



المركز الدولي للزراعة الملحية
INTERNATIONAL CENTER FOR BIOSALINE AGRICULTURE

ICBA Key Highlights 2025



Executive Summary

ICBA advanced the implementation of its research and innovation portfolio, managing **23 projects** aligned with institutional and donor priorities, of which **13 were successfully completed**. The Center launched **7 new initiatives**, **5 of which were externally funded**, reflecting sustained external confidence in its work.

The Center maintained active engagement across national and international platforms, contributing to **105 strategic events**, including high-level conferences, coordination forums, and institutional knowledge exchange programmes.

Scientific output remained strong, with **28 research papers** in international peer-reviewed journals. Of these, **24 were published** during the year, while **4 additional papers were under review** at year-end.



23 ongoing research and development projects



105 national, regional, and international events



28 research publications in international peer reviewed journals

Key Milestones

ICBA achieved key institutional milestones that strengthened its global positioning, reinforced long-term partnerships, and advanced its mandate in climate-resilient agriculture and biodiversity conservation.



Deposit of Genetic Resource Accessions in the Svalbard Global Seed Vault

On 28 February, ICBA deposited **315 accessions** representing **110 plant species** including the Ghaf tree, the national tree of the United Arab Emirates in the **Svalbard Global Seed Vault**, marking the first contribution from a research institution in the Arabian Peninsula.

The genetic resources, conserved at **ICBA's Genebank in Dubai**, comprise heat, drought, and salinity adapted materials, many of which were secured in Svalbard for the first time. This contribution strengthens global crop diversity safeguards and reinforces ICBA's role in advancing climate-resilient agriculture in vulnerable regions.



Scaling Climate-Resilient Quinoa Through Strategic Partnership with Silal

On 24 April, ICBA presented to **His Highness Sheikh Hazza bin Zayed Al Nahyan, Ruler's Representative in Al Ain**, a strategic overview of progress achieved under the **Quinoa Value Chain Development Project in the UAE**, supported by the **Research and Development Fund of ADQ** in collaboration with **Silal**, during the inauguration of the Silal Innovation Oasis.

Through its scientific leadership, ICBA successfully expanded the project's implementation, with climate-resilient quinoa varieties approved for use in the United Arab Emirates and officially registered following

successful local trials. The high-performing varieties demonstrated strong agricultural productivity and high nutritional value, reinforcing quinoa's position as a strategic crop that supports the UAE's national food security objectives.



National Engagement on Salt-Tolerant Agriculture at the Emirates Agriculture Conference and Exhibition

On 27 May, ICBA participated in the inaugural **Emirates Agriculture Conference and Exhibition**, held under the patronage of H.H. Sheikh Mansour bin Zayed Al Nahyan, Vice President of the UAE, Deputy Prime Minister, and Chairman of the Presidential Court, and organized by the UAE Ministry of Climate Change and Environment at ADNEC Al Ain. The participation highlighted more than **25 years** of ICBA's applied research and institutional leadership in sustainable, salt-tolerant agriculture tailored to arid and saline environments.



UAE Government and IsDB Reaffirm Institutional Support Through 2029

On 30 May, the **Government of the United Arab Emirates** and the **Islamic Development Bank (IsDB)** renewed ICBA's founding agreement through 31 December 2029, reinforcing continued institutional support for the Center's mission and research programmes. The signing of the agreement extension addendum was witnessed by H.E. Dr. Amna bint Abdullah Al Dahak, UAE Minister of Climate Change and Environment, and H.E. Eng. Mohammad Jamal Al Saati, Special Advisor to the President of the Islamic Development Bank, on behalf of H.E. Dr. Muhammad Sulaiman Al Jasser, President of the Bank, reaffirming both parties' commitment to supporting ICBA's efforts to advance innovative agricultural solutions for climate adaptation and food security.



ADFD and ICBA Launch Agricultural Production Systems Development Project in Karakalpakstan, Uzbekistan

On 23 September, the **Abu Dhabi Fund for Development (ADFD)**, in cooperation with the **Government of the Republic of Uzbekistan** and ICBA, launched the Agricultural Production Systems Development Project in Karakalpakstan, Uzbekistan.

The project is the outcome of joint cooperation and is being implemented in collaboration with the Government of Uzbekistan, represented by the **Ministry of Ecology, Environmental Protection and Climate Change** and the **Ministry of Agriculture**, alongside ICBA, the **International Innovation Center for the Aral Sea Basin (IICAS)**, and the **Karakalpakstan Agricultural Research Institute (KARI)**. It aims to improve agricultural productivity and strengthen capacity to adapt to climate change in the arid and saline areas of the Aral Sea region.

