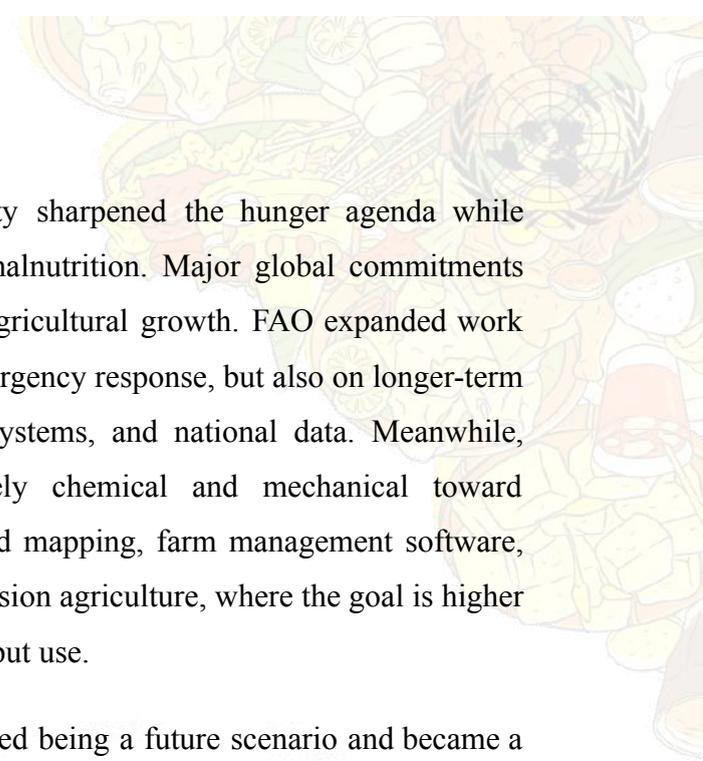
After World War II, governments treated food as a security issue, not just an economic sector. Widespread shortages in Europe and Asia, plus fears that hunger would fuel instability, pushed states to build a permanent global institution for agriculture and nutrition. In October 1945, the Food and Agriculture Organization (FAO) was created to raise levels of nutrition, improve agricultural productivity, and better the lives of rural populations. From the start, FAO's role was technical and political at the same time: collect evidence, set standards, spread good practice, and coordinate cooperation so countries could increase output without repeating the cycle of soil depletion, rural poverty, and crisis.



In the 1950s through the 1970s, the dominant global priority was boosting yields fast. Mechanization, synthetic fertilizers, pesticides, irrigation expansion, and high-yielding crop varieties spread widely, especially through what is often called the Green Revolution. The result was major production growth in several regions and averted large scale famine in many contexts, but it also revealed the cost of “production at any price.” Overuse of nitrogen and phosphorus increased water pollution and dead zones, pesticides harmed ecosystems and human health, irrigation contributed to salinization and groundwater decline, and monocultures reduced agrobiodiversity. This era matters for your agenda because it proved that technology can transform food supply, and it also proved that technologies are never neutral: the incentive structure determines whether gains are regenerative or extractive.

From the late 1970s into the 1990s, sustainability moved from a niche environmental concern into mainstream policy language. Soil conservation, integrated pest management, and farming systems research gained traction, and the idea of “sustainable development” emerged as a framework for balancing production with long-term resource limits. At the same time, the globalization of food trade and input markets increased exposure to price volatility and made smallholders more dependent on purchased inputs. This period highlighted a structural problem that still shapes adoption today: new technologies spread fastest where farmers have credit, extension support, stable markets, and infrastructure, while poorer regions risk being left with degraded land and weaker bargaining power.





