



Food and Agriculture Organization
of the United Nations

WSI Work Plan: Results

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Water Scarcity (WSI)- Objectives

The WSI has been formulated to support the countries of the Near East and North Africa Region to cope with one of their most striking challenges: the pursuit of food and water securities, for a sustainable social and economic development, under an unprecedented severe escalation of water scarcity.

The objectives of the initiative are: enhancing policies, investments, governance and best practices to sustainably increase water and land productivity; providing tools for strategic planning of optimal and sustainable allocation of scarce water resources; implementing a regional collaborative strategy for a water-reform agenda.



Focus Area 1: Expanding **Protected Agriculture** in the GCC Countries (20101)

Expected Results

- ❑ A **prototype** of new generations of hydroponic greenhouses -NGGH- (reducing water consumption up to 90% as compared to outdoor), installed and operational at the Agric. Innovation Center in Dubai (MoEW).
- ❑ **Business & Environmental Assessment** for expanding Protected Agriculture in general, and NGGH in particular (cost-benefit and investment analysis, food trade and nutrition gains, foot-print evaluation, comparison with desalination, etc.)
- ❑ A **major advocacy and demonstrative event** for Investors (private/public) and other key stake-holders in the GCC countries

Financial Resources: MoEW ~ US\$ 320,000

Partners: MoEW, ICBA, ICARDA, GCC Countries



Focus Area 2: Use of **Non-conventional Water** in Agriculture (20101)

Expected Results

- Innovative **agri-aquaculture management practices** are tested and scaled up in four selected desert and arid locations of Egypt, Morocco, Algeria and Mauritania
- Aquaculture **pilot farms** are established for demonstration
- Guidelines** for the **Brackish Water use in Agriculture** are published and disseminated (countries involved: Algeria, Egypt, Iraq, Iran, Jordan, KSA, Morocco, Tunisia and Yemen) + **Brackish Water Atlas**
- Participation in the Network on '**Arab Non-conventional Water Initiative**' in support to the League of Arab States '**Water Security Strategy 2030**' (desalination, virtual water)

Financial Resources: WSI ~ US\$ 240,000

Partners: AWC, Countries



Focus Area 3: **On-Farm Sustainable Agriculture Intensification (20101)**

Expected Results

- Water and Land productivity** at community level is sustainably increased in at least 300 small-holders farmers
- Demonstration Fields** are established for:
 - ✓ **Raised-bed production** under irrigation (Egypt)
 - ✓ **Deficit/supplemental irrigation** under rainfed (Morocco and Tunisia)
 - ✓ **Conservation Agricultural** (Jordan, Morocco, Tunisia)
- Six 'greywater' treatment systems** are installed in selected villages to supply water for irrigation to small-holders farmers (Egypt, Jordan, Tunisia)
- Gender and socio-economic** assessment in the use of the above technologies

Financial Resources: WSI ~ US\$ 700,000

Partners: ICARDA, Countries



Focus Area 4: **Groundwater** Governance (20101)

Expected Results

- Improved **groundwater governance** of three aquifers (Al Azraq in Jordan; Berrechid in Morocco; Guenniche/ Bizerte in Tunisia)
- Hydrological, Institutional and Gender assessments** in the three aquifers (Jordan, Morocco, Tunisia)
- Decentralized Governance** in groundwater and other water systems in Sana'a Basin (Yemen)

Financial Resources: WSI ~ US\$ 150,000 for Jordan, Morocco and Tunisia
The Netherlands ~ US\$ 5M for Yemen

Partners: IWMI, Countries



Focus Area 5: Expanding **Solar-Energy** Use in Agriculture (20102)

Expected Results

- ❑ Four **pilot cases** of **solar energy** application to **irrigation** are implemented in the Region (Egypt, Jordan, Lebanon, ?).
- ❑ **Assessment** of the **potential** for the **use of solar energy** in NENA irrigated agriculture

Financial Resources: WSI ~ US\$ 50,000

Italian Cooperation ~ US\$ 0.5M (Egypt)

Swiss Cooperation ~ US\$ 2.2M (Jordan)

Swiss Cooperation ~ ????? (Lebanon)

GIZ ~ US\$ 300,000 (NENA assessment)

