CABI

DRAFT

Strategy

2023–2028

KNOWLEDGE FOR LIFE

Strategy 2023–2028

This Strategy is an updated version of CABI's Medium-Term Strategy 2023-2025. Below are the original Foreword from 2023 and a new Foreword added for the launch of the updated Strategy in January 2026.

Foreword – 2023

Dr Ismahane Elouafi, then Chief Scientist, Food and Agriculture Organization (FAO)

As Chief Scientist at the FAO, I am acutely aware of the food crisis facing our planet's 8 billion citizens and the numerous and interconnected reasons for this. As many as 828 million people are suffering from hunger while some 3.1 billion cannot afford a healthy diet. Unless we radically change how we produce and consume food, we face the very real risk of not achieving Sustainable Development Goal 2 (SDG2) by 2030. This is our challenge: to end hunger, achieve food security and better nutrition and promote sustainable agriculture.

This challenge is exacerbated by conflict, climate change and economic instability. Recent examples include the war in Ukraine, devastating droughts and floods in different parts of the world, and volatility in global prices for food and fertilizers. And when you add the impact of the COVID-19 pandemic into the mix, the pathway towards SDG2 is even steeper. I believe CABI's new Strategy will contribute greatly towards addressing this challenge, while recognizing the needs of our fragile earth.

I am pleased that CABI's Strategy also recognizes the centrality of science, technology and innovation to help reduce and adapt to the impacts of climate change as well as improve the lives and livelihoods of small-scale producers. We also need to acknowledge the important role that women and youth play in food value chains and reduce any inequality affecting their participation.Ultimately, the Strategy goals will help the world's 1.5 billion smallholder producers improve their livelihoods and achieve greater food security.

The FAO, CABI and partners – including governments, donors, researchers and practitioners – need to continue working in partnership despite significant social, political and economic challenges. This food crisis can be tackled through science, technology and innovation when accompanied by strong institutions, good governance, political will, enabling regulatory frameworks and effective measures to promote equity among agrifood system actors. I strongly encourage CABI's Member Countries, partners and donors to work closely to deliver the new Strategy which, in turn, will contribute towards the global effort to improve food security.

Foreword – 2026

Chileshe Kapwepwe, Secretary General, Common Market for Eastern and Southern Africa, and CABI Board Chair

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Dr Daniel Elger, Chief Executive Officer, CABI

I would like to thank our Member Countries and donors for their continuing partnership and support of CABI's work. I would particularly like to acknowledge the vital role of our Member Countries in shaping the next phase of that work through the consultation processes that led to this Strategy and its extension to 2028.

Introduction

CABI works on the biggest challenges facing humanity – **hunger**, **poverty**, **gender inequality**, **climate change** and the **loss of biodiversity**. Our Strategy sets out what we plan to do in each of these areas over the period to 2028 by pursuing five major goals:

1. **Improve the food security and livelihoods of smallholder communities**
2. **Help communities adapt to the impacts of climate change**
3. **Reduce inequality through better opportunities for rural women and youth**
4. **Safeguard biodiversity and support the sustainable use of natural resources**
5. **Increase the reach, application and impact of science in agriculture and the environment**

The Strategy covers each of these goals in turn, setting out the problem we seek to address, our relevant expertise, what we will do and how we will know if we have been successful, with top-level indicators for each goal to provide a framework for judging our impact.

CABI's priorities are determined by its 48 Member Countries, and this Strategy has been shaped by extensive consultation with them and with other CABI stakeholders.

Delivering on this Strategy will contribute to the United Nations Sustainable Development Goals (SDGs), including:

It will also further our progress towards our vision of a world where the sharing of agricultural and environmental knowledge empowers people and protects the planet, while fulfilling our mission to:

Improve people's lives worldwide by providing information and applying scientific expertise to solve problems in agriculture and the environment

CABI's core values

We believe in long-term solutions, embedding our work within existing national systems, designing for sustainability and ensuring local ownership.

We are objective and impartial, and are not influenced by political or commercial considerations. The information we provide is high quality, evidence based and reliable.

We care about people, from smallholder farmers in developing countries to researchers and academics. We focus on making a difference to their lives.

We are committed to sharing knowledge so people can support themselves and improve their lives.

We view partnerships as key to success; this includes local, national and international partnerships with governments, non-governmental organizations, universities and the private sector.

Measuring our impact

The indicators in the Strategy are objective criteria that can be used to assess our impact. Our measurement approaches for these indicators seek to distinguish changes attributable to CABI's work from background changes with other causes, such as market forces. Targets for each indicator are set on an annual basis to ensure they reflect up-to-date workplans and expectations of what our projects should achieve.

If you would like to explore our work further, or find out more details about a specific project, you can do all that and more through our website:

www.cabi.org

GOAL 1

Improve the food security and livelihoods of smallholder communities

Too many people worldwide still lack secure access to sufficient, safe and nutritious food. Many of these people are smallholder farmers or those who depend on their output. By supporting the integration of smallholders into sustainable food systems and minimizing crop losses, we can reduce hunger and increase rural incomes.

CABI is a leader in empowering farmers with knowledge, skills, tools and technology that help them grow more and lose less to pests and diseases. At the same time, we work with governments, industry and other stakeholders to influence policies and practices to support farmers' access to markets, finance and safer crop management solutions.

To deliver change, under this Goal we will:

- Work at regional, national and farm levels to support sustainable food production so that more, safer and higher quality food is produced, meeting the nutritional needs of consumers and improving the incomes and livelihoods of smallholder farmers – including men, women and youth
- Support countries to make their national plant health systems better able to predict, prevent and prepare themselves for plant health threats, thereby reducing crop losses. Key to this will be strengthening – and better linking – components of the plant health system, including surveillance, research, regulation, the supply of farming inputs and advisory services to farmers
- Facilitate risk-based approaches to identifying, characterizing and prioritizing pest and disease threats.
- Enhance pest and disease monitoring and surveillance by combining satellite observations with modelling and other data
- Ensure that problems detected by national and cross-border surveillance lead rapidly to practical advice that reaches farmers
- Provide other timely, science-based information to farmers to help them optimize the choice, yield, safety and nutritional and monetary value of their crops
- Address the limited public provision of advisory services in many countries by finding new ways to reach farmers directly and to support their advisors, working with private sector and entrepreneurial service providers and utilizing digital decision support tools, digital communication campaigns and digital learning products
- Explore how agro-input dealers can be mobilized and incentivized to fill gaps in diagnostic services and to stock products compliant with sustainable farming approaches
- Support increased use of integrated pest management (IPM) and other integrated crop management approaches, including nature-based solutions such as bioprotection and biofertilization products, thereby protecting biodiversity and ecosystem services while reducing dependence on agrochemical inputs and the risks associated with the use of pesticides
- Work at multiple points along crop value chains to improve access to markets for smallholder farmers and increase their opportunities to realize value from safer, higher-quality and indigenous produce. This will include collaboration with private sector companies committed to sustainable sourcing
- Partner with governments, regional and international bodies, and end-markets to strengthen, implement and harmonize sanitary and phytosanitary (SPS) regulations and food safety requirements in order to remove technical barriers to national and cross-border trade

