High Level Panel

Water use and management in agriculture within a climate resilient environment

The African Union - European Union Agriculture Ministers Conference

2 July 2017, FAO HQ, Rome, Italy

CONCEPT NOTE

Context

Water has a crucial role in accomplishing development goals. This is extremely relevant in Africa where a large number of regions have abundant water resources whilst at the same time others suffer from long and severe drought periods and/or extreme water scarcity. The sustainable management of water and other precious natural resources is one of the defining challenges of our time. The World Economic Forum referred to water as one of the main global risks.

Africa is highly dependent on agriculture for food production, in particular with regard to its large rural population. The expected population growth in Africa is predicted to reach 2 billion people by 2050 and 4 billion by 2100. This, combined with the potential impact of climate change, calls for better water management across the continent. Consequently, sustainable and efficient agriculture requires improved water resource management and must focus on reducing water consumption, for instance through more efficient irrigation systems. Agricultural practices need to concentrate on both quantity and quality of water, to avoid water pollution and excessive usage, land degradation and desertification.

Globally, agriculture and water play a substantial role in the 2030 Agenda for Sustainable Development. This is clearly reflected in the Sustainable Development Goals (SDGs). Sustainable water management (SDG6) and sustainable agriculture (SDG2) are both primary goals, and neither one can be achieved independently of the other.

Water, as recognized in the 2017 G20 Agriculture Ministers' Declaration, is an essential production resource for agriculture, critical for feeding the growing world population. Ministers reaffirmed their commitment to policies which boost agricultural productivity while ensuring that water and water-related ecosystems are protected, managed and used sustainably.

The delicate balance between agriculture and water-related objectives has been addressed at EU level by the evolving EU environmental and agricultural legislation.

Objectives and outcome

The presentations will offer opportunities to learn from experiences in the EU and Africa from both public and private sector. The discussions should result in a proposal to promote further cross-fertilisation in terms of policy, management practices and solutions, based on an identification of the priorities of EU - Africa cooperation on water and agriculture.

More specific objectives will be to:

- Exchange experiences and create opportunities for cooperation on sustainable use of water resources.
- Learn from EU and African examples on investments, technologies, professional trainings.
- Promote green business partnerships, green industry clusters, and sustainability in the start-up process.

The session will provide a vision on water use in agriculture in the EU and Africa, including a number of best practices and lessons learnt. It will also involve presentations on the needs for innovation and implementation of sustainable management of water resources, focusing on the nexus of water, agriculture and food production. The brief vision presented should help to identify priorities of the EU-Africa cooperation on water and agriculture.

The outcome will represent an opportunity for the EU to promote global efforts to combat climate change and environmental degradation in Africa improving livelihood through improved management of soil and watersheds, sustainable development and job creation. It will also contribute to the ratification of the Paris Agreement by the European Union. Activities following the proposed deliverables would be part of the EU's commitment of spending at least 20% of its budget for 2014-2020 on climate-related activities.

The outcome of the Panel will be reported to the EU African Union Summit and could be important input to the envisaged flagship initiative on developing an EU-Africa Charter on sustainable management of natural resources

BACKGROUND

INTEGRATED WATER RESOURCES MANAGEMENT AND AGRICULTURE

Water policy: why water matters?

Human demand for water is on the rise, and water links to everything else. There is no nature, no health and no life without water. And there is no environment, no ecosystem and no economy without water. It is a precondition for humanity.

In Europe, water management is primarily the competence of local, regional and state authorities. The protection provided by the EU's water legislation has led to huge advances providing millions of Europeans with high-quality drinking water and ensuring clean rivers and that people can bathe in clean seas along our 66,000 kilometres coastline. The EU's experience shows that a robust legal framework and effective structures in place for water governance are essential pre-requisites for the protection of all waters.

In the EU, the EU Water Framework Directive (WFD), adopted by the European Parliament and Member States in 2000, set the milestone to achieve good water status. Second, the Nitrates Directive in combination with sustainable rural development practices including the sustainable use of pesticides has also had a measurable effect on the reduction of pollution from agriculture and reduced the risks and impacts of pesticides on human health; on the environment; and for promoting Integrated Pest Management. Furthermore, the Drinking Water Directive mandates minimum health standards in water intended for human consumption, making linkages with other water-related policies.

Water and agriculture legislation must directly address their overlapping challenges to ensure the long term objective of making agriculture sustainable – in other words, agricultural production must develop and grow while securing the good status of water as defined by the water legislation.

EU water policy has also made it possible for the EU to develop a vibrant water sector that includes more than 9,000 SMEs and provides almost 500,000 jobs. It is therefore much more than a response to an environmental imperative: it is also a building block for the EU to spark green and blue growth and to become more resource efficient. The water industry has also developed new market opportunities, for example organic fertilisers produced out of treated sewage sludge and recovered phosphorus. In fact, phosphorus is an essential element for plant growth and its recovery from sewage sludge can contribute to improving resource efficiency in agriculture.