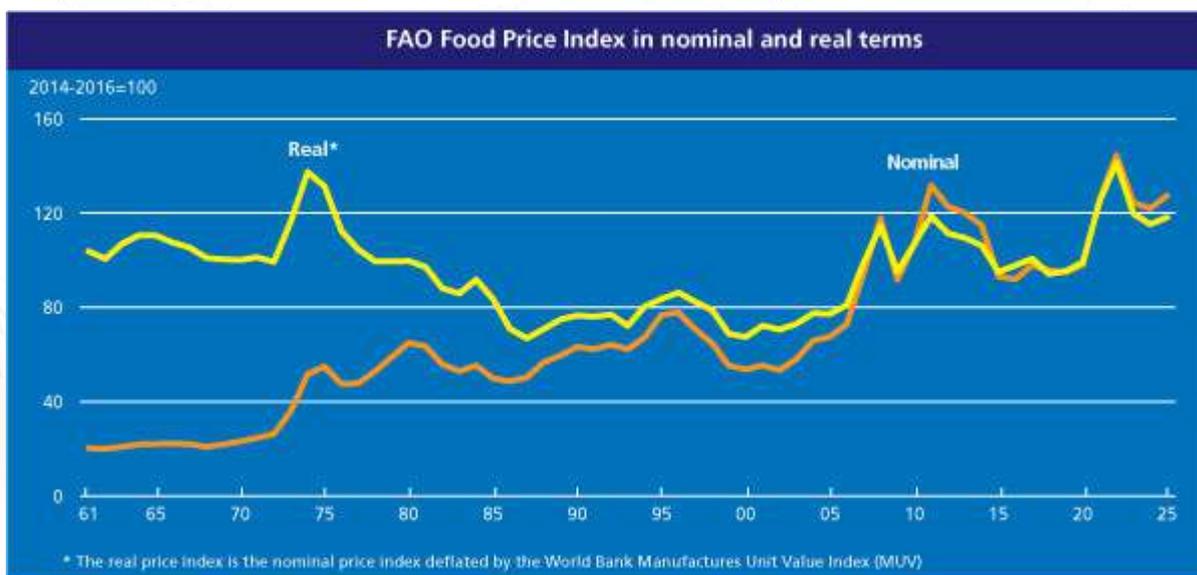
In the 1990s and 2000s, the global community sharpened the hunger agenda while recognizing that production alone does not end malnutrition. Major global commitments emphasized food security and nutrition alongside agricultural growth. FAO expanded work on food system governance, early warning, and emergency response, but also on longer-term capacity like land and water management, seed systems, and national data. Meanwhile, farming technologies began shifting from purely chemical and mechanical toward information driven approaches. GPS guidance, yield mapping, farm management software, and early remote sensing set the foundation for precision agriculture, where the goal is higher efficiency per unit input rather than simply higher input use.

From the late 2000s onward, climate change stopped being a future scenario and became a present operating condition for farming. More frequent heat extremes, droughts, floods, and shifting pest and disease patterns made resilience as important as yield. This pushed the rise of climate-smart agriculture as a policy frame: increase productivity, adapt to climate risks, and reduce emissions where possible. In parallel, biotechnology and breeding accelerated for stress tolerant crops, and livestock and rice systems came under greater scrutiny because of methane. The lesson is that “sustainable tech” is now expected to perform under volatility, not just under average conditions.

In the 2010s, digital agriculture moved from pilot projects into national strategies. Smartphones, cheaper sensors, better satellite imagery, cloud computing, and AI enabled advisory services, pest outbreak forecasting, and risk scoring for credit and insurance. Drones and remote sensing improved monitoring of crop health and water stress. Controlled environment agriculture expanded in some regions as urbanization and water scarcity intensified. Post-harvest technologies gained attention because reducing loss often produces faster sustainability gains than expanding acreage. But this decade also exposed new governance issues: who owns farm data, whether platforms create vendor lock-in, how to regulate algorithmic recommendations, and how to prevent a two-tier system where large farms become “high-tech efficient” while smallholders remain excluded.

With the adoption of the 2030 Agenda in 2015, SDG 2 tied hunger reduction directly to sustainable agriculture, resilient production, and smallholder productivity and incomes. That linkage matters because it forces policy to answer two questions at once: can technology reduce environmental harm per kilogram of food, and can it be adopted at scale by farmers with limited capital, limited connectivity, and high risk exposure. The historical pattern is clear: technology changes agriculture fastest when paired with institutions that make adoption feasible, extension services that translate tools into practice, financing that does not trap farmers in debt, and regulations that prevent environmental rebound effects like “efficiency that increases total extraction.”

This history sets up your agenda’s central tension. The world has already lived through a technology driven production surge that delivered food, but also left pollution, soil loss, and water stress. The current wave of innovation has the potential to flip the model toward efficiency, resilience, and regeneration, but only if delegates design rules, incentives, and investment plans that keep sustainability outcomes as the target rather than treating technology as the target.



## 5. Examples of the Topic

Countries and institutions use different approaches to apply new farming technologies for sustainability, combining better measurement, input efficiency, climate resilience, circular resource use, and financing models that make adoption realistic for smallholders.

In India, several states have scaled Soil Health Card programs that test soils and give tailored nutrient recommendations. The lesson is that fertilizer efficiency improves when decisions are based on measurement, but the impact depends on whether farmers can access the recommended inputs and whether extension services can explain tradeoffs, not just hand out reports.



