

# Agroecology Knowledge Hub Digest

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The FAO **Agroecology Digest** presents a collection of news, research publications, stories from the field, multimedia materials (and much more) from around the world.

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# In Focus

## Biodiversity and Pollinators

### Unsung heroes: fixing multifaceted sustainability challenges through insect biological control

A progressive decline in insect numbers — as inflicted by habitat loss, pollution or intensive agriculture — can jeopardize a sustained provisioning of those services.

### Pollinators Are More Diverse than We Think—And Face Challenges We Aren't Fully Addressing

The food system relies on pollinators—so let's build a food system that pollinators can rely on, too

### Five reasons pollinators matter for One Health

Pollinators are vital to One Health, sustaining global food security, nutrition, plant resilience, and ecosystem stability, while serving as key indicators of environmental well-being.

### Listening to bees, working for the planet: interview with two beekeepers in Casamance

In Casamance, south Senegal, beekeeping is much more than an income-generating activity: it's a commitment to the environment, a sustainable lifestyle choice, and a concrete response to climate change.

### Buzzing Forward: Africa Leads the Way in Global Honey Production on World Bee Day 2025

New FAO data reveals that global honey production reached 1.894 million tonnes in 2023. Africa now accounts for 12 percent of this, producing approximately 223,000 tonnes each year, which marks the highest growth rate globally.

# In Focus

## Biodiversity and Pollinators

### **Beekeeping Offers Opportunity to Zimbabwean Farming Communities**

In Zimbabwe's Chimanimani region, young farmers are embracing sustainable beekeeping, supported by the FAO, to combat climate change, boost incomes, and empower women, all while preserving forests and biodiversity

### **Lo que las abejas les están diciendo a las Américas**

En América Latina, la FAO facilita una plataforma regional que promueve el intercambio de conocimientos y la colaboración entre países como el Brasil, Chile, Costa Rica, México y el Perú.

### **Mainstreaming biodiversity across agricultural sectors in Asia and the Pacific**

This study assesses how biodiversity and food systems are integrated in national strategies, examining 41 National Biodiversity Strategy and Action Plans and National Food System Transformation Pathways.

### **Bee pollination affects coffee quality, yield, and trade-offs within them**

This experimental research emphasizes the importance of protecting or restoring bee habitats in coffee farms, which can not only improve income for coffee producers but also conserve biodiversity.

# Germinate!

An exclusive column featuring the perspective, insights & innovations of leading agroecology & food systems experts & practitioners



## Op-Ed “What the bees are telling us”

Bees are speaking to us – not with sound, but through their presence, their absence, and their steady disappearance. Silent architects of our agrifood systems, champions of biodiversity, the pollinators are under pressure.

Alongside butterflies, bats, beetles, some mammals and birds, bees are the tireless workers that sustain the crops and wild plants that feed us, protect biodiversity, and keep our agrifood systems resilient. When they thrive, ecosystems flourish. When they falter, so could we.

So we all have a role to play. One can help by planting pollinator-friendly flowers, especially native species. One can avoid using harmful chemicals, particularly during flowering seasons when pollinators are most active, and support local beekeepers and buy honey from sustainable sources. One can also encourage schools and municipalities to create pollinator gardens and corridors, which provide safe and nourishing habitats for these essential creatures.

Though small in size, pollinators have an outsized impact. They are climate heroes, biodiversity champions, and silent architects of our agrifood systems. Protecting them goes beyond saving species – it is fundamental to securing our shared future.

Beyond World Bee Day, let's do more than celebrate. Let's act. Let's invest in pollinator-friendly solutions, support community-led innovation, and ensure that nature's most essential workers can keep doing their jobs – one flower, one farm, one future at a time.



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# Voice from the ground



## **The forest is life: Restoring the health of people and place in Benin**

The article explores the deep interconnection between forest conservation and community well-being in Benin, emphasizing how local initiatives are revitalizing both ecological systems and cultural traditions.

