

CYPRUS

Πρόγραμμα Αγροτικής Ανάπτυξης 2007-2013 – (Rural Development Programme 2007-2013)

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http://www.moa.gov.cy/moa/da/da.nsf/dmlaboutus_gr/dmlaboutus_gr?OpenDocument

Other useful links:

Rural Development Programme (RDP):

http://www.moa.gov.cy/moa/da/da.nsf/dmldevelopment_gr/dmldevelopment_gr?OpenDocument

National Strategy Plan (NSP):

http://www.moa.gov.cy/moa/da/da.nsf/dmldevelopment_gr/dmldevelopment_gr?OpenDocument

Cyprus National Rural Network (NRN):

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Climate Change and Renewable Energy issues in 2007-2013 RDP

Climate change (CC) is a fundamental issue for agriculture and related policy making. EU agriculture must play an important role in mitigating this phenomenon by curbing greenhouse gas (GHG) emissions. At the same time, it needs to adapt to the expected climatic adversities which have serious implications for production processes. Rural development offers a range of possible measures to support farming practices and investments which can allow them to contribute to climate change *mitigation* efforts (for example, through increasing the use of *Renewable Energy* (RE) resources) and additionally effect *adaptation* benefits. CC challenges have been well recognised in the baseline analysis of the 2007-2013 EU Rural Development Programmes (RDP) and is addressed in their strategies. Following the Health Check (HC) of the Common Agricultural Policy (CAP), the 'new challenges' of the RD policy include 'climate change' and 'renewable energy', for which an additional budget of approximately €1 billion⁽¹⁾ has been made available for Member States (MS) to spend on tackling these issues⁽²⁾. As a result, operations related to these newly introduced EU priorities have been further strengthened in the RDPs.

⁽¹⁾ 19,8% of the total additional fund released.

⁽²⁾ The budget allocated to the 'new challenges' includes the funds released by the HC of the CAP (including voluntary modulation and transfers according to Art. 136 of regulation (EC) N. 73/2009) and the European Economic Recovery Package (EERP) .

Introduction - overview of Member State RDP

All three dimensions of climate change (mitigation, adaptation and the potential for renewable energy) are addressed by the baseline analysis provided in the Cyprus RDP, with different emphasis on the varying issues. The relative importance of each of these three aspects has been considered and accordingly addressed in the RDP strategy and within the implemented measures.

The main challenges clearly identified by the RDP, following the European Economic Recovery Plan (EERP), relate to the mitigation and adaptation to climate change so as to reduce GHG emissions, which increased by a substantial 83% in Cyprus between 1990 and 2007. Another challenge is identified as preventing and coping with the potential impacts of climate change, in particular on water resources (already scarce in Cyprus) and biodiversity (14% of the territory belongs to the 'Natura 2000' network and 6% of forest areas belong to a network of protected forest areas). These challenges are addressed specifically under axis 2 of the RDP.

Rural areas are a significant part of the Cypriot territory: about 80% is classified as rural (26% is agricultural land, 24% is forest and 30% is other types of forest areas). Additionally, Cyprus has intrinsic and singular characteristics which make it particularly exposed to climate change effects. It has a diverse and interchangeable landscape, which includes mountains, plains, valleys, cliffs, gorges, caves, and steep coasts, as well as the local climatic variety. The fact that Cyprus is the warmest island in the Mediterranean, together with the scarce availability of surface water (rivers are seasonal and only flow after heavy rain) explain its particular vulnerability in terms of climate change impact. Furthermore, the concentration of its population in coastal areas, increases the threat of climate change impact on the human population, namely related rising water levels.

Cyprus did not subscribe to Annex B of the Kyoto Protocol and/or Annex I of the Climate Change Convention, as it was not an EU member when the individual targets were established for Members States for the first period of engagements (2008-2012). However, as an EU-Member State, Cyprus has subscribed to the second period of commitments of the Kyoto Protocol after 2012. The objective is to reduce its 2005 emissions by 5% by 2020. The RDP is considered an important tool in addressing climate change challenges and future national commitments in this context.

