

# Climate Change Impact on WANA

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**« Dialogue between Europe and its Southern partners**  
**on agricultural research and climate change »**  
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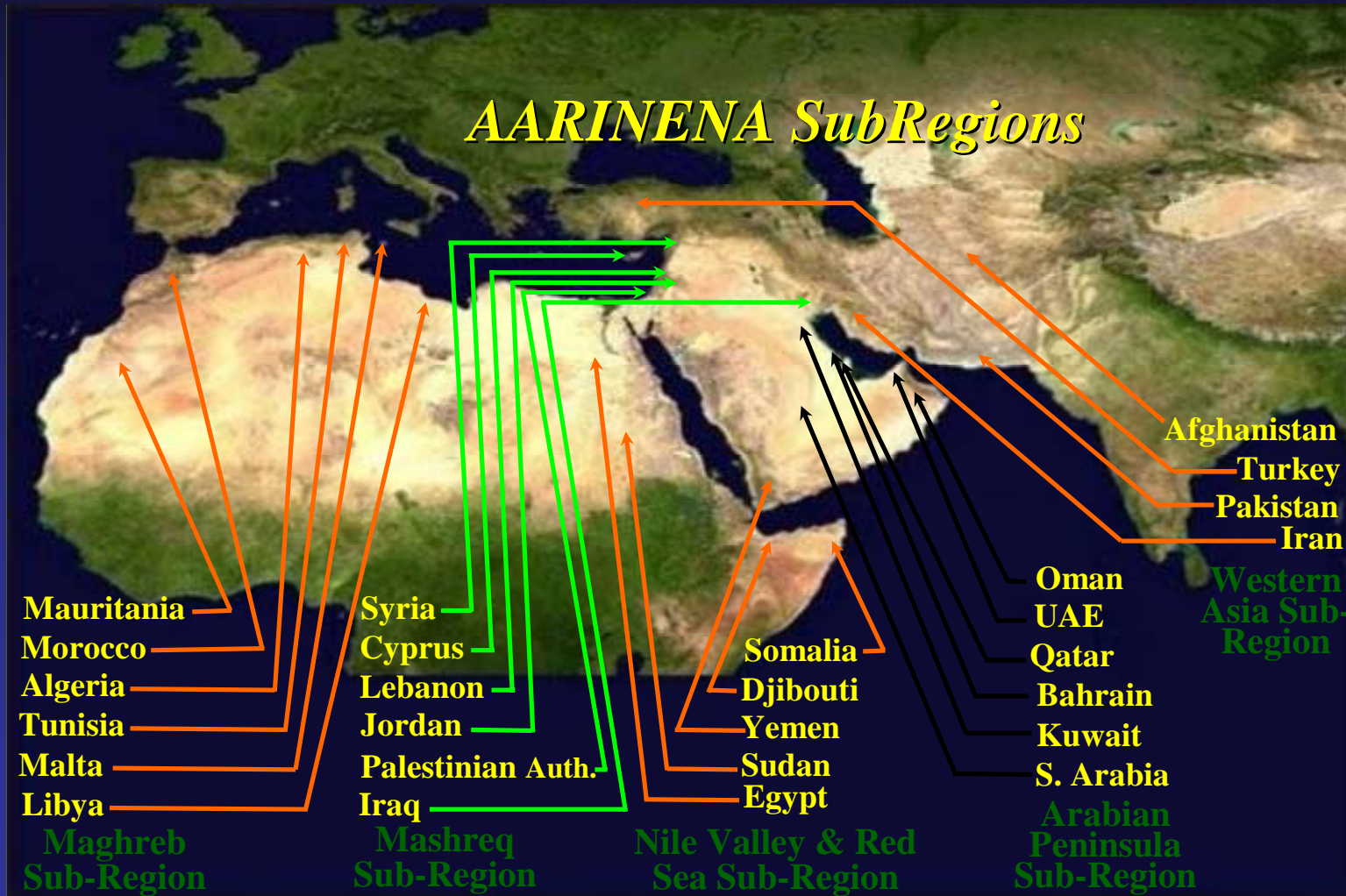
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# The Association of Agricultural Research Institutions in the Near East & North Africa (AARINENA)

- ❖ **AARINENA** was Established in 1985 as an autonomous body and a platform for agricultural research and innovation in the West Asia and North Africa (WANA) region
- ❖ **AARINENA's** Mission is to contribute to the enhancement of agricultural and rural development in member countries through fostering agricultural research and technology development and by strengthening collaboration among them and with the outside world.

