

Global forum searches for answers to food security challenges in marginal environments

Dubai, UAE, 26 November 2019 – Leading scientists, policymakers and experts from around the world have urged more action and support from the public and private sectors to spur research and innovation for food security and sustainable development in marginal environments.

This was one of the key messages at the first-of-its-kind global forum dedicated to marginal environments in Dubai on 20-21 November 2019. The Global Forum on Innovations for Marginal Environments ([GFIME](#)) brought together more than 300 delegates from about 70 countries to showcase the latest advances in research, innovation, development and policy in agriculture and food production in marginal environments — areas of the world that are most vulnerable to climate change, water scarcity and salinity.

Populations in the marginal environments, home to 70 percent of the world's extremely poor, are most vulnerable to climate change effects on agriculture, which is their main source or livelihood. They need affordable innovative solutions to increase agricultural productivity in areas suffering from drought, water scarcity and salinity.

Every day about 2,000 hectares of irrigated land in some 75 countries are degraded due to salinization, resulting in more marginal environments.

During the forum, scientists shared and explored various solutions, including climate-resilient plants such as quinoa, pearl millet, barley and Salicornia as alternatives to traditional staple crops. They also highlighted the importance of crop biodiversity to food security in the face of climate change.

Speaking at the forum, which also coincided with ICBA's 20th anniversary celebration, Dr. Ismahane Elouafi, Director General of ICBA, said: "I am delighted to see the representation from more than 70 countries discussing innovations for marginal environments. It is a great sign and shows our seriousness about the issues that need to be addressed in marginal environments of the world. The forum served as a necessary platform to discuss strategic investment and collaboration among government, science, and business leaders from around the world. I would like to thank all the co-organizers, partners, and delegates for making this global forum a grand success."

The forum broadly focused on food security and innovation, and climate impact and sustainability in marginal environments. During a series of policy, business and scientific sessions, delegates looked at a range of topics from food security to smart agriculture to space farming.

Commenting on the forum, Dr. Abdelouahhab Zaid, Agricultural Advisor at the Ministry of Presidential Affairs of the UAE and Secretary General of the Khalifa International Award for Date Palm and Agricultural Innovation (KIADPAI), said: "The Global Forum on Innovations for Marginal Environments (GFIME) is a trump card to enable innovations in marginal environments in the face of food insecurity. The convening of GFIME is an attempt to map the agriculture and provide solutions in the marginal environments of the world where salinity, water scarcity, and climate change pose a significant threat to food and water security, affecting millions of people living in these environments. In the face of these problems, we need to develop effective policies that can guide us into the future. We also need agricultural projects that are able to provide positive results for now and the future."

The forum also featured an international keynote address by Dr. Nina Fedoroff, Emeritus Professor of Biology, Penn State University, the USA.

In her address, Dr. Nina Fedoroff said: "What's needed for agriculture to keep growing our food supply in a harsher climate? My answer is that it's both technology and biology. Specifically, we'll need to call on the entire range of genetic techniques from domestication and plant breeding, to the most modern genetic modification and gene editing techniques. Equally critical to success are

peoples' beliefs and attitudes — and by extension, those of their politicians and governments. Countries must address the politics of modern genetics, including public acceptance, the development of an appropriate regulatory framework, and getting the political establishment on board. But none of this can happen without seriously boosting investment in agricultural research. Today that means both laboratories and field facilities. It means highly educated personnel, and it means money to do the research. Some countries have already invested a great deal in modernizing their agricultural research organizations, while others are still looking for a way to get into the game. I think there are extraordinary opportunities for collaboration among nations in Africa and the Middle East.

"I am much heartened by the rapid progress that ICBA has made since the first time I visited perhaps a decade or so ago. I also am heartened to see that there is renewed interest among major global funding institutions to assist countries in modernizing their agricultural research establishments. This conference provides terrific opportunities for networking and will — I trust — surface some actionable ideas for building regional research and training networks. I gave you some examples of new approaches that can be used to accelerate the development of organisms adapted to what we anticipate will be increasingly marginal conditions for agriculture. It has been done. It can be done. Whether it will be done is up to folks like the ones in this room!" Dr. Nina Fedoroff added.

During the panel discussion on gauging the impact of farming in marginal environments, Mrs. Fatiha Charradi, Vice President of Agricultural Development - Domestic Market, OCP Group - Morocco, said: "Technology and innovations are essential for creating a sustainable impact in marginal environments and critical in delivering customized and high-performing solutions. Most importantly, what we believe at OCP, through the Al Moutmir [Program](#), that investment in farmers is the key agent of change and is crucial for supporting the transformation of the agricultural sector in such a changing and challenging environment."

The forum was organized by the International Center for Biosaline Agriculture ([ICBA](#)) in collaboration with the Food Security Office and the Advanced Sciences Office of the UAE Government, the Islamic Development Bank (IsDB), the Environment Agency – Abu Dhabi (EAD), and the Khalifa International Award for Date Palm and Agricultural Innovation. Among other partners, the event was supported by the OCP Group.

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About ICBA

The International Center for Biosaline Agriculture (ICBA) is a unique applied agricultural research center in the world with a focus on marginal areas where an estimated 1.7 billion people live. It identifies, tests and introduces resource-efficient, climate-smart crops and technologies that are best suited to different regions affected by salinity, water scarcity and drought. Through its work, ICBA helps to improve food security and livelihoods for some of the poorest rural communities around the world.

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