E

February 2014

| | | | | | | |
|---|---|---|---|---|---|---|
| | منظمة الأغذية والزراعة للأمم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Alimentación y la Agricultura |

# FAO Regional Conference for the Near East

## Thirty-second Session

## Rome, Italy, 24-28 February 2014

## Regional Water Scarcity Initiative: Towards a Collaborative Strategy


**Executive Summary**

This paper summarizes the main themes and recommendations of the document *Regional Water Scarcity Initiative: Towards a Collaborative Strategy* prepared as part of FAO's 'Regional Initiative on Water Scarcity' in Near East and North Africa (NENA). The *Regional Collaborative Strategy* will complement and complete existing initiatives, will seek structured mechanisms to address water scarcity beyond the national level and will provide an agricultural water lens to the 'Arab Water Security Strategy' (2010-30). After discussing the challenges and responses for a sustainable water resources management and related food security in NENA, the document puts forward an agenda for a comprehensive reform, including a number of options, and indicates innovative implementation modalities, including: evidence-based decision-making processes through benchmarking, monitoring, evaluation and reporting; sound governance and institutions, including decentralization of agriculture water management and empowerment of farmers and farmers groups as full partners, food producers and ultimate managers of soil and water resources; synergies in innovation and learning based on exchange of solutions amongst practitioners within and outside the Region; and all-inclusive multi-stakeholder approach to changes. The collaborative regional strategy will be implanted through regional and national action plans, supported by FAO and Partners.


**Guidance sought from the conference**

The conference may wish to:

i) support the regional initiative on water scarcity;
ii) welcome the efforts and actions undertaken by FAO and Partners to develop a regional collaborative strategy on sustainable water management for food security;
iii) provide guidance on priority areas for action under the regional initiative on water scarcity to be considered in the PWB 2014-2015 and the MTP 2014-2017;
iv) invite countries to formulate national action plans and to support the formulation of a regional action plan to implement the regional collaborative strategy.

**Table of Contents**



## I. INTRODUCTION

1. The Near East and North Africa (NENA) Region is naturally exposed to chronic shortage of water and may be facing the most severe intensification of water scarcity in history. Per capita fresh water availability has decreased by 2/3 over the last forty years and will probably decrease by another 50% by 2050. Agriculture which consumes already more than 85% of available fresh water resources in the region will most likely have to absorb the bulk of this shock, with possibly major consequences for food security and the rural economy. Countries in the region need to plan strategically their water resources allocation and review their water, food-security and energy policies to ensure their alignment with the imperative of making the best use of each single drop of water.

2. To address these challenges, FAO has launched a Regional Initiative on Water Scarcity in Near East and North Africa (WSI) to assist countries in identifying and streamlining policies and best practices that can significantly improve agriculture productivity and food security in the region. The initiative will support adoption and implementation of evidence-based policy-decisions, sound governance and institutions, cost-effective water investments and best management practices. The initiative is premised on the principle that in a so complex field as agricultural water management, and in the enormous diversity of situations across the NENA region, there is a strong advantage in seeking structured ways and means beyond the national level, to understand challenges and potentials, to learn from experiences, to innovate and scale up successful cases. In this context, a regional collaborative

strategy has been formulated under the pilot phase of the WSI (see box). The collaborative strategy was discussed at the Land and Water Days held in Amman, Jordan (15-18 December, 2013) by over 230 participants, including 80 experts from 15 countries and 16 international and regional institutions.

***The WSI pilot phase***

Launched in June 2013, the WSI is intended to design two major products: a *Regional Collaborative Strategy* on sustainable agriculture water management for food security, and a *Regional Partnership* to support countries in the implementation of the collaborative strategy. During the pilot phase, six countries (Egypt, Jordan, Morocco, Oman, Tunisia and Yemen) started to apply three major approaches constituting the initial analytical framework of the WSI: 'water accounting', reviewing the current status of water availability and use and the potential for further agricultural production; 'food supply cost curve', a simple but powerful method for identifying and ranking options for future food supply in terms of both their economic and water-requirements costs; 'gap analysis', investigating policies, governance and institutional environments and performance of agriculture water management in the region. The results of the pilot phase are expected to be completed within the first semester of 2014.

