CLIMATE CHANGE

Agriculture contributes to the causes of climate change. At the same time the farming sector is extremely vulnerable to the impacts of our changing climate. In 2009, farming accounted for 10.3% of total greenhouse gas (GHG) emissions in the EU-27. These emissions are largely composed of nitrous oxides (N_2O) and methane (CH_4) mainly from cattle husbandry and fertiliser application[1]. The UNFCCC estimates that climate change adaptation for agriculture will cost between $11.3 and $12.6 billion by 2030[2]. The effects of climate change are already visible with extreme climate events. In 2002, 100,000 hectares of agricultural land were affected during a major flood in central Europe[3]. Climate change is also likely to lead to a decrease of annual rainfall by up to 20% in southern Mediterranean areas, resulting in harvest losses and increasing costs. Droughts in Central and Southern Europe in 2003, led to reductions in crop and livestock production costing €11 billion[4]. Organic farming, however, can offer solutions to many of the negative effects that agriculture places on climate.

ORGANIC FARMING MITIGATES AND ADAPTS TO CLIMATE CHANGE

Mitigation: Organically managed soils can store on average 450kg extra carbon per hectare each year compared to conventional soils[5]. N_2O emissions from organically managed soils are on average significantly lower (1.04kg N_2O per hectare each year) than emissions from non-organically managed soils[6].

Adaptation: Organic farmers record higher yields during extreme climate events than conventional farmers[7]. Soils rich in organic matter absorb more water during extreme rainfall, reduce surface run-off and erosion, and have better water supply during dry periods[8].

CAP RURAL DEVELOPMENT MEASURES FOR SUSTAINABLE CLIMATE ACTION

New rural development measures[9], in combination with **organic farming** (Article 30), offer targeted solutions for sustainable climate action. Relevant measures include:

Agro-forestry systems and forest measures (Articles 22-27,35)

Agroforestry and the application of forest measures, in conjunction with organic farming, to enhance ecosystem services, sequester carbon, and contribute to climate resilience and mitigation.

Knowledge transfer and advisory services (Articles 15 -16)

Options tailored specifically towards organic farmers to increase understanding and technical expertise on climate mitigation and climate adaptation.

Quality schemes for agricultural products and food stuffs (Article 17)

Increase organic market development by building consumer awareness and understanding the role of organic farming systems and practices for climate adaptation and mitigation as well as support for certification costs.

European Innovation Partnership (Articles 53, 61-63)

Support for knowledge exchange and collaboration between researchers, the organic sector and relevant stakeholders to stimulate participatory agro-ecological innovation on climate resilience and mitigation.

International Federation of Organic Agriculture Movements
IFOAM EU Group, Rue du Commerce 124, BE – 1000 Brussels, info@foam-eu.org, www.ifoam-eu.org

AUSTRIA: POLICY SUPPORT FOR ORGANIC FARMING

The Austrian Rural Development Programme (2007-2013) links organic farming, agri-environment measures, investment assistance, training and education in its organic farming support mechanisms. There is also strong stakeholder involvement from actors such as the farming organisation BIO AUSTRIA and environmental NGOs. Organic farming support accounts for about 12% of the Axis 2 budget dedicated to improving the environment and the countryside. Measures under Axis 1, which improve the competitiveness of the agricultural and forestry sector, also address organic farming through marketing support such as information and promotion activities. The current Austrian Organic Action Plan (2009-2013) sets out a number of targets including increasing the total organically managed land area to 20% (19.69% in 2010)[10] and the organic market share to 10% of all food sales by 2020[11].

UK: PROMOTING LOW CARBON FARMING APPROACHES

The Low Carbon Farming (LCF) Project trains and gives advice to farmers about applying climate-friendly farming practices that have the potential to reduce GHG emissions. These practices focus on improving nutrient and manure management, soil and grassland management, livestock production efficiency and reducing fuel use. The LCF project disseminates factsheets, organises on-farm training events and facilitates farmer to farmer support providing project participants with a carbon measurement toolkit to monitor the farms' carbon footprints and to assess the implementation of these practices[12]. The project was launched in the first quarter of 2011 by the Soil Association, in partnership with Campden BRI and is funded by the Ashden Trust and Defra's South West Rural Development Programme for England under vocational training and advice (measure 111). It is part of the SWARM (South West Agricultural Resource Management) Initiative managed by Duchy College and has worked with a total of 57 organic and conventional farms across the UK (50 in England, predominantly in the South West of England and 7 in Scotland).


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Publisher: IFOAM EU Group, December 2012. **Design:** Marina Morell, www.4morfic.com

This publication is co-financed by the European Community, Directorate-General for the Environment. The sole responsibility for the communication/publication lies with the IFOAM EU Group.The European Commission is not responsible for any use that may be made of the information provided.