# AARINENA (Cont.)



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- ❖ **The Association cosponsored and hosted by ICARDA West Asia Regional Program and FAO, BI and IFPRI and acted as a collaborator and partner with other relevant regional and international organizations.**
- ❖ **AARINENA Contributes to sharing and exchanging of knowledge and technology, and initiating generic modules and functional mechanisms such as commodity and technical regional networks and Regional Agricultural Information System (RAIS)**
- ❖ **AARINENA has important benchmarks in research prioritization and impact assessment related activities carried out in close collaboration with its stakeholders.**

# Constraints to Sustainable Agricultural Development in WANA

- typical fragile ecosystems of dry areas
- hot spot for climate change impact
- water scarcity & drought is becoming a common phenomenon
- land degradation & desertification
- population boom & poverty
- weak investment in agricultural research for development
- Inadequate policies
- Geo-politically fragile environment
- gender imbalance
- constraints in human resources and institutional capacities
- the largest food deficit region in the world



# Climate Change Impact on WANA

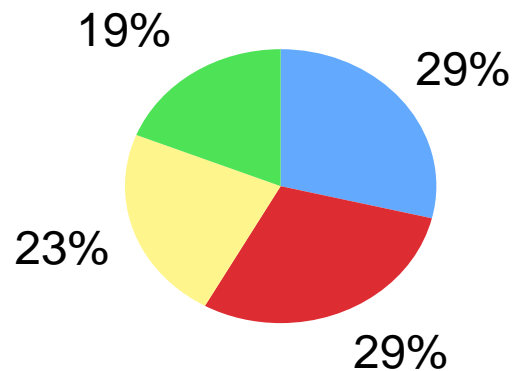
- Climate change is already a reality that we are facing,
- it will add additional constraints for the already fragile ecosystems of dry areas and limited natural resources in WANA.
- There is an urgency to strengthen further research and technology transfer on adaptation, mitigation and production system resilience.
- There is evidence on the global decline in food production; and although ***developing countries have contributed the least to climate change, they will be hit the hardest, particularly in WANA.***

# Impact of Climate Change (cont.)

- The climate change impacts are closely related to the hydrological cycle, such as water shortages, sea level rise, ecosystem stress, the increase of extreme events as droughts, floods, hurricanes and the risk of irreversible damage, such as bleaching of coral reefs due to higher levels of ocean acidity
- striking examples of potential impacts, such as the Nile delta with 6 million people will be affected by 1 meter of sea-level rise

# WANA Face 2 Face Consultation for GCARD 2010 9-12 Nov. 2009

For the 4 identified **cross-cutting themes** a total of 467 votes were distributed, the results shown in the figure below.



- Research management and capacity
- Climate change
- Poverty and socio-economic policy
- Dissemination and scaling up

# WANA F2F Consultation (cont.)

## Identified key-researchable issues (not in priority order):

1. Impact assessment of climate change
2. Capacity building and strengthening the data collection capability, analysis and modeling
3. Climate change projections, early warning system, land use plan and hazard zonation
4. Dissemination, awareness and advocacy about climate change among decision makers and politicians
5. Utilization of indigenous knowledge in climate change adaptation

# Identified key-researchable issues (cont.)

6. Enhance efficiency in agricultural system and secure innovative alternate energy sources in rural areas
1. Promote carbon sequestration 9. Develop climate change policy and sectoral action plans
2. Adaptation to Climate Change, e.g. breeding crops for climatic stresses, improve water efficiency, precision agriculture, disease surveillance and monitoring,
3. Mitigation to Climate Change through sustainable intensification of production systems and rehabilitation of rangelands which will enhance carbon sequestration.
4. Production system resilience
5. Feasibility and opportunity of bio-fuels in areas outside crop producing zones.

# Constraints

- Lack of appreciation/ awareness of the magnitude of Climate Change Impact among policy and decision makers
- Lack of institutions for climate change research and national and regional information sharing
- Lack of climate change research capacity
- Lack of or low funding allocations
- Lack of appropriate recognition of agriculture at international forum

# Proposed Measures

- Awareness campaigns through high level regional conferences and seminars
- Designate the relevant data collecting and research institutions for coordinating Climate Change research
- Development of research capacity at national and regional level
- Allocation of more funds from internal resources and mobilization of justified share of UNFCCC adaptation fund and from other donor agencies
- Participation of high level national delegates and international organizations/NGOs in international communications

# Proposed Measures (cont.)

- There is a need for global actions in energy policies, illustrated by the special requirements of various non-fossil energies, such as bio-fuels, solar and wind power, as well as nuclear energy.
- Innovations in faster growing, drought and salt tolerant crops will be required to deal with these challenges.
- The importance of collective action at the global and regional levels to harness against climate change impacts, for example joined efforts to dam the Mediterranean to regulate the sea level.
- Strategic approach, based on public education, awareness-raising and behavior-change to address unsustainable consumption patterns and pollution

# Proposed Measures (cont.)

- more crop per drop of water will need to be produced to ensure global food security and actions are needed to counter balance the higher volatility in the food markets.
- challenging the existing distortions in our value-systems and the need to engage with our leaders.
- A powerful illustration were the costs of the Iraq war of around 20 million dollars per hour, the trillions of dollars invested to bail out banks in the financial crisis, compared to the “marginal” 65 million dollars of total ODA commitments, pledged in Monterrey!!.

# Partnerships

- Policy makers,
- legislators,
- regional
- international organizations
- Governments,
- UNFCC
- adaptation fund through GEF
- FAO and ICARDA and EU and
- international donors

*Thank You*