ICARDA

Science for resilient livelihoods in dry areas

Leveraging Research for Sustainable Development in the Arab Region

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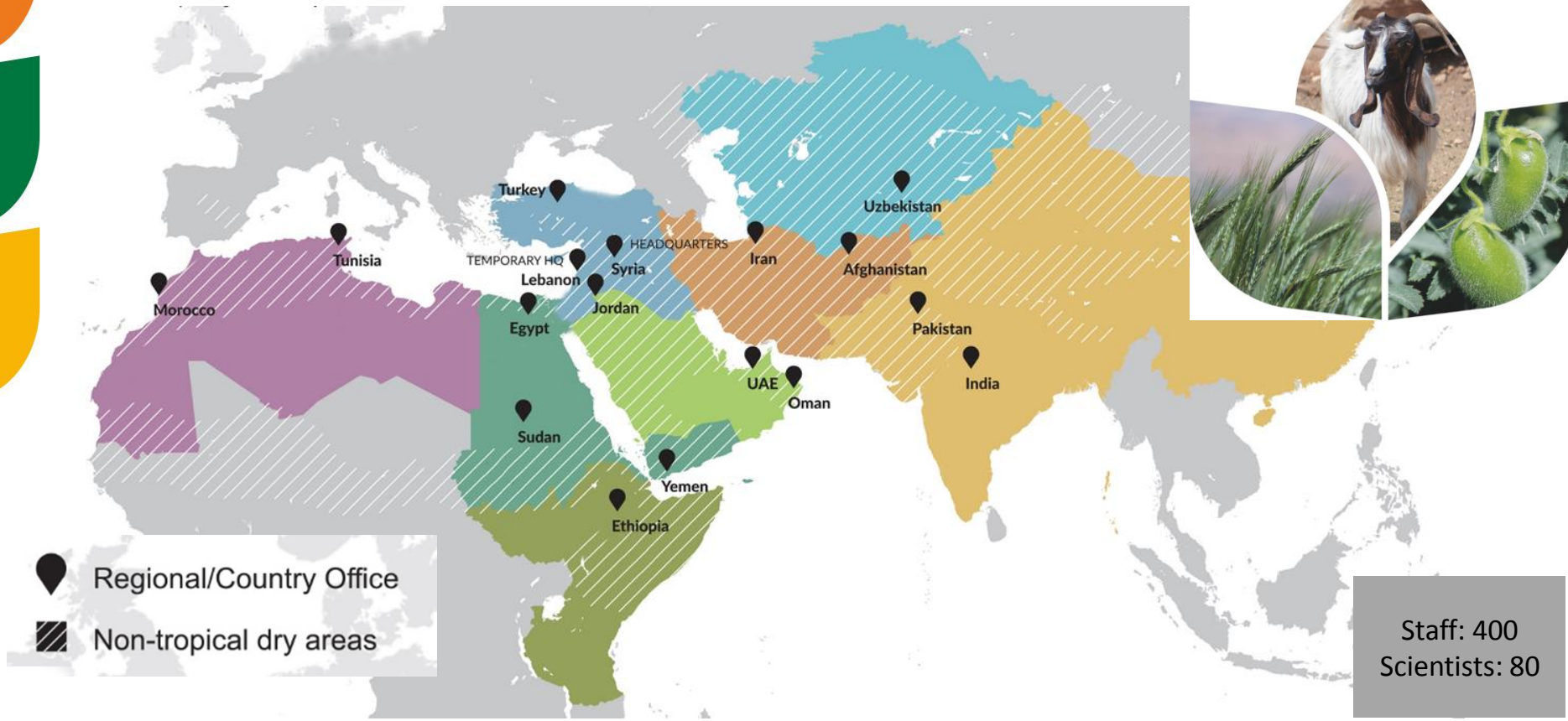
Issues facing the Arab Region

- Water scarcity, and climate change
- Land degradation / desertification
- Food security, loss of agricultural productivity and agro-biodiversity
- Poverty and marginalization
- Population movement and rapid urbanization
- Political instability and conflict

ICARDA is a **Decentralized R4D** International Institute on **Dryland Agriculture** combining **Component** Research and **Systems** Research



Staff: 400
Scientists: 80

Strategic Research Priorities

Enhancing water, land productivity

- Rainfed, irrigated (Blue and Grey), and agro-pastoral farming
- Reversal of environmental degradation
- Enhance intensification

Adaptation to Climate Change

Conventional and molecular breeding to develop climate-smart crops and livestock

Genetic Resources

- Mining crop diversity to develop germplasm resistant to heat, drought, cold, disease, higher nutrients
- International public goods (open access)