PlantwisePlus

PlantwisePlus is a major international programme designed to improve the food security and livelihoods of smallholder farmers. It is implemented through three "impact pathways": **(1) pest preparedness**, supporting national and regional authorities to coordinate and strengthen systems for detection of, and response to, pest outbreaks; **(2) pesticide risk reduction**, shifting the way crops are protected, away from high-risk farm inputs towards safer approaches, supporting human health and protecting biodiversity; and **(3) farmer advisory**, providing farmers and advisory service providers with better information and digital decision support tools to support sustainable and climate-resilient agriculture. PlantwisePlus aims to reach 75 million smallholder farmers in 27 low and lower-middle income countries by 2030.

Summary of actions

Support sustainable food production by strengthening plant health systems

Protect farmers' crops by identifying, characterizing and prioritizing pest and disease threats and supporting effective response planning

Improve farmers' market access, incomes and welfare by increasing the use of products and strategies that enable production of higher-value, safer produce

Support trade by enhancing regulations and capacities in SPS and food safety

Indicators

Number of smallholder farmers with a decrease in food insecurity, based on the Food Insecurity Experience Scale, by sex and age

Number of smallholder farmers with an increase in yield per hectare, by sex and age

Number of smallholder farmers with an increase in farming income, by sex and age

Number of governments, regional or international bodies and value chain actors assisted to develop, improve, implement or strengthen capacities in SPS regulation, pesticide regulation and food safety requirements

Pesticide risk reduction

Reducing the risks associated with pesticides is a growing focus area for CABI, building on successes in PlantwisePlus and other projects. We support the use of IPM, which encompasses diverse, safer practices to manage pests alongside judicious and carefully managed use of appropriate chemicals. Our approaches seek to implement FAO's Guidance on Pest and Pesticide Management Policy Development (2010), which sets out three main steps to reduce pesticide risks: 1) Reduce reliance on pesticides and eliminate unjustified pesticide use; 2) Select pesticides with the lowest risk; and 3) Ensure proper use of the selected products for approved applications and in compliance with international standards. Engagement in this area can bring benefits to health, food security, trade and the environment.

CABI's work spans action from the farm level to national regulation and policy and international cooperation, and will develop in response to the specific demands of our Member Countries. Important elements include supporting the adoption of lower-risk production practices at various steps along food value chains, supporting the development and implementation of policies and regulations promoting pesticide risk reduction, and collaborative research and development of innovative IPM solutions.

Sowing the seeds of change

Peppercorn is a vital crop for the economies of Vietnam, Cambodia and Laos. However, smallholder farmers have faced challenges meeting Sanitary and Phytosanitary (SPS) standards, threatening their access to international markets. The 'Safer Spices' project, funded by the Standards and Trade Development Facility (STDF) and implemented by CABI and local partners, aimed to rebuild confidence in the region's peppercorn by promoting high-quality, safe production from small-scale value chains.

The project developed a Code of Practice aligned with international standards, along with locally adapted implementation guides translated into local languages. It then piloted application of the Code on farms in the three countries using a new community-led public–private partnership (PPP) model.

The pilot was a success in several areas. When farmers in Vietnam and Cambodia used the Code, there was a reduction in their peppercorn rejection rates. This improved quality helped the private sector find new export routes. A further measure of success is the fact that the Code of Practice and its approach has now been adopted by a new donor in a much larger project which will scale this approach in the region.

Harnessing digital innovations to help farmers

CABI uses digital technologies to bring science-based agricultural knowledge to millions of smallholder farmers. For example, the Pest Risk Information Service (PRISE) is an early warning system that combines earth observation technology, pest models and real-time field observations to deliver tailored pest alerts and actionable advice to farmers. Based on environmental data, PRISE models the time to act against key insect pests and plant diseases. Tailored messages are then created and made available through our PlantwisePlus network and other local extension and digital services, giving clear advice on how and when to apply appropriate practices to minimize crop damage. PRISE has helped over two million farmers in Africa reduce crop losses and bring down chemical pesticide applications, leading to higher yields, increased incomes and a healthier environment.

GOAL 2

Help communities adapt to the impacts of climate change

Climate change amplifies the impacts of other risks, such as food insecurity, conflict, and pests and diseases. Intertwined with this are negative impacts from biodiversity loss and landscape degradation. Taken together, this can undermine development gains and push people back into, or further into, poverty.

CABI empowers people with skills, tools and knowledge to adapt to the impacts of climate change on crops and landscapes. We bring technical expertise in addressing major biotic threats linked to climate change, notably the spread of pests, including invasive species, and the impact on soil ecosystem services. Together, these approaches bring benefits to food security, livelihoods and biodiversity.

CABI recognizes that women are disproportionately impacted by the changing climate, while youth are inheriting a climate-impacted world. Therefore, our climate change work will have a strong focus on these two groups.

To deliver change, under this Goal we will:

- Develop, test and share information and tools that help smallholder farmers respond to climate change threats. This includes supporting them to make changes in their choice of crops, to optimize their practices to meet changing conditions and to manage pest and disease threats associated with climate change. Underpinning this, we will work with external partners to undertake further research in this area and advocate for climate policies at regional, national and local levels
- Provide insights on pest risks that incorporate future climate change scenarios to support national climate adaptation and biosecurity plans. This will include applying cutting-edge datasets derived from earth observation to improve the modelling of pest risks and the management of pests against the backdrop of a changing climate
- Explore the potential to develop more comprehensive climate risk profiles for smallholder farmers in order to support adaptation planning
- Support comprehensive assessments of climate risks in critical commodity value chains such as cocoa, coffee, mango, cotton and high-value horticultural crops, identifying medium- to long-term risks posed by climate change and variability. This will equip farmers and businesses with advice to support locally led adaptation approaches and management strategies, as well as an improved understanding of key climate risks
- Work with partners to develop and implement landscape-wide management plans and nature-based solutions for the control of invasive species, particularly invasive weeds. These approaches will contribute to climate adaptation by increasing ecosystem resilience and to mitigation where restored landscapes have superior carbon sequestration compared to invaded areas
- Explore the opportunities for plant and soil microbiome research to inform climate adaptation practices and technologies for vulnerable crops and croplands

