

SUBMISSION BY LITHUANIA AND THE EUROPEAN COMMISSION ON BEHALF OF THE EUROPEAN UNION AND ITS MEMBER STATES

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Subject: Issues relating to agriculture

General remarks

In line with the conclusions by the SBSTA chair¹, the EU welcomes this opportunity to provide views on the current state of scientific knowledge on how to enhance the adaptation of agriculture to climate change impacts while also promoting productivity and co-benefits of adaptation, taking into account the diversity of agricultural systems. The EU would also like to reemphasise the views expressed in its previous UNFCCC submission on agriculture in March 2012².

The objective of the convention (article 2) states: "The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner". It is therefore clear that agriculture has a central role to play to achieve the objective of the Convention while promoting food production, food security, livelihoods and rural development at local, national, regional and global level.

Europe is already facing climate impacts which vary in severity and nature between the different regions³. The ability to cope and adapt also differs across EU countries depending on different variables (e.g. farm scale, agro-ecological and socioeconomic conditions). What is clear is that climate change will add to the many economic and social challenges already being faced by European agriculture, with crop yields, livestock management and location of production likely to be affected.

Agriculture work under the UNFCCC to date and current state of scientific knowledge

The EU recognises that while useful work on agriculture mitigation has been carried out to date under the UNFCCC⁴, this work did not adequately address adaptation and the close relationship between adaptation and mitigation in agriculture and in particular the synergies between them. This work also needs to be updated to include the latest scientific and technological advice.

¹ FCCC/SBSTA/2013/L.20

² FCCC/SBSTA/2012/MISC.1

³ <http://www.eea.europa.eu/publications/climate-impacts-and-vulnerability-2012>.

⁴ FCCC/SBSTA/2010/10, FCCC/TP/2008/8, FCCC/SBSTA/2008/12

Although no explicitly titled agricultural adaptation work has been conducted under the UNFCCC, a considerable number of the adaptation outputs⁵ from the Nairobi Work Program include a significant agricultural component⁶. This work should be taken into account in our SBSTA work.

Increasingly, agriculture is also prominently featured in many NAMAs and NAPs⁷. Mitigation actions in the agricultural sector are mentioned in 40 per cent of the NAMA submissions to the UNFCCC Secretariat. They all focus on the potential synergies of mitigation, resilience or adaptation, and on food security, while most of the measures in the NAPAs (National Adaptation Programme Actions) are, in fact, directly related to the agriculture sectors (see Figure 1 below).

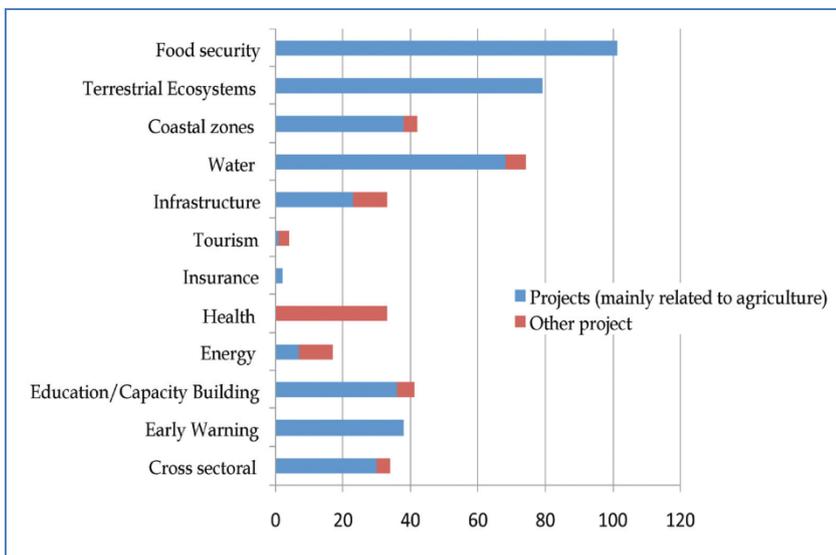


Figure 1: NAPAs priority projects *mainly related to agriculture* in each of the 12 UNFCCC categories (Source: FAO⁸)

Many international organisations, research institutes, farmer organisations, private companies and NGO's worldwide are actively developing new scientific knowledge and advice and promoting the implementation of this knowledge on the ground. International organisations such as FAO⁹, OECD¹⁰, IFAD, World Bank¹¹, EU¹², African Union¹³ and others have set up large programs to this end. Resilience has also become central to the European Commission's reflection on development, particularly in the context of reducing small producers' vulnerability to food crises. For example, the ACP-EU Technical Centre for Agricultural and Rural Cooperation recently organised the 30th Brussels Development Briefing to discuss the importance of Agricultural Resilience in the Face of Crises and Shocks¹⁴.