Partners: GIZ, Countries



Focus Area 6: **Climate Change** Impact on Water Resources and on Socio-Economics -RICCAR- (20102)

Expected Results

- ❑ Climate Change **scenario analysis for three time horizons** are established (1986-2005 baseline; 2044-2065; 2081-2100)
- ❑ Socio-economic and agricultural productivity **impact assessments** are carried out for three countries (Egypt, Lebanon, Jordan) and selected agro-ecological zones of the Region
- ❑ **Adaptation and mitigation measures** are identified and promoted for three countries (Egypt, Lebanon, Jordan) and selected agro-ecological zones of the Region
- ❑ **Institutional Mapping Report** on how countries address climate change

Financial Resources: WSI, GIZ, ACSAD, ESCWA ~ US\$ 300,000

Partners: GIZ, ACSAD, ESCWA, Countries



Focus Area 7: **Strategic Planning & Policies** of Water Resources -Arab Water Conference- (20103)

Expected Results

- A **policy dialogue** process is established within the **League of Arab States** (LAS) Ministerial Council (Water & Environment)
- Country Reports** on ‘**Water Accounting**’, ‘**Food Supply Cost Curve**’ and ‘**Gap Analysis**’ to be finalized and used on strategic planning and policy review of sustainable water resources management (Egypt, Jordan, Morocco, Oman, Tunisia)
- Contribution to the **3rd Arab Water Conference** with the LAS Ministerial Council of Water Resources Ministers
- Diagnostic Report** on the impact of using **modern/high-tech irrigation** to increase the sustainability of water resources management

Financial Resources: WSI ~ US\$ 80,000

Partners: LAS



Focus Area 8: Sustainable Soil/Land Management (20103)

Expected Results

- A comprehensive **soil information system** is fully operational and made accessible to key stakeholders
- A **capacity development** work plan on sustainable soil/land management (**SLM**) and on **restoration of degraded soils** is organized for soil institutions of NENA countries are (targeting at least 120 staff)
- VGGT** implemented in selected countries (at least 3)

Financial Resources: WSI ~ US\$ 80,000

Partners: The NENA Regional Soil Partnership, the Global Soil Partnership, IUCN, Countries



Focus Area 9: **Water Accounting and Water Productivity (20403)**

Expected Results

- ❑ Consortia of Institutions are established (**Regional Collaborative Platform**)
- ❑ Staff from the Ministry of Agriculture, Water Resources and Environment will make use of advanced **Satellite-based information systems** (targeting at least 80 professional from Governmental Agencies)
- ❑ Agricultural **water productivity** monitoring and enhancement of major farming/cropping systems is established in pilot countries of the Region (Egypt, Jordan, Lebanon, Morocco, Tunisia and WBGs)
- ❑ Water and Food security **GAP** are promoted within the Region
- ❑ Work plan for the **Lake Urmia Restoration** is established in Iran (pipeline)

Financial Resources: WSI ~ US\$ 1M (TCPs a MDF); ESCWA ~ \$ 0.5M; DWFI ~ \$ 0.5M; The Netherlands ~\$ 2.5M; Japan ~ \$ 3.6M (Iran); Swiss ~ \$ 1M (Morocco);

Partners: DWFI, ICBA, ESCWA, UNESCO-IHE, USDA, Countries



Focus Area 10: **Drought** Risk Reduction (50101)

Expected Results

- Risk profiling** assessment developed in at least three focus countries
- Drought **risk reduction strategy**, management and preparedness plans fully deployed in at least three focus countries
- Regional Drought Management System** implemented and operational at least in four pilot countries (Jordan, Lebanon, Morocco, Tunisia)