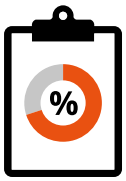
Summary of actions

Support smallholder farmers and businesses with access to information and tools to assess climate risks and enhance their adaptive capacity

Inform national and farm-level planning by developing pest and disease risk analytics that incorporate climate data

Develop management plans to control pests and invasive species on a landscape scale, providing enhanced climate resilience and contributing to climate mitigation

Explore cutting-edge areas of research to improve climate adaptation, including plant and soil microbiome research



Indicators

Number of smallholder farmers using an increased number of climate-smart response options to adapt to climate hazards, by sex and age

Number of smallholder farmers with increased adaptive capacity, by sex and age

Number of businesses and organizations supported through technical assistance on climate change adaptation and climate-smart agriculture

Number of hectares of land where sustainable land management practices have been applied to improve climate resilience

Number of land management plans developed, adopted or implemented that build climate resilience

Climate-smart agriculture

CABI's climate-smart approach combines innovative digital analytics and communications technologies, rigorous and novel scientific research, and successful national and local partnerships, focusing on the needs of smallholder farmers, pastoralists and CABI's Member Country governments.

CABI has developed, supported and promoted a wide range of **climate-smart agriculture practices** and technologies, many of which closely overlap with IPM. These enable farmers to maintain productivity, adapt to the impacts of climate change and build resilient livelihoods.

Climate Smart Jobs

As part of the UK Foreign, Commonwealth and Development Office-funded Climate Smart Jobs programme in Uganda, CABI is partnering with the private sector to support agribusinesses and smallholder farming communities (men, women, refugee and host communities) in northern Uganda to improve their market access through engagement in climate-smart agriculture. The project considers imminent climate risks and their impacts on agricultural productivity. It works with stakeholders on better soil management and use of climate-smart inputs and technologies that help diversify livelihoods and support income-generating activities, for improved adaptive capacity and resilience.

GOAL 3

Reduce inequality through better opportunities for rural women and youth

Studies have shown that women produce 20–30% less agricultural produce than men due to their lack of access to and control over resources, including land, labour, credit, agricultural information, inputs and market opportunities. If these differences could be overcome, the number of undernourished and hungry people worldwide would fall by 100–150 million. Significant societal benefits would also be achieved if young people, regardless of gender, could find new opportunities within rural economies.

CABI makes gender and youth inclusion a central feature of all its development projects. We use our understanding of how gender, age, social relations and underlying power dynamics affect the participation of women, men, youth and marginalized groups in agriculture to design targeted programming to redress inequalities in wealth and nutrition.

To deliver change, under this Goal we will:

- Create new income and employment opportunities for rural women and youth in agricultural value chains, through support of existing community-based organizations, women and youth groups and agricultural service providers
- Develop face-to-face, hybrid and digital agricultural tools and advisory services designed to ensure equitable access for women, youth and other marginalized groups. We will use group-specific evidence on effectiveness to further refine and develop our approach and ensure women and youth farmers and others who face disadvantage are benefitting
- Roll out social and behavioural change communication approaches that seek to provide more opportunities for women and youth to benefit from agricultural advice by shifting the social norms that underpin inequalities in access to and uptake of agricultural services
- Drive the adoption of productivity-enhancing technologies by women and young farmers by applying a targeted approach to the development, dissemination and promotion of these technologies
- Complement this work by mainstreaming gender and age considerations in all CABI programme work and by using CABI's platforms to promote women and youth role models in agriculture and the environment – for example, via *SciDev.Net*'s coverage of successful women innovators

Summary of actions

Create new income and employment opportunities for women and youth in the agricultural sector

Support the involvement of women and youth through skills development and capacity strengthening in technical (plant health) and business skills

Ensure equitable access to agricultural information by embedding gendered approaches in rural advisory services

Roll out social and behaviour change approaches that shift the social norms underpinning inequalities in access to, and benefits from, agricultural services

Enhance technology adoption by women and youth farmers through targeted technology development, dissemination and promotion strategies

Promote role models of successful women and youth scientists and innovators

Indicators

Number of women and youth who are more empowered

Number of women and youth who have increased access to and control over farming inputs (land, labour, finance, advice, technologies, etc.)

Number of women, youth and men with increased access to income-generating and employment opportunities in agri-businesses

Number of women and men farmers adopting gender-equitable social norms in agriculture

Number of women and youth researchers, scientists and innovators whose work is promoted through CABI platforms, including *SciDev.Net*