This initiative reflects development cooperation between the United Arab Emirates and the Republic of Uzbekistan in support of sustainable agriculture, stronger food security, and climate adaptation in Central Asia. It also highlights ICBA's role in developing innovative scientific solutions to improve agricultural productivity and promote more efficient use of water resources.



BADEA President Visits ICBA to Advance Development Cooperation

On 11 November, ICBA received H.E. Mr. Abdullah Khalil Al Musaibeeh, President of the Arab Bank for Economic Development in Africa (BADEA), at its Dubai headquarters as part of efforts to strengthen strategic dialogue on sustainable, climate-resilient agricultural development. Discussions between the two parties focused on enhancing cooperation in research, innovation, and capacity development to support food security and agricultural growth in arid regions and those most affected by climate change.



ICBA and Al Rostamani Group Open New Agricultural Research and Training Facilities to Advance Sustainable Agriculture and Innovation in the United Arab Emirates

On 12 November, in the presence of H.E. Dr. Amna bint Abdullah Al Dahak, Minister of Climate Change and Environment, ICBA and Al Rostamani Group inaugurated a training and knowledge transfer building, a plant tissue culture laboratory, and an integrated aquaculture system at ICBA's headquarters in Dubai, reflecting national support for advancing sustainable agricultural innovation.

These new facilities contribute to strengthening institutional capacity in applied research, innovation, and climate-resilient production systems.

Awards and Recognition

ICBA's work received international recognition for its contributions to sustainable agriculture and environmental resilience under challenging environmental conditions.



Energy Globe Award Recognition for Sustainable Agricultural Systems in Uzbekistan

In February, the ADFD-funded project "Development of Sustainable Agricultural Production Systems in Degraded Areas of Karakalpakstan, Uzbekistan" was recognized as Uzbekistan's national winner of the 2024 Energy Globe Award.

The recognition reflects the project's contributions to the restoration of degraded land and the advancement of

sustainable, climate-resilient agriculture in the Aral Sea region. It also underscores the importance of partnership between ICBA and local institutions in Uzbekistan in developing sustainable agricultural systems and improving livelihoods for local communities in degraded areas.



Government of Uzbekistan Awards "Tabiat Himoyachisi" Badge of Honor to Dr. Tarifa Alzaabi

On 22 June, the Government of Uzbekistan awarded Dr. Tarifa Ajeif Alzaabi, Director General of ICBA, the prestigious "Tabiat Himoyachisi" (Defender of Nature) badge of honor in recognition of her contributions to environmental sustainability, scientific cooperation and the advancement of sustainable agriculture in fragile ecosystems.

The distinction was formally conferred by H.E. Aziz Abdulkhakov, Minister of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan, during an official ceremony held as part of Eco Expo Central Asia 2025 in Tashkent.



FAO Recognizes ICBA for Leadership in Sustainable Plant Production and Protection

On 17 October, ICBA received high-level international recognition from the **Food and Agriculture Organization of the United Nations (FAO)** in appreciation of its leading contributions to plant production and the development of sustainable agricultural systems capable of adapting to climate change in arid and saline environments.

Dr. Tarifa Ajeif Alzaabi, Director General of ICBA, received the recognition from **Dr. Qu Dongyu, Director-General of FAO**, during the organization's first global technical recognition ceremony, held at FAO headquarters in Rome on the occasion of World Food Day 2025 and FAO's 80th anniversary.

This international recognition reflects ICBA's leading role in developing innovative solutions for plant production and advancing sustainable agricultural systems capable of adapting to climate change in arid and saline environments.

Knowledge Translation and Strategic Partnerships

ICBA strengthened its role as a regional knowledge partner by translating the results of applied research into evidence-based guidance for decision-makers and practitioners. The Center provided technical contributions across **105 national, regional, and international platforms**, helping to advance the adoption of climate-resilient solutions in arid and saline systems.



Technical Contribution on Climate-Resilient Water Management in Baghdad

On 2 June, ICBA contributed to the **11th ICID Micro Irrigation Conference in Baghdad**, providing technical input on smart water solutions and climate resilience. The participation highlighted applied research on integrated water management, treated wastewater reuse, and data-driven decision tools to support water-scarce and climate-vulnerable regions.