⁵ FCCC/SBSTA/2007/7, FCCC/SBSTA/2007/15, FCCC/SBSTA/2009/7, FCCC/SBSTA/2010/9

⁶ Please see annex 1

⁷ Hansel G. 2012. Paving the way for nationally appropriate mitigation actions in the agricultural sector.

⁸ <http://www.fao.org/docrep/017/i3084e/i3084e13.pdf>

⁹ <http://www.fao.org/climatechange/en/>

¹⁰ <http://www.oecd.org/tad/sustainable-agriculture/agricultureandclimatechangeimpactsmitigationandadaptation.htm>

¹¹ <http://www.worldbank.org/en/topic/climatechange/brief/climate-smart-agriculture-world-bank-facts>

¹² http://ec.europa.eu/agriculture/climate-change/index_en.htm

¹³ <http://pages.au.int/caadp>

¹⁴ http://brusselsbriefings.files.wordpress.com/2007/12/br30_highlights_eng_agricultural-resilience-rev4.pdf

It is clear that scientific and technological advice is needed to guide those national actions and programs. Further work on agriculture under the UNFCCC, especially looking at agriculture in a holistic fashion, should contribute to reaching the objective of the Convention. It should build on current scientific knowledge and existing research programs. Agriculture features prominently in the IPCC assessment reports, with the 5th assessment report to cover interactions between mitigation and adaptation in the same chapter for the first time.

The EU has set up a Joint Programming Initiative¹⁵ on Agriculture, Food Security and Climate Change (FACCE-JPI) which brings together 21 countries who are committed to building an integrated European Research Area addressing the interconnected challenges of sustainable agriculture, food security and impacts of climate change. EU research organisations are also collaborating with worldwide partners in the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)¹⁶. In addition, 10 EU countries are members of the Global Research Alliance (GRA), collaborating to increase knowledge on ways to reduce GHG in agriculture while producing more food and also increasingly considering possible cobenefits for adapting to climate change. Outcomes of all this work can contribute to the UNFCCC work under SBSTA.

In addition to scientific advancement, the EU and its individual member states, are contributing significantly to the implementation of actions on adaptation in agriculture at both regional¹⁷ and global level¹⁸. This includes the financial contributions to the implementation of the Nairobi Work Program, as acknowledged during SBSTA38¹⁹.

Rationale for SBSTA work on enhancing agricultural adaptation, while also sustainably increasing the productivity of agricultural systems

Further addressing and improving the understanding of scientific, technical and socio-economic issues on the interface between agriculture and climate change, can enhance the contribution of the sector to many critical objectives. These include sustainable development, poverty alleviation and preservation of biodiversity and ecosystem services as well as contributing to achieving the 2°C objective.

Many adaptation actions can be implemented within the agricultural systems. These include e.g. agroforestry, improved protection and enhancement of soil organic matter, restoring degraded land, integrated land and water resources management including safe reuse of water, use and development of drought, heat and flood-resilient as well as salt-resilient locally adapted crop varieties, improved livestock management (e.g. forages, pastures, water), early warning and early reaction systems for weeds, pests, and diseases, access to climate services²⁰, insurance schemes and reduction of pre and post-harvest losses (including food losses).

¹⁵ <http://www.faccejpi.com/>

¹⁶ <http://ccafs.cgiar.org/>

¹⁷ <http://www.eea.europa.eu/publications/adaptation-in-europe>

[http://www.circle-era.eu/np4/%7B\\$clientServletPath%7D/?newsId=432&fileName=BOOK_150_dpi.pdf](http://www.circle-era.eu/np4/%7B$clientServletPath%7D/?newsId=432&fileName=BOOK_150_dpi.pdf)

¹⁸ <http://ec.europa.eu/europeaid/climate-change-actions/>

¹⁹ UNFCCC/SBSTA/2013/L.9

²⁰ <http://www.gfcs-climate.org/>

Combining such actions can contribute to improving the efficiency and productivity of agricultural systems in a sustainable manner, if implemented in a locally appropriate manner, considering the diversity of the agricultural and social systems. It can therefore have a positive mitigation impact and will contribute to increased food production at local, national, regional level thus contributing towards global food security.

There is a need to ensure that mitigation co-benefits are achieved as a component of adaptation actions as well as to ensure adaptation is not threatened by, but rather included as a component of any mitigation actions and that both approaches can support enhanced food security at local, national, regional and global level. A common scientific understanding of the synergies between adaptation, mitigation and food security is therefore required, according to the variety of agricultural and social systems, practices, techniques and technologies.