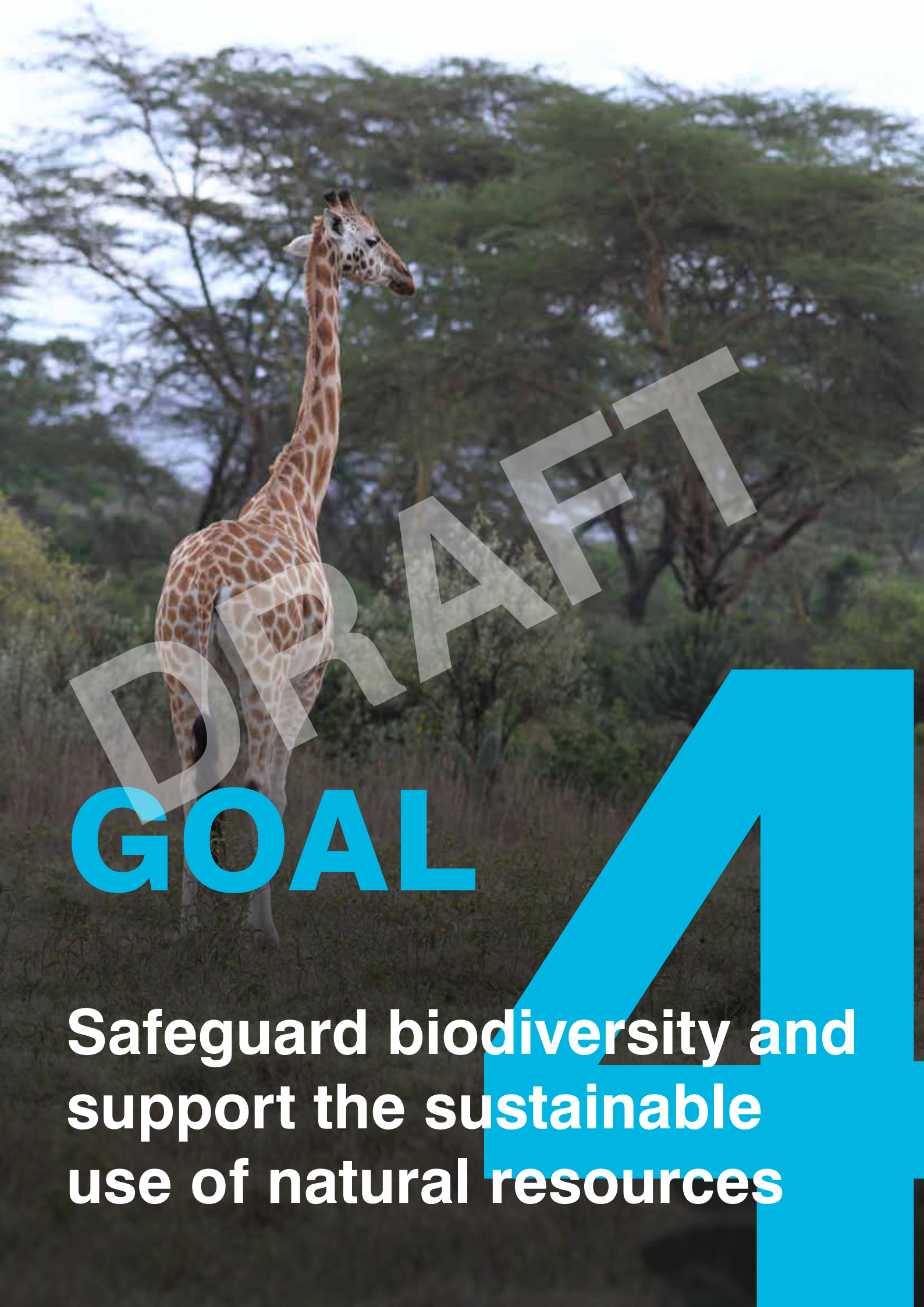
Community conversations help empower women farmers in Burundi

PlantwisePlus in Burundi implemented a transformative 'Community Conversation' approach to enhance the recognition of women's crucial role in crop production by addressing existing gender inequalities. This approach aimed to change attitudes, beliefs and practices that limit women's access to agricultural extension services, including plant clinics and other services provided by the PlantwisePlus project, as well as their decision-making roles in agriculture. Changing those societal attitudes that restrict women's influence in agricultural productivity and income generation is essential for the future of sustainable and inclusive agriculture.

Community conversations proved to be vital catalysts in shifting social norms and increasing women's empowerment. Through these conversations, women participants in the PlantwisePlus project achieved higher empowerment scores and greater household gender parity compared to non-participants, highlighting the positive influence of the project's interventions on gender dynamics within households. Despite numerous challenges, the project made significant progress, with the percentage of empowered women rising from 41% to 46% in one year.

If male–female differences in access and yields were overcome, the number of undernourished and hungry people worldwide would fall by

100–150 million



GOAL 4

Safeguard biodiversity and support the sustainable use of natural resources

Biodiversity loss is proceeding at an unprecedented pace, jeopardizing the stability of natural ecosystems, increasing vulnerability to climate change, limiting options for climate adaptation and threatening food security. The world's poorest countries are home to the greatest array of biodiversity, but bear the brunt of this trend. Invasive species are major drivers of biodiversity loss, alongside land-use change and habitat loss, climate change and pollution, which includes excessive use of synthetic pesticides.

CABI is a world leader in nature-based solutions, including biological control of pests, diseases and weeds. Our actions to manage invasive species are part of our wider work to protect and restore degraded ecosystems and preserve biodiversity across the world. We also contribute to the cataloguing and conservation of global biodiversity and to finding ways of utilizing biodiversity for human and environmental benefit.

To deliver change, under this Goal we will:

- Increase support for and application of Integrated Landscape Management (ILM), as a holistic, participatory, and long-term approach to foster natural resource resilience and regeneration at the landscape scale, while sustaining livelihoods for farmers, pastoralists and other land users
- Promote agroecological principles, including IPM and the greater use of biological alternatives to toxic pesticides
- Minimize the disruption of ecosystems by invasive species, by documenting the spread of and threat from these species, raising awareness, helping countries produce plans for their management across landscapes and different land uses, and contributing to their management through the identification, development and release of new and safe biological control agents
- Deploy technology such as remote sensing, modelling and drones for surveillance of invasive species, as well as for release of biological control agents
- Pursue other applications of biodiversity, such as wider use of underutilized and indigenous crops. These can offer nutritional benefits, contribute to climate adaptation and offer long-term benefits to food security through the diversification of agro-ecosystems
- Work on applications of CABI's microbial collections, which have the potential to yield new biocontrol agents and other nature-based solutions that could benefit agriculture and the environment by reducing the need for chemical interventions such as pesticides and fertilizers
- Explore our collections, data and knowledge repositories that catalogue biodiversity to study changes in species distribution and disease evolution over time. We will also seek new ways to apply these assets to help global conservation and monitoring efforts
- Work with CABI Member Countries to support plans to characterize the nature and value of their biological resources and for national collections and data repositories to boost the local ownership of biodiversity

One Health

One Health is a concept that stresses the interconnections between humans, animals, plants and ecosystems. CABI works with leading experts to provide One Health resources, including an open-access journal and a database of case studies. These resources are designed to support the transdisciplinary approach required to make One Health a practical reality. One Health evidence is used to stimulate dialogue and support high-level decision makers. CABI also applies One Health approaches in practice, for example through joint crop-livestock services in East Africa and research to understand how crop protection contributes to anti-microbial resistance. A One Health approach is also used to engage stakeholders in landscape planning to manage invasive plants such as prosopis and parthenium that impact human, animal and ecosystem health.

