## CABI

# CAB in review

(b) CABI

### **Contents**

Foreword from the Chair	3
Foreword from the CEO	4
CABI Member Countries come together to tackle biggest challenges facing humanity	6
Shaping our future: CABI's Medium-Term Strategy	7
2022 in review: addressing global challenges	8
Our stories	10
Thank you	24
Governance	26
CABI's global role	27
Financials	28
CABI staff	31
Staff publications	33

**a** Links to open access materials

Cover image: Plantwise in Burundi, Nihimbazwe Paterne for CABI

## **4.3**m

farmers reached directly and indirectly through the CABI-led Plantwise/ PlantwisePlus programmesupported activities in 2022

> Worked in **91** countries in 2022

staff publications published in 2022



### **Foreword from the Chair**

In 2022, important areas for the Board's action and oversight were ensuring the delivery of plans across the organization, monitoring the adequacy of future funding, and mapping out clear goals with our Member Countries in a new strategy. We also maintained vigilance over our legacy Pension Scheme and renewed the Board with several new appointments.

We experienced a rebound last year after COVID-19, with development programmes like PlantwisePlus expanding their activity and our global portfolio of smaller projects steadily growing. The launch of CABI Digital Library also enhanced our Knowledge Business; this consolidates our publishing and knowledge resources into one easy-to-use platform.

One of the Board's essential roles is to keep looking to the longer term, particularly the organization's future funding. A key objective last year was to complete financing for the proof-of-concept phase of PlantwisePlus through to the end of 2023. A new agreement with the UK's FCDO helped us to meet this important goal. We also gained funding for critical new programming like the Juno initiative to support policymakers with better evidence.

Also, looking to the future, CABI worked with its Member Countries and other stakeholders to develop a new strategic plan for the next three years. Member Countries approved this new Medium-Term Strategy at the end of 2022.

The Board remains focused on ensuring that CABI manages the deficit in its legacy UK Pension Scheme. We approved the latest valuation and recovery plan at the end of 2021 and submitted it

to the UK Pensions Regulator in 2022. Throughout the year and into 2023, CABI has kept up with all of its obligations under the recovery plan. As a Board, we acknowledge Member Countries' critical support in managing this issue. We are pleased to report that the deficit had fallen from over £80m when the recovery plan was submitted to under £60m at the end of 2022.

In early 2022, Prof. Dame Anne Glover, Prof. Ruth Oniang'o, and Dr Prem Warrior stepped down from the Board. After an open and thorough selection process, we were pleased to renew the Board with the appointments of Ann Tutwiler, Chileshe Kapwepwe, Christoph Chesher, and Marcy Vigoda, who bring an impressive array of skills and different perspectives to the organization's governance. In early 2023, Paulus Verschuren also stepped down, as did Dr Lutz-Peter Berg, who had represented CABI's Executive Council on the Board for 10 years. Dr Berg is replaced by the new Chair of CABI's Executive Council, His Excellency Vishnu Dhanpaul, who was elected by Member Countries at the March Executive Council meeting. I would like to thank all the Board Members who have completed their terms for their valuable contributions to CABI's development.

During the year we welcomed Euphresco as a new Affiliate Member of CABI. Meanwhile, within the organization, we added to our skills base with hires of additional experts in areas including gender, pesticide risk, digital marketing, business development, and operations. I thank all of our hardworking staff, both new and long-serving, for their contributions to CABI's achievements in 2022. We want to maintain the high level of engagement enjoyed with Member Countries in 2022 as we work towards implementing the new Medium-Term Strategy. There is real ambition at CABI to grow our impact and strengthen our partnerships, especially those with our Member Countries.

#### Roger Horton, Chair



## Foreword from the CEO

In 2022, we worked with our Member Countries to develop a new Medium-Term Strategy for 2023 to 2025. We increased the scale and impact of our international development work and unveiled a new Science Strategy to complement and underpin our Medium-Term Strategy. We also launched CABI Digital Library, a new, greatly improved and unified platform for our publishing and information resources.

While the worst impacts of COVID-19 waned in most places, the human catastrophe of the Ukraine war coupled with natural disasters such as droughts and floods led to fuel and food price spikes. This had adverse impacts on many people around the world. We reacted to these crises. joining efforts aimed at lessening their impacts. We published our response to the emerging food crisis and participated in food security dialogues. This included the G20 Agricultural Chief Scientists' meeting in Indonesia, the AGRF meeting in Rwanda, and the High-Level Food Security and Nutrition Conference convened by the African Union in Ethiopia. We also participated actively in global fora such as the Climate and Biodiversity COP meetings, important for framing longer-term plans to tackle the global challenges of climate change and biodiversity loss.

In September, following three regional consultation meetings with our Member Countries, we held our triennial Review Conference, focused on developing our new Medium-Term Strategy. The strategy focuses on five goals addressing poverty, hunger, gender inequality, climate change, and the loss of biodiversity. While these are broad challenges, we sought to define clearly what CABI would do under each goal, and how we would harness the breadth of our expertise across research, international development, and knowledge management to achieve tangible progress. We thank our Member Countries for co-developing and endorsing the new Medium-Term Strategy and look forward to working with them to achieve its goals.

