Medium-Term Strategy

2023–2025

KNOWLEDGE FOR LIFE

Foreword

Dr Ismahane Elouafi, Chief Scientist, FAO

As Chief Scientist at the Food and Agriculture Organization (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 Medium-Term Strategy 2023-2025 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 Medium-Term 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.

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 process that led to this new Medium-Term Strategy.

Introduction

CABI works on the biggest challenges facing humanity – **hunger**, **poverty**, **gender inequality**, **climate change** and the **loss of biodiversity**. Our Medium-Term Strategy sets out what we plan to do in each of these areas over the next three years 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 49 Member Countries, and this Medium-Term Strategy has been shaped by extensive consultation with those Members and 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 Medium-Term Strategy are objective criteria that can be used to assess our impact. Our measurement approaches for these indicators will seek to distinguish changes attributable to CABI's work from background changes with other causes, such as market forces. Targets for each indicator will be 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.

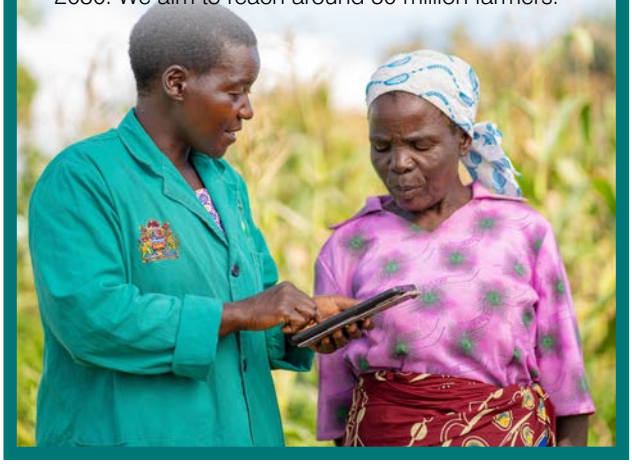
CABI is a leader in empowering farmers with knowledge, skills, tools and technology that can help them grow more and lose less to pests and diseases. At the same time, we work with governments, industry and other stakeholders to influence policies and practices to support farmers' access to markets,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

To deliver change, over the next three years 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
- Support countries to make their national plant health systems better able to predict, prevent and prepare themselves for plant health threats, 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 surveillance by combining satellite observations with other data and supporting greater regional co-ordination between countries, while also ensuring 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, yields 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, utilizing improved digital decision support tools, digital communication campaigns and digital learning
- Explore how private-sector actors, such as 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 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
- Improve access to markets for smallholder farmers and connect them to sustainable value chains that supply safer and higher quality produce. We will support farmers and others to benefit from income opportunities linked to rising local market demand for indigenous and more nutritious foods. We will also focus on international trade opportunities, partnering with agribusinesses committed to sustainable sourcing and with governments and regional bodies to remove barriers to trade. This will include continuing our work to enhance national sanitary and phytosanitary (SPS) capacities critical for export success
- Seek to improve the livelihoods and incomes of smallholder farmers by driving the growth of small and medium-sized enterprises (SMEs) that serve their needs through improving the information available to potential investors in these businesses

PlantwisePlus

PlantwisePlus is a major international development collaboration programme designed to improve the food security and livelihoods of smallholder farmers. It builds on two earlier successful CABI programmes: Plantwise and Action on Invasives. PlantwisePlus has three "impact pathways": **(1) pest preparedness**, improving the prediction and prevention of, and preparation for, pest threats to farmers' crops; **(2) farm advisory**, providing farmers and advisory service providers (public and private) with better information and digital decision support tools to support sustainable and climate-resilient agriculture; and **(3) pesticide risk reduction**, shifting the way crops are protected, away from high-risk farm inputs towards safer approaches, supporting human health and protecting biodiversity. The programme proof-of-concept phase will conclude in 2023 and we will then scale up the programme over the period to 2030. We aim to reach around 50 million farmers.