Summary of actions

Support regional, national and subnational bodies to develop and implement landscape-scale invasive species management strategies

Co-develop ILM projects with Member Countries and partners

Increase the availability and use of low-risk bioprotection products, including the development and release of new biocontrol agents against priority invasive and native pests

Apply CABI's data assets and microbial collections in the cataloguing and conservation of biodiversity

Develop appropriate strategies for the utilization of biodiversity, such as biocontrol agents and applications of CABI's microbial collections

Work with Member Countries to support local biodiversity assessments, data repositories and collections

Indicators

Number of hectares of land where sustainable land management practices have been applied

Number of land management plans developed, adopted or implemented that reduce the effects of invasive species and/or incorporate use of IPM and biological alternatives

Number of biocontrol agent introductions shown to have had an impact on their target species

Number of unique microbial strains provided from CABI's Culture Collection

Number of organisms in CABI's Culture Collection for which potential applications have been identified

Invasive species

Invasive species are one of the five leading drivers of biodiversity loss. The 2023 'Assessment Report on Invasive Alien Species and their Control' developed under the Intergovernmental Science-Policy Platform on Biodiversity & Ecosystem Services found that 60% of global extinctions have been caused solely or partly by invasive alien species. They disproportionately affect vulnerable communities in poor rural areas, especially in developing countries, which depend on natural resources, healthy ecosystems, trade and tourism for their livelihoods. In 2021, CABI scientists estimated the economic impact of invasive species on Africa's agricultural sector to be US$ 65.58bn a year, equivalent to 2.5% of Africa's combined GDP. CABI has worked on invasive species for over 100 years, providing robust data on their impacts on human livelihoods and the environment, and developing practical ways of tackling the biggest threats, including infamous pests like the desert locust and fall armyworm.

We are currently working on solutions for about 85 different invasive species in Europe, North America, Africa, Asia and Latin America. Our scientists are world leaders in biocontrol research – a method that uses natural enemies of invasive species, like insects or fungal pathogens, to control their vigour, density and spread. One emerging success is our work alongside the Royal Society for the Protection of Birds and the UK Food and Environment Research Agency on Tristan da Cunha as part of a Darwin Initiative project. One of the world's rarest birds, the Wilkins' Bunting, is endemic to Nightingale Island, part of the Tristan da Cunha Group in the South Atlantic, the world's most remote inhabited archipelago. The birds rely on the seeds of *Phylica arborea*, the island's only native tree, which was threatened by the invasion of the soft brown scale insect. A tiny parasitoid wasp was successfully released on Tristan and Nightingale. It rapidly established and has led to high levels of parasitism of the soft brown scale, without any adverse impacts on other species. The *Phylica* trees have started to recover, and we expect this will also lead to a recovery of the endangered buntings over the coming years.

Another success is our work on the South American tree *Prosopis juliflora*, which has invaded several million hectares of grassland, cropland, wetland and settlements in eastern Africa, including the drylands of Ethiopia's Afar Region. We demonstrated that prosopis consumes more than 50% of the annual rainfall in the invaded area, with serious consequences for livelihoods unless its spread is contained and its density reduced. CABI applied an ILM approach for the control of prosopis, where various stakeholders in Kenya took part in a participatory process to develop and test management plans that bring together cultural, biological, physical and chemical control at the landscape level. The aim is to stop the further spread of the invasive species and remove it from high-value areas, such as dry-season grazing areas or cropland. Under this Goal, we will promote community-centred approaches of this kind to support livelihoods and reduce conflicts over land use in other landscapes blighted by invasive weeds like prosopis.

Alongside and linked to its project work, CABI will continue to facilitate the development and implementation of national invasive species policies, such as the Kenyan National Prosopis Strategy and the Tanzanian National Invasive Species Strategy and Action Plan.

GOAL 5

Increase the reach, application and impact of science in agriculture and the environment

Despite the abundance of data on agriculture and the environment, significant gaps remain. More effort is needed to curate and synthesize existing data and to transform data and evidence into valuable knowledge accessible to those who need it.

CABI uniquely combines original scientific research, scientific publishing, data science, independent journalism on science for development and practical expertise in using digital and other tools to reach farmers and other stakeholders with scientifically proven approaches.

We will continue to expand our efforts to create, curate and share high-quality evidence relevant to policy and practice, and for different stakeholders, from farmers and their advisors to policymakers, researchers, students, industry actors and investors. Our work to increase the reach, application and impact of science will remain user focused and needs driven, co-created with partners, customers and end users. To aid the discovery and use of our knowledge resources, CABI's research and information resources have been integrated into a single platform: the CABI Digital Library.

To deliver change, under this Goal we will:

- Put innovation at the heart of CABI's approach, across our research, international development and knowledge management work
- Maximize opportunities to support the expansion of local scientific and technical capacities through collaborations with Member Country governments and with educational, research and regulatory institutions
- Promote technology exchange and collaboration between CABI Member Countries, including South–South cooperation
- Conduct and publish high-quality research in the biological and social sciences, in line with our Science Strategy
- Work with partners to deliver positive social and behavioural change through the adoption of evidence-based practices, policies and technologies
- Work with governments and other relevant authorities to influence the policy and institutional environment to provide a supportive context and to ensure we facilitate lasting enhancements to local capacities
- Capitalize on digital approaches to improve the efficiency and reach of our information sharing and exchange, via apps, mobile messaging, digital learning products and websites, and where relevant develop new decision-support tools and information portals to advise farmers
- Use insights from data and modelling to develop context-specific recommendations, anticipate future threats, and identify trends across large datasets and disparate sources
- Develop a global framework for evaluating the scale, causes and trends of crop loss to inform decision making and to ensure we lose less of what is grown worldwide

Innovative use of technology to improve the reach of extension advice

We promote the innovative use of technology and information to empower people, including smallholder farmers and extension advisors. For example, through the GenAI for Agriculture Advisory (GAIA) project funded by the Gates Foundation, CABI is piloting the development of a plant health advisory chatbot for plant doctors who provide advice to farmers at plant clinics, as well as agro-input suppliers and farmers. The GAIA chatbot will enable them to query and interact with CABI and partner content from various CABI digital tools and databases and provide advice tailored to their specific questions and locality. The project will also help find appropriate ways to integrate CABI content into partners' generative AI tools, extending the reach of CABI's high-quality extension advice to farmers.

Scientific publishing

Our publications in the applied life sciences – including world-leading databases, books, eBooks, case studies, open-access journals and repositories, such as the Compendium and Collections – help scientists discover credible and authoritative data and research outputs from around the globe.

Our tools add insights to data and help people apply science to real-world problems.

Our expertise and skills in publishing help put knowledge into context and put it into the hands of those who need it most.

Our learning resources build the capacity of farmers, practitioners and scientists to improve agricultural practices.