3. This paper summarizes the main elements of the collaborative strategy. It presents first the main problematic associated with food security and agriculture water management in the NENA region. It then review the progresses made by the NENA in the sustainable management of agriculture water resources, identifying gaps and priority areas for action, including those where a regional collaboration can add value. The *Collaborative Strategy* on sustainable Agriculture water management for food security builds on existing initiatives and will also provide an agricultural water lens to the 'Arab Water Security Strategy' (2010-2030), complementing and completing its action plan.

## II. WATER, AGRICULTURE AND FOOD SECURITY IN NENA: BRIEF OVERVIEW

4. NENA is a very water short region, with water resources per capita just one sixth of the world average. Countries in the region have thus developed a higher proportion of their available water resources and constructed more water storage per capita than any other region in the world. Nonetheless, over 60% of water resources in the Region flows from outside national and regional boundaries. Groundwater has also become a significant source of water across the region, representing the basis for the rapid growth of new agricultural economies in the Arabian Peninsula, though every country is now experiencing groundwater depletion. Furthermore, the considerable degradation of water quality and the competition for water between all sectors are accelerating. Finally, climate change is likely to accentuate the already severe water scarcity and increasing the crop water requirements.

5. Agriculture, by far the largest user of water in the region and as an important socio-economic sector in almost all countries of the region (see box), will thus be required to substantially increase its 'productivity' in terms of food, income and employment, while reducing its water share. While the last 25 years have witnessed a strong average growth rate of 2% per annum in agricultural value added, the situation is becoming extremely challenging when seen in perspective. On one side we have an irrigated market-oriented agriculture, responding to fast-growing demand of higher value produces from urban and export markets, though facing progressive reduction of water allocation. On the other side we have rainfed farming, largely growing cereals and that accounts for nearly two thirds of the agricultural population region-wide, facing particular challenges of low productivity and unpredictable rainfall.

6. Water is therefore the binding constraint for agriculture in all NENA countries in their quest to further increase agriculture growth and incomes, employment and food security and reduce rural poverty. Food security has been a perennial preoccupation in NENA as no country approaches self-sufficiency in cereals, and most of them import a large share of their food needs. Only four countries

cover two thirds of their cereals needs from domestic production, and six cover less than 20%. Region-wide, food imports average 13% of total merchandise imports, but variability exists with peak exceeding 20%. Due to their dependence on imported food, global food price hikes and food price volatility affect all NENA countries and sustainable production intensification is seen with great interest.

***Agriculture[1] is a vital economic and social sector in the region***

Region-wide, agriculture accounts for $95 billion of value added annually, with agriculture in Iran adding more than $20 billion annually to GDP, and more than $10 billion annually in both Egypt and Morocco. With modernization and urbanization, the share of agriculture in regional GDP has declined. Nonetheless, the sector remains key to primary production and is the mainstay of the rural economy, contributing averagely with 13% to regional GDP, and (excluding some Gulf countries) ranging from 2% in Jordan to more than 20% in Sudan and Syria. The sector provides jobs and incomes for 38% of the region's economically active population. Food exports ($20 billion annually and 4% of the region's total merchandise exports) make a considerable contribution to the economy of many NENA countries and help to pay for food imports.

7. Following the food crisis of 2008, countries in NENA region need evidently to evaluate in perspective the food and agricultural policies that would most contribute to an optimal balance between internal production, trade, storage and social protection , vis-à-vis the optimal balance between 'actual' and 'virtual' water budget.

