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NOTE

from: Presidency

to: Delegations

Subject : Informal meeting of the Ministers for Agriculture
(Nicosia, Cyprus, 9-11 September 2012)

- *Conserving Europe's potential for the production of food, renewables and public goods: addressing water scarcity and land abandonment linked to adverse climate conditions*

Delegations will find attached a working document prepared by the Presidency on the above-mentioned subject, with a view to discussion at the informal meeting of the Ministers for Agriculture in Nicosia on 9-11 September 2012.



CYPRUS PRESIDENCY
OF THE COUNCIL
OF THE EUROPEAN UNION



INFORMAL MEETING OF EU MINISTERS OF AGRICULTURE

Nicosia, Cyprus, 9-11th September 2012

WORKING DOCUMENT OF THE PRESIDENCY

**Conserving Europe's potential for the production of food,
renewables and public goods: addressing water scarcity and
land abandonment linked to adverse climate conditions**

Conserving Europe's potential for the production of food, renewables and public goods: addressing water scarcity and land abandonment linked to adverse climate conditions

The context

For many decades, the need to “ensure the availability of food supplies” – set out in the Treaty of Rome – had retreated to the back of public consciousness as agricultural productivity, production and surpluses all increased, partly spurred on by the CAP.

However, those decades are gone. Recent developments have recalled to our minds that food in the world is not in ample supply and that the situation is likely to become soon rather critical. The agricultural price spikes of the early 21st century, along with predictions from the Food and Agriculture Organisation (FAO) that global food demand will rise by 70 % by 2050, have reminded policy-makers and the public that food security cannot be taken for granted. Millions of people still suffer from ethically and morally unacceptable under-nutrition while the middle classes of society in emerging economies demand their share of high-value animal protein. On a global scale meat consumption is projected to double from 229 million tonnes in 2000 to 465 million tonnes in 2050 (FAO 2006).

The European Commission reports that demand for food, feed and fibre may lead to resource scarcity by 60% by the middle of the century. Scarcity and volatility are likely to stay with us for some time in the foreseeable future.

Meanwhile, under a business as usual scenario climate change may cause global temperatures to increase by as much as 6 C° by 2100 (OECD 2012). Even the modest goal of limiting the increase to no more than 2 C° by 2050, put forward in Copenhagen a few years ago, would require global green house gas emissions to be reduced by 50%, in Europe perhaps by much more. Many in the world do not seem ready to share the burden and CO₂ concentrations meanwhile continue to increase.

Agriculture and food production will be affected by climate change in different ways around the globe, but the net balance is quite negative. Firstly, because agriculture still accounts for 10-12% of total emissions, in southern food exporting countries sometimes for more than 50%, and the sector cannot avoid having to make a sizable contribution to the overall reduction effort. Secondly, because land resources are limited and major land use changes to the detriment of forest, especially tropical forest, would be unfavourable, even disastrous from a climate change point of view.

Additionally, land will be more and more used for producing biomass and other renewables, augmenting scarcity at the national and, cumulatively, at the global level. In some Member States of the EU almost one out of five hectares of arable land is already used for the production of renewable energy.

It appears that most of the required increase in global food production will have to come from productivity gains. The "productivity challenge" is back with us to stay.

Last, but not least, climate change will affect agriculture and food production by reducing yields and by making the use of water for irrigation much more difficult and costly. Climate studies predict an ever increasing frequency of droughts, floods and other extreme weather phenomena, potentially causing heavy damage to agriculture and to food production.

Although the link between food security on the one hand and climate change on the other is evident and very clear, there seems to be widespread reluctance to accept the consequences. Hence the need for more scientific knowledge to underpin global recognition and appreciation of the policy changes and action required. In its submission of 5 March 2012¹ to the United Nations Framework Convention on Climate Change (UNFCCC), the EU explicitly underlined the link to food security and recommended that the next Conference of the Parties (COP 18) – which will meet in Doha from 26 November to 7 December 2012 – should launch a specific work programme to cover, among other things, the state of scientific knowledge on the impact of climate change on agriculture and food security.