ICARDA's contribution to SDGs

Our Research Priorities

Our Cross-Cutting Themes

Partnerships for Impact

Reduce Poverty

Improve Food, Nutrition Security for Health

Improve Natural Resources , Ecosystem Services

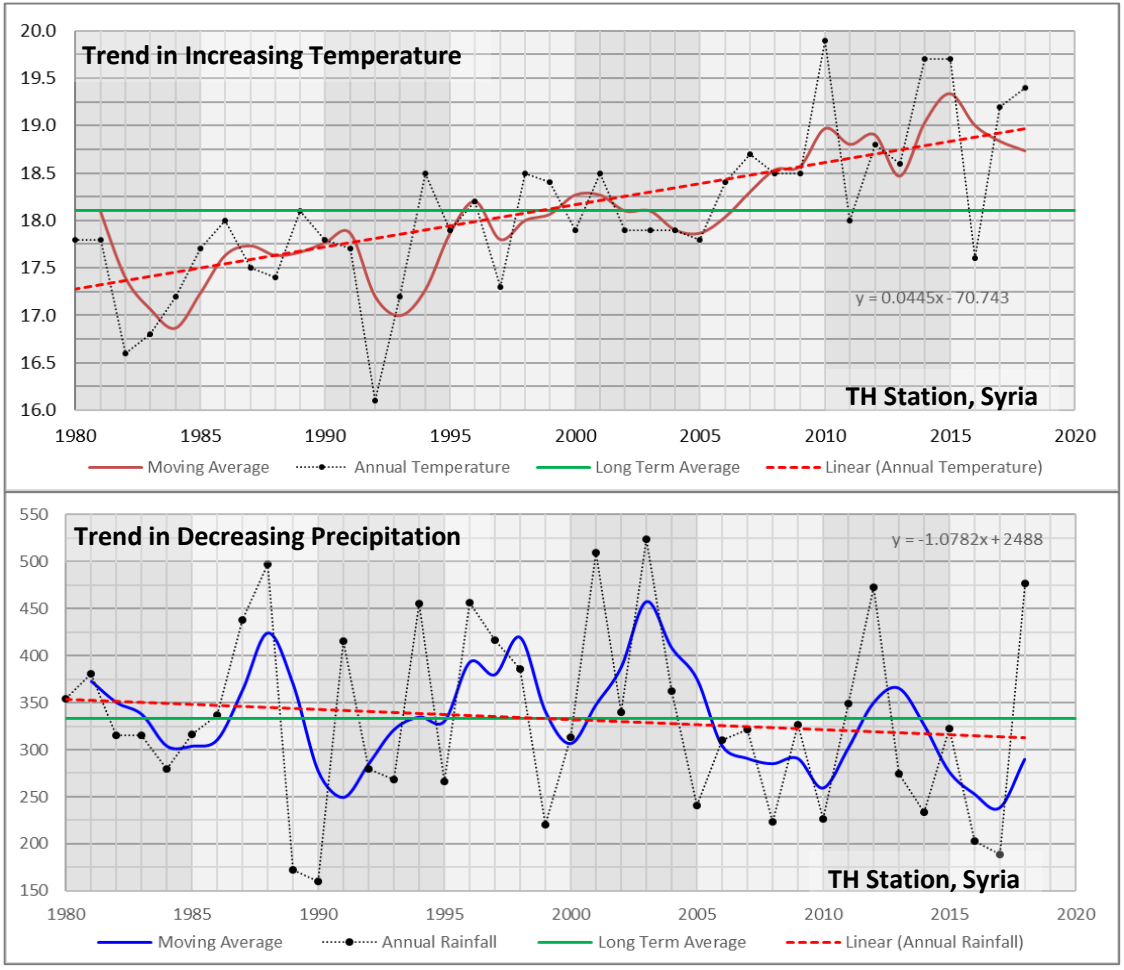
Systems Research

Rainfed

Irrigated

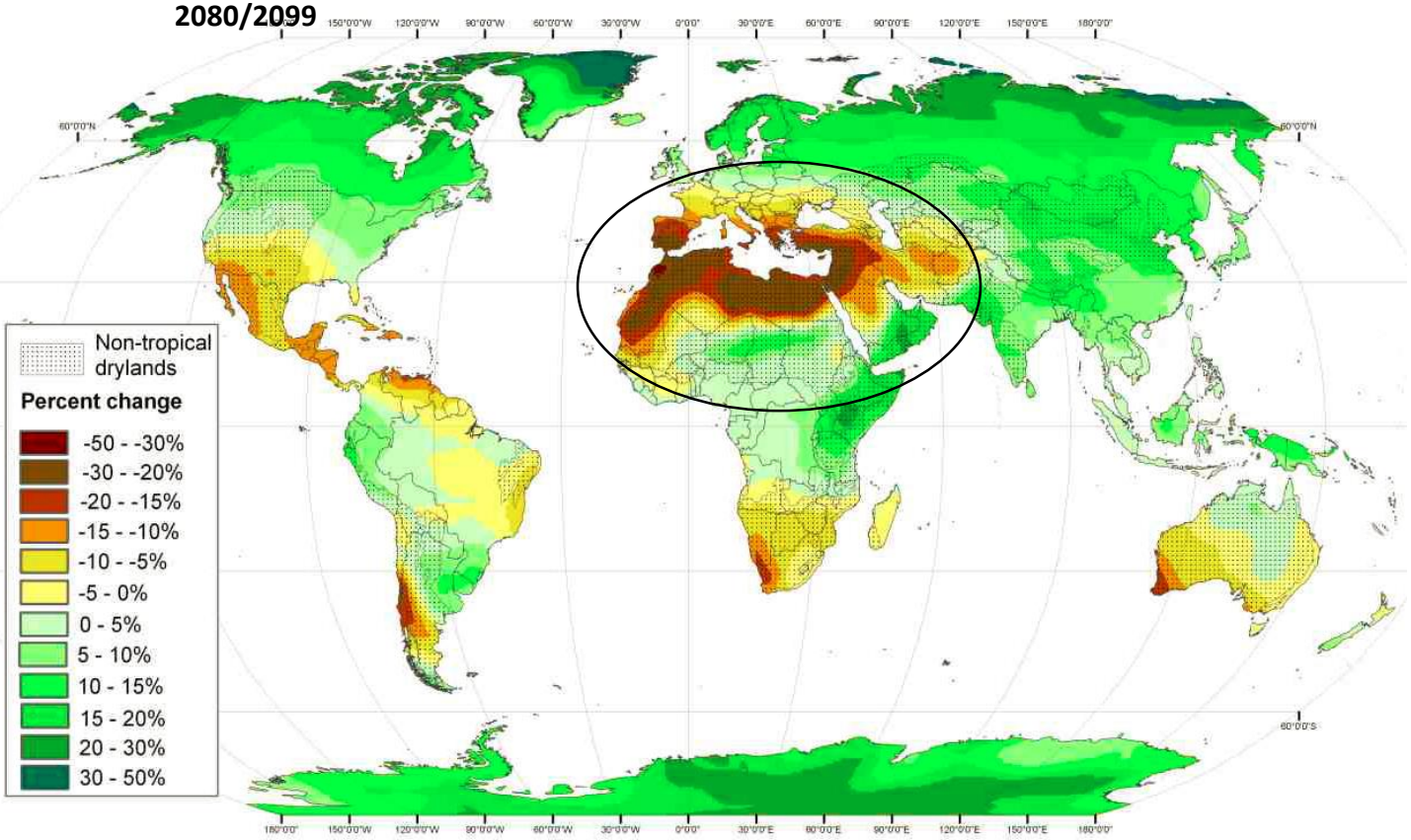
Agro-Pastoral

Climate change: historical records from ICARDA stations

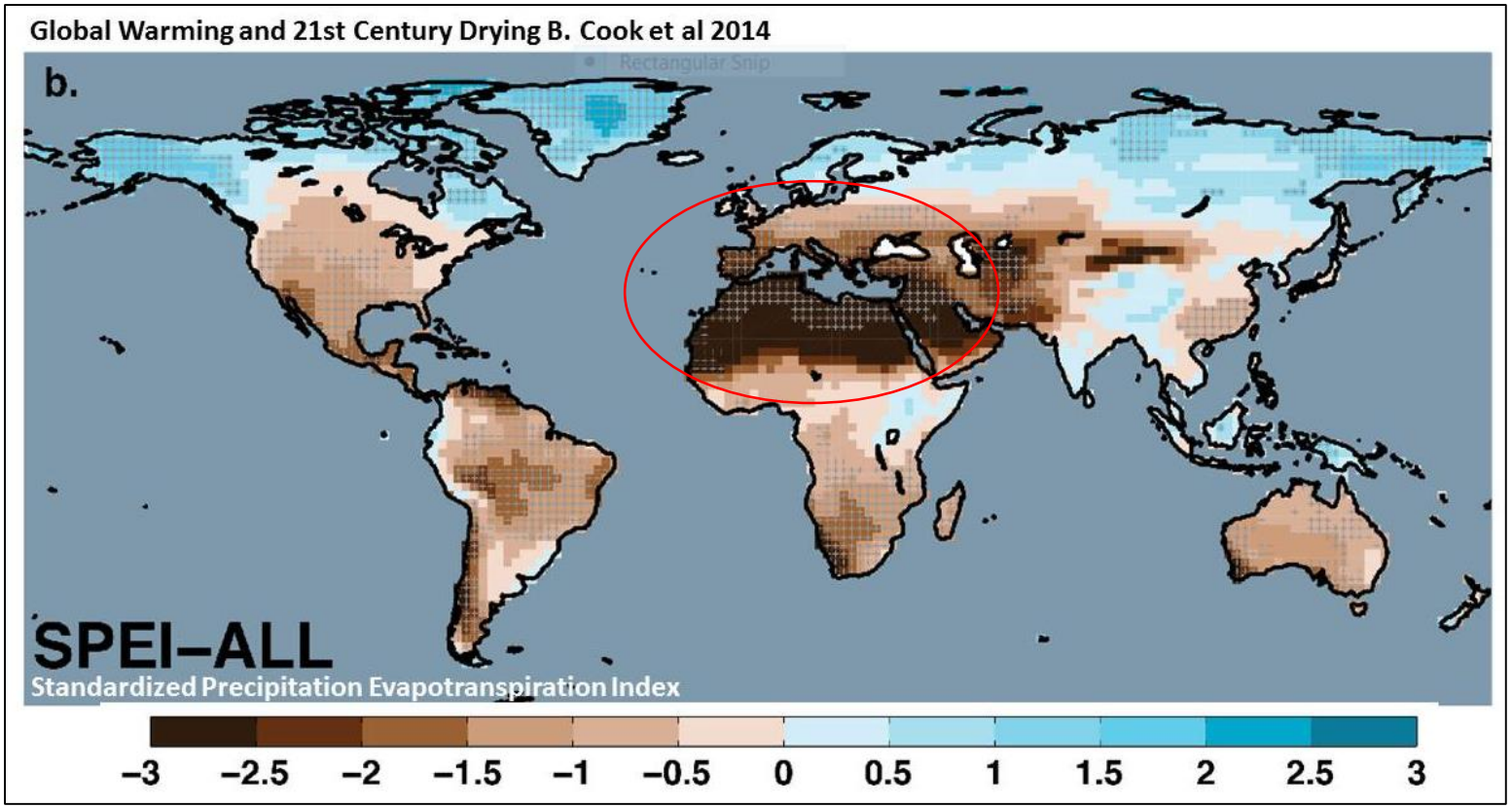


Climate Change: Expected change in Precipitation

1980/1999 to 2080/2099



Climate Change: Projected droughts by 2100



Tools


:: Agri Analytics Days | Agri Analy
eAtlas of Climate Change in Iraq
Not secure | geoagro.icarda.org/eatlas/
Apps
Bookmarks
EVI Seasonal Peak v2
Machine Learning C...
Earth Engine Coding
GU Lab
ODK Aggregate
DigitalGlobe - Sear...
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IFAD
eAtlas of Climate Change in Iraq and Jordan
Project "Improving food security and climate change adaptability of livestock producers using the Rainfed Barley-based system in Iraq and Jordan" (IFAD Grant 1240-ICARDA)
Please select target country
Iraq
Jordan
النسخة العربية
Forward
Implementation Team
Copyright and Fair Use

