Gender Equality, Youth and Social Inclusion in Agriculture: Priorities and Possibilities in the CWANA Region

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• World population has doubled
• World economy has grown 7X

• World grain demand has tripled
• 38% of Earth’s terrestrial water is used for Agriculture

• Human demands surpassed Earth’s regeneration capacity around 1980;
• Humanity will require capacity of 2 Earths by 2033

• 38% of Earth’s terrestrial water is used for agriculture
• 75% of Agricultura land used to raise animals

• 70-90% of the global freshwater withdrawals are for irrigation
• 30-35% of GHG emission are from Ag.

• Yet 1 in 7 persons is food-insecure and 2-3 in 7 are malnourished
The Perfect Storm

- High unemployment, unrest and migration
- Food and nutrition insecurity
- Demographic change, gender inequality
- Urbanization and heat islands
- Land degradation and desertification
- Loss of agrobiodiversity
- High water scarcity and low efficiency
- Double impact of climate change: increasing temperature and reduced precipitation

Conflicts and Fragility
Malnutrition
High Population
Land Degradation
Loss of Biodiversity
Water Scarcity
Climate change
Dry Areas Are Expanding

Expand the link for more information on dry areas.
Ukraine war, COVID, drought, climate change, heatwaves, income growth, high energy prices, globalization, urbanization, - are all converging to transform food production, markets, consumption and future pressure on prices.
Climate Change and MENA

• The MENA region is already the most water-stressed region in the world.

• Agricultural land is equally scarce and fragile.

• Temperatures in the region are projected to rise by 4 degrees Celsius, twice as fast as the global average according to the Max Planck Institute and precipitation is projected to decline by 10 to 30 percent (World Bank).

Crop yields could decrease by 30–60 percent
Decline in groundwater replenishment and severely overexploited aquifers
Agriculture as an industry is a major consumer of water
Climate-Driven Social Inequity

The challenges for strengthening climate security and resilience in the MENA region have already been documented in detail to include:

- High levels of conflict within and between countries
- Growing poverty
- Unemployment
- Loss of agricultural livelihoods
- High levels of inequality leading to rising dissatisfaction with the status quo

The effects and impact of climate change are **locally specific** and **are experienced differently** by different groups of people based on **gender**, **age**, **race**, **disability**, **sexual orientation**, **class**, and **other social identities**.

Lower access to productive resources, technology, markets, finance, and information; and restrictive sociocultural norms are factors that can make women more vulnerable to climate-change adversities.
The MENA paradox

- According to the Global Gender Gap report, the gender gap is highest in the MENA region and “at the current relative pace, it would take an estimated 142.4 years to close.”

- The region performs well on health and education but counterintuitively performs very poorly on economic and political participation: a phenomenon referred to as the “MENA paradox” (World Economic Forum, 2021)

- Only 18.5% of women participate in the labor force in the MENA region (ILO, 2017)
Although agriculture is the largest employer of women in the MENA region, women’s contribution to the sector remains largely undervalued, if not invisible.

Some estimates suggest that about 50 percent of women engaged in agrarian labor are either not counted at all in national surveys or classified as economically inactive (Kabeer, Deshpande and Assaad 2019).

This is especially true for women who provide unpaid labor on family farms and are assumed to be (and may even see themselves as) economically inactive or, at most, as helpers to male farmers instead of farmers (Baruah and Najjar, 2022).
Weaker access to credit and capital, training, technology, and other inputs into agriculture (Najjar et al., 2019, 2020, 2023)

Women do not have **adequate access to credit services, banking institutions, agricultural extension services, and training.**

Women also had **weaker access** than men to extension services and **training in skills deemed masculine**, such as irrigation and other drought-mitigation strategies.

Women also have **weaker access** than men **to markets** for the goods they produce.
ICARDA’s work towards addressing gender gaps in agri-food systems (IFAD, F2R Initiative)

- Multi-country studies demonstrating women’s contributions to agriculture, while providing policy reform and recommendations.
- Designed and implemented projects in which women gain access to drought management and adaptation training at par with men.
- Carried out projects that challenged harmful norms around women’s mobility, leadership and income generation roles.