The baseline analysis stresses a trend towards land abandonment and the intensification of agricultural activity, as two key factors in terms of the environmental problems of rural areas. The maintenance of the population in rural areas and the encouragement of agricultural activity are important, not only for the environment, but also for the preservation of the rich natural landscape of the country, especially in mountain areas. According to the baseline analysis, the country is rich in natural landscapes and biodiversity, found in the inland ecosystems and forests (97% of these ecosystems belong to the 'Natura 2000' Network). Overall, there are 38 areas in Cyprus that belong to 'Natura 2000' and they represent 14% of the territory. There is also a network of protected forest spaces (national forest parks and natural protection areas) which represents 6% of total forested areas. 12% of the Cypriot territory belongs to the High Nature Value (HNV) farmland areas (they are composed of agricultural and forest areas as well as wetlands). Also, some types of vine and some autochthonous animal breeds are under threat of extinction.

Water resources are scarce, mainly due to the very dry climate conditions in Cyprus. Despite water saving efforts over the last 40 years, the problem is still acute. However, the application of improved irrigation systems in recent years aims to achieve significant water savings.

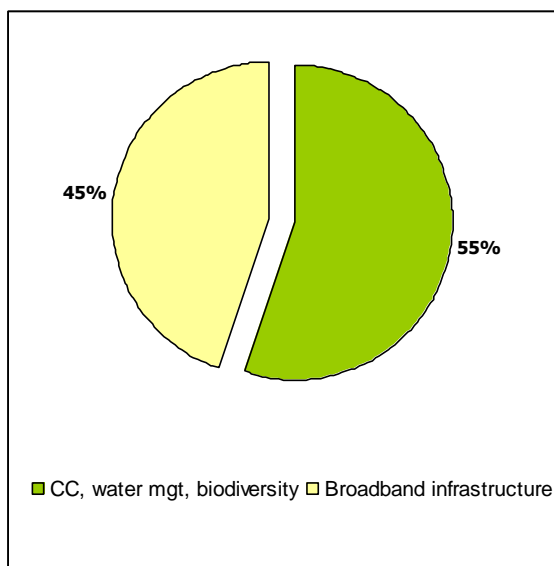
Furthermore, over-exploitation of underground water resources has led to increased salinisation levels. The main objective of Cyprus is to completely eliminate the dependency of water supply on rainfall and to use as many desalination units as possible. There are also six areas in Cyprus, identified as being sensitive to pollution from nitrates, especially in potato cultivation areas. The main sources of pollution are intensive farming practices and the use of fertilisers and phyto-sanitary products (some intensive livestock farms of pork and poultry are particularly polluting). Particular attention is paid to the protection of water resources and aquatic ecosystems, with the promotion of the application of European Directives, while a Drought Management Plan helps to manage the water resources of the island in a rational and sustainable way.

The baseline analysis also identifies forest fires as a serious problem in Cyprus, which has led to a number of initiatives, as well as a special protection programme, for their prevention. Despite these efforts the incidence of forest fires in Cyprus every year is quite high.

According to the RDP strategy, the efforts to mitigate and adapt to climate change impacts will be mainly implemented through axis 2, namely, actions under the agri-environment measures. This decision is confirmed in the renewed RDP strategy following the European Economic Recovery Plan (EERP), which aims to address simultaneously the new challenges of climate change, water management and biodiversity, through the agri-environmental measures. Forestry measures under axis 2 contribute to climate change adaptation through actions that aim to restore forests damaged by fires, preserve biodiversity and protect agricultural resources from adverse weather conditions, such as frost or strong winds.

Axis 1 addresses climate change issues through actions related to manure management, environmental protection and the rational management of water resources in the context of the modernisation of agricultural holdings. Land management and environmentally friendly agricultural practices are also covered by the training and advisory topics of axis 1. As regards renewable energy, axis 1 foresees the production of biogas from farm waste.

Allocation of the additional resources per type of priority



The overall budget of the Cyprus RDP - in terms of total public expenditure, amounts to €443,970,615, of which €164,563,574 is the EAFRD contribution. This includes an additional allocation of €2,040,000 (EAFRD contribution), as a result of the new challenges raised by the adoption of the European Economic Recovery Package³ (EERP). 55% or €1,130,000 of this additional financial support to the RDP objectives relates to climate change, water management and biodiversity.

This new financial support is in addition to the initial financial allocation of the RDP which had already included climate change, water management and biodiversity.

³ Cyprus did not receive any additional financial allocation following the CAP Health Check as it will not receive any modulation amounts before 2013 (Regulation EC 74/2009).

The enhanced RDP strategy focuses on addressing more than one challenge, simultaneously. Therefore, greater strategic priority is now given to water management, biodiversity and climate change, through a specific set of actions under the agri-environmental obligations for citrus fruit.