At the Review Conference, we also reviewed achievements under the outgoing Medium-Term Strategy for 2020-2022. The great majority of the specific milestones we set in 2019 had been met at the end of this period; however, we sought to learn from both successes and setbacks as we developed our plans for the new Medium-Term Strategy.

During 2022, notable accomplishments included our contribution to original research, with 115 peerreview papers published across relevant scientific and social scientific disciplines. Our flagship food security programme, PlantwisePlus, gathered momentum, with formal launches in a series of countries. We also made good progress in the delivery of many other international development projects following the removal of COVID-19 restrictions. Winning a host of new projects through competitive processes and direct awards, together with additional donor support for major programmes, garnered some £13.9m of additional support for our future work.

Last year brought notable developments in our Knowledge Business with the launch of CABI Digital Library, a new and improved platform for our publishing and information resources. CABI Digital Library has increased usage of our resources and provided an enhanced user experience, while making it easier for us to expand our new offerings in the future. We introduced a number of new resources, notably the journal *CABI One Health* as well as books and cases. We continued to build our digital learning resource, the CABI Academy, which now has over 15,000 registered users from more than 140 countries.

CABI's work attracted over 1,600 items of online and broadcast media coverage during the year with an estimated reach of 123 million people. SciDev.Net, our independent media channel on science for development, extended its reach and range of outputs, which were seen or heard over 831 million times during the year.

Reflecting the uptick in our international development work and continuing good performance in our Knowledge Business, our revenues grew by 7.4% year on year to £36.9m, albeit not quite to the level we budgeted at the start of the year. Our operating surplus of £358k clearly exceeded our budget of £11k, helped by favourable changes in exchange rates during the year.

Looking ahead, our priorities for 2023 are to achieve the first set of targets under our Medium-Term Strategy 2023-2025 and the associated Science Strategy goals. We will work closely with our Member Countries to deliver the new strategy and on the Action Plans agreed with individual Member Countries. We will complete the proofof-concept phase for PlantwisePlus, which will be subject to an independent review important in shaping the programme's next, 'scale-up', phase from 2024. We will also complete the migration of our published content onto CABI Digital Library and build on this platform through further expansion and improvement of our products and services.

We thank our Member Countries, donors, and other stakeholders for their ongoing support and look forward to continuing work in partnership to deliver our mission and impact.

Dr Daniel Elger, CEO

## CABI Member Countries come together to tackle biggest challenges facing humanity

In September 2022, CABI held its 21st Review Conference. Taking place every three years, this event is an important milestone in the organization's agenda, bringing together CABI's stakeholders to examine previous years' work and determine future policies and strategies.

Delegates from over 40 Member Countries joined forces with CABI staff and partners at the conference. Discussions focused on solutions to global challenges such as hunger and poverty in rural communities. Biodiversity and climate change were high on the agenda, along with gender equality and youth employment.

Dr Ismahane Elouafi, the FAO's Chief Scientist and a former CABI Board Member, highlighted the scale of the global challenges and called for governments to focus on scientific research and development to help solve them. She drew attention to the Sustainable Development Goals and underscored how partnerships with organizations such as CABI could help to achieve them.

A series of lively panel discussions on key topics brought experts together from within and outside the organization. A separate session dived into how CABI intended to increase the impact and reach of science in agriculture and the environment. The organization committed to combining science and evidence synthesis with communication and practical action to turn research into policy and practice worldwide.

Delegates concluded the meeting by considering the

essential role of partnerships in addressing global challenges. At a separate governance session, Member Countries unanimously agreed that CABI's new Medium-Term Strategy should move forward to final approval, which was granted in December 2022.

CABI's CEO, Dr Daniel Elger, thanked Member Countries and partners for their support. He underscored how concerted action would be critical when delivering CABI's plans. "We are confident that with the continuing support and partnership of our Members and donors, we will achieve meaningful progress on our shared goals over the next three years," - Dr Daniel Elger.



## Shaping our future: CABI's Medium-Term Strategy

CABI is committed to working on some of the biggest challenges facing humanity, including hunger, poverty, gender inequality, climate change, and biodiversity loss. We have now agreed our Medium-Term Strategy for 2023-2025. A detailed process of collaboration was critical for helping us define our five major goals:



Our priorities are determined by our 49 Member Countries. Many stakeholders have shaped the Medium-Term Strategy through extensive consultation. The strategy helps us to define challenges as well as understand how we can best apply our expertise to address them. Each goal has top-level indicators to help us judge our impact and success.

Delivering on our strategy will contribute to the UN Sustainable Development Goals, including:



The Medium-Term Strategy will further our progress towards our vision of a world where the sharing of agricultural and environmental knowledge empowers people and protects the planet.

## **2022 IN REVIEW**

## addressing global challenges







### PlantwisePlus goes from strength to strength

PlantwisePlus is a global programme led by CABI. Launched in 2021, it aims to help smallholder farmers increase their incomes and grow safer and higher quality food through sustainable crop production. In 2022, the programme went from strength to strength, reaching an estimated 4.3 million farmers.

It achieved this considerable reach through a combination of plant clinics (149,276), plant health rallies (32,847), Pest Risk Information Service (PRISE) SMS alerts (43,543), mass extension campaigns (445,100), digital tools, including the PlantwisePlus Toolkit (197,727), and farmer-to-farmer information sharing (3,473,972).