Improving locally adapted crops for climate resilience and drought resistance

Bread Wheat

Faba bean

Durum Wheat

Chickpea

Barley

Lentils

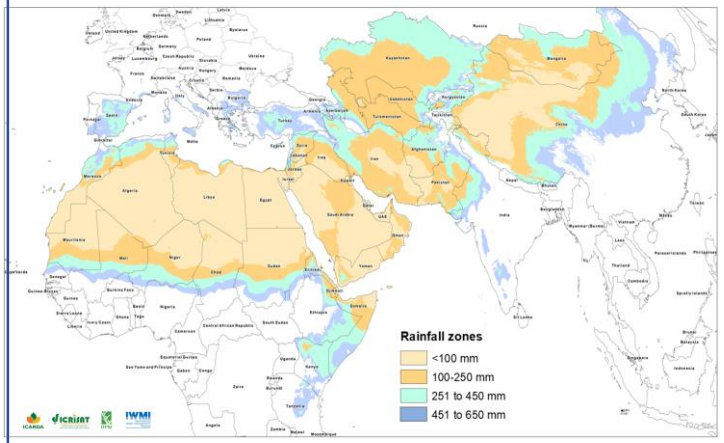
Rainfed

mm

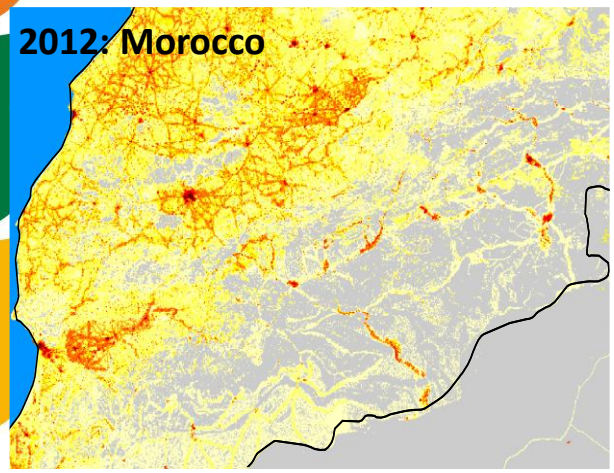
450

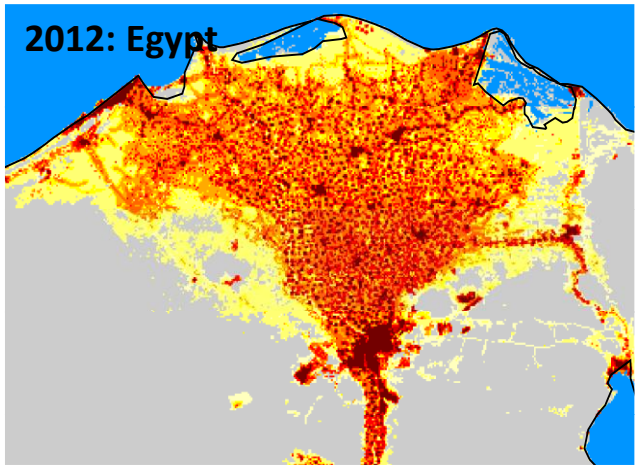
250

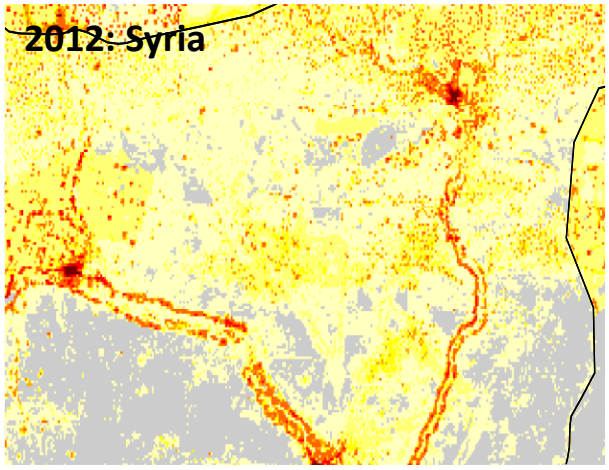
100

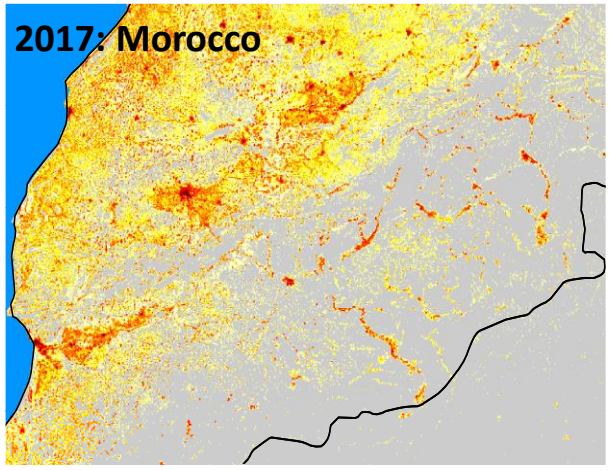


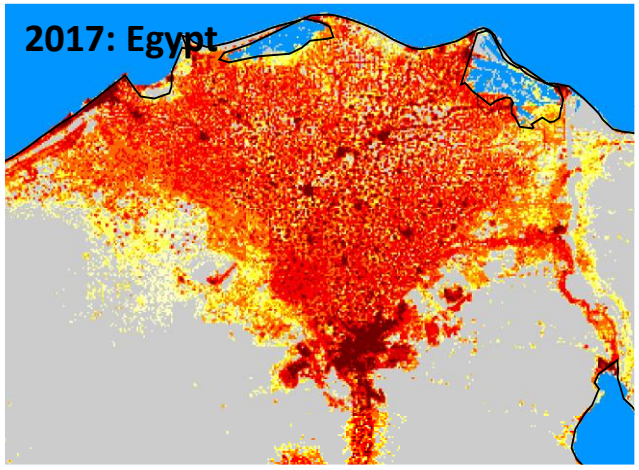
Changing demographics due to migration

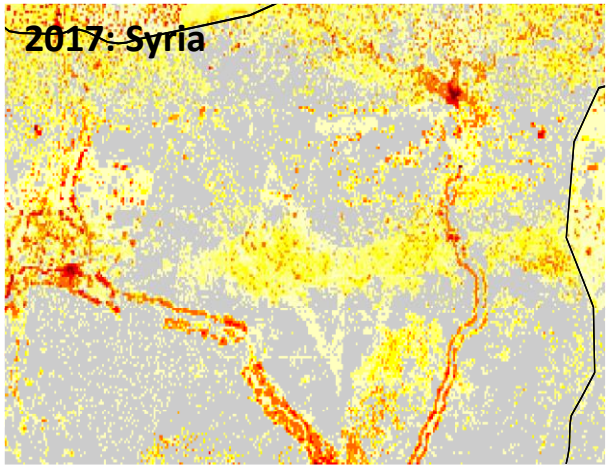