Summary of actions

Support sustainable food production by strengthening the linkages between plant health system components, including advisory services, research, input supply and regulation

Predict and prevent pest threats to crops through co-ordinated prioritization and response plans that employ digital technology, including earth observation data and application of modelling

Improve farmers' market access, incomes and welfare by increasing the use of low risk plant protection products and Integrated Pest Management (IPM) strategies that enable safer production of higher-value produce

Mobilize agro-input dealers as advisors on, and suppliers of, sustainable crop protection solutions

Provide research to support investment in SMEs serving the needs of smallholder farmers

Indicators

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

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

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

Increase (kg) in volume of local/national/international trade produced by smallholder farmers, by sex, age, and minority group

Increase in value (US$) of local/national/international trade produced by smallholder farmers, by sex, age, and minority group

Value chains and trade

By helping farmers improve the quality and safety of what they grow, process and sell, CABI helps break down barriers to trade and improve access for smallholder farmers to domestic and international markets. For example, two projects – in Ghana and in Uganda – had a dramatic impact on those countries' trade with the European Union (EU). Prior to CABI's projects, growers and smallholders were facing poor sales to the EU because their produce (flowers in Uganda; fruit and vegetables in Ghana) was too affected by pests to meet the EU's high SPS standards. Ghanaian imports had even been banned by the EU. CABI's projects strengthened the ability of smallholders and growers to improve the quality and safety of their produce. The effect was dramatic: the EU lifted its ban on imports of Ghanian produce, worth US$ 15m, while in Uganda the number of product interceptions was reduced from 36 to zero over a five-year period.

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 risk to crops from insect pests and plant diseases. Tailored messages are then created and made available through our Plantwise network and other local extension services, giving clear advice on how and when to apply appropriate practices to minimize crop damage. PRISE has helped over 1.8 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 extreme weather 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 increased spread and impacts of invasive species. Together, these approaches bring benefits to livelihoods and biodiversity.

To deliver change, over the next three years we will:

- Develop, test and share information and tools that help smallholder farmers build resilience to climate change threats. This includes supporting them to make changes in their choice of crops (thus diversifying agro-ecosystems), to optimize their practices to meet changing conditions and to manage pest and disease threats associated with climate change. Underpinning this, we will continue to work with partners such as the Adaptation Research Alliance to further research in this area, including innovative social science research
- Provide insights on pest risks that incorporate future climate change scenarios to support national climate adaptation and biosecurity plans
- Explore the potential to develop more comprehensive and equitable climate risk profiles for smallholder farmers in order to support adaptation planning and improve access to financial services, particularly for women smallholder farmers
- Provide further support for assessing climate risks in critical commodity value chains such as cocoa, coffee and cotton, identifying medium-term risks posed by climate change and variability and providing farmers and businesses with appropriate advice on adaptation techniques and management strategies, as well as an improved understanding of climate risks
- Continue to work with partners to develop landscape-wide management and governance plans for the control of invasive species, particularly invasive weeds. These nature-based solutions 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 microbiome research to inform climate adaptation practices and technologies for vulnerable crops and croplands

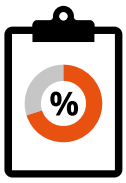
Summary of actions

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 and governance plans to control invasive species on a landscape scale, providing enhanced climate resilience and also contributing to climate mitigation

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



Indicators

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

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

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

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 local partnerships, focusing on the needs of smallholder farmers and CABI's Member Country governments.

CABI has developed, supported, and promoted a wide range of CSA practices and technologies that enable farmers to adapt to the impacts of climate change and build resilient livelihoods, an important example being Climate-Smart Pest Management. Read more at: www.fao.org/3/BU464EN/bu464en.pdf

As part of the CASA programme, CABI has worked with public and private investors to increase their engagement in climate-smart smallholder agriculture. This has included recommendations to improve guidance for financial institutions on climate risk assessments; analysis of climate adaptation practices in the UK FCDO's commercial agriculture portfolio; and gaining insights from investors and innovators on commercially viable CSA technologies.