PlantwisePlus gives supports in three concrete ways:

#### **Advising farmers**

#### **Preparing against pests**

#### **Reducing pesticide risks**

The programme is currently in its proof-of-concept phase, which will run until 2023. In 2022, it concentrated on six countries: Bangladesh, Ghana, Kenya, Pakistan, Uganda, and Zambia. But an additional 21 countries across Africa, Asia, and the Americas are benefitting from the backstopping of plant clinics introduced under the original Plantwise programme.

Highlights of 2022 include 40 full pest risk analyses conducted in Ghana and Kenya. The programme also released a biocontrol agent against papaya mealybug in Kenya – a pest that can cause significant crop losses. Results show the successful establishment of the agent in all sites, with a visible reduction of the pest's impact. The programme established a new production facility for biocontrol agents (Trichogramma) in Pakistan and trained facility personnel in the management of a key pest in tomato (Helicoverpa). This biocontrol agent should help to reduce chemical pesticide use over time.

Under PlantwisePlus, the CABI BioProtection Portal, an open-access online knowledge resource for advisors and farmers, is now available in 32 countries. And in February 2022, the programme launched the Crop App Index – a guide to 500 agricultural apps and tools for users worldwide.

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In 2022, PlantwisePlus went from strength to strength, reaching an estimated 4.3 million farmers ©Nihimbazwe Paterne for CABI





The PlantwisePlus Knowledge Bank is a free, open access resource ©Homeline Media for CABI

## **PlantwisePlus Knowledge Bank** helps countries prepare for crop health threats

Access to plant health knowledge is critical for the world's 500 million smallholder farmers. It can make the difference between crops that succeed or fail. But for many farmers globally, finding reliable plant health information can be difficult. It can even be a challenge for the extension experts who support them.

To help solve this problem, CABI upgraded the PlantwisePlus Knowledge Bank. This plant health information resource helps smallholders, extension services, and many others identify pests and protect crops.

The PlantwisePlus Knowledge Bank is a free, open access resource featuring over 15,000 pieces of plant health content. Since its launch in 2012, it's had over three million visits from people in 192 countries. In 2022, CABI conducted a survey to understand its benefits, usage, and users. The survey revealed the impact it's having worldwide, including in Malawi.

Mr Eric Haraman is the Programme Manager for the Blantyre Agriculture Development Division in Malawi's Ministry of Agriculture. Here, extensionists use the PlantwisePlus Knowledge Bank as a resource to boost their knowledge and skills. In the survey, Mr Haraman explained that the tool has helped his team bring critical plant health information directly to farmers.

Specifically, it's given them information about plant health problems not yet reported locally but observed in neighbouring countries. This has enabled them to prepare for risks and threats. Preparation is critical for safeguarding crops from invasive species and pest outbreaks. By doing this, it helps to protect farmer livelihoods.

"We have developed quite a number of extension materials such as factsheets for plant health problems of concern in Malawi. The PlantwisePlus Knowledge Bank has also assisted the Malawi plant health team to come up with over 50 pert management decision guides for specific important plant health issues facing the country,"



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he said. He explained that, in this way, the resource has helped Malawi as a country.

#### **CABI CENTRES**

Global

#### DONORS

Directorate-General for International Cooperation (DGIS), Netherlands European Commission Directorate-General for International Partnerships (INTPA, EU)

Foreign, Commonwealth & Development Office (FCDO), UK Swiss Agency for Development and Cooperation (SDC) Australian Centre for International Agricultural Research (ACIAR) Ministry of Agriculture and Rural Affairs of the People's Republic of China (MARA)

#### PARTNERS

We would like to thank our many partners for their support

## Project boosts Uganda's horticultural trade

In Uganda, agriculture is a significant source of income for most people. The industry employs 84% of the working population and supports 80% of the country's export earnings.

But several years ago, profitable exports to EU markets were hindered when Uganda failed to meet sanitary and phytosanitary (SPS) measures such as quarantine standards. Uganda put in place a self-imposed ban on chillies and other horticultural goods. At the heart of the problem were plant pests and high pesticide residues. The ban affected the country's smallholder farmers.

Bans like this prevent countries from growing their agricultural sectors to their full potential. But Uganda took action. The government's Vision 2040 identified agriculture as a big opportunity to transform the country. In 2019, the Ugandan government commissioned CABI to manage a three-year SPS project with partners. The aim was to improve Uganda's SPS practices.

The project focused on integrated pest management, food safety, and export requirements. It trained 1,400 smallholder farmers in SPS compliance. And it identified five priority pests to manage, including fruit flies, moths, and weevils. The project increased knowledge about profitable commodities, and it boosted the skills of farmers, extensionists, inspectors, traders, and transporters. The training helped them to tackle harmful organisms that damage produce.

Description
Description

Kampala's Entebbe International Airport now has inspectors working round the clock. They ensure exports meet requirements. Where inspectors intercept pests, Uganda's Ministry of Agriculture, Animal Industry and Fisheries records and addresses them. Interception databases help to uphold compliance, efficiency, and traceability. The investment has paid dividends.

"Working with partners, Uganda now has greater capacity to ensure that its exports are safe and of a high standard olemanoled by customers not only in regional but also more profitable European markets."