Financial Resources: WSI & FSN ~ US\$ 100,000; USAID ~ US\$ 2.1M

Partners: DWFI, ICBA, NDMC-Nebraska, Countries



SUMMARY

10 Focus Areas (Field-scale, Institutions, Policies/Strategies, Data)

10 Focus Countries (Algeria, **Egypt**, Iran, Jordan, Morocco, Oman, Tunisia, UAE, **WBGS**, Yemen)

2 Main SOs involved (SO2 & SO5)

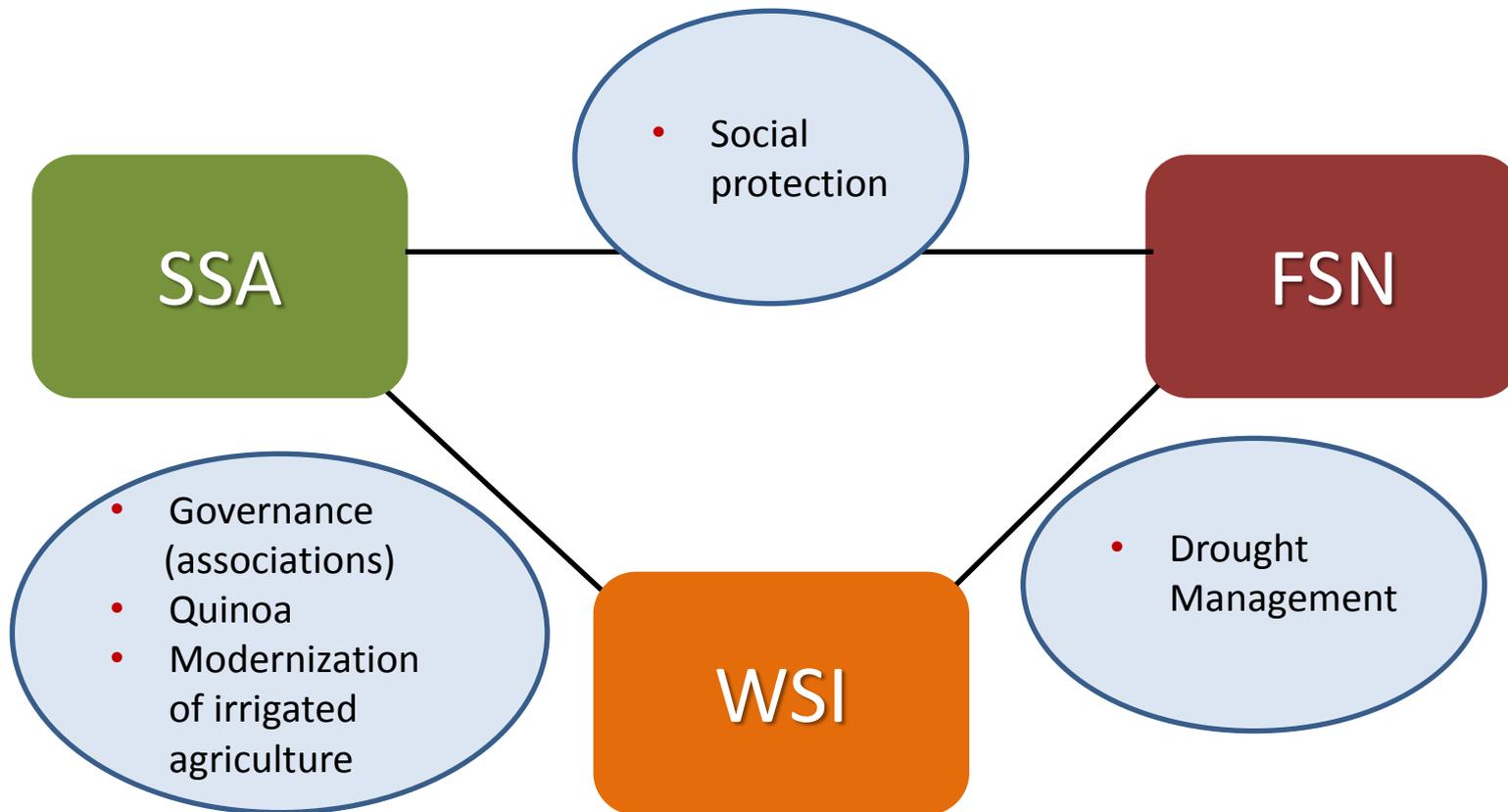
Financial Resources (~ US\$ 21M)

Solid Partnership (National, Regional, International)

Consolidated Delivery Teams (Country Offices, RNE, HQ)

Further opportunities for accelerating delivery (MAWs, TN, ?)

Regional Initiatives' Synergies





Thank you