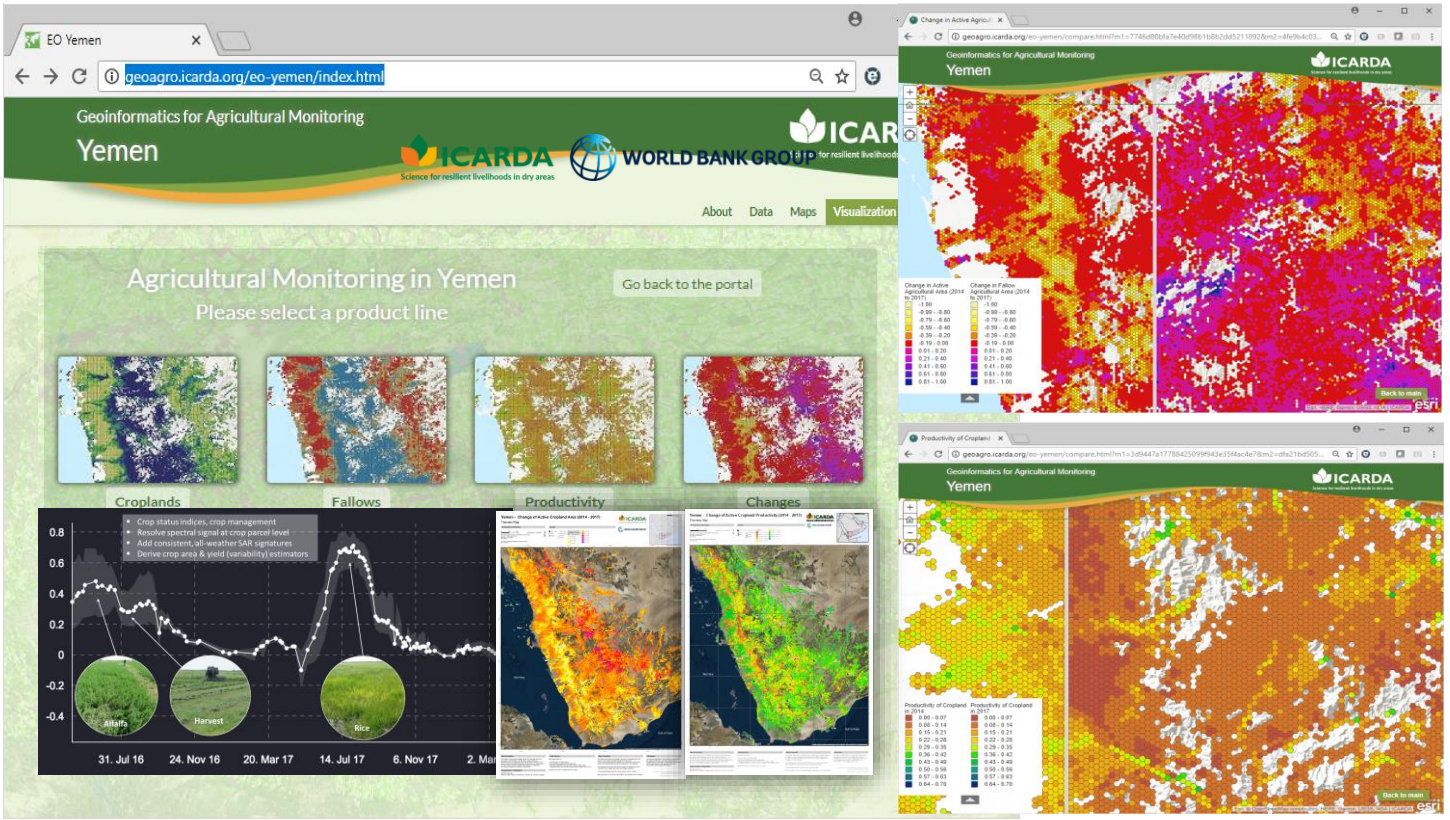






Mapping and monitoring the fragile landscapes

Impact of war on agriculture in Yemen



Enhancing water productivity for food security

- Modernization of irrigation systems and improving the efficiency of surface irrigation
- Supplemental irrigation (Systems and management)
- Deficit Irrigation as a water management strategy for water scarce areas
- Modifying cropping patterns to enhance water productivity
- Use of geo-informatics for monitoring and management