- Florence Chege, Project Scientist, CABI

CABI CENTRES CABI in Africa

#### DONORS

Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) Royal Netherlands Embassy (EKN Uganda) Standards and Trade Development Facility (STDF) World Trade Organization (WTO)

#### PARTNERS

Department of Crop Inspection and Certification Horticulture Exporters Association of Uganda (HORTEXA) Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Uganda Ministry of Trade Industry and Cooperatives (MTIC), Uganda National Agricultural Research Organization (NARO), Uganda Uganda Agribusiness Alliance (UAA) Uganda Export Promotion Board (UEPB) Uganda Fruits and Vegetable Exporters and Producers Association (UFVEPA) Uganda Horticulture Exporters and Processors Association (UHEPA)



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13 CLIMATE

15 LIFE ON LAND

## Plant clinics **boost women's empowerment** through biopesticide production groups

Globally, women make up 43% of the farming workforce. But on family-run farms, they rarely control decision-making and often work in manual labour. However, home-based agricultural 'cottage' industries are helping to boost women's incomes.

In India's state of Tamil Nadu, women have been creating biopesticide production groups, like the Ellya Thendral group. Here, they produce fungal biopesticides – eco-friendly pest control products. Historically, the groups have not always been commercially viable. But the PlantwisePlus programme is helping to change this.

In 2011, CABI and partners set up Plantwise plant clinics in Tamil Nadu. People started to notice a change. As the plant clinics became more established, the number of farmers visiting cottage industries for eco-products increased. The women's biopesticide groups started to thrive commercially.

Moreover, people noticed that as the groups thrived, the women did too. They become more confident, articulated themselves more clearly and engaged more in community life. As a result, they were able to secure capital ownership, credit, and leadership roles. Why was this happening?

In 2021, CABI studied the source of this empowerment. The research revealed a close connection between plant clinics and women's biopesticide production groups. Women in Tamil Nadu who engaged in cottage industries increased their empowerment through the operation of local production hubs for biopesticides, especially when those hubs were linked to a network of plant clinics.

The connection was clear. Plant doctors advised farmers on plant health. They recommended ecofriendly alternatives to chemical pest control, like biopesticides. The farmers then used this advice to seek out biopesticide products from women's groups like Ellya Thendral.

With support from plant clinics, women in Tamil Nadu have strengthened their cottage industries. The biopesticide production hubs that are linked to plant clinics empower them, nurturing successful businesses.

#### **CABI CENTRE**

CABI in India

**DONORS** CABI Development Fund

**PARTNER** MS Swaminathan Research Foundation, Tamil Nadu, India



**17** PARTNERSHIPS FOR THE GOALS

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### Vegetable project in Pakistan helps woman farmer build confidence and boost her income

Kubra Bibi is a farm labourer from Pakistan. Like many smallholders here, she struggles to make enough money to meet her family's needs.

In Pakistan, over 60% of the population live in rural areas. Poverty in these communities is high at nearly 55%. And while growing vegetables can provide a source of income, careers in horticulture are challenging.

Lack of knowledge about how to run a vegetable business is a big hurdle. Farmers lack the skills they need to grow high-quality produce to sell at market. Women especially lack access to farming and marketing knowledge and the confidence to pursue farming careers.

In 2020, the Tomato Flagship Initiative (TFI) began work as part of the Strengthening Vegetable Value Chains project in Pakistan. CABI and its partners supported the project, which aimed to help smallholders access more profitable tomato value chains. The project trained women how to grow tomato seedlings in nurseries and increase their incomes.

Kubra Bibi took part in the training. Investing in a tomato hybrid, she grew over 4,000 seedlings in a polytunnel, applying best practices she had learnt. Over 85% of her seeds were healthy and germinated. She grew most of the seedlings on leased land and sold almost a quarter at a nearby market, earning 2,475 PKR. She said, "Before participating in TF?, we did not know about to mato seedling enterprises. We were shy and felt hesitant to speak in front of men.

As a result, our involvement in family decision-making was also less. Male family members were conservative with our roles as females in farming.

This changed as we gained knowledge and skills in best practice nursery production and growing tomatoes.

[Trainers] helped me to realize that success is not a one-time achievement. It is a constant journey. I am a selfconfident lady, and I believe that agriculture is incomplete without females.

Insha'Allah, I will adopt the best practices of entrepreneurship and will be the best entrepreneur for tomato seedlings in future."

#### CABI CENTRE CABI in Pakistan

#### DONOR

Australian Centre for International Agricultural Research (ACIAR)

#### PARTNERS

Agricultural Research Institute (ARI), Tandojam, Pakistan Department of Agriculture Extension, Punjab, Pakistan Department of Agriculture Extension, Sindh, Pakistan Engro Foundation, Pakistan National Agricultural Research Centre (NARC), Pakistan Sindh Agriculture University (SAU), Tandojam, Pakistan The University of Queensland, Australia University of Agriculture, Faisalabad (UAF), Pakistan Women Agriculture Development Organization (WADO), Pakistan



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12 RESPONSIBLE CONSUMPTION AND PRODUCTI

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## **Protecting biodiversity and rural livelihoods** from the threat of woody weeds

Prosopis (*Prosopis juliflora*) is an invasive woody weed native to the Americas. It was introduced to East Africa in the 1970s for fodder and fuel, but today, it's having a devastating effect on biodiversity, crowding out native flora and consuming vast amounts of water. It's also affecting pastoralists who rely on the land to graze their livestock.