## **Aniceta's amaranth: A story of resistance, memory and life in Guatemala**

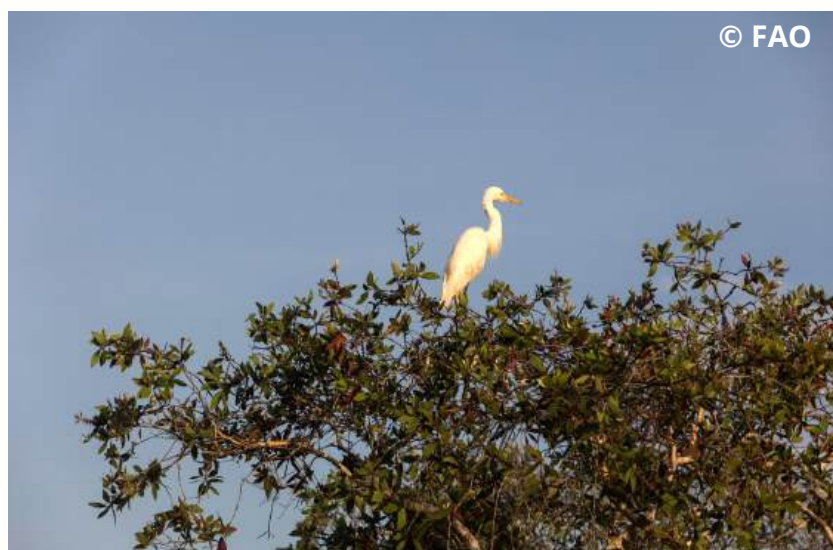
When violence wiped out entire villages, many families fled, taking only the bare necessities. Aniceta preserved amaranth seeds as an act of resistance, nurturing cultural survival and community healing.

## **'Dirt is not just dirt': Growing healthy communities in the UK**

Two community gardens in London are bringing people together to grow food, with love, nurturing both the soil and social bonds.

## **Urban agroecology fosters collective health in Brazil**

Urban agroecology is revitalizing Brazilian cities by enhancing public health, food security, and environmental justice.





# Voice from the ground



## **Short stories: Urban initiatives for health in Quito**

A trilogy of short stories from Quito, Ecuador illuminates the importance of urban agriculture in cities, where people often lack connection with nature and its cycles as well as with other people.

## **The footprints of transformation: Success stories, best practices and lessons learnt in agroecology from the PENELI IV Programme**

This publication depicts inspiring narratives of smallholder farmers and pastoralists turning small plots into thriving hubs of productivity, women's groups spearheading agroecology initiatives, and communities leveraging indigenous knowledge to adapt to climate change.

## **Amplifying Stories of Agroecology Practices and Principles (ASAPP) – Jonai Farms & Meatsmiths**

This case study highlights Jonai Farms and Meatsmiths, a family farm in Dja Dja Wurrung- how it exemplifies a community-rooted, zero-waste agroecology model that champions food sovereignty, ethical meat production, and degrowth through solidarity-based local economies.

## **From Carajás to Gaza: Peasant Struggles Are Global – To Defend Land, Water, and Territories for Life!**

Peasants, Indigenous Peoples, and rural and urban activists face threats, persecution, and even assassination for resisting land grabs, extractivism, and agribusiness. These attacks threaten not only lives, but also the survival of alternative models of production, like peasant agroecology.



# In the News



## **Op-Ed | Defining Regenerative Agriculture with Integrity**

With a rapidly warming planet and extensive investments needed to address it, regenerative agriculture remains an essential arena with enormous momentum and possibility.

## **EALA embraces agroecology to transform East Africa's food**

Agroecology has been identified as one of the most important pathways to climate resilience and sustainable food systems transformation in Africa.

## **Understanding how to scale out agroecology in livestock farming, based on five case studies**

This study explores the barriers to the agroecological transition of livestock farming systems through five case studies in Switzerland, Guadeloupe, mainland France (Massif Central), Bulgaria and Spain (Andalusia).

## **Academic and non-academic contributions to the International Conference of Researchers and Farmers: Rethinking the regulation of agricultural markets for agroecological transition in Europe**

Find the collection of all the academic and non-academic contributions to the international conference.

## **La Dynamique pour une Transition Agroécologique au Sénégal (DyTAES)**

La caravane 2025 de la DyTAES parcourt les 14 régions du Sénégal pour promouvoir l'agroécologie, renforcer les dynamiques locales et co-construire une stratégie nationale durable en collaboration avec les acteurs du territoire et le gouvernement.



# In the News



## **Agriculture : comment lutter contre les mauvaises herbes sans pesticides ?**

L'article explore des méthodes agricoles innovantes et écologiques pour lutter contre les mauvaises herbes sans recourir aux pesticides, en mettant en avant des techniques telles que la lutte culturale, la lutte biologique et l'utilisation de plantes compagnes.

## **At COP30 in Brazil, Lula can lead the world in transforming food**

At COP30, President Lula presented Brazil's approach to transforming food systems through sustainable agriculture, focusing on addressing climate change, hunger, and poverty.

## **Exploring Agroecology: Reflections from visit to Krishna Sudha academy for agroecology**

The article highlights the Krishna Sudha Academy's commitment to implementing agroecological principles to address challenges in agriculture, such as nutrition insecurity and biodiversity loss.