ICBA's Geospatial Data Contributions to IsDB Earth Observation eToolkit

On 21 November, ICBA contributed scientific expertise to the **Earth Observation eToolkit** initiative at the **Islamic Development Bank (IsDB)** headquarters in Jeddah, advancing the integration of geospatial analytics agricultural planning systems capable of adapting to climate change in arid and saline regions.

Strategic Research and Technology Projects

ICBA managed 23 research and development projects, completing 13 and initiating 7 new projects, 5 externally funded and 2 internally supported. The project portfolio aligns with UAE and ICBA's partner priorities in sustainable agriculture, food security, and environmental sustainability in response to region-specific development needs.

Strategic Programme Delivery and Development Impact

Good Agricultural Practices for RPW Management in Date Palm-Based Systems

Project duration:	01 August 2025 - 31 July 2028
Budget:	USD 2,939,055
Project Donor(s)	Gates Foundation
Country:	United Arab Emirates
Description:	The project addresses the challenge of the Red Palm Weevil, which poses a major threat to date palm productivity and agricultural livelihoods. It promotes Good Agricultural Practices (GAP) as a preventive approach that is environmentally responsible and integrated within broader Integrated Pest Management (IPM) frameworks. By strengthening crop protection, improving productivity, and reducing pest-related losses, the initiative supports the long-term sustainability of date palm production systems.

Generating Evidence for Sustainable Irrigated Agriculture in Ethiopia's Lowlands: A Data-Driven Approach to Soil Health and Agricultural Policy (Soil Matters - Innovations for Soil Health and Agroecology)

Project duration:	01 July 2025 - 28 February 2027
Budget:	USD 162,658.31
Project Donor(s)	Deutsche Gesellschaft Fur Zusammenarbeit - GIZ - ICBA
Country:	Ethiopia
Description:	The project generates scientific evidence on soil salinity risks, irrigation efficiency, and agricultural productivity in Ethiopia's lowland areas. It translates data-driven insights into policy recommendations and best practices for sustainable irrigated agriculture, while assessing alternative land-use options in areas constrained by salinity and related factors. The initiative also develops decision-support tools to guide policymakers, extension service providers, and farmers in improving soil and water management.

Completed Project Portfolio

Quinoa Value Chain Development in the UAE

Project duration:	01 December 2023 - 31 July 2025
Budget:	USD 499,253
Project Donor(s)	Silal
Country:	United Arab Emirates
Description:	The project advances the development of a quinoa value chain in the UAE by building the technical capacities among Silal employees, farmers, and value chain actors through applied training in quinoa agronomic best practices.

Development of the Earth Observation e-Toolkit

Project duration:	01 January 2025 - 31 December 2025
Budget:	USD 40,000
Project Donor(s)	Islamic Development Bank (IsDB)
Country:	United Arab Emirates
Description:	The project supports the development of an Earth Observation e-Toolkit, including the compilation of case studies and assessment of digital technologies relevant to agricultural resilience. It also facilitates knowledge exchange through targeted workshops and strengthens engagement.

Optimization of irrigation water and fertilizers application for better use efficiency for Sudan grass, Sorghum, Panicum

Project duration:	01 January 2020 - 30 September 2025
Budget:	USD 114,386
Country:	United Arab Emirates
Description:	The project evaluates irrigation scheduling and fertilizer application strategies to improve resource-use efficiency in Sudan grass, sorghum, and Panicum under local climatic conditions. By aligning water and fertilizer inputs with crop growth stages, the initiative enhances productivity while reducing input waste and minimizing environmental impact.

Key Institutional Developments



ADFD-ICBA Strategic Agreement on MENA Soil Museum Blueprint

On 21 May, the Abu Dhabi Fund for Development (ADFD) and ICBA formalized a strategic sponsorship agreement on the sidelines of the “Make it in the Emirates” platform to develop a **regional blueprint for soil museums across the Middle East and North Africa**.

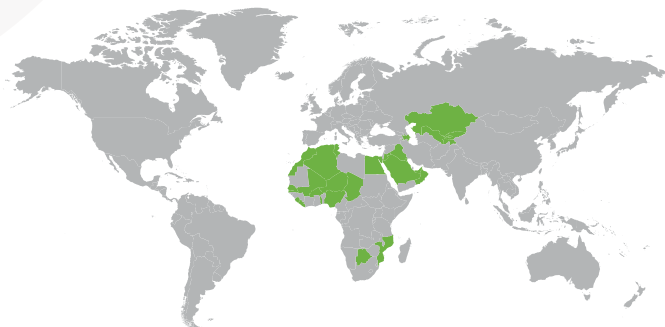
The agreement was signed by H.E. Mohamed Saif Al Suwaidi, **Director General of ADFD**, reinforcing institutional cooperation to deliver a practical guide and structured capacity-building programme to strengthen soil conservation, environmental education and greater resilience to climate change in arid environments.