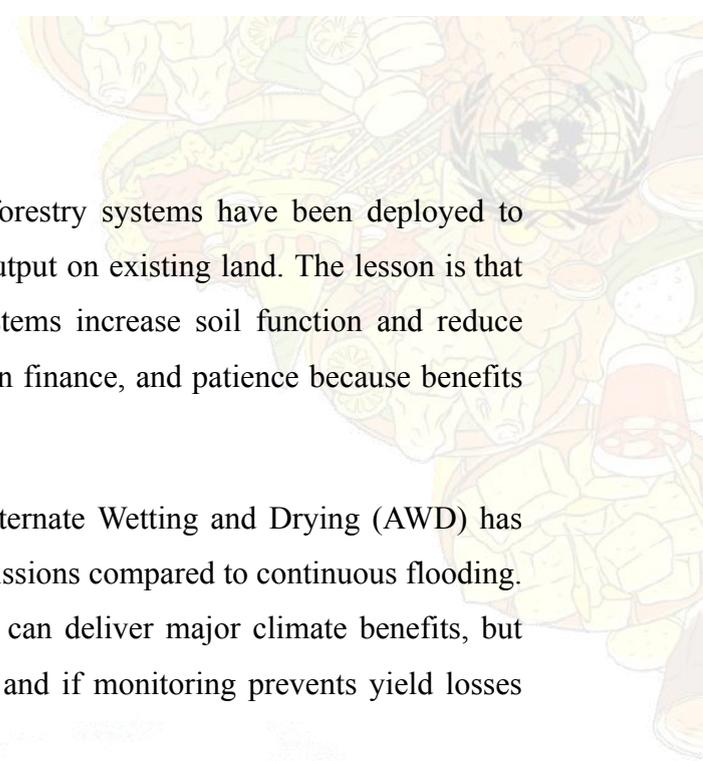
In Israel, widespread use of drip irrigation and fertigation has shown how precise water and nutrient delivery can reduce losses and raise yields in water-scarce conditions. The lesson is that efficiency technologies work best when paired with water governance and metering, otherwise higher efficiency can still lead to higher total extraction if irrigated area expands.

In the Netherlands, high-tech greenhouse systems use climate control, precision fertigation, and biological pest control to produce high output per square meter with tightly managed inputs. The lesson is that controlled environments can drastically reduce land and pesticide pressure, but the sustainability outcome depends on energy sources and heat reuse, not just the greenhouse itself.

In Kenya and Ethiopia, mobile-based digital advisory services and weather alert systems have helped farmers time planting, fertilizing, and pest responses more accurately. The lesson is that digital extension scales faster than field visits, but it must be localized by language, crop, and microclimate, and validated so advice does not become confident nonsense.

In the United States, variable-rate technology and yield mapping are used to apply fertilizer and lime based on within-field variability. The lesson is that precision tools cut waste when paired with good agronomy and calibration, but they can become expensive toys if the farm lacks data literacy, maintenance capacity, or reliable service support.





In Brazil, no-till and integrated crop-livestock-forestry systems have been deployed to reduce erosion, improve soil carbon, and increase output on existing land. The lesson is that “sustainable intensification” can be real when systems increase soil function and reduce expansion pressure, but it requires training, transition finance, and patience because benefits often appear over multiple seasons.

In Vietnam and other rice-growing countries, Alternate Wetting and Drying (AWD) has been promoted to reduce water use and methane emissions compared to continuous flooding. The lesson is that simple management innovations can deliver major climate benefits, but only if farmers have control over irrigation timing and if monitoring prevents yield losses from poor implementation.

In China, drone spraying and remote sensing have expanded rapidly in some regions to improve timing and reduce labor bottlenecks. The lesson is that automation can cut labor constraints and improve precision, but safety standards, drift control, and operator training determine whether it reduces chemical risk or just spreads it faster.

In Rwanda, smallholder-focused irrigation schemes and water harvesting projects have helped stabilize production against rainfall variability. The lesson is that water infrastructure increases resilience, but sustainability requires watershed-level planning so upstream gains do not become downstream shortages and conflict.

In Australia, livestock methane reduction efforts have included feed additives, improved grazing management, and better manure handling in intensive systems. The lesson is that emissions intensity can drop without reducing output, but adoption depends on cost, supply chains for additives, and credible measurement frameworks so claims are not just marketing.