The economic impact is substantial. In South Africa alone, the cost of woody weeds to ecosystem services has been estimated at US \$1bn per year.

The impact on biodiversity is equally great. In Kenya's Baringo County, prosopis coverage has increased by over 2,000% in 28 years, creating a vast monoculture in which native species struggle to survive.

During this time, grasslands in Baringo have declined by 86%, largely due to Prosopis. Furthermore, this weed can consume up to half the total rainfall in certain arid regions of East Africa, worsening the impacts of climate change.

### How can we tackle these pernicious plants?

Building on previous work, **CABI leads the Woody Weeds + project**, piloting implementation of Kenya's new National Prosopis Strategy, to which CABI contributed. This will help sustainably manage the invasive weed in Kenya. A parallel project supports implementation of the National Invasive Species Strategy and Action Plan in Tanzania.

The project generates and shares knowledge about how woody weeds spread and impact landscapes. It also develops sustainable land management strategies for controlling the weeds. Manual control is virtually impossible due to dense thickets, and chemical control at large scale is expensive and can be harmful to humans and nature.

Biocontrol is one of the most promising methods, and the only option for sensitive habitats such as wetlands – key areas for pastoralism and wildlife conservation in East Africa. A landscapes approach involving different stakeholders can help to restore critical biodiversity, food, and fodder production, and save water. By continuing and expanding our work, we can tackle the threat, protect ecosystems, and support the people who rely on them.

#### CABI CENTRES

CABI in Africa and Switzerland

#### DONORS

Swiss Agency for Development and Cooperation (SDC) Swiss National Science Foundation The Darwin Initiative

#### PARTNERS

Centre for Development and Environment (CDE), University of Bern, Switzerland (co-lead Woody Weeds +) Centre for Training and Integrated Research in ASAL Development (CETRAD), Kenya Community Research and Development Services (CORDS) Farmbetter Ltd Kenya Forestry Research Institute (KEFRI) Tanzania Forestry Research Institute (TAFORI) (co-lead Darwin project) Tanzania Natural Resource Forum (TNRF) Tanzania Wildlife Management Authority (TAWA) University of Nairobi, Kenya

2,000% COVERAGE INCREASE IN 28 YEARS

## Cotton **farmer overcomes rising fertilizer costs** and shortages using compost

In 2022, the world faced a shortage of chemical fertilizer. Farmers struggled to find enough of this valuable agricultural input to feed their crops. For smallholders in low- and middle-income countries like Pakistan, this spelt disaster.

But chemical fertilizer can be harmful to agricultural workers' health and the environment. And farmers are tiring of its negative impacts.

Wazeer Ali, a cotton farmer from Pakistan, explained how he was fed up using chemical fertilizer on his farm. "[It had detrimental effects on my. soil, the environment, and human and crop health," he said.

In 2022, CABI won £1.59m from the Better Cotton Growth & Innovation Fund to help Pakistan produce over 124,000 metric tonnes of Better Cotton annually until 2025. To achieve this, we aim to train more than 32,000 farmers and 80,000 farm workers with cotton growing advice, including training on how to create and use natural compost as a fertilizer.

Alternatives to chemical fertilizers, like manure, are abundant and cheap. And approaches like composting not only improve yields but are costeffective and safe to use too.

Compost enriches the ground, maintains water and inhibits plant pests. And it promotes beneficial bacteria and fungi. These decompose organic matter and produce nutrient-rich soil. Compost also reduces carbon emissions by slowing the decomposition of plant materials. After attending CABI's training, Wazeer reported outstanding results on his farm.

The compost increased his crop's growth and yield by the same levels as chemical fertilizers. But it caused no damage to groundwater, the environment or human and animal health. Wazeer praised this low-cost approach that re-cycles waste like leftover animal food and farmyard manures.

"Using comport, I was able to save nearly 50% of the money I would have spent on synthetic fertilizer," he said. He plans to expand the use of compost next season and is encouraging other farmers to try composting too.

**CABI CENTRE** CABI in Pakistan

**DONOR** Better Cotton Growth & Innovation Fund



2 RESPONSIBLE CONSUMPTION AND PRODUCTIO





## **CASA highlights investment gap** limiting smallholder engagement in commercial markets

In 2022, an article by former British prime minister Tony Blair stated, "A new class of investor is needed to respond to the demand to sustainably produce, process and distribute nutritious, affordable food." He went on to highlight a US \$106bn financing gap in agricultural businesses in sub-Saharan Africa and Southeast Asia. The article appeared in *African Business*, one of the most influential business journals in Africa. Blair was citing research commissioned and designed by CABI, as part of its role in the Commercial Agriculture for Smallholders and Agribusiness Programme (CASA), which is funded by the UK's Foreign, Commonwealth and Development Office (FCDO).

This investment gap currently prevents an estimated 500 million smallholder farmers from engaging in commercial agriculture. FCDO's approach is to

use demand-led evidence generation as a vehicle for promoting change in investment policy and practice. It has entrusted CABI to lead the work of the CASA programme to make the commercial and development case for investing in agri-businesses that source produce from smallholders. The programme also focuses on promoting climate resilient food systems.