## III. MANAGING NENA'S WATER RESOURCES: GAPS AND RESPONSE OPTIONS

8. NENA countries have recognized that water scarcity will escalate and that available water resources must be managed more efficiently and sustainably than ever before. This involves actions at National level, to put in place instruments for optimal water allocation between sectors while providing the institutional and incentive frameworks for efficient and sustainable water resources management, and at agricultural-sector (and local) level, to ensure that water allocated to agriculture is used efficiently and productively. Supporting tools as water accounting (including water foot-print), scenario analysis, water and food cost-curves approaches, are available to provide an analytical and evidence-based charter for policy- and decision-makers.

### A. National (inter-sectoral) Water Resources Management

9. At the National level, countries need to develop a vision for their future development as to better define political-economy objectives and efficient water allocation between sectors/users and to put in place the institutional structure, enabling environment and incentive frameworks for socio-economic efficient and productive water use. Priorities for improving management of water resources in NENA countries belong to domains including: strengthening governance and institutions; integrated approaches to water resource management; decentralization and participation; supply-side management; demand-side management and the incentive framework.

*Governance and institutions*

10. Over two decades, NENA countries have made strides in applying best practice principles of integrated water resources management (IWRM). In general, the countries have embarked on a progressive transition from supply augmentation and direct provision of water services toward a greater focus on water demand management, decentralization and inclusion.

11. Decentralization, participation, changes to the incentive structure and basin planning have all helped to achieve higher levels of allocative efficiency between sectors, better efficiency and productivity in agriculture water use, and greater social equity and environmental sustainability. Irrigation agencies are progressively decentralizing. The quality of planning and public investment has

[1] Including livestock, forestry and fishery

improved, although there remains a legacy of capital-intensive, supply-driven investments still featuring a 'top down' engineering approach.

12. Priority areas for action could be to further improve efficiency and accountability, strengthen participatory approaches and economic analysis in the investment planning process, and to continue the on-going transition from centralized management to approaches where farmers are considered as producers in viable commercial value chains, while public agencies delegate, regulate, monitor and support, and invest efficiently, all with a raised level of transparency and accountability.

*Integrated Water Resources Management (IWRM) and the basin approach*

13. Several NENA countries have embarked on IWRM and planning anchored at basin level, improving allocative efficiency, integrating investment programming and strengthening environmental regulations. The basin approach has the advantage of settling sectoral allocations, providing certainty and transparency, and this has been a driver of greater efficiency in irrigation. In the future, as demand from other sectors grows, basin-level institutional mechanisms for orderly transfer of water between users will become increasingly necessary.

14. Priority areas for action include: the generalization of the basin approach, both within countries and across borders; further decentralization of decisions on investments and allocations; and an increase in accountability by giving more voice to non-state stakeholders. A regional review of past experience, drawing pointers and guidance for the future could be undertaken, as well as sharing at the regional level of data, information and knowledge on basin planning, to help improving allocative efficiency, efficiency and productivity of water use.

*Decentralization and participation*

15. Many NENA countries have started moves towards decentralization and community collaboration on natural resources and environmental management. The approach has been applied on irrigation schemes with water user associations (WUAs), but the same community-based collaboration has also been applied to watershed and groundwater management and to conservation of ecosystems and environmental services.

16. WUAs have developed taking-on tasks ranging from simple right representation up to management of branch canal. However, WUAs in NENA are considered weaker than in other regions: a recent FAO study found no strong link between NENA WUAs and the quality of water services. The explanation was that WUAs in the region are less than fully effective because they are not sufficiently empowered.

17. Further analysis has shown that WUAs can be empowered not only for improving efficiency and productivity of water use at production level but also as institutional mechanisms for ensuring efficient working of the value chain.

18. Priority areas for action would be to systematically develop and empower WUAs (and farmer organizations more generally). The development and empowerment of WUAs and other farmer organizations could be the subject of regional technical cooperation, benchmarking, and capacity building.