Water use in agriculture in Africa

Availability of water in the right amounts and at the right time is a prerequisite for most food production, i.e. agriculture, horticulture, livestock, and aquaculture. Hence, improved water management is a prerequisite for increasing food production and diversifying it to provide access to a more varied diet and reducing the vulnerability to droughts, floods and climate change. This is particularly important in water scarce areas like Mediterranean and Sub-Saharan countries.

In 2011 the European Commission's Directorate General for Development and Cooperation reprioritised its work on sustainable growth and re-focused on a core number of sectors, including agriculture. The response to an EU Development Report recommending that a "nexus-wide approach be consistently followed to avoid perverse outcomes and maximise opportunities" has meant that water has been reinforced within our activities in other sectors.

In the programming period 2014-2020, agricultural water is addressed in 11 partner countries (6 of them in Africa) having food security as a focal sector.

EU Africa cooperation on water and agriculture: Perspectives for a sustainable agriculture for the future of the African continent within limited water resources

Agriculture, largely dependent upon irrigation, is essential in Africa. With 70% of Africans dependent on agriculture for livelihoods, the sector is critical to the economies of all African countries. Productive agriculture is in many areas largely dependent upon irrigation, therefore, water scarcity and climate change variability and risk will impact directly the sector increasing its vulnerability. Variability in water supply for irrigation due to droughts and floods affects agricultural production.

The reduction of cultivated land due to increased erosion and land degradation – caused by climate change and unsustainable management of water resources, deforestation and the deficiency of energy in rural areas are two of the major gaps that agriculture is experiencing. Due to the country's high population growth rate, agriculture needs to tackle sustainable water management to be capable to continue producing.

As a result, environmentally induced conflicts about the distribution of natural resources, fertile lands, grazing grounds and water are likely to expand if measures are not taken. Actions in upper and lower catchments to reduce soil erosion, water runoff and to maintain and increase available land, vegetation cover, fodder and biodiversity are urgently required and will contribute to increased water availability for irrigation and renewable energy. Complementarily this will contribute to adapt to effects of climate change impacts.

As countries across Africa grapple with the challenges of sustaining high levels of economic growth, plunging commodity prices and the effects of climate change, revitalizing agriculture must become a priority on the continent.

Sustainable and resilient agriculture sector is vital for Africa's economic future. Indeed, African agriculture stands at the cusp of transformational change. The numbers are compelling. In the sub-Saharan Africa, farming is the primary source of food and income for Africans and provides up to 60% of all jobs on the continent. Africa's food and beverage markets are buoyant and expected to top $1 trillion in value by 2030. Projections on food production show a needed increase by 60% over the next 15 years to feed a growing population.

Best practices on water resources management

The "Nexus approach" aims at breaking the silos approach among water, energy and agriculture sectors without compromising the sustainability of vital ecosystems.

The global concern of how to feed ourselves sustainably whilst supporting economic growth represents indeed a major cross-sectoral challenge, a challenge that will be harder in 15 years' time and even harder in 30 years' time if we do not adapt, learn and apply best practices.

There are many synergies and trade-offs between water and energy use and food production. Using water to irrigate crops might promote food production but it can also reduce river flows and hydropower potential. Growing bioenergy crops under irrigated agriculture can increase overall water withdrawals and jeopardize food security. Converting surface irrigation into high efficiency pressurized irrigation may save water but may also result in higher energy use. Recognizing these synergies and balancing these trade-offs is central to jointly ensuring water, energy and food security.

The global community is well aware of food, energy and water challenges, but has so far addressed them in isolation, within sectoral boundaries. At the country level, fragmented sectoral responsibilities, lack of coordination, and inconsistencies between laws and regulatory frameworks may lead to misaligned incentives. If water, energy and food security are to be simultaneously achieved, decision-makers, including those responsible for only a single sector, need to consider broader influences and cross-sectoral impacts. Enhanced dialogue, collaboration and coordination, is needed to ensure that co-benefits and trade-offs are considered and that appropriate safeguards are put in place.

In the context of the Agenda 2030 and of SDGs, the nexus prospective looks even more appropriate. In the new set of universally applicable sustainable development goals, goal 12 "Ensure sustainable consumption and production patterns" represents much of what the nexus will strive to achieve.

At the beginning of 2016, the European Commission launched together with Germany the Nexus Dialogue Programme. This programme is designed to strengthen five regional policy dialogues to advance towards concrete outcomes. The five regions include: the MENA region, the SADC region, the Niger Basin, Latin America and Central Asia. The Nexus Dialogue Programme assists regional stakeholders in developing concrete policy recommendations and action plans for future investments with a specific focus on multi-sector infrastructure and corresponding capacity development activities.