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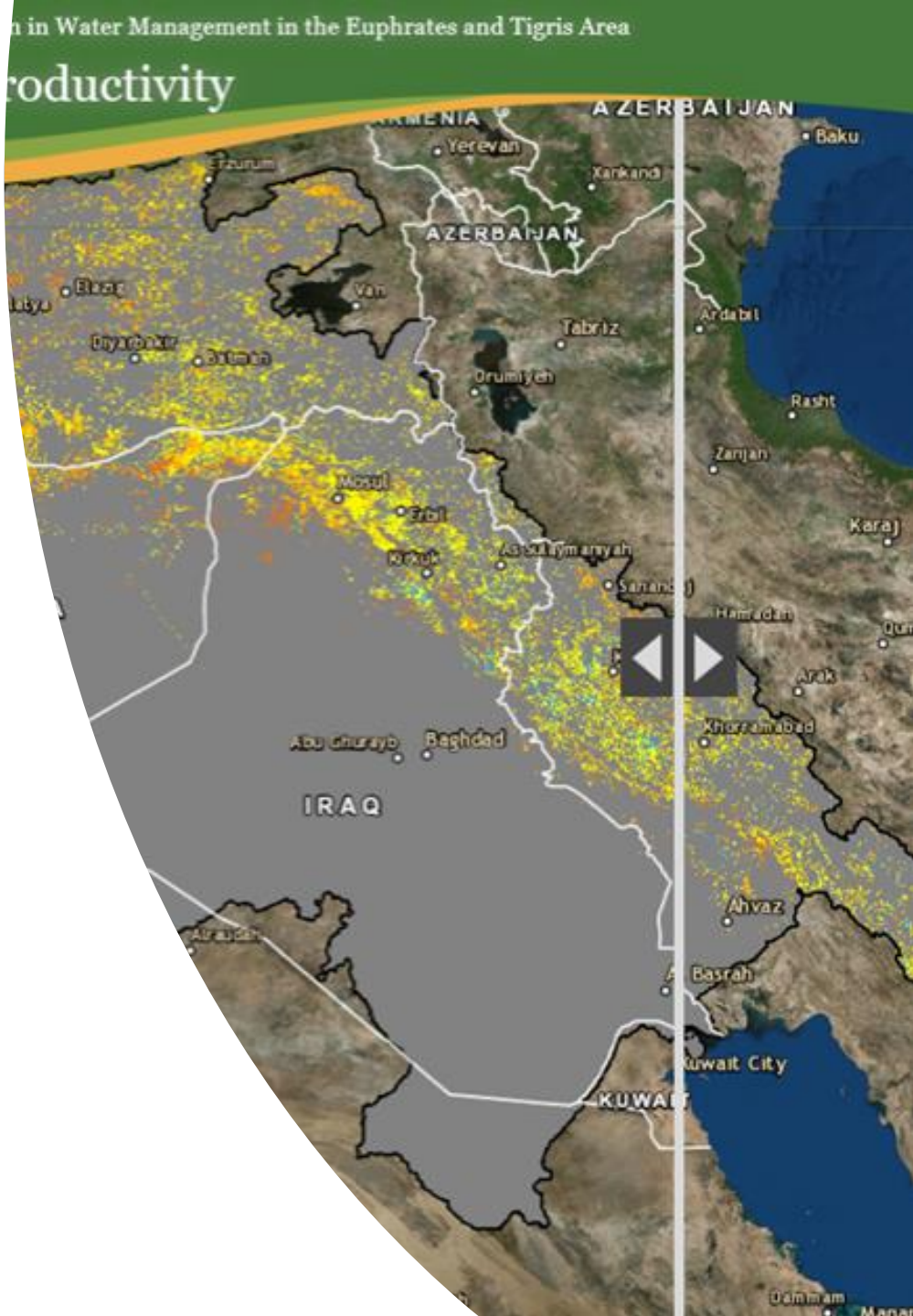


Increasing water productivity in wheat through raised-bed technology

Increasing wheat crop productivity and food security while saving on water resources