GOAL 3

Reduce inequality through better opportunities for rural women and youth

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

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

To deliver change, over the next three years we will:

- Seek to create new income and employment opportunities for rural women and youth in agricultural value chains. This will include roles in the local production of low-risk biological pest control products
- Develop digital, hybrid and face-to-face agricultural advisory services designed to ensure equitable access for women and other marginalized groups. We will integrate these into services provided under our major programmes and projects, and we will use group-specific evidence on effectiveness to further refine and develop our approach and ensure women farmers and others who face disadvantage are benefitting
- Pilot social and behavioural change communication (SBCC) approaches that seek to shift the social norms underpinning inequalities in access to and uptake of agricultural services
- Drive the adoption of productivity-enhancing technologies by women and youth farmers by applying a targeted approach to the development, dissemination and promotion of these technologies
- Complement this work by mainstreaming gender considerations in all CABI programme work and by using CABI's platforms to promote female role models in agriculture and the environment – for example, via SciDev.Net's coverage of successful women innovators

Music videos help women farmers grow better soybean crops

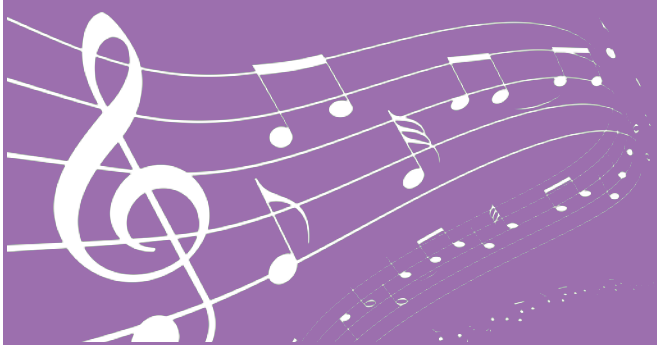
Farmers and agro-dealers are not always well connected: farmers may not know where to buy high-quality inputs, and agro-dealers may not be aware of what farmers need or want to grow. Women farmers are particularly affected, especially those speaking minority languages.

The Gender and the Legume Alliance (GALA), a collaboration between CABI and partners, aimed to help more women farmers in Ghana grow more and better soybeans. The alliance considered ways to share valuable farming information more widely and took the novel approach of developing music videos about growing soybeans.

The videos, based on traditional folk rhythms and screened in 200 villages in northern Ghana, reached around 41,000 members of farming households, with more women attending than men.

A Facebook campaign reached another 45,000 farmers. After the campaign, farmers reported greater awareness about soybean farming practices, including planting in line, weeding regularly, spacing seeds apart and using fertilizers.

Data showed an increase in the adoption of crop rotation and chemical weeding of 4%–16%. The links built between farmers and agro-dealers also led to the development of a specific legume fertilizer.



Summary of actions

Create new income and employment opportunities for women and youth as agricultural service providers

Support the involvement of women and youth in the production of low-risk bio-based pest control products for local use

Ensure equitable access to advisory services by providing mixed digital and face-to-face services designed to include and empower marginalized groups

Pilot SBCC 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 female scientists and innovators

