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Saline Agriculture for ADaptation

The Need of Funding for Solving a Part of Challenges

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The green revolution failed to achieve the United Nations Millennium Development Goals of halving hunger by 2015 in water-scarce regions, such as the Arab region.

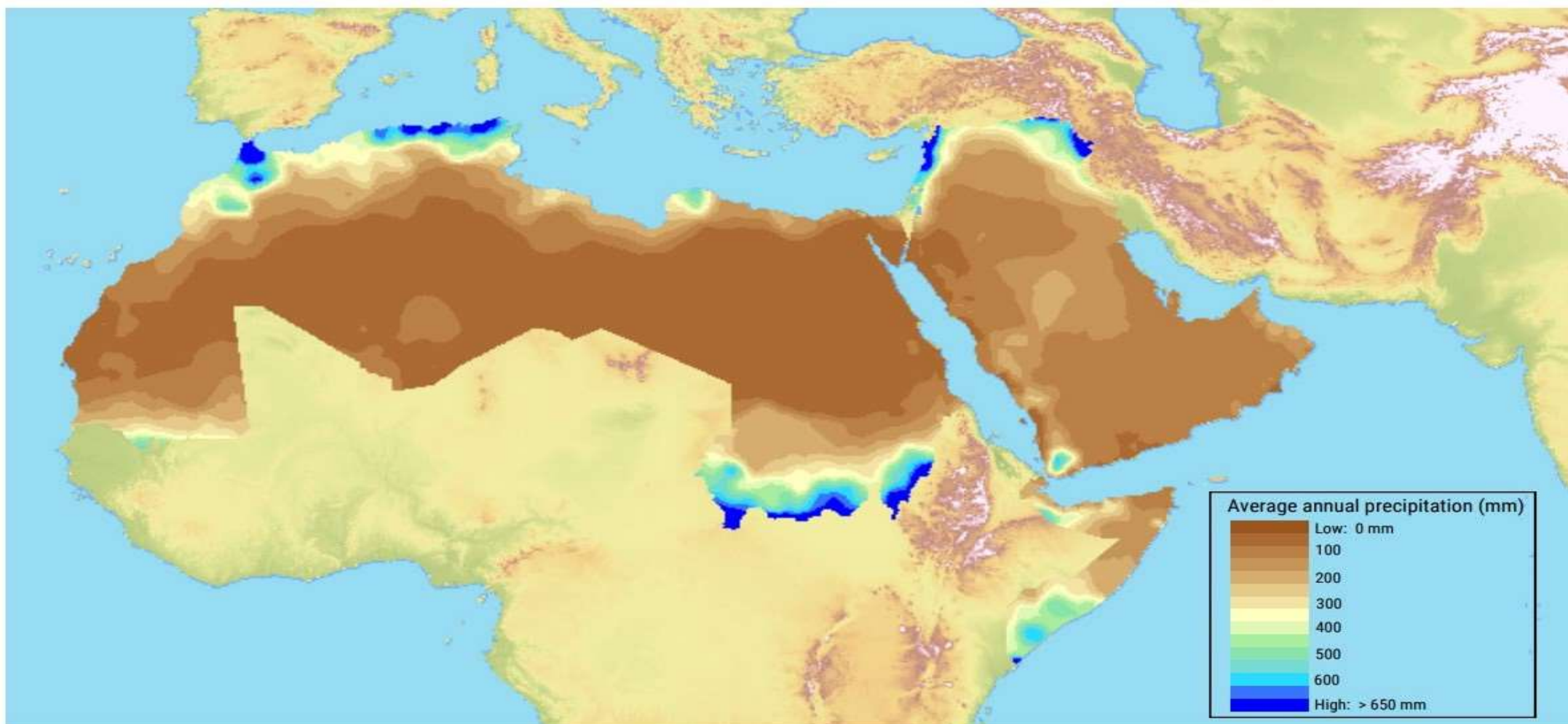


Figure 1. Mean annual precipitation over the Arab region, 1985-2005

Source: [E/ESCWA/SDPD/2017/RICCAR/Report.](https://www.escwa.org/publications/SDPD/2017/RICCAR/Report)

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Experts generally agree that the Nile region and Egypt in particular will experience further warming, thus increasing irrigation needs

Moreover, sea level rise is going to put pressure on agriculture and water resources in the Nile delta, home to more than 35 million people and providing 63% of Egypt's agricultural production ([World Bank 2014](#)).

Utilizing Salt-Affected Lands for Food Production:

- The Food and Agriculture Organization (FAO) emphasizes the potential of salt-affected lands to contribute to food security in water-stressed regions like Egypt. [[FAO](#)].
- Advanced agricultural practices such as saline agriculture, hydroponics, and soil amendment techniques offer promising solutions for cultivating crops in salt-affected areas.
- Cultivating salt-tolerant crop varieties, such as barley and quinoa, can enhance food production on salt-affected lands while minimizing freshwater irrigation requirements.

Initial Investment Requirement:

The transformation of salt-affected lands into productive agricultural areas demands substantial initial investment in soil reclamation, water management infrastructure, and adoption of appropriate crop varieties and cultivation techniques. Without adequate funding, farmers may struggle to cover the upfront costs associated with these endeavors. [[International Food Policy Research Institute \(IFPRI\)](#)].

Longer Return on Investment (ROI) Period:

Agriculture on salt-affected lands typically entails a longer period to achieve profitability compared to conventional farming on fertile soils. Farmers may experience extended timelines for soil rehabilitation, crop establishment, and market development before realizing significant returns on their investments. [[World Bank](#)].

Need for Subsidies and Support:

Given the economic challenges associated with agricultural development on salt-affected lands, government subsidies, grants, and technical assistance programs play a crucial role in supporting farmers in adopting sustainable practices and overcoming financial barriers. [[Food and Agriculture Organization \(FAO\)](#)].

Financial Requirements: The transformation of salt-affected or degraded lands into productive agricultural areas demands substantial initial investment in soil reclamation, water management infrastructure, and adoption of appropriate crop varieties and cultivation techniques. Without adequate funding, farmers may struggle to cover the upfront costs associated with these endeavors. [[International Fund for Agricultural Development \(IFAD\)](#)].

The conclusion that Utilizing salt-affected or partially degraded lands for food production in the Middle East and North Africa (MENA) region may not present a profitable business case without substantial funding and investments to support this type of agriculture, particularly in the initial years of implementation.

Thank you!

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