In West Africa, hermetic storage bags and improved silo systems have reduced post-harvest losses for grains by limiting pests and moisture damage. The lesson is that sustainability gains are often fastest after harvest, because saving food is equivalent to producing more without extra land, water, or fertilizer.

In Europe, precision livestock farming tools such as sensors for health, feeding, and heat detection have improved animal welfare and reduced antibiotic overuse by catching problems earlier. The lesson is that data can prevent disease escalation and waste, but it raises governance questions about data ownership and whether farmers get locked into one vendor’s ecosystem.

In several countries, solar powered irrigation pumps have been deployed to lower diesel use and cut production costs. The lesson is that clean energy can help farmers, but without groundwater regulation, cheap pumping can accelerate aquifer depletion, so solar needs smart constraints like metering, pump sizing rules, or buy-back schemes for unused electricity.

In Latin America and parts of Africa, farmer cooperatives and shared-service models provide access to machinery, drones, soil testing, and cold storage as a service rather than requiring each farmer to buy equipment. The lesson is that technology adoption scales when ownership models fit real farm economics, because “you should buy this” is not a policy, it is a bill.



## 6. Questions to be Addressed

1. How can smallholders access new technologies without unaffordable debt, including subsidies, blended finance, leasing, pay-as-you-go, or cooperative ownership models?
2. What minimum extension and training capacity is required so farmers can operate, maintain, and troubleshoot technology instead of abandoning it after pilot projects?
3. How should governments prioritize digital infrastructure for agriculture, including connectivity, local language content, and interoperable data standards?
4. What safeguards are needed for farmer data rights, privacy, and consent when platforms collect soil, yield, and financial data?
5. Which policies reduce overuse of fertilizers and pesticides while protecting yields, including soil testing, variable rate tools, taxes, or restrictions on high-risk chemicals?
6. How can water-saving irrigation technologies be scaled without accelerating groundwater depletion, including metering, water rights, and caps on total extraction?
7. What monitoring systems can track soil organic matter, erosion, salinization, and nutrient runoff at scale to verify sustainability claims?
8. How can biological inputs like biofertilizers and biopesticides be regulated for quality and effectiveness while avoiding counterfeit products?
9. What role should gene editing and advanced breeding play in climate resilience, and how should biosafety and seed market concentration risks be managed?
10. How can technology help reduce methane and nitrous oxide emissions in livestock and rice systems without pushing farmers out of production?
11. How should countries balance mechanization and automation with rural employment, especially where agriculture is a major source of jobs?
12. What investment in post-harvest infrastructure is most cost-effective, including cold chains, storage, drying, and logistics to cut food loss and waste?
13. How can early warning systems for drought, pests, and disease be integrated into actionable farm decisions, not just dashboards for ministries?
14. What incentives can shift adoption toward regenerative practices, including payments for ecosystem services, carbon markets, or input subsidy reform?
15. How can sustainability technologies be adapted to local contexts, including small plot sizes, fragmented land, and mixed crop-livestock systems?
16. What role should public procurement and food companies play in scaling sustainable practices through standards, premiums, and traceability requirements?

## 7. Bibliography

1. FAO official website  
<https://www.fao.org/home/en>
2. Sustainable Development Goal 2 (UN DESA)  
<https://sdgs.un.org/goals/goal2>
3. SDG 2: Zero Hunger (UN)  
<https://www.un.org/sustainabledevelopment/hunger/>
4. FAOSTAT global food and agriculture statistics (FAO)  
<https://www.fao.org/faostat/en/>
5. FAO e-Agriculture (digital agriculture and ICT)  
<https://www.fao.org/e-agriculture/>
6. Climate-Smart Agriculture Sourcebook (FAO)  
<https://www.fao.org/climate-smart-agriculture-sourcebook/en/>
7. AQUASTAT global information system on water and agriculture (FAO)  
<https://www.fao.org/aquastat/en/>
8. FAO Platform on Food Loss and Waste  
<https://www.fao.org/platform-food-loss-waste/en/>
9. Integrated Pest Management (FAO)  
<https://www.fao.org/pest-and-pesticide-management/ipm/en/>
10. AGROVOC multilingual agricultural vocabulary (FAO)  
<https://agrovoc.fao.org/>
11. The State of Food Security and Nutrition in the World 2024 (FAO Open Knowledge Repository)  
<https://openknowledge.fao.org/items/ebe19244-9611-443c-a2a6-25cec697b361>
12. Save and Grow: a policymaker's guide to sustainable intensification of smallholder crop production (FAO)  
<https://www.fao.org/3/i2215e/i2215e.pdf>