The work of the multidisciplinary CABI team is rooted in a deep understanding of how change happens. The team collaborates with policymakers from government and leading voices from the investor community to identify and address evidence gaps holding back investments.

CASA has published and shared over 30 research reports. The recommendations are targeted at

investors, governments, and the international donor community. CASA reports are starting to influence the investment strategies and practice of impact investors.

It can be challenging to put research into action, but CABI is helping to achieve this by focusing on short text and video summaries such as 15-second video snippets for LinkedIn campaigns. Behind every social media post is comprehensive research and often data on CASA's website.

#### **CABI CENTRES**

Global

#### DONOR

Foreign, Commonwealth & Development Office (FCDO), United Kingdom

#### **DELIVERY PARTNERS**

NIRAS Swisscontact TechnoServe





CABI's Private Sector Engagement Manager, Alvaro Valverde, addresses delegates at an agricultural investment meeting in Nepal ©CABI



13 CLIMATE

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## Masters course in crop management shares **eco-friendly farming techniques** worldwide

Agricultural education can boost confidence, promotion opportunities and respect among colleagues. That's what CABI discovered when it researched the long-term effects of its Masters of Advanced Studies in Integrated Crop Management (MAS ICM).

ICM is an eco-friendly way of managing agricultural land and optimizing crop yields. It helps farmers profitably grow more from fewer inputs with a minimal negative impact on the environment. From 2015 to 2020, CABI and the University of Neuchâtel in Switzerland ran the MAS ICM. Over 60 graduates from all over the world completed the course. Today, they're advocates of sustainable agriculture.

In 2021, CABI researched how the students benefited from the course long-term. In 2022, the results revealed that 44% received promotions to more senior positions. The majority of respondents (94%) believed that completing the MAS ICM course contributed to their step up the career ladder.

The MAS ICM course brought together extensionists, policymakers, scientists and teachers from around the world, 40% of whom were women. The CABI study revealed that 92% of the course graduates were able to share their ICM knowledge more widely once back home. This included critical learnings such as the importance of biodiversity for the environment. Most (85%) have changed their attitude towards pesticide use and feel they're now able to advocate for more sustainable agriculture.

Their knowledge sharing has had a positive knock-on effect on colleagues, farmers, and even policymakers. Graduates have changed attitudes towards pesticide use. And they've increased the use of ICM among smallholders, leading to improved yields and incomes.

Research into the MAS ICM suggests that virtual knowledge transfer, of technical skills at least, could be as effective as face-to-face training. And last year saw the introduction of the online Certificate of Advanced Studies (CAS) in ICM. This new virtual delivery will help to boost careers in agriculture and spread eco-friendly farming know-how to many more people.

#### **CABI CENTRE**

CABI in Switzerland

#### DONORS

Canton of Jura Swiss Agency for Development and Cooperation (SDC) co-financed from Plantwise funds

PARTNER University of Neuchâtel, Switzerland



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4 QUALITY

## Introducing our new platform, **CABI Digital Library**, and a range of new knowledge resources

#### **CABI Digital Library**

Part of CABI's mission is to increase the reach, application and impact of science in agriculture and the environment. In line with this, in 2022 we launched CABI Digital Library, an exciting new platform for students, researchers, and practitioners. CABI Digital Library offers a single place of knowledge and scientific discovery of CABI's tools and resources to support study, research, and practice.

#### **CABI Compendium**

In November 2022, we launched CABI Compendium. This knowledge resource combines data and research about species, pests, and diseases in one comprehensive location. It helps practitioners, researchers, and students access valuable knowledge about species' distribution, hosts, and threats. Pulling together images, maps, and diagnostic and decision support tools, this resource also lets users access support tools such as:

Horizon Scanning Tool Pest Risk Analysis Tool Invasive Species Discovery Tool









#### **CABI** journals

Last year, we expanded our journal portfolio, providing more open access content to support scientific discovery. Alongside CABI Agriculture and Bioscience, in July 2022, we published our first articles in CABI One Health. And we acquired a new journal, Human-Animal Interactions, which went live on CABI Digial Library in October.

#### BMC Part of Springer Nature



#### Announcing two new collections

Gendert and Applicatives: Integrating a gender perspective in apriculture is important to realize proter values per sensers. empowerment in the agriculture sector.

International Year of Millets: As 2023 has been declared the international Ward Millets CAB Agrophys & Boome a Issunching a special collection focused on milets, covering production, prosicility, economics, making sub-tanet provide and popularization.

### A quote from the Editor-in-Chief



\*CABI Agricultury and Stocharce tas an unnet need in the global varies indexing wrappen We publish multiduciplinary, multivational repeat whether look upparts for exercise assessed In Science. We slight publicly, for exercise, economic research that recording these more use management, and big data. By providing in other to behild only and medicuption racial we're caelled a bone far islance drech ynanan i'r hedry Drysen'r graeg souann.

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**One Health Knowledge Ban** 

Niklaus Grünwald, Editor-In-Chiel, North America

#### One Health Knowledge Bank

As part of our continuous commitment to One Health, we launched the One Health Knowledge **Bank** in November. Valuable One Health content is spread widely across multiple sources and platforms. The One Health Knowledge Bank combines CABI's One Health information in a searchable, single resource. This includes articles from CABI One Health, case studies from One Health Cases, chapters from our One Health books, and news and blogs.