Indicators

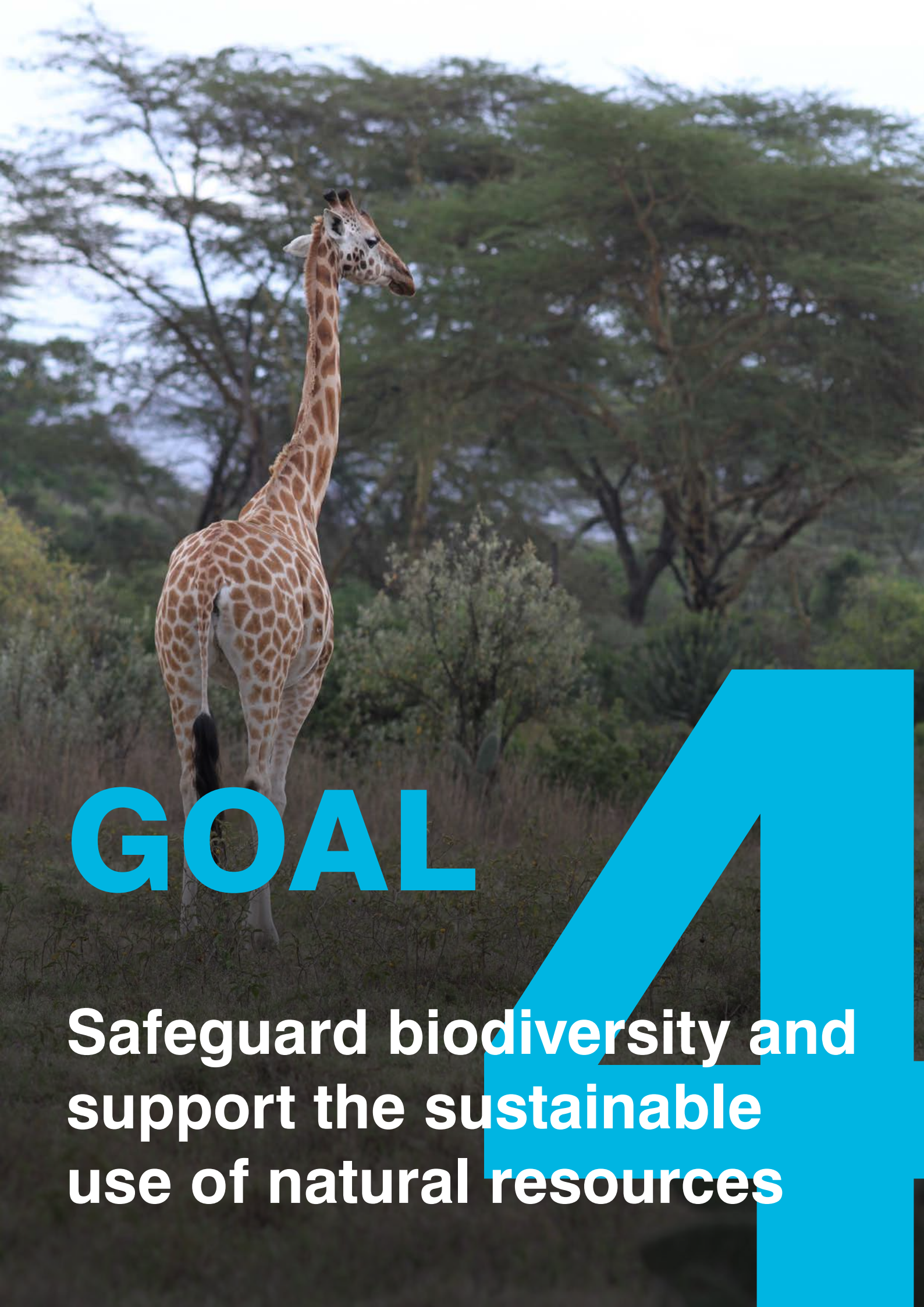
Number of women who are more empowered, as measured by the project-level Women's Empowerment in Agriculture Index (pro-WEAI)

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



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 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 solutions for specific pests, diseases and weeds that minimize environmental harms. Our programmes to manage invasive species help preserve and restore biodiversity across the world. We contribute to the cataloguing and conservation of global biodiversity and to finding ways of utilizing biodiversity for human and environmental benefit.

To deliver change, over the next three years we will:

- Promote nature-based solutions in agriculture, including IPM and the greater use of biological alternatives to toxic pesticides
- Work to minimize the disruption of ecosystems by invasive species, by documenting the spread of and threat from these species, helping countries produce plans for their management across landscapes and different land uses, and contributing to nature-based solutions, especially through the identification, development and release of new and safe biological control agents. Our work in this area will protect biodiversity both by reducing the need for toxic pesticide use in agro-ecosystems and by supporting the restoration of ecosystems that have been degraded by invasion
- 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. In addition, we will work on applications of CABI's microbial collections, which have the potential to yield new biocontrol agents and other nature-based products that are beneficial to agriculture and the environment
- Explore our collections, data and knowledge repositories, which catalogue biodiversity and monitor changes in species distribution over time. We will find 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

Summary of actions

Support regional, national and subnational bodies to develop and implement landscape scale invasive species management strategies that reduce negative effects on biodiversity and ecosystem service delivery, while sustaining livelihoods

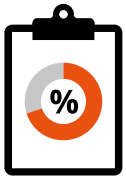
Provide sustainable nature-based solutions to priority invasive and native pests, including tackling new invasive species by developing, gaining approval for, and releasing new biocontrol agents

Increase the availability and use of low-risk bioprotection products that conserve biodiversity

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 global environmental change. 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. CABI scientists recently estimated the economic impact of invasive species on Africa's agricultural sector to be US$65.58bn a year, equivalent to 2.5% of the GDP of all African countries combined. CABI has worked on invasive species for over 100 years, providing robust data on their impacts on human well-being and the environment, and developing practical ways of tackling the biggest threats, including infamous pests like the desert locust and fall armyworm.