Making women’s contributions to agriculture visible

Improving access to credit and capital, training, technology, and other inputs into agriculture

Better understanding of youth perceptions and interests in agriculture

- Closing information gaps between men and women through provision of cell phones, gender-inclusive terminology, radio programs and improved access to in-person trainings for women (many women have attended trainings for the first time)
- Make agriculture more compatible with contemporary aspirations of youth through mechanization (including for drudgery reduction), digitization and provisions for information and technologies

Better understanding of youth perceptions and interests in agriculture
A vision for youth in the agro-food sector is required.

**Middle East and North Africa**

**DEMOGRAPHIC PROJECTIONS**

| Number of total population and adolescents (10-19 years), 2015, 2030 and 2050 (in millions) |
|---|---|---|---|
| 2015 | 2030 | 2050 |
| Total population | 450 | 581 | 724 |
| Adolescents | 245 | 295 | 337 |

**THE PROSPECT OF A DEMOGRAPHIC DIVIDEND**

**Early-dividend**
1950 2000 2015 2030 2050 2070 2085

- Increasing working age population & low child-dependency ratio
- Window of the opportunity for accelerated economic growth is wide open

**Post-dividend**

Pre-requisites for realizing the window of opportunity for accelerated economic growth offered by this demographic dividend:
- Political and social stability
- Inclusive and equitable economic and social policies
- Expanded employment opportunities

**THE MOST URGENT POLICY PRIORITIES**

- Equipping adolescents and youth with the skills they need to make an effective transition from school to work.
BARRIERS TO REAPING THE DEMOGRAPHIC DIVIDEND IN MENA

Conflict and Violence

MENA is home to six percent of the world's adolescents.

More than one-third (37 per cent) of youth in MENA live in fragile and conflict-affected countries.

MENA is home to 58 per cent of the world's refugees and nearly half of the world's internally displaced populations.

1 in 4 aged 13 to 15 in countries reported being bullied at school at least once in the past two months.

Extreme Survival Measures

1/4 experience acute poverty²

half of the 118 million under-18-year-olds, experience moderate poverty, while one in four (29.3 million) experience acute poverty.

One in five girls in the region married before the age of 18.

The poorest children are five times less likely to complete primary education.

One-third of school-aged Syrian refugees in host countries are still out of school.

5 times less
Improving perceptions and interests in agriculture among youth

Youth and gender issues are **inextricably** intertwined

The existing research on agricultural labor in MENA confirms that most of those between the ages of 15 and 24 only participate in agriculture when they have **no other viable livelihood options**.

Research and responsive policies aimed at **revalorizing agricultural labor to render it more compatible with contemporary aspirations of youth** are urgently needed.

Given the added stress that climate change places upon agricultural systems and productivity, the sector **can ill afford to lose out on the labor, energy, enthusiasm, and creativity** that youth can bring to it.
# Actions Required

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<td>Regional and national strategies must be developed by policymakers that focus on unleashing economic activity by establishing a role for youth in a dynamic agriculture industry that meets the growing needs of their populations.</td>
<td>Governments and regional actors must turn their vision into policy programs that support their ambitions in generating enough attractive jobs opportunities for burgeoning youth populations in both rural and urban settings.</td>
<td>Youth must be equipped with the training and skills required to take on current and future jobs throughout the agriculture value chain.</td>
<td>Governments and regional organizations much invest in the education, research, innovation and science that is required to build a resilient, fit-for-purpose agro-industry that can withstand climate change and equip youth with opportunities.</td>
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ICARDA in CWANA
ICARDA/CGIAR Initiatives

Objective
To transforming food, land, and water systems in a climate crisis.
ICARDA is involved in 17 of the 33 initiatives: leads CWANA RII.

