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Addressing climate change risks on water and food security in the Arab Region

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ABSTRACT

Water scarcity is increasing, especially in dry environments, such as in the Arab Region, with climate change and degradation of natural resources. About 41% of the Earth's land area is classified as dryland; wherein the farming system is characterized by low annual rainfall with much of it falling in the winter and spring. Agriculture, especially in the Middle East and North Africa (MENA) Region, is required to produce more food and welfare for rapidly increasing populations but with less freshwater resources. Conventional responses to this situation focus on increasing yields, improving irrigation efficiency, and managing demand. Here, it is argued that those strategies are either not working under current conditions or not anymore sufficient to cope with the daunting demand for more food in water scarce dryland regions. A paradigm shift in how we manage water is needed going into the future. The debate on how better to handle agricultural water allocation and use with increasing scarcity is being intensified over the last decade and is producing new transformative solutions. Climate-smart agricultural practices that require less water, can sustain climatic stresses, produce food with high nutritive values but require less water and energy to produce are the needs of the hour. ICARDA success stories from the Arab Region in these regards will be presented.

Keywords: Crop water productivity; Climate-smart agriculture; Drylands

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