The application of AI

AI presents transformative opportunities across a wide range of applications, enabling publishing, projects and programmes in CABI to enhance their impact and efficiency. In Juno (see Evidence and Policy pull out box on page 22), a generalizable AI model supports tasks for evidence synthesis, enabling more and faster outputs. Juno supported 12 simultaneous reviews within 10 months, analysing 6.3 million scientific summaries to produce the **State of the Field for Research in Agrifood Systems.** CABI also uses AI for image recognition, text extraction and processing earth observation data. Our EVA chatbot, for instance, uses content from the CABI Digital Library and has the potential to generate new courses for CABI Academy users. *SciDev.Net* uses AI to increase the impact of its journalism by enhancing video and audio products and generating infographical elements for articles, in line with CABI's AI policy and *SciDev.Net*'s AI guidelines. CABI will invest to expand its AI infrastructure and create new offerings by bringing together experts in technology and other disciplines.

- Apply CABI's capabilities in Artificial Intelligence (AI), including the use of AI approaches such as large language models, machine learning, and artificial neural networks, to increase our impact
- Explore issues of data governance and ethics for AI, including key areas for responsible AI such as transparency, explainability, accountability, human-centricity in design and deployment, and trustworthiness of such systems, as well as issues around representation of indigenous and local knowledge and of evidence and perspectives from the Global South
- Work with partners to build the Juno Evidence Alliance, a global platform to support evidence-informed decision making in agriculture, food security and climate adaptation. Emulating a model that has proved successful in the healthcare field, we will engage with governments and funders to establish evidence priorities and deliver timely, relevant evidence syntheses to decision makers. In doing so, we will leverage the strength of CAB Abstracts as a leading source of published and grey literature, together with AI, to save costs and time in analysing data from diverse sources
- Continue to promote evidence-based approaches via *SciDev.Net*'s journalism and online debates and through expanded publicity about CABI's work
- Equip researchers, students and practitioners with up-to-date knowledge and skills. We will support learning by publishing new books and journal papers, by developing our database of educational case studies and by expanding the scope of our encyclopaedic Compendium. We will develop our open-access journals in the areas of One Health, agriculture and the environment, and will grow the portfolio, including through partnerships with other organizations
- Expand the digital learning content in the CABI Academy, including modules targeting young entrepreneurs, and continue to develop a community-led skills framework for agriculture practitioners, linked to certification and a curriculum of digital learning materials
- Find new ways to support the process of research, providing powerful tools to search and visualize the world's literature, shaping data policies and practices, and providing pre-print services to enable the free and open sharing of draft research articles
- Support researchers with training on communication of their research findings to journalists and policymakers
- Support grant makers, grantees and national agricultural systems to improve their data governance and, in particular, to make data generated in development projects FAIR (findable, accessible, interoperable and reusable) and responsibly managed. This will reduce repeated and wasted effort and maximize the value and impact of projects
- Increase the impact and use of data generated under CABI's international development programmes, ensuring they are FAIR and available for onward use in CABI information products and tools
- Explore, test and implement innovative business models to ensure long-term sustainability of our successful digital tools, and in the design of new tools. This will require establishing a framework for sustainable product development, engaging existing and new users, and identifying customers and routes to reach them

Summary of actions

Translate scientific research in agriculture and the environment into policy and practice, evaluating how best to deliver positive social and behavioural change in different contexts

Collaborate with Member Country governments and other institutions to promote the expansion of local scientific and technical capacities and international cooperation in the agricultural and environmental arenas

Enhance, expand and extend the reach of CABI's publishing and knowledge products and learning resources

Increase the impact of *SciDev.Net*'s global science journalism on policy, organizations and individuals

Transform the support for evidence-based approaches and decision making in agriculture, food, climate and development

Champion the application of FAIR principles in the governance of development data

Contribute to the global evidence base through CABI's own scientific and social scientific research

Indicators

Number of stakeholders reached through CABI publishing and knowledge products, learning resources and *SciDev.Net* coverage

Number of institutional, local, national or international policies developed, informed and shaped by CABI research, evidence and support, or as a result of *SciDev.Net* coverage

Number of stakeholders reached with agricultural, environmental or food safety advice or information through diverse extension and communication approaches by type, sex and age

Number of smallholder farmers who adopt improved technologies and practices leading to more productive, sustainable and safer agricultural production, by sex and age

Number of partners, tools or services actively using insights from CABI models

Dollar value of investments commissioned by donors under the FAIR principles

Evidence and policy

The synthesis of diverse knowledge is essential for effective decision making in the agriculture, food and climate adaptation arenas, yet the integration of research into policy remains a challenge. Infrastructure to translate research and indigenous wisdom into policies lags behind that in sectors like health and education.

The Juno Evidence Alliance, of which CABI is a founding partner, is creating a global platform that leverages artificial and human intelligence to enhance evidence-based policy. The initiative conducts evidence reviews itself, but importantly also works on evidence standards and to train stakeholders around the world in the production and use of evidence, which will greatly widen its impact over time.

The Global Burden of Crop Loss project will address the significant issue of crop loss, which currently affects up to 40% of global production. This project will provide updated, detailed data on the extent, causes and locations of crop losses to inform effective strategies for reducing food loss.

CABI will bring together high-level external advisors to guide our existing and new evidence and policy initiatives. This will help create more robust solutions that better inform and shape global policy- and decision-making processes.

How agricultural development data can benefit from being FAIR

CABI supports donors and funding agencies to design solutions so that they will be embedded, sustained and available to those that need them. In Ethiopia, the National Soil Information System (formerly EthioSIS) was developed in response to the need for improved and comprehensive national soils data. On project completion, this data was not easily available to all the key stakeholders who needed to use it, including parts of the Ethiopian Ministry of Agriculture.

CABI determined that one significant barrier to data sharing and reuse was the lack of a national data-sharing policy giving local actors the mandate to share data, and of a framework for how that could be done securely. Working with national government and other stakeholders, CABI facilitated the co-creation of a data policy based on FAIR data principles and implementation plans. These were taken up by the Government of Ethiopia and endorsed as a Ministerial Directive to share soil and agronomy data.

A plan is now also in place to examine whether this directive to share data might be expanded across the agriculture sector in the country and in 2024 CABI supported the Government to embed responsible data governance in the national Digital Agriculture Roadmap.

SciDev.Net

SciDev.Net has been an integral though editorially independent part of CABI since 2017, and remains the leading source of science-based news for global development. A network of journalists worldwide contributes to its news, investigations and podcasts.

SciDev.Net also provides training for journalists to help them cover science stories, and for scientists to help them communicate their research to the media and other stakeholders. In 2023, our content was seen or heard approximately 750 million times, with our podcasts on science reaching an estimated 9 million people weekly through a network of radio station partners across sub-Saharan Africa and our videos on TikTok and YouTube attracting hundreds of thousands of views. *SciDev.Net*'s long-form investigations into the impact of science frequently trigger stories in prominent mainstream media outlets such as the Guardian, Sky News, Al Jazeera and El Pais.