An example of successful research in this area is our work on the invasive *Prosopis juliflora* tree, which has invaded several million hectares of grassland, cropland, wetland and settlements in Eastern Africa, including the drylands of the Afar Region in Ethiopia. Our work there showed 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.

We are currently working on solutions for over 80 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. CABI also applies novel approaches: for *prosopis*, 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. Over the next three years, we will explore whether community-led approaches of this kind could support livelihoods and reduce conflicts over land use in other landscapes invaded by weeds.

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

One Health

One Health is a concept that stresses the interconnections between humans, animals, plants, ecosystems and their shared environment. CABI has worked with leading experts to develop new resources in One Health, including an open-access journal, a database of relevant case studies and a knowledge hub combining these and other materials. These resources are designed to support the transdisciplinary approach required to make One Health a practical reality. CABI is also applying One Health in practice through the development of integrated livestock and plant clinics in East Africa, which are showing the potential to strengthen crop and animal healthcare systems.

GOAL 5

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

Despite the wealth of data available about agriculture and the environment, major gaps remain and further effort is needed to curate, synthesize and make accessible existing data and evidence in order to turn this into useful knowledge that is available to those who need it.

CABI uniquely combines original scientific research, scientific publishing, 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 on increasing the reach, application and impact of science will remain user-focused and needs-driven, co-created with partners, customers and end users. In order to aid the discovery and use of our knowledge resources, we will integrate CABI's research and information resources into a single new platform: the CABI Digital Library.

To deliver change, over the next three years 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" co-operation
- Conduct and publish high quality research in biological and social science, in line with our Science Strategy. In particular, we will seek to 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
- 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 data sets and disparate sources
- Work with partners to develop a global platform to support evidence-informed decision-making in agriculture and food security. Following 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 policymakers. In doing so, we will leverage the strength of CAB Abstracts as a leading source of published and "grey" literature, together with artificial intelligence, 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 a database of educational case studies, and by expanding the scope of our encyclopaedic Compendium to focus on climate-smart agriculture. We will launch and grow new open-access journals in the areas of One Health, agriculture and the environment
- Expand the digital learning content in the CABI Academy 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 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). This will reduce repeated and wasted effort and maximize the value and impact of projects

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 co-operation in the agricultural and environmental arenas

Enhance, expand and extend the reach of CABI's Publishing and Knowledge products and learning resources

Increase the output and reach of SciDev.Net's independent coverage of science for development

Transform the support for evidence-based approaches to 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