## **Rebuilding Africa's Soil Capital: Agroecology as a Policy and Practice Response**

While not a silver bullet, the agroecology systems approach holds promise for transforming smallholder agriculture without repeating the ecological and social costs of the agrochemical mode.

## **Empowering women and youth for agroecology's success in East Africa**

Empowering women and youth in East Africa through agroecology is key to building resilient, sustainable food systems amid climate challenges.





# In the News



## **Ethiopia moves toward a national agroecology strategy**

A new national strategy aims to put agroecology at the heart of Ethiopia's fight against soil degradation and food insecurity.

## **Why aren't South Africans growing more indigenous crops? How farmers can be nudged to change their ways**

Indigenous foods have a big role to play as the world searches for sustainable ways of producing food and increasing food security.

## **Advancing Ethiopia's Agricultural Transformation: A Consultative Workshop on Developing the National Agroecology Strategy**

The article expands on the high-level consultative workshop by Ethiopia's Ministry of Agriculture, intending to advance the development of Ethiopia's National Agroecology Strategy .

## **Opinion: Food aid is in crisis. So let's stop funding agrochemicals**

The aid budget crisis is a chance to support a resilient food system by moving away from agrochemicals and toward community-led, chemical-free farming.

## **Agroecology at a crossroads: Reflections from the Second Eastern Africa Agroecology Conference**

EAAC25 presented a dynamic platform for knowledge exchange, exhibitions, and scientific presentations. Yet certain gaps and contradictions emerged, raising critical questions about the future trajectory of agroecology in the region.





# From the Research World

## **Protecting crops with plant diversity: Agroecological promises, socioeconomic lock-in, and political levers**

Plant diversification at field, farm, and landscape scales is a key strategy for protecting crops from pests. But its level of adoption remains confidential, while the overall negative impacts of pesticides are now well established.

## **Soil governance in Tunisia: analyzing the potentials for agroecology transformations**

This study finds that the current institutional landscape in Tunisia is largely disabling of effective soil protection and broader agroecology transformations and provide analytical insights into formal and informal institutions that can be targeted to build a more enabling environment for agroecology transformations.

## **Advancing sustainable agriculture for goal 2: zero hunger - a comprehensive overview of practices, policies, and technologies**

Through a nuanced analysis of best practices and policies, this study aims to inspire collaborative efforts and informed decision-making toward building resilient and sustainable food systems that can effectively address the global challenge of hunger and malnutrition.

## **Institutional barriers and levers to pesticide reduction in tropical agriculture- A look at West and Central Africa**

Despite rising awareness of pesticide harms, tropical agriculture sees increasing use due to persistent policy support, highlighting the need for institutional reform and investment in agroecological alternatives.

## **What is transformative in participatory approaches to territorial agroecological transitions? A systematization of five case studies in Spain**

This paper systematizes the experiences of five cases of co-design for agroecological transitions in Spain, in different territorial contexts and scales, applying the framework of Local Agroecological Dynamization

## **Co-creating a common language for an agroecological transition through local food governance: lessons learned from discussion and practice in Mashue, Los Ríos, Chile**

This study addresses the lack of a common language around agroecology by co-creating and implementing educational workshops.



# From the Research World

## **Understanding farmers' choices in climate-smart agriculture: adoption of agroecology principles and impacts on rural livelihoods in semi-arid Tanzania**

This study explores climate-smart agriculture adoption and the application of agroecology principles among Tanzanian smallholders, using a survey of 315 households.

## **Agroecological Living Labs as entry points for transition towards sustainable food systems: a novel framework for the evaluation of living labs at different scales**

Agroecological transitions are vital for creating resilient and sustainable food systems, as they balance ecological processes with social dynamics.

## **Philanthropic Funding for Agroecology in Europe – Opening the (black) box of sustainable food system actors**

The article critically examines philanthropic funding for agroecology in Europe, highlighting its pivotal role in advancing sustainable food systems and addressing policy gaps across 19 countries.

## **Another threat to the future of food**

This article highlights how recent federal budget cuts to key U.S. food and agriculture programs—such as Local Food for Schools and the Gus Schumacher Nutrition Incentive Program—jeopardize local food systems, nutrition access, and the resilience of the nation's food supply.

## **Assessing the multidimensional impacts of agroecological practices in Southeast Asia. A review**

This study provides a comprehensive analysis of the effects of agroecological practices in Southeast Asia.



# From the Research World

## **Restoring functional farmland biodiversity for biological pest control**

Restoring farmland biodiversity for conservation biological control offers potential to secure win-win outcomes for yield and the environment.