Achievements
• Germplasm (ABI) is delivered faster and more targeted to farmers
• Genebanks support regional genebanks e.g. in Mauretania, Sudan Iraq
• CWANA, Climber, EiA supporting Morocco to convert 1 M ha to CA
• A digital platform monitors adoption of CA practices
• Community-based sheep/goat breeding programs are out-scaled beyond Ethiopia
• Crop-livestock diversification under CA is a desirable strategy
• Innovative feed solutions to be used by pastoralists and farmers

Recommendations
• Integration of Regional Directors and CGIAR Country Conveners
• Boost coordination, integration and coherence across CGIAR’s science groups
• Regional scaling hubs to amplifying impact
Arab Food Security Project: Investment in disseminating technology packages to increase wheat yields pays off

Objective of the study
• To close yield gaps by introducing packages of best practices in wheat production

Achievements
• The project developed/adapted and introduced packages of up to 10 technologies in 9 countries (improved wheat varieties combined with improved agronomic practices)

Outcomes
• Adoption of variety and at least 2 other components stands at 37.95%
• The project directly benefitted 2.07 million people

Impacts
• 551,000 tons of additional wheat produced in five countries
• $129 million (in 2022 US$) additional value generated by the project
• Every dollar invested on the project generated a return of $22.16 (over 2000%)
ICARDA/World Bank Study: Economics of Land Degradation will guide investment in land restoration in Uzbekistan

Objective of the study
• To guide national and international investments to combat land degradation (LD) in agriculture covering all four biomes (cropland, forest, pasture, and water resources)

Achievements
• Identified and prioritized land degradation hotspots in the country
• Identified suites of policy, institutional, and technological interventions to combat land degradation (LD)

Findings
• Annual loss of crops, forage, forest biomass, irrigation water and soil is valued at $11 billion (17.94% of GDP)

Recommendations
• 10-year investment of $2.9 billion is needed to restore the 6.6 million ha of prioritized areas.
• Recommendations for increased investments to combat LD is currently being discussed by government and donors.
Integrated Desert Farming Systems
Integrated Desert Farming Systems

- **Seasonal Crops**
  - Protected Agriculture (e.g., vegetables, fruits, aromatic & medicinal plants)
  - Open field (e.g., forage)

- **Water & Nutrients**
  - For protected crops (solar powered root zone cooling)
  - For open field irrigation

- **Drought Tolerant Crops**
  - Intercropping date palms with citrus, fig, pomegranate, jujub, etc.

- **Drought Tolerance**
  - Sand dune fixation

- **Solar-Powered Irrigation Pump**

- **Real-Time Evapotranspiration Measurement**

- **Integrated Farm-Fish Production Systems**

- **Livestock and Feed Production**
  - Spineless cactus for animal feed

- **Trees for Protective Erosion Control**

- **Public Private Producer Partnerships and Knowledge Sharing**

- **Remote Sensing**
  - To measure and monitor cropping systems, trees, plant growth & soil quality

- **Drones Technology**
  - For liquid pollination of date palm, and for pest monitoring and control

- **Digital Approaches**
  - To accelerate the scaling-up of innovative desert farming

- **IoT Technologies**
  - Artificial intelligence, modeling, smartphone applications and big data analytics to track environmental change, and to share real-time monitoring data and advice.
DR. HOLGER MEINKE

- Adjunct Research Professor for Global Food Sustainability at the University of Tasmania, Australia.

- Prior to that, he was a cropping systems scientist with the Queensland Government (1988–2007), where he co-developed the agricultural systems simulation platform.

- He is a member of the National Committee for Agriculture, Fisheries and Food, a subcommittee of the Australian Academy of Science that advises the Australian Government.

- He has a BSc from Hohenheim University (Germany, 1983), an MSC from the Technical University Berlin (Germany, 1986) and PhD from Wageningen University (The Netherlands, 1996).

- Dr. Meinke has published over 130 refereed papers in disciplinary and transdisciplinary journals.

- He is a member of five editorial boards and was Director of the Tasmanian Institute of Agriculture for nine years (2011–2019).

- Before joining the University of Tasmania, Holger held the Chair of Crop and Weed Ecology at Wageningen University in The Netherlands (2007–2011).
Thank you