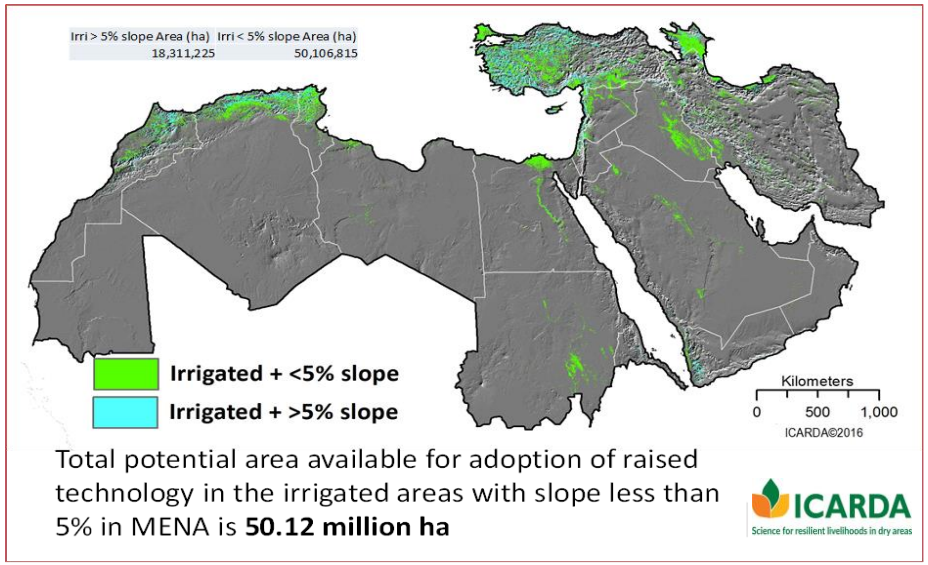
Farmer practices (Evaporation)

Mechanized Raised-bed technology

- **Reduce applied water by 30%**
- **Increased yields by 25%**
- **Reduced seed rate by 50%**

Adopted on 700,000 feddans across Egypt in 6 years. Egyptian Government National Campaign is targeting 1.8 million feddans by 2020.

Out-scaling proven technologies



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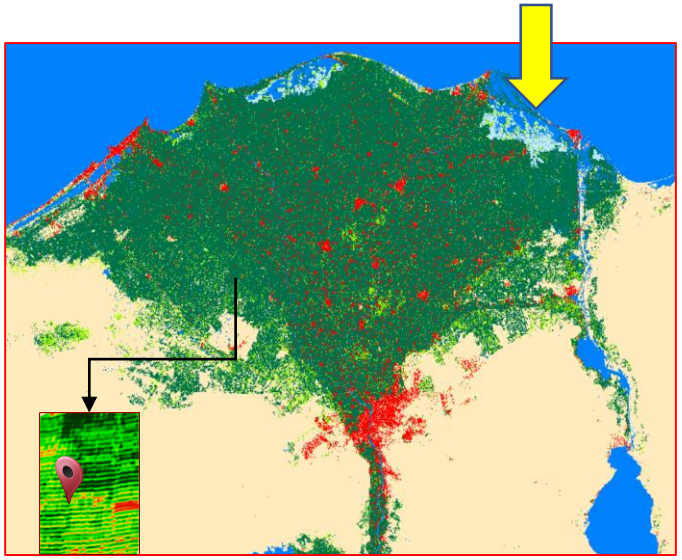
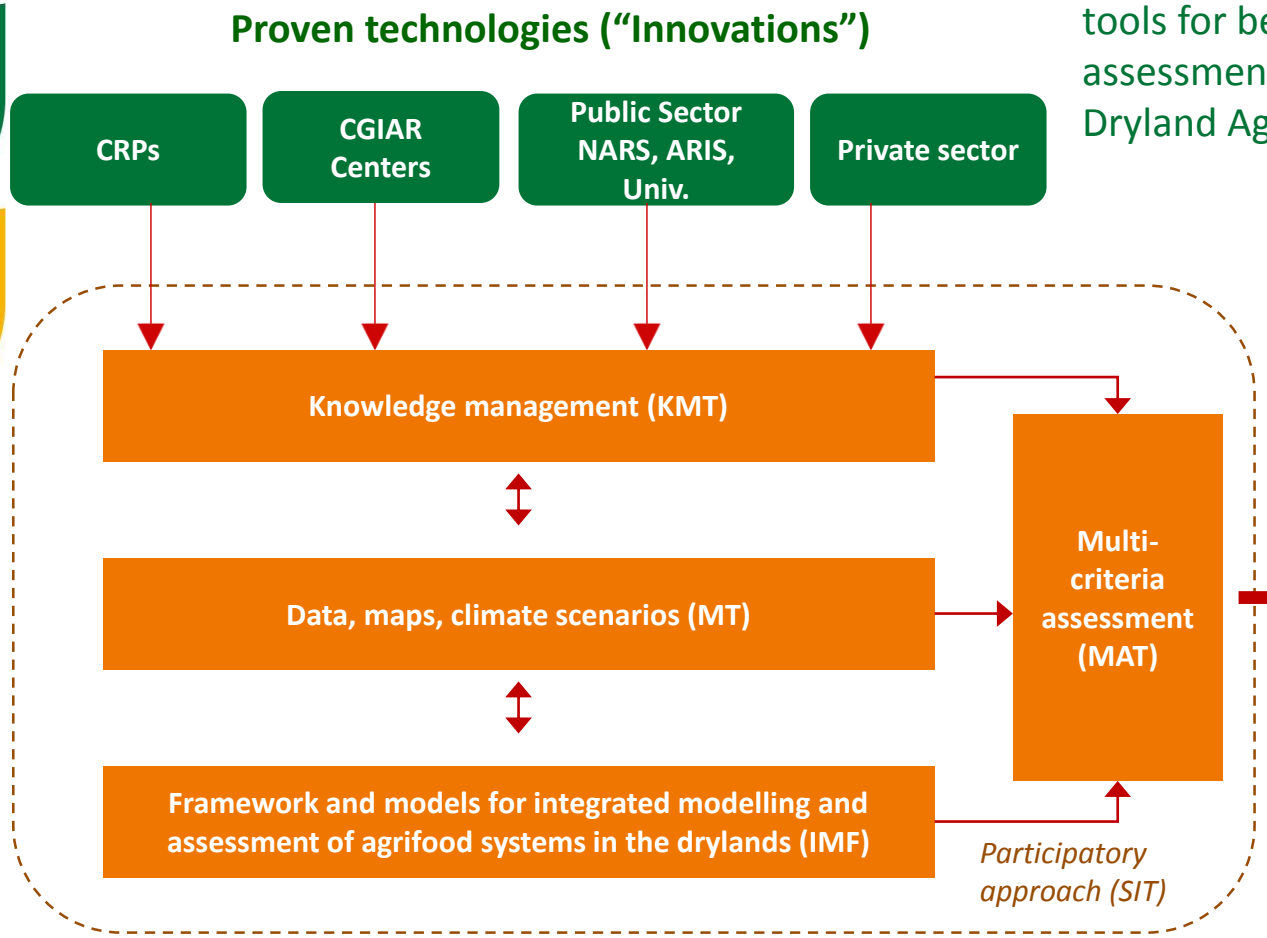
ARC
Agricultural Research Center