Capacity Development and Knowledge Transfer

ICBA strengthened its capacity development portfolio through in-person, online, and e-learning programs reaching a diverse group of participants from around the world. The Center delivered **33 in-person courses** benefiting **2,695 participants (1,797 men and 898 women)** and hosted **18 interns from nine countries**.

Through its e-learning platform, **395 participants (256 men and 139 women)** from more than **30 countries** completed one or more courses, reflecting the breadth of its international reach and its commitment to providing specialized scientific education that is accessible to all.

Technical training in 2025



Algeria
Azerbaijan
Botswana
Burkina Faso
Chad
Egypt
Gambia
Iraq
Jordan
Kazakhstan
Kuwait
Kyrgyzstan
Liberia
Mali
Morocco
Mozambique
Niger
Nigeria
Oman
Saudi Arabia
Senegal
Sierra Leone
Tajikistan
Togo
Tunisia
UAE
Uzbekistan

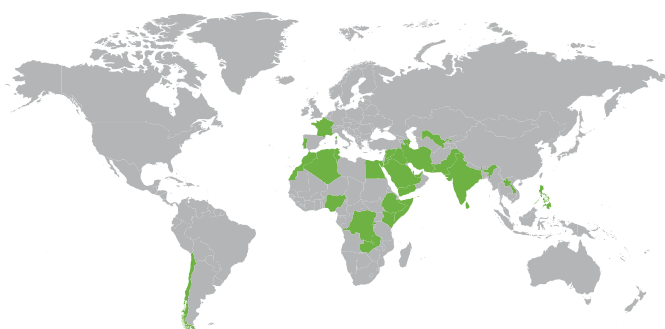


1797 Men

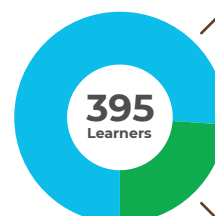
898 Women

33 in-person courses, participants from 27 countries

ICBA's e-learning statistics for 2025



Algeria
Azerbaijan
Chile
Congo
Egypt
Ethiopia
France
India
Iran
Iraq
Jordan
Kenya
Lao
Lebanon
Morocco
Nigeria
Pakistan
Philippines
Portugal
Qatar
Rwanda
Saudi Arabia
Somalia
Sri Lanka
Syria
Tunisia
UAE
Uzbekistan
Yemen
Zambia

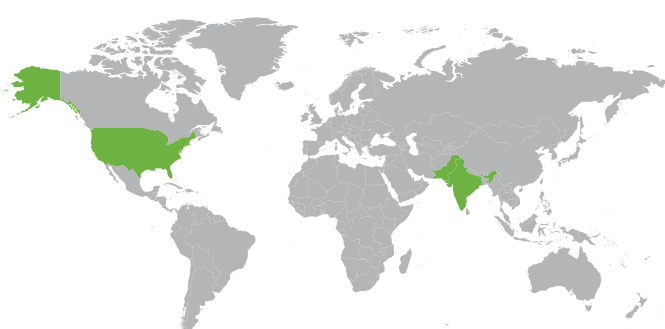


256 Men

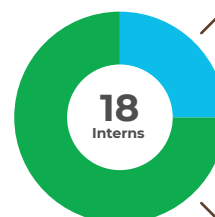
139 Women

Learners from 30 countries completed one or more of the 15 e-learning courses available on ICBA's e-learning portal

Internships in 2025



Algeria
India
Jordan
Kenya
Morocco
Nigeria
Pakistan
Saudi Arabia
Sudan



4 Man

14 Women

18 interns from 9 countries

ICBA expanded its digital learning portfolio through the introduction of **four Arabic-language, CPD-certified e-learning courses**, strengthening regional access to specialized, science-based knowledge.