1

http://unfccc.int/files/methods_science/redd/submissions/application/pdf/20120305_eu_agriculture.pdf

"Agriculture is an important sector in global climate change efforts as it is particularly vulnerable to the effects of climate [...]. It is necessary to increase agricultural production and its efficiency in the context of decreasing availability and declining quality of natural resources, often exacerbated by climate change. Production must increase in a sustainable way, taking into account in an integrated vision all the environmental challenges (e.g. deforestation, biodiversity, soil, air, water), while safeguarding livelihoods for people in rural areas [...]"

The EU cannot change the world alone, but it can certainly show the way forward: conserving natural resources and finding ways to use them efficiently and sustainably should be at the centre of our attention. We need green technologies and practices to produce sustainably, to halt the loss of biodiversity, to prevent soil depletion, to use water efficiently and to avoid environmental degradation as a whole.

But we also need farmers to do so; big and small farmers to stay in place and to continue to produce the many public goods that society wants, everywhere in the EU but perhaps more so in regions where farming is less profitable in the conventional sense.

The challenge, if taken up, can also become an opportunity for sustainable European agriculture. The projected rise in demand will inevitably trigger a supply reaction from the EU's agricultural sector, which is one of the largest suppliers to global agricultural markets: Union agriculture accounts for 18 % of world food exports, worth around 76 billion Euro, and it provides more than 40 % of total food production in OECD countries.

KEY RESOURCE: LAND

Agriculture is a major user of land in the EU, occupying nearly 47 % of the Union's surface area (excluding seas and oceans). However, more than 1 000 km² of land is subject to "land take" every year for housing, industry, roads or recreational purposes, and around half of this surface is actually "sealed". Translated into an easy-to-grasp image: every 10 years the EU paves over a surface area equivalent to Cyprus.

Clearly, agriculture is not the only activity which requires land, but its claims must be given due weight in view of threats to the balance between supply and demand for food.

In peripheral regions of the EU and in areas with adverse climatic conditions, agriculture often fails to support the livelihoods of rural families, leading to migration and land abandonment. Land abandonment and the encroachment of unwanted vegetation can lead to environmental degradation and loss of biodiversity and, in southern Member States in particular, it favours the frequent outbreak of fires that destroy the landscape and soil cover, often causing irreversible damage through erosion and gradual desertification.

KEY RESOURCE: SOIL

Soil is a complex, living resource, which performs vital functions as a basis for production (food, livestock feed, fibre and fuel). It is essential for the preservation of water and ecosystem stability. As a global carbon sink, soil also has an important role in the mitigation of climate change. Finally, it is a reservoir for genes and an important element constituting landscape amenities and habitat values. Soil is a non-renewable resource and needs to be managed sustainably.

Most of the soil degradation processes commonly identified as matters of primary concern are closely linked to farming. **Erosion** in particular is known to be a serious problem throughout Europe. Almost one quarter of soils in the EU suffer from moderate to high erosion, water erosion being particularly common in the Mediterranean and wind erosion in northern Europe. With the very slow rate of soil formation, any soil loss of more than 1 t/ha/year can be considered as irreversible within a time span of 50 – 100 years.

Soil organic matter is a major contributor to soil fertility and, because soil organic matter contains around 60 % carbon, it is the defining factor in soil's influence on the global carbon cycle: there is more carbon stored in soil than in the atmosphere and in vegetation combined. In the EU alone, there are more than 70 billion tonnes of organic carbon in our soils. However, an estimated 45 % of European soils have low organic matter content – partly as a result of farming practices such as conversion of grassland to arable land, drainage of wetlands and poor crop rotation.

KEY RESOURCE: WATER

Globally, the agricultural sector accounts today for 70% of total freshwater abstractions (UNESCO, 2012). In many parts of the world, the availability of water is extremely important for food production, given that irrigation has the potential to increase the productivity of the soil by a multiple.

Water is however a scarce resource, likely to become even scarcer in the future due to climate change and increasing demand from other sectors of the economy. OECD projects that by 2050 overall water needs will increase by 55% due to growing demand from manufacturing (+400%), thermal power plants (+140%) and domestic use (+130%).

In the EU, water scarcity is an expanding phenomenon. In 2007, at least 11 % of the EU's population and 17 % of its territory had been affected by water scarcity. And according to ongoing modelling, 26 river basins are under water stress all year round and 43 during the summer. These overall figures are expected to increase to 47 and 63 respectively by 2030. Moreover, this is not a purely "southern" phenomenon as 16 river basins are already under water stress in northern Europe in the summer and the number is projected to rise to 31 by 2030.