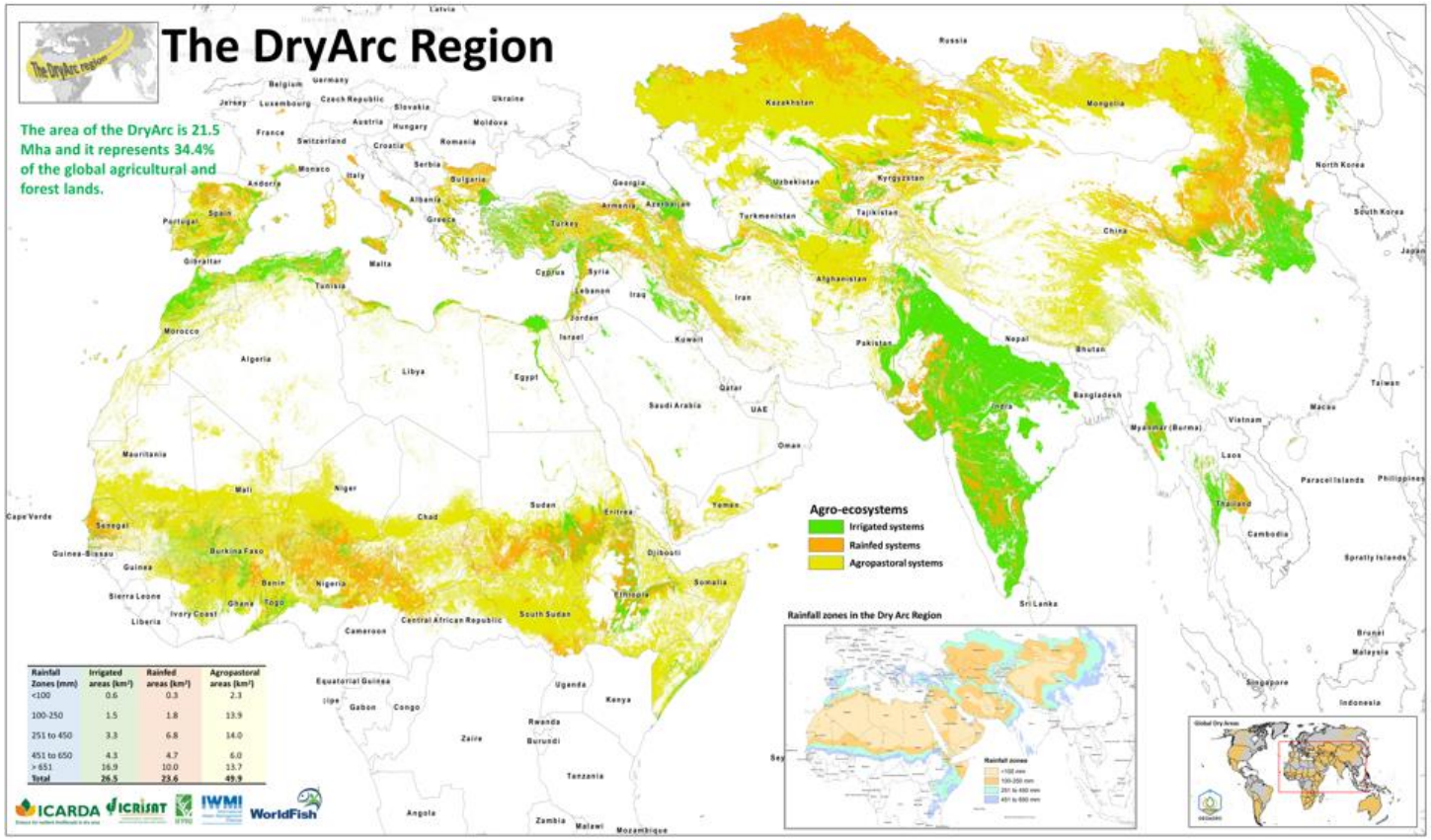
ICARDA New initiatives

DryArc Initiative

The DryArc Interface: a combination of tools for benchmarking, integrated assessment and scaling of innovations for Dryland Agriculture



‘Leaving no one behind’



Desert farming

- Less than 200 mm rainfall
- Water: harvested (green), extracted (fresh or saline) or re-used (grey, treated wastewater)
- Integrated Farming Systems - combinations of production systems
- Job creation in, and out of, agricultural sector
- Sustainability: circular economy and improved livelihoods

Thank you

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