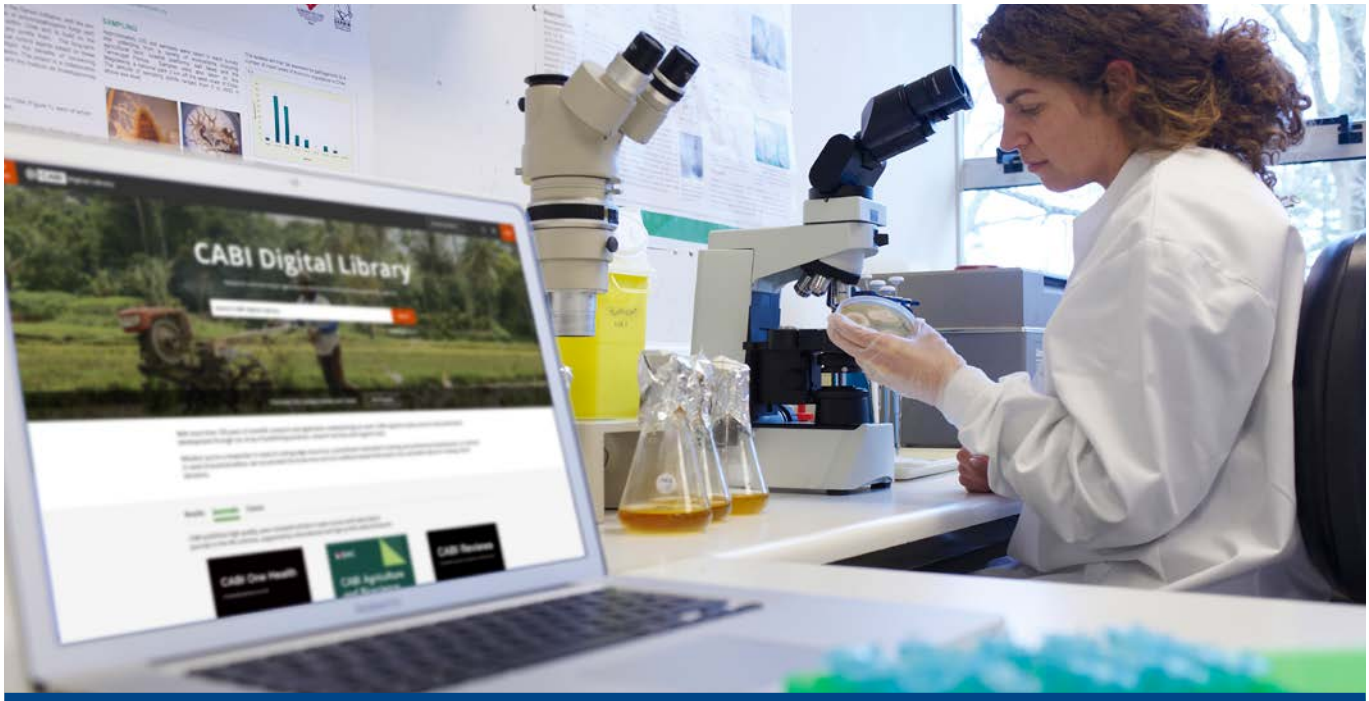
Number of stakeholders reached through CABI publishing and knowledge products, learning resources and SciDev.Net coverage

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, age, minority group

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

$ value of investments commissioned by donors under the FAIR principles



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.

Using development communications and extension to increase farmer yields

We use our on-the-ground expertise in development communication and agricultural extension (advisory services) to help smallholder farmers apply agricultural practices that improve their yields. Our approaches are always participatory: they are built on human-centred design principles, responsive to the needs of the communities we serve and respectful of indigenous knowledge. For example, a project supported by CABI in Tanzania and Uganda aimed to improve banana farming practices by commissioning farmer intermediaries to share banana farming information at scale with thousands of smallholders.

The advice covered the selection of a good site to grow crops; mulching; managing pests; land preparation; and soil and water conservation. Advice was shared in many ways, including through banana calendars, dramas, guides and posters developed by CABI in collaboration with partners and stakeholders. The project reached 47,650 farmers, and the farmers who participated increased their yields by 64% – worth an extra US$8.15m annually in total.

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, EthioSIS, was developed in response to a clearly articulated 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 the FAIR data principles (FAIR data is Findable, Accessible, Interoperable and Reusable) and implementation plans. These have now been 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.

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, as part of one recent initiative, we enhanced the chat groups used by the plant doctors who provide advice to farmers at plant clinics. Using chatbot technology and artificial intelligence-driven computer vision, plant doctors are now directly connected with the CABI diagnosis team and are able to receive timely expert assistance when they need it. The computer vision guides the plant doctors to provide better images of the crop problems they are seeing, making the process more efficient.

SciDev.Net

SciDev.Net, an integral part of CABI since 2017 although it remains editorially independent, is the leading source of science-based news for global development. A network of journalists worldwide contributes to its news, podcasts and other outputs.

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 2021, our content was seen or heard over 900m times, with our radio podcasts on science reaching an estimated 12 million people weekly across sub-Saharan Africa. *SciDev.Net*'s long-form investigations into the impact of science frequently triggered stories in prominent mainstream media outlets.