Full details of the overall RDP budget allocation can be found in the RDP fiche for Cyprus that is available at:

http://enrd.ec.europa.eu/rural-development-policy/country-information/rural-development-policy-fiches/en/rural-development-policy-fiches_home_en.cfm

Mitigation

Activities aimed at reducing agricultural greenhouse gas emissions

The Cyprus RDP provides comprehensive support for a range of activities which could contribute to reducing agricultural emissions and water pollution. Following the adoption of the EERP, new strengthened operations have been implemented to support environmental protection and sustainable agriculture which enhance the uptake of the priority of CC mitigation. These are particularly related to agri-environmental measures.

The main measure through which the RDP seeks to support efforts to reduce agricultural GHG is **measure 214** - *agri-environment payments*, although other measures also contribute. A considerable number of operations are referenced under this measure, all of which could help to reduce emissions, including:

- the protection of 'Natura 2000' areas by preventing any chemical intervention in crops located in these areas;
- traditional tree and bush cultivation (with emphasis on disadvantaged areas), including the reduction in the use of pesticides through mechanical cultivation and cleaning of weeds;
- integrated production for the cultivation of potatoes and fruit, including crop rotation, the rational management of fertilisers and water and the certification of integrated production;
- operations related to soil conservation techniques and water quality (namely, mechanical cultivation of vines and fruit and the use of other mechanical means for cleaning weeds in vine fields and fruit crops);
- crop rotation in the cultivation of potatoes and cereal;
- organic farming and livestock production which comprise payments for reduced fertiliser use and improved management.

Measure 214 has been specifically addressed in the revised RDP following the EERP, in particular the sub-measure concerning *agri-environmental obligations for citrus fruit*. There is renewed emphasis on mechanical means of pest control, instead of pesticides, which contributes in a considerable manner to the minimisation of underground water pollution, helping to substantially increase the sustainable use of water. At the same time, the incorporation or maintenance of plant biomass in the soil increases organic carbon in the soil, and carbon dioxide emissions are reduced. Furthermore, integrated management systems are employed, which ensure environmental protection and food safety.

Under Axis 2, forestry measures (namely, **measure 221** – 'first afforestation of agricultural land', and **measure 223** – 'first afforestation of non-agricultural land') support the establishment of forests and their maintenance, thereby directly contributing to the uptake of CO₂ emissions. These measures reinforce anti-erosion support and contribute to the maintenance of biodiversity and the fight against climate change.

Under axis 1, **measure 121** – ‘modernisation of agricultural holdings’, promotes manure management through a specific sub-measure for ‘waste management of agricultural holdings’. This supports operations such as building installations, tanks and other equipment of manure storage, tanks for the collection and separation of treated and untreated waste, dry and liquid waste separation, tanks for evaporation of biologically treated waste, irrigation systems and transport of liquid manure, mechanisms for spreading manure in fields, and installations/equipment for biological waste treatment.

Further support for activities which could help mitigate against climate change are employed under **measure 111** – ‘vocational training and information actions’. Under this measure, explicit reference is made to the provision of training regarding environmentally-friendly production methods and the implementation of agricultural practices to promote integrated management of natural resources.

Adaptation

Prevention of, and coping with, potential impacts of climate change on agriculture

In terms of preventing and coping with the potential impacts of climate change, a number of actions are supported, specifically: investments in water efficiency and management and preventive actions against natural disasters. The rational use of water resources and the improvement of land management practices are the main elements in the revised RDP strategy, used to address the climate change adaptation priority. They benefited from additional financial resources, released by the EERP and targeted specifically at water management and the protection of biodiversity.

The same measure that supports mitigation activities is also the main measure through which the RDP addresses adaptation to climate change, namely **measure 214**. The climatic changes observed over the last number of years all over the world, and more specifically in hot and dry regions, require measures and strategies to encourage the adaptation of crops to increased temperature, lack of water and other biotic and non-biotic factors, all of which put pressure on crops and are observed when extreme meteorological phenomena occur. This measure includes actions such as:

- integrated production which promotes the rational use of water;
- planting of trees to protect crops from wind;
- actions related to the conservation of genetic resources and biodiversity (such as the protection of traditional vine varieties under threat of extinction; the protection and preservation of local autochthonous breeds of bovine and ovine livestock; as well as the protection and maintenance of natural ecosystems and wild fauna aimed at preserving biodiversity).