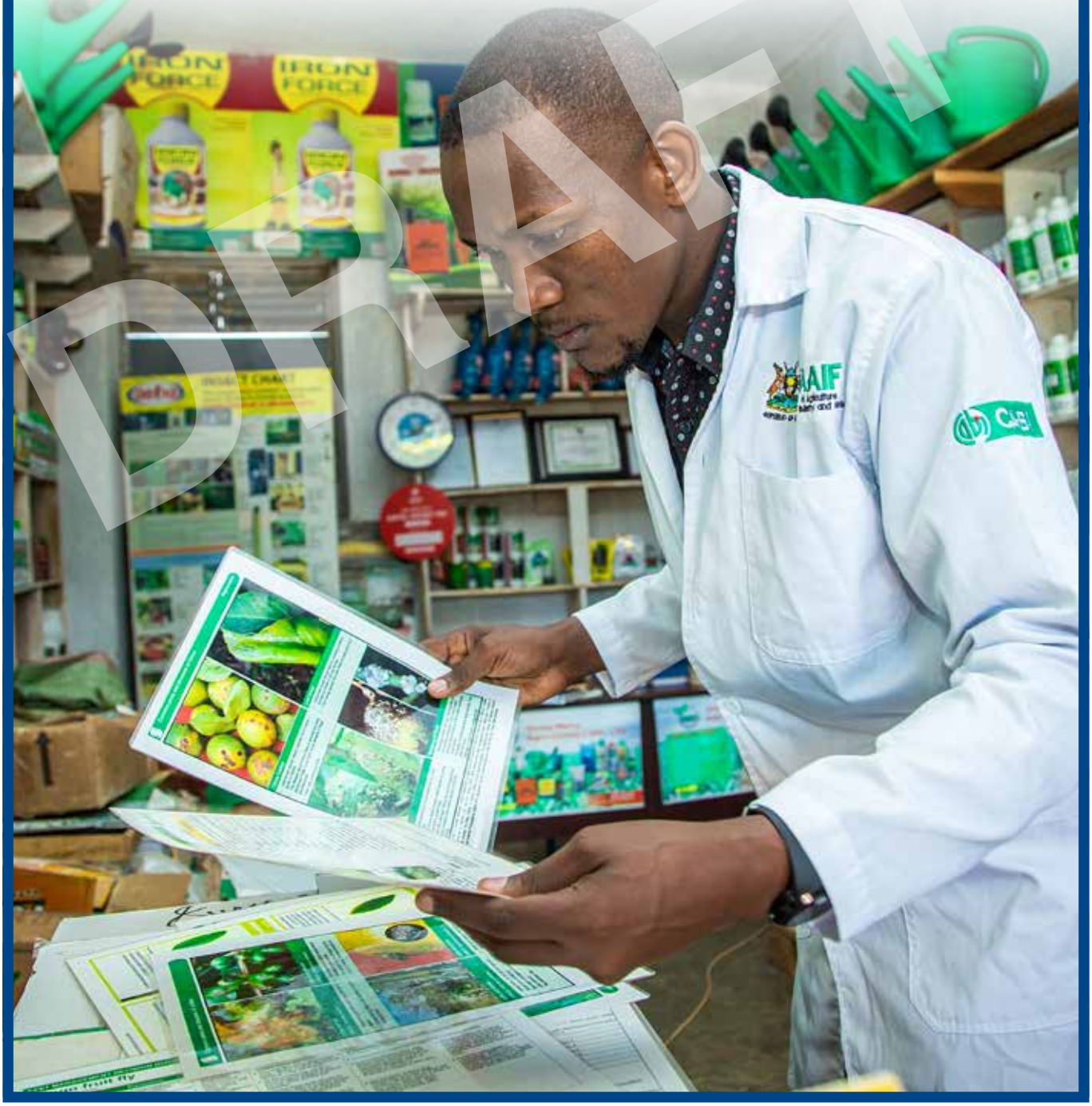
SciDev.Net was one of the few media organizations reporting on health from inside Sudan during the outbreak of civil war in 2023. Médecins Sans Frontières and the World Health Organization both reported that our coverage had helped them decide how to formulate their interventions in the country. Our podcast on the importance of HPV vaccination was broadcast on public radio in Nigeria and led to an increase in vaccine acceptance, according to the country's national HPV vaccine coordinator. Our report on a new solar-powered bread oven resulted in authorities in Yemen investing in several of the ovens in the capital Sana'a, while our article on the impact of traffic on air quality in the capital of Burkina Faso, Ouagadougou, was read out during a town hall meeting, after which policymakers decided to roll out a programme of asphalting in the city.

Using social and behaviour change communication to reduce pesticide risks

We combine our expertise in pesticide risk and IPM with skills in social and behaviour change. This approach supports societal, organizational and individual shifts to reduce pesticide risks for farmers, consumers and the environment. By recognizing that farmers are influenced by extension services, agro-dealers, traders and others in the food system, we emphasize the importance of understanding these broader roles in pesticide management and risk reduction. Communication across stakeholder groups, not just with farmers, is key to driving change.

Our work involves generating evidence and engaging local and national stakeholders in a participatory process. This helps us validate findings, understand community contexts and develop joint strategies. These strategies go beyond sharing knowledge, addressing social norms, myths and misconceptions about pesticide risks that can hinder change. For example, in Kenya we launched the award-winning 'Ukulima True' campaign ('True Farmer' in Swahili) to encourage safer farming practices. We found that promoting safe food production for communities was a more effective motivator than focusing on the health risks of pesticides alone. We are also working with and through agro-dealers, extension agents and food safety bodies to drive change.

The project reached 890,000 people in its first season, with promising results. There was a 41% increase in farmers monitoring their fields for pests, 28% more wore protective clothing during spraying and 26% more adopted three or more IPM practices.



About CABI

CABI is an international not-for-profit organization that solves problems in agriculture and the environment by conducting scientific research, delivering development programmes and publishing information and media resources.

Our combined scientific and technical expertise and skills in managing and sharing knowledge benefit people around the world. At all levels, our approach is to empower people and communities with information, knowledge and practical tools with which they can improve their lives. Our priorities are set by our 48 Member Countries, situated across Africa, the Asia-Pacific region, Europe and the Americas, and our work is delivered by a dedicated worldwide team of staff and an extensive network of collaborators. As a self-sustaining organization, our funding comes from donors, Member Countries and sales of our products and services. We work from more than 25 locations globally, with major hubs in Kenya, Switzerland, Pakistan and the UK, and smaller sites in Brazil, China, Ghana, India, Malaysia, the Netherlands, Trinidad and Tobago, the United States and Zambia.