A SciDev.Net article that looks at the unequal burden borne by women during the COVID-19 pandemic was tweeted by Melinda Gates, which helped increase the visibility of the need for sex-disaggregated data during the pandemic. Her tweet was liked and retweeted by representatives from global health institutions such as UNFPA, CARE and Jhpiego, as well as by a former Minister of Health. *SciDev.Net* convened a follow-up debate attended by 250 people with academic, non-profit, research and policy roles, including a representative from the National Institutes of Health Office of Research on Women's Health. A follow-up article found that various countries that had never reported sex-disaggregated data have now started to do so.

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 49 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 20 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.

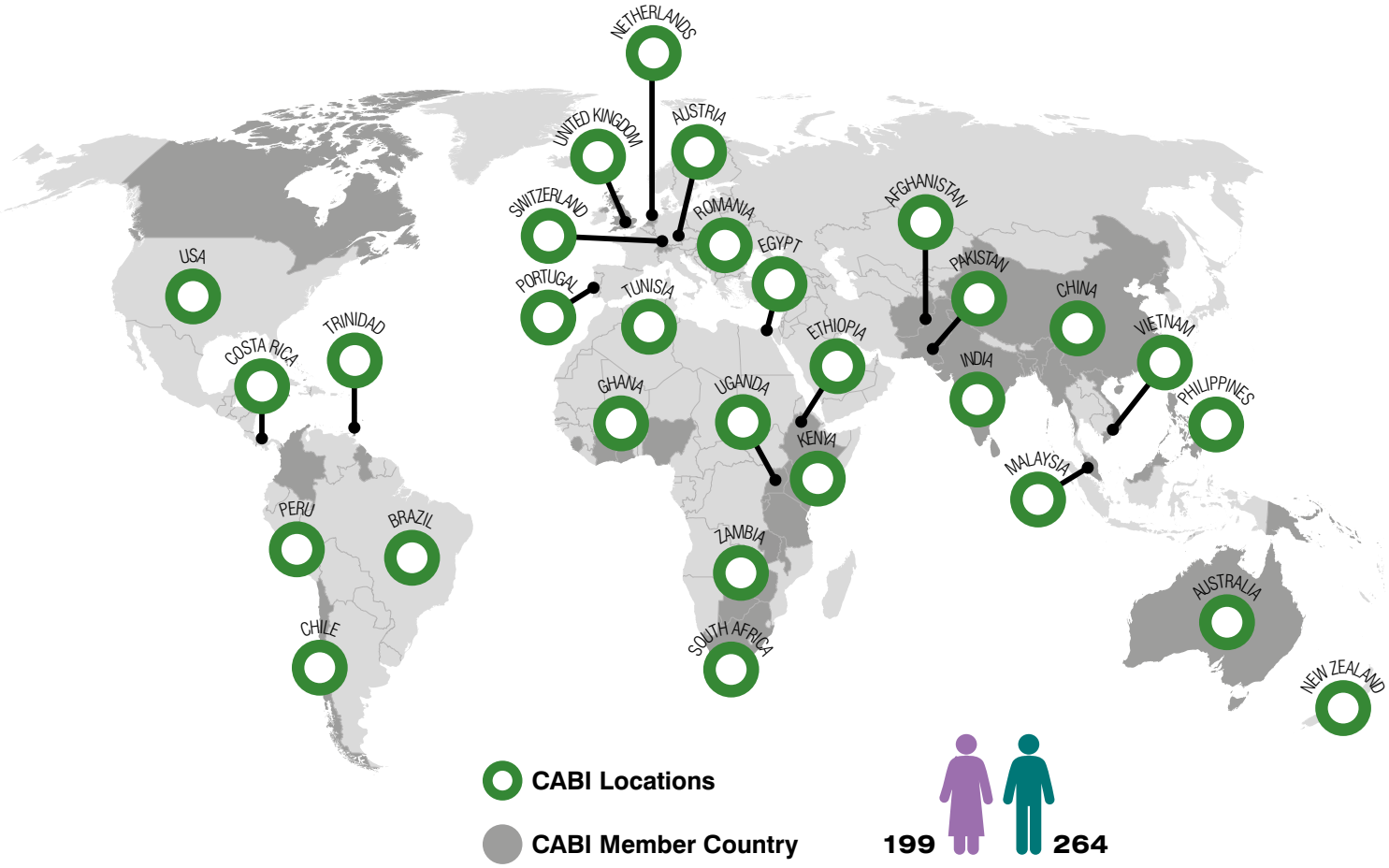
CABI's expertise

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 49 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 **49 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 and national priorities. We will continue to develop regional and local strategies that align with our global Medium-Term Strategy but tailor our approach to local needs. We expect to conduct more work in 'fragile states' over the next three years. 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 (AIRCA).