Biosaline Agriculture as an Approach to Land Restoration (in collaboration with UNCCD)



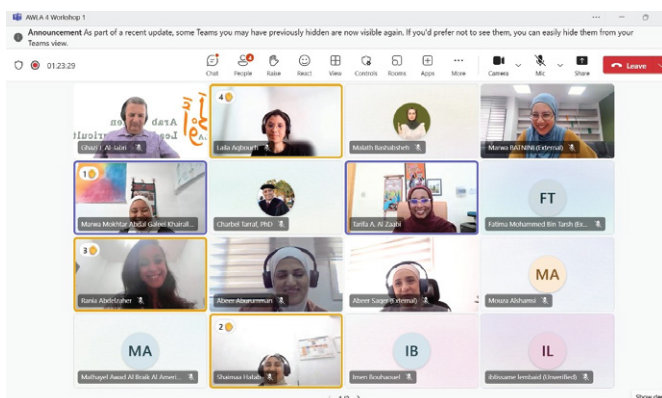
Alternative Crops for Degraded Lands in the UAE (supported by EAD)



Integrated Land Management in the United Arab Emirates (supported by EAD)



Water Resources and Irrigation Management Systems in Arid Regions (supported by EAD)



Launch of the Fourth Cohort of the Arab Women Leaders in Agriculture (AWLA) Programme

In October, the fourth cohort of the Arab Women Leaders in Agriculture (AWLA) program commenced, engaging 23 women experts from nine Arab countries. Managed by ICBA and supported by the Gates Foundation, AWLA strengthens leadership and research capacities among women professionals contributing to agricultural and sustainable development sectors, food security, and adaptation to climate change across the MENA region. The program continues to serve as a regional platform for advancing women's leadership in scientific research and climate-resilient agriculture systems.

Research Publications

Peer-reviewed publications remain central to ICBA's scientific output and contribution to advancing agricultural research. ICBA scientists produced **28 research articles** published in international journals and books. A full list of publications is available on ICBA's website at www.biosaline.org/publications.



Publication: Nature Plants

Title: Promoting new crop cultivars in low-income countries requires a transdisciplinary approach

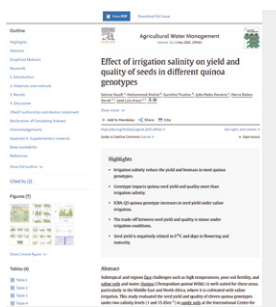
Publication date:
January 2025



Publication: Climatic Change

Title: Assessing high-resolution precipitation extremes in Central Asia: evaluation and future projections

Publication date:
February 2025



Publication: Elsevier

Title: Effect of Irrigation Salinity on Yield and Seed Quality in Different Quinoa Genotypes

Publication date:
May 2025



Publication: Agricultural Water Management (Elsevier)

Title: Climate change and irrigation management shape crop resilience in UAE arid agriculture: APSIM model-driven assessment

Publication date:
October 2025



Publication: Computers and Electronics in Agriculture (Elsevier)

Title: Smart Irrigation Manager: Simple, User-Friendly Software for Determining Irrigation Scheduling

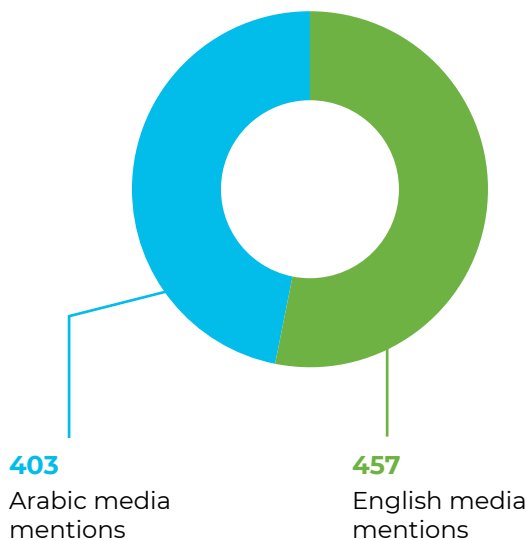
Publication date:
December 2025

Research and Development Communication

ICBA adopts a systematic communication approach to showcase its research, projects, and institutional activities across media and digital platforms, helping to strengthen stakeholder engagement.

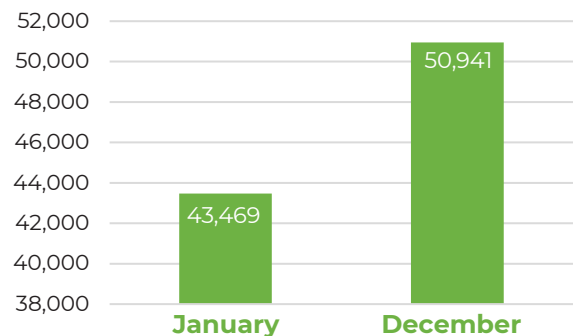
Between 1 January and 31 December, references to the Center and its contributions generated around **860 mentions** across local and international media, marking a **%10.3 increase** compared with the previous year. Coverage included prominent international platforms such as **CNN International (70.4 million reach)**, **Springer (43.2 million reach)**, **ScienceDirect (31 million reach)**, **Nature (28.6 million reach)**, and **Daily Hunt (21.2 million reach)**.