This measure is reinforced following the EERP, in particular the above mentioned sub-measure concerning ‘agri-environmental obligations for citrus fruit’. More precisely, in addition to the mitigation actions, this sub-measure helps to substantially increase the rational use of water, since the incorporation or the maintenance of plant biomass in the soil reduces evaporation and thus, the water needs of crops. Furthermore, the increased biodiversity of micro-organisms in the soil considerably improves soil fertility, which is an important indicator of sustainable agricultural ecosystems.

Other measures under axis 2 complement the adaptation to climate change. **Measure 226** – ‘restoring forestry potential and introducing prevention actions’, includes actions which prevent

forest fires and restore burned forests. Similarly, **measure 225** – ‘first establishment of agroforestry systems on agricultural land’, supports actions for protection against adverse weather conditions such as frost and strong winds.

Under axis 1, **measure 121** includes among its aims, the protection of crops from natural disasters, the protection and maintenance of the natural environment and the rational use of water resources. In this context, actions cover the installation of water collection tanks, rehabilitation of natural features such as trees and bushes, and improved irrigation systems. These include more specific actions per type of crop or livestock breed, such as the installation of improved irrigation systems for woody crops, potatoes and vegetables.

Further contributions to water management are provided through **measure 125** – ‘infrastructure related to the development and adaptation of agriculture and forestry’, which includes actions such as the construction of irrigation systems and the construction of water storage equipment.

Main RDP measures which contribute to addressing CC mitigation/adaptation issues

Axis/ Measure	Description	Type of operation	Potential effects
Axis 1			
Measure 121	Modernisation of agricultural holdings	Installations and equipment for manure management and treatment of manure waste; Installation of water collection tanks, improved irrigation systems, rehabilitation of natural features.	Reduction of GHG emissions from agricultural waste; Rational use of water resources, protection of crops from natural disasters.
Measure 125	Infrastructure related to the development and adaptation of agriculture and forestry	Construction of irrigation systems, water storage equipment.	Improvement of water management (use and storage capacity).
Measure 111	Vocational training and information actions	Includes training topics related to integrated management of natural resources.	Improved awareness of farmers on aspects that contribute to climate mitigation and adaptation.
Axis 2			
Measure 214	Agri-environment payments	Protection of ‘Natura 2000’ areas by preventing any chemical intervention in crops located in these areas; Traditional tree and bush cultivation; Reduction in the use of pesticides through mechanical cultivation and cleaning of weeds; Integrated production for the cultivation of potatoes and fruit; Soil conservation techniques and water quality Organic farming and livestock production;	Reduced use of fertilisers and phytosanitary products; Improvements in environmental protection and restrictions on pollution caused by agriculture; Reduced GHG emissions; Water efficiency and improved water quality; Minimisation of soil erosion; Protection of genetic resources and maintenance of biodiversity.

Axis/ Measure	Description	Type of operation	Potential effects
		Protection of traditional vine varieties under threat of extinction; Protection and preservation of local autochthonous breeds of bovine and ovine livestock; Protection and maintenance of natural ecosystems and wild fauna;	
Measure 226	Restoring forestry potential and introducing preventive actions	Equipment, infrastructure and works for fire prevention; Communication equipment and logistics for fire prevention; Tree planting to restore burned forests.	Carbon retention from forests and reduction of (CO ₂) emissions; Adaptation to climate change through improved risk management; Improved soil quality and biodiversity.
Measure 221	First afforestation of agricultural land	Extension and improvement of forest resources through the establishment of forests in designated areas.	Counteracting climate change through the uptake of CO ₂ .

Note: Measures are presented by axis and by order of importance in terms of their contribution to climate change mitigation/adaptation.

Renewable energies

Electricity, heating and transport fuels, produced from biomass (such as biofuels, biogas) and other renewable sources (solar, wind, geothermal).

The Cyprus RDP integrates the aspect of renewable energy in the production of biogas from farm waste.

There is one measure that contributes to renewable energy under axis 1, namely, **measure 121** – ‘modernisation of agricultural holdings’ more specifically a sub-measure for ‘waste management in agricultural holdings’. This sub-measure covers pork, bovine and poultry farms and includes the biological treatment and processing of waste (including anaerobic digesters) and the production of biogas and electric energy.

Main implemented RDP measures related to the development of renewable energy sources

Axis/Measure	Description	Type of operation	Potential effects
Axis 1			
Measure 121	Modernisation of agricultural holdings	Livestock waste management for the production of biogas.	Increased use of bio-fuels to reduce GHG emissions.