Over the next three years, we will review and renew our approach in order to work even more effectively with our major partners.

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 Medium-Term Strategy.

Contact CABI

Africa

Ghana
CABI, CSIR Campus
No. 6 Agostino Neto Road
Airport Residential Area
P. O. Box CT 8630
Cantonments
Accra
Ghana

T: +233 (0)302 797 202
E: westafrica@cabi.org

Kenya
CABI, Canary Bird
673 Limuru Road
Muthaiga
PO Box 633-00621
Nairobi
Kenya

T: +254 (0)20 2271000/20
E: africa@cabi.org

Zambia
CABI, 5834 Mwange Close
Kalundu
PO Box 37589
Lusaka
Zambia

T: +260 967619665
E: southernafrica@cabi.org

Americas

Brazil
CABI, UNESP-Fazenda
Experimental
Lageado
FEPAF (Escritorio da CABI)
Rua Dr. Jose Barbosa de
Barros 1780
Fazenda Experimental Lageado
CEP:18.610-307
Botucatu
Sao Paulo
Brazil

T: +55 (14) 3880 7670
E: y.colmenarez@cabi.org

Trinidad & Tobago
CABI, 59 Gordon Street
Curepe
St. Augustine
TUNAPUNA 331323
Trinidad and Tobago

T: +1 868 6457628
E: n.ramnanan@cabi.org

USA
CABI, 200 Portland Street
Boston, MA 02114
USA

T: +1 (617) 682 9015
E: h.jansen@cabi.org

Asia

China
CABI, Beijing Representative
Office
Internal Post Box 85
Chinese Academy of
Agricultural Sciences
12 Zhongguancun Nandajie
Beijing 100081, China

T: +86 (0)10 82105692
E: china@cabi.org

India
CABI, 2nd Floor, CG Block
NASC Complex
DP Shastri Marg
Opp. Todapur Village
PUSA, New Delhi – 110012
India

T: +91 (0)11 25841906
E: india@cabi.org

Malaysia
CABI, PO Box 210
43400 UPM Serdang
Selangor, Malaysia
T: +60 (0)3 89432921
E: cabisea@cabi.org

Pakistan
CABI, Opposite 1-A
Data Gunj Baksh Road
Satellite Town
PO Box 8
Rawalpindi-Pakistan

T: +92 51 9292062
T: +92 51 8434979
E: cabi.cwa@cabi.org

Europe

Netherlands
CABI, Landgoed Leusderend 32
3832 RC Leusden
The Netherlands

T: +31 (0)33 4321031
E: netherlands@cabi.org

Switzerland
CABI, Rue des Grillons 1
CH-2800 Delémont
Switzerland

T: +41 (0)32 4214870
E: europe-CH@cabi.org

UK
CABI, Nosworthy Way
Wallingford
Oxfordshire
OX10 8DE, UK

T: +44 (0)1491 832111
E: corporate@cabi.org

UK
CABI, Bakeham Lane
Egham
Surrey
TW20 9TY, UK

T: +44 (0)1491 829080

E: cabieurope-uk@cabi.org
E: microbialservices@cabi.org

CABI is an international intergovernmental organisation, and we gratefully acknowledge the core financial support from our member countries (and lead agencies) including:

UKaid from the British people
Ministry of Agriculture and Rural Affairs, People's Republic of China
Australian Government Australian Centre for International Agricultural Research
Agriculture and Agri-Food Canada
Ministry of Foreign Affairs of the Netherlands
Schweizerische Eidgenossenschaft Confédération suisse Confederazione Svizzera Confederaziun svizra
Swiss Agency for Development and Cooperation SDC