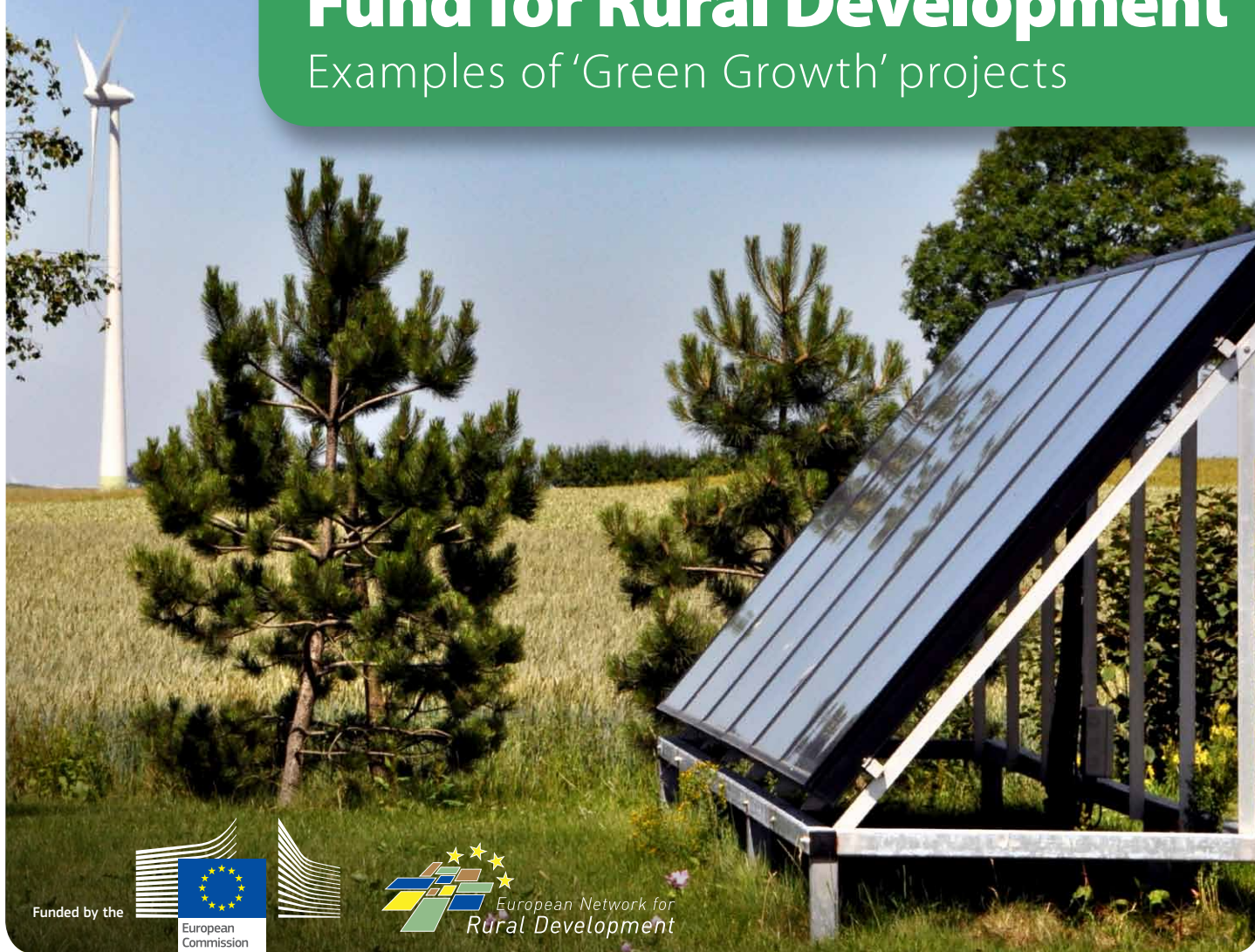


The European Agricultural Fund for Rural Development

Examples of 'Green Growth' projects



Funded by the





European Network for Rural Development

The European Network for Rural Development (ENRD) contributes to the efficient implementation of Rural Development Programmes (RDPs) throughout the European Union (EU).

Each Member State has established a National Rural Network (NRN) which brings together the organisations and administrations involved in rural development.

At EU level, the ENRD ensures the networking of these NRNs, national administrations and European organisations.

Find out more on [the ENRD website](http://enrd.ec.europa.eu) (<http://enrd.ec.europa.eu>).

The European Agricultural Fund for Rural Development

Information exchange is an important aspect of the NRN and ENRD operations. This brochure forms part of a series of ENRD publications that has been introduced to help encourage such information exchange.

Each edition of the brochure features different types of projects that have received EU co-finance from The European Agricultural Fund for Rural Development (EAFRD).

This edition of the brochure focuses on a sample of interesting EAFRD projects that are promoting 'Green Growth' through environmentally sustainable rural development actions in Europe's countryside.

Other editions of the brochure can be downloaded from the [ENRD website's library section](#)¹ and a [RDP Projects database](#)² contains many examples of EAFRD assistance to rural development initiatives.

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Cover photograph: © Tim Hudson

The contents of this publication do not necessarily express the opinions of the institutions of the European Union.

1 http://enrd.ec.europa.eu/en-rd-library/eafrd_examples_of_projects_brochure_en/en/eafrd_examples_of_projects_brochure_en_home.cfm

2 <http://enrd.ec.europa.eu/projects/>

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Supporting Green Growth in rural Europe

'Green Growth' is the term used to describe environmentally-sensitive economic development approaches. Green Growth is central to the EU's overall *2020 strategy for growth*³ which encourages Member States to balance environmental, social and economic development actions to achieve smart, sustainable and inclusive growth.

The rationale for a Green Growth approach to rural development is based on the principle that environmental resources underpin our economy and our quality of life. Continuing our current patterns of resource use is not considered to be sustainable and forecasts predict negative effects on future generations of EU citizens if society does not alter its approach to growth. At the same time, the inclusion of Green Growth thinking into rural development projects has been shown to create new business possibilities, improve productivity, drive down costs, diversify economies, and increase competitiveness.

Green Growth principles therefore present both opportunities and challenges for Europe's countryside, and the EAFRD contains a useful variety of measures to help rural areas strengthen their environmental credentials.