*Acting on the supply-side of the water budget*

19. Although regional water resources are generally fully committed, some opportunities still exist to develop further storage and to optimize releases on existing storage. However, any new storage projects will have to cope with more variable and extreme flows, and are likely to be set in an environmentally and financially more sensitive landscape. Local hill dams, water harvesting or on-farm water storage may prove to be sound solutions.

20. In NENA, there are important sources of brackish water, which are increasing with the salinization of groundwater and waterways. Recent research at the region's International Centre on Biosaline Agriculture shows the economic potential of brackish water in agriculture in NENA countries.

21. As cities grow, their claim on water resources increase at the expenses of agriculture, but the growing volumes (and treatment) of wastewater coming from these cities become increasingly attractive to farmers and agricultural activities around cities. With increasing scarcity of water, it is important to ensure safe disposal and wise use of wastewater around cities.

22. Best practice in transboundary water management seeks to achieve goals of fair distribution of benefits, economic efficiency and environmental sustainability through agreement on some level of cooperation and benefit sharing. Overall, the paybacks coming from cooperation are likely to be considerable, as reaching agreement over water will reduce risks and encourage investments.

23. Climate change will have a negative impact on agricultural water availability and will increase farmers' vulnerability. Farmers would benefit from structured support within national adaptation strategies. At the regional and national level, climate modelling and resource monitoring are essential to preparing responses to climate change.

24. Priority areas for action should focus on strengthening regional cooperation and research for the augmentation of unconventional waters, and to support farmers on applying best practices and standards. For adaptation to climate change, there is a need to strengthen regional cooperation at the level of modelling and monitoring, prepare adaptation strategies, and cooperate on research and technology development. Region-wide sharing of data and best practices, information and knowledge on groundwater governance and management would be useful. For transboundary waters, experiences on cooperative approache frameworks could be shared between basins; for example, the Tigris/Euphrates basin could learn from the Nile experience.

*Demand management options and the incentive framework*

25. NENA countries have adjusted the incentive structure to manage demand for agricultural water and encourage conservation and efficient use. Most countries have revised the basis for charging farmers for irrigation water, and fees have been increased to recover management, operation and maintenance costs (MOM) and sometimes a share of the capital costs. However, there is a shortfall on many schemes, and fees paid by users do not cover full costs, which limits autonomy and may impair services. Not recovering costs also limits the scope for private sector participation.

26. NENA countries have moved progressively towards free trade and compliance with their commitments under the WTO. Nonetheless remaining protection of domestic production still keeps farm gate prices high in many countries, distorting incentives and encouraging uneconomic use of water. Cheap energy prices continue to drive groundwater depletion in several countries.

27. NENA countries have recognized the significant losses and waste of food along the production-consumption value chain and are establishing a plan to reduce food losses and waste in the region by 50% within ten years. This will significantly reduce water resources consumption.

28. Priority areas for action should be evidence-based – to know what are the components of effective incentive structures for agricultural water use that drive farmer behaviour, support household level food security, and reduces water consumption. Public and institutional awareness building is of high significance.

## B. Agricultural (intra-sectoral) Water Management

29. Within the Agricultural sector, strategic opportunities exist for improving management of water resources, including: improving water use efficiency and crop water productivity, irrigation modernization, rainfed agriculture enhancement, improved watershed and dryland management, drainage and drainage water re-use.

*Improving water use efficiency and crop water productivity*

30. Improving productivity from existing water must be the principal path to agricultural growth, especially in terms of efficiency and crop-productivity gains in rainfed and irrigated systems. The introduction of fishery and aquaculture (also in combination with rice systems) can provide a valuable opportunity for water productivity increase.

31. Overall, water use efficiency and crop water productivity of irrigated agriculture are relatively high in NENA. There is nonetheless scope for improvement, particularly in progressive conversion to pressurized irrigation and protected agriculture, in switching to higher value crops, and in improving all aspects of irrigation and land, crop, livestock and water management.