Media mentions for January - December 2025



Social media stats for January - December 2025

Followers



- 860,625 impressions (5.3% decrease compared to 2024) - 89,521 engagements (105.9% increase compared to 2024) - 48,895 link clicks (62.74% increase compared to 2024).
- The total number of followers rose across all channels from 43,469 on 1 January to 50,941 on 31 December (17.18% increase).

Social media activities contributed to a noticeable increase in follower numbers across most platforms. **LinkedIn** followers increased from **25,127 to 31,716**, **Facebook** followers rose from **8,556 to 8,992**, and **Instagram** followers grew from **3,080 to 3,391**, while **X** recorded a slight decline from **3,009 to 3,021**. As of 31 December 2025, ICBA's YouTube channel recorded a total of **17,763 views** during the year, marking a **%21 decline** compared with 2024.



ICBA's work was covered by leading national and international news outlets.

Resource Mobilization and Strategic Partnerships

Strategic Alliances: ICBA advanced a diversified partnership ecosystem spanning national, regional, and global institutions.

These engagements strengthened science-based collaboration, resource mobilization, and institutional impact in climate-resilient agriculture.



Resource Mobilization: ICBA finalized two project agreements were finalized for a total of US\$ 870,418. These included the following:

An Operational Partnership Agreement was signed with the Food and Agriculture Organization of the United Nations (FAO) on 2 April for a total grant of US\$ 720,432 for a program titled "Supporting the Implementation of the Regional Water Scarcity Initiative (WSI) in the Near East and North Africa (NENA) Region."

A Grant Agreement was signed with the German Agency for International Cooperation (GIZ) on 26 June for a total grant of EUR 138,912 (USD 149,986) for a project titled "Generating evidence for sustainable irrigated agriculture in Ethiopia's lowlands: A data-driven approach to soil health and agricultural policy".

Partnership Building: Seven new Memorandums of Understanding (MoUs) were signed, including:

Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan (15 January): To enhance cooperation in environmental protection and adaptation to climate change through capacity building, knowledge exchange, and joint implementation of sustainable agriculture and natural resource management initiatives across Central Asia.

BITS Pilani, Dubai Campus (17 January): To advance joint research in biosaline agriculture, environmental biotechnology, biodiversity, nutrient studies, molecular biology, and laboratory analytical sciences.

Agency for Innovative Development under the Ministry of Higher Education, Science and Innovations of the Republic of Uzbekistan (10 February): To implement joint research programs, promote scientific exchange, support young researchers, and advance initiatives focused on women and youth.

World Agriculture Forum (20 February): To collaborate on innovative agricultural solutions, farmer empowerment in arid and saline environments, strengthen policy dialogue implement training programmes and sustainable farming practices.

ASPIRE (Research Collaboration Agreement, 5 May): To advance joint research on water scarcity solutions, climate-resilient agriculture, AI-driven crop monitoring, soil health innovation, and renewable energy applications in agricultural systems.



New strategic partnership Strengthens ICBA-ADAFSA Collaboration in UAE Agriculture

On 24 October, during Global Food Week at ADNEC, ICBA and the Abu Dhabi Agriculture and Food Safety Authority (ADAFSA) renewed their partnership through a Memorandum of Understanding, formalized in the presence of H.E. Dr. Tariq Ahmed Mohammed Saeed Al Ameri, General Director of ADAFSA, to advance sustainable agriculture in the UAE.

The agreement reinforces collaboration in applied research, crop and water innovation, and capacity development for farmers, women, and youth.



ICBA and IWMI Sign Strategic MoU to Advance Climate-Resilient Agriculture

On 12 December, ICBA and the International Water Management Institute (IWMI) signed a three-year Memorandum of Understanding to advance scientific collaboration in sustainable water management and climate-resilient agriculture.

The agreement was signed by Dr. Tarifa Alzaabi, Director General of ICBA, and Dr. Mark Smith, Director General of IWMI, establishing a strategic framework for joint

research, knowledge exchange, and capacity development. By combining ICBA's expertise in applied research in arid and saline environments with IWMI's global leadership in water resources management, the partnership strengthens institutional capacity to deliver integrated, science-based solutions for addressing water scarcity and enhancing food system resilience in regions most affected by climate change.



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والبيئة



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