The EAFRD's role in Green Growth projects has been reinforced recently by proposals for the *future of the Common Agricultural Policy*⁴ (CAP). Furthermore, the *CAP Health Check*⁵ that was carried out in 2009 led to an additional

€3.853 billion being injected into the EAFRD budget for Green Growth type approaches.

Biodiversity, water quality, renewable energy, and climate change projects were all among the priorities selected by Member States for this increased EAFRD budget, which boosted RDP capacities to co-finance Green Growth projects.

Details about the EAFRD's increased emphasis in these sectors are featured in the following brochure. Other environmental topics supported by the EAFRD are also covered and each of the brochure's nine articles highlights a particular aspect of the EAFRD's Green Growth toolkit.

RDP project case studies are presented from different Member States to illustrate and explain in practice how Europe's rural areas can benefit from adopting environmentally-sustainable approaches to their development.

Summary descriptions of other Green Growth projects that have received support from the EAFRD are available in the ENRD's new database of *RDP Projects*⁶.

Further information about the range of Green Growth activities in Europe's countryside is also available in the '*policy areas*' section of the European Commission's agriculture and rural development website (http://ec.europa.eu/agriculture/index_en.htm).

3 http://ec.europa.eu/europe2020/index_en.htm

4 http://ec.europa.eu/agriculture/cap-post-2013/index_en.htm

5 http://enrd.ec.europa.eu/app_templates/filedownload.cfm?id=5ACE6F64-F5FA-701C-70FD-E059E8462395

6 <http://enrd.ec.europa.eu/projects/>

Resource efficient rural development: Leader-funded business cluster in Luxembourg helps tackle climate change

Greater emphasis on the efficient use of EU resources is seen as a key tool for tackling climate change and encouraging green economic growth. The EAFRD offers a variety of opportunities for supporting resource efficient rural development projects and results from such RDP actions can generate benefits for both rural areas and wider EU society.

Climate change remains an ongoing issue for EU rural areas as more extreme and unpredictable weather conditions continue to create new challenges for life and work in the countryside. News about the effects of floods, storms and droughts is becoming increasingly common and climate change also produces other rural problems such as loss of biodiversity habitats and migration of pests that attack food crops for instance.

'Resource efficiency' and 'eco-innovation' are two of the core policy concepts driving Member States' climate action efforts and a new '*Flagship initiative for a resource efficient Europe*'⁷ has been introduced to help the EU improve its sustainable growth performance. European Commission President Barroso said at the launch of the Flagship initiative, "Continuing current patterns of resource use is not an option" and the Flagship sets out a vision for a more resource-efficient EU economy by 2020 and 2050.

Eco-innovation is central to the Flagship philosophy which encourages Europe's businesses and citizens to adopt new ways of living and working. Energy efficiency, waste minimisation and wise water use are just a few examples of how this can happen in practice. These Green Growth approaches offer economic benefits as well as environmental advantages.

A group of rural businesses from Luxembourg appreciate the potential profits that can be gained from 'going green' and they

have joined forces, with support from the EAFRD, to form an innovation cluster of resource-efficient technologies.

ClimECC

Titled ClimECC (Eco Expert Cluster), this Luxembourg business network was created through a project from the Redange and Wiltz Leader Local Action Group (LAG). The project has a budget of €100 000 for its two years' work with exploring and expanding new rural economic development opportunities that help mitigate climate change effects. LAG Manager Fons Jacques explains that, "During the consultations on our Leader Local Development Strategy we picked up a lot of interest for ecological approaches to the development of our LAG territory. We heard from local people, public sector bodies and community organisations that were keen to protect our environment and we knew that we already had a reasonable number of businesses with green skills that were based here. We therefore had a good bottom-up basis to use Leader funds for bringing these companies together in a cluster that would help roll-out sustainable development approaches in our area and also boost the competitiveness of the cluster members."

Around 20 different businesses have now joined the cluster which is coordinated by a part-time manager. EAFRD provides co-finance for the ClimECC manager and such dedicated per-



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sonnel resources are acknowledged in cluster circles as a crucial success factor for business networks (of any type). Coordinating, steering, driving, motivating, developing and promoting a cluster all require specific time and skills. Many companies do not have the time to spare for these essential network management tasks and so the EAFRD's ability to help employ cluster staff can provide an added-value. This then allows participating companies to concentrate on adapting their operations to support the cluster's strategy.

ClimECC's strategy involves encouraging both demand for, and supply of, ecological technologies in rural Luxembourg. Cluster manager, Michel Wilwert highlights how his role includes, "Helping companies from the LAG area identify their environmental training needs so we can provide a broader and better range of eco-friendly services for our customers." He continues, "We already have a wide coverage of green skills in the cluster as our companies include construction firms, architects, engineers and agricultural enterprises that specialise in technologies like renewable energies or low impact waste management. We also have other types of members, including a biogas plant and a school, which provide us with useful additional dimensions to our cluster activities."

One of ClimECC's early actions involved promoting the cluster to stimulate demand for its members' services. Their first chance to advertise ClimECC came at a national Eco-Fair that is held annually in Luxembourg City. Mr Wilwert notes how, "We gained a lot of confidence from this fair and so we decided we should organise our own ClimECC event here in Redange to give people from the rural areas a chance to get to know about what we can do for them."

Following several months of careful planning, ClimECC's rural eco-fair took place in April 2011 and attracted over 800 participants who came to see the 25 exhibitors. Speaking at the fair Mr Wilwert said, "We are very pleased with the public's interest in our sustainable development cluster. Today here at the fair we are able to offer different solutions for different clients' questions. For example, farmers wanting to know about how to gain money by using alternative energy systems can speak to our technical experts in this field. Similarly if a family is looking to build or restore a house here in the countryside they can also learn about many different low-impact ecological construction methods from ClimECC members."

“*The reason why the cluster's companies stay involved is because they can see a clear business advantage for them. They see that they can gain market share and exchange useful experiences for their own business.*”

Michel Wilwert, ClimECC Manager

ClimECC cluster members have thus already benefitted from the EAFRD project, which has long-term plans to evolve into a self-sustaining high quality eco-business brand. ClimECC's future is also expected to include transnational partners as LAGs from Belgium and France are expressing an interest in cooperating with the cluster.

See the [ClimECC website \(www.climeec.lu\)](http://www.climeec.lu) for more information about this effective and resource-efficient rural development initiative.