32. Priority areas for actions could address technology development and management research to increase productivity. Strengthening regional cooperation on research for plant breeding and biotech to develop planting material to increase the harvest index and strengthen drought, salinity and pest resistance, or to allow earlier planting or maturing or extend the growing period. There is also scope for research on water management and on integrated land/crop/livestock/water management. A regional approach to benchmarking on these options is also valuable.

*Irrigation modernization*

33. Recent studies conducted by FAO show that a few NENA irrigation schemes are relatively efficient overall at delivering a timely, quality water service, and compare favourably with those in other regions of the world. There was nonetheless a wide variation between schemes and countries, particularly in overall irrigation efficiency and in performance amongst farmers within the same scheme. There is thus scope for improving irrigation performance.

34. Energy costs are relatively high in NENA irrigation, particularly on pressurized or lift schemes, and this makes for high O&M costs. As a result, investments to raise irrigation efficiency may not always be cost-effective as energy prices rise. Assessments on energy consumption and costs in the various schemes would add significant value to the irrigation modernization process.

35. Modernization of a NENA irrigation scheme, and related investments, should typically cover infrastructure, water and energy measurement and control devices, empowerment of WUAs and capacity development in order to improve flexibility, equity and reliability of water delivery services.

36. Priority areas for action would focus on a regional process to share data, information and knowledge on modernization, methodologies and best practices, as well as on benchmarking and capacity building. A regional collaborative review of the implications of the energy-water nexus, both within NENA and worldwide, could provide a valuable set of options for governments in the region.

*Groundwater governance*

37. The groundwater boom has revolutionized agriculture in many countries of the region. Groundwater has proved very popular as an easily developed, flexible source of just-in-time water under the farmer's direct control. However, the 'open access' characteristic of groundwater has led to unregulated development, inequitable access and competitive over-pumping, resulting in rapid depletion in many locations, accompanied by deterioration of water quality and saline intrusion.

38. Priority areas for action will include the development of new models of groundwater management that ensure the sustainability of the resources. 'Aquifer agreements' and methods of participatory governance of groundwater resources will need to be developed, tested and disseminated. Future development pathways need to promote more robust governance conducive to higher levels of productivity coupled with sustainability of groundwater quantity and quality and with equitable access.

*Rainfed agriculture enhancement*

39. Across NENA countries, rainfed systems support 62% of farming households. Incomes are generally low and poverty is prevalent in many communities. Raising productivity of these systems would have a significant impact on reducing poverty and improving household level food security.

40. The gap between current and potential yield is very high: productivity can be improved up to two to three times by a combination of soil-moisture and fertility management, and choice of crops and varieties. Where supplementary irrigation is available, it provides famers with a range of risk management options.

41. However, rainfed farmers face multiple constraints including low and variable water availability, soil salinity, unfavourable temperature, lack of nutrients, drought and floods, market risks and land and water tenure uncertainties. Consequently, farming strategies are naturally characterized by risk aversion, low levels of investment, inherent low yielding and vulnerability to climate change.

42. Priority areas for action would focus on technology and institutions for improved productivity in these systems through: promoting research, innovation and strategies for risk reduction; institutional adaptation accompanying technological innovation; strengthening land tenure; joint monitoring of climate change trends and the development of adaptive strategies and investment programmes at the local and regional level; introducing innovative sources of financing, such as payment for environmental services (PES). There would be multiple benefits from synergy and joint work across the region in research, exchange of best practice, mutual farmer visits, etc.

*Improved watershed and dryland management*

43. Watershed management typically targets land and water management with twin objectives: improved livelihoods upstream and improved water resources downstream. The challenge has been to achieve win-win solutions profitable enough for both upstream and downstream farmers.

44. Best results come where there are conservation techniques that are also profitable for farmers, and where participatory approaches are used that create ownership amongst the local community. In addition, the approach of PES has been used with some success elsewhere in the world, and could be piloted in NENA.