#### CABI Cases

We also expanded our range of Cases. CABI's case study resources offer real-life experiences and expertise that support practice, research, and study. One Health Cases and Animal Behaviour and Welfare Cases went live with the launch of CABI Digital Library in July. We have more case studies coming in 2023. Plant Health Cases recently went live on CABI Digital Library.



## **SciDev.Net** impacts policy development and expands science communication

Science and development news outlet *SciDev.Net* went from strength to strength in 2022. Last year, it published a story entitled *Togo villages threatened by erosion*. The article led Yaou Lerry, Director of Environment at the Ministry for the Environment and Forest Resources in Togo, to name *SciDev.Net* as one of the news sources that prompted the government to evacuate areas affected by coastal erosion and start remedial works, including in Kossi Agbavi, the village featured in the article. She told the news outlet that press articles, "including that of *SciDev.Net*", drew the government's attention to the urgency of work to be carried out to halt the threat of coastal erosion.

In 2021, *SciDev.Net* published a story about the impact of African swine fever on pork production in the Philippines. African swine fever decimates Philippine pig stocks drew attention to the plight of pork farmers and the impact of pork shortages on food security. Since its publication, the Philippine government has changed its pork production laws. In 2022, *SciDev. Net* discovered that Senator Panfilo Lacson cited the article when opening his written argument for an investigation into the shortage's origins, demonstrating the importance of evidence-based science reporting in policy development.

And finally, *SciDev.Net*'s science communication programme, Script, continued to boost sciencefocused stories in the news. Talking about the course's benefits, Prof Emmanuel Samu Dandaura from Nigeria's Nasarawa State University, said: "Script has been an overwhelming success. It is an innovative programme that has delivered science communication skills to hundreds of my students, who today write thousands of high -quality news stories that are impacting and informing millions of people in Africa.

The Script programme has empowered my students and catalysed the power of education. We must sustain the momentum in order to reach our goal of raising scientific communication and knowledge across the regions."

#### DONORS

Robert Bosch Stiftung, Germany Sida, Sweden

#### PARTNERS

See Script's partners at: https://scripttraining.net/our-partners

Science Communication for Journalists



Science Communication for Scientists



Science Communication for Communication Professionals (MA)



Advanced Science Communication for Scientists (MSC)



### A year of scientific discovery

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. A core part of our new Medium-Term Strategy is increasing the reach, application, and impact of science in agriculture and the environment.

In 2022, CABI produced **145 publications**, 115 of which were published in peer-reviewed journals, and 73 of which were published in journals with an impact factor greater than two. Of the 145 publications, 115 were open access.

Below is a selection of highlights from 2022.

CABI scientists published a review of potential management options that farmers in Europe could take against an invasion of fall armyworm. This pest has already devastated maize crops in Africa and other parts of the world. Scientists expect it to spread to and establish in Europe. New CABI-led research, working in conjunction with the Bangladesh Agricultural Research Institute, proposed the establishment of local biological control agent production hubs to fight the devastating fall armyworm pest in Bangladesh.



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CABI led research to prioritize 120 potential invasive species that could pose a threat to agriculture and biodiversity in Kenya. The scientists ranked the species in order of likelihood of entry, magnitude of socio-economic impact and impact on biodiversity.

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CABI scientists published a paper that reviewed potential connections between biodiversity, climate change adaptation, and invasive species management policies. The study highlights opportunities in four countries for integrated approaches and greater efficiency in resource allocation and spending. And finally, CABI uncovered lessons learnt from the Africa Soil Health Consortium. Scientists published research that considered how sustainable agricultural intensification could be scaled up through campaign-based extension approaches.



# THANK YOU

CABI's ability to improve lives worldwide is made possible by the generous contributions of the many Member Countries, donors and partners we work with. For this, we want to say a big thank you.

Your ongoing support has enabled us to help...



...their village

...their soil health



## Governance

#### **CABI Board**

The Governing Board oversees CABI's programmes and guides management on operational and strategic issues.

#### EMT

CABI's Executive Management Team (EMT) is responsible for managing the organization's core business operations.

#### **Review Conference**

CABI's high-level governing body is the Review Conference of Member Countries, which reviews CABI's work programmes and determines its broad policies and strategies.

#### **Executive Council**

Representatives from each Member Country meet to monitor CABI's affairs and implement Review Conference resolutions.

#### **Liaison Officers**

Each Member Country has at least one Liaison Officer. Their role is to provide a crucial link between their country and CABI.





His Excellency Vishnu Dhanpaul (joined in Mar 23)



Mr Christoph Chesher (joined in Jun 22)



Mr Andrew Jack



Ms Chileshe Kapwepwe (joined in Jun 22)





Ms Ann Tutwiler (joined in Mar 22)



Ms Marcy Vigoda (joined in Dec 22)



Dr Daniel Elger, CEO

Mr Neil MacIntosh



Mr Rob Sloley, CFO

Ms Carol McNamara



Ms Linda Copsey



Dr Ulrich Kuhlmann



Dr Dennis Rangi











## CABI's global role

CABI is an inter-governmental, not-for-profit organization governed through a UN-registered treaty-level agreement. We work with countries that represent over half of the world's population, or over four billion people. Many of these people are smallholder farmers, and much of our work focuses on them.