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EAFRD provides opportunities to tackle climate change in a way that also supports the competitiveness of rural businesses.

Agri-environment payments protect the EU's natural resource base: wildlife and farmers benefit from EAFRD scheme in Romania

Natural resources are essential to the EU's long-term economic, social and environmental interests. Most of our biodiversity, soils, and water are found in rural areas and specialised agri-environmental schemes are a compulsory part of the EAFRD to help protect these vital EU assets.

The European Commission has set out options for the future of EU rural development policy in its Communication on *'The CAP towards 2020: Meeting the food, natural resources and territorial challenges of the future'*⁸. The significance of Green Growth approaches is highlighted in this CAP Communication and underscored by comments from EU Commissioner for Agriculture and Rural Development Dacian Cioloş who stresses, "The importance of making the CAP greener, fairer, more efficient and more effective". Commissioner Cioloş is also keen to explain that, "The CAP is not just for farmers, it is for all EU citizens – as consumers and taxpayers. It is therefore important that we design our policy in a way which is more understandable to the general public and which makes clear the public benefits that farmers provide to society as a whole."

Management of our countryside's landscapes and biodiversity represent prime examples of these public benefits and the EAFRD is providing financial assistance through agri-environment schemes to help sustain the provision of such 'public goods'. Agri-environment support is available for "land use methods that result in the sustainable management of natural resources". The schemes reward farmers for protecting and enhancing the environment on their farmland.

In this way the EAFRD is used to secure ecological benefits for society, such as safeguarding the preservation of wildlife habitats and EU biodiversity. The schemes can also act as develop-

ment tools for farm businesses that can use their environmental assets to diversity into new economic activities, like wildlife tourism. This underscores the relevance of agri-environment action as a Green Growth tool.

Whilst each scheme is different (because they are designed to support the particular environmental needs of specific localised areas), common categories of agri-environmental action include: using non-intensive farming techniques and equipment; restricting fertilisers and pesticide inputs on grazing meadows; working organically; or improving wildlife habitat features like wetlands and hedgerows. Other agri-environment schemes also exist.

EU spending on agri-environment between 2007 and 2013 will sum to nearly €20 billion, which accounts for around 22 % of the total EU rural development budget. Such a heavy emphasis on agri-environment funding reflects the importance placed on sustainable land management by the EU. It provides an important foundation for the principles of Green Growth in most national and regional RDPs with many thousands of land managers throughout rural Europe combining agri-environmental commitments with rural tourism businesses and/or the production of local products. A typical example of this can be seen in Romania where the Bangala farming family is participating in one of the agri-environment schemes that is implemented with EAFRD assistance in Transylvania.



©Raluca Barbu

8 http://ec.europa.eu/agriculture/cap-post-2013/communication/index_en.htm

High Nature Value farming

Located in the Northern part of Brasov County, at 1480 metres altitude, the Bangala's land covers around 20 hectares of hay meadows and 80 hectares of grasslands surrounding their sheep and cattle farm. They also graze livestock on 250 hectares of uplands during the summer months. Traditional agricultural ways have been practiced by the family for several generations. These include manual and other non-intensive methods for growing, cutting and storing hay. Flora and fauna thrive in such conditions because they are not threatened by heavy machinery, chemical inputs or habitat loss. As a result, the grasslands in this part of Romania are considered to be some of the most biodiversity rich in Europe.

Farm meadows and pastures in Brasov County like the Bangala's are eligible for the High Nature Value (HNV) agri-environment scheme provided through Romania's RDP, which aims to maintain and enhance the grasslands' HNV characteristics. EAFRD payments are conditional on the farmers carrying out pre-determined environmentally benign agri-approaches over a five year period.

Daniela Bangala describes how her farm's agri-environment payment works. "Our five year environmental management plan commits us to avoid using chemical fertilisers on our grasslands. Ploughing, rolling and reseeded of pastures are similarly not possible under the terms of the agri-environment contract. We apply natural, traditional organic fertiliser and this never exceeds a top limit of 30 kilograms of nitrogen per hectare."



©Raluca Barbu

“ Our support from the EAFRD helps us to provide jobs and preserve over 200 hectares of traditional landscape for future generations. ”

Daniela Bangala

“We control our mowing to reduce risks to insects, birds, flowers, animals and other species during sensitive times such as breeding, nesting, or pollination periods. Our pastures and meadows are therefore left alone for much of the initial growing season and only mown after the end of June, by when the sensitive wildlife points have passed. All of the mowed grass is removed from the land within two weeks of cutting and this helps to further enhance the habitat's natural features.”

Rural Development support

An agri-environment payment of €124 per hectare is provided from the Romanian RDP for complying with these management requirements, whilst another €58 per hectare is received annually for the hand mowing and turning of hay. In total, the Bangala family receives €3 276 of agri-environment support per year. The majority of this is spent on employing an additional seven local people for hay-making and shepherd duties during the summer months. The maintenance of their rich heritage of traditional farming practices has considerable added-value for the Bangala's since it has underpinned their rural tourism diversification into farmhouse accommodation and the production of an authentic range of traditional meat and dairy products.

RDP agri-environmental payments reflect national circumstances and further information about the substantial amounts of Green Growth development support for on-farm nature conservation actions is available from the RDP managing authorities and National Rural Networks in your country. Contact details for these are available on the [ENRD website's country section](#)⁹.

Nearly a quarter of the EAFRD budget is spent on agri-environment projects which provide sustainable development opportunities for land managers by protecting EU natural resources.

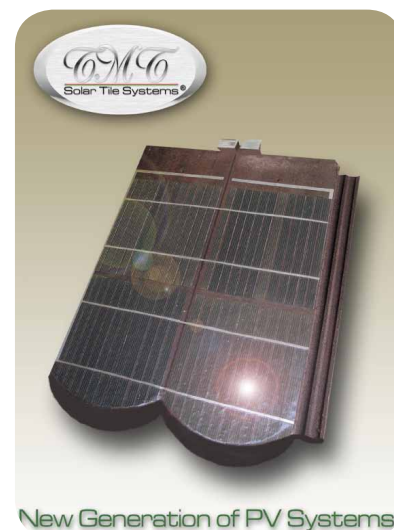
Generating rural profits from renewable energy: EAFRD helps Hungarian eco-innovator to expand photovoltaic roof tile business

A pioneering rural business from Hungary has used EAFRD assistance to help enlarge its manufacturing facilities for a novel new line of renewable energy products that fit well with the EU's Green Growth objectives.