It is also necessary to increase agricultural production and efficiency in the context of decreasing availability and declining quality of natural resources, often exacerbated by climate change. In parallel to food waste and loss reduction, production must increase in a sustainable way, taking into account in an integrated vision all the environmental challenges (e.g. deforestation, biodiversity, soil, air and water), while promoting socio-economic development and safeguarding livelihoods for people in rural areas (e.g. access to land, water, credit and markets). The wide diversity of agricultural systems worldwide, as well as specific national and regional development priorities, objectives and circumstances mean that a one size fits all approach does not apply for agriculture in relation to climate change.

It is therefore crucial that farmers' organizations and farmers, especially smallholders and subsistence farmers, are closely involved and supported through exchange of scientific and traditional knowledge and advice, extension services, access to financial mechanisms and agricultural markets.

Conclusions and ways forward

While farmers successfully have adapted production systems over thousands of years, the recent impacts of climate change (droughts and extreme weather events) presents a serious challenge for billions of people to produce and secure their access to food. This is therefore also a matter of global food security. Science can contribute to addressing these challenges. UNFCCC decisions on agriculture could help foster local, national, regional and international initiatives to address the challenges of agriculture and climate change.

The complex nature of agriculture and the wide variety of productions systems and climatic conditions requires a considerable amount of work by the UNFCCC to ensure that Parties and farmers are best equipped to respond to the challenges of agriculture and climate change, to ensure that food production is not threatened.

Therefore to commence this work, the EU proposes that the secretariat:

1. Invites the IPCC to make a presentation at an in-session workshop at SBSTA39, to discuss the findings of the IPCC 5th Assessment report and its implications towards agriculture.
2. Prepares a technical report on previous UNFCCC work on agricultural adaptation conducted under the Nairobi work programme.
3. Revise the 2008 UNFCCC technical paper²¹ to include the latest science and also to incorporate synergies and trade-offs between mitigation and adaptation.

Finally, it is the view of the EU and its Member States that further discussions of SBSTA on agriculture should not be limited to the scope of this submission, but rather maintain room for discussing further aspects of agriculture in relation to climate change and the UNFCCC.

²¹ FCCC/SBSTA/2010/10, FCCC/TP/2008/8, FCCC/SBSTA/2008/12

Annex 1. UNFCCC Nairobi Work program outputs relevant to Agriculture

UNFCCC Output	Relevance for Agriculture
Workshop on Climate Related Risks and Extreme Events (FCCC/SBSTA/2007/7)	Discussions focused on experience with assessment, prediction and management of climate-related risks and impacts, including those related to extreme events, in the agriculture and food security, coastal zones and health sectors.
Workshop on adaptation planning and practices (FCCC/SBSTA/2007/15)	Discussions at the workshop focused on sector-specific adaptation planning and practices in the areas of agriculture and food security, water resources, coastal zones and health.
Technical workshop on increasing economic resilience to climate change and reducing reliance on vulnerable economic sectors, including through economic diversification (FCCC/SBSTA/2009/7)	The workshop was divided into two parts. The first part focused on understanding existing approaches, measures and tools for increasing economic resilience to climate change and reducing reliance on vulnerable sectors, in particular from the perspective of the agriculture and food security sector.
Technical Workshop on costs and benefits of adaptation options (FCCC/SBSTA/2010/9)	The second day was organized into three breakout groups: group 1 focused on agriculture, and ecosystems and biodiversity; group 2 discussed water resources and health; while group 3 discussed coastal zones, settlements and infrastructure.
NWP Adaptation Practices Interface (FCCC/SBSTA/2006/11)	Includes practices in agriculture and food security
NWP Local Coping Strategies database (http://maindb.unfccc.int/public/adaptation/)	Includes practices in agriculture and food security (i.e. loss of crops, low survival/productivity of livestock)
Database on Ecosystem Based Approaches to adaptation (http://unfccc.int/adaptation/nairobi_work_programme/knowledge_resources_and_publications/items/6227.php)	Includes experiences in agriculture and food security
NWP Compendium on Methods and tools (http://unfccc.int/adaptation/nairobi_workprogramme/knowledge_resources_and_publications/items/5457.php)	Tools include i.e. Agro-ecological Zones Methodology, AFRC-Wheat, Agricultural Catchments Research Unit, Agro-climatic Water Stress Mapping, Agro-Met-Shell, Aqua-Crop,
Relevant Publications: <ul style="list-style-type: none"> • Climate Change and Freshwater Resources Technical Paper: Water and Climate Change Impacts and Adaptation Strategies • Compilation of Information: Ecosystem-based Approaches to Adaptation (http://unfccc.int/adaptation/nairobi_work_programme/knowledge_resources_and_publications/items/4628.php)	Direct links with agriculture
Partner Database	100 Partners in Food Security, Agriculture, Forestry and Fisheries