45. Much dryland in NENA is lost each year under desertification. Some of this is simply natural process, but much is due to changes in land use, for example, changes from sustainable pastoral use to crop production or increased stocking rates leading to over-grazing. Reforestation of degraded lands may help to reduce the desertification process, provided forests canopies and trees are factored in the water budget.

46. "Priority areas for action would include: efforts towards better integration between upstream and downstream development; institutional coordination for improved planning and participatory implementation of soil and water conservation programmes across forests, rangeland and cropland, including systems to reduce desertification and the development of PES approaches. Regional collaboration for sharing of data, information, knowledge, best practices and R&D could help with programmes to protect and reclaim degraded watersheds and for combatting desertification."

*Drainage and drainage water reuse*

47. Waterlogging and salinity due to rise of water tables and accumulation of salts are reducing productivity over wide areas in NENA. On the positive side, drainage water can be collected and reused so that drainage gives the possibility of increasing water resources.

48. Drainage water represents a considerable water resource and, with careful planning, management and investment, it can add 10% or more to national water resources, as in Egypt.

49. Priority areas for action on drainage water would focus on salinity control and on the potential for reuse. Regional collaboration could be very helpful, including in particular: sharing of data, information and knowledge on drainage and reuse; establishment of best practices; benchmarking; capacity building.

## IV. AGENDA FOR SUSTAINABLE AGRICULTURAL WATER MANAGEMENT IN NENA

50. NENA countries have progressed on many fronts to improve agricultural water management and this has raised productivity, supported a shift to higher value cropping, brought many more farmers into the market, and strengthened household-level food security through higher incomes, reduced dependence on subsistence crops, and improved market functioning.

51. Mounting water scarcity in the Region requires a comprehensive reform and innovative approaches to further improvement in sustainable agricultural water management. This paper has identified a number of opportunities for actions at regional, sub-regional and country level. The following table summarizes the major themes and areas for intervention to pursue a sustainable water resources management in NENA.

**National and Agricultural Water Resources Management areas of interventions**

| | | | | |
|---|---|---|---|---|
| **A** | **Strategic planning for comprehensive Water Resources Management (National/inter-sectoral level)** | | | |
| | ▪ Multi-stakeholder scenario building | ▪ IWRM and allocation efficiency | ▪ Water-Food-Energy Nexus analysis | ▪ Policy, Institutions and overall Governance revision |
| **B** | **Interventions for improved Agricultural Water Management (sectoral/local level)** | | | |
| | **Farming system** | **Governance and policy issues** | **Resource management issues** | **Productivity issues** |
| | ***Rainfed systems*** | ▪ Community-based natural resource management | ▪ Climate change adaptation<br>▪ Watershed management (including forestry, rangeland)<br>▪ Water harvesting | ▪ Research, technology development and transfer<br>▪ Reducing the yield-gap<br>▪ Increase Water Productivity<br>▪ Value chain approach |
| | ***Irrigated systems*** | ▪ Empowering water user associations (WUAs) | ▪ Supply management (unconventional water use)<br>▪ Demand management (farming system allocation)<br>▪ Climate change adaptation | ▪ Irrigation modernization<br>▪ Increasing efficiency and productivity in water use<br>▪ Value chain approach |
| | ***Groundwater systems*** | ▪ Groundwater governance and policy issues | ▪ Collective water-user management<br>▪ Monitoring of groundwater depletion | ▪ Increasing efficiency and productivity in water use |

52. What will make the difference for the coming years, though, is not so much the list of measures but the approaches to applying them. At least four linked approaches represent innovations in doing business in agricultural water management in NENA:

Evidence-based approaches employing benchmarking, monitoring, evaluation and reporting to assess the results of measures applied and to feed the knowledge gained back into adjustments. This approach applies across the whole range of measures: policies and strategies; changes to institutions and incentives; and technical and socio-economic interventions.

Farmers as full partners in building policies and programs responding to farmers' needs and constraints. Approaches to farmer involvement go beyond 'consultation' and recognize their status as commercial operators in the value chain, not just beneficiaries.

