

BioDiVine: *Demonstrating Biodiversity in viticulture landscapes*

The **Life+ 2009 BioDiVine** project is about managing biodiversity in vines through landscape. Prevention of pests, diseases and weeds, as well as preservation of soil from erosion or chemical alterations by overuse, salinisation, acidification, or other chemical soil contamination, may be considered at different hierarchical scales. While the field scale has traditionally received much interest in strategic and applied research, the higher hierarchical scales of landscape have only recently gained consideration. Interdisciplinary research on issues such as functional biodiversity and landscape connectivity demonstrates that new options arise when systems managements are approached from landscape scale. Over the last decades, many attempts have been made to enhance the quantity and quality of semi-natural elements left in the countryside such as hedges, groves or ground covers.

Most mentioned reasons for the improvement of such habitats are:

- ❖ To contribute to **nature conservation** (food, shelter, migration habitats of plants and animals)
- ❖ To **improve environmental quality** (buffer strips to prevent pesticides and nutrients contamination)
- ❖ To promote the **aesthetic and legacy** values of the countryside.

The LIFE+ 2009 BIODIVINE projects is about emphasizing the above motivations, by enlarging its scope at a **landscape level**; and also suggest **management plans using biological struggle through conservation** to demonstrate and enforce the **reliability of functional biodiversity**.

BioDiVine in short

- **6 partners** from three EU member states (France, Portugal and Spain)
- Budget: **1 951 043€** - EU financial contribution: **959523 €** (49.18% of total eligible budget)
- Concrete conservation actions:
 - ✓ Introduction of ground covers
 - ✓ Introduction of diversified hedges
 - ✓ Reorganization of low walls and other layout (slopes...)
 - ✓ Use of pheromones
 - ✓ Reorganization of headlands.



For more information, please, visit us at: <http://www.biodivine.eu/>

Recent news

Monitoring arthropod diversity in Douro Wine Region vineyards – ADVID.

Nowadays, many actions aim to enhance the biological control in agro ecosystems in order to improve their resilience and sustainability.

To what extent does the landscape structure improve biodiversity? Is it possible to adapt vineyard management or surrounding landscape to improve the presence of ecological infrastructures and thus increase biodiversity?



Those two questions are the basis of the European project LIFE+ “BioDiVine: Demonstrating functional biodiversity in viticulture landscapes”.

The arthropods caught during seven weeks of assessment (April-June) were sorted out using the Rapid Biodiversity Assessment (RBA) method. Biological indexes were calculated and correlated with landscape characteristics calculated through a database to investigate the way habitats influence arthropods' biodiversity and, in the particular functional biodiversity. More than 52000 arthropods were counted and 789 morphospecies identified.

Some positive correlations have been established between landscape components and arthropods presence. Staphylinidae abundance and richness were higher in more diverse landscape. Concerning other taxa, each order appears to be differently influenced by the landscape's structure.

Increasing fragmentation of landscape threatens European wildlife – EEA & FOEN.



Roads, motorways, railways, intensive agriculture and urban developments are breaking up Europe's landscapes into ever-smaller pieces, with potentially devastating consequences for flora and fauna across the continent, according to a new joint report from the European Environment Agency (EEA) and the Swiss Federal Office for the Environment (FOEN).

The report, 'Landscape fragmentation in Europe', demonstrates how areas of land are often unable to support high levels of biodiversity when they are split into smaller and smaller parcels. The fragmentation of the landscape increases

the isolation of animal populations in smaller and more vulnerable fractions. These problems are compounded by the growing area taken up by transport infrastructure and the area bordering these developments – many animals cannot live in the fringe areas. Moreover, landscape fragmentation also facilitates the spread of invasive species and reduces the ecosystem services that human society relies on.

To read more information about the increasing fragmentation of landscape threatens: <http://www.eea.europa.eu/highlights/increasing-fragmentation-of-landscape-threatens>



Recent news

Measuring biodiversity with indicators – EEA.

The continuing loss of biodiversity – made up of genes, species and ecosystems – is a matter of growing concern in Europe. Yet measuring the extent of the loss and the threat it poses is a huge challenge.

In recent years the Streamlining European Biodiversity Indicators (SEBI) process coordinated by the European Environment Agency (EEA) has developed a set of indicators to measure progress against targets to halt biodiversity loss. The EEA has now reviewed the successful



The report, “Streamlining European biodiversity indicators 2020: Building a future on lessons learnt from the SEBI 2010 process” summarizes achievements to date and is intended to help form the next stage of improving indicators for new biodiversity targets for 2020.

The SEBI process started in 2005 as a partnership with a pan-European dimension. Almost 150 experts helped to build a set of 26 indicators which show among other things genetic diversity of domesticated animals, trends in species populations and the extent of selected ecosystems and habitats, including protected areas. Other indicators look at threats to biodiversity and sustainable use of natural resources, funding to protect biodiversity and public awareness of biodiversity issues.

To read more information about indicators to measure biodiversity:

<http://www.eea.europa.eu/highlights/measuring-biodiversity-with-indicators>

Upcoming events:

Group of International Experts of vitivincultural Systems for CoOperation (from the 29th of August to the 29th of September) – Porto, Portugal



The 18th International Symposium GiESCO 2013 (Group of international Experts of vitivincultural Systems for CoOperation) will take place from July 7th to 11th at the Faculdade de Ciências da Universidade do Porto – Portugal. The Symposium will cover the main fields of viticultural sciences, and it will be expected to join about 200 presentations (oral and poster) by 250 researchers and scientists from more than 17 countries.

Started as a European group, by Alain Carbonneau and colleagues, GiESCO, originally focused on training systems and ecophysiology, studies nowadays an extended number of topics of basic and applied Viticulture.

This Symposium is also a good occasion to visit two UNESCO World Heritage sites, ALTO DOURO WINE VALLEY and PORTO HISTORICAL CENTER, and to know the latest advances in Viticulture and Portuguese wines production.7

To read more information about the 18th International Symposium :

http://www.biodivine.eu/docs/GIESCO2013_en.pdf

Workshop “Installing hedges in the viticulture ecosystem” (the 29th of October) - Pinhão, Portugal

On October the 29th, ADVID held a Workshop “Installing hedges in the viticulture ecosystem”, at Quinta das Carvalhas (Real Companhia Velha – Pinhão).

This initiative is part of one of ADVID's strategic priorities for the wine sector, the “Functional Biodiversity in Viticulture”, which purpose is to encourage biodiversity and ecosystem sustainability of the vineyard