Each of our **49 Member Countries** has an equal role in the organization's governance, policies and strategic direction. Our membership structure enables us to deliver products, projects and programmes that complement and strengthen the existing national capabilities of our Member Countries and beyond. This helps us to deliver on our mission to improve people's lives worldwide.

Since its beginnings as an entomological committee in 1910, our organization has grown to the Commonwealth Agricultural Bureaux in 1947, to CAB International in 1987, to its present structure today. The diagram shows when Members have joined throughout our long journey.



#### Statement of comprehensive income

for the year ended 31 December 2022

	2022	2021
	£'000	£'000
Income		
Sales and project income	32,999	30,558
Member Country contributions	2,339	2,347
CABITAX recovery	1,372	1,288
Miscellaneous income	142	105
	36,852	34,298
Expenditure		
Staff costs	(10,315)	(9,953)
Direct project costs	(19,666)	(16,741)
Production	(3,059)	(2,912)
Facilities and maintenance	(1,447)	(1,389)
Sales and distribution	(381)	(344)
Travel	(413)	(48)
Depreciation and leasehold amortisation	(691)	(768)
Consultants and freelancers	(528)	(503)
Restructuring costs	(38)	(254)
Expected credit losses from Member Country contributions	(210)	(351)
Associated company loss	(95)	(165)
Profit on foreign currency exchange	850	166
Other costs	(563)	(506)
	(36,556)	(33,768)
Operating surplus / (deficit) before interest	296	530
Interest receivable	62	2
	62	2
Operating surplus/(deficit) for the year before exceptional items	358	532

#### Other comprehensive surplus/(deficit) items that may be subsequently reclassified to operating surplus/(deficit)

Cash flow hedges	(60)	(251)
Movement between funds	(325)	(425)
Other gains on defined benefit pension scheme	25,902	11,174
	25,517	10,498
Total comprehensive cumplus for the year	25.875	11 030
Total comprehensive surplus for the year	25,015	11,000

### **Financials**

2022 was another solid year for CABI financially, with revenue growth combined with foreign exchange gains contributing to an operating surplus of £358k. This surplus exceeded internal budget expectations, although there was still a reduction on the prior year's surplus (of £532k) because of the adverse impact of general cost inflation.

CABI's total income in 2022 of £36.9m represents a 7.4% increase on the prior year, driven principally by the PlantwisePlus Programme. In difficult market conditions, Publishing sales (databases and books) performed broadly in line with expectations, albeit declining by 2.1% on the prior year. However, compendia and new e-learning resources covering crop pest diagnosis and management showed good growth. Total expenditure increased from £33.8m to £36.6m in 2022 due in large part to the increase in project-related direct costs.

In 2022, at £25.5m, the other comprehensive surplus was driven by a significant decrease in the net liability on the UK defined benefit Pension Scheme (of £25.9m). This reduction in the liability was caused primarily by the increase in UK bond yields linked to rising interest rates.

The end-of-year total cash balance of £9.6m still remained at a relatively healthy level, although it reduced from the 2021 figure of £12.7m because of disbursements related to the high level of project activity.

#### Statement of financial position

#### for the year ended 31 December 2022

	2022	2021
	£'000	£'000
Assets		
Non-current assets		
Land and buildings	14,924	14,853
Plant and equipment	1,167	1,188
Intangibles	691	344
Intangibles – goodwill	113	113
Investments accounted for using the equity method	631	756
	17,526	17,254
Current assets		
Inventories		
- books	221	334
- projects	2 357	1 864
Contract receivables net of provisions:	2,007	1,00
- sales receivables	2,006	1 0 2 4
- sums owing by project sponsors	2,090	848
Amounts receivable from member countries	08	21
Other financial acceta:	30	2
	0.000	10.000
- Cash and cash equivalents	9,000	12,080
Other receivables	1,1/1	10 504
Tetal acceta	16,973	18,304
	34,499	30,010
Equity and liabilities		
Equity		
Revaluation reserve	(3,145)	(3,145
Cash flow hedges	131	71
Designated fund	(75)	(75
Investment fund	(450)	(350)
Accumulated deficit	57,595	83,530
Total equity	54,056	80,031
Liabilities		
Non-current liabilities		
Post-employment benefits	(75.140)	(101.042
Lease liabilities	(31)	(56
	(75.171)	(101.098
Current liabilities	(,)	(,
Salas income received in advance	(2.252)	(3 330)
Sales in come received in advance	(3,232)	(0,009
Sume hold on hohalf of project anongers	(040)	(0 106
Trade and other psychology	(3,063)	(0,130
trade payables.	(1 10 4)	(1 000
- trade payables	(1,104)	(1,222
- Other financial liabilities:	(2,300)	(1,963
Other Infancial Habilities.	(101)	(71
	(131)	(/ )
	(13,384)	(14,/51
Total liabilities	(88,555)	(115,849
Total equity and liabilities	(34,499)	(35,818









### Staff publications

d Available open access

CABI authors in bold; corresponding authors (where named) underlined.

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