## **Conservation agriculture enhances soil biodiversity and fertility: Evidence from contrasting soil textures in Cambodia**

This three-year study evaluated the effects of transitioning from conventional tillage to conservation agriculture on soil properties and fauna communities in vegetable production systems in Battambang (clay loam) and Siem Reap (sandy loam), Cambodia.

## **Leaving synthetic pesticides behind**

This article discusses the need to transition from chemical pesticides to agroecological practices to mitigate their harmful effects on ecosystems and human health.

## **Principles, barriers and enablers to agroecological animal production systems: a qualitative approach based on five case studies**

The article explores how agroecological principles—such as biodiversity, land and natural resource governance, and co-creation of knowledge—can be applied to animal production systems, highlighting the challenges and opportunities involved.

## **Biological control mitigates spread of vector-borne plant pathogens**

This study contests the long-standing dogma that arthropod-vectored pathogens cannot be mitigated through biological control, and accentuates how observational or manipulative field studies are imperative to grasp its full potential.

## **Syntropic farming systems for reconciling productivity, ecosystem functions, and restoration**

The article explores how syntropic farming systems can enhance plant growth, survival, and resistance to disease and herbivory, while promoting biodiversity and ecosystem services.



# Policy Brief & Report

## **Des politiques publiques au service du développement de l'agroécologie**

Cette note politique souligne l'importance de politiques publiques robustes et inclusives pour favoriser le développement de l'agroécologie en Afrique de l'Ouest, en s'appuyant sur les enseignements du Programme Agroécologie en Afrique de l'Ouest (PAE)

## **le programme agroécologie en Afrique de l'Ouest (pae) – bilan global du programme**

Le programme d'agroécologie dans cinq pays d'Afrique de l'Ouest vise à promouvoir des pratiques agricoles durables et résilientes face aux défis climatiques et socio-économiques.

## **« Les défis supposés par la numérisation à l'agroécologie paysanne : perspective d'ECVC »**

Cet article met en lumière les préoccupations selon lesquelles la numérisation de l'agriculture pourrait nuire à l'agroécologie paysanne en promouvant des modèles industriels, en menaçant l'autonomie des agriculteurs et en exacerbant les inégalités d'accès aux technologies et aux données.

## **Report: Shifting Financial Power: Defunding Industrial Agriculture – Redirecting Funding To Agroecology.**

The report advocates for redirecting financial support from industrial agriculture to agroecology, emphasizing the need for sustainable and equitable food systems in Africa.





# Policy Brief & Studies

## **Policy for sustainable food system transformation through agroecology transition in vietnam**

Vietnam is revolutionizing its agriculture by embracing agroecological practices, digital technologies, and climate-smart strategies to lead as Asia's Food Innovation Hub by 2030.

## **Rethinking No-Till- the toxic impact of conventional no-till agriculture on soil, biodiversity, and human health**

The article critically examines no-till farming, arguing that while it reduces soil disturbance, its common implementation with herbicide-intensive practices undermines environmental and health benefits.

## **Gleanings from the Field: Food Security, Resilience, and Experiential Learning**

By integrating experiential learning, conceptual frameworks about food security and resilience, and real-world engagement, educators can cultivate a new generation of resilient problem-solvers committed to addressing food insecurity

## **Agroforestry and Agroecology- Sustainable and safe alternatives to pesticides for increased biodiversity and human health**

This brief outlines the need to reduce reliance on synthetic pesticides, emphasising agroecology and agroforestry as sustainable alternatives.

# Multimedia & Learning



## **Youtube Video | Revisiting 'Landraces' Resource for the 'FUTURE'**

This video explores the nutritional and ecological implications of the Green Revolution and presents a case for reviving traditional rice landraces through agroecological farming.

## **Youtube Playlist | "Shifting Financial Power Convening"**

This playlist results from the conveyance of food systems actors across Africa by AFSA to explore how industrial agriculture is bankrolled by global financial systems that perpetuate injustice, debt, land grabs, and ecological harm.

## **Webinar recording | "Indigenous Peoples & Agroecology: Exploring Their Leadership in Transforming Food Systems"**

The webinar aims to explore how Indigenous communities are already leading the way in advancing food sovereignty and reshaping global food systems toward healthy, sustainable diets for all, while nurturing and respecting the Earth.

## **Webinar recording | "Silent agroecology-examples from Bolivia and Europe"**

Having a clearer picture of agroecological farms and implementation of practices is important to strengthen the advocacy of the agroecological movement toward the political authorities to defend family farming, and also advocate for food sovereignty.



# Behind the Scenes

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