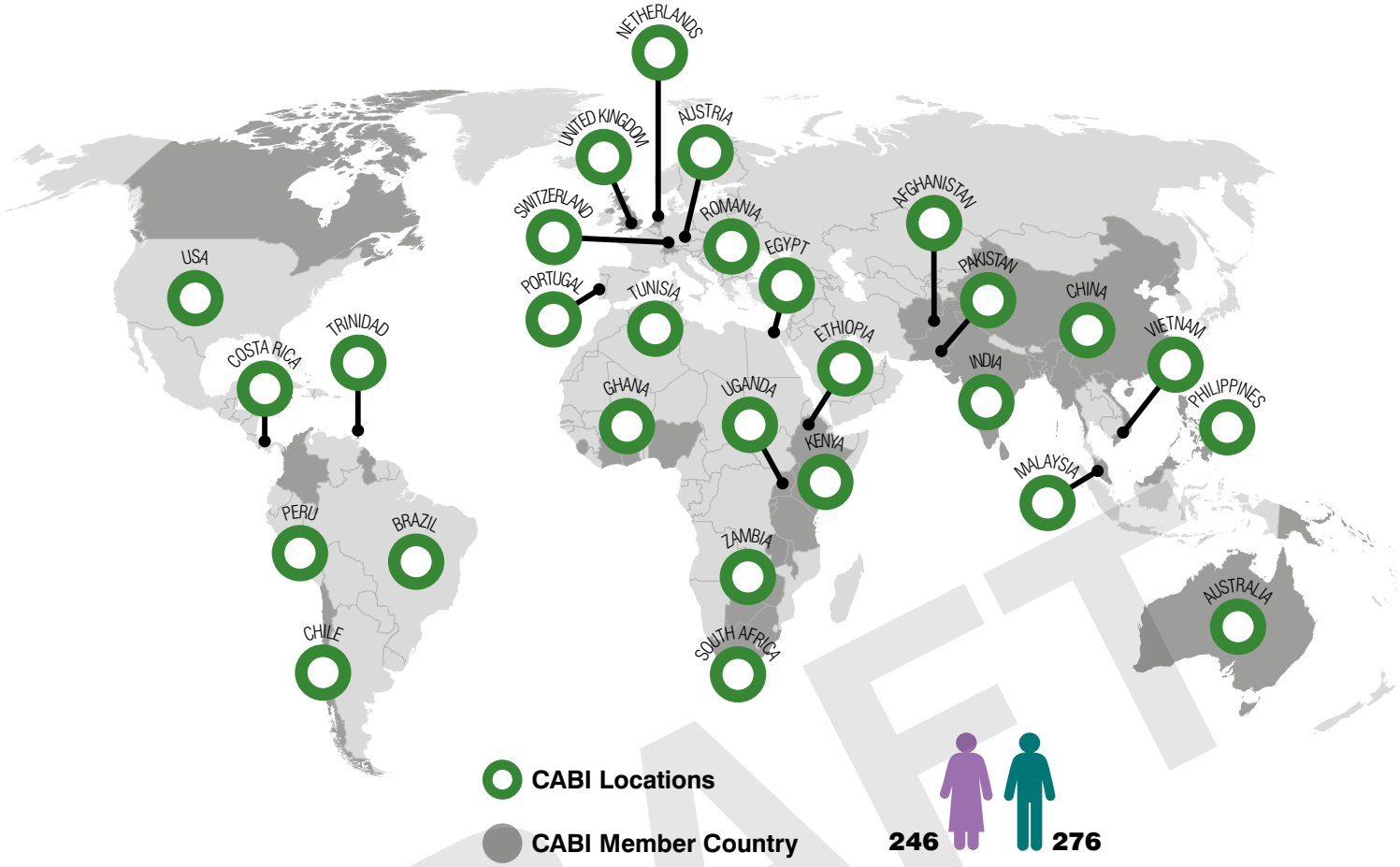
CABI's expertise

CABI is recognized as a world leader in identifying, diagnosing, preventing and controlling plant pests and diseases. We apply this expertise to make agriculture more sustainable and to protect the environment. We also have specialist skills in social and economic sciences, which we use to contribute to solving broader societal challenges in areas such as food security, poverty alleviation, gender inequality and climate change. In addition, we are experts in the communication of science, particularly in making research findings available to farmers for practical application and in reaching researchers, students, practitioners and policymakers through our scientific publishing, education and training platforms, and science journalism.

CABI's unique contribution

Our combination of science, communication and practical solutions on the ground are central to our success, as is our structure. Our membership represents many of those most severely impacted by climate change, food insecurity, inequality and loss of biodiversity. We apply our skills to the needs of our 48 Member Countries, ensuring we are responsive to their requirements, and we deliver on our shared goals through building deep and long-term partnerships.

Our vision is a world where the sharing of agricultural and environmental knowledge empowers people and protects the planet.



CABI's global impact

CABI works globally, in and beyond its **48 Member Countries**. We foster collaboration between Members, including South–South collaboration through which skills and technology are shared between developing countries. At the same time, we respond to regional, national and local priorities. We will continue to develop regional and national strategies that align with our global Strategy but tailor our approach to local needs. We will strive to work in a demand-driven manner, with an emphasis on listening and reciprocal learning, and to be mindful of the full impacts of our actions on local communities, organizations and societies. We expect to conduct more work in 'fragile states' in future. More broadly, we will continue to expand our local presence to more of the places where we work but where we currently have no or few locally based staff.

Partnerships and collaboration

Working with others who bring complementary skills and perspectives can allow us to achieve more. That is why we always welcome opportunities to partner and collaborate with other organizations. CABI's partnership with its Member Countries is central to the success of our programmes.

Also of key importance are our relationships with donors, many of whom are also Member Countries, who fund much of our international development work. We collaborate with a wide range of other international, national and local organizations in the public and private sectors to deliver our mission. We are a member of the Alliance of International Research and Development Centers for Agriculture.

CABI's diversity

We are proud of our diverse global team, spread across more than 25 countries and with a wide range of different backgrounds, expertise and skills.

We are committed to improving the representation of women in our senior management and also intend to make broader progress in building a more inclusive and diverse organization over the period of this Strategy.

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CABI, as an international intergovernmental not-for-profit organization, gratefully acknowledges the generous support received from our many donors, sponsors and partners. In particular we thank our Member Countries for their vital financial and strategic contributions.

KNOWLEDGE FOR LIFE