



9th World Water Forum

Actions submission format

Action Group 2 D “Ensure sustainable agricultural practices, including water productivity and efficiency, reduction of diffuse pollution, and decreased food losses”

ACTION 1: WATER PRODUCTIVITY FOR FOOD SECURITY

Overall Goal: Ensuring food and nutrition security for populations in a context of increasingly pronounced climate variability/change

It is well known that water is one of the most important inputs needed for plant growth for agricultural production and food security. However, the West African region is facing problems related to water scarcity as well as depletion of soil fertility. These factors have an impact on yield risks and food security due to high variability in seasonal precipitation and other climatic hazards. Therefore, there is a need to improve the efficiency of water use in irrigated agriculture in the West African region. In other words, local stakeholders in West Africa need easy-to-use, cost-effective and effective decision-making tools to manage their irrigated agricultural fields and increase irrigation efficiency. Climate change is expected to worsen conditions in the region. There will be less rainfall and more frequent droughts; Extreme temperatures changes in climate zones; shorter growing seasons emerging diseases and pests. All these elements, especially the decrease in water quantity and quality, will challenge our ability to produce food

Specific objectives and expected outputs: modernizing irrigation systems and improving the efficiency of surface irrigation at farm level - studying deficit irrigation as a water management strategy for water-scarce areas with minimum negative impact on crop yield – using modified cropping patterns to enhance water productivity and income by improving crop varieties that are drought tolerant and high yielding - developing integrated livestock-range-land-crops production systems on marginal lands

Alignment with SDGs: SDG2 - SDG 6 - SDG 13 - SDG 15

Coherence with other priorities: Connected to the Action Group on IWRM

| | Objective | DESCRIPTION | EXPECTED OUTPUTS | ALIGNMENT WITH SDGs | IMPLEMENTATION | IMPLICATION DES PARTIES PRENANTES | OUTSCALING and OTHER CONTEXT | REGIONAL REPRESENTIVITY | LINK WITH OTHER ACTION GROUPS |
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| Project 1 - TITLE: Smart management water system | <p>OG: Develop and test methods for mapping agricultural water productivity at watershed and scheme scale to improve producers' resilience to food, nutritional insecurity in a context of climate change</p> <p><u>Specific Objective 1:</u> mapping water productivity using remote sensing data at different time scales;</p> <p><u>Specific Objective 2:</u> Mapping irrigated and rainfed areas at various time scales;</p> <p><u>Specific Objective 3:</u> Develop methods and techniques at spatial and time different scales</p> | <p>The project is based on the development of sound methods and techniques for assessing agricultural water productivity and mapping watersheds using remote sensing techniques; it will also apply a consistent, comparable, reliable, timely and cost-effective approach to map water productivity at different scales (resolution) and/or level (field, basin)</p> | <ul style="list-style-type: none"> - Production of water productivity maps at different scales and levels; - Mapping of areas under irrigation using time series of remote sensing data and advanced methods and tools; - Implementing modern equipment for water level measurements and application and of user guidelines to adequately monitor fluctuations in in each reservoir; - Mapping and estimating water need at the basin level; - Improving the management of agricultural water structures; - Improve water productivity according to different uses (agriculture, livestock fishing);- Introducing a | <p>SDG2 SDG 6 SDG 13 SDG 15</p> | <p>Not yet been implemented but could be considered in the Delta of the Senegal River, the Anambé Basin and in the rain-fed areas where smallholder irrigation schemes are planned</p> | <p>States, international cooperation, research institutions, technical services, water user associations</p> | <p>In the Sahel with real opportunities for the funding of projects and programs exists; e.g. the regional Sahel irrigation initiative (PARIIS) implemented in 6 CILSS countries by the World Bank</p> | <p>The PARIIS project which is implemented jointly in 6 CILSS countries with a regional approach could be used as a platform</p> | <p>Possible link with the Action group on IWRM, Rural domestic water supply ; migration, job creation</p> |

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| | | | better management of soil moisture and fertility; - Increasing water productivity by producing more per unit of water volume | | | | | | |
| Project 2 - TITLE : Famers collective participation in ground water resources operation and management | To understand the role that groundwater could play in assessing water potential in agricultural development in a con-text of food insecurity and climate change <u>Specific Objective 1:</u> to study how future groundwater development could contribute in promoting the development of agriculture; <u>Specific Objective 2:</u> Analyze the current and past surface and subsurface water governance by region. <u>Specific Objectives 3:</u> Assess the socio-economic impacts of groundwater use in agro-ecological areas (e.g. the Sahel region); <u>Specific Objective 4:</u> Disseminate effective water use and management technologies for agricultural development in the Sahel | Until recently, groundwater was mainly used for drinking water supply (EPA) of populations. But with the climatic variabilities that have plagued the SAHEL, they are increasingly called upon for the development of agriculture. For this reason, it is important to focus on inclusive and participatory management of groundwater resources in the SAHEL to sustainably support agricultural development without jeopardizing the need for the environment. | | SDG2 SDG6 SDG13 SDG 15 | Weakly implemented in the SAHEL and CILSS countries | States, international cooperation; research institutions, technical services, water users' associations | In the Sahel with real opportunities for the funding of projects and programs exists; e.g. the regional Sahel irrigation initiative (PARIIS) implemented in 6 CILSS countries by the World Bank | The PARIIS project which is implemented jointly in 6 CILSS countries with a regional approach could be used as a support for out-scaling the project findings | Possible link with the Action group on IWRM, Rural domestic water supply; migration, job creation |