As noted elsewhere in this series, concepts like 'eco-innovation' sit at the heart of the EU's Green Growth agenda. Using new technologies in smart ways to help sustain long-term supplies of raw materials makes common-sense in Europe's countryside. Hence the EAFRD is well equipped to support eco-innovation projects on farms, in forests, by agri-food businesses and for other members of the EU rural development community.

One notable example of such eco-innovation in action can be seen in Hungary, where RDP support for rural economic diversification has been used to supply a growing demand for a new type of photovoltaic roof tile.

The mastermind behind this new range of innovative rural products is Miklós Tóth from Harsány in northern Hungary. His solar roof tile technology combines all the structure and functions of a traditional roof tile with a state-of-the-art photovoltaic unit. He observes, "In this way a new market segment has been created which is quite unique worldwide and provides a good alternative to existing solutions."



This highly simplistic, but extremely effective business idea embodies the type of innovative thinking that the EAFRD can help rural entrepreneurs to take forward.

Mr Tóth's solar roof tile product range offers potential to radically revolutionise the photovoltaic market and he notes, "It is a giant challenge to satisfy the demands of the market". As such, his 'Ideas Solar' company was awarded nearly €165 000 of EAFRD support for co-financing the company's own investments in new factory facilities to increase manufacturing capacity for the roof tiles. These RDP business development funds mean the solar tiles can now be produced in a host of different shapes, sizes and colours.

Demand continues to increase as more people become aware of the practical advantages and full potential of these eco-friendly roofing products. They are designed to comply with technical and architectural regulations, are easy to install and potential for expansion is unlimited.

Stand alone photovoltaic systems are built into each tile so no separate electrical cabling or connection is required. This

approach can reduce roof weight loads by as much as one third and makes the product highly adaptable.

Such features mean that the tiles can be used on all types of roofs, including historic buildings protected for their heritage value. The project is therefore not only producing smart and sustainable outcomes but it is also inclusive because it provides an equal opportunity for the owners of heritage buildings to benefit from renewable energy technologies.

Other advantages from the RDP-funded roof tile technology include increased energy efficiency compared with conventional solar roof modules as only four tiles are required to operate a domestic computer. Eight tiles can run a refrigerator and all the power needs of an average family house, including the electricity network and the heating system can be supplied from a roof containing between 300-500 tiles (covering between 20-50 m²).

Business Confidence

Business confidence is booming in 'Ideas Solar' following the opening of the new manufacturing premises and Mr. Tóth is now looking forward to introducing new business innovations. "In the near future, we are going to launch complementary options like integrated defrosting control units." These roof defrosting technologies are expected to find market niches in mountain or snowy regions throughout Europe and beyond.

Successful rural businesses like this example from Hungary also help to build community confidence in rural areas, especially in times of recession, and the EAFRD investments that were secured by 'Ideas Solar' provide a lift for local communities in the area where the new factory development has helped to create 18 new jobs.

Benefits from this RDP-funded rural product development project will of course potentially be far more widespread, not only because the solar roof tile offers a new solution for mitigating climate change impacts, but also the tiles provide many rural areas with an opportunity to adapt to drier hotter conditions in a manner that simultaneously helps them reduce fuel bills and strengthen energy self-sufficiency.



© Ideassolar

“ The products practically sell themselves ... historical town centres like the ones in Florence, Rome and Paris present a vast market with a huge growth potential.

Miklós Tóth ”

Renewable energy projects can help rural areas seize economic opportunities while contributing to climate change mitigation.

Wise water use: EAFRD co-finances investments in intelligent irrigation systems on Cyprus

Water is fundamental to life on our planet so the quality and quantity of rural water supplies dictates the developments that are possible in any given area. EAFRD co-finance is available to assist Europe's countryside manage its water resources in sustainable ways that support Green Growth principles.

Water management is a key challenge for rural areas and wise water use is known to make direct contributions to rural development issues connected with business competitiveness, environmental conservation, economic diversification and quality of life.

Green Growth approaches to sustainable water management are promoted by the EU's *Water Framework Directive*¹⁰ (WFD). This high level policy instrument governs how countries care for their water resources. One of the main management tools used by Member States in this regard is the *River Basin Management Plans*¹¹ (RBMPs), which affect all users of EU water resources in rural areas, especially agriculture. Farming is estimated to consume on average 44 % of the total amount of water that is abstracted in Europe. In southern Member States agricultural consumption of water can increase to over 60%.

RDPs play beneficial roles in implementing RBMPs and managing the amount of water that is used to grow food and produce other rural commodities. A range of Green Growth approaches to water management are eligible for EAFRD co-finance. These include actions by public, private and voluntary sector bodies implementing RDP projects targeting (among others) rain water collection, flood prevention and protection works, conservation of biodiversity in wetland habitats, effluent management and reduction of water pollution risks, information campaigns and capacity building, as well as numerous initiatives for improving water use efficiency.

10 http://ec.europa.eu/environment/water/index_en.htm#wfd_factsheet

11 http://ec.europa.eu/environment/water/participation/map_mc/map.htm



© European Union

Intelligent irrigation

Taking a closer look at the latter, EAFRD is a popular source of support for improving irrigation. Irrigation helps address water stress in agricultural and horticultural crops and improves the productivity potential of these businesses. Traditional irrigation systems also create diverse and intricate landscapes, which support a variety of wildlife and have important cultural and historic value. However, irrigation can be the cause of counter-productive environmental problems. Namely, depletion of underground water supplies in aquifers, increased risks of soil salinity and erosion.

Automated approaches to irrigation offer opportunities to overcome some of these problems and EAFRD is being used to increase the uptake of intelligent irrigation systems. One of many such examples can be seen in Cyprus where the EU's rural development funds have helped a large horticultural business invest in modernising its water management infrastructure.

Cypriot solutions

Water stress is a big issue on Cyprus because climate changes are reducing the amount of rainwater that falls on the island and sea water continues to seep into underground aquifers. Fresh water is therefore becoming increasingly scarce and Green Growth solutions are required to support the country's sustainable development.