Effective synergies in innovation and learning. As earlier indicated, the complexity and diversity of agricultural water management in the NENA region provides a strong advantage in pursuing structured mechanisms beyond the national level to understand challenges and potentials and build capacity. This process, evidence-based and founded on the primacy of the farmers' viewpoint, needs to bring together institutions and programmes at all levels (local-regional-global), and to forge more effective partnerships and ways of collaborating, from farmer-to-farmer exchange, e.g. in Farmer Field Schools, to exchanges of solutions amongst practitioners rather than through conventional capacity development.

An inclusive approach to change. Recent years have seen the emergence of new ways in which change comes about across the NENA region. Education and social changes have heightened awareness of water issues across broad constituencies, and a new political openness has encouraged inclusive debates. There is broader understanding that problems of scarcity, inter-sectoral competition and climate change are worsening, and that water institutions are not always well-adapted to this changing context. Future reforms in water management may be modelled on successful examples worldwide, such as that of Australia (see box).

***Comprehensive reform of water management in an arid country: Australia's National Water Initiative***

Driven by growing water shortages, Australia conducted an inclusive process of study and debate to arrive at consensus on its *National Water Initiative*. This comprehensive reform plan says: on resource management, return all water systems to sustainable levels of extraction and respect needs for environmental water; on water allocation, provide secure water entitlements for all, and introduce water sharing plans with legal force; on demand management, encourage open trading of water rights, introduce water pricing based on economics, and ensure support for affected communities where irrigation supplies are reduced; and on governance and institutions, invest in knowledge about water, and build capacity for good water management, and improve water data collection and water accounting.

Five key elements enabled Australia to bring about such sweeping reforms:

- An imperative for reform: Australia was experiencing severe water shortages and over-allocation to agriculture and the situation was worsening with climate change. These realities became 'drivers of change'.
- An inclusive process of study and debate leading to consensus on a national water reform agenda: A long process of study, national debate and political discussion led to agreement on objectives and on the national water reform agenda, the *National Water Initiative*, which acted as a blueprint for the changes.
- Policy coherence: The *National Water Initiative* contained the right suite of policies to achieve the policy objectives and the right measures to tackle the many water challenges within a coherent, integrated national plan.
- Good water governance arrangements: The reforms established the right institutions, with clear authority, the necessary resources, and stability.
- An evidence-based process: The *National Water Initiative* was based on the systematic use of data, science and knowledge, and on the practical application of economics, taking account of key concerns like property rights, and introducing the discipline of markets.

53. The proposed agenda for sustainable agriculture water management for food security requires both a large by-in from member countries in the region and a broad partnership between the main regional and international institutions active in the field of Water management and food security. It requires also the identification of the critical priority areas for action at country and at regional level where immediate interventions could help achieve the greatest impact in the medium and long term. In this context and building on the pilot phase of the WSI, the priority for FAO are threefold:

i) At national level, support countries translate the regional agenda into national strategic action plans for sustainable agriculture water management and provide adequate support for their implementation, in collaboration with strategic Partners.

ii) At regional level, develop an action plan for the implementation of the *Collaborative Strategy* between countries and promote its implementation with Partners. A priority is to be given to addressing the agricultural dimension of the Arab Water Security Strategy (2010-30).

iii) Translate the Partnership pledge made by 14 regional and International organizations at the Land and Water days held in Amman into theme-specific and result-oriented partnerships with time-bound outcomes.

**Guidance sought from the conference**

The conference may wish to:

v) support the regional initiative on water scarcity;
vi) welcome the efforts and actions undertaken by FAO and Partners to develop a regional collaborative strategy on sustainable water management for food security;
vii) provide guidance on priority areas for action under the regional initiative on water scarcity to be considered in the PWB 2014-2015 and the MTP 2014-2017;
viii) invite countries to formulate national action plans and to support the formulation of a regional action plan to implement the regional collaborative strategy.