ACTION 2: TRANSITIONING FROM RURAL DEVELOPMENT TO RURAL TRANSFORMATION

Overall Goal: To transform rural areas into social and economic development Poles through sustainable agricultural productions

Specific objectives and expected outputs: Development of human resources by building capacity of farmers - Promoting environmentally friendly agriculture based on good control of water resources - Implementing innovative technologies for water conservation and use - Developing technology capabilities for farmers - Creating development poles for the market and processing of agricultural products in rural areas

Alignment with SDGs: SDG2 - SDG 6 - SDG13 - SDG15

Coherence with other priorities:

| Objective | DESCRIPTION | EXPECTED OUTPUTS | ALIGNMENT WITH SDGs | IMPLEMENTATION | IMPLICATION DES PARTIES PRENANTES | OUTSCALING and OTHER CONTEXT | REGIONAL REPRESENTIVITY | LINK WITH OTHER ACTION GROUPS |
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| <p>Project 3 - TITLE: Transition switching from rural development towards rural transformation</p> | <p>Overall Goal: To make the rural environment a hub of eco-economic development centered on activities related to green water;</p> <p><u>Specific Objective 1:</u> Develop agricultural production systems based on efficient use of water resources;</p> <p><u>Specific Objective 2:</u> Establish water use efficiency and contribute to wealth-generating agricultural hubs;</p> <p><u>Specific Objective 3:</u> Develop access services to secure young people in rural areas and encourage their integration into the agriculture sector;</p> <p><u>Specific Objective 4:</u> Develop strong links between cities and rural areas to reduce mega-urbanization and limit rural exodus;</p> <p><u>Specific Objective 5:</u> Support of family farming systems to promote economic development in rural areas;</p> <p><u>Specific Objective 6:</u> Promote both staple and cash crops;</p> <p><u>Specific Objective 7:</u> Promote the processing and marketing of agricultural production in rural areas.</p> | <p>The fact is that agriculture in the Sahel is mainly rainfed (80% of cultivated land). The frequent droughts have a negative impact on the development of agricultural activities and make life difficult in rural areas. This is why it is essential to consider developing agro-poles based on a paradigm shift in the production system that is part of productive water to promote the diversification of rural activities. These mutations will allow us to evolve towards sustainable agriculture supported by controlled water resources with a promotion of value chains linked to the various activities (agriculture, livestock, aquaculture /fish farming). To achieve these changes and achieve desired results, the IWRM approach could be a key tool to successfully develop attractive activities for young people in particular, who might be interested in an attractive development of rural areas.</p> | <ul style="list-style-type: none"> -Promoting sustainable economic activities based on a good management and control of water-resources; - Maintaining the volumes used; - Building a viable and reliable water system to ensure the water availability; - Solving water pollution problems - Analysis of demographic issues in relation with the availability of labour to address the needs of users and consumers; - Capacity building of operators; - Promoting cross-border cooperation - Implementing innovative technologies for water use and conservation; - Developing operators' capabilities with regard to technologies; - Creating hubs for the development, marketing and transformation of agricultural production; - Water accounting. Investing in rainfed agriculture - Demand management to avoid post-harvest losses; - Making water available at critical times - Expansion of storm-water management; - Defining small- and large-scale IWRM solutions; Development of the public-private partnership; - Guaranteeing access to credit for women and young people; - Protection of ecosystems. | <p>SDG2 SDG 6 SDG13 SDG15</p> | <p>Weakly implemented in the SAHEL and CILSS countries</p> | <p>States, international cooperation; research institutions, technical services, water users' associations</p> | <p>In the Sahel with real opportunities for the funding of projects and programs exists; e.g. the regional Sahel irrigation initiative (PARIIS) implemented in 6 CILSS countries by the World Bank</p> | <p>The PARIIS project which is implemented jointly in 6 CILSS countries with a regional approach could be used as a</p> | <p>Possible link with the Action group on IWRM, Rural domestic water supply; migration, job creation</p> |
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