Solomou nurseries, a rural business from Kotsiatis in central Cyprus, was aware that their company could benefit from improving its use of water through investing in 'smart' irrigation systems and new water conservation equipment. Employing 60 full-time staff, the nursery is well established in Cyprus as a producer of vegetable seedlings, ornamental plants, herbs and cut-flowers. Accurate and appropriate irrigation is essential in this market to ensure that the seedlings and other produce reach their point of sale in perfect condition.

Plans were consequently drawn up for a quality-driven programme of modernisation that started in 2005 and completed in 2010. EU rural development funding was awarded to help Solomou upgrade its production capacities and this included some €60 000 of EAFRD.

Over a five year period, the total EU co-finance contributed €307 500 towards the nursery's €1.7 million upgrade. The money was spent on a new automated irrigation system, new equipment to desalinate underground water for irrigation purposes, rain water collection apparatus and a waste treatment plant. The nursery's greenhouse facilities and working spaces were also upgraded as part of the modernisation drive.

Outcomes from the EU support package have significantly improved the nursery's ability to use water wisely. Productivity costs have reduced and product quality has been improved. In the words of Mr Marios Solomou, managing director of the nursery, "Our modernisation programme has been good for business but also good for the environment because we are saving and collecting more water than before".

Green Growth solutions to water conservation challenges, like those shown by this Cypriot EAFRD project example, offer demonstration value for other rural businesses. Details about the opportunities available from the EAFRD for similar Green Growth approaches are available from *NRN representatives in your country*¹².

Further information about EU water management matters are available from the European Commission's DG Environment web pages¹³, which include useful material such as good practices and a multi-lingual handbook for integrating water considerations into agriculture.

“ The balance between water demand and availability has reached a critical level in many areas of Europe. ”

European Commission, DG Environment



© Marios Solomou

11

Water management projects are a high priority for EU rural development policy.

12 http://enrd.ec.europa.eu/national-rural-networks/nrn-information/en/nrn-information_home_en.cfm

13 http://ec.europa.eu/environment/water/quantity/good_practices.htm

Organic growth opportunities: EAFRD boosts Slovakian bio-food business

Organic production contributes to a higher level of biodiversity and the preservation of species and natural habitats as well as better protection of water and soil quality compared to conventional farming. The growth in organic farming around Europe continues to create new rural development opportunities and the EAFRD is well placed to help increase organic productivity.

Organic farming exemplifies the type of Green Growth approaches to sustainable agriculture that can be supported by the EAFRD. Organic production methods place high emphases on environmental protection and animal welfare considerations. Typical organic farming practices include strict controls on the chemicals used in pesticides, fertilisers, livestock antibiotics and feed additives. Crop rotation patterns are another common feature of organic systems since these encourage natural nutrient regeneration in soils. Organic methods also tend to take advantage of on-farm resources, like livestock manure for fertiliser, or locally-grown fodder feed.

Other organic characteristics involve: choosing plant and animal species that are resistant to disease and adapted to local conditions; avoiding genetically modified organisms; and applying free-range livestock husbandry methods that use open-air systems or organic feed.

Controls on organic production are regulated by EU rules which guarantee the authenticity of organic food. Any food sold as organic in the EU must comply with these regulations and control bodies make regular inspections. A new EU organic label has been introduced to help consumers identify genuine organic products and this EU 'leaf label' is complemented by Member States' own national and regional organic classifications.

14 http://ec.europa.eu/agriculture/organic/eu-policy/action-plan_en

15 http://ec.europa.eu/agriculture/organic/home_en

16 http://ec.europa.eu/agriculture/organic/download-information_en



© Ekotrend Myjava company

Such quality standards and labelling schemes are promoted through the EU's *Action Plan for Organic Food and Farming*¹⁴. Raising awareness about organic foods is another important aspect of the Action Plan and different information campaigns are supported by the EU to help increase Green Growth organic approaches. For example, a set of *organic farming web pages*¹⁵ on the European Commission's internet site contain guidance for farmers and food processors interested in organic systems. *Free recipe books and fun children's games*¹⁶ are also available for downloading from this website as part of the EU's push to promote organic production.

Growth sector

Strong EU backing for organic agriculture has helped the sector become highly dynamic and enjoy a steady expansion in size (between 10-15% per year). Studies indicate that the value of Europe's organic market is coming close to €20 billion as organic foods make inroads into supermarkets and convenience stores. Organic products are also extending their importance into discount brand markets as well and the catering trade. Around 180 000 certified EU organic food producers currently operate and figures show that the total coverage of organic farming systems recently increased by 7.4% in the EU. Belgium, Bulgaria, Greece, Hungary, Slovakia, Spain and the United Kingdom have all recorded growth in organic farmland of over 10 % during the last few years.

Expansion has in part been assisted by EU rural development policy. The EAFRD can be used to establish organic production methods and boost the competitiveness of organic food businesses. Thousands of different RDP grants have been made in support of the EU's organic food Action Plan and these are typified by an example from one of the high growth States, Slovakia. Here in the country's Trenčín Region, the Ekotrend Myjava company received an EAFRD grant for a project introducing modernised organic food processing technology and improved capacity for the bio-food businesses.

Organic operations

Around €106 000 of EAFRD was used by the company to co-finance investments in improving productivity of their organic operation line. Purchased with help from the RDP, new high-tech equipment for peeling organic cereals allows increases in production efficiencies of up to 9%. The modern machinery provides high quality outputs, requires less energy to run than the previous mechanical peeler, and produces much less noise so results in better working conditions for employees. This project is therefore a useful example to show how smart and sustainable technology can also create health and safety benefits for rural businesses.

New computerised business processes were also part of the RDP project and these software solutions mean that the company can now coordinate all phases of its production systems within a common management system. Additional features of the EAFRD support include a purpose-built storage facility for Ekotrend's organic grains and flour, which will further enhance employment conditions for staff and reinforce hygiene levels.



© Ekotrend Myjava company

Consumer demand for organic products is growing, offering increased business opportunities for all sectors of the food supply chain.

Mr Dušan Janoviček from Ekotrend is pleased with the results of their business development project because of the multiple benefits that it creates. He says, "Our new equipment is helping us to operate more cost-effectively and because we are producing organic products these benefits will help us to continue working in an environmentally-sensitive way".

Commenting on the EAFRD's involvement with the organic developments at Trenčín, Mrs Malvína Gondová from Slovakia's NRN said, "Promoting environmental sustainability is an important part of our RDP's work and this project provides an excellent example of how rural businesses in Slovakia can benefit from adopting Green Growth approaches".