In the EU agriculture accounts on average for 24% of fresh water abstraction, but in southern Europe farming accounts for 60 % and in some areas even for 80 % of the total. In 2007 the share of irrigated area in UAA was 6.7% but in southern Member States it was much higher particularly in Greece (31 %), Malta (27 %), Cyprus (21 %) and Italy (21 %). and also above 10 % in Spain, Portugal and the Netherlands. 84 % of the total irrigated area of the EU is located in Spain, Italy, France and Greece.

In the face of climate change, keeping the status quo is not an option. Business as usual would increase the pressure on food production and possibly lead to loss of many jobs in rural areas. It is therefore extremely important that water is managed in the most efficient way and that Member States develop holistic approaches to ensure that all types of water use, including irrigation, are subject to strict sustainability criteria.

The Water Framework Directive provides a common platform for Member States to develop comprehensive river basin management plans and to specify measures taking effect at farm level. In the typical case such measures will entail cuts in water supply and a requirement to use water more efficiently. It is therefore essential that farmers continue to have access to appropriate measures under the second pillar of the CAP to cover additional costs and income foregone and to undertake the necessary investment to improve water use efficiency.

In countries and regions with semi-arid climate, river basin management plans may need to be supplemented by additional national instruments in order, for example, to manage risks associated with extreme variation in rainfall from one year to the next or with prolonged droughts. National Water Authorities are often empowered by law to implement emergency measures to cope with extreme situations. They are likely to accord very low priority to agriculture which in effect receives water “only when there is enough”. Farmers are often called upon to save “every drop of water”. Not surprisingly, over time they have become very “water conscious” and, in the typical case, they have developed quite advanced systems to harvest and to use water efficiently. Additional substantial water savings may not always be possible at the individual farm level, but even small savings can cumulatively sum up to a total gain which is very important for the overall water balance of a given area.

FOOD SECURITY AND NATURAL RESOURCE CONSERVATION IN THE CONTEXT OF THE CAP2020

The Commission has stated its intention to make the post-2013 CAP more beneficial in terms of sound care for and efficient use of natural resources in a context affected by climate change.

Under the second pillar, the Commission proposes in fact to target expenditure on a number of priorities related, *inter alia*, to food security (enhancing competitiveness of all types of agriculture and enhancing farm viability) and the conservation and efficient use of resources focussing on water, soil, energy, biodiversity and climate change mitigation and adaptation.

However, in relation to the Union priority on “enhancing competitiveness of all types of agriculture and enhancing farm viability”, the Commission’s proposal could be improved as regards investments for farm restructuring and in irrigation. There may also be a need for more specific action to adapt to climate change, although the scope for doing so through key measures such as on-farm investments, "agri-environment-climate", "co-operation" etc. is already quite substantial.

Under the first pillar the Commission proposed a strengthened system of **cross-compliance** which will concern, among other things, water (e.g. establishment of buffer strips along water courses), soil (e.g. maintenance of soil organic matter level), biodiversity (the Habitats and Birds Directives) and landscapes (retention of landscape features).

Furthermore most of the actions proposed under greening are conducive to natural resource conservation and improved management although greening has also been criticised as counteracting the food security objective.

In its recent concept paper on greening, the Commission mentioned that it could be considered to accept that some areas that form part of traditional agricultural systems, where grasses and other herbaceous forage are traditionally not predominant but still suitable for grazing, be considered eligible. Provisions could also be made to allow MS to apply a “reduction coefficient” for the calculation of such hectares into eligible hectares. In this connection it is also important to clarify that the relevant articles of the direct payments regulation do not exclude land in SAPs countries that was not in good agricultural condition in 2003, if this land meets the respective eligibility criteria

QUESTIONS TO GUIDE REFLECTION

- 1. Water is a scarce resource likely to become scarcer in the future affecting food production and the livelihood of many farmers: What mixture of water related measures, conditions and requirements would be most likely to maximize the benefit for farmers and for society as a whole?**
 - 2. Land and soil are important resources for food production and for food security now and in the future: What additional measures, if any, could be envisaged to manage land in a sustainable way and/or to prevent land abandonment?**
 - 3. Other than improved water management and soil protection, what additional specific measures could be envisaged to help farmers adapt to climate change?**
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