More examples of other EAFRD project support for organic food production, processing and promotion is available from the ENRD database of RDP projects¹⁷.

“ Our new equipment is helping us to operate more cost-effectively and because we are producing organic products these benefits will help us to continue working in an environmentally-sensitive way. ”

Dušan Janoviček, Ekotrend

17 <http://enrd.ec.europa.eu/projects/>

Earth matters: sustainable soil conservation on Santorini in Greece

European soils have taken millennia to form but these precious resources can be lost in a lot shorter time period and Green Growth approaches to sustainable agriculture, supported by the EAFRD, are showing how land managers can conserve our soils for future generations to come.

Soil has been referred to as the *'factory of Life'* by the European Commission¹⁸ and good quality soil is vital to our everyday lives. EU soils provide us with food, drinking water, biomass and raw materials. Most of our human activities are somehow related to soil but soil degradation is accelerating across the EU. This can have negative effects on the health of ecosystems but also on productivity and exacerbates climate change impacts. Results of soil degradation processes therefore affect our economic prosperity and quality of life.

Farmers and foresters play a central role in protecting soils because they act as custodians for much of the EU's soil resources. Rural development policies provide incentives to help land managers take appropriate care of soils through sustainable approaches. Agri-environment payments are a prominent RDP tool that is used to promote soil conservation practices.

Agri-environment schemes tend to be tailored to meet the conservation needs of local soil types as well as the terrain where they are found. Soil biodiversity is often a high priority for this RDP-funded Green Growth work which applies environmentally-sensitive tools and techniques to safeguard the micro-organisms which maintain soil structures and organic matter. For example, sustainable agriculture approaches funded by agri-



© Santo Wines, Santorini Association Of Winemakers

environment schemes aim to avoid using agri-chemicals which might upset the delicate balance of soil organisms involved in crucial functions like storing carbon or cleaning water.

Soil-focused agri-environment schemes also favour the use of mulching to cover soil with crop residues or compost, as this helps to retain heat, preserve moisture, prevent erosion and provides food for soil organisms. Crop choice is another significant factor in soil conservation strategies and legume plants (i.e. peas and beans) are able to act as natural fertilisers because they take nitrogen from the air and release it through their roots back into the soil. Other crops take resources out of the soil, and if planted in succession they may impair soil structure and deplete organic matter. Hence, rotating the variety of crops planted in a field can help preserve nutrients in the soil, plus prevent the build-up of pathogens or pests and thus prevent or limit significantly the use of chemical input.

Protecting rural soils using these types of land management approaches is increasingly relevant throughout the EU 27, and the issue is particularly pertinent in island environments where local soils stocks can be limited. Wine producers on the Greek islands of Santorini were aware about the importance of soil conservation to the long-term sustainability of their businesses and a new agri-environment scheme has recently been put in place which helps support Santorini's vineyard soils.

Santorini soil support

Santorini is the site of one of the largest volcanic eruptions in recorded history which created a mini archipelago of islands characterised by steep cliffs. Traditional cliff-face vineyard terraces (known as 'pezoules') are found here and Santorini's distinctive wine making methods date back over 3500 years.

Pezoules rely on the ability of their terraced soils to trap humidity and morning dew evaporating off of the sea. Vines are grown in scattered, non-linear patterns, close to the ground and local producers apply unique pruning processes to curl their crops into shapes that resemble round baskets. These help protect the cliff top grapes and terraced soils from damage by the islands' strong winds.

Around 1100 hectares of vines are grown on Santorini's main islands of Thira and Thirasia. Vine coverage is however under pressure from soaring land prices because Santorini is the third most visited tourism destinations in Greece. As such, urbanisation and tourist developments represent a very real threat to Santorini soil stocks, so the EAFRD agri-environment scheme provides additional economic encouragement (in turn for farmers following specific environmentally-oriented requirements and practices) that helps the vineyards and their volcanic biodiversity to survive.

A budget of €2 million has been allocated to the Santorini agri-environment scheme for farmers involved in protecting traditional agricultural practices. Soil conservation is one of the important outcomes from this type of EAFRD assistance. Targets for the agri-environment support expect to reach around 660 hectares.

Environmental benefits can be best met when economic interests are also considered.

Referring to the benefits available from the new scheme's area coverage, a spokesperson from the Greek government's *Ministry of Rural Development and Food* said, "It is very important for a large number of farmers to take up the EAFRD agri-environment scheme in order to conserve the islands' vital soil resources".

Conservation conditions incorporated within the EAFRD project reduce erosion risks and ensure that farmers maintain traditional vine cultivation and pruning methods. Field margins must also be kept, herbicides are restricted and fires are banned. Outcomes will contribute to the long-term protection of island soil reserves, biodiversity and also importantly, Santorini's farming communities.

“ Our members pride themselves on the quality of their products and this quality is achieved by maintaining traditional agricultural activity that protects the island's soils. ”

Mr Mathaios Dimopoulos, Santorini association of winemakers



Greening rural energy supplies: Dutch rose garden business converts to biomass heating

EU Member States are committed to increasing their use of renewable energy by 20%. Shifting towards greener energy supplies will help reduce emissions of greenhouse gases and make us less dependent on imported oil or gas. The transition will also help create jobs and support economic growth, particularly in rural areas which represent the main source of renewable energy for the EU.

Biomass is one of the widespread fuels used by EU renewable energy sectors and the growing popularity of biomass is attributed to a number of factors. It remains especially competitive as a heating fuel compared to fossil-based alternatives like coal, oil or gas. It is also often more readily available than these fossil-fuels and, unlike solar or wind energy, biomass energy has the advantage that it can be produced continuously, because most of feedstock can be conveniently stored. This offers useful benefits for supplying seasonal energy demands.

Sustainable approaches to the uptake of renewable energies like biomass are encouraged by the EU through its recently released *'Strategy for competitive, sustainable and secure energy'*¹⁹. This sets out long-term policy directions and introduces a new *'Roadmap towards a low-carbon energy system by 2050'*²⁰. Technical innovations and holistic principles are inherent in the EU's high level goals concerning renewable energy. The EAFRD's support for biomass projects provides an effective tool for helping convert such policy jargon into practical reality.

EAFRD investments in biomass come in different forms. For instance, RDPs can offer co-finance for the construction of biogas plants; planting trees for short-rotation coppicing; establishing perennial energy grasses; crushing oilseeds to produce plant oil fuel for farm machinery; or installing heating systems which run on straw, wood pellets or low-value timber.

19 http://ec.europa.eu/energy/strategies/2010/2020_en.htm

20 http://ec.europa.eu/clima/policies/roadmap/index_en.htm



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Sustainable development approaches are applied in all these cases and EAFRD support for biomass projects ensures that the EU funds are used in ways that do not harm the environment, nor jeopardise climate change efforts, nor lead to negative social effects on food supplies. A vast array of different EAFRD projects have been implemented in the biomass field and an interesting example from the Netherlands demonstrates the benefits that can be gained by rural businesses from making a technological shift to a low-carbon energy system.

Growing eco roses

Jos and Rianne Otte from Zeeland in the south west of the Netherlands are commercial rose growers who produce around one million roses on an annual basis for the domestic and export markets. The Otte's grow their roses under cover in 7200 m² of greenhouse and in 2009 they used EAFRD assistance to convert the rose garden's heating system from gas to biomass. Talking about the background to their project, Mr Otte says, "We first came aware of the possibility for using biomass as an alternative energy source when we were looking for answers to the following questions: how can we meet our energy demand in a way which will improve the environment and will make our company more socially responsible and financially healthy."

Conclusions from their quest led to the preparation of business development proposals for a wood burning heating system that could generate cost savings for the company. Their initial financial projections were calculated on the basis of relatively high fossil fuel prices which indicated the biomass investment would have a maximum pay-back period of four years. However, like many other businesses around the world, their forecasts were not able to predict the rapid and full effects of the global downturn which combined to lengthen the payback period on the biomass heating plant by a further two years.

Nevertheless, this timeframe remained affordable and the Otte's eco rose garden project was awarded €75 000 of EAFRD to help co-finance their investment in the biomass plant's wood burner and heat distribution system. A storage facility for the biomass fuel was also constructed using EAFRD support.

Good relations were forged with local sawmills to supply waste sawdust and off-cuts as a biofuel. Mr and Mrs Otte are pleased that this meant they could reduce transport-related impacts by sourcing their energy locally. The option also helps to minimise volumes of sawmill waste.

Technical challenges

Now fully operational, the success of the Otte's wood burner project was recognised by the Netherland's Rural Network as an example of good practice in promoting environmentally sensitive rural developments. Their award acknowledges the Otte's personal perseverance in keeping their project on track throughout some difficult times during its development. One of its most problematic challenges they faced was due to the fact that biomass heating of business premises was quite innovative, and so it did not easily comply within the standards for environmental licenses. Commenting on this point, Mr Otte believes, "We were pioneers, because not much was known about this type of energy system. It is an innovative technique, especially in horticulture. For all this, it took some time before we got the right license."

Sustainable biomass projects pose many opportunities for rural development in Europe.

EAFRD support for more biomass business projects like the Otte's heating plant is helping to increase awareness about the new technology among EU licensing bodies. This in turn should help overcome such problems for other rural businesses that are interested in gaining from the cost savings offered by investments in green energy supplies.



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Further information about this award-winning EAFRD project and other Green Growth initiatives funded by their RDP is available from the [Netherlands Rural Network \(www.netwerkplatteland.nl\)](http://www.netwerkplatteland.nl)

“ We were pioneers, because not much was known about this type of energy system. ”

Jos Otte, Kapelle, Zeeland

Birds benefit from biodiversity project: wildlife species and rural tourism receive a lift from EAFRD in Malta

Halting the decline of biodiversity is a key challenge for the EU and EAFRD assistance at a Maltese bird park project show how RDP resources can be used to promote Green Growth in a manner that helps conserve wildlife and support rural economies.



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Rural areas host the majority of Europe's wildlife habitats and so biodiversity conservation is a priority topic for EU rural development policy. Wildlife support from the EAFRD is available for a variety of actions, like improving, restoring or maintaining habitats for birds, plants, insects and animal species. Information and training projects can also be funded which lead to a better understanding of how best to look after biodiversity in rural Europe. Special attention is often paid to protecting rare and endangered wildlife and such RDP actions help make important contributions to the aims of the *EU's new Biodiversity Strategy for 2020*²¹.

European Commission conclusions about the current state of EU biodiversity highlight how, "Up to 25% of European animal species are still at risk of extinction and even common species continue to suffer from a lack of suitable habitats outside protected areas. Urban sprawl, industrial development and new infrastructure continue to spread rapidly across Europe, often at the expense of the remaining natural areas."

RDP projects are able to help address some of these types of biodiversity challenges and a private sector business from Malta has shown how the EAFRD can be used to protect the island's wildlife in a way that also strengthens the rural economy.

Malta's Bird Park project

Around €190 000 from the EAFRD has been awarded to upgrade a bird centre on mainland Malta which provides a biodiversity sanctuary for native birds and a visitor facility for tourists. Malta's Bird Park project also provides important educational services for local schools and university research.

Bird Park owner Mr Kevin Mallia explains that this RDP project will improve his company's ability to tackle local wildlife challenges. He notes that, "The lack of forest land and fresh water sources on Malta limits potential habitat areas for birds" and he continues saying how, "Urban and land reclamation have led to drastic reductions in numbers of some wetland birds."

Mr Mallia's Bird Park has been designed to provide a protected wetland habitat containing trees, shrubs, reeds, sedges, grasses and rushes supported by fresh water plains and water courses. The park represents an attractive habitat for wildlife that thrives in an abundance of food and shelter.

Bird species like Black Winged Stilt, Great Reed warbler, Little Bittern, Little Egrets and Little Crake have all bred for the first time in the Maltese Islands at the park. In addition to these, rare local breeding birds such as Reed Warbler, Spotted Flycatcher and Cetti's Warblers also breed within the grounds of the park.

21 <http://ec.europa.eu/environment/nature/biodiversity/comm2006/2020.htm>

Mr Mallia stresses how his Bird Park business, “Proves that many species of birds can breed in Malta when given the chance.”

Such chances are being enhanced by the EAFRD which is co-financing improvements to the Bird Park’s existing habitat area. New infrastructure for visitors is also being built which will strengthen the park’s position as one of Malta’s quality tourist attractions. A multilingual website funded by the RDP will act as an essential marketing tool for informing, updating and drawing in visitors.

RDP rationale

Rationale for the EAFRD grant to this biodiversity project is explained by Donald Aquilina from the Maltese NRN who describes how, “The Maltese RDP promotes and supports initiatives leading to sustainable rural development like the Bird Park project. The preservation of biodiversity is pivotal for the sustainable economic and human capital development which stimulates eco-tourism and other income generating activities.”

Mr Mallia agrees with the NRN and reiterates that, “The main role of the park is to provide visitors with accurate information about indigenous fauna and flora (and that of other countries).

Visitors will have the opportunity to learn about birds’ flight and migration patterns, their life cycles, the displays they put on for other birds, the songs they sing and calls they make, as well as how they build their nests, what happens inside their eggs, and how tourists can identify different bird species.”

More RDP-funded green business projects like Malta’s Bird Park development can lead to better protection for EU wildlife and help rural areas halt the decline of biodiversity in Europe.

Europe’s biodiversity is in decline and the EAFRD offers a useful tool to assist efforts aimed at reversing this trend.

“ A better understanding of wildlife can only lead to a better appreciation of the world around us. ”

Kevin Mallia, Bird Park Malta



Converting farm waste into biogas fuel: green energy plant provides manure management solution for Czech piggeries

Renewable energy is one of the main thrusts of the EU's Green Growth agenda and this series of articles features some examples of different EAFRD renewable energy projects. A useful source of renewable power can be generated from agricultural waste, which is converted into biogas for electricity and heat.

Agricultural waste accounts for about 5% of the total waste volumes in Europe. The EU is seeking to reduce all types of waste streams and a recent *review of the EU's Thematic Strategy on the prevention and recycling of waste*²² revealed that more still needs to be done to reduce adverse impacts from waste.

Manure from livestock forms a large proportion of agricultural waste and manure's high nitrogen content can cause pollution risks for water quality or wildlife habitats. Minimising such waste-related problems forms part of the basic Green Growth philosophy and a keynote workshop was organised by the European Commission during November 2010 to discuss good practices in *managing livestock manure for sustainable agriculture*²³.

One of the options analysed by workshop delegates was the generation of biogas, which is created by fermenting livestock manure in a specialised digester. This technology accelerates decomposition of the manure and produces combustible gas which can then be burnt either for heating purposes or fed through a turbine to generate electricity.

Several case studies were presented at the European Commission's workshop showing the energy generation potential offered from pig manures. Biogas production from pig and other livestock manure can be co-financed by the EAFRD, and numerous cases exist to show how RDP support is helping EU

farmers convert their agricultural waste problems into profitable sources of renewable energy fuel.

In the Czech Republic for instance, a farm business from Dešov in the Vysočina Region (South Moravia) has built a new biogas production plant using €1.05 million of funds from the national RDP.

Electricity from waste

Economic diversification objectives were important for the EAFRD beneficiary's (ZD Dešov) business plan. Their biogas plant formed part of the company's strategy to secure more stable and consistent income streams in the long-term. This was possible because sales of electricity produced by the plant remain fixed under a guaranteed price agreement provided by the government for uptake of bio-energy.

Installed during 2008, the Dešov project was constructed on land within the existing farm business and this helped to reduce overall costs. Further savings were achieved by the company's use of its own labour to prepare the biogas plant's foundations. A specialist firm constructed the actual gas generation units which are now operational and converting farm waste into green electricity.



©Tim Hudson

22 <http://ec.europa.eu/environment/waste/strategy.htm>

23 http://ec.europa.eu/environment/water/workshop_manure.html

Mr Jan Macálka, Head of the farmers' cooperation in Dešov, explains that, "The biogas station uses 10 000 tonnes of bio inputs. This comes mainly from pig manure, maize and livestock slurry, which is converted into around 4 300 MWh of electricity each year." The farm waste and biomass are fermented in the project's bio-generator to extract gas as a renewable fuel source.

Once all the gas has been produced the fermented manure and biomass still needs to be disposed of. However, bi-molecular processes that occur during the gas extraction procedure convert this secondary waste into a good quality compost material. Constant volumes of quality compost therefore offer supplementary income options for farmers diversifying into biogas businesses, and provide a final outlet for the treated farm waste.

Such diversification does of course require a major commitment from the businesses involved and proper planning is essential. ZD Dešov received advice from their Leader LAG during the planning phases of the development, and an important lesson for other farmers interested in biogas options is underlined by the company who stress that, "One absolutely critical point right before starting building up the biogas plant was to ensure that we had the proper consent for connecting our electricity to the distribution grid."

Coordination of energy infrastructure can be seen as a success factor behind this type of EAFRD project and such lessons remain relevant not just in Dešov but also elsewhere in the Czech Republic and Europe. The project's transferability is noted by Darina Blacká from the Czech Rural Network who says, "This is very modern unit which can serve as an inspiration for other farmers to diversify their activities. Also, electricity produced by this unit represents an alternative energy coming from renewable resources and so helps to support sustainable development of the region."

“ This is very modern unit which can serve as an inspiration for other farmers to diversify their activities. ”

Darina Blacká, Czech Rural Network



Green Growth approaches to rural development can convert waste management problems into profit-making business opportunities.

The European Network for Rural Development ONLINE

<http://enrd.ec.europa.eu/>

The screenshot shows the ENRD website homepage. At the top, there is a navigation menu with links for Home, Policy in Action, Country, Themes, Leader, Networks & Networking, Publications & Media, Events & Meetings, Info, and LOGIN. Below the menu is a main heading 'European Network for Rural Development' and a sub-heading 'Connecting Rural Europe...'. A large map of Europe is displayed, with country flags indicating EU Member Countries, Accession to EU in 2013, Candidate countries, Potential candidate countries, and Other countries. To the right of the map, there are sections for 'Connect with EU', 'European Evaluation Network to Rural Development', 'Key Tools', and 'Leader Gateway'. Below these are 'News' items, including 'International Green Week in Berlin' and '24 February, 2012: Series of Thematic Working Group leaflets published (TWG.1 - TWG.2 - TWG.3)'. At the bottom, there is a grid of links for 'POLICY IN ACTION', 'THEMES', 'COUNTRY', 'NETWORKS & NETWORKING', 'EVENTS & MEETINGS